



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 09:54 PM GMT

PDB ID : 4V7U  
Title : Crystal structure of the E. coli ribosome bound to erythromycin.  
Authors : Dunkle, J.A.; Xiong, L.; Mankin, A.S.; Cate, J.H.D.  
Deposited on : 2010-08-15  
Resolution : 3.10 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.  
We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)  
A user guide is available at  
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>  
with specific help available everywhere you see the ⓘ symbol.

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The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity : 4.02b-467  
Mogul : 1.7 (RC4), CSD as536be (2015)  
Xtriage (Phenix) : 1.9-1692  
EDS : rb-20026688  
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)  
Refmac : 5.8.0135  
CCP4 : 6.5.0  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : trunk26865

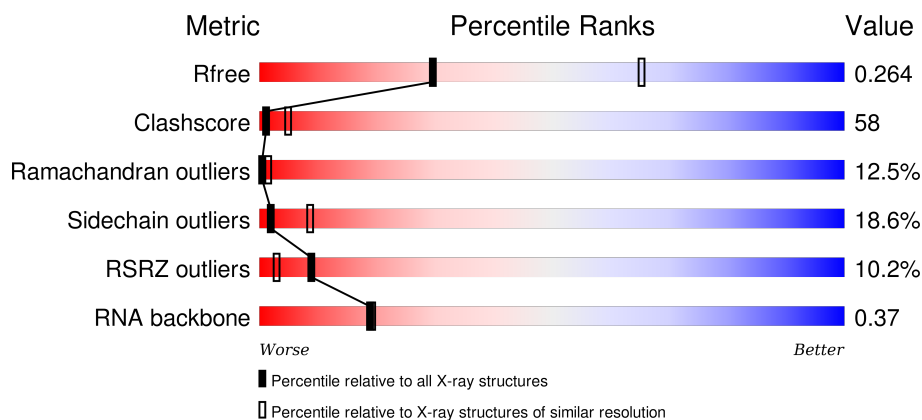
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

## *X-RAY DIFFRACTION*

The reported resolution of this entry is 3.10 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	91344	1114 (3.14-3.06)
Clashscore	102246	1222 (3.14-3.06)
Ramachandran outliers	100387	1174 (3.14-3.06)
Sidechain outliers	100360	1174 (3.14-3.06)
RSRZ outliers	91569	1119 (3.14-3.06)
RNA backbone	2183	1010 (3.52-2.68)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	1533	<div> <div>15%</div> <div>49%</div> <div>20%</div> <div>17%</div> </div>
1	CA	1533	<div> <div>3%</div> <div>12%</div> <div>48%</div> <div>25%</div> <div>14%</div> </div>
2	AB	218	<div> <div>33%</div> <div>21%</div> <div>54%</div> <div>23%</div> <div>.</div> </div>
2	CB	218	<div> <div>33%</div> <div>22%</div> <div>63%</div> <div>14%</div> <div>.</div> </div>

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Mol	Chain	Length	Quality of chain
3	AC	206	
3	CC	206	
4	AD	205	
4	CD	205	
5	AE	150	
5	CE	150	
6	AF	100	
6	CF	100	
7	AG	151	
7	CG	151	
8	AH	129	
8	CH	129	
9	AI	127	
9	CI	127	
10	AJ	98	
10	CJ	98	
11	AK	117	
11	CK	117	
12	AL	123	
12	CL	123	
13	AM	114	
13	CM	114	
14	AN	100	
14	CN	100	
15	AO	88	

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Mol	Chain	Length	Quality of chain
15	CO	88	
16	AP	82	
16	CP	82	
17	AQ	80	
17	CQ	80	
18	AR	55	
18	CR	55	
19	AS	79	
19	CS	79	
20	AT	85	
20	CT	85	
21	AU	51	
21	CU	51	
22	BA	2904	
22	DA	2904	
23	BB	118	
23	DB	118	
24	BC	271	
24	DC	271	
25	BD	209	
25	DD	209	
26	BE	201	
26	DE	201	
27	BF	178	
27	DF	178	

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Mol	Chain	Length	Quality of chain
28	BG	176	
28	DG	176	
29	BH	149	
29	DH	149	
30	BI	141	
30	DI	141	
31	BJ	142	
31	DJ	142	
32	BK	122	
32	DK	122	
33	BL	143	
33	DL	143	
34	BM	136	
34	DM	136	
35	BN	120	
35	DN	120	
36	BO	116	
36	DO	116	
37	BP	114	
37	DP	114	
38	BQ	117	
38	DQ	117	
39	BR	103	
39	DR	103	
40	BS	110	

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Mol	Chain	Length	Quality of chain
40	DS	110	
41	BT	93	
41	DT	93	
42	BU	102	
42	DU	102	
43	BV	94	
43	DV	94	
44	BW	79	
44	DW	79	
45	BX	77	
45	DX	77	
46	BY	63	
46	DY	63	
47	BZ	58	
47	DZ	58	
48	B0	56	
48	D0	56	
49	B1	50	
49	D1	50	
50	B2	46	
50	D2	46	
51	B3	64	
51	D3	64	
52	B4	38	
52	D4	38	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
53	MG	AA	1620	-	-	-	X
53	MG	BA	3027	-	-	-	X
53	MG	BA	3036	-	-	-	X
53	MG	BA	3040	-	-	-	X
53	MG	BA	3047	-	-	-	X
53	MG	BA	3057	-	-	-	X
53	MG	BA	3063	-	-	-	X
53	MG	BA	3070	-	-	-	X
53	MG	BA	3082	-	-	-	X
53	MG	BA	3100	-	-	-	X
53	MG	BA	3103	-	-	-	X
53	MG	BA	3104	-	-	-	X
53	MG	BA	3108	-	-	-	X
53	MG	BA	3123	-	-	-	X
53	MG	BA	3130	-	-	-	X
53	MG	BA	3135	-	-	-	X
53	MG	CA	1607	-	-	-	X
53	MG	CA	1618	-	-	-	X
53	MG	CA	1625	-	-	-	X
53	MG	CA	1628	-	-	-	X
53	MG	DA	3002	-	-	-	X
53	MG	DA	3013	-	-	-	X
53	MG	DA	3033	-	-	-	X
53	MG	DA	3043	-	-	-	X
53	MG	DA	3075	-	-	-	X
53	MG	DA	3076	-	-	-	X
53	MG	DA	3079	-	-	-	X
53	MG	DA	3082	-	-	-	X
53	MG	DA	3108	-	-	-	X
53	MG	DA	3129	-	-	-	X
53	MG	DA	3133	-	-	-	X

## 2 Entry composition

There are 56 unique types of molecules in this entry. The entry contains 284525 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1533	Total	C	N	O	P	0	0	0
			32895	14671	6036	10655	1533			
1	CA	1530	Total	C	N	O	P	0	0	0
			32831	14642	6024	10635	1530			

- Molecule 2 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	218	Total	C	N	O	S	0	0	0
			1705	1081	305	312	7			
2	CB	218	Total	C	N	O	S	0	0	0
			1705	1081	305	312	7			

- Molecule 3 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AC	206	Total	C	N	O	S	0	0	0
			1625	1028	305	289	3			
3	CC	206	Total	C	N	O	S	0	0	0
			1625	1028	305	289	3			

- Molecule 4 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AD	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			
4	CD	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			

- Molecule 5 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AE	150	Total	C	N	O	S	0	0	0
			1106	687	211	202	6			
5	CE	150	Total	C	N	O	S	0	0	0
			1106	687	211	202	6			

- Molecule 6 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AF	100	Total	C	N	O	S	0	0	0
			818	515	148	149	6			
6	CF	100	Total	C	N	O	S	0	0	0
			818	515	148	149	6			

- Molecule 7 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AG	151	Total	C	N	O	S	0	0	0
			1182	735	227	216	4			
7	CG	150	Total	C	N	O	S	0	0	0
			1175	730	226	215	4			

- Molecule 8 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			
8	CH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			

- Molecule 9 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	AI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			
9	CI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			

- Molecule 10 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AJ	98	Total	C	N	O	S	0	0	0
			787	493	150	143	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	CJ	98	Total	C	N	O	S	0	0	0
			787	493	150	143	1			

- Molecule 11 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			
11	CK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			

- Molecule 12 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			
12	CL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			

- Molecule 13 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	114	Total	C	N	O	S	0	0	0
			884	546	178	157	3			
13	CM	114	Total	C	N	O	S	0	0	1
			877	541	178	155	3			

- Molecule 14 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AN	96	Total	C	N	O	S	0	0	0
			774	483	160	128	3			
14	CN	95	Total	C	N	O	S	0	0	0
			769	480	159	127	3			

- Molecule 15 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AO	88	Total	C	N	O	S	0	0	0
			714	439	144	130	1			
15	CO	88	Total	C	N	O	S	0	0	0
			714	439	144	130	1			

- Molecule 16 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AP	82	Total	C	N	O	S	0	0	0
			649	406	128	114	1			
16	CP	81	Total	C	N	O	S	0	0	1
			639	400	127	111	1			

- Molecule 17 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	80	Total	C	N	O	S	0	0	0
			649	411	121	114	3			
17	CQ	80	Total	C	N	O	S	0	0	0
			649	411	121	114	3			

- Molecule 18 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	AR	55	Total	C	N	O	0	0	0
			456	288	86	82			
18	CR	55	Total	C	N	O	0	0	0
			456	288	86	82			

- Molecule 19 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AS	79	Total	C	N	O	S	0	0	0
			638	408	120	108	2			
19	CS	79	Total	C	N	O	S	0	0	0
			638	408	120	108	2			

- Molecule 20 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AT	85	Total	C	N	O	S	0	0	0
			665	411	137	114	3			
20	CT	85	Total	C	N	O	S	0	0	0
			665	411	137	114	3			

- Molecule 21 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	AU	51	Total	C	N	O	S	0	0	0
			426	265	86	74	1			
21	CU	51	Total	C	N	O	S	0	0	0
			426	265	86	74	1			

- Molecule 22 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	BA	2854	Total	C	N	O	P	0	0	0
			61274	27334	11279	19807	2854			
22	DA	2841	Total	C	N	O	P	0	0	0
			60995	27210	11229	19715	2841			

- Molecule 23 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	BB	118	Total	C	N	O	P	0	0	0
			2529	1126	464	821	118			
23	DB	117	Total	C	N	O	P	0	0	0
			2507	1116	459	815	117			

- Molecule 24 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	BC	271	Total	C	N	O	S	0	0	0
			2083	1288	423	365	7			
24	DC	271	Total	C	N	O	S	0	0	0
			2083	1288	423	365	7			

- Molecule 25 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	BD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			
25	DD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			

- Molecule 26 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	BE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	DE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			

- Molecule 27 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	BF	178	Total	C	N	O	S	0	0	1
			1411	899	250	256	6			
27	DF	178	Total	C	N	O	S	0	0	0
			1420	905	251	258	6			

- Molecule 28 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	BG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			
28	DG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			

- Molecule 29 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	BH	149	Total	C	N	O	S	0	0	0
			1111	699	197	214	1			
29	DH	149	Total	C	N	O	S	0	0	0
			1111	699	197	214	1			

- Molecule 30 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	BI	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			
30	DI	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			

- Molecule 31 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	BJ	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			
31	DJ	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			

- Molecule 32 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	BK	122	Total	C	N	O	S	0	0	0
			939	587	180	166	6			
32	DK	122	Total	C	N	O	S	0	0	0
			939	587	180	166	6			

- Molecule 33 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	BL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			
33	DL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			

- Molecule 34 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			
34	DM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			

- Molecule 35 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BN	120	Total	C	N	O	S	0	0	0
			961	593	196	167	5			
35	DN	120	Total	C	N	O	S	0	0	0
			961	593	196	167	5			

- Molecule 36 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
36	BO	116	Total	C	N	O	0	0	0
			892	552	178	162			
36	DO	116	Total	C	N	O	0	0	0
			892	552	178	162			

- Molecule 37 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BP	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			
37	DP	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			

- Molecule 38 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BQ	117	Total	C	N	O	S	0	0	0
			947	604	192	151				
38	DQ	117	Total	C	N	O	S	0	0	0
			947	604	192	151				

- Molecule 39 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			
39	DR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			

- Molecule 40 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BS	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			
40	DS	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			

- Molecule 41 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BT	93	Total	C	N	O	S	0	0	0
			739	466	139	132	2			
41	DT	93	Total	C	N	O	S	0	0	0
			739	466	139	132	2			

- Molecule 42 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BU	102	Total	C	N	O	S	0	0	0
			780	492	146	142				

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
42	DU	102	Total	C	N	O	0	0	0
			780	492	146	142			

- Molecule 43 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BV	94	Total	C	N	O	S	0	0	0
			753	479	137	134	3			
43	DV	94	Total	C	N	O	S	0	0	0
			753	479	137	134	3			

- Molecule 44 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	BW	79	Total	C	N	O	S	0	0	0
			596	367	120	108	1			
44	DW	79	Total	C	N	O	S	0	0	0
			596	367	120	108	1			

- Molecule 45 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BX	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			
45	DX	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			

- Molecule 46 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BY	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			
46	DY	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			

- Molecule 47 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BZ	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			
47	DZ	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			

- Molecule 48 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	B0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			
48	D0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			

- Molecule 49 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	B1	50	Total	C	N	O	0	0	0
			410	263	75	72			
49	D1	50	Total	C	N	O	0	0	0
			410	263	75	72			

- Molecule 50 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	B2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			
50	D2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			

- Molecule 51 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	B3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			
51	D3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			

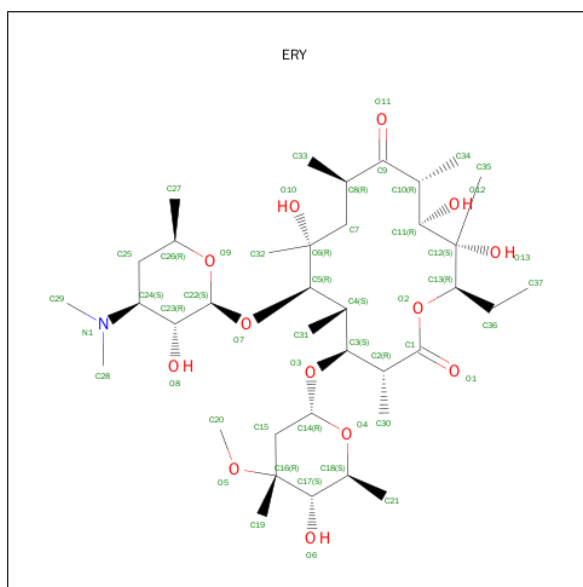
- Molecule 52 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	B4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			
52	D4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			

- Molecule 53 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
53	BB	4	Total Mg 4 4	0	0
53	BA	135	Total Mg 135 135	0	0
53	CA	42	Total Mg 42 42	0	0
53	DJ	1	Total Mg 1 1	0	0
53	AA	41	Total Mg 41 41	0	0
53	AN	2	Total Mg 2 2	0	0
53	DA	133	Total Mg 133 133	0	0
53	DC	2	Total Mg 2 2	0	0
53	DB	1	Total Mg 1 1	0	0

- Molecule 54 is ERYTHROMYCIN A (three-letter code: ERY) (formula:  $C_{37}H_{67}NO_{13}$ ).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
54	BA	1	Total C N O 51 37 1 13	0	0

- Molecule 55 is ZINC ION (three-letter code: ZN) (formula:  $Zn$ ).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	B4	1	Total 1	Zn 1	0	0
55	D4	1	Total 1	Zn 1	0	0

- Molecule 56 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	AA	197	Total 197	O 197	0	0
56	AE	1	Total 1	O 1	0	0
56	AL	1	Total 1	O 1	0	0
56	AN	7	Total 7	O 7	0	0
56	AT	1	Total 1	O 1	0	0
56	AU	1	Total 1	O 1	0	0
56	BA	605	Total 605	O 605	0	0
56	BB	19	Total 19	O 19	0	0
56	BC	7	Total 7	O 7	0	0
56	BD	3	Total 3	O 3	0	0
56	BE	1	Total 1	O 1	0	0
56	BL	4	Total 4	O 4	0	0
56	BN	2	Total 2	O 2	0	0
56	BR	1	Total 1	O 1	0	0
56	BT	2	Total 2	O 2	0	0
56	BV	1	Total 1	O 1	0	0
56	B3	3	Total 3	O 3	0	0
56	B4	2	Total 2	O 2	0	0

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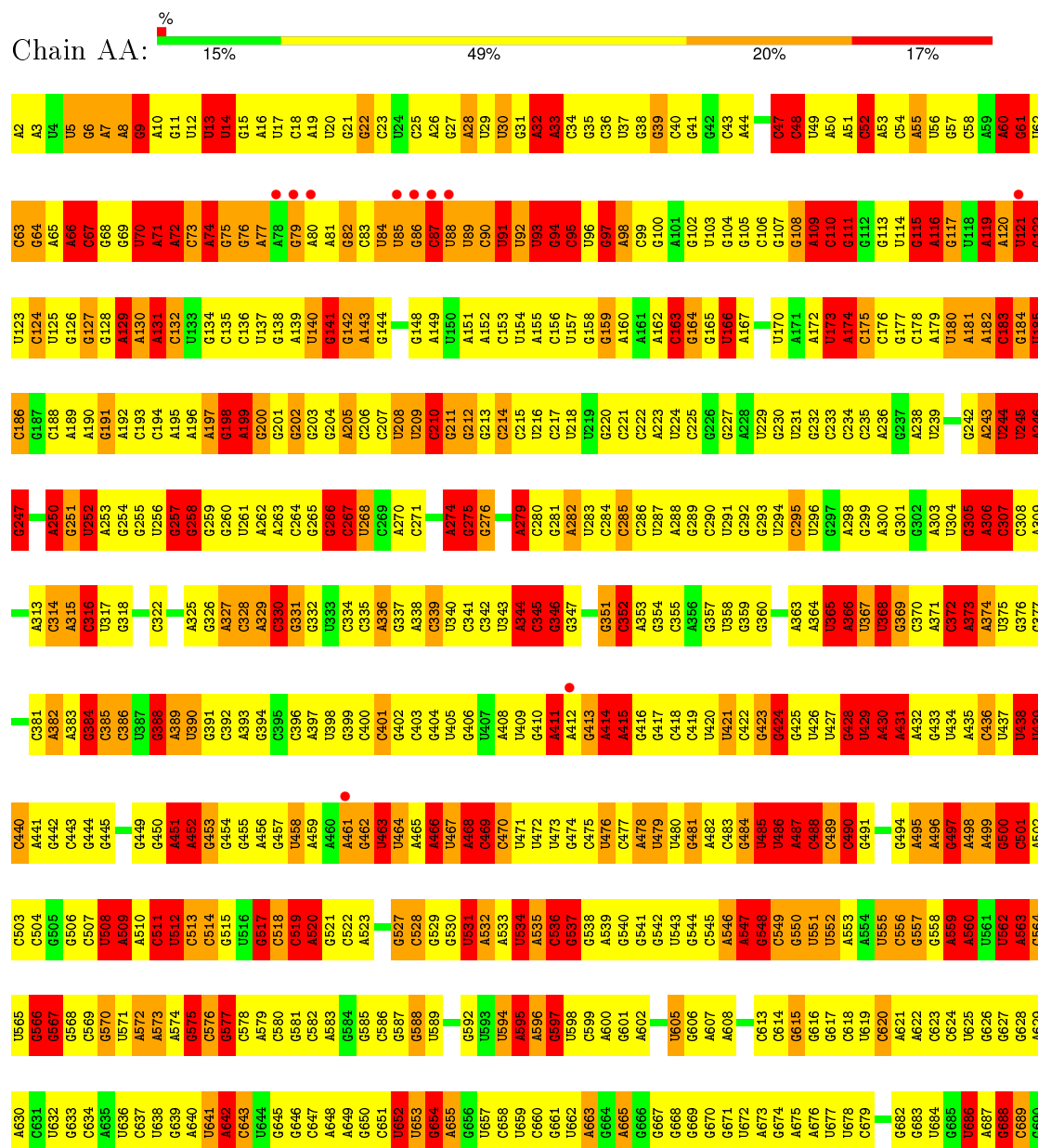
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	CA	195	Total 195	O 195	0	0
56	CE	3	Total 3	O 3	0	0
56	CL	1	Total 1	O 1	0	0
56	CN	3	Total 3	O 3	0	0
56	CT	4	Total 4	O 4	0	0
56	CU	1	Total 1	O 1	0	0
56	DA	600	Total 600	O 600	0	0
56	DB	3	Total 3	O 3	0	0
56	DC	13	Total 13	O 13	0	0
56	DD	2	Total 2	O 2	0	0
56	DE	4	Total 4	O 4	0	0
56	DJ	3	Total 3	O 3	0	0
56	DL	4	Total 4	O 4	0	0
56	DN	2	Total 2	O 2	0	0
56	DT	2	Total 2	O 2	0	0
56	DU	2	Total 2	O 2	0	0
56	DV	2	Total 2	O 2	0	0
56	D2	1	Total 1	O 1	0	0
56	D3	1	Total 1	O 1	0	0
56	D4	4	Total 4	O 4	0	0

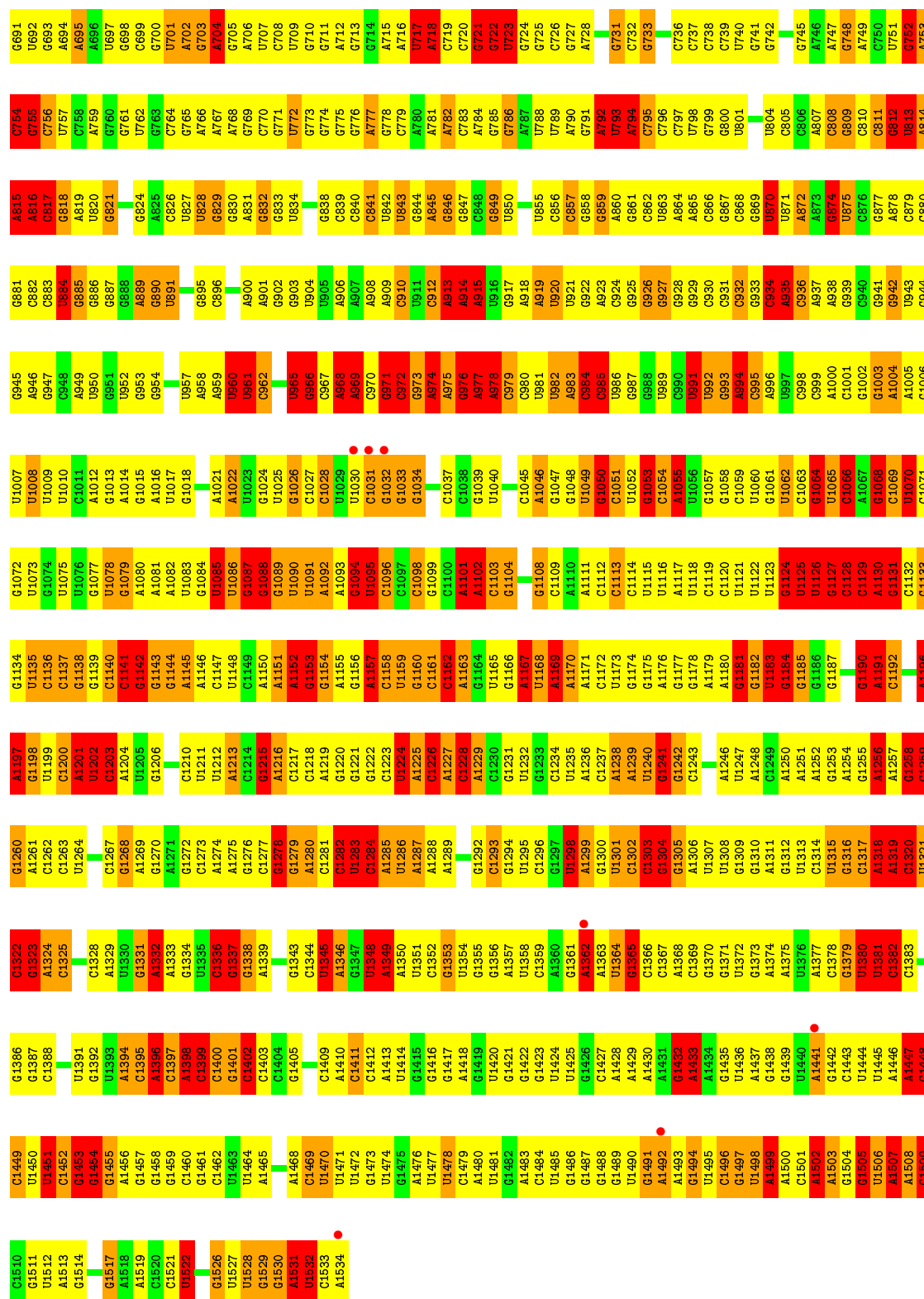


### 3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ( $RSRZ > 2$ ). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

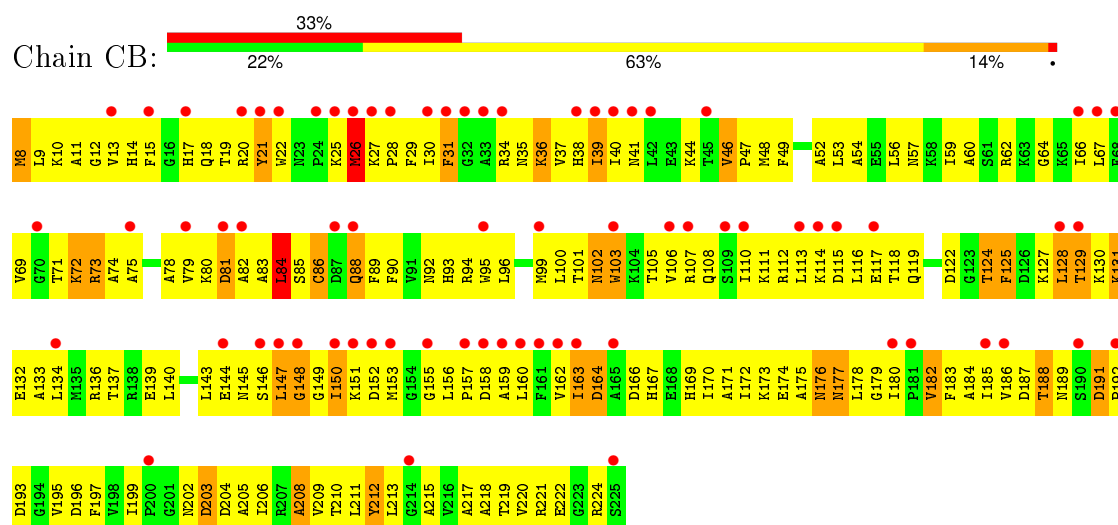
#### • Molecule 1: 16S rRNA



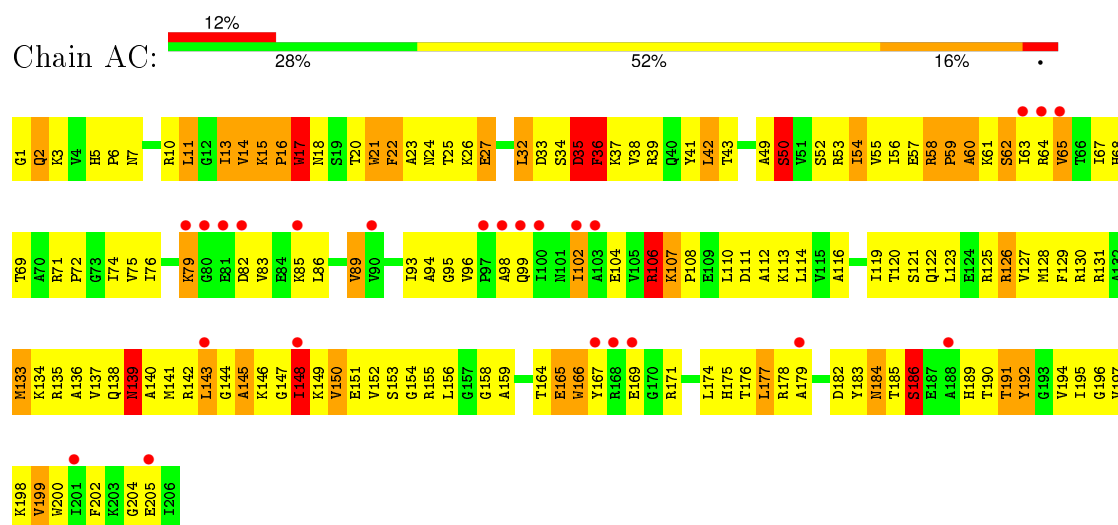




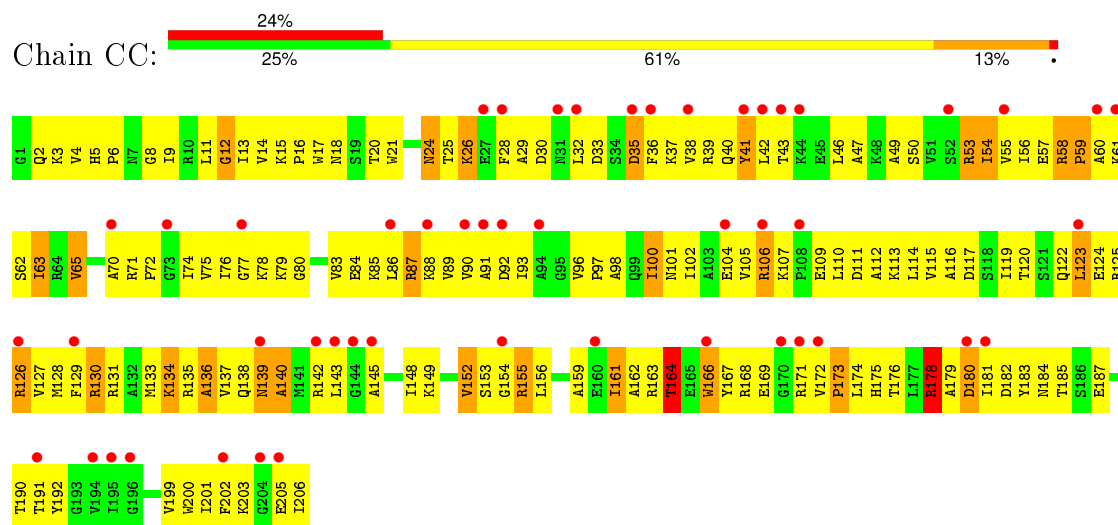
- Molecule 2: 30S ribosomal protein S2



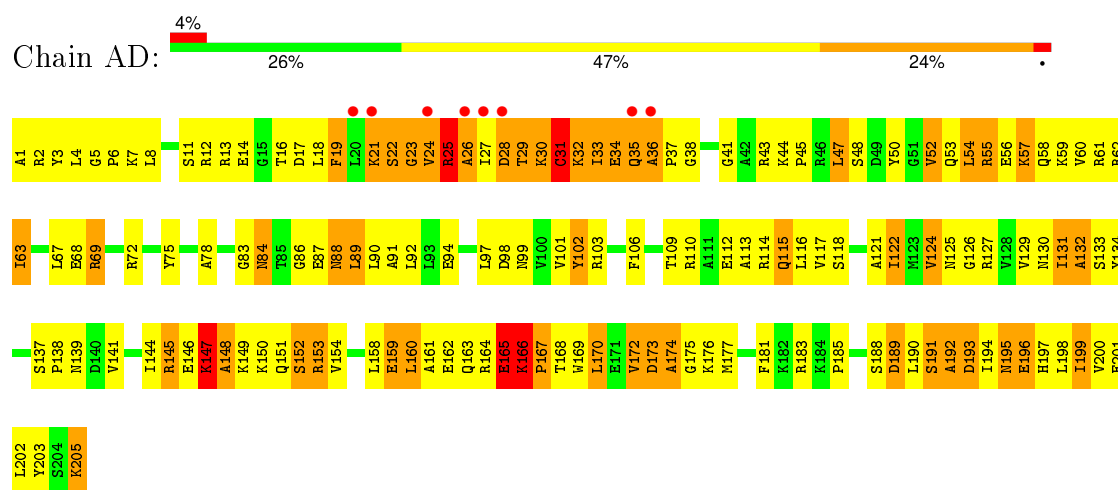
• Molecule 3: 30S ribosomal protein S3



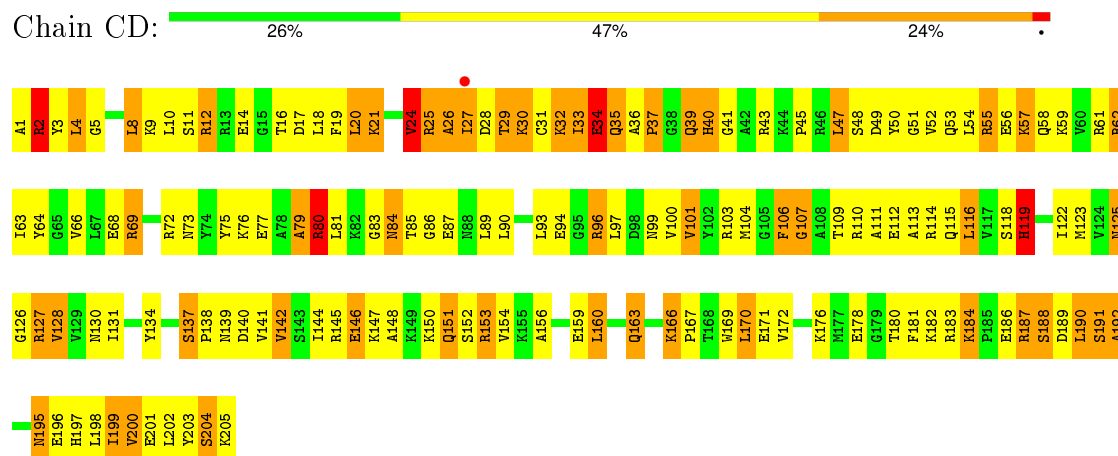
• Molecule 3: 30S ribosomal protein S3



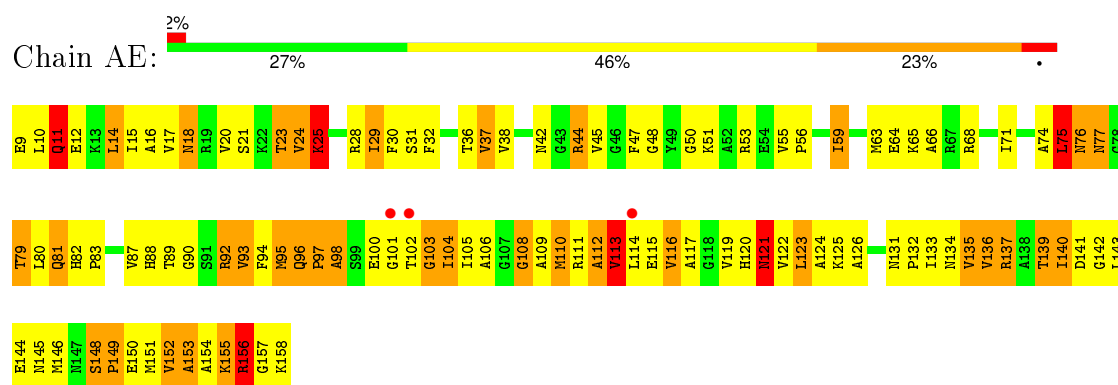
• Molecule 4: 30S ribosomal protein S4



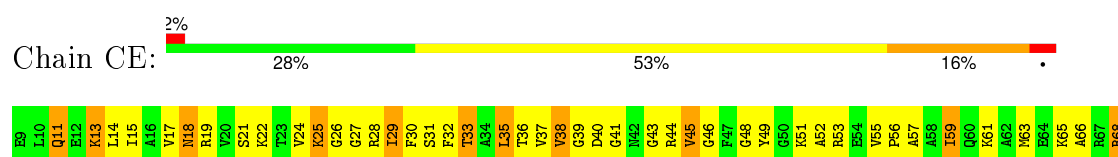
• Molecule 4: 30S ribosomal protein S4

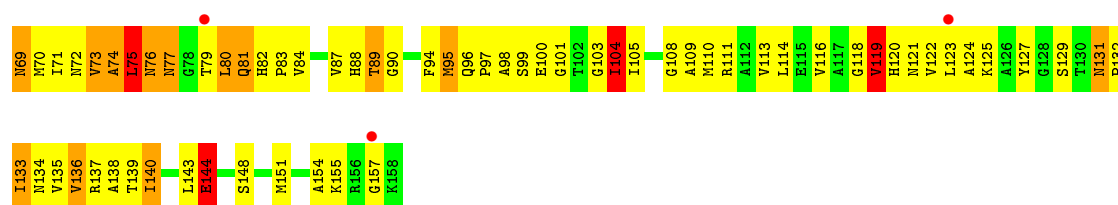


• Molecule 5: 30S ribosomal protein S5



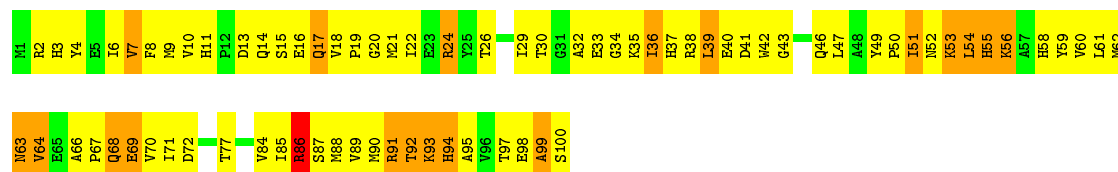
• Molecule 5: 30S ribosomal protein S5





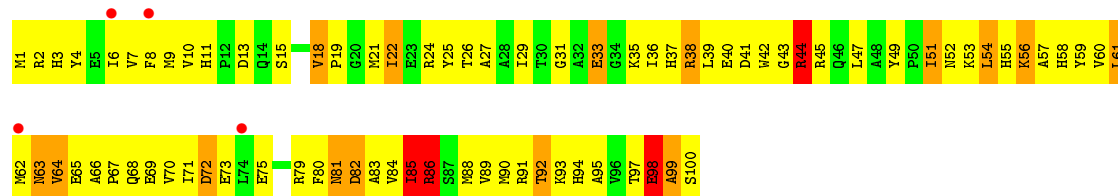
• Molecule 6: 30S ribosomal protein S6

Chain AF: 24% 56% 19%



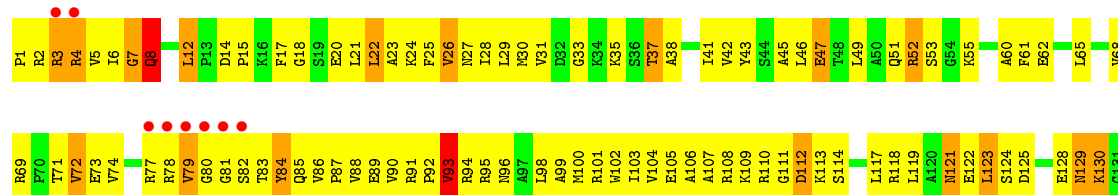
• Molecule 6: 30S ribosomal protein S6

Chain CF: 4% 20% 61% 15%



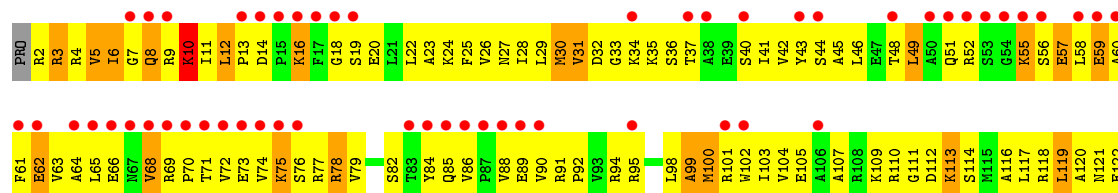
• Molecule 7: 30S ribosomal protein S7

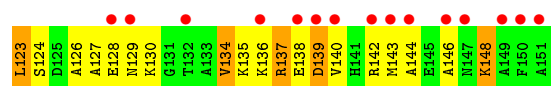
Chain AG: 6% 27% 60% 12%



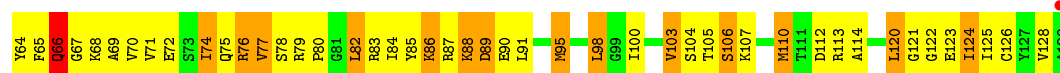
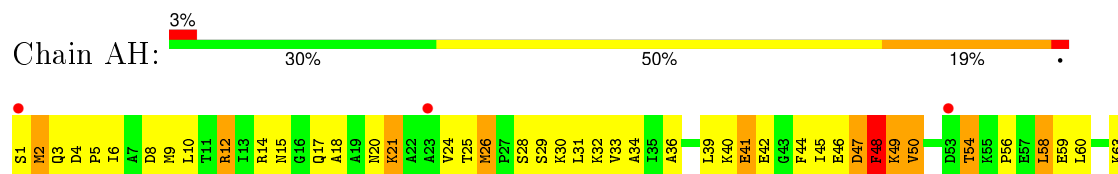
• Molecule 7: 30S ribosomal protein S7

Chain CG: 20% 46% 62% 17%

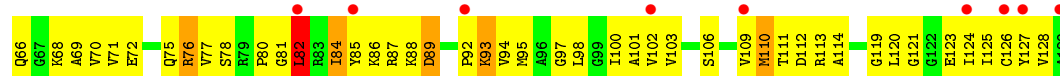
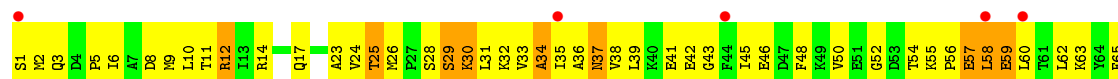




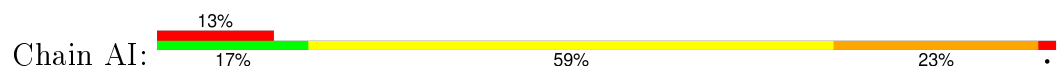
• Molecule 8: 30S ribosomal protein S8



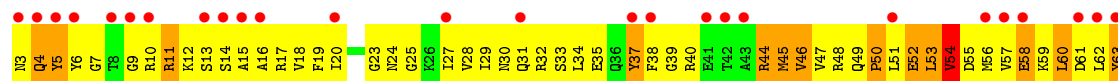
• Molecule 8: 30S ribosomal protein S8



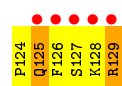
• Molecule 9: 30S ribosomal protein S9



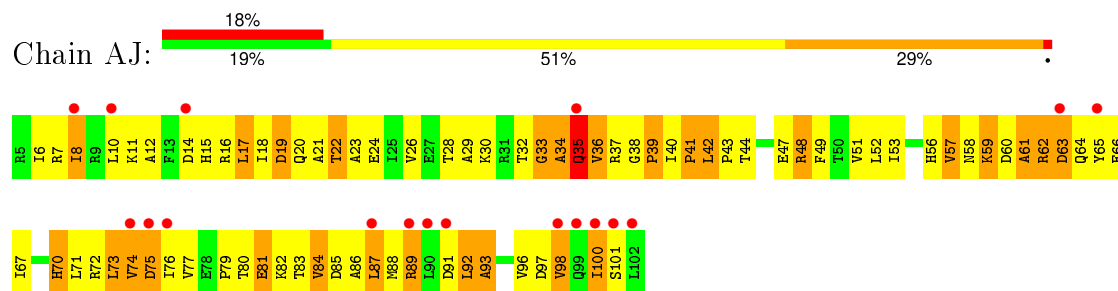
• Molecule 9: 30S ribosomal protein S9



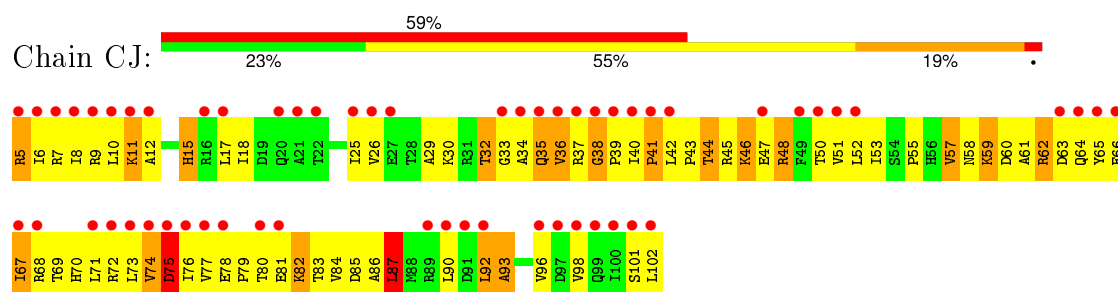




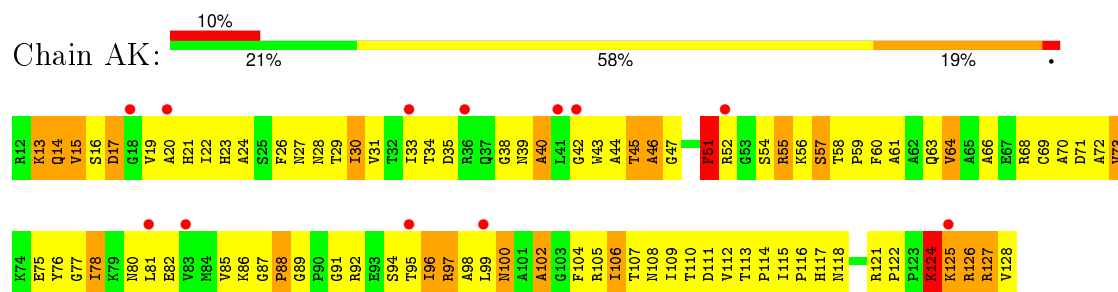
- Molecule 10: 30S ribosomal protein S10



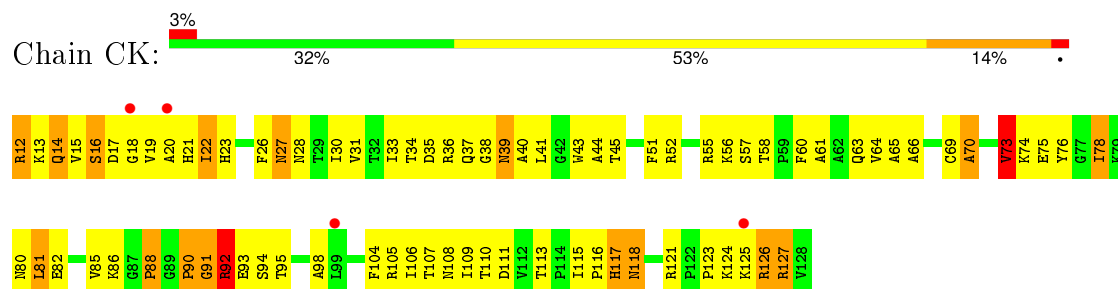
- Molecule 10: 30S ribosomal protein S10



- Molecule 11: 30S ribosomal protein S11

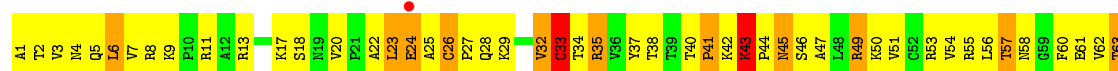


- Molecule 11: 30S ribosomal protein S11

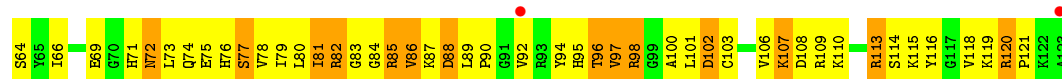


- Molecule 12: 30S ribosomal protein S12





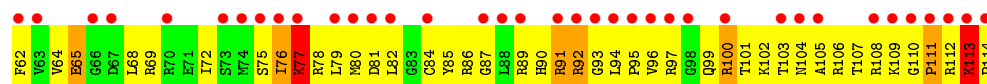
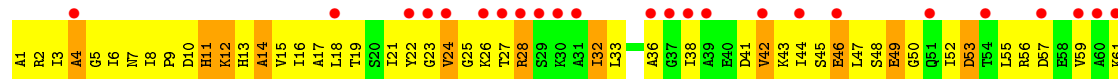
• Molecule 12: 30S ribosomal protein S12



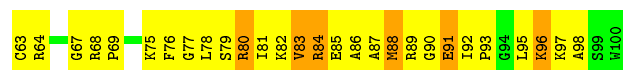
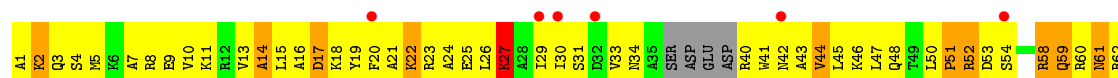
• Molecule 13: 30S ribosomal protein S13



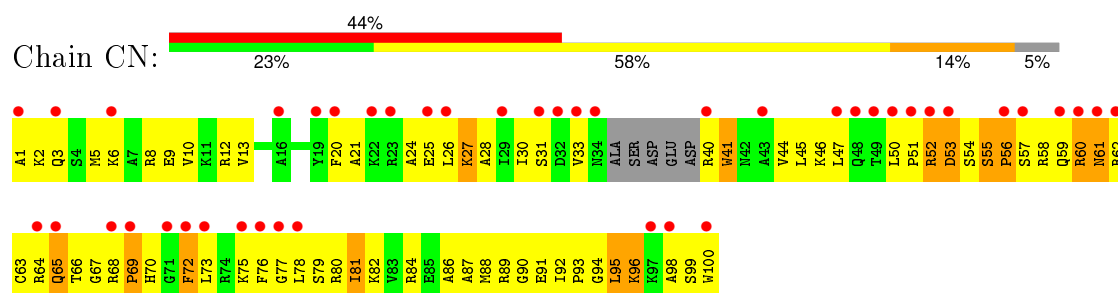
• Molecule 13: 30S ribosomal protein S13



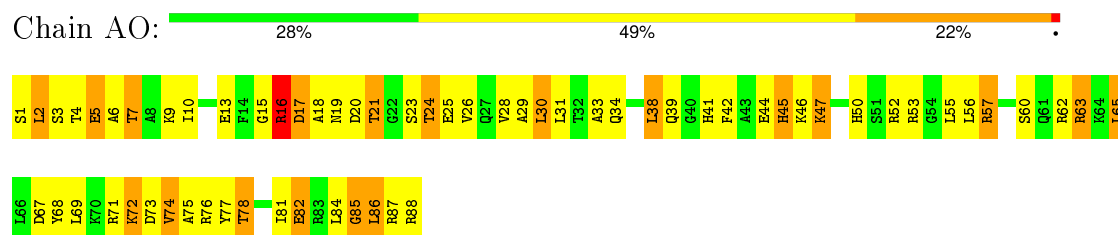
• Molecule 14: 30S ribosomal protein S14



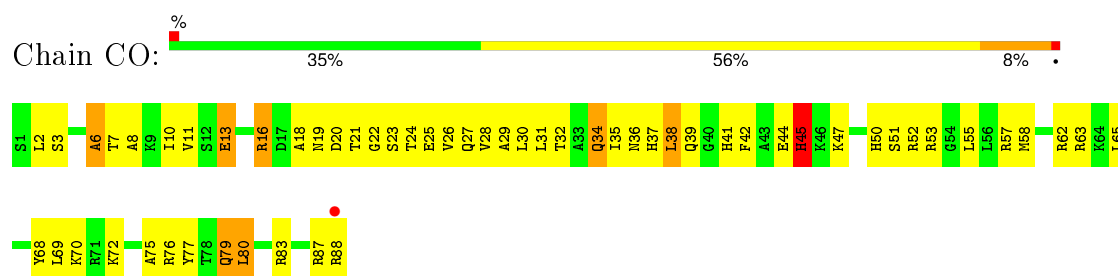
• Molecule 14: 30S ribosomal protein S14



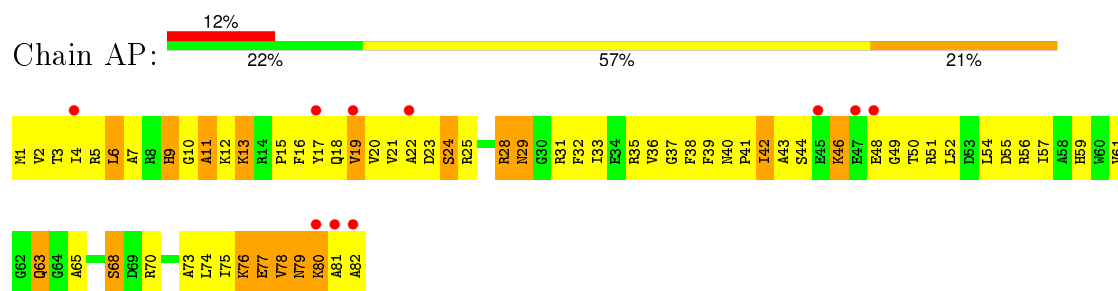
- Molecule 15: 30S ribosomal protein S15



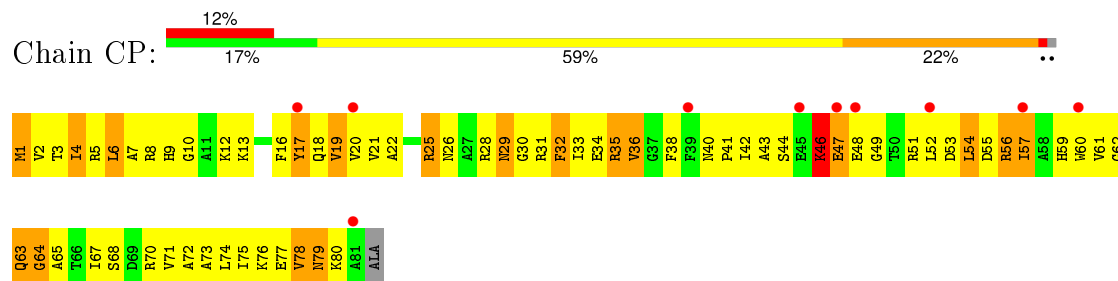
- Molecule 15: 30S ribosomal protein S15



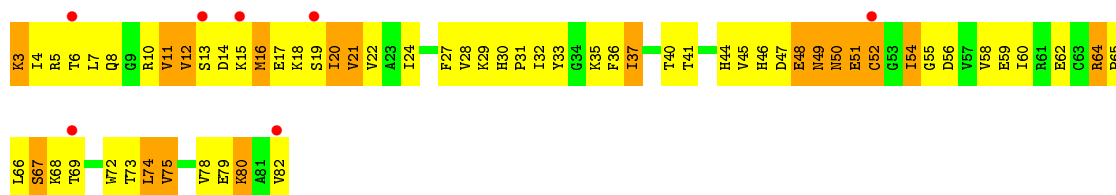
- Molecule 16: 30S ribosomal protein S16



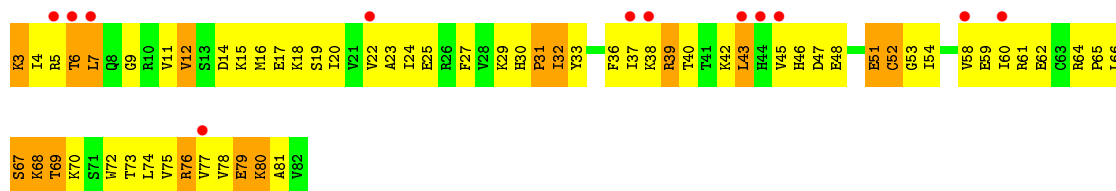
- Molecule 16: 30S ribosomal protein S16



- Molecule 17: 30S ribosomal protein S17



- Molecule 17: 30S ribosomal protein S17



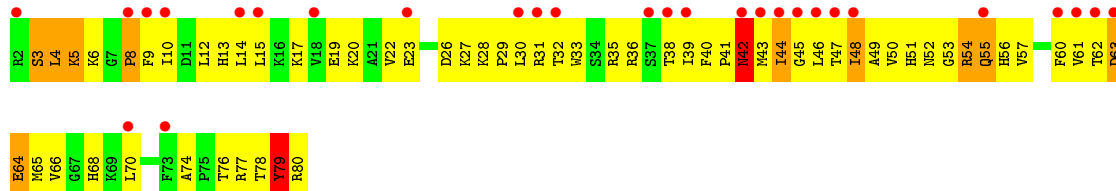
- Molecule 18: 30S ribosomal protein S18



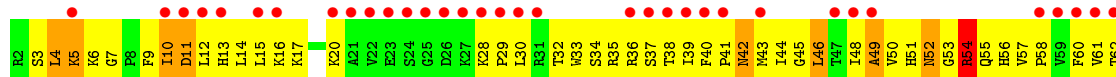
- Molecule 18: 30S ribosomal protein S18

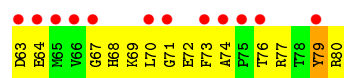


- Molecule 19: 30S ribosomal protein S19

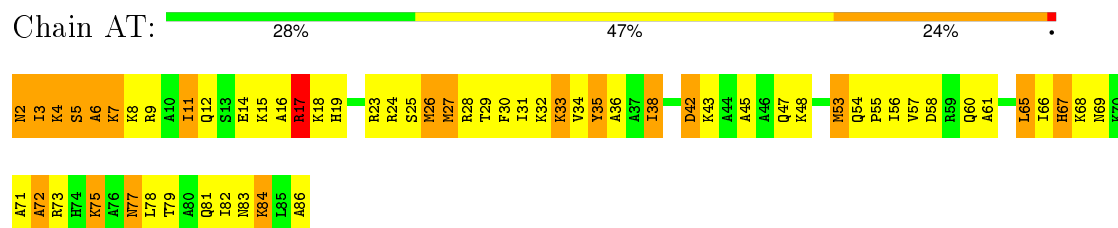


- Molecule 19: 30S ribosomal protein S19

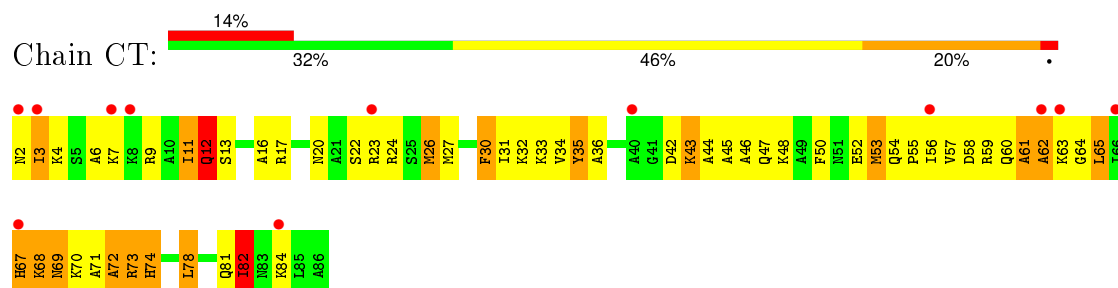




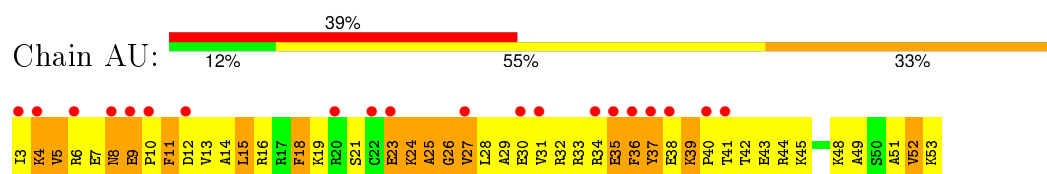
• Molecule 20: 30S ribosomal protein S20



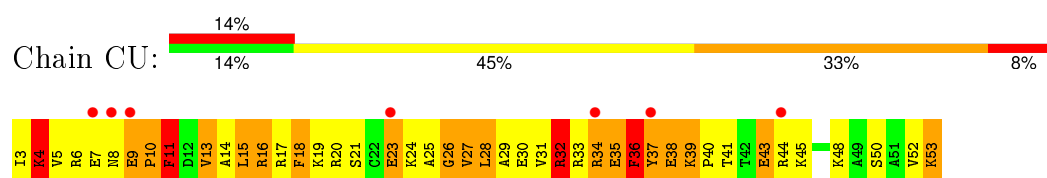
• Molecule 20: 30S ribosomal protein S20



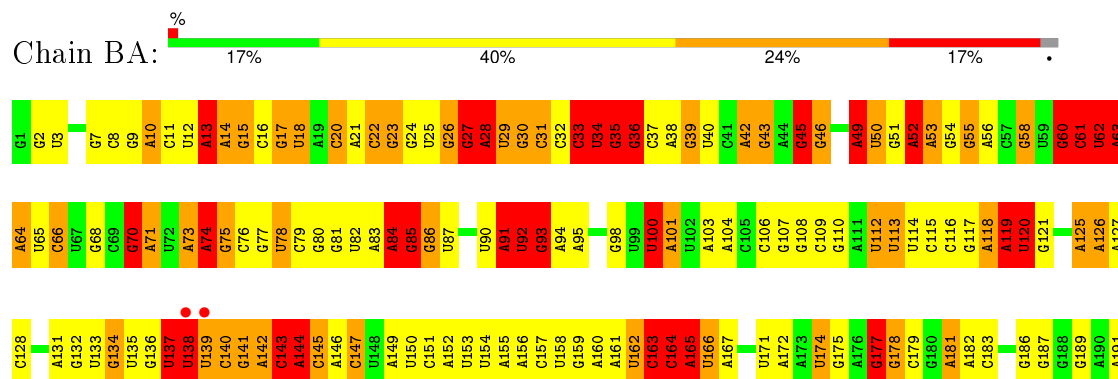
• Molecule 21: 30S ribosomal protein S21



• Molecule 21: 30S ribosomal protein S21

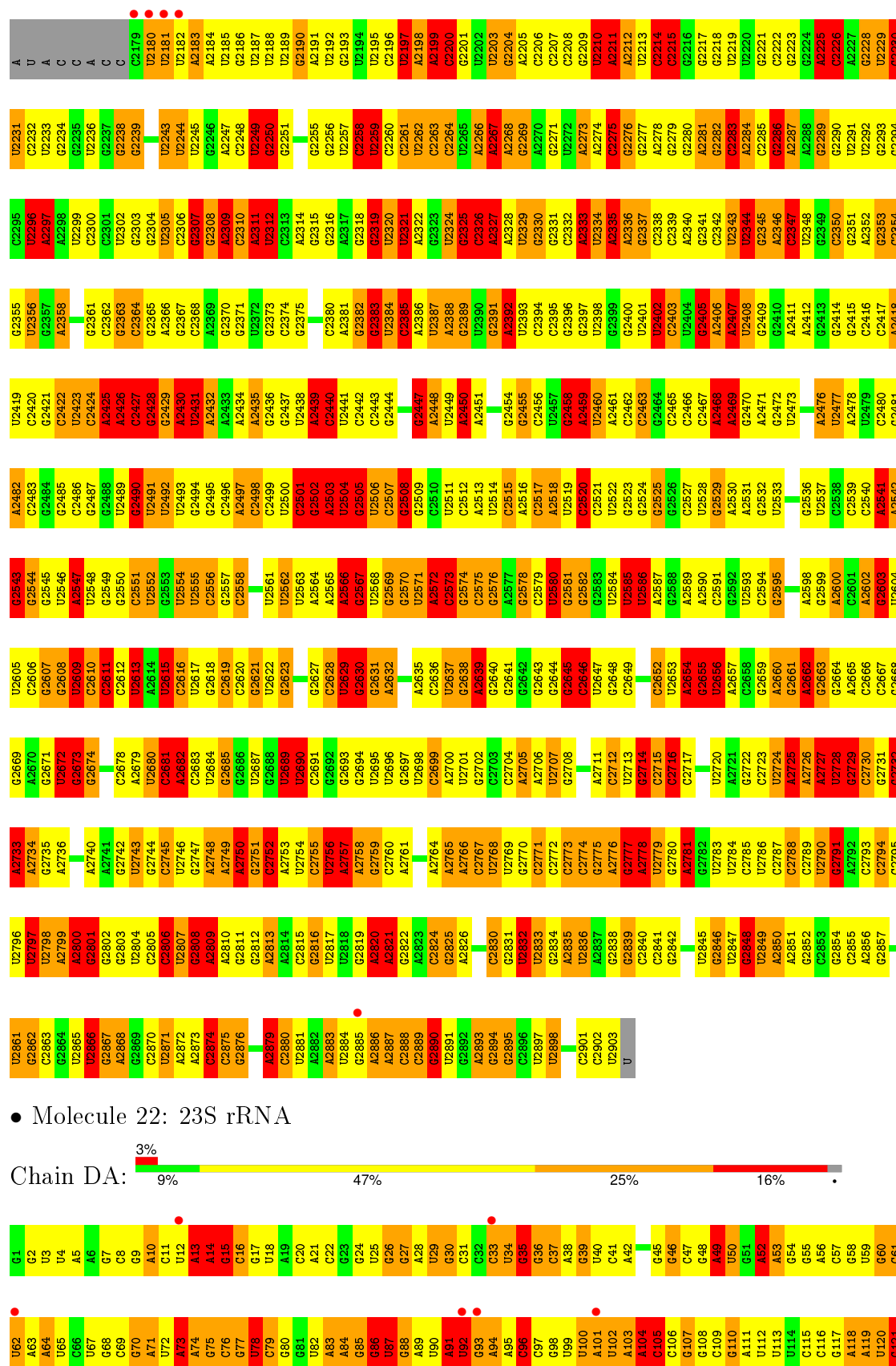


• Molecule 22: 23S rRNA



G1139	C1079	C1013	C951	C	A825	G763	A699	G638	G577	C510	U448	A382	C318	C257	G192
C1140	A1080	A1014	G951	C	U826	A764	U702	U639	G578	U511	A449	C383	G319	G258	A196
U1141	U1081	U1015	G954	G	U827	C765	U703	C640	G579	A513	G450	A384	A320	G259	A197
A1142	U1082	G1016	U955	A892	U828	U766	G704	U641	U580	A514	U450	C385	U321	G260	C198
A1143	U1083	G1017	U956	C893	A829	U767	A705	U642	A582	C581	G452	G386	A322	G261	C199
A1144	A1084	U1018	G956	U894	G830	G768	G706	C645	C583	A453	G453	U387	C323	A262	A199
C1145	A1085	U1019	C957	U895	G831	U769	U707	C646	C584	G520	A454	C388	C324	G263	U200
C1146	A1086	U1020	U958	A896	U832	U770	G708	U647	C585	U521	C455	C389	G325	C264	C201
A1147	G1087	A1021	A959	C897	A833	C772	G708	G648	C586	A522	A457	U390	G326	A265	
G1148	A1088	G1022	A960	A898	G834	U773	U709	G649	C587	C523	G458	A391	G329	G266	A204
G1149	A1089	U1023	A961	C898	C835	U774	U710	G649	C588	C524	U459	U391	G330	G267	A205
A1150	A1090	G1024	G962	A900	G836	G775	G711	C650	U583	A526	U459	U395	A330	C268	U206
A1151	C1091	U1025	U963	C901	C837	G776	G712	C651	U589	C527	A460	C386	A331	C269	A207
C1152	C1092	G1026	C964	C902	C838	G777	G713	U852	A590	A528	C461	U387	A332	A270	C208
C1153	G1093	A1027	C965	G903	U839	U778	U715	U853	U591	A529	C462	U388	G333	G271	C209
G1154	U1094	C840	G966	G904	U841	U779	A715	A855	A592	C531	G463	U399	C334	A272	C210
A1155	A1095	U842	U967	A905	G841	G780	G717	G656	U593	A532	U464	G400	C335	G273	C211
C1156	G968	U842	C907	U906	U842	A781	C717	G657	U594	C533	G465	U403	C336	G274	G212
G1157	U969	U842	G907	G907	U842	A782	A718	U858	C595	C534	A466	A404	C337	G275	A213
U1158	A1098	A845	C908	C908	A845	A783	G719	U858	U596	U534	G467	A404	U338	G276	G214
U1159	A1099	U846	A909	A909	U846	G784	U720	U859	C597	C535	G468	U405	U339	G277	G215
G1160	C1100	U847	A910	A910	U847	G785	A721	C660	G600	C536	G469	A406	U340	A278	A216
C1161	U1101	C848	A911	A911	C848	G786	A722	A661	G601	C537	A470	G407	C341	A279	A217
G1162	C1102	G1042	A975	C912	C848	C787	G723	G662	A602	A538	A471	G408	A342	U280	
	A1103	G1043	G976	U913	C851	A788	U724	G663	C603	C539	A472	G409	C343	C281	A221
A1165	C1104	C1044	G977	C914	U852	A789	G725	G664	A603	C540	G473	G410	A344	A282	A222
G1166	U1105	C1045	G978	C915	C853	U790	G726	U665	G604	A541	G474	G411	A345	G283	A223
	G1106	U1046	A979	G916	C854	G791	A727	U666	G605	C542	C475	G412	A346	U284	U224
C1170	G1107	G1047	A980	A917	G855	A792	G728	U667	U606	C543	G476	G413	A347	G285	C225
G1171	A1108	A1048	A981	A918	G856	A793	G729	U668	U607	C544	A477	C414	A348	U286	A226
C1172	C1109	U1049	C982	U919	G857	A794	A730	G669	A608	U545	A478	A415	U349	G287	A227
U1173	G1110	A1050	A983	A920	G858	C795	G738	A675	A609	U546	A479	U416	C350	U288	C228
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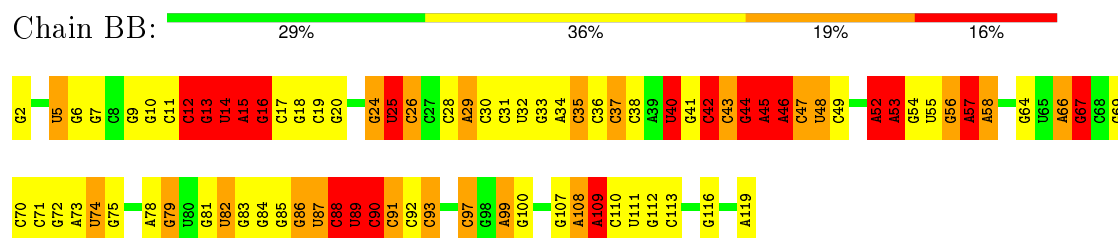


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C948	C948	U762	G701	U762	U762	G702	U639	G579	C516	C455	U395	C335	C275	A216	A155
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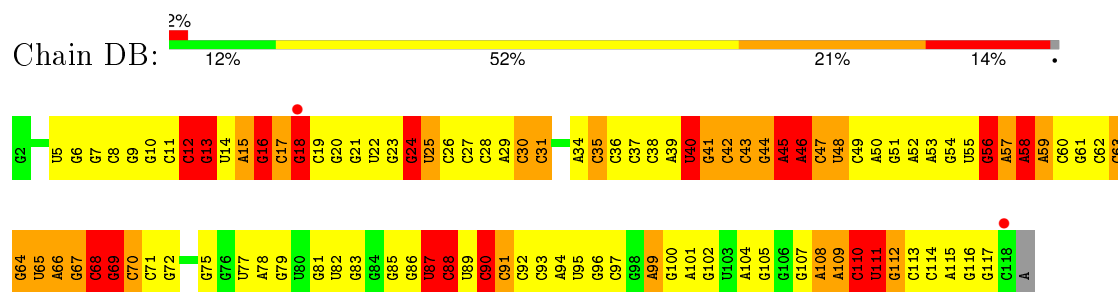
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G2012	A1887	U1887	U1765	A1705	C1645	G1585	A1523	C1462	G1401	U1340	G1279	U1219	C1158
A2013	U1951	G1888	G1766	C1706	C1646	A1586	G1524	C1463					

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	A2807	U2807	G2623	G2623	C2558	C2494	A2435	C2374	U2312	G2252	U	U	C2072
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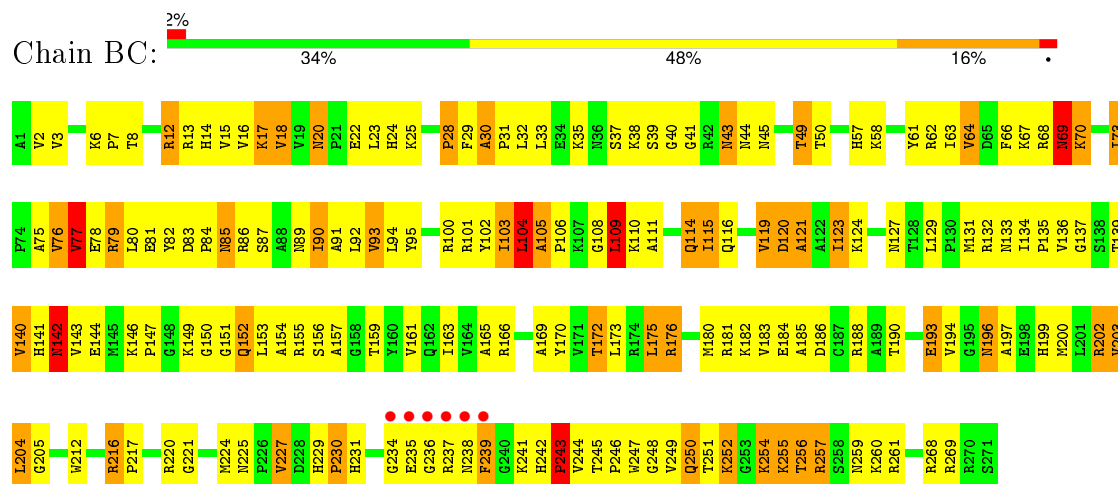
- Molecule 23: 5S rRNA



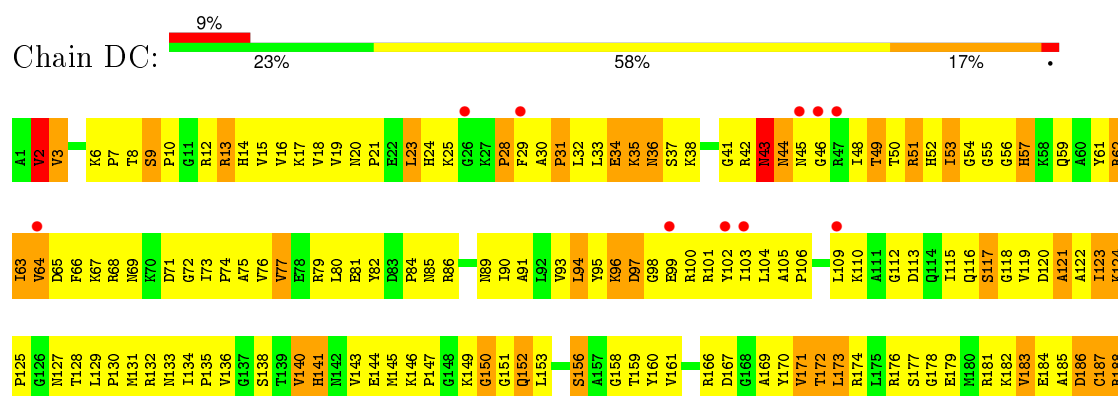
- Molecule 23: 5S rRNA

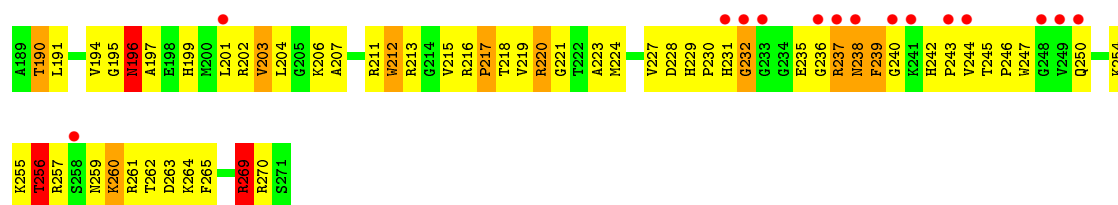


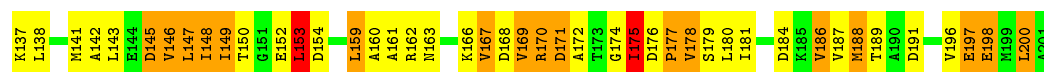
- Molecule 24: 50S ribosomal protein L2



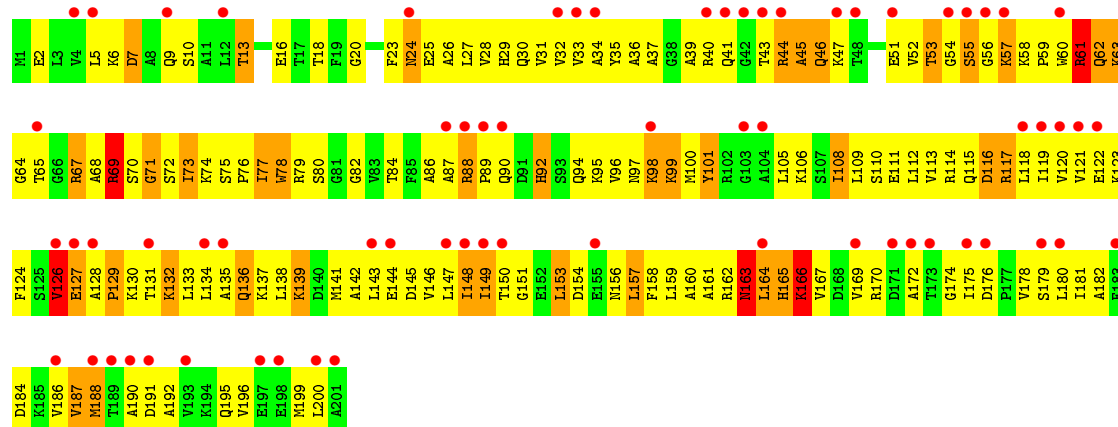
- Molecule 24: 50S ribosomal protein L2



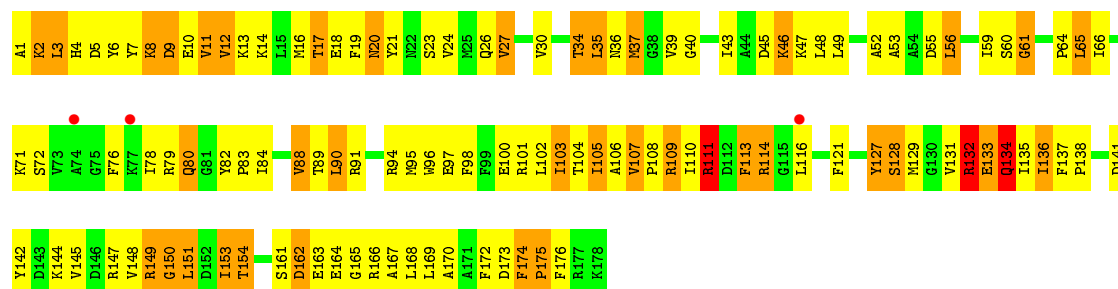




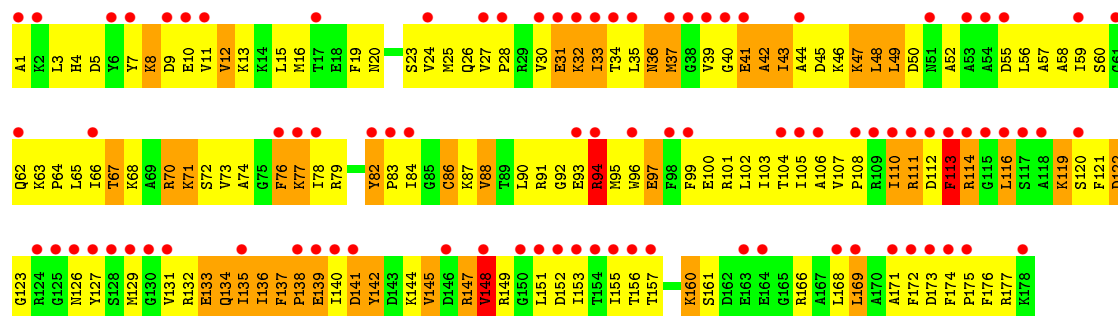
• Molecule 26: 50S ribosomal protein L4



• Molecule 27: 50S ribosomal protein L5

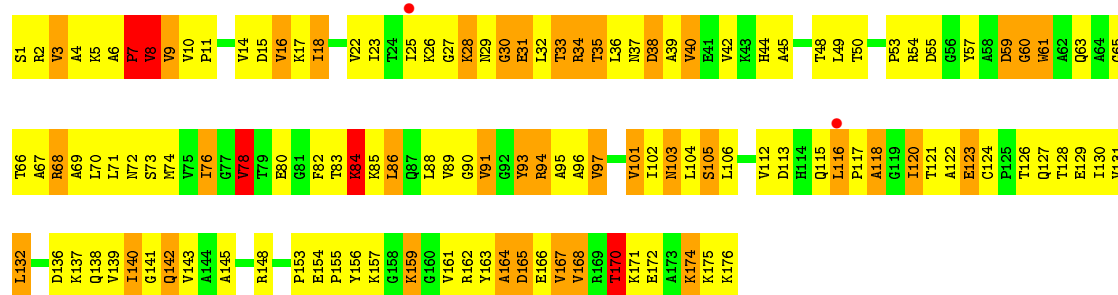


• Molecule 27: 50S ribosomal protein L5

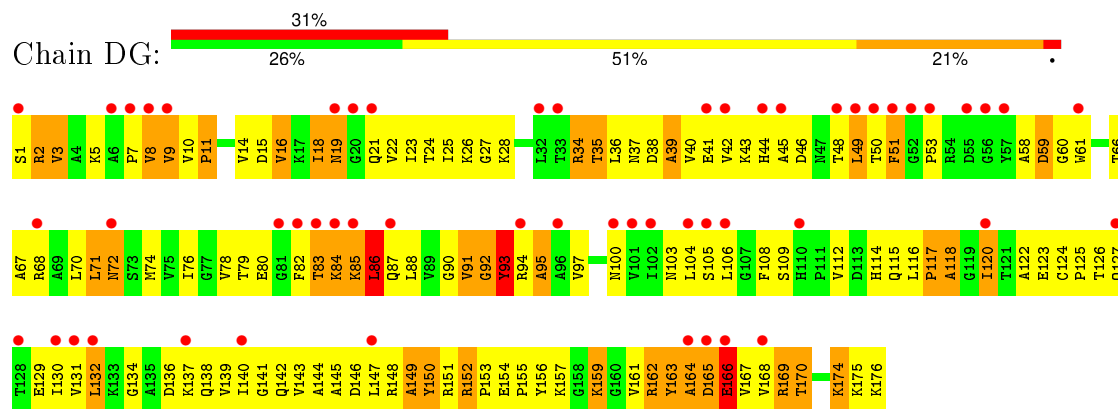


• Molecule 28: 50S ribosomal protein L6

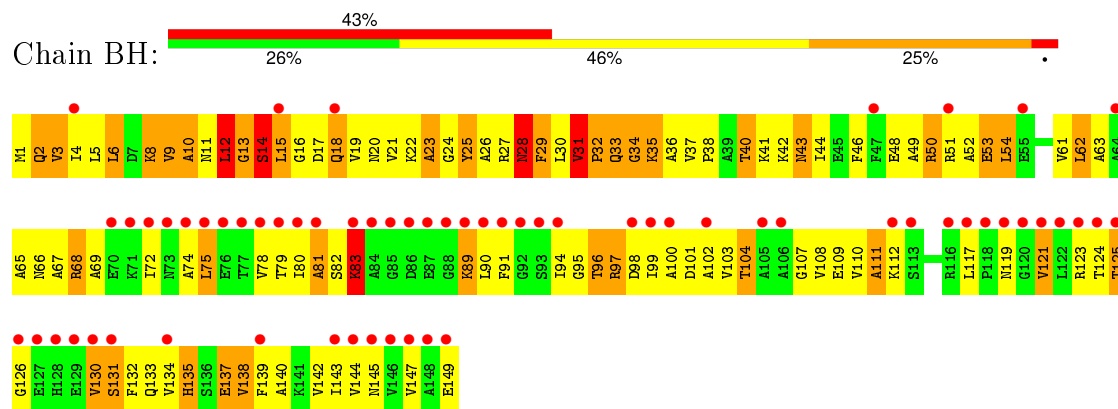




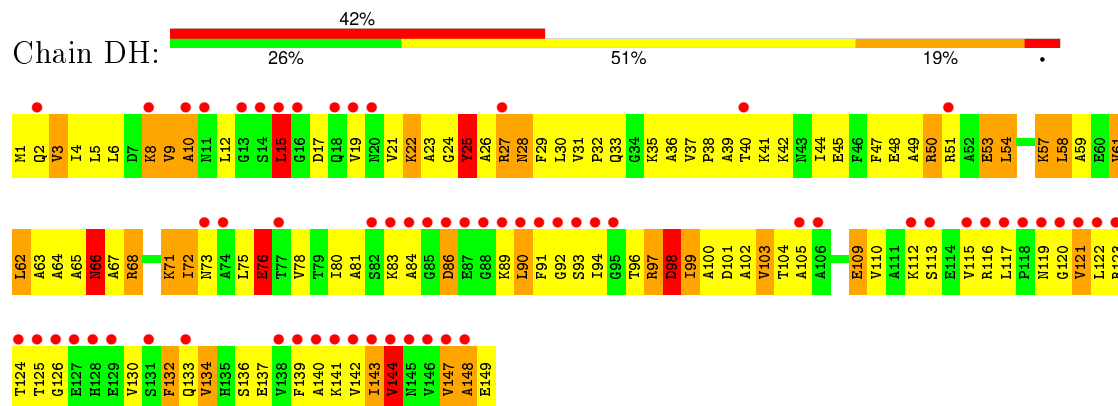
• Molecule 28: 50S ribosomal protein L6



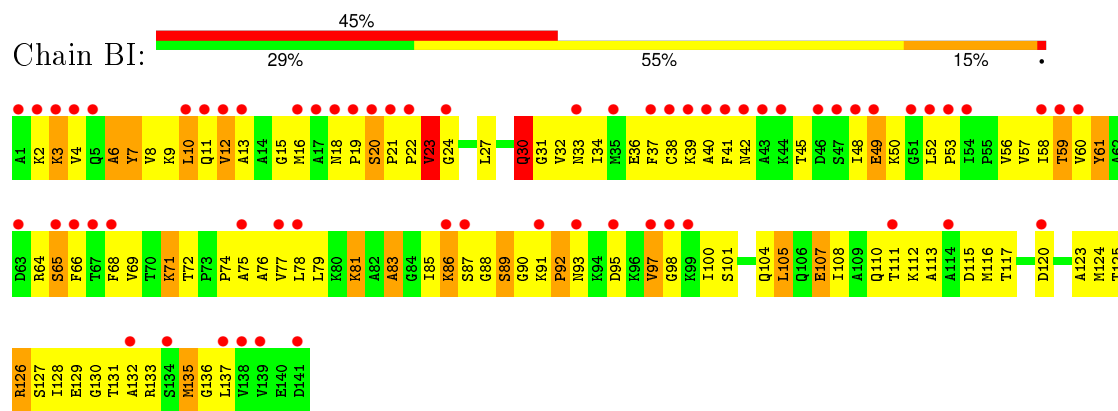
• Molecule 29: 50S ribosomal protein L9



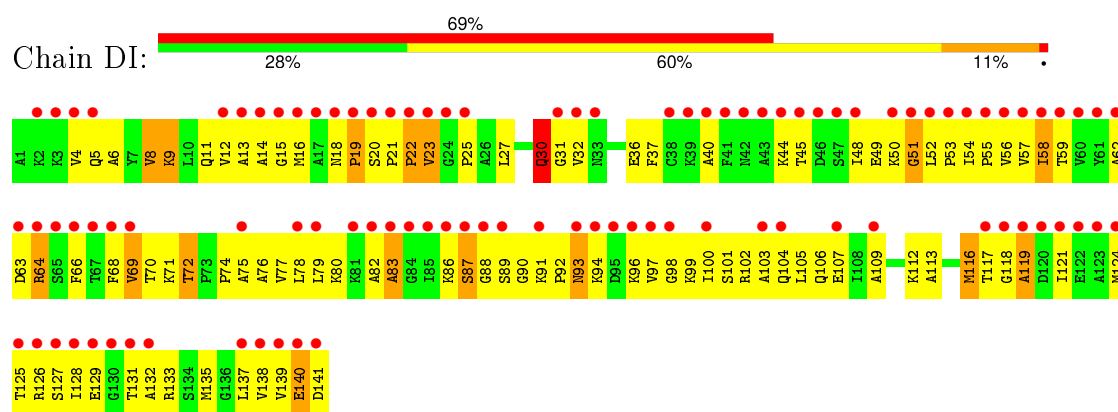
• Molecule 29: 50S ribosomal protein L9



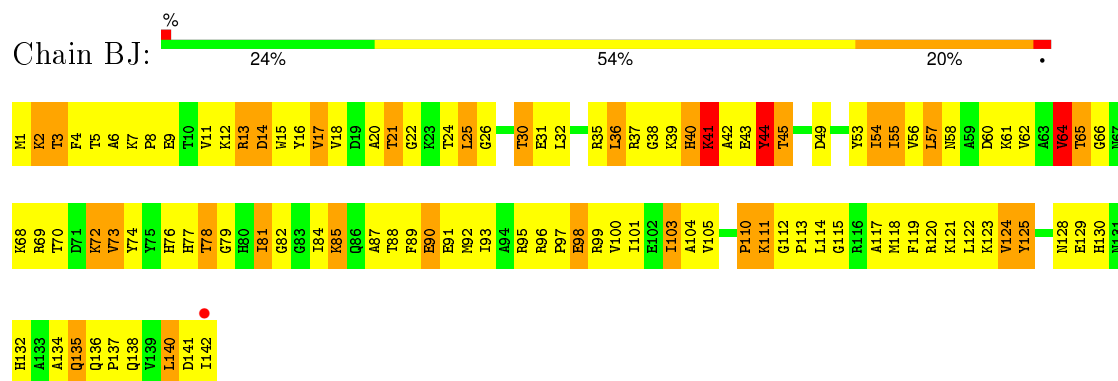
- Molecule 30: 50S ribosomal protein L11



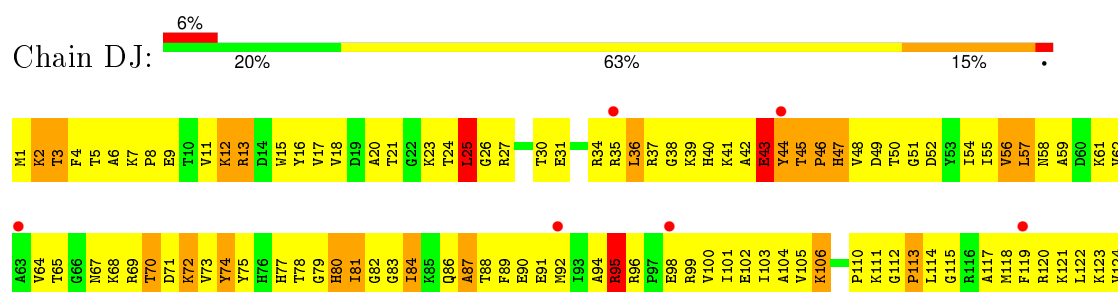
- Molecule 30: 50S ribosomal protein L11



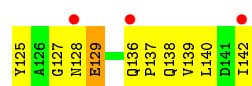
- Molecule 31: 50S ribosomal protein L13



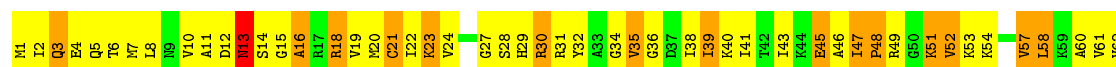
- Molecule 31: 50S ribosomal protein L13



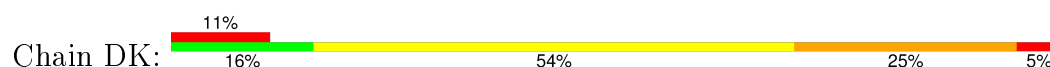




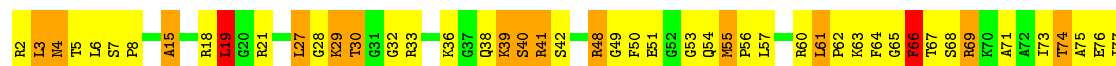
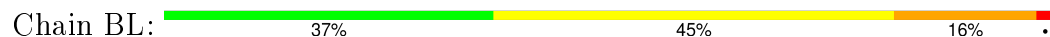
- Molecule 32: 50S ribosomal protein L14



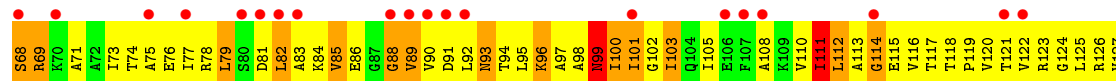
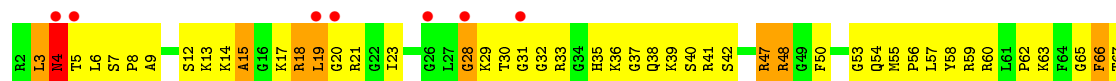
- Molecule 32: 50S ribosomal protein L14



- Molecule 33: 50S ribosomal protein L15

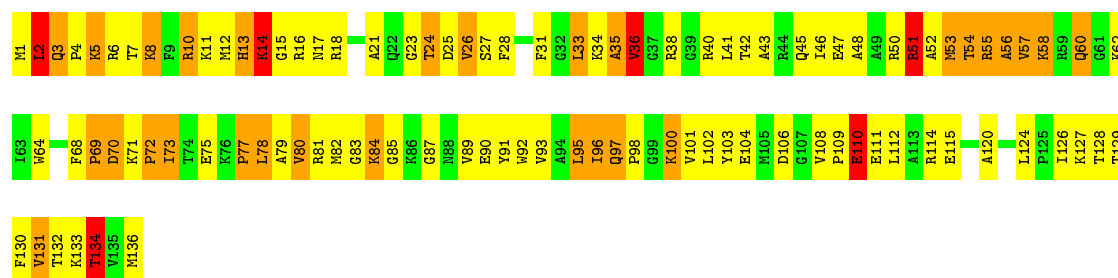


- Molecule 33: 50S ribosomal protein L15



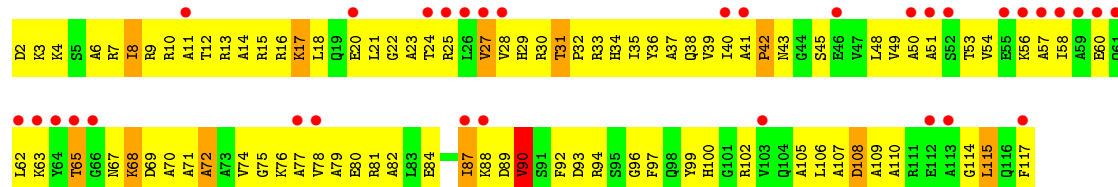
- Molecule 34: 50S ribosomal protein L16



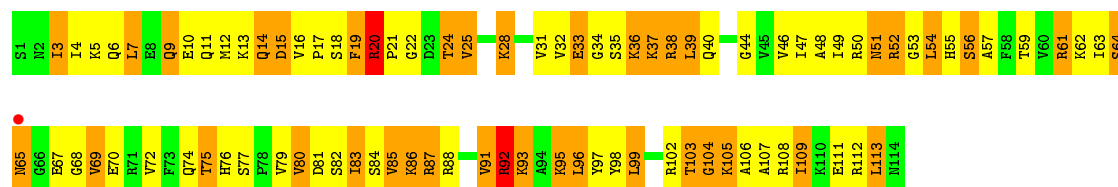
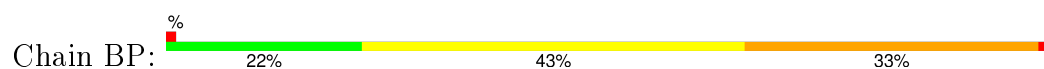




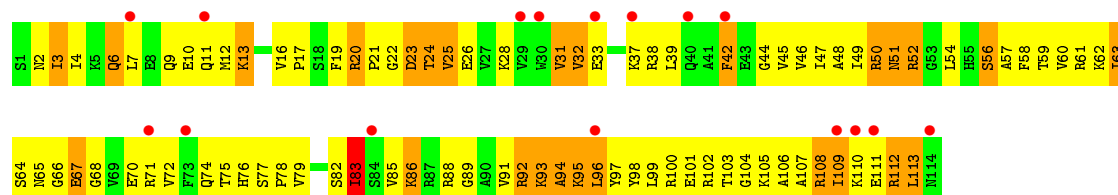
• Molecule 36: 50S ribosomal protein L18



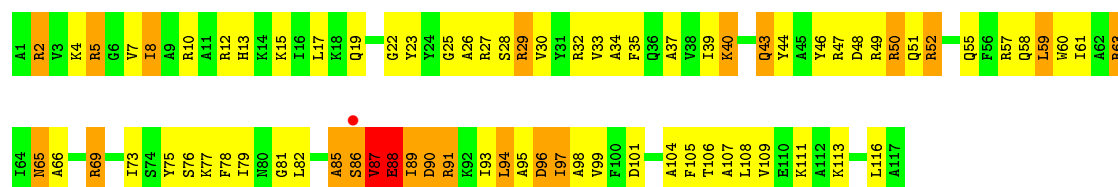
• Molecule 37: 50S ribosomal protein L19



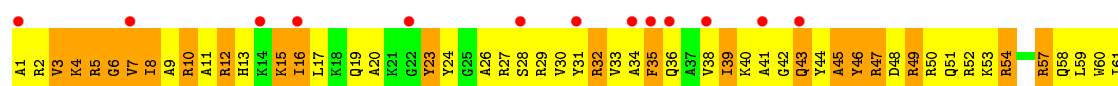
• Molecule 37: 50S ribosomal protein L19



• Molecule 38: 50S ribosomal protein L20

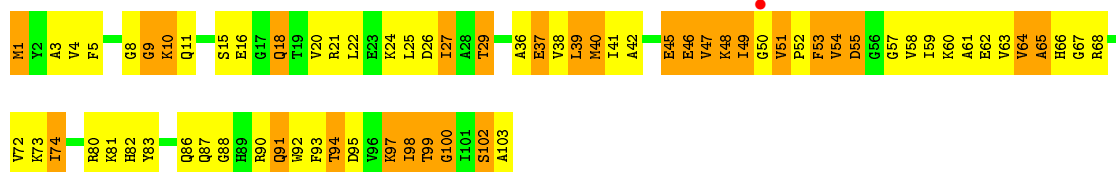


• Molecule 38: 50S ribosomal protein L20

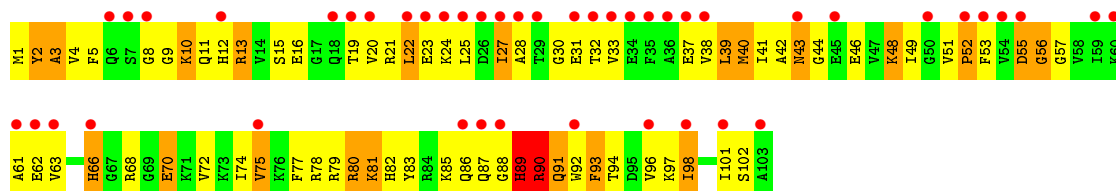




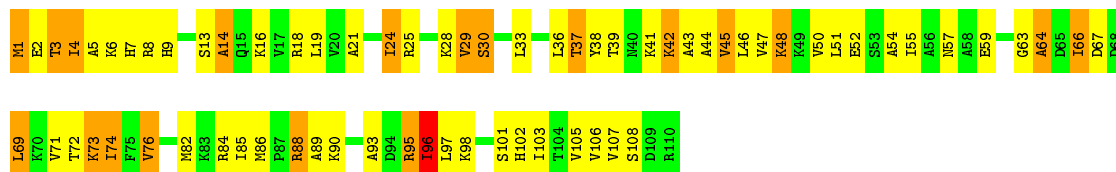
- Molecule 39: 50S ribosomal protein L21



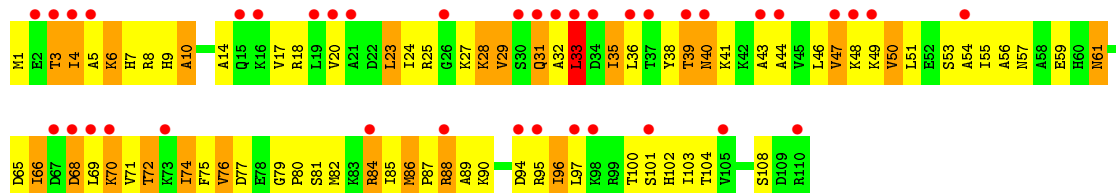
- Molecule 39: 50S ribosomal protein L21



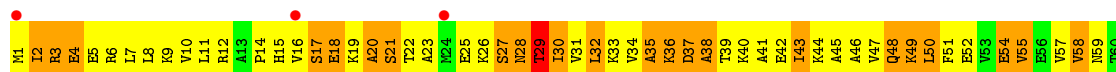
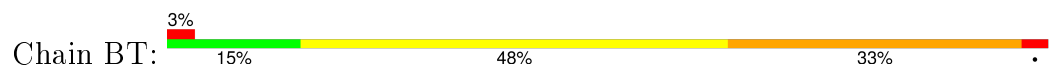
- Molecule 40: 50S ribosomal protein L22



- Molecule 40: 50S ribosomal protein L22

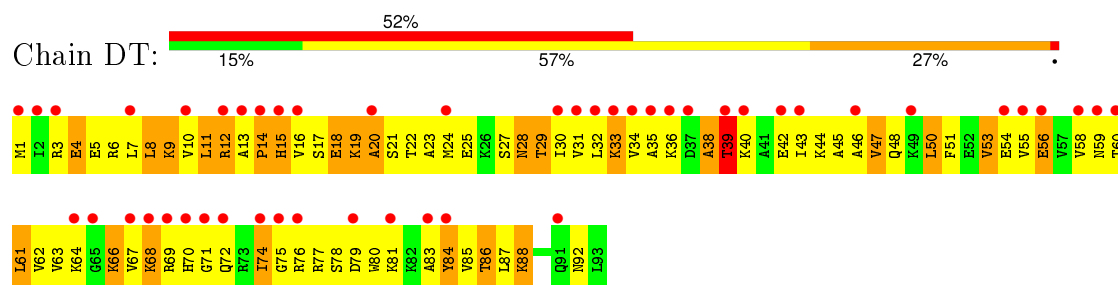


- Molecule 41: 50S ribosomal protein L23

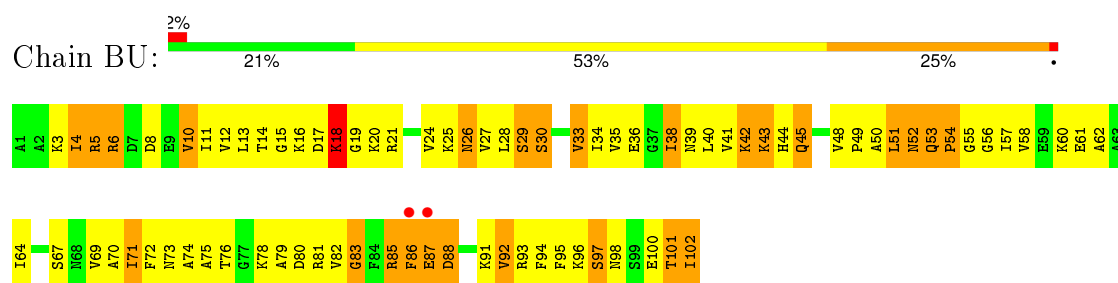




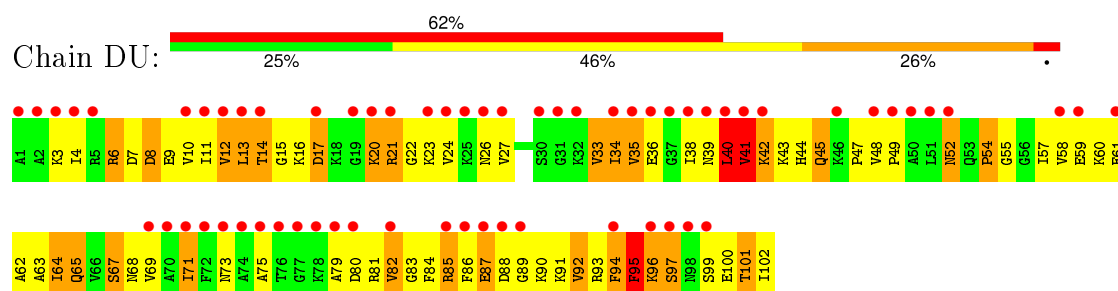
• Molecule 41: 50S ribosomal protein L23



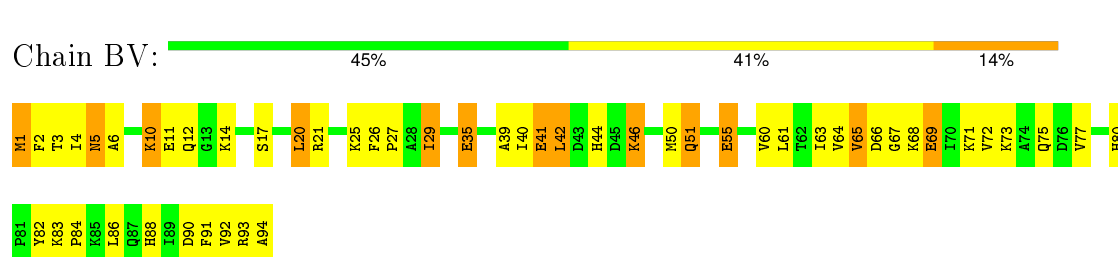
• Molecule 42: 50S ribosomal protein L24



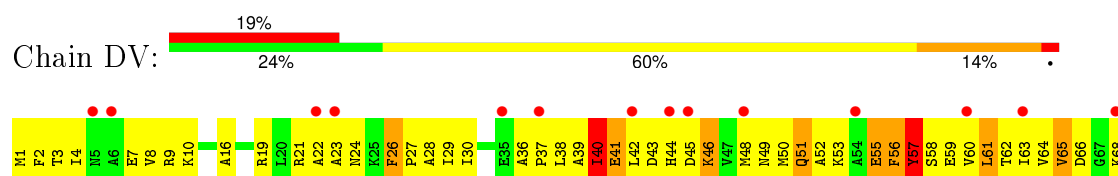
• Molecule 42: 50S ribosomal protein L24

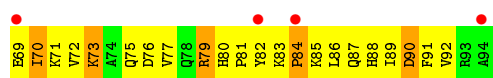


• Molecule 43: 50S ribosomal protein L25

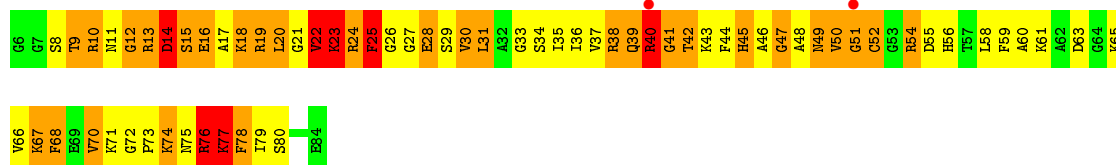
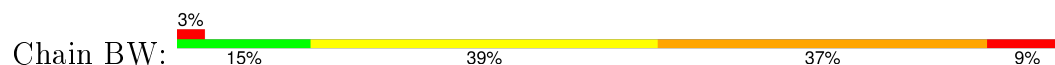


• Molecule 43: 50S ribosomal protein L25

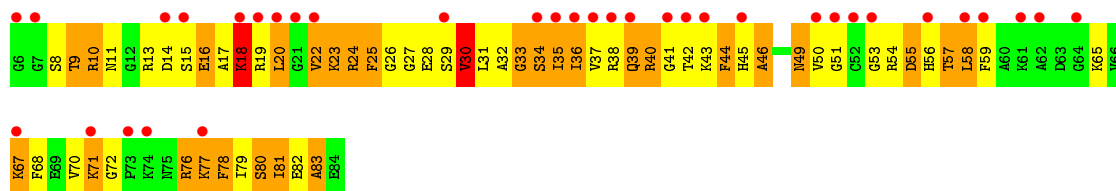
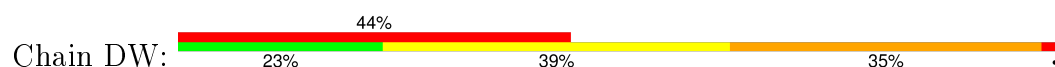




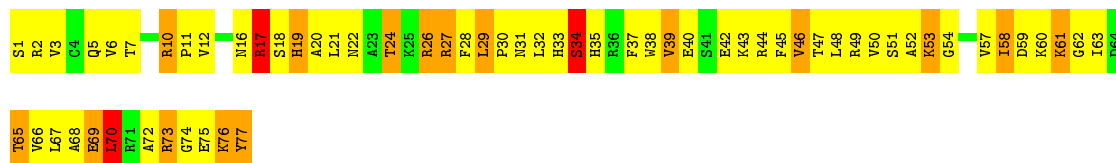
- Molecule 44: 50S ribosomal protein L27



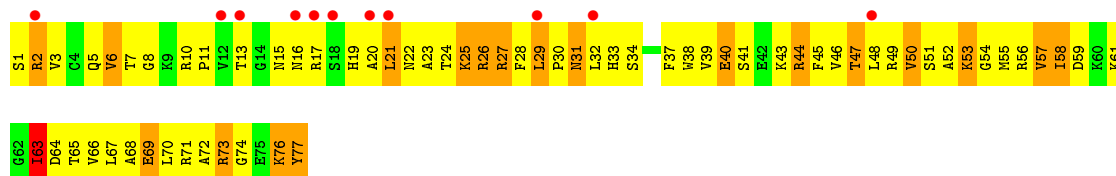
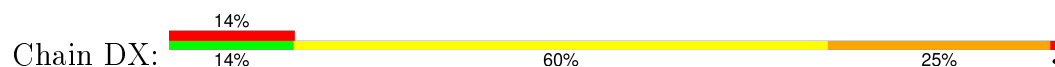
- Molecule 44: 50S ribosomal protein L27



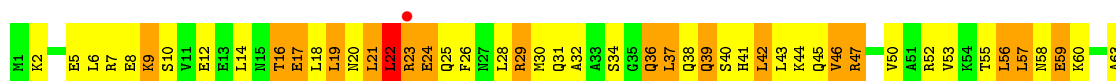
- Molecule 45: 50S ribosomal protein L28



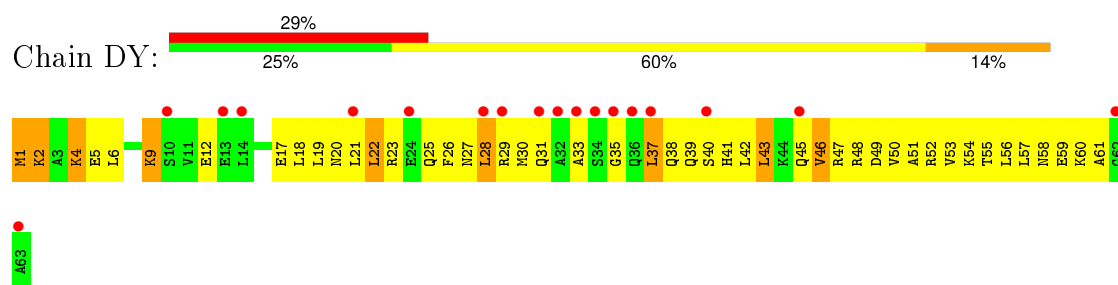
- Molecule 45: 50S ribosomal protein L28



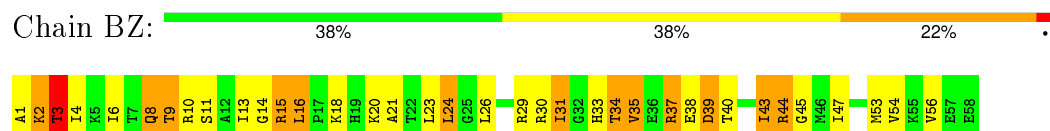
- Molecule 46: 50S ribosomal protein L29



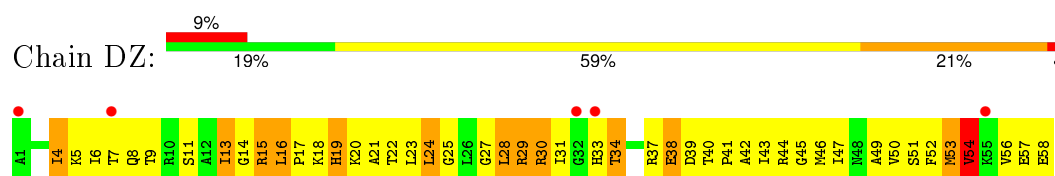
- Molecule 46: 50S ribosomal protein L29



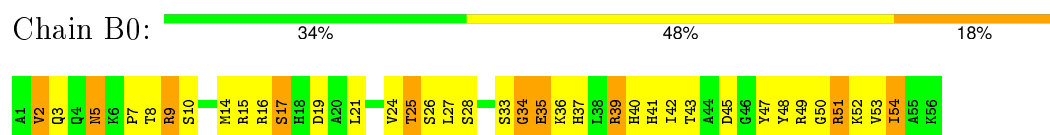
- Molecule 47: 50S ribosomal protein L30



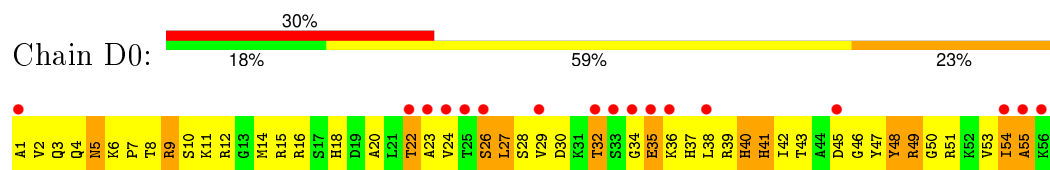
- Molecule 47: 50S ribosomal protein L30



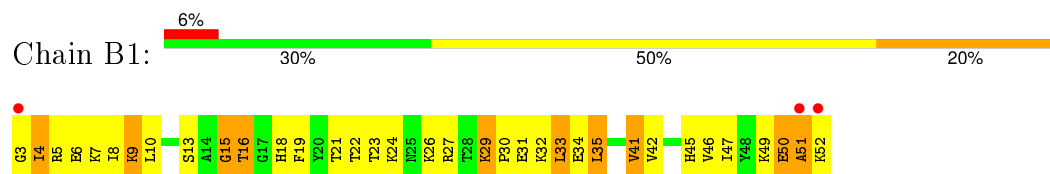
- Molecule 48: 50S ribosomal protein L32



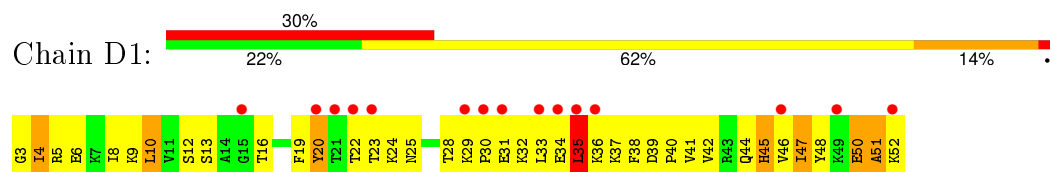
- Molecule 48: 50S ribosomal protein L32



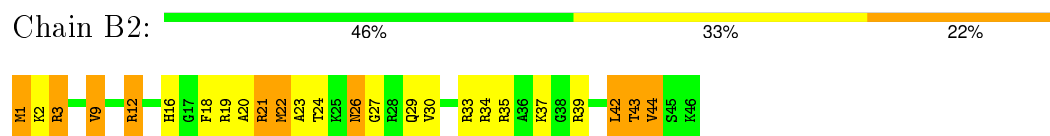
- Molecule 49: 50S ribosomal protein L33



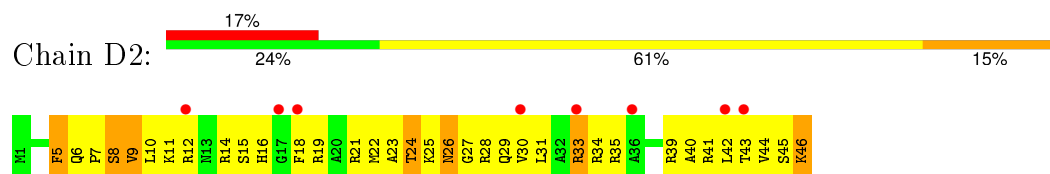
- Molecule 49: 50S ribosomal protein L33



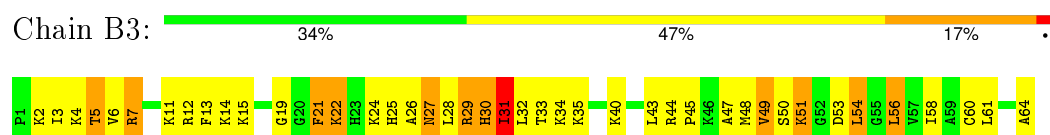
- Molecule 50: 50S ribosomal protein L34



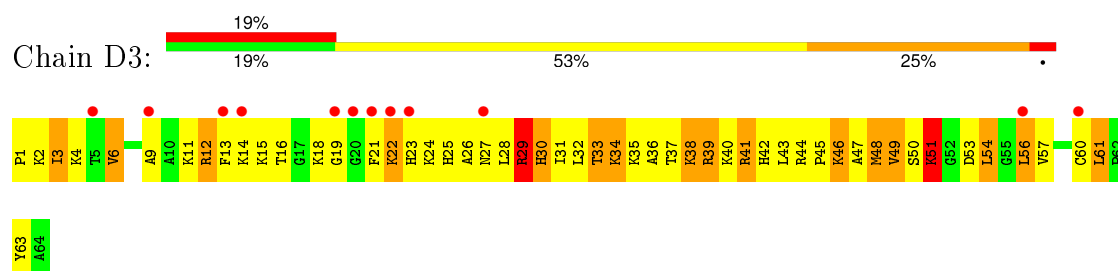
- Molecule 50: 50S ribosomal protein L34



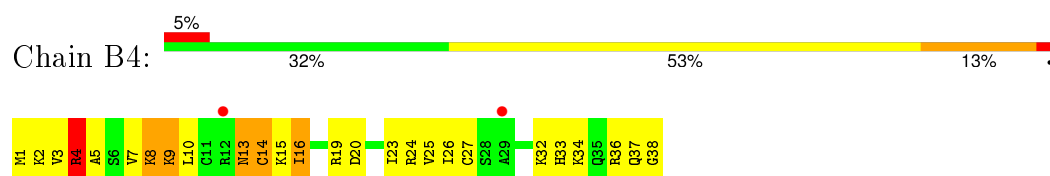
- Molecule 51: 50S ribosomal protein L35



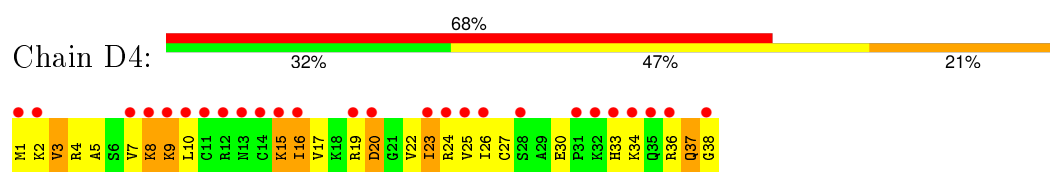
- Molecule 51: 50S ribosomal protein L35



- Molecule 52: 50S ribosomal protein L36



- Molecule 52: 50S ribosomal protein L36





## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	211.96Å 434.53Å 623.58Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	82.40 – 3.10 82.42 – 3.10	Depositor EDS
% Data completeness (in resolution range)	(Not available) (82.40-3.10) 83.9 (82.42-3.10)	Depositor EDS
$R_{merge}$	0.10	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.47 (at 3.13Å)	Xtriage
Refinement program	PHENIX	Depositor
R, $R_{free}$	0.205 , 0.254 0.217 , 0.264	Depositor DCC
$R_{free}$ test set	18658 reflections (2.21%)	DCC
Wilson B-factor (Å <sup>2</sup> )	54.4	Xtriage
Anisotropy	0.354	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.24 , 79.0	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.47$ , $\langle L^2 \rangle = 0.30$	Xtriage
Outliers	0 of 925668 reflections	Xtriage
$F_o, F_c$ correlation	0.91	EDS
Total number of atoms	284525	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	102.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.52% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  for acentric reflections are 0.5, 0.375 respectively for untwinned datasets, and 0.333, 0.2 for perfectly twinned datasets.

## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: MG, ZN, ERY

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 5$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z  > 5$	RMSZ	$\# Z  > 5$
1	AA	0.53	0/36834	1.32	524/57462 (0.9%)
1	CA	0.46	0/36762	1.21	433/57350 (0.8%)
2	AB	0.24	0/1736	0.47	0/2338
2	CB	0.22	0/1736	0.44	0/2338
3	AC	0.27	0/1652	0.50	0/2225
3	CC	0.24	0/1652	0.44	0/2225
4	AD	0.30	0/1665	0.52	0/2227
4	CD	0.37	0/1665	0.61	0/2227
5	AE	0.34	0/1119	0.61	0/1504
5	CE	0.31	0/1119	0.55	0/1504
6	AF	0.29	0/836	0.47	0/1128
6	CF	0.28	0/836	0.51	0/1128
7	AG	0.22	0/1196	0.44	0/1602
7	CG	0.22	0/1188	0.44	0/1591
8	AH	0.32	0/989	0.56	0/1326
8	CH	0.27	0/989	0.49	0/1326
9	AI	0.23	0/1034	0.45	0/1375
9	CI	0.22	0/1034	0.41	0/1375
10	AJ	0.24	0/797	0.47	0/1077
10	CJ	0.21	0/797	0.47	0/1077
11	AK	0.27	0/893	0.53	0/1205
11	CK	0.26	0/893	0.50	0/1205
12	AL	0.38	0/969	0.69	0/1300
12	CL	0.32	0/969	0.56	0/1300
13	AM	0.23	0/893	0.49	0/1193
13	CM	0.27	1/885 (0.1%)	0.39	0/1183
14	AN	0.25	0/785	0.48	0/1043
14	CN	0.21	0/780	0.38	0/1036
15	AO	0.30	0/722	0.49	0/964
15	CO	0.25	0/722	0.44	0/964
16	AP	0.31	0/659	0.51	0/884
16	CP	0.33	0/649	0.53	0/872

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
17	AQ	0.37	0/658	0.59	0/881
17	CQ	0.26	0/658	0.50	0/881
18	AR	0.29	0/463	0.49	0/621
18	CR	0.28	0/463	0.46	0/621
19	AS	0.23	0/653	0.46	0/877
19	CS	0.21	0/653	0.41	0/877
20	AT	0.34	0/671	0.57	0/888
20	CT	0.26	0/671	0.51	0/888
21	AU	0.25	0/431	0.46	0/570
21	CU	0.31	0/431	0.58	0/570
22	BA	0.85	15/68626 (0.0%)	1.69	1674/107056 (1.6%)
22	DA	0.46	0/68314	1.26	901/106569 (0.8%)
23	BB	0.74	0/2828	1.56	46/4410 (1.0%)
23	DB	0.40	0/2803	1.09	27/4371 (0.6%)
24	BC	0.48	0/2122	0.74	1/2852 (0.0%)
24	DC	0.29	0/2122	0.54	0/2852
25	BD	0.61	0/1586	0.80	2/2134 (0.1%)
25	DD	0.28	0/1586	0.55	0/2134
26	BE	0.51	0/1571	0.73	0/2113
26	DE	0.25	0/1571	0.48	0/2113
27	BF	0.35	0/1435	0.55	0/1928
27	DF	0.21	0/1444	0.44	0/1937
28	BG	0.38	0/1343	0.61	0/1816
28	DG	0.21	0/1343	0.44	0/1816
29	BH	0.28	0/1122	0.51	0/1515
29	DH	0.26	0/1122	0.48	0/1515
30	BI	0.23	0/1046	0.47	0/1410
30	DI	0.20	0/1046	0.42	0/1410
31	BJ	0.60	0/1152	0.84	1/1551 (0.1%)
31	DJ	0.27	0/1152	0.55	1/1551 (0.1%)
32	BK	0.61	1/948 (0.1%)	0.83	0/1268
32	DK	0.30	0/948	0.56	0/1268
33	BL	0.50	0/1054	0.80	2/1403 (0.1%)
33	DL	0.25	0/1054	0.51	0/1403
34	BM	0.55	0/1093	0.78	0/1460
34	DM	0.27	0/1093	0.49	0/1460
35	BN	0.55	0/974	0.82	2/1301 (0.2%)
35	DN	0.27	0/974	0.50	0/1301
36	BO	0.42	0/902	0.66	0/1209
36	DO	0.22	0/902	0.41	0/1209
37	BP	0.52	0/929	0.72	0/1242
37	DP	0.28	0/929	0.49	0/1242
38	BQ	0.72	0/960	0.89	1/1278 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
38	DQ	0.27	0/960	0.46	0/1278
39	BR	0.67	2/829 (0.2%)	0.85	1/1107 (0.1%)
39	DR	0.27	0/829	0.48	0/1107
40	BS	0.63	0/864	0.84	0/1156
40	DS	0.26	0/864	0.51	0/1156
41	BT	0.51	0/745	0.80	0/994
41	DT	0.22	0/745	0.46	0/994
42	BU	0.44	0/788	0.75	0/1051
42	DU	0.23	0/788	0.45	0/1051
43	BV	0.47	0/766	0.65	0/1025
43	DV	0.23	0/766	0.43	0/1025
44	BW	0.67	0/603	0.93	1/797 (0.1%)
44	DW	0.24	0/603	0.48	0/797
45	BX	0.43	0/635	0.75	1/848 (0.1%)
45	DX	0.28	0/635	0.54	0/848
46	BY	0.39	0/510	0.63	0/677
46	DY	0.21	0/510	0.41	0/677
47	BZ	0.58	0/453	0.93	2/605 (0.3%)
47	DZ	0.25	0/453	0.49	0/605
48	B0	0.52	0/450	0.79	0/599
48	D0	0.27	0/450	0.49	0/599
49	B1	0.38	0/417	0.64	0/554
49	D1	0.23	0/417	0.46	0/554
50	B2	0.52	0/380	0.71	0/498
50	D2	0.27	0/380	0.52	0/498
51	B3	0.50	0/513	0.70	1/676 (0.1%)
51	D3	0.26	0/513	0.54	0/676
52	B4	0.41	0/303	0.64	0/397
52	D4	0.24	0/303	0.43	0/397
All	All	0.56	19/306773 (0.0%)	1.25	3621/458571 (0.8%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
12	AL	0	1
20	AT	0	1
25	BD	0	1
31	BJ	0	1
35	BN	0	1
All	All	0	5

All (19) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	BA	1142	A	N9-C4	-8.33	1.32	1.37
22	BA	984	A	C5-C6	-7.40	1.34	1.41
39	BR	86	GLN	CB-CG	7.19	1.72	1.52
22	BA	1783	A	N7-C5	-6.87	1.35	1.39
22	BA	984	A	N9-C4	-5.90	1.34	1.37
22	BA	2606	C	N1-C6	-5.84	1.33	1.37
39	BR	86	GLN	CG-CD	5.77	1.64	1.51
13	CM	113	LYS	C-N	-5.63	1.23	1.34
22	BA	1785	A	N7-C5	-5.57	1.35	1.39
22	BA	563	A	N7-C5	-5.57	1.35	1.39
22	BA	984	A	N3-C4	-5.53	1.31	1.34
22	BA	1299	G	N7-C5	-5.52	1.35	1.39
22	BA	1385	A	N9-C4	-5.42	1.34	1.37
22	BA	2699	C	N1-C6	-5.35	1.33	1.37
22	BA	1658	C	N1-C6	-5.32	1.33	1.37
32	BK	122	VAL	CA-CB	5.19	1.65	1.54
22	BA	673	C	N1-C6	-5.11	1.34	1.37
22	BA	2587	A	C5-C4	-5.09	1.35	1.38
22	BA	1654	A	N3-C4	-5.07	1.31	1.34

All (3621) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	571	U	O4'-C1'-N1	17.46	122.17	108.20
22	BA	2848	G	P-O3'-C3'	17.00	140.09	119.70
22	BA	627	A	P-O3'-C3'	16.24	139.19	119.70
22	BA	984	A	N1-C6-N6	16.11	128.26	118.60
22	BA	1603	A	P-O3'-C3'	-15.84	100.69	119.70
1	AA	111	G	P-O3'-C3'	-15.18	101.49	119.70
22	BA	2893	A	P-O3'-C3'	15.14	137.87	119.70
22	BA	984	A	C2-N3-C4	-15.11	103.05	110.60
22	DA	2137	U	N1-C1'-C2'	-14.97	94.53	114.00
22	DA	2283	C	N1-C1'-C2'	-14.81	94.75	114.00
22	DA	946	C	N1-C1'-C2'	-14.73	94.85	114.00
22	BA	451	U	O4'-C1'-N1	14.72	119.98	108.20
22	BA	1997	C	N1-C1'-C2'	-14.71	94.88	114.00
22	BA	788	A	P-O3'-C3'	14.65	137.28	119.70
22	DA	2504	U	N1-C1'-C2'	-14.29	95.43	114.00
22	BA	1012	U	O4'-C1'-N1	14.29	119.63	108.20
22	BA	2283	C	N1-C1'-C2'	-14.16	95.59	114.00
1	AA	1202	U	N1-C1'-C2'	-14.12	95.64	114.00
22	BA	302	C	N1-C1'-C2'	-14.13	95.64	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	250	G	P-O3'-C3'	-14.11	102.77	119.70
22	DA	1956	U	N1-C1'-C2'	-13.79	96.07	114.00
22	BA	531	C	O4'-C1'-N1	-13.74	97.21	108.20
22	BA	2752	C	N1-C1'-C2'	-13.73	96.15	114.00
22	BA	2423	U	O4'-C1'-N1	-13.71	97.23	108.20
22	BA	2776	A	P-O3'-C3'	13.70	136.14	119.70
1	AA	352	C	N1-C1'-C2'	-13.67	96.23	114.00
22	BA	728	G	P-O3'-C3'	13.52	135.93	119.70
22	DA	2586	U	N1-C1'-C2'	-13.51	96.44	114.00
22	DA	485	C	N1-C1'-C2'	-13.45	96.51	114.00
22	BA	241	A	P-O3'-C3'	13.28	135.64	119.70
22	DA	1997	C	N1-C1'-C2'	-13.27	96.75	114.00
1	AA	52	C	N1-C1'-C2'	-13.24	96.79	114.00
22	BA	2800	A	P-O3'-C3'	13.20	135.54	119.70
22	DA	2068	U	N1-C1'-C2'	-13.12	96.95	114.00
22	DA	1782	U	P-O3'-C3'	-13.08	104.01	119.70
22	BA	1151	A	P-O3'-C3'	-13.06	104.02	119.70
22	DA	740	C	N1-C1'-C2'	-13.05	97.03	114.00
22	BA	1023	U	N1-C1'-C2'	-12.97	97.14	114.00
1	CA	1086	U	N1-C1'-C2'	-12.94	97.18	114.00
23	BB	90	C	N1-C1'-C2'	-12.93	97.19	114.00
22	BA	1461	C	N1-C1'-C2'	-12.92	97.20	114.00
1	CA	1302	C	N1-C1'-C2'	-12.90	97.22	114.00
22	BA	783	A	P-O3'-C3'	-12.78	104.37	119.70
22	DA	1782	U	N1-C1'-C2'	-12.78	97.39	114.00
22	DA	2440	C	N1-C1'-C2'	-12.72	97.46	114.00
23	BB	44	G	P-O3'-C3'	12.61	134.84	119.70
22	BA	2517	C	O4'-C1'-N1	12.60	118.28	108.20
1	CA	132	C	N1-C1'-C2'	-12.57	97.66	114.00
22	BA	390	U	P-O3'-C3'	12.56	134.77	119.70
22	BA	1635	A	P-O3'-C3'	-12.50	104.69	119.70
1	CA	66	A	P-O3'-C3'	-12.47	104.74	119.70
1	AA	267	C	N1-C1'-C2'	-12.43	97.84	114.00
1	AA	1202	U	O4'-C1'-N1	12.41	118.13	108.20
22	BA	373	U	N1-C1'-C2'	-12.41	97.87	114.00
22	DA	2300	C	N1-C1'-C2'	-12.40	97.88	114.00
22	DA	1013	C	N1-C1'-C2'	-12.37	97.92	114.00
1	CA	328	C	P-O3'-C3'	12.34	134.51	119.70
22	DA	961	C	P-O3'-C3'	12.34	134.51	119.70
22	BA	805	G	P-O3'-C3'	12.29	134.45	119.70
1	AA	960	U	P-O3'-C3'	12.27	134.42	119.70
22	BA	481	G	P-O3'-C3'	12.26	134.41	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	1402	U	N1-C1'-C2'	-12.25	98.07	114.00
22	BA	2214	C	N1-C1'-C2'	-12.24	98.08	114.00
22	DA	234	U	N1-C1'-C2'	-12.21	98.12	114.00
22	BA	92	U	N1-C1'-C2'	-12.14	98.22	114.00
22	BA	227	A	P-O3'-C3'	12.12	134.25	119.70
22	DA	235	U	N1-C1'-C2'	-12.06	98.32	114.00
22	DA	1675	C	N1-C1'-C2'	-12.06	98.32	114.00
22	BA	449	A	P-O3'-C3'	-12.04	105.25	119.70
22	BA	1602	U	O4'-C1'-N1	12.04	117.83	108.20
22	DA	2063	C	N1-C1'-C2'	-12.03	98.37	114.00
1	CA	245	U	N1-C1'-C2'	-12.02	98.38	114.00
22	BA	1993	U	N1-C1'-C2'	-12.01	98.38	114.00
22	BA	847	U	P-O3'-C3'	-12.01	105.29	119.70
22	BA	2447	G	P-O3'-C3'	12.01	134.11	119.70
22	BA	1240	U	O4'-C1'-N1	-11.98	98.61	108.20
22	BA	1435	G	P-O3'-C3'	-11.96	105.35	119.70
22	BA	2712	C	P-O3'-C3'	11.93	134.01	119.70
22	BA	1971	U	N1-C1'-C2'	-11.84	98.61	114.00
22	DA	1804	C	P-O3'-C3'	-11.83	105.50	119.70
22	DA	1023	U	N1-C1'-C2'	-11.81	98.65	114.00
22	BA	588	U	N1-C1'-C2'	-11.79	98.67	114.00
22	DA	2616	C	P-O3'-C3'	-11.79	105.55	119.70
1	AA	32	A	P-O3'-C3'	-11.79	105.56	119.70
22	BA	531	C	P-O3'-C3'	11.78	133.83	119.70
22	BA	961	C	O4'-C1'-N1	11.76	117.60	108.20
22	DA	2095	A	P-O3'-C3'	-11.75	105.60	119.70
23	BB	88	C	O4'-C1'-N1	-11.74	98.81	108.20
22	BA	790	U	N1-C1'-C2'	-11.72	98.76	114.00
22	BA	2060	A	P-O3'-C3'	11.72	133.76	119.70
22	BA	1204	A	P-O3'-C3'	11.70	133.74	119.70
1	AA	870	U	P-O3'-C3'	11.67	133.70	119.70
22	DA	1963	U	N1-C1'-C2'	-11.65	98.85	114.00
22	DA	1967	C	N1-C1'-C2'	-11.64	98.86	114.00
22	BA	1815	A	P-O3'-C3'	11.63	133.66	119.70
22	BA	984	A	C6-C5-N7	-11.62	124.17	132.30
22	BA	2581	G	P-O3'-C3'	11.61	133.64	119.70
22	DA	1667	G	P-O3'-C3'	11.61	133.63	119.70
22	DA	2320	U	N1-C1'-C2'	-11.60	98.92	114.00
22	DA	765	C	N1-C1'-C2'	-11.59	98.94	114.00
22	DA	2347	C	N1-C1'-C2'	-11.59	98.94	114.00
22	BA	1602	U	P-O3'-C3'	11.58	133.59	119.70
1	AA	1282	C	N1-C1'-C2'	-11.57	98.96	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1654	A	N9-C1'-C2'	-11.54	99.00	114.00
22	BA	2691	C	N1-C1'-C2'	-11.53	99.01	114.00
1	CA	643	C	N1-C1'-C2'	-11.53	99.01	114.00
22	BA	1287	A	P-O3'-C3'	-11.52	105.88	119.70
1	AA	597	G	P-O3'-C3'	-11.49	105.91	119.70
1	CA	330	C	N1-C1'-C2'	-11.49	99.06	114.00
22	BA	49	A	P-O3'-C3'	11.46	133.45	119.70
22	BA	1782	U	N1-C1'-C2'	-11.46	99.10	114.00
1	AA	1284	C	N1-C1'-C2'	-11.42	99.16	114.00
1	CA	520	A	P-O3'-C3'	-11.42	106.00	119.70
22	BA	1675	C	N1-C1'-C2'	-11.40	99.17	114.00
22	BA	2879	A	P-O3'-C3'	11.37	133.34	119.70
1	CA	116	A	P-O3'-C3'	-11.34	106.09	119.70
1	CA	352	C	N1-C1'-C2'	-11.33	99.27	114.00
1	CA	1095	U	N1-C1'-C2'	-11.30	99.31	114.00
22	DA	87	U	N1-C1'-C2'	-11.30	99.31	114.00
22	BA	1963	U	P-O3'-C3'	-11.29	106.15	119.70
1	CA	1230	C	N1-C1'-C2'	-11.26	99.36	114.00
1	CA	1383	C	N1-C1'-C2'	-11.25	99.38	114.00
1	AA	122	G	P-O3'-C3'	-11.23	106.23	119.70
22	BA	1859	U	N1-C1'-C2'	-11.22	99.42	114.00
22	BA	164	C	P-O3'-C3'	-11.21	106.24	119.70
1	CA	891	U	N1-C1'-C2'	-11.21	99.42	114.00
22	DA	244	A	P-O3'-C3'	-11.18	106.28	119.70
22	BA	1967	C	N1-C1'-C2'	-11.16	99.49	114.00
23	DB	90	C	N1-C1'-C2'	-11.15	99.50	114.00
22	DA	2646	C	N1-C1'-C2'	-11.14	99.52	114.00
22	BA	2424	C	P-O3'-C3'	-11.13	106.34	119.70
22	DA	2348	U	N1-C1'-C2'	-11.13	99.53	114.00
22	BA	1398	C	N1-C1'-C2'	-11.12	99.54	114.00
1	CA	14	U	N1-C1'-C2'	-11.10	99.57	114.00
22	BA	1779	U	O4'-C1'-N1	11.09	117.07	108.20
1	AA	972	C	N1-C1'-C2'	-11.08	99.59	114.00
22	BA	1394	U	O4'-C1'-N1	-11.04	99.37	108.20
22	BA	2809	A	P-O3'-C3'	-11.01	106.48	119.70
22	BA	685	A	P-O3'-C3'	11.01	132.91	119.70
1	AA	488	C	N1-C1'-C2'	-11.00	99.70	114.00
22	BA	229	C	N1-C1'-C2'	-10.99	99.71	114.00
22	DA	1081	U	N1-C1'-C2'	-10.98	99.73	114.00
22	BA	2382	G	P-O3'-C3'	10.97	132.86	119.70
22	BA	2449	U	O4'-C1'-N1	-10.96	99.43	108.20
1	CA	252	U	N1-C1'-C2'	-10.96	99.75	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	1249	U	N1-C1'-C2'	-10.94	99.78	114.00
22	BA	435	C	N1-C1'-C2'	-10.91	99.82	114.00
22	BA	573	U	O4'-C1'-N1	10.90	116.92	108.20
1	AA	512	U	N1-C1'-C2'	-10.90	99.83	114.00
22	BA	861	A	P-O3'-C3'	-10.90	106.62	119.70
22	BA	671	C	N1-C1'-C2'	-10.88	99.85	114.00
22	DA	2875	C	N1-C1'-C2'	-10.88	99.86	114.00
23	DB	110	C	N1-C1'-C2'	-10.87	99.88	114.00
22	BA	2425	A	P-O3'-C3'	10.86	132.73	119.70
22	BA	2894	G	P-O3'-C3'	-10.86	106.67	119.70
22	BA	164	C	N1-C1'-C2'	-10.85	99.89	114.00
22	BA	1417	C	N1-C1'-C2'	-10.84	99.91	114.00
1	CA	109	A	P-O3'-C3'	10.83	132.69	119.70
22	DA	915	C	N1-C1'-C2'	-10.80	99.96	114.00
22	DA	1512	C	N1-C1'-C2'	-10.80	99.96	114.00
22	DA	128	C	N1-C1'-C2'	-10.80	99.96	114.00
22	BA	2333	A	P-O3'-C3'	10.77	132.63	119.70
22	BA	249	C	P-O3'-C3'	10.76	132.61	119.70
22	BA	587	C	O4'-C1'-N1	-10.76	99.59	108.20
1	CA	997	U	N1-C1'-C2'	-10.76	100.01	114.00
22	DA	2616	C	N1-C1'-C2'	-10.76	100.01	114.00
22	BA	1247	A	P-O3'-C3'	10.76	132.61	119.70
23	BB	25	U	N1-C1'-C2'	-10.75	100.02	114.00
22	BA	243	U	N1-C1'-C2'	-10.75	100.02	114.00
1	AA	1345	U	O4'-C1'-N1	10.74	116.79	108.20
1	CA	372	C	O4'-C1'-N1	10.74	116.79	108.20
22	BA	995	C	O4'-C1'-N1	-10.73	99.61	108.20
22	BA	1330	C	N1-C1'-C2'	-10.72	100.06	114.00
22	BA	784	G	P-O3'-C3'	10.72	132.56	119.70
1	AA	275	G	P-O3'-C3'	-10.71	106.85	119.70
1	AA	812	G	P-O3'-C3'	10.70	132.54	119.70
1	CA	1528	U	P-O3'-C3'	10.70	132.54	119.70
1	AA	1532	U	N1-C1'-C2'	-10.70	100.09	114.00
22	BA	1013	C	N1-C1'-C2'	-10.69	100.11	114.00
22	BA	1648	U	N1-C1'-C2'	-10.67	100.13	114.00
22	DA	2382	G	P-O3'-C3'	10.67	132.50	119.70
22	BA	790	U	P-O3'-C3'	-10.67	106.90	119.70
1	AA	330	C	N1-C1'-C2'	-10.64	100.17	114.00
22	BA	2022	U	O4'-C1'-N1	10.64	116.71	108.20
22	BA	1360	G	P-O3'-C3'	-10.64	106.94	119.70
22	BA	475	C	N1-C1'-C2'	-10.61	100.20	114.00
22	BA	934	U	N1-C1'-C2'	-10.61	100.20	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	1707	G	P-O3'-C3'	-10.60	106.98	119.70
1	AA	1507	A	P-O3'-C3'	-10.59	106.99	119.70
22	DA	934	U	N1-C1'-C2'	-10.58	100.25	114.00
1	AA	915	A	P-O3'-C3'	-10.54	107.05	119.70
22	BA	1249	U	N1-C1'-C2'	-10.53	100.31	114.00
22	DA	2880	C	N1-C1'-C2'	-10.53	100.31	114.00
22	DA	1289	C	N1-C1'-C2'	-10.52	100.32	114.00
22	BA	2384	U	P-O3'-C3'	10.51	132.31	119.70
22	BA	645	C	P-O3'-C3'	10.50	132.30	119.70
22	BA	1427	A	P-O3'-C3'	10.50	132.30	119.70
22	BA	2226	C	P-O3'-C3'	-10.48	107.13	119.70
22	BA	1565	C	N1-C1'-C2'	10.46	127.60	114.00
1	AA	1528	U	P-O3'-C3'	10.45	132.24	119.70
1	CA	92	U	N1-C1'-C2'	-10.44	100.42	114.00
22	BA	2239	G	P-O3'-C3'	-10.43	107.18	119.70
22	BA	2068	U	N1-C1'-C2'	-10.43	100.44	114.00
1	CA	248	C	N1-C1'-C2'	-10.43	100.44	114.00
22	DA	392	U	N1-C1'-C2'	-10.43	100.45	114.00
1	AA	985	C	N1-C1'-C2'	-10.42	100.45	114.00
1	AA	874	G	P-O3'-C3'	-10.42	107.19	119.70
1	AA	66	A	P-O3'-C3'	-10.41	107.20	119.70
22	BA	1396	U	O4'-C1'-N1	10.41	116.53	108.20
22	DA	991	C	N1-C1'-C2'	-10.40	100.48	114.00
22	DA	1565	C	P-O3'-C3'	10.39	132.17	119.70
22	BA	2086	U	N1-C1'-C2'	-10.39	100.49	114.00
22	BA	2225	A	P-O3'-C3'	10.37	132.15	119.70
22	BA	1963	U	N1-C1'-C2'	-10.37	100.52	114.00
22	BA	2801	G	P-O3'-C3'	-10.36	107.27	119.70
1	AA	1448	C	N1-C1'-C2'	-10.35	100.54	114.00
22	BA	239	C	N1-C1'-C2'	-10.35	100.54	114.00
22	BA	687	C	N1-C1'-C2'	-10.34	100.56	114.00
22	BA	1045	C	P-O3'-C3'	10.34	132.10	119.70
22	DA	1991	U	O4'-C1'-N1	-10.34	99.93	108.20
1	CA	316	C	N1-C1'-C2'	-10.32	100.59	114.00
22	BA	2023	C	N1-C1'-C2'	-10.31	100.59	114.00
22	BA	178	G	P-O3'-C3'	-10.31	107.33	119.70
22	BA	1288	G	O4'-C1'-N9	10.31	116.45	108.20
22	DA	2586	U	P-O3'-C3'	-10.31	107.33	119.70
22	BA	119	A	P-O3'-C3'	10.30	132.06	119.70
22	BA	2497	A	P-O3'-C3'	10.29	132.05	119.70
1	AA	1162	C	N1-C1'-C2'	-10.29	100.63	114.00
22	BA	604	G	P-O3'-C3'	-10.27	107.37	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	2214	C	N1-C1'-C2'	-10.27	100.65	114.00
1	CA	239	U	O4'-C1'-N1	-10.26	99.99	108.20
22	DA	206	U	N1-C1'-C2'	-10.26	100.66	114.00
1	CA	1401	G	P-O3'-C3'	-10.24	107.41	119.70
1	AA	1224	U	P-O3'-C3'	10.24	131.99	119.70
22	DA	2151	U	N1-C1'-C2'	-10.23	100.70	114.00
22	BA	1634	A	P-O3'-C3'	10.22	131.96	119.70
22	BA	1249	U	O4'-C1'-N1	-10.21	100.03	108.20
23	BB	57	A	P-O3'-C3'	-10.19	107.47	119.70
22	BA	1941	C	N1-C1'-C2'	-10.19	100.75	114.00
22	DA	1963	U	P-O3'-C3'	-10.19	107.47	119.70
22	DA	164	C	N1-C1'-C2'	-10.19	100.76	114.00
22	DA	2645	G	P-O3'-C3'	10.18	131.92	119.70
22	BA	656	G	P-O3'-C3'	-10.17	107.50	119.70
22	BA	2609	U	O4'-C1'-N1	10.16	116.33	108.20
22	BA	2506	U	O4'-C1'-N1	10.15	116.32	108.20
22	BA	2036	C	N1-C1'-C2'	-10.14	100.81	114.00
22	DA	481	G	O4'-C1'-N9	10.13	116.31	108.20
1	AA	13	U	P-O3'-C3'	10.13	131.85	119.70
22	BA	2044	C	P-O3'-C3'	-10.13	107.55	119.70
1	AA	490	C	N1-C1'-C2'	-10.10	100.87	114.00
22	BA	61	C	N1-C1'-C2'	-10.08	100.89	114.00
22	BA	2807	U	O4'-C1'-N1	-10.07	100.14	108.20
22	BA	1954	G	P-O3'-C3'	10.06	131.78	119.70
22	BA	1971	U	O4'-C1'-N1	10.06	116.25	108.20
22	DA	304	U	N1-C1'-C2'	-10.06	100.92	114.00
1	AA	889	A	P-O3'-C3'	10.05	131.77	119.70
22	DA	459	U	N1-C1'-C2'	-10.05	100.93	114.00
22	BA	646	U	N1-C1'-C2'	-10.04	100.95	114.00
1	AA	119	A	P-O3'-C3'	10.02	131.72	119.70
1	AA	1203	C	N1-C1'-C2'	-10.01	100.99	114.00
1	AA	891	U	N1-C1'-C2'	-10.01	100.99	114.00
22	BA	204	A	P-O3'-C3'	10.00	131.70	119.70
1	CA	1345	U	O4'-C1'-N1	9.98	116.19	108.20
1	CA	1449	C	N1-C1'-C2'	-9.97	101.03	112.00
22	BA	1034	G	P-O3'-C3'	-9.97	107.74	119.70
22	BA	2030	A	P-O3'-C3'	9.97	131.66	119.70
22	BA	2137	U	N1-C1'-C2'	-9.95	101.05	112.00
22	DA	2611	C	N1-C1'-C2'	-9.95	101.06	112.00
1	CA	1065	U	O4'-C1'-N1	9.93	116.15	108.20
22	BA	2808	G	P-O3'-C3'	9.93	131.62	119.70
22	DA	1291	C	N1-C1'-C2'	-9.93	101.08	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	511	C	P-O3'-C3'	9.91	131.59	119.70
22	DA	250	G	P-O3'-C3'	-9.91	107.81	119.70
22	BA	1250	G	P-O3'-C3'	9.91	131.59	119.70
1	AA	534	U	N1-C1'-C2'	-9.90	101.11	112.00
22	BA	215	G	P-O3'-C3'	9.90	131.58	119.70
22	BA	2728	U	P-O3'-C3'	9.90	131.58	119.70
22	BA	301	G	P-O3'-C3'	9.89	131.57	119.70
22	BA	1654	A	P-O3'-C3'	-9.89	107.83	119.70
22	BA	784	G	O4'-C1'-N9	-9.89	100.29	108.20
1	AA	33	A	P-O3'-C3'	-9.87	107.86	119.70
22	BA	2725	A	P-O3'-C3'	9.86	131.54	119.70
22	DA	2520	C	N1-C1'-C2'	-9.85	101.16	112.00
22	BA	2611	C	N1-C1'-C2'	-9.84	101.18	112.00
22	DA	15	G	P-O3'-C3'	-9.84	107.89	119.70
22	BA	1272	A	P-O3'-C3'	9.84	131.50	119.70
1	AA	1181	G	P-O3'-C3'	9.83	131.50	119.70
1	AA	1088	G	P-O3'-C3'	-9.81	107.93	119.70
22	BA	2572	A	P-O3'-C3'	9.81	131.47	119.70
22	BA	2835	A	P-O3'-C3'	9.79	131.45	119.70
22	DA	2043	C	O4'-C1'-N1	-9.78	100.37	108.20
22	DA	1064	C	N1-C1'-C2'	-9.78	101.24	112.00
22	DA	2615	U	N1-C1'-C2'	-9.78	101.25	112.00
22	BA	2824	C	N1-C2-O2	-9.77	113.04	118.90
22	DA	2333	A	P-O3'-C3'	9.77	131.42	119.70
22	BA	1816	C	P-O3'-C3'	-9.77	107.98	119.70
1	CA	792	A	P-O3'-C3'	9.75	131.40	119.70
22	DA	86	G	P-O3'-C3'	-9.74	108.02	119.70
1	AA	1128	C	N1-C1'-C2'	-9.73	101.29	112.00
22	BA	459	U	N1-C1'-C2'	-9.73	101.29	112.00
22	BA	2756	U	P-O3'-C3'	9.73	131.38	119.70
1	CA	980	C	N1-C1'-C2'	-9.73	101.30	112.00
22	BA	2347	C	N1-C1'-C2'	-9.73	101.30	112.00
22	BA	85	G	P-O3'-C3'	-9.72	108.03	119.70
22	BA	2866	U	O4'-C1'-N1	9.72	115.98	108.20
22	DA	1648	U	N1-C1'-C2'	-9.71	101.32	112.00
22	BA	620	G	P-O3'-C3'	9.70	131.34	119.70
22	BA	2210	U	P-O3'-C3'	9.70	131.34	119.70
22	BA	1838	C	P-O3'-C3'	9.70	131.34	119.70
22	DA	917	A	P-O3'-C3'	-9.70	108.06	119.70
22	DA	2498	C	N1-C1'-C2'	-9.69	101.34	112.00
22	BA	587	C	N1-C1'-C2'	9.69	126.59	114.00
22	BA	747	U	P-O3'-C3'	-9.69	108.08	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	616	A	P-O3'-C3'	-9.68	108.09	119.70
22	DA	413	C	N1-C1'-C2'	-9.67	101.36	112.00
22	BA	1135	C	N1-C1'-C2'	-9.66	101.37	112.00
22	BA	2689	U	O4'-C1'-N1	9.66	115.93	108.20
22	DA	846	U	O4'-C1'-N1	9.66	115.93	108.20
22	BA	783	A	C5-N7-C8	-9.64	99.08	103.90
1	CA	486	U	N1-C1'-C2'	-9.64	101.39	112.00
1	AA	934	C	O4'-C1'-N1	9.64	115.91	108.20
22	BA	126	A	P-O3'-C3'	-9.62	108.15	119.70
22	DA	763	G	P-O3'-C3'	-9.60	108.18	119.70
1	CA	1161	C	N1-C1'-C2'	-9.59	101.45	112.00
22	BA	527	C	P-O3'-C3'	9.59	131.20	119.70
22	BA	238	C	P-O3'-C3'	9.58	131.19	119.70
22	BA	1476	U	N1-C1'-C2'	-9.56	101.48	112.00
22	BA	503	A	P-O3'-C3'	9.56	131.17	119.70
22	DA	829	A	P-O3'-C3'	9.55	131.16	119.70
1	AA	93	U	N1-C1'-C2'	-9.55	101.50	112.00
22	BA	2645	G	P-O3'-C3'	9.54	131.15	119.70
1	CA	512	U	N1-C1'-C2'	-9.54	101.50	112.00
1	CA	705	G	P-O3'-C3'	-9.54	108.25	119.70
22	BA	2629	U	P-O3'-C3'	9.53	131.13	119.70
22	BA	1455	G	P-O3'-C3'	-9.53	108.27	119.70
22	BA	2490	G	P-O3'-C3'	9.52	131.12	119.70
22	DA	2656	U	N1-C1'-C2'	-9.52	101.53	112.00
1	AA	969	A	P-O3'-C3'	-9.52	108.28	119.70
22	BA	1329	U	P-O3'-C3'	9.51	131.11	119.70
1	CA	755	G	P-O3'-C3'	-9.51	108.29	119.70
1	CA	1068	G	P-O3'-C3'	-9.51	108.29	119.70
1	AA	1095	U	N1-C1'-C2'	-9.51	101.54	112.00
22	BA	984	A	N9-C4-C5	-9.51	102.00	105.80
22	BA	1288	G	P-O3'-C3'	9.51	131.11	119.70
1	AA	279	A	P-O3'-C3'	9.50	131.10	119.70
22	DA	2023	C	N1-C1'-C2'	-9.48	101.58	112.00
22	BA	1647	U	O4'-C1'-N1	9.46	115.77	108.20
22	BA	2468	A	P-O3'-C3'	9.45	131.04	119.70
22	BA	413	C	N1-C1'-C2'	-9.45	101.60	112.00
22	BA	522	A	P-O3'-C3'	-9.45	108.36	119.70
22	DA	1971	U	O4'-C1'-N1	9.45	115.76	108.20
22	DA	2226	C	N1-C1'-C2'	-9.45	101.60	112.00
1	AA	1298	U	P-O3'-C3'	9.45	131.04	119.70
22	DA	945	A	P-O3'-C3'	9.45	131.04	119.70
1	AA	173	U	O4'-C1'-N1	9.45	115.76	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	2617	U	P-O3'-C3'	-9.44	108.37	119.70
1	AA	1381	U	N1-C1'-C2'	-9.44	101.62	112.00
22	BA	506	G	P-O3'-C3'	9.44	131.02	119.70
22	DA	1655	A	P-O3'-C3'	-9.43	108.38	119.70
22	BA	2312	U	N1-C1'-C2'	-9.42	101.64	112.00
22	BA	1682	G	P-O3'-C3'	-9.41	108.41	119.70
22	BA	866	A	N9-C1'-C2'	-9.40	101.66	112.00
1	CA	95	C	N1-C1'-C2'	-9.40	101.66	112.00
22	BA	2656	U	N1-C1'-C2'	-9.40	101.67	112.00
22	DA	588	U	N1-C1'-C2'	-9.39	101.67	112.00
22	DA	2137	U	P-O3'-C3'	-9.38	108.44	119.70
23	BB	52	A	P-O3'-C3'	9.38	130.96	119.70
22	BA	2681	C	P-O3'-C3'	9.38	130.96	119.70
22	DA	672	C	N1-C1'-C2'	-9.38	101.69	112.00
22	BA	1265	A	P-O3'-C3'	9.37	130.95	119.70
1	AA	1451	U	P-O3'-C3'	9.36	130.94	119.70
22	BA	621	A	P-O3'-C3'	-9.35	108.48	119.70
22	DA	2875	C	O4'-C1'-N1	9.34	115.67	108.20
1	AA	305	G	P-O3'-C3'	9.33	130.90	119.70
1	CA	173	U	O4'-C1'-N1	9.33	115.66	108.20
22	BA	1498	C	N1-C1'-C2'	-9.32	101.75	112.00
22	BA	200	U	N1-C1'-C2'	-9.32	101.75	112.00
22	BA	2197	U	P-O3'-C3'	9.32	130.88	119.70
22	BA	2498	C	N1-C1'-C2'	-9.32	101.75	112.00
22	DA	1965	C	N1-C1'-C2'	-9.31	101.76	112.00
22	BA	92	U	P-O3'-C3'	-9.31	108.53	119.70
22	BA	2200	C	N1-C1'-C2'	-9.31	101.76	112.00
1	AA	984	C	N1-C1'-C2'	-9.29	101.78	112.00
22	DA	1417	C	N1-C1'-C2'	-9.30	101.77	112.00
22	BA	404	A	P-O3'-C3'	9.29	130.85	119.70
22	BA	512	G	O4'-C1'-N9	9.29	115.63	108.20
22	BA	686	U	O4'-C1'-N1	9.29	115.63	108.20
22	DA	1982	U	N1-C1'-C2'	-9.29	101.78	112.00
23	BB	48	U	P-O5'-C5'	-9.29	106.04	120.90
1	CA	577	G	P-O3'-C3'	-9.29	108.56	119.70
1	AA	1259	C	N1-C1'-C2'	-9.28	101.79	112.00
22	DA	533	G	P-O3'-C3'	-9.28	108.56	119.70
22	DA	243	U	N1-C1'-C2'	-9.28	101.79	112.00
22	BA	1779	U	C5-C6-N1	-9.28	118.06	122.70
22	DA	2874	C	N1-C1'-C2'	-9.28	101.80	112.00
22	DA	778	G	P-O3'-C3'	-9.27	108.58	119.70
1	AA	961	U	N1-C1'-C2'	-9.27	101.81	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	595	A	P-O3'-C3'	9.26	130.81	119.70
22	DA	1498	C	N1-C1'-C2'	-9.26	101.82	112.00
22	DA	2450	A	P-O3'-C3'	-9.24	108.61	119.70
22	BA	727	A	P-O5'-C5'	-9.24	106.12	120.90
22	DA	1267	U	N1-C1'-C2'	-9.24	101.84	112.00
1	AA	547	A	P-O3'-C3'	9.23	130.77	119.70
1	AA	1283	U	N1-C1'-C2'	-9.22	101.85	112.00
22	BA	2732	G	P-O3'-C3'	9.22	130.76	119.70
22	BA	671	C	O4'-C1'-N1	9.20	115.56	108.20
22	DA	2712	C	P-O3'-C3'	9.20	130.74	119.70
22	DA	1476	U	O4'-C1'-N1	9.20	115.56	108.20
22	DA	1611	C	N1-C1'-C2'	-9.19	101.89	112.00
1	AA	173	U	P-O3'-C3'	9.19	130.72	119.70
22	DA	78	U	O4'-C1'-N1	9.18	115.55	108.20
22	BA	62	U	O4'-C1'-N1	9.18	115.55	108.20
1	AA	793	U	P-O3'-C3'	-9.18	108.69	119.70
1	AA	1349	A	P-O3'-C3'	-9.16	108.71	119.70
22	BA	61	C	P-O3'-C3'	-9.16	108.71	119.70
1	CA	486	U	P-O5'-C5'	-9.16	106.24	120.90
1	CA	1283	U	N1-C1'-C2'	-9.16	101.92	112.00
22	BA	143	C	N1-C1'-C2'	-9.16	101.93	112.00
22	BA	1644	C	N1-C1'-C2'	-9.15	101.93	112.00
1	AA	575	G	P-O3'-C3'	9.14	130.67	119.70
1	AA	972	C	O4'-C1'-N1	9.14	115.52	108.20
22	DA	1418	G	P-O3'-C3'	-9.14	108.73	119.70
22	DA	1804	C	N1-C1'-C2'	-9.12	101.96	112.00
22	BA	1499	C	O4'-C1'-N1	9.12	115.50	108.20
23	BB	67	G	P-O3'-C3'	-9.12	108.75	119.70
22	BA	1965	C	N1-C1'-C2'	-9.11	101.98	112.00
1	AA	1228	C	N1-C1'-C2'	-9.11	101.98	112.00
22	BA	646	U	O4'-C1'-N1	9.11	115.48	108.20
1	CA	331	G	P-O3'-C3'	-9.11	108.77	119.70
22	DA	933	A	P-O3'-C3'	-9.10	108.78	119.70
22	DA	1682	G	P-O3'-C3'	-9.10	108.78	119.70
1	AA	1399	C	P-O3'-C3'	9.10	130.61	119.70
22	BA	962	G	P-O3'-C3'	-9.09	108.80	119.70
22	BA	2266	A	P-O3'-C3'	9.09	130.60	119.70
1	CA	200	G	P-O3'-C3'	-9.07	108.81	119.70
22	BA	2319	G	P-O3'-C3'	9.07	130.59	119.70
22	BA	1920	C	P-O3'-C3'	-9.07	108.82	119.70
1	AA	307	C	P-O3'-C3'	-9.06	108.83	119.70
1	AA	110	C	N1-C1'-C2'	-9.06	102.04	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	811	U	P-O3'-C3'	9.05	130.56	119.70
22	BA	2354	C	O4'-C1'-N1	-9.02	100.99	108.20
1	CA	428	G	P-O3'-C3'	9.01	130.51	119.70
22	BA	1786	A	O4'-C1'-N9	9.01	115.41	108.20
22	DA	656	G	P-O3'-C3'	-9.01	108.89	119.70
22	BA	208	C	C6-N1-C2	9.00	123.90	120.30
23	BB	40	U	P-O3'-C3'	9.00	130.50	119.70
22	BA	2689	U	N1-C1'-C2'	9.00	125.69	114.00
1	CA	986	U	N1-C1'-C2'	-9.00	102.10	112.00
22	DA	1324	G	P-O3'-C3'	8.99	130.49	119.70
22	BA	2541	A	P-O3'-C3'	8.98	130.48	119.70
1	AA	1068	G	P-O3'-C3'	-8.98	108.93	119.70
22	DA	2691	C	N1-C1'-C2'	-8.97	102.13	112.00
22	BA	847	U	N1-C1'-C2'	-8.96	102.14	112.00
1	AA	1380	U	P-O3'-C3'	8.96	130.45	119.70
1	AA	1125	U	P-O3'-C3'	8.96	130.45	119.70
1	AA	821	G	P-O3'-C3'	-8.96	108.95	119.70
22	DA	2320	U	P-O3'-C3'	-8.95	108.96	119.70
22	BA	974	G	C5-N7-C8	-8.95	99.83	104.30
22	BA	165	A	P-O3'-C3'	-8.94	108.97	119.70
22	DA	831	G	P-O3'-C3'	-8.93	108.98	119.70
22	BA	2051	A	P-O3'-C3'	8.93	130.41	119.70
22	DA	1276	A	P-O3'-C3'	-8.93	108.99	119.70
22	BA	2230	G	P-O3'-C3'	-8.92	109.00	119.70
22	BA	369	U	O4'-C1'-N1	-8.91	101.07	108.20
22	DA	2299	U	N1-C1'-C2'	-8.88	102.23	112.00
1	AA	577	G	P-O3'-C3'	-8.86	109.06	119.70
1	AA	1502	A	P-O3'-C3'	8.86	130.33	119.70
22	BA	2733	A	P-O3'-C3'	-8.86	109.07	119.70
22	BA	27	G	P-O3'-C3'	8.86	130.33	119.70
22	DA	2469	A	P-O3'-C3'	-8.86	109.07	119.70
1	AA	1348	U	N1-C1'-C2'	-8.85	102.26	112.00
22	BA	421	C	P-O3'-C3'	8.85	130.32	119.70
22	BA	1434	A	P-O3'-C3'	8.85	130.32	119.70
22	BA	1379	U	N1-C1'-C2'	-8.84	102.28	112.00
22	BA	2504	U	N1-C1'-C2'	-8.83	102.29	112.00
22	BA	1981	A	P-O3'-C3'	-8.82	109.12	119.70
22	BA	1816	C	N1-C1'-C2'	-8.81	102.31	112.00
1	AA	815	A	P-O3'-C3'	8.80	130.27	119.70
22	DA	1931	U	P-O3'-C3'	-8.80	109.14	119.70
22	BA	34	U	P-O3'-C3'	8.80	130.26	119.70
22	BA	1716	U	N1-C1'-C2'	-8.80	102.32	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	805	G	P-O5'-C5'	-8.79	106.84	120.90
22	DA	336	C	N1-C1'-C2'	-8.78	102.34	112.00
22	DA	687	C	N1-C1'-C2'	-8.78	102.34	112.00
22	DA	2036	C	N1-C1'-C2'	-8.77	102.35	112.00
22	BA	249	C	N1-C1'-C2'	8.77	125.40	114.00
22	BA	2520	C	N1-C1'-C2'	-8.77	102.35	112.00
1	AA	1398	A	P-O3'-C3'	-8.77	109.18	119.70
22	BA	2880	C	N1-C1'-C2'	-8.77	102.35	112.00
22	BA	984	A	C4-C5-N7	8.77	115.08	110.70
22	BA	1326	U	P-O3'-C3'	-8.77	109.18	119.70
22	DA	2300	C	P-O3'-C3'	-8.77	109.18	119.70
22	DA	2689	U	O4'-C1'-N1	8.76	115.21	108.20
22	BA	1142	A	C2-N3-C4	-8.76	106.22	110.60
22	DA	78	U	N1-C1'-C2'	-8.75	102.38	112.00
22	BA	1626	A	P-O3'-C3'	8.74	130.19	119.70
1	CA	110	C	P-O3'-C3'	-8.74	109.22	119.70
22	BA	1568	G	P-O3'-C3'	-8.73	109.22	119.70
22	BA	2519	U	O4'-C1'-N1	8.73	115.19	108.20
22	DA	222	A	P-O3'-C3'	8.73	130.17	119.70
1	AA	792	A	O4'-C1'-N9	8.72	115.18	108.20
1	CA	1395	C	N1-C1'-C2'	-8.72	102.41	112.00
22	BA	1451	C	O4'-C1'-N1	8.71	115.17	108.20
1	AA	9	G	P-O3'-C3'	-8.71	109.25	119.70
22	BA	2727	A	P-O3'-C3'	-8.70	109.26	119.70
22	BA	1210	G	P-O3'-C3'	8.70	130.14	119.70
22	DA	2877	G	P-O3'-C3'	-8.70	109.26	119.70
22	BA	2689	U	P-O3'-C3'	8.70	130.14	119.70
22	BA	28	A	P-O5'-C5'	-8.70	106.98	120.90
22	BA	1508	A	P-O3'-C3'	8.69	130.13	119.70
22	BA	1558	C	P-O3'-C3'	8.69	130.13	119.70
1	CA	1367	C	N1-C1'-C2'	-8.69	102.44	112.00
22	BA	2517	C	C6-N1-C2	8.69	123.78	120.30
22	BA	946	C	N1-C1'-C2'	-8.69	102.45	112.00
22	BA	748	G	P-O3'-C3'	-8.68	109.29	119.70
22	DA	1931	U	N1-C1'-C2'	-8.68	102.46	112.00
22	DA	1541	C	N1-C1'-C2'	-8.66	102.47	112.00
22	BA	1942	C	N1-C1'-C2'	-8.66	102.47	112.00
22	BA	1739	A	P-O3'-C3'	-8.65	109.32	119.70
22	DA	730	A	P-O3'-C3'	-8.65	109.31	119.70
22	BA	2612	C	O4'-C1'-N1	8.64	115.11	108.20
22	DA	1065	U	N1-C1'-C2'	-8.64	102.50	112.00
1	CA	1202	U	N1-C1'-C2'	-8.64	102.50	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	2490	G	P-O3'-C3'	8.64	130.06	119.70
1	CA	1218	C	N1-C1'-C2'	-8.63	102.51	112.00
22	BA	2836	U	N1-C1'-C2'	-8.62	102.52	112.00
22	BA	2573	C	N1-C1'-C2'	-8.62	102.52	112.00
1	AA	141	G	P-O3'-C3'	-8.61	109.37	119.70
22	DA	164	C	P-O3'-C3'	-8.61	109.37	119.70
22	DA	1779	U	O4'-C1'-N1	8.60	115.08	108.20
22	BA	1675	C	P-O3'-C3'	-8.60	109.39	119.70
22	DA	2249	U	P-O3'-C3'	8.59	130.01	119.70
22	BA	505	A	P-O3'-C3'	-8.59	109.39	119.70
22	DA	2492	U	N1-C1'-C2'	-8.58	102.56	112.00
22	BA	2508	G	P-O5'-C5'	-8.57	107.18	120.90
22	BA	2797	U	P-O3'-C3'	8.57	129.99	119.70
22	DA	1980	G	P-O3'-C3'	8.57	129.99	119.70
1	AA	438	U	P-O3'-C3'	8.57	129.99	119.70
1	CA	110	C	N1-C1'-C2'	-8.57	102.57	112.00
22	DA	2497	A	P-O3'-C3'	8.57	129.98	119.70
22	BA	764	A	O4'-C1'-N9	8.56	115.05	108.20
22	DA	2458	G	O4'-C1'-N9	8.56	115.05	108.20
22	BA	2752	C	P-O3'-C3'	-8.55	109.44	119.70
22	DA	304	U	O4'-C1'-N1	8.55	115.04	108.20
1	AA	519	C	P-O3'-C3'	-8.55	109.44	119.70
1	CA	564	C	N1-C1'-C2'	-8.55	102.60	112.00
22	BA	958	U	O4'-C1'-N1	-8.54	101.37	108.20
22	BA	1956	U	N1-C1'-C2'	-8.54	102.61	112.00
1	AA	752	G	P-O3'-C3'	8.53	129.94	119.70
22	BA	2458	G	P-O3'-C3'	8.53	129.94	119.70
22	DA	1256	G	P-O3'-C3'	-8.53	109.46	119.70
22	BA	984	A	N1-C2-N3	8.53	133.56	129.30
1	CA	9	G	P-O3'-C3'	-8.53	109.47	119.70
1	CA	536	C	P-O3'-C3'	-8.53	109.47	119.70
1	AA	501	C	N1-C1'-C2'	-8.52	102.63	112.00
22	BA	2426	A	P-O3'-C3'	8.52	129.92	119.70
22	BA	474	G	P-O3'-C3'	8.52	129.92	119.70
22	BA	865	C	P-O3'-C3'	8.51	129.91	119.70
1	AA	469	C	N1-C1'-C2'	-8.50	102.65	112.00
22	BA	2321	U	P-O3'-C3'	-8.49	109.52	119.70
22	DA	2384	U	N1-C1'-C2'	8.49	125.03	114.00
1	CA	438	U	O4'-C1'-N1	8.48	114.98	108.20
22	BA	1759	A	P-O3'-C3'	-8.48	109.53	119.70
22	DA	2501	C	O4'-C1'-N1	8.47	114.98	108.20
1	AA	1157	A	P-O3'-C3'	8.47	129.86	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1396	A	P-O3'-C3'	8.47	129.86	119.70
22	BA	2035	G	P-O3'-C3'	8.46	129.86	119.70
1	AA	306	A	P-O3'-C3'	-8.46	109.55	119.70
22	BA	1407	G	P-O3'-C3'	-8.46	109.55	119.70
22	BA	791	C	O4'-C1'-N1	8.45	114.96	108.20
1	AA	889	A	O4'-C1'-N9	8.44	114.95	108.20
22	DA	2239	G	P-O3'-C3'	-8.44	109.57	119.70
22	BA	422	A	P-O3'-C3'	-8.44	109.57	119.70
23	DB	68	C	N1-C1'-C2'	-8.44	102.72	112.00
1	CA	509	A	P-O3'-C3'	-8.44	109.57	119.70
22	BA	571	U	P-O3'-C3'	8.44	129.83	119.70
1	CA	374	A	P-O3'-C3'	-8.44	109.57	119.70
22	DA	1127	A	P-O3'-C3'	-8.44	109.57	119.70
22	BA	1611	C	P-O3'-C3'	-8.44	109.58	119.70
22	DA	1915	U	N1-C1'-C2'	-8.43	102.72	112.00
1	AA	1200	C	P-O3'-C3'	8.43	129.81	119.70
22	BA	783	A	N7-C8-N9	8.42	118.01	113.80
22	BA	1157	G	P-O3'-C3'	-8.42	109.60	119.70
22	BA	1942	C	P-O3'-C3'	-8.41	109.61	119.70
22	DA	2611	C	P-O3'-C3'	-8.40	109.61	119.70
22	BA	1126	A	P-O3'-C3'	8.39	129.77	119.70
22	BA	1639	C	O4'-C1'-N1	8.39	114.92	108.20
1	CA	122	G	P-O3'-C3'	-8.39	109.63	119.70
22	DA	121	G	P-O3'-C3'	-8.39	109.63	119.70
1	CA	13	U	P-O3'-C3'	8.39	129.77	119.70
22	DA	2406	A	P-O3'-C3'	8.39	129.76	119.70
22	BA	904	G	P-O3'-C3'	-8.38	109.64	119.70
22	BA	2321	U	N1-C1'-C2'	-8.38	102.78	112.00
22	BA	1522	A	P-O3'-C3'	8.36	129.74	119.70
22	DA	1632	A	P-O3'-C3'	8.36	129.74	119.70
22	DA	2581	G	P-O3'-C3'	8.36	129.73	119.70
22	BA	1254	A	P-O5'-C5'	-8.36	107.52	120.90
1	CA	575	G	P-O3'-C3'	8.35	129.72	119.70
1	CA	348	G	P-O3'-C3'	-8.34	109.69	119.70
1	CA	701	U	P-O3'-C3'	8.33	129.70	119.70
22	DA	1829	A	P-O3'-C3'	-8.33	109.71	119.70
22	BA	2846	G	P-O5'-C5'	-8.32	107.58	120.90
22	BA	1112	G	P-O3'-C3'	-8.32	109.72	119.70
1	CA	915	A	P-O3'-C3'	-8.32	109.72	119.70
22	DA	229	C	N1-C1'-C2'	-8.32	102.85	112.00
22	BA	391	A	P-O3'-C3'	-8.31	109.72	119.70
22	DA	2447	G	P-O3'-C3'	8.31	129.67	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	813	U	P-O3'-C3'	-8.31	109.73	119.70
22	BA	1732	C	P-O3'-C3'	8.31	129.67	119.70
22	DA	2283	C	P-O3'-C3'	-8.31	109.73	119.70
23	BB	42	C	N1-C1'-C2'	-8.30	102.87	112.00
22	DA	2616	C	O4'-C1'-N1	8.30	114.84	108.20
22	BA	2250	G	O4'-C1'-N9	-8.29	101.57	108.20
22	DA	1396	U	P-O3'-C3'	8.29	129.65	119.70
22	BA	800	A	P-O3'-C3'	8.29	129.65	119.70
22	BA	2093	G	N9-C1'-C2'	-8.29	102.89	112.00
22	DA	1119	U	O4'-C1'-N1	8.28	114.83	108.20
22	DA	2836	U	N1-C1'-C2'	-8.28	102.89	112.00
1	AA	1433	A	P-O3'-C3'	-8.28	109.77	119.70
1	CA	1450	U	N1-C1'-C2'	-8.27	102.90	112.00
1	AA	252	U	N1-C1'-C2'	-8.26	102.91	112.00
1	CA	534	U	N1-C1'-C2'	-8.26	102.92	112.00
22	BA	1848	A	P-O3'-C3'	-8.26	109.79	119.70
1	CA	344	A	P-O3'-C3'	8.26	129.61	119.70
22	DA	1972	G	P-O3'-C3'	-8.26	109.79	119.70
22	BA	556	A	P-O3'-C3'	-8.25	109.80	119.70
1	CA	1148	U	N1-C1'-C2'	-8.24	102.93	112.00
22	BA	403	U	P-O3'-C3'	8.24	129.59	119.70
1	CA	1245	C	N1-C1'-C2'	-8.23	102.94	112.00
1	AA	1203	C	P-O3'-C3'	-8.23	109.82	119.70
22	DA	122	G	P-O3'-C3'	-8.22	109.83	119.70
22	DA	1428	C	O4'-C1'-N1	8.22	114.78	108.20
22	BA	1213	A	P-O5'-C5'	-8.22	107.75	120.90
1	CA	32	A	P-O3'-C3'	-8.21	109.84	119.70
22	BA	673	C	C6-N1-C2	8.21	123.58	120.30
1	AA	1284	C	P-O3'-C3'	-8.21	109.85	119.70
22	BA	1653	G	P-O3'-C3'	8.21	129.55	119.70
22	DA	1612	C	N1-C1'-C2'	-8.20	102.98	112.00
22	BA	2572	A	N1-C6-N6	8.19	123.52	118.60
1	CA	1398	A	P-O3'-C3'	-8.19	109.87	119.70
22	BA	144	A	P-O3'-C3'	-8.19	109.87	119.70
1	CA	884	U	P-O3'-C3'	8.19	129.53	119.70
22	DA	1378	A	P-O3'-C3'	8.19	129.53	119.70
1	CA	388	G	P-O3'-C3'	8.19	129.52	119.70
1	CA	1528	U	O4'-C1'-N1	8.18	114.75	108.20
1	CA	68	G	P-O3'-C3'	-8.18	109.89	119.70
22	BA	783	A	N9-C1'-C2'	-8.18	103.00	112.00
22	BA	2422	C	O4'-C1'-N1	-8.18	101.66	108.20
22	DA	991	C	P-O3'-C3'	-8.17	109.89	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	2603	G	P-O3'-C3'	-8.17	109.90	119.70
22	BA	1615	C	P-O3'-C3'	8.16	129.50	119.70
22	DA	1967	C	P-O3'-C3'	-8.16	109.90	119.70
1	CA	793	U	P-O3'-C3'	-8.16	109.91	119.70
22	BA	984	A	N9-C1'-C2'	-8.16	103.02	112.00
22	BA	1859	U	P-O3'-C3'	-8.16	109.91	119.70
22	BA	1021	A	P-O3'-C3'	-8.15	109.92	119.70
22	BA	2215	C	N1-C1'-C2'	-8.15	103.04	112.00
22	DA	670	A	P-O3'-C3'	8.15	129.47	119.70
22	DA	868	U	P-O3'-C3'	-8.14	109.93	119.70
22	DA	2060	A	P-O3'-C3'	8.14	129.47	119.70
22	BA	783	A	N1-C6-N6	8.14	123.48	118.60
1	CA	486	U	P-O3'-C3'	-8.14	109.93	119.70
22	DA	1013	C	P-O3'-C3'	-8.14	109.93	119.70
22	BA	1901	A	P-O3'-C3'	-8.13	109.94	119.70
22	BA	2777	G	P-O3'-C3'	-8.13	109.94	119.70
22	DA	1400	U	N1-C1'-C2'	-8.13	103.06	112.00
1	CA	519	C	N1-C1'-C2'	-8.12	103.06	112.00
22	DA	1081	U	O4'-C1'-N1	8.12	114.70	108.20
22	DA	1347	A	P-O3'-C3'	-8.12	109.95	119.70
1	AA	1303	C	N1-C1'-C2'	-8.12	103.07	112.00
22	BA	2613	U	P-O3'-C3'	8.12	129.44	119.70
22	BA	1013	C	P-O3'-C3'	-8.11	109.96	119.70
22	DA	531	C	P-O3'-C3'	8.11	129.44	119.70
1	AA	985	C	P-O3'-C3'	-8.11	109.97	119.70
1	AA	316	C	P-O3'-C3'	-8.11	109.97	119.70
22	DA	1157	G	P-O3'-C3'	-8.10	109.97	119.70
22	DA	2199	A	P-O3'-C3'	-8.08	110.00	119.70
22	BA	1980	G	O4'-C1'-N9	8.08	114.66	108.20
1	AA	431	A	P-O3'-C3'	-8.08	110.01	119.70
1	AA	1365	G	P-O3'-C3'	-8.06	110.02	119.70
1	AA	1380	U	O4'-C1'-N1	8.06	114.65	108.20
22	DA	1626	A	P-O3'-C3'	8.06	129.38	119.70
1	CA	316	C	P-O3'-C3'	-8.06	110.03	119.70
22	DA	806	C	N1-C1'-C2'	-8.06	103.14	112.00
22	DA	1758	U	P-O3'-C3'	8.05	129.36	119.70
22	BA	1324	G	P-O3'-C3'	8.05	129.36	119.70
22	DA	860	U	N1-C1'-C2'	-8.04	103.15	112.00
22	DA	2612	C	O4'-C1'-N1	8.04	114.63	108.20
22	DA	2836	U	P-O3'-C3'	-8.04	110.06	119.70
22	DA	390	U	P-O3'-C3'	8.03	129.33	119.70
22	DA	2063	C	P-O3'-C3'	-8.02	110.07	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	654	G	P-O3'-C3'	-8.02	110.08	119.70
22	DA	2573	C	N1-C1'-C2'	-8.02	103.18	112.00
1	AA	1332	A	P-O3'-C3'	-8.02	110.08	119.70
1	AA	1256	A	P-O3'-C3'	8.01	129.31	119.70
1	AA	816	A	P-O3'-C3'	-8.01	110.09	119.70
1	CA	753	A	P-O3'-C3'	8.01	129.31	119.70
22	BA	196	A	O4'-C1'-N9	8.00	114.60	108.20
22	BA	948	C	C5-C6-N1	-8.00	117.00	121.00
22	BA	727	A	P-O3'-C3'	-8.00	110.10	119.70
1	CA	497	G	P-O3'-C3'	-8.00	110.11	119.70
22	BA	595	C	C6-N1-C2	7.99	123.50	120.30
22	DA	2629	U	P-O3'-C3'	7.99	129.29	119.70
22	BA	1357	C	P-O3'-C3'	-7.98	110.13	119.70
22	DA	860	U	P-O3'-C3'	-7.97	110.13	119.70
22	DA	335	C	N1-C1'-C2'	-7.97	103.23	112.00
22	DA	1759	A	P-O3'-C3'	-7.96	110.15	119.70
1	AA	934	C	P-O3'-C3'	7.96	129.25	119.70
22	BA	1289	C	P-O3'-C3'	-7.96	110.15	119.70
1	CA	14	U	P-O3'-C3'	-7.96	110.15	119.70
22	DA	1838	C	P-O3'-C3'	7.96	129.25	119.70
22	BA	2567	G	P-O3'-C3'	-7.96	110.15	119.70
22	BA	221	A	P-O3'-C3'	7.95	129.24	119.70
22	BA	1980	G	P-O3'-C3'	7.95	129.24	119.70
22	DA	2024	G	P-O3'-C3'	-7.95	110.16	119.70
22	BA	1782	U	P-O3'-C3'	-7.94	110.17	119.70
22	DA	218	A	P-O3'-C3'	-7.93	110.18	119.70
22	BA	2060	A	O4'-C1'-N9	7.93	114.55	108.20
22	BA	860	U	P-O5'-C5'	-7.93	108.21	120.90
1	AA	115	G	P-O3'-C3'	7.93	129.21	119.70
22	BA	2759	G	P-O5'-C5'	-7.93	108.22	120.90
1	CA	511	C	P-O3'-C3'	7.92	129.21	119.70
1	CA	499	A	P-O3'-C3'	7.92	129.21	119.70
1	AA	486	U	N1-C1'-C2'	-7.92	103.29	112.00
22	DA	1522	A	P-O3'-C3'	7.91	129.20	119.70
22	BA	2646	C	N1-C1'-C2'	-7.91	103.30	112.00
22	DA	2727	A	P-O3'-C3'	-7.90	110.22	119.70
22	BA	2214	C	P-O3'-C3'	-7.90	110.22	119.70
22	DA	1430	G	P-O3'-C3'	-7.90	110.22	119.70
22	DA	1782	U	O4'-C1'-N1	7.90	114.52	108.20
22	BA	1255	U	N1-C1'-C2'	-7.90	103.31	112.00
22	BA	2152	G	P-O3'-C3'	-7.89	110.23	119.70
22	BA	1714	U	O4'-C1'-N1	-7.89	101.89	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1348	U	N1-C1'-C2'	-7.89	103.32	112.00
22	BA	812	C	P-O3'-C3'	-7.89	110.23	119.70
22	DA	1558	C	P-O3'-C3'	7.89	129.17	119.70
22	DA	573	U	O4'-C1'-N1	7.89	114.51	108.20
23	BB	16	G	P-O3'-C3'	-7.89	110.24	119.70
22	BA	2312	U	P-O3'-C3'	-7.88	110.24	119.70
22	BA	704	G	P-O3'-C3'	7.88	129.16	119.70
1	AA	48	C	O4'-C1'-N1	7.88	114.50	108.20
22	BA	654	A	P-O3'-C3'	7.87	129.14	119.70
22	DA	1213	A	P-O3'-C3'	-7.87	110.26	119.70
22	BA	531	C	N1-C1'-C2'	7.86	124.22	114.00
22	BA	1127	A	C8-N9-C4	-7.86	102.66	105.80
1	AA	479	U	O4'-C1'-N1	7.86	114.48	108.20
22	BA	1255	U	O5'-P-OP1	-7.86	98.63	105.70
22	BA	2258	C	P-O3'-C3'	7.86	129.13	119.70
22	BA	1026	G	P-O3'-C3'	-7.85	110.28	119.70
22	DA	805	G	P-O3'-C3'	7.85	129.12	119.70
22	BA	2337	G	P-O3'-C3'	-7.85	110.28	119.70
22	DA	1305	C	N1-C1'-C2'	-7.85	103.36	112.00
22	BA	454	A	P-O3'-C3'	7.84	129.11	119.70
1	AA	718	A	P-O3'-C3'	-7.84	110.30	119.70
22	BA	1293	C	P-O3'-C3'	-7.84	110.30	119.70
22	BA	1627	G	P-O3'-C3'	-7.83	110.30	119.70
1	AA	1447	A	P-O3'-C3'	7.83	129.10	119.70
22	BA	764	A	P-O3'-C3'	7.83	129.09	119.70
22	BA	33	C	P-O3'-C3'	7.83	129.09	119.70
1	AA	511	C	N1-C1'-C2'	7.82	124.17	114.00
1	AA	1196	A	P-O3'-C3'	7.82	129.09	119.70
1	AA	389	A	P-O3'-C3'	-7.82	110.32	119.70
22	BA	817	C	N1-C2-O2	-7.82	114.21	118.90
1	CA	1282	C	N1-C1'-C2'	-7.81	103.41	112.00
22	DA	445	C	N1-C1'-C2'	-7.81	103.41	112.00
1	CA	240	G	P-O3'-C3'	-7.81	110.33	119.70
23	DB	88	C	P-O3'-C3'	7.80	129.06	119.70
1	CA	245	U	P-O3'-C3'	-7.80	110.34	119.70
1	CA	512	U	P-O3'-C3'	-7.80	110.34	119.70
1	CA	1399	C	P-O3'-C3'	7.80	129.06	119.70
1	CA	48	C	O4'-C1'-N1	7.79	114.43	108.20
1	AA	490	C	P-O3'-C3'	-7.79	110.35	119.70
22	BA	196	A	P-O3'-C3'	7.79	129.04	119.70
22	DA	527	C	P-O3'-C3'	7.78	129.04	119.70
1	AA	373	A	P-O3'-C3'	-7.78	110.36	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	91	A	P-O3'-C3'	7.78	129.04	119.70
22	BA	2385	C	N1-C1'-C2'	-7.78	103.44	112.00
22	DA	2617	U	N1-C1'-C2'	-7.78	103.44	112.00
1	AA	1055	A	P-O3'-C3'	-7.77	110.38	119.70
22	BA	1839	G	P-O3'-C3'	-7.77	110.38	119.70
22	BA	1555	G	P-O3'-C3'	-7.77	110.38	119.70
22	BA	137	U	O4'-C1'-N1	-7.76	101.99	108.20
23	DB	68	C	O4'-C1'-N1	7.76	114.41	108.20
1	AA	365	U	O4'-C1'-N1	7.76	114.41	108.20
22	BA	1732	C	O4'-C1'-N1	7.76	114.41	108.20
22	DA	2752	C	N1-C1'-C2'	-7.76	103.47	112.00
1	CA	874	G	P-O3'-C3'	-7.76	110.39	119.70
1	AA	688	G	P-O3'-C3'	-7.75	110.40	119.70
1	CA	734	G	P-O3'-C3'	-7.75	110.40	119.70
1	AA	1066	C	O4'-C1'-N1	-7.75	102.00	108.20
22	DA	2251	G	P-O3'-C3'	-7.75	110.40	119.70
22	BA	1340	U	O4'-C1'-N1	7.74	114.39	108.20
1	AA	439	U	N1-C1'-C2'	-7.74	103.49	112.00
22	BA	1885	A	P-O3'-C3'	-7.74	110.41	119.70
22	DA	784	G	O4'-C1'-N9	7.74	114.39	108.20
22	DA	811	U	O4'-C1'-N1	7.74	114.39	108.20
22	BA	2681	C	N1-C2-O2	-7.74	114.26	118.90
22	BA	1936	A	C2-N3-C4	-7.73	106.73	110.60
22	DA	2075	U	O4'-C1'-N1	-7.73	102.01	108.20
1	CA	547	A	P-O3'-C3'	7.72	128.97	119.70
22	DA	2387	U	N1-C1'-C2'	-7.72	103.50	112.00
1	AA	129	A	P-O3'-C3'	7.72	128.96	119.70
1	CA	643	C	P-O3'-C3'	-7.72	110.44	119.70
22	BA	2346	A	P-O3'-C3'	7.72	128.96	119.70
22	DA	2847	U	P-O3'-C3'	7.72	128.96	119.70
1	AA	109	A	P-O3'-C3'	7.71	128.96	119.70
22	BA	2606	C	C5-C6-N1	-7.71	117.14	121.00
1	AA	794	A	P-O3'-C3'	-7.71	110.45	119.70
22	BA	2662	A	P-O3'-C3'	-7.71	110.45	119.70
1	CA	891	U	P-O3'-C3'	-7.71	110.45	119.70
1	AA	1128	C	P-O3'-C3'	-7.70	110.46	119.70
22	BA	1695	G	P-O3'-C3'	-7.70	110.46	119.70
22	BA	1681	G	P-O3'-C3'	7.69	128.93	119.70
22	DA	2876	G	P-O3'-C3'	-7.69	110.47	119.70
22	BA	385	C	O4'-C1'-N1	-7.68	102.06	108.20
1	AA	717	U	P-O3'-C3'	7.68	128.91	119.70
22	BA	2672	U	O4'-C1'-N1	-7.67	102.06	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1693	U	P-O3'-C3'	7.66	128.90	119.70
22	DA	392	U	P-O3'-C3'	-7.66	110.51	119.70
1	AA	1201	A	P-O3'-C3'	7.66	128.89	119.70
22	DA	2324	U	P-O3'-C3'	7.66	128.89	119.70
22	BA	2086	U	O4'-C1'-N1	7.65	114.32	108.20
22	BA	1385	A	P-O3'-C3'	7.64	128.88	119.70
22	BA	812	C	N1-C1'-C2'	-7.63	103.60	112.00
22	BA	984	A	C5-C6-N6	-7.63	117.60	123.70
22	BA	613	A	P-O3'-C3'	7.63	128.86	119.70
22	BA	490	C	P-O5'-C5'	-7.63	108.70	120.90
1	AA	198	G	P-O3'-C3'	-7.62	110.55	119.70
22	DA	200	U	N1-C1'-C2'	-7.62	103.61	112.00
22	DA	1136	G	P-O3'-C3'	-7.62	110.55	119.70
22	DA	1236	G	P-O3'-C3'	7.62	128.84	119.70
22	BA	790	U	O4'-C1'-N1	7.62	114.29	108.20
1	CA	430	A	P-O3'-C3'	-7.61	110.57	119.70
1	AA	72	A	P-O3'-C3'	-7.61	110.57	119.70
1	AA	1200	C	N1-C1'-C2'	7.61	123.89	114.00
22	BA	783	A	C4-C5-N7	7.61	114.50	110.70
22	BA	1330	C	O4'-C1'-N1	7.60	114.28	108.20
1	CA	116	A	N9-C1'-C2'	-7.60	103.64	112.00
22	BA	2566	A	P-O3'-C3'	7.60	128.82	119.70
22	BA	729	G	P-O3'-C3'	-7.60	110.58	119.70
22	BA	740	C	N1-C1'-C2'	-7.60	103.64	112.00
22	DA	144	A	P-O3'-C3'	-7.60	110.58	119.70
22	BA	479	A	P-O3'-C3'	7.59	128.81	119.70
22	DA	575	A	P-O3'-C3'	-7.59	110.59	119.70
22	BA	1706	C	P-O3'-C3'	7.59	128.81	119.70
22	DA	1918	A	P-O3'-C3'	7.59	128.81	119.70
22	DA	105	C	O4'-C1'-N1	7.59	114.27	108.20
22	BA	1786	A	P-O3'-C3'	7.59	128.80	119.70
22	DA	2492	U	P-O3'-C3'	-7.58	110.60	119.70
23	DB	46	A	P-O3'-C3'	-7.58	110.60	119.70
22	BA	786	C	C6-N1-C2	7.58	123.33	120.30
22	BA	697	G	P-O3'-C3'	7.57	128.79	119.70
22	BA	2768	U	P-O3'-C3'	-7.57	110.61	119.70
1	AA	336	A	P-O3'-C3'	-7.57	110.62	119.70
22	BA	573	U	P-O3'-C3'	7.57	128.78	119.70
1	CA	547	A	O4'-C1'-N9	7.56	114.25	108.20
22	BA	1152	C	N1-C2-O2	-7.55	114.37	118.90
1	AA	512	U	P-O3'-C3'	-7.55	110.64	119.70
22	DA	92	U	N1-C1'-C2'	-7.55	103.69	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	1255	U	N1-C1'-C2'	-7.55	103.70	112.00
22	BA	1510	G	P-O3'-C3'	-7.55	110.64	119.70
22	DA	510	C	N1-C1'-C2'	-7.54	103.70	112.00
1	AA	1394	A	P-O3'-C3'	7.54	128.75	119.70
22	BA	985	C	P-O3'-C3'	-7.54	110.65	119.70
22	BA	914	G	P-O3'-C3'	-7.54	110.65	119.70
22	BA	482	A	P-O3'-C3'	-7.54	110.65	119.70
1	CA	536	C	N1-C1'-C2'	-7.54	103.71	112.00
22	DA	353	C	P-O3'-C3'	7.53	128.74	119.70
1	AA	1395	C	P-O5'-C5'	-7.53	108.85	120.90
22	DA	407	G	P-O3'-C3'	-7.53	110.67	119.70
22	BA	1905	C	O4'-C1'-N1	7.53	114.22	108.20
22	BA	2250	G	C5-N7-C8	-7.53	100.54	104.30
22	BA	1416	G	P-O3'-C3'	7.52	128.73	119.70
22	BA	507	A	P-O3'-C3'	-7.52	110.67	119.70
22	BA	1306	C	O4'-C1'-N1	7.52	114.22	108.20
1	AA	974	A	P-O3'-C3'	7.52	128.72	119.70
23	BB	67	G	P-O5'-C5'	-7.51	108.88	120.90
1	AA	1382	C	N1-C1'-C2'	-7.51	103.74	112.00
22	DA	637	A	P-O3'-C3'	7.51	128.71	119.70
1	AA	1259	C	P-O3'-C3'	-7.50	110.70	119.70
22	BA	984	A	C4-C5-C6	7.50	120.75	117.00
22	DA	2384	U	P-O3'-C3'	7.50	128.71	119.70
1	AA	415	A	P-O3'-C3'	-7.50	110.70	119.70
22	BA	1943	U	P-O3'-C3'	7.50	128.70	119.70
22	DA	2620	C	O4'-C1'-N1	-7.50	102.20	108.20
1	AA	95	C	N1-C1'-C2'	-7.50	103.76	112.00
22	BA	489	G	P-O3'-C3'	7.49	128.69	119.70
22	DA	1399	C	N1-C1'-C2'	-7.49	103.76	112.00
22	BA	125	A	P-O3'-C3'	7.49	128.69	119.70
22	DA	478	A	P-O3'-C3'	-7.49	110.71	119.70
22	BA	915	C	N1-C1'-C2'	-7.49	103.76	112.00
22	DA	1460	U	P-O3'-C3'	7.49	128.68	119.70
22	BA	529	A	C8-N9-C4	7.49	108.79	105.80
22	DA	1141	U	P-O3'-C3'	7.48	128.68	119.70
22	BA	783	A	C6-C5-N7	-7.48	127.06	132.30
23	BB	108	A	P-O3'-C3'	7.48	128.67	119.70
22	BA	177	G	P-O3'-C3'	7.47	128.67	119.70
1	CA	548	G	P-O3'-C3'	-7.47	110.73	119.70
22	BA	199	A	P-O3'-C3'	7.47	128.67	119.70
1	AA	642	A	P-O3'-C3'	-7.47	110.74	119.70
22	BA	509	C	P-O3'-C3'	-7.47	110.73	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	233	A	P-O3'-C3'	-7.47	110.74	119.70
22	DA	2259	U	N1-C1'-C2'	-7.47	103.79	112.00
22	BA	777	G	N9-C1'-C2'	-7.46	103.79	112.00
22	DA	669	G	P-O3'-C3'	7.46	128.66	119.70
22	DA	1333	G	P-O3'-C3'	-7.46	110.75	119.70
22	DA	919	U	O4'-C1'-N1	-7.46	102.23	108.20
22	BA	2440	C	N1-C1'-C2'	-7.45	103.80	112.00
22	DA	805	G	O4'-C1'-N9	7.45	114.16	108.20
22	DA	934	U	P-O3'-C3'	-7.45	110.77	119.70
22	BA	1286	A	O4'-C1'-N9	7.44	114.16	108.20
22	BA	14	A	P-O3'-C3'	-7.44	110.77	119.70
22	BA	1965	C	P-O3'-C3'	-7.44	110.77	119.70
22	DA	2440	C	P-O5'-C5'	-7.44	108.99	120.90
22	DA	1397	U	P-O3'-C3'	7.44	128.63	119.70
22	DA	627	A	P-O3'-C3'	7.44	128.63	119.70
22	DA	2866	U	P-O3'-C3'	7.44	128.62	119.70
22	BA	1918	A	P-O3'-C3'	7.43	128.62	119.70
1	CA	247	G	P-O3'-C3'	-7.43	110.78	119.70
22	BA	1461	C	P-O3'-C3'	-7.43	110.78	119.70
1	AA	536	C	P-O3'-C3'	-7.43	110.78	119.70
22	DA	1008	A	P-O3'-C3'	7.43	128.62	119.70
22	DA	2580	U	O4'-C1'-N1	7.43	114.14	108.20
1	AA	641	U	P-O3'-C3'	7.42	128.61	119.70
22	BA	60	G	P-O3'-C3'	7.42	128.61	119.70
22	BA	995	C	P-O3'-C3'	7.42	128.61	119.70
22	BA	1524	G	P-O3'-C3'	-7.42	110.79	119.70
22	BA	1278	C	C6-N1-C2	7.42	123.27	120.30
22	BA	1119	U	P-O3'-C3'	-7.42	110.80	119.70
1	CA	1358	U	O4'-C1'-N1	7.42	114.13	108.20
22	BA	1048	A	P-O3'-C3'	-7.41	110.81	119.70
22	BA	1491	G	P-O3'-C3'	-7.41	110.81	119.70
22	BA	2615	U	N1-C1'-C2'	-7.41	103.85	112.00
22	BA	2585	U	O4'-C1'-N1	7.41	114.13	108.20
1	CA	15	G	P-O3'-C3'	-7.41	110.81	119.70
22	DA	217	A	P-O3'-C3'	-7.41	110.81	119.70
22	DA	2837	A	P-O3'-C3'	-7.40	110.81	119.70
22	BA	1451	C	P-O3'-C3'	7.40	128.58	119.70
22	DA	1398	C	P-O3'-C3'	-7.40	110.82	119.70
22	BA	2151	U	N1-C1'-C2'	-7.40	103.86	112.00
1	CA	214	C	N1-C1'-C2'	-7.40	103.86	112.00
1	CA	429	U	P-O3'-C3'	7.40	128.58	119.70
22	BA	2267	A	C3'-C2'-C1'	7.40	107.42	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	235	U	P-O3'-C3'	-7.39	110.83	119.70
22	BA	2430	A	P-O3'-C3'	7.39	128.57	119.70
22	BA	1205	A	P-O3'-C3'	7.39	128.56	119.70
22	BA	2575	C	O4'-C1'-N1	7.39	114.11	108.20
22	DA	1602	U	P-O3'-C3'	7.39	128.56	119.70
22	DA	2289	G	P-O3'-C3'	-7.38	110.84	119.70
22	BA	1063	G	P-O3'-C3'	-7.38	110.84	119.70
22	DA	2267	A	P-O3'-C3'	-7.38	110.84	119.70
22	BA	1463	C	O4'-C1'-N1	-7.38	102.30	108.20
22	DA	1512	C	P-O3'-C3'	-7.38	110.85	119.70
22	BA	2423	U	N1-C1'-C2'	7.37	123.58	114.00
1	CA	1051	C	N1-C1'-C2'	-7.37	103.89	112.00
22	DA	959	A	P-O3'-C3'	-7.36	110.87	119.70
1	AA	517	G	P-O3'-C3'	7.35	128.52	119.70
22	DA	1427	A	P-O3'-C3'	7.35	128.52	119.70
22	BA	2151	U	O4'-C1'-N1	7.35	114.08	108.20
1	CA	688	G	P-O3'-C3'	-7.35	110.88	119.70
22	DA	2282	G	P-O3'-C3'	7.34	128.51	119.70
23	DB	69	G	P-O3'-C3'	-7.34	110.89	119.70
22	BA	967	U	P-O3'-C3'	-7.34	110.89	119.70
22	BA	1611	C	P-O5'-C5'	-7.34	109.15	120.90
1	CA	575	G	C4-N9-C1'	-7.34	116.96	126.50
22	BA	35	G	P-O5'-C5'	-7.34	109.16	120.90
1	CA	1498	U	P-O3'-C3'	7.34	128.51	119.70
22	BA	961	C	P-O3'-C3'	7.33	128.50	119.70
1	AA	960	U	N1-C1'-C2'	7.33	123.53	114.00
22	BA	671	C	P-O3'-C3'	-7.33	110.90	119.70
1	CA	277	C	N1-C1'-C2'	-7.33	103.94	112.00
1	CA	1395	C	P-O3'-C3'	-7.33	110.90	119.70
22	BA	395	U	P-O3'-C3'	7.33	128.50	119.70
22	BA	528	A	N1-C6-N6	7.32	122.99	118.60
22	BA	747	U	O5'-P-OP2	-7.32	99.11	105.70
1	AA	245	U	N1-C1'-C2'	-7.32	103.94	112.00
22	DA	2458	G	P-O3'-C3'	7.32	128.49	119.70
22	BA	835	C	N1-C1'-C2'	-7.32	103.95	112.00
1	CA	1224	U	P-O3'-C3'	7.32	128.48	119.70
22	BA	2250	G	N1-C6-O6	7.31	124.29	119.90
22	DA	622	G	P-O3'-C3'	-7.31	110.92	119.70
1	AA	704	A	P-O3'-C3'	-7.31	110.93	119.70
22	BA	70	G	P-O3'-C3'	7.31	128.47	119.70
22	BA	2791	G	P-O3'-C3'	-7.31	110.93	119.70
22	BA	2645	G	O4'-C1'-N9	7.31	114.05	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	794	A	P-O3'-C3'	-7.31	110.93	119.70
22	BA	84	A	P-O3'-C3'	7.30	128.47	119.70
22	BA	2715	C	P-O3'-C3'	-7.30	110.94	119.70
22	BA	2459	A	P-O3'-C3'	-7.30	110.94	119.70
22	DA	1135	C	N1-C1'-C2'	-7.30	103.97	112.00
22	BA	974	G	C4-C5-N7	7.30	113.72	110.80
22	BA	1286	A	P-O3'-C3'	7.30	128.46	119.70
1	CA	248	C	P-O3'-C3'	-7.30	110.94	119.70
22	DA	398	C	N1-C1'-C2'	-7.30	103.97	112.00
1	AA	885	G	P-O3'-C3'	-7.29	110.95	119.70
22	DA	2874	C	P-O3'-C3'	-7.29	110.95	119.70
22	BA	682	G	O4'-C1'-N9	-7.29	102.37	108.20
1	CA	1499	A	P-O5'-C5'	-7.29	109.24	120.90
1	AA	935	A	P-O3'-C3'	-7.29	110.96	119.70
1	AA	520	A	P-O3'-C3'	-7.28	110.97	119.70
1	AA	913	A	P-O3'-C3'	7.27	128.42	119.70
1	AA	1320	C	P-O3'-C3'	-7.27	110.98	119.70
1	AA	1345	U	P-O3'-C3'	7.27	128.42	119.70
22	DA	1072	C	O4'-C1'-N1	7.27	114.01	108.20
22	BA	1867	G	P-O3'-C3'	-7.27	110.98	119.70
22	DA	704	G	P-O3'-C3'	7.27	128.42	119.70
22	BA	2431	U	N1-C1'-C2'	-7.26	104.01	112.00
22	DA	1681	G	P-O3'-C3'	7.26	128.41	119.70
22	BA	726	G	P-O3'-C3'	7.25	128.40	119.70
22	BA	1198	U	O4'-C1'-N1	-7.25	102.40	108.20
1	CA	1218	C	P-O3'-C3'	-7.25	111.00	119.70
22	BA	2250	G	C6-C5-N7	-7.25	126.05	130.40
22	DA	2585	U	P-O3'-C3'	7.25	128.40	119.70
22	BA	934	U	P-O3'-C3'	-7.25	111.00	119.70
22	DA	162	U	O4'-C1'-N1	7.25	114.00	108.20
22	DA	1130	U	P-O3'-C3'	7.25	128.39	119.70
22	BA	1942	C	P-O5'-C5'	-7.24	109.31	120.90
22	BA	1027	A	O4'-C1'-N9	-7.24	102.41	108.20
1	CA	566	G	P-O3'-C3'	7.24	128.39	119.70
22	BA	2018	G	N9-C4-C5	7.24	108.30	105.40
22	DA	1954	G	P-O3'-C3'	7.24	128.39	119.70
22	BA	2584	U	O4'-C1'-N1	7.24	113.99	108.20
1	AA	1141	C	N1-C1'-C2'	-7.24	104.04	112.00
22	DA	783	A	P-O3'-C3'	-7.24	111.02	119.70
22	BA	2286	G	P-O3'-C3'	7.23	128.38	119.70
1	AA	961	U	P-O3'-C3'	-7.23	111.03	119.70
22	BA	2064	C	N1-C1'-C2'	-7.23	104.05	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	388	G	P-O3'-C3'	7.22	128.37	119.70
22	BA	791	C	N1-C2-O2	-7.22	114.56	118.90
22	DA	858	G	P-O3'-C3'	7.22	128.37	119.70
1	AA	346	G	P-O5'-C5'	-7.22	109.34	120.90
1	CA	1052	U	N1-C1'-C2'	-7.22	104.05	112.00
22	BA	951	C	C6-N1-C2	7.22	123.19	120.30
22	BA	1238	G	N9-C1'-C2'	-7.22	104.06	112.00
22	BA	324	A	P-O3'-C3'	-7.21	111.04	119.70
22	BA	1884	G	O4'-C1'-N9	7.21	113.97	108.20
22	BA	1116	G	P-O3'-C3'	-7.21	111.05	119.70
22	DA	2348	U	O4'-C1'-N1	7.21	113.97	108.20
22	DA	2848	G	P-O3'-C3'	7.21	128.35	119.70
22	BA	2820	A	C2-N3-C4	-7.21	107.00	110.60
22	DA	1402	U	O4'-C1'-N1	7.20	113.96	108.20
22	DA	2339	C	N1-C1'-C2'	-7.20	104.08	112.00
1	CA	184	G	P-O3'-C3'	-7.20	111.06	119.70
22	DA	485	C	P-O3'-C3'	-7.20	111.06	119.70
22	BA	1920	C	N1-C1'-C2'	-7.20	104.08	112.00
22	BA	822	G	O4'-C1'-N9	7.20	113.96	108.20
22	DA	1838	C	O4'-C1'-N1	7.20	113.96	108.20
22	BA	257	C	O4'-C1'-N1	7.19	113.95	108.20
22	DA	413	C	P-O3'-C3'	-7.19	111.07	119.70
22	BA	858	G	P-O3'-C3'	7.19	128.33	119.70
1	AA	531	U	P-O3'-C3'	7.19	128.32	119.70
1	AA	1101	A	P-O3'-C3'	7.19	128.33	119.70
1	CA	596	A	P-O3'-C3'	-7.18	111.08	119.70
22	BA	1733	G	P-O3'-C3'	-7.18	111.09	119.70
22	BA	1273	U	P-O3'-C3'	-7.17	111.09	119.70
22	BA	752	A	P-O3'-C3'	7.17	128.31	119.70
22	BA	921	C	O4'-C1'-N1	7.17	113.94	108.20
22	DA	304	U	P-O3'-C3'	-7.17	111.09	119.70
22	DA	1498	C	P-O3'-C3'	-7.17	111.09	119.70
1	AA	1053	G	P-O3'-C3'	7.17	128.30	119.70
22	BA	1024	G	P-O5'-C5'	-7.17	109.43	120.90
1	AA	519	C	N1-C1'-C2'	-7.16	104.12	112.00
22	BA	1033	U	N1-C1'-C2'	7.16	123.31	114.00
22	BA	2866	U	P-O3'-C3'	7.16	128.29	119.70
39	BR	9	GLY	N-CA-C	-7.15	95.22	113.10
22	BA	1758	U	N1-C2-N3	7.15	119.19	114.90
22	BA	1818	U	P-O3'-C3'	7.14	128.27	119.70
22	BA	2067	G	P-O3'-C3'	7.14	128.27	119.70
22	DA	312	G	P-O3'-C3'	-7.14	111.13	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	464	U	O4'-C1'-N1	-7.14	102.49	108.20
23	DB	40	U	P-O3'-C3'	7.14	128.27	119.70
22	BA	2424	C	N1-C1'-C2'	-7.14	104.14	112.00
22	DA	1615	C	N1-C1'-C2'	7.14	123.28	114.00
1	AA	1320	C	N1-C1'-C2'	-7.14	104.15	112.00
22	BA	1396	U	P-O3'-C3'	7.14	128.27	119.70
1	AA	282	A	P-O3'-C3'	-7.14	111.14	119.70
22	BA	984	A	C5-C6-N1	-7.14	114.13	117.70
1	AA	485	U	P-O3'-C3'	7.13	128.26	119.70
22	BA	637	A	P-O3'-C3'	7.13	128.26	119.70
1	CA	183	C	O4'-C1'-N1	7.13	113.91	108.20
22	DA	442	G	P-O3'-C3'	7.13	128.25	119.70
1	AA	652	U	P-O3'-C3'	7.13	128.25	119.70
22	BA	2797	U	N1-C1'-C2'	7.13	123.26	114.00
22	BA	2391	G	O4'-C1'-N9	7.12	113.90	108.20
1	AA	14	U	P-O5'-C5'	-7.12	109.51	120.90
22	BA	2275	C	N1-C1'-C2'	7.12	123.25	114.00
22	DA	2250	G	O4'-C1'-N9	-7.12	102.51	108.20
22	DA	1265	A	P-O3'-C3'	7.11	128.24	119.70
22	BA	462	C	C6-N1-C2	7.11	123.14	120.30
22	BA	2654	A	P-O3'-C3'	7.11	128.23	119.70
1	AA	1131	G	P-O3'-C3'	-7.11	111.17	119.70
22	BA	1328	A	P-O3'-C3'	7.11	128.23	119.70
1	CA	1227	A	P-O3'-C3'	7.11	128.23	119.70
1	AA	344	A	P-O3'-C3'	7.10	128.22	119.70
1	CA	1455	G	P-O3'-C3'	-7.10	111.18	119.70
22	DA	749	A	P-O3'-C3'	-7.10	111.18	119.70
1	CA	429	U	O4'-C1'-N1	7.10	113.88	108.20
22	BA	35	G	N1-C6-O6	-7.10	115.64	119.90
22	DA	2023	C	P-O3'-C3'	-7.09	111.19	119.70
22	DA	2383	G	P-O3'-C3'	-7.09	111.19	119.70
22	BA	2439	A	P-O3'-C3'	7.09	128.21	119.70
22	DA	2069	G	P-O3'-C3'	-7.09	111.19	119.70
22	BA	306	U	O4'-C1'-N1	-7.08	102.53	108.20
22	BA	2890	G	N1-C6-O6	7.08	124.15	119.90
1	CA	93	U	N1-C1'-C2'	-7.08	104.21	112.00
22	DA	2151	U	O4'-C1'-N1	7.08	113.87	108.20
22	DA	162	U	P-O3'-C3'	7.08	128.20	119.70
22	DA	1780	A	P-O3'-C3'	7.08	128.19	119.70
1	AA	452	A	P-O3'-C3'	-7.08	111.21	119.70
22	DA	868	U	N1-C1'-C2'	-7.08	104.22	112.00
1	CA	518	C	O4'-C1'-N1	7.07	113.86	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1245	C	O4'-C1'-N1	7.07	113.86	108.20
22	DA	917	A	N9-C1'-C2'	-7.06	104.23	112.00
1	AA	1453	G	P-O3'-C3'	-7.05	111.23	119.70
1	CA	439	U	N1-C1'-C2'	-7.05	104.25	112.00
1	CA	1289	A	P-O3'-C3'	-7.05	111.24	119.70
22	DA	1810	A	P-O3'-C3'	-7.05	111.25	119.70
22	BA	2343	U	O4'-C1'-N1	-7.04	102.56	108.20
22	BA	1499	C	N1-C1'-C2'	-7.04	104.26	112.00
22	BA	1999	C	C5-C6-N1	-7.04	117.48	121.00
22	DA	945	A	O4'-C1'-N9	7.04	113.83	108.20
22	DA	1397	U	N1-C1'-C2'	7.04	123.15	114.00
22	BA	484	C	O4'-C1'-N1	-7.03	102.57	108.20
1	AA	411	A	P-O3'-C3'	7.03	128.13	119.70
22	BA	852	U	P-O3'-C3'	-7.03	111.27	119.70
22	DA	1606	C	P-O3'-C3'	7.02	128.13	119.70
22	BA	1343	G	P-O3'-C3'	-7.02	111.27	119.70
22	BA	2307	G	P-O3'-C3'	7.02	128.13	119.70
22	DA	1207	C	N1-C1'-C2'	-7.02	104.28	112.00
1	AA	316	C	N1-C1'-C2'	-7.01	104.28	112.00
1	CA	132	C	P-O3'-C3'	-7.01	111.28	119.70
1	AA	372	C	O4'-C1'-N1	7.01	113.81	108.20
1	CA	802	A	P-O3'-C3'	7.01	128.11	119.70
1	AA	1362	A	O4'-C1'-N9	7.00	113.80	108.20
22	BA	2348	U	P-O3'-C3'	-7.00	111.30	119.70
1	CA	718	A	P-O3'-C3'	-7.00	111.30	119.70
22	DA	976	G	P-O3'-C3'	-7.00	111.30	119.70
22	BA	1866	A	P-O3'-C3'	-7.00	111.31	119.70
45	BX	70	LEU	CA-CB-CG	7.00	131.39	115.30
22	BA	434	U	O4'-C1'-N1	6.99	113.80	108.20
22	BA	1398	C	P-O3'-C3'	-6.99	111.31	119.70
1	CA	1202	U	P-O3'-C3'	-6.99	111.31	119.70
22	BA	1757	A	P-O3'-C3'	6.99	128.09	119.70
22	BA	2423	U	P-O3'-C3'	6.99	128.09	119.70
22	BA	1011	G	P-O3'-C3'	6.99	128.09	119.70
22	BA	2815	C	N1-C2-O2	-6.99	114.71	118.90
22	BA	1272	A	P-O5'-C5'	-6.99	109.72	120.90
1	CA	915	A	N9-C1'-C2'	-6.99	104.31	112.00
22	DA	369	U	O4'-C1'-N1	6.99	113.79	108.20
22	DA	1476	U	N1-C1'-C2'	-6.99	104.31	112.00
22	BA	442	G	P-O3'-C3'	6.99	128.08	119.70
1	AA	1283	U	P-O3'-C3'	-6.98	111.32	119.70
22	BA	232	G	P-O3'-C3'	6.98	128.08	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2289	G	P-O3'-C3'	-6.98	111.32	119.70
22	BA	2051	A	C5-C6-N6	-6.98	118.12	123.70
22	BA	1340	U	C5-C6-N1	-6.97	119.21	122.70
1	CA	704	A	P-O3'-C3'	-6.97	111.33	119.70
22	BA	1351	C	O4'-C1'-N1	6.97	113.78	108.20
1	CA	1520	C	O4'-C1'-N1	-6.97	102.62	108.20
22	DA	1822	C	O4'-C1'-N1	6.97	113.78	108.20
1	AA	1190	G	P-O3'-C3'	6.97	128.06	119.70
22	BA	1645	G	O4'-C1'-N9	-6.97	102.62	108.20
22	DA	1941	C	N1-C1'-C2'	-6.97	104.33	112.00
1	AA	1401	G	P-O3'-C3'	-6.97	111.34	119.70
22	BA	2392	A	P-O3'-C3'	-6.97	111.34	119.70
23	DB	111	U	N1-C1'-C2'	-6.97	104.33	112.00
1	CA	132	C	O4'-C1'-N1	6.97	113.77	108.20
22	DA	397	U	N1-C1'-C2'	-6.97	104.34	112.00
1	AA	1167	A	P-O3'-C3'	6.96	128.05	119.70
1	CA	85	U	P-O3'-C3'	6.96	128.05	119.70
22	BA	1971	U	O3'-P-O5'	-6.96	90.78	104.00
22	DA	2225	A	P-O3'-C3'	6.96	128.05	119.70
22	BA	386	G	P-O3'-C3'	6.96	128.05	119.70
1	CA	980	C	P-O3'-C3'	-6.95	111.36	119.70
22	BA	1809	A	P-O3'-C3'	-6.95	111.36	119.70
22	BA	2364	C	O4'-C1'-N1	6.95	113.76	108.20
22	DA	302	C	N1-C1'-C2'	-6.95	104.36	112.00
23	BB	86	G	P-O3'-C3'	-6.95	111.36	119.70
1	CA	555	U	P-O3'-C3'	-6.94	111.37	119.70
22	BA	1999	C	C6-N1-C2	6.94	123.08	120.30
22	DA	230	G	P-O3'-C3'	-6.94	111.37	119.70
22	DA	73	A	P-O3'-C3'	-6.94	111.38	119.70
22	BA	906	U	O4'-C1'-N1	6.93	113.75	108.20
22	DA	1568	G	P-O3'-C3'	-6.93	111.38	119.70
22	BA	2383	G	P-O3'-C3'	-6.93	111.38	119.70
22	BA	794	A	P-O3'-C3'	-6.93	111.38	119.70
1	AA	1068	G	N9-C1'-C2'	-6.93	104.38	112.00
22	BA	1266	G	P-O3'-C3'	6.93	128.02	119.70
22	DA	1208	C	N1-C1'-C2'	-6.93	104.38	112.00
22	BA	1654	A	C3'-C2'-C1'	6.92	107.04	101.50
22	BA	138	U	N1-C1'-C2'	-6.92	104.38	112.00
1	CA	1230	C	P-O3'-C3'	-6.92	111.39	119.70
22	DA	1386	C	O4'-C1'-N1	6.92	113.74	108.20
22	DA	336	C	P-O3'-C3'	-6.92	111.39	119.70
22	DA	1993	U	N1-C1'-C2'	-6.92	104.39	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	972	C	P-O3'-C3'	-6.92	111.40	119.70
1	CA	40	C	O4'-C1'-N1	-6.92	102.66	108.20
1	AA	438	U	O4'-C1'-N1	6.92	113.73	108.20
22	BA	989	G	P-O3'-C3'	-6.92	111.40	119.70
22	DA	1960	A	P-O3'-C3'	-6.92	111.40	119.70
22	BA	510	C	O5'-P-OP2	-6.92	99.47	105.70
22	BA	163	C	N1-C1'-C2'	-6.92	104.39	112.00
1	CA	1450	U	O4'-C1'-N1	6.92	113.73	108.20
22	DA	274	C	N1-C1'-C2'	-6.92	104.39	112.00
22	DA	1982	U	P-O3'-C3'	-6.92	111.40	119.70
22	BA	1494	A	P-O3'-C3'	-6.91	111.40	119.70
22	BA	1738	G	P-O3'-C3'	6.91	128.00	119.70
22	BA	944	C	C6-N1-C2	6.91	123.06	120.30
22	DA	2272	U	O4'-C1'-N1	-6.91	102.67	108.20
22	DA	1965	C	P-O3'-C3'	-6.91	111.41	119.70
22	BA	961	C	N3-C4-C5	-6.90	119.14	121.90
22	BA	2572	A	C8-N9-C4	6.90	108.56	105.80
22	DA	2325	G	P-O3'-C3'	-6.90	111.42	119.70
1	CA	421	U	O4'-C1'-N1	6.90	113.72	108.20
1	AA	60	A	P-O3'-C3'	6.89	127.97	119.70
1	AA	1094	G	O4'-C1'-N9	6.89	113.72	108.20
22	BA	2297	A	P-O3'-C3'	-6.89	111.43	119.70
22	BA	2637	U	C5-C6-N1	-6.89	119.26	122.70
1	AA	52	C	P-O3'-C3'	-6.88	111.44	119.70
1	AA	919	A	P-O3'-C3'	6.88	127.96	119.70
22	BA	531	C	O3'-P-O5'	-6.88	90.92	104.00
22	BA	746	U	P-O3'-C3'	6.88	127.96	119.70
22	BA	2211	A	P-O3'-C3'	6.88	127.96	119.70
22	DA	1996	C	P-O3'-C3'	6.88	127.96	119.70
22	BA	2283	C	P-O3'-C3'	-6.88	111.45	119.70
22	DA	476	G	P-O3'-C3'	-6.88	111.45	119.70
1	CA	424	G	P-O3'-C3'	-6.88	111.45	119.70
23	BB	87	U	P-O3'-C3'	6.87	127.95	119.70
22	BA	1303	G	P-O3'-C3'	-6.87	111.46	119.70
22	DA	2469	A	N9-C1'-C2'	-6.87	104.44	112.00
1	CA	387	U	O4'-C1'-N1	6.87	113.69	108.20
1	AA	258	G	N9-C1'-C2'	-6.87	104.45	112.00
1	AA	965	U	P-O3'-C3'	6.87	127.94	119.70
22	DA	451	U	O4'-C1'-N1	6.87	113.69	108.20
1	AA	463	U	P-O3'-C3'	-6.86	111.47	119.70
22	BA	1802	A	P-O3'-C3'	-6.86	111.47	119.70
22	BA	2611	C	P-O5'-C5'	-6.86	109.93	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	1051	G	P-O3'-C3'	-6.86	111.47	119.70
22	BA	1340	U	O3'-P-O5'	-6.85	90.98	104.00
1	AA	1197	A	P-O3'-C3'	-6.85	111.48	119.70
22	BA	1606	C	P-O5'-C5'	-6.84	109.95	120.90
23	BB	13	G	P-O3'-C3'	-6.84	111.49	119.70
1	CA	1302	C	P-O3'-C3'	-6.84	111.49	119.70
22	DA	2334	U	O4'-C1'-N1	6.84	113.67	108.20
22	BA	1326	U	O4'-C1'-N1	6.84	113.67	108.20
1	CA	641	U	P-O3'-C3'	6.84	127.91	119.70
1	AA	1085	U	N1-C1'-C2'	6.84	122.89	114.00
22	BA	369	U	N1-C1'-C2'	6.84	122.89	114.00
22	BA	1651	G	C8-N9-C4	-6.84	103.66	106.40
22	BA	1535	A	O4'-C1'-N9	6.84	113.67	108.20
22	DA	587	C	P-O3'-C3'	6.84	127.91	119.70
22	BA	93	G	P-O3'-C3'	-6.84	111.50	119.70
22	DA	2758	A	P-O3'-C3'	-6.84	111.50	119.70
22	BA	741	U	P-O5'-C5'	-6.83	109.96	120.90
22	BA	1386	C	N1-C1'-C2'	-6.83	104.49	112.00
22	DA	375	G	P-O3'-C3'	-6.83	111.50	119.70
22	DA	1491	G	P-O3'-C3'	-6.83	111.51	119.70
22	BA	2504	U	P-O3'-C3'	-6.83	111.51	119.70
23	DB	18	G	P-O3'-C3'	-6.82	111.51	119.70
22	BA	680	C	O4'-C1'-N1	-6.82	102.74	108.20
22	BA	390	U	N1-C1'-C2'	6.82	122.86	114.00
22	BA	2499	C	P-O5'-C5'	-6.81	110.00	120.90
22	BA	2426	A	O4'-C1'-N9	-6.81	102.75	108.20
22	DA	2873	A	O4'-C1'-N9	6.81	113.65	108.20
22	BA	1681	G	C5-C6-O6	-6.81	124.52	128.60
22	BA	2673	G	N9-C1'-C2'	-6.81	104.51	112.00
22	DA	1065	U	P-O3'-C3'	-6.81	111.53	119.70
22	DA	1208	C	O4'-C1'-N1	6.81	113.65	108.20
22	DA	2314	A	P-O3'-C3'	-6.81	111.53	119.70
1	AA	1381	U	O4'-C1'-N1	6.80	113.64	108.20
1	CA	511	C	N1-C1'-C2'	6.80	122.84	114.00
1	CA	820	U	O4'-C1'-N1	6.80	113.64	108.20
22	DA	2266	A	P-O3'-C3'	6.80	127.86	119.70
22	DA	2669	G	P-O3'-C3'	-6.80	111.54	119.70
22	BA	1714	U	P-O3'-C3'	-6.79	111.55	119.70
22	BA	1647	U	P-O3'-C3'	6.79	127.85	119.70
22	BA	1655	A	O5'-P-OP2	-6.79	99.59	105.70
1	AA	9	G	N9-C1'-C2'	-6.79	104.53	112.00
1	AA	1318	A	P-O3'-C3'	6.79	127.85	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	806	C	P-O5'-C5'	-6.79	110.04	120.90
22	BA	2363	G	P-O3'-C3'	6.79	127.85	119.70
1	CA	1507	A	P-O3'-C3'	-6.79	111.55	119.70
22	DA	475	C	N1-C1'-C2'	-6.79	104.53	112.00
22	BA	2267	A	P-O5'-C5'	-6.79	110.04	120.90
22	BA	2766	A	O4'-C1'-N9	-6.79	102.77	108.20
1	CA	428	G	O4'-C1'-N9	6.78	113.63	108.20
22	BA	2215	C	P-O3'-C3'	-6.78	111.56	119.70
22	BA	793	A	C2-N3-C4	-6.78	107.21	110.60
22	BA	1237	A	P-O3'-C3'	6.78	127.83	119.70
22	BA	2820	A	O4'-C1'-N9	-6.78	102.78	108.20
22	BA	974	G	N7-C8-N9	6.78	116.49	113.10
22	BA	2264	C	P-O5'-C5'	-6.78	110.06	120.90
22	DA	196	A	P-O3'-C3'	6.78	127.83	119.70
22	BA	396	G	P-O3'-C3'	-6.77	111.57	119.70
1	AA	566	G	P-O3'-C3'	6.77	127.83	119.70
22	BA	806	C	O4'-C1'-N1	-6.77	102.78	108.20
1	CA	1381	U	P-O3'-C3'	-6.77	111.57	119.70
1	CA	500	G	P-O3'-C3'	-6.77	111.58	119.70
1	AA	1152	A	P-O3'-C3'	-6.77	111.58	119.70
22	BA	806	C	P-O3'-C3'	-6.77	111.58	119.70
22	BA	1708	C	C6-N1-C2	6.77	123.01	120.30
22	DA	1818	U	O4'-C1'-N1	6.77	113.61	108.20
22	BA	1428	C	O4'-C1'-N1	6.77	113.61	108.20
1	AA	1531	A	P-O3'-C3'	-6.76	111.58	119.70
22	DA	105	C	N1-C1'-C2'	-6.76	104.56	112.00
22	DA	2714	G	P-O3'-C3'	-6.76	111.59	119.70
22	BA	2229	U	P-O3'-C3'	6.76	127.81	119.70
22	DA	1802	A	P-O3'-C3'	-6.76	111.59	119.70
22	BA	2427	C	C3'-C2'-C1'	6.76	106.91	101.50
22	BA	2459	A	N1-C6-N6	-6.76	114.55	118.60
22	DA	2428	G	P-O3'-C3'	-6.76	111.59	119.70
22	BA	1946	U	O4'-C1'-N1	-6.75	102.80	108.20
1	AA	1382	C	P-O3'-C3'	-6.75	111.60	119.70
22	BA	1411	U	O4'-C1'-N1	6.75	113.60	108.20
22	DA	2286	G	P-O3'-C3'	6.75	127.80	119.70
1	AA	366	A	P-O3'-C3'	6.75	127.80	119.70
22	BA	1985	C	N1-C2-O2	-6.75	114.85	118.90
22	BA	861	A	P-O5'-C5'	-6.75	110.11	120.90
22	DA	2392	A	P-O3'-C3'	-6.74	111.61	119.70
22	BA	1009	A	P-O3'-C3'	-6.74	111.62	119.70
22	BA	1560	G	P-O3'-C3'	-6.74	111.62	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1672	A	C8-N9-C4	6.74	108.49	105.80
22	DA	827	U	P-O3'-C3'	6.74	127.78	119.70
22	DA	1811	G	P-O3'-C3'	-6.74	111.62	119.70
22	BA	34	U	O4'-C1'-N1	-6.73	102.81	108.20
1	CA	1332	A	P-O3'-C3'	-6.73	111.62	119.70
22	DA	2150	C	O4'-C1'-N1	6.73	113.58	108.20
22	BA	2043	C	O4'-C1'-N1	-6.73	102.82	108.20
22	BA	2356	U	O4'-C1'-N1	6.73	113.58	108.20
22	BA	1320	C	P-O3'-C3'	6.72	127.77	119.70
1	CA	174	A	P-O3'-C3'	-6.72	111.63	119.70
22	BA	744	U	O4'-C1'-N1	6.72	113.58	108.20
22	DA	2498	C	P-O3'-C3'	-6.72	111.64	119.70
22	DA	2576	G	P-O3'-C3'	6.72	127.76	119.70
1	AA	1228	C	P-O3'-C3'	-6.71	111.64	119.70
22	DA	1386	C	N1-C1'-C2'	-6.71	104.61	112.00
1	AA	372	C	P-O3'-C3'	6.71	127.75	119.70
1	AA	469	C	O4'-C1'-N1	6.71	113.57	108.20
22	BA	1512	C	P-O3'-C3'	-6.71	111.65	119.70
22	BA	534	U	O4'-C1'-N1	6.70	113.56	108.20
1	CA	213	G	P-O3'-C3'	-6.70	111.66	119.70
22	BA	2756	U	N1-C1'-C2'	6.70	122.71	114.00
22	BA	583	G	P-O5'-C5'	-6.70	110.19	120.90
22	BA	2450	A	P-O5'-C5'	-6.70	110.19	120.90
22	BA	1236	G	P-O3'-C3'	6.69	127.73	119.70
22	BA	1996	C	P-O3'-C3'	6.69	127.73	119.70
1	AA	314	C	P-O3'-C3'	6.68	127.72	119.70
22	BA	531	C	N3-C4-C5	6.68	124.57	121.90
22	BA	1783	A	P-O3'-C3'	-6.67	111.69	119.70
22	DA	2582	G	P-O3'-C3'	-6.67	111.69	119.70
22	BA	2522	U	O4'-C1'-N1	-6.67	102.86	108.20
22	DA	2566	A	P-O3'-C3'	6.67	127.70	119.70
22	BA	2603	G	P-O3'-C3'	-6.66	111.71	119.70
22	BA	2631	G	P-O5'-C5'	-6.66	110.24	120.90
22	BA	1325	U	O4'-C1'-N1	6.66	113.53	108.20
22	DA	229	C	P-O3'-C3'	-6.66	111.71	119.70
1	AA	266	G	P-O3'-C3'	6.66	127.69	119.70
22	BA	926	G	P-O5'-C5'	-6.66	110.25	120.90
22	BA	1610	A	O4'-C1'-N9	-6.66	102.88	108.20
22	DA	444	C	O4'-C1'-N1	6.66	113.53	108.20
1	CA	1481	U	O4'-C1'-N1	6.65	113.52	108.20
22	BA	856	G	P-O3'-C3'	6.65	127.68	119.70
22	BA	1498	C	P-O3'-C3'	-6.65	111.72	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2199	A	P-O3'-C3'	-6.65	111.72	119.70
1	AA	497	G	P-O3'-C3'	-6.65	111.72	119.70
22	DA	861	A	P-O3'-C3'	-6.65	111.72	119.70
22	DA	2542	A	P-O3'-C3'	6.65	127.68	119.70
22	BA	996	A	O5'-P-OP2	-6.65	99.72	105.70
1	AA	1336	C	P-O3'-C3'	6.64	127.67	119.70
22	BA	1045	C	N1-C1'-C2'	6.64	122.64	114.00
22	DA	1399	C	P-O3'-C3'	-6.64	111.73	119.70
22	BA	302	C	P-O3'-C3'	-6.64	111.73	119.70
22	BA	753	A	P-O3'-C3'	-6.64	111.73	119.70
22	BA	1200	C	C6-N1-C2	6.64	122.95	120.30
22	BA	2064	C	P-O5'-C5'	-6.63	110.29	120.90
22	BA	32	C	O4'-C1'-N1	6.63	113.51	108.20
22	BA	1074	G	P-O3'-C3'	-6.63	111.74	119.70
22	BA	1760	C	O4'-C1'-N1	-6.63	102.89	108.20
22	DA	421	C	P-O3'-C3'	6.63	127.66	119.70
22	BA	1971	U	C3'-C2'-C1'	6.63	106.80	101.50
1	CA	811	C	P-O3'-C3'	6.63	127.65	119.70
22	DA	774	G	P-O3'-C3'	6.62	127.65	119.70
1	AA	451	A	P-O3'-C3'	6.62	127.65	119.70
22	BA	237	C	O4'-C1'-N1	6.62	113.50	108.20
22	BA	2850	A	P-O3'-C3'	-6.62	111.76	119.70
22	BA	216	A	P-O3'-C3'	-6.62	111.76	119.70
22	BA	1326	U	N1-C1'-C2'	-6.62	104.72	112.00
22	DA	2567	G	P-O3'-C3'	-6.62	111.76	119.70
22	BA	1931	U	N1-C1'-C2'	-6.61	104.72	112.00
1	AA	14	U	N1-C1'-C2'	-6.61	104.73	112.00
1	AA	121	U	N1-C1'-C2'	-6.61	104.73	112.00
22	BA	933	A	P-O3'-C3'	-6.61	111.77	119.70
22	BA	2567	G	C6-C5-N7	6.61	134.37	130.40
22	BA	2226	C	P-O5'-C5'	-6.61	110.33	120.90
22	DA	916	G	P-O3'-C3'	-6.61	111.77	119.70
22	DA	1419	A	P-O3'-C3'	-6.61	111.77	119.70
1	AA	686	U	O4'-C1'-N1	6.61	113.49	108.20
1	AA	688	G	N9-C1'-C2'	-6.61	104.73	112.00
22	BA	443	A	P-O5'-C5'	-6.61	110.33	120.90
22	BA	2350	C	O4'-C1'-N1	6.61	113.48	108.20
1	CA	86	G	P-O3'-C3'	6.61	127.63	119.70
22	BA	673	C	P-O3'-C3'	-6.60	111.78	119.70
22	DA	1733	G	P-O3'-C3'	-6.60	111.78	119.70
22	DA	2798	U	O4'-C1'-N1	-6.60	102.92	108.20
22	BA	1628	G	C6-C5-N7	-6.60	126.44	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2022	U	P-O5'-C5'	-6.60	110.34	120.90
22	DA	324	A	P-O3'-C3'	-6.60	111.78	119.70
1	CA	1211	U	P-O3'-C3'	6.59	127.61	119.70
22	BA	1734	G	P-O3'-C3'	-6.59	111.79	119.70
1	CA	546	A	P-O3'-C3'	6.59	127.61	119.70
22	BA	414	C	O4'-C1'-N1	6.59	113.47	108.20
22	DA	1627	G	P-O3'-C3'	-6.58	111.80	119.70
1	AA	428	G	P-O3'-C3'	6.58	127.60	119.70
22	BA	1058	U	O4'-C1'-N1	6.58	113.47	108.20
22	BA	1386	C	P-O3'-C3'	-6.58	111.80	119.70
22	BA	1457	U	P-O3'-C3'	6.58	127.60	119.70
22	BA	2492	U	P-O3'-C3'	-6.58	111.80	119.70
22	BA	1255	U	P-O5'-C5'	-6.58	110.37	120.90
22	DA	1560	G	P-O3'-C3'	-6.58	111.81	119.70
22	BA	507	A	N9-C1'-C2'	-6.58	104.77	112.00
22	BA	528	A	C6-C5-N7	-6.58	127.70	132.30
22	BA	1760	C	C5-C6-N1	-6.57	117.72	121.00
1	CA	70	U	P-O3'-C3'	6.57	127.59	119.70
22	DA	1900	A	P-O3'-C3'	6.57	127.58	119.70
22	DA	807	U	O4'-C1'-N1	6.56	113.45	108.20
23	BB	47	C	O4'-C1'-N1	-6.56	102.95	108.20
22	BA	2672	U	P-O3'-C3'	6.56	127.57	119.70
1	CA	129	A	P-O3'-C3'	6.56	127.57	119.70
22	BA	475	C	P-O3'-C3'	-6.56	111.83	119.70
22	BA	1667	G	C5-C6-O6	-6.56	124.67	128.60
1	AA	984	C	P-O3'-C3'	-6.55	111.83	119.70
22	BA	434	U	P-O3'-C3'	6.55	127.57	119.70
22	BA	2595	G	P-O5'-C5'	-6.55	110.42	120.90
22	BA	783	A	C2-N3-C4	-6.55	107.33	110.60
22	BA	1939	U	O4'-C1'-N1	6.55	113.44	108.20
22	BA	1993	U	P-O5'-C5'	-6.55	110.42	120.90
22	DA	1839	G	P-O3'-C3'	-6.55	111.84	119.70
23	BB	79	G	C5-C6-N1	6.55	114.77	111.50
22	DA	398	C	P-O3'-C3'	-6.54	111.85	119.70
1	AA	1278	G	P-O3'-C3'	6.54	127.55	119.70
22	BA	1993	U	C3'-C2'-C1'	6.54	106.73	101.50
1	CA	1087	G	P-O3'-C3'	-6.54	111.85	119.70
22	BA	1311	G	P-O3'-C3'	6.54	127.55	119.70
22	DA	2324	U	O4'-C1'-N1	6.54	113.43	108.20
22	BA	143	C	O4'-C1'-N1	6.54	113.43	108.20
22	DA	990	A	P-O3'-C3'	-6.54	111.86	119.70
22	BA	2820	A	O3'-P-O5'	-6.54	91.58	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	1993	U	C3'-C2'-C1'	6.54	106.73	101.50
22	DA	2240	U	O4'-C1'-N1	6.54	113.43	108.20
22	BA	2501	C	N1-C1'-C2'	6.53	122.49	114.00
22	BA	2821	A	P-O3'-C3'	-6.53	111.86	119.70
1	CA	885	G	N9-C1'-C2'	-6.53	104.82	112.00
1	CA	1202	U	O4'-C1'-N1	6.53	113.42	108.20
1	AA	486	U	P-O3'-C3'	-6.53	111.86	119.70
1	AA	872	A	O4'-C1'-N9	6.53	113.42	108.20
22	BA	125	A	O3'-P-O5'	-6.53	91.60	104.00
22	DA	1956	U	O4'-C1'-N1	6.53	113.42	108.20
1	CA	328	C	O4'-C1'-N1	-6.52	102.98	108.20
22	DA	2646	C	P-O5'-C5'	-6.52	110.47	120.90
22	BA	1127	A	C3'-C2'-C1'	6.52	106.72	101.50
22	DA	571	U	P-O3'-C3'	6.52	127.52	119.70
22	DA	2520	C	P-O3'-C3'	-6.52	111.88	119.70
22	DA	2137	U	O4'-C1'-N1	6.52	113.41	108.20
22	DA	105	C	P-O3'-C3'	-6.51	111.88	119.70
22	DA	913	U	P-O3'-C3'	6.51	127.52	119.70
22	BA	1992	G	C4-N9-C1'	-6.51	118.03	126.50
22	BA	593	U	O4'-C1'-N1	6.51	113.41	108.20
22	BA	1024	G	C8-N9-C4	-6.51	103.80	106.40
22	BA	2519	U	N1-C1'-C2'	-6.51	104.84	112.00
1	CA	438	U	P-O3'-C3'	6.51	127.51	119.70
22	BA	1544	A	P-O5'-C5'	-6.51	110.49	120.90
1	CA	291	U	O4'-C1'-N1	6.51	113.41	108.20
22	DA	1286	A	P-O3'-C3'	6.51	127.51	119.70
22	BA	1618	A	C5-C6-N6	6.51	128.91	123.70
22	DA	395	U	N1-C1'-C2'	6.51	122.46	114.00
22	BA	2335	A	P-O3'-C3'	-6.51	111.89	119.70
1	AA	1126	U	P-O3'-C3'	6.50	127.50	119.70
22	BA	600	G	P-O5'-C5'	-6.50	110.49	120.90
22	DA	386	G	P-O3'-C3'	6.50	127.50	119.70
22	DA	802	A	P-O3'-C3'	-6.50	111.90	119.70
22	BA	1780	A	P-O3'-C3'	6.50	127.50	119.70
22	BA	1497	U	O4'-C1'-N1	6.50	113.40	108.20
1	CA	1181	G	P-O3'-C3'	6.50	127.50	119.70
22	DA	274	C	P-O3'-C3'	-6.50	111.90	119.70
22	BA	2871	U	O5'-P-OP1	6.50	118.50	110.70
1	AA	424	G	P-O3'-C3'	-6.49	111.92	119.70
22	BA	1299	G	C6-C5-N7	-6.48	126.51	130.40
1	AA	722	G	P-O3'-C3'	-6.48	111.92	119.70
22	BA	2555	U	O4'-C1'-N1	6.48	113.39	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	344	A	O4'-C1'-N9	6.48	113.39	108.20
22	BA	1276	A	P-O3'-C3'	-6.48	111.92	119.70
1	AA	14	U	P-O3'-C3'	-6.48	111.93	119.70
1	AA	792	A	P-O3'-C3'	6.48	127.47	119.70
22	BA	637	A	O4'-C1'-N9	6.48	113.38	108.20
22	DA	1025	G	P-O3'-C3'	6.47	127.47	119.70
22	DA	1483	G	P-O3'-C3'	-6.47	111.93	119.70
1	CA	1531	A	P-O3'-C3'	-6.47	111.94	119.70
22	BA	2296	U	O4'-C1'-N1	6.47	113.38	108.20
1	CA	119	A	P-O3'-C3'	6.47	127.46	119.70
22	DA	2468	A	P-O3'-C3'	6.47	127.46	119.70
22	BA	1300	G	O4'-C1'-N9	6.46	113.37	108.20
22	BA	2778	A	P-O3'-C3'	6.46	127.46	119.70
1	AA	1283	U	O4'-C1'-N1	6.46	113.37	108.20
33	BL	19	LEU	CA-CB-CG	6.46	130.15	115.30
22	BA	1638	C	O4'-C1'-N1	6.45	113.36	108.20
22	BA	1678	A	N1-C6-N6	6.45	122.47	118.60
22	BA	2431	U	P-O3'-C3'	-6.45	111.95	119.70
22	DA	2338	C	O4'-C1'-N1	6.45	113.36	108.20
22	DA	2868	A	P-O3'-C3'	-6.45	111.96	119.70
1	AA	184	G	P-O3'-C3'	-6.45	111.96	119.70
1	AA	857	C	O4'-C1'-N1	6.45	113.36	108.20
22	BA	2628	C	P-O3'-C3'	6.45	127.44	119.70
23	BB	109	A	P-O3'-C3'	-6.45	111.96	119.70
22	BA	2326	C	P-O3'-C3'	6.45	127.44	119.70
22	BA	973	A	P-O3'-C3'	6.45	127.44	119.70
22	DA	1397	U	O4'-C1'-N1	6.45	113.36	108.20
22	DA	957	C	P-O3'-C3'	6.45	127.44	119.70
1	CA	73	C	N1-C1'-C2'	-6.44	104.91	112.00
22	BA	1756	G	O4'-C1'-N9	-6.44	103.05	108.20
22	DA	1493	C	P-O3'-C3'	6.44	127.43	119.70
22	DA	2873	A	P-O3'-C3'	6.44	127.43	119.70
22	BA	2089	C	P-O3'-C3'	-6.44	111.98	119.70
1	CA	575	G	C8-N9-C1'	6.44	135.37	127.00
22	DA	2850	A	P-O3'-C3'	-6.44	111.98	119.70
1	AA	365	U	C5-C6-N1	-6.43	119.48	122.70
22	DA	2143	C	P-O3'-C3'	6.43	127.42	119.70
22	BA	1476	U	C3'-C2'-C1'	6.43	106.65	101.50
22	DA	1305	C	O4'-C1'-N1	6.43	113.34	108.20
1	CA	914	A	C3'-C2'-C1'	6.43	106.64	101.50
1	CA	47	C	N1-C1'-C2'	6.42	122.35	114.00
22	BA	1129	A	C3'-C2'-C1'	6.42	106.64	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	108	G	P-O3'-C3'	-6.42	112.00	119.70
22	BA	807	U	P-O5'-C5'	-6.42	110.63	120.90
22	DA	177	G	P-O3'-C3'	6.41	127.40	119.70
1	AA	258	G	P-O5'-C5'	-6.41	110.64	120.90
22	DA	1945	G	P-O3'-C3'	-6.41	112.01	119.70
22	BA	476	G	P-O5'-C5'	-6.41	110.65	120.90
22	BA	1760	C	C6-N1-C2	6.41	122.86	120.30
22	BA	575	A	C4-C5-C6	6.41	120.20	117.00
22	BA	24	G	P-O3'-C3'	6.41	127.39	119.70
22	BA	1275	A	P-O3'-C3'	6.40	127.39	119.70
22	BA	1033	U	P-O3'-C3'	6.40	127.38	119.70
22	BA	2502	G	P-O5'-C5'	-6.39	110.67	120.90
1	AA	469	C	P-O3'-C3'	-6.39	112.03	119.70
22	DA	1997	C	P-O3'-C3'	-6.39	112.03	119.70
22	DA	273	G	P-O3'-C3'	-6.39	112.03	119.70
1	CA	978	A	P-O3'-C3'	-6.39	112.03	119.70
22	DA	242	G	P-O3'-C3'	6.39	127.37	119.70
1	CA	1141	C	N1-C1'-C2'	-6.39	104.97	112.00
22	BA	913	U	P-O3'-C3'	6.39	127.36	119.70
22	BA	1758	U	N3-C2-O2	-6.39	117.73	122.20
22	DA	1807	G	P-O3'-C3'	-6.38	112.04	119.70
22	DA	2151	U	P-O3'-C3'	-6.38	112.04	119.70
22	BA	63	A	N9-C1'-C2'	-6.38	104.98	112.00
1	CA	481	G	P-O3'-C3'	6.38	127.36	119.70
1	CA	316	C	O4'-C1'-N1	6.38	113.30	108.20
22	BA	1378	A	P-O3'-C3'	6.38	127.36	119.70
22	BA	2562	U	O4'-C1'-N1	-6.38	103.10	108.20
22	DA	1635	A	P-O3'-C3'	-6.38	112.05	119.70
22	DA	2334	U	N1-C1'-C2'	6.38	122.29	114.00
22	DA	2682	A	C3'-C2'-C1'	6.38	106.60	101.50
22	BA	1651	G	P-O5'-C5'	-6.38	110.70	120.90
1	AA	1320	C	O4'-C1'-N1	6.37	113.30	108.20
22	BA	769	U	O4'-C1'-N1	-6.37	103.10	108.20
1	AA	985	C	O4'-C1'-N1	6.37	113.30	108.20
22	BA	1340	U	P-O3'-C3'	6.37	127.35	119.70
22	BA	451	U	P-O3'-C3'	6.37	127.34	119.70
22	BA	2504	U	O4'-C1'-N1	6.37	113.30	108.20
1	CA	306	A	N9-C1'-C2'	-6.37	104.99	112.00
22	DA	1722	A	P-O3'-C3'	-6.37	112.06	119.70
1	CA	654	G	P-O3'-C3'	-6.37	112.06	119.70
1	CA	733	G	P-O3'-C3'	6.37	127.34	119.70
22	BA	967	U	O4'-C1'-N1	6.36	113.29	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	564	C	P-O3'-C3'	-6.36	112.06	119.70
22	BA	2656	U	P-O3'-C3'	-6.36	112.07	119.70
22	DA	221	A	P-O3'-C3'	6.36	127.33	119.70
22	BA	1459	G	P-O3'-C3'	-6.36	112.07	119.70
22	BA	785	G	C2-N3-C4	-6.36	108.72	111.90
22	DA	777	G	N9-C1'-C2'	-6.35	105.01	112.00
1	AA	318	G	N3-C4-N9	-6.35	122.19	126.00
22	BA	2052	A	N9-C1'-C2'	-6.35	105.01	112.00
22	BA	2505	G	N1-C6-O6	-6.35	116.09	119.90
22	BA	2056	G	C5-C6-O6	-6.35	124.79	128.60
22	DA	1970	A	P-O3'-C3'	6.35	127.32	119.70
22	BA	2384	U	N1-C1'-C2'	6.35	122.25	114.00
1	AA	67	C	O4'-C1'-N1	6.35	113.28	108.20
1	CA	1502	A	P-O3'-C3'	6.35	127.31	119.70
1	AA	245	U	O4'-C1'-N1	6.34	113.28	108.20
22	BA	1992	G	C8-N9-C1'	6.34	135.25	127.00
22	DA	222	A	O4'-C1'-N9	6.34	113.27	108.20
22	BA	479	A	O4'-C1'-N9	6.34	113.27	108.20
22	BA	2728	U	N1-C1'-C2'	6.34	122.24	114.00
1	CA	792	A	O4'-C1'-N9	6.34	113.27	108.20
22	DA	129	C	P-O3'-C3'	-6.34	112.10	119.70
22	BA	2492	U	P-O5'-C5'	-6.33	110.77	120.90
22	DA	1389	G	P-O3'-C3'	-6.33	112.10	119.70
1	AA	267	C	O4'-C1'-N1	6.33	113.27	108.20
22	BA	655	A	P-O3'-C3'	6.33	127.30	119.70
22	BA	846	U	P-O3'-C3'	6.33	127.30	119.70
1	AA	110	C	P-O3'-C3'	-6.33	112.10	119.70
1	AA	1224	U	O4'-C1'-N1	6.33	113.27	108.20
22	DA	1554	U	P-O3'-C3'	6.33	127.30	119.70
1	CA	567	G	C3'-C2'-C1'	6.33	106.56	101.50
22	BA	1005	C	N1-C2-O2	6.33	122.70	118.90
22	BA	1329	U	O4'-C1'-N1	6.33	113.26	108.20
23	BB	42	C	P-O3'-C3'	-6.33	112.11	119.70
22	BA	1009	A	N9-C1'-C2'	-6.32	105.05	112.00
22	BA	1132	U	O4'-C1'-N1	6.32	113.26	108.20
22	DA	455	C	O4'-C1'-N1	6.32	113.26	108.20
22	DA	2217	G	C3'-C2'-C1'	6.32	106.56	101.50
22	BA	1155	A	O4'-C1'-N9	6.32	113.26	108.20
22	BA	100	U	N1-C1'-C2'	6.32	122.22	114.00
22	BA	2498	C	P-O3'-C3'	-6.32	112.11	119.70
22	DA	2143	C	O4'-C1'-N1	6.32	113.26	108.20
1	AA	124	C	O4'-C1'-N1	-6.32	103.15	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1717	A	P-O3'-C3'	-6.32	112.12	119.70
22	BA	1499	C	P-O3'-C3'	-6.32	112.12	119.70
22	BA	2613	U	O4'-C1'-N1	6.32	113.25	108.20
22	BA	2297	A	O4'-C1'-N9	-6.31	103.15	108.20
1	AA	1396	A	P-O3'-C3'	6.31	127.27	119.70
1	CA	576	C	O4'-C1'-N1	-6.31	103.15	108.20
1	AA	733	G	O4'-C1'-N9	6.31	113.25	108.20
22	BA	2777	G	O4'-C1'-N9	-6.31	103.15	108.20
22	BA	2425	A	O4'-C1'-N9	6.31	113.25	108.20
1	CA	60	A	P-O3'-C3'	6.31	127.27	119.70
1	CA	482	A	C3'-C2'-C1'	6.31	106.55	101.50
1	CA	1201	A	P-O3'-C3'	6.31	127.27	119.70
22	DA	1739	A	P-O3'-C3'	-6.31	112.13	119.70
22	DA	1020	A	P-O3'-C3'	6.30	127.26	119.70
22	DA	1267	U	P-O3'-C3'	-6.30	112.14	119.70
22	BA	1945	G	P-O3'-C3'	-6.30	112.14	119.70
1	CA	686	U	O4'-C1'-N1	6.30	113.24	108.20
1	CA	1152	A	P-O3'-C3'	-6.30	112.14	119.70
1	AA	1478	U	P-O5'-C5'	-6.29	110.83	120.90
22	BA	1324	G	O4'-C1'-N9	6.29	113.23	108.20
22	BA	835	C	C6-N1-C2	6.29	122.82	120.30
22	DA	1304	A	P-O3'-C3'	-6.29	112.15	119.70
22	BA	587	C	P-O3'-C3'	6.29	127.25	119.70
1	AA	1087	G	P-O3'-C3'	-6.29	112.15	119.70
22	BA	1735	A	P-O3'-C3'	-6.29	112.15	119.70
22	BA	1994	C	N1-C2-O2	-6.29	115.13	118.90
22	BA	2824	C	N3-C4-C5	-6.29	119.38	121.90
22	DA	806	C	P-O3'-C3'	-6.29	112.15	119.70
23	BB	15	A	P-O5'-C5'	-6.29	110.84	120.90
22	DA	2875	C	P-O3'-C3'	-6.29	112.16	119.70
22	BA	984	A	C8-N9-C4	6.28	108.31	105.80
22	DA	1857	G	P-O3'-C3'	6.28	127.24	119.70
1	AA	85	U	P-O3'-C3'	6.28	127.24	119.70
23	DB	24	G	P-O3'-C3'	6.28	127.23	119.70
22	BA	588	U	C3'-C2'-C1'	6.28	106.52	101.50
1	AA	1282	C	P-O3'-C3'	-6.28	112.17	119.70
22	BA	776	G	O4'-C1'-N9	-6.28	103.18	108.20
22	BA	2327	A	P-O3'-C3'	-6.28	112.17	119.70
22	BA	1426	G	O4'-C1'-N9	-6.27	103.18	108.20
22	BA	2646	C	P-O5'-C5'	-6.27	110.86	120.90
1	CA	218	U	O4'-C1'-N1	6.27	113.22	108.20
22	BA	523	C	N3-C4-C5	6.27	124.41	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	2656	U	P-O3'-C3'	-6.27	112.18	119.70
1	AA	1064	G	P-O3'-C3'	6.26	127.22	119.70
22	BA	1116	G	N9-C1'-C2'	-6.26	105.11	112.00
22	DA	271	G	P-O3'-C3'	6.26	127.22	119.70
22	BA	2875	C	P-O5'-C5'	-6.26	110.88	120.90
23	DB	110	C	P-O3'-C3'	-6.26	112.19	119.70
22	BA	2263	C	N1-C2-O2	-6.26	115.14	118.90
1	CA	992	U	P-O3'-C3'	6.26	127.21	119.70
22	DA	1460	U	O4'-C1'-N1	-6.26	103.19	108.20
22	DA	2194	U	P-O3'-C3'	-6.26	112.19	119.70
1	AA	257	G	P-O3'-C3'	6.26	127.21	119.70
22	BA	482	A	O5'-P-OP2	-6.26	100.07	105.70
22	DA	995	C	N1-C1'-C2'	6.26	122.13	114.00
1	CA	1507	A	N9-C1'-C2'	-6.25	105.12	112.00
1	CA	407	U	O4'-C1'-N1	-6.25	103.20	108.20
22	DA	1758	U	N1-C1'-C2'	6.25	122.13	114.00
22	BA	2388	A	O4'-C1'-N9	6.25	113.20	108.20
22	DA	233	A	P-O3'-C3'	-6.25	112.20	119.70
1	AA	1066	C	P-O3'-C3'	-6.25	112.21	119.70
22	BA	948	C	C4-C5-C6	6.25	120.52	117.40
1	AA	811	C	P-O3'-C3'	6.24	127.19	119.70
22	BA	603	A	P-O3'-C3'	6.24	127.19	119.70
22	BA	934	U	C3'-C2'-C1'	6.24	106.50	101.50
22	DA	775	G	P-O3'-C3'	6.24	127.19	119.70
22	BA	1759	A	P-O5'-C5'	-6.24	110.92	120.90
1	CA	486	U	O4'-C1'-N1	-6.24	103.21	108.20
1	CA	1127	G	P-O3'-C3'	-6.24	112.22	119.70
22	BA	1758	U	O4'-C1'-N1	-6.24	103.21	108.20
22	BA	2556	C	O4'-C1'-N1	6.23	113.19	108.20
22	BA	63	A	P-O3'-C3'	-6.23	112.22	119.70
22	DA	1962	C	P-O3'-C3'	6.23	127.18	119.70
1	AA	368	U	P-O3'-C3'	-6.23	112.22	119.70
22	BA	1452	G	N3-C4-C5	6.23	131.72	128.60
1	AA	884	U	N1-C1'-C2'	6.23	122.10	114.00
22	BA	529	A	N7-C8-N9	-6.23	110.69	113.80
22	BA	2469	A	N9-C1'-C2'	-6.23	105.15	112.00
1	CA	937	A	C3'-C2'-C1'	6.23	106.48	101.50
22	BA	1694	C	N1-C1'-C2'	-6.23	105.15	112.00
22	BA	2344	U	P-O3'-C3'	6.23	127.17	119.70
1	AA	414	A	C3'-C2'-C1'	6.22	106.48	101.50
22	DA	989	G	P-O3'-C3'	6.22	127.17	119.70
22	BA	1419	A	P-O3'-C3'	6.22	127.16	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	1993	U	P-O3'-C3'	-6.22	112.24	119.70
22	BA	406	G	P-O3'-C3'	-6.21	112.24	119.70
22	BA	729	G	C3'-C2'-C1'	6.21	106.47	101.50
1	CA	275	G	P-O3'-C3'	-6.21	112.24	119.70
22	BA	2809	A	P-O5'-C5'	-6.21	110.96	120.90
22	BA	2824	C	C4-C5-C6	6.21	120.51	117.40
22	BA	2888	C	P-O3'-C3'	-6.21	112.25	119.70
22	BA	2492	U	N1-C1'-C2'	-6.21	105.17	112.00
22	DA	107	G	P-O3'-C3'	-6.21	112.25	119.70
22	BA	2152	G	N9-C1'-C2'	-6.21	105.17	112.00
1	AA	1348	U	P-O3'-C3'	-6.21	112.25	119.70
1	AA	1398	A	N9-C1'-C2'	-6.21	105.17	112.00
1	AA	141	G	N9-C1'-C2'	-6.20	105.18	112.00
1	AA	562	U	O4'-C1'-N1	-6.20	103.24	108.20
1	CA	282	A	P-O3'-C3'	-6.20	112.26	119.70
22	DA	2459	A	P-O3'-C3'	-6.20	112.25	119.70
22	DA	604	G	P-O3'-C3'	-6.20	112.26	119.70
1	AA	534	U	P-O3'-C3'	-6.20	112.26	119.70
22	BA	819	A	O4'-C1'-N9	-6.20	103.24	108.20
22	BA	2047	C	O4'-C1'-N1	-6.20	103.24	108.20
22	DA	2052	A	N9-C1'-C2'	-6.20	105.18	112.00
22	BA	2630	G	P-O3'-C3'	-6.20	112.26	119.70
22	BA	30	G	P-O5'-C5'	-6.19	110.99	120.90
1	AA	247	G	N9-C1'-C2'	-6.19	105.19	112.00
1	AA	567	G	C3'-C2'-C1'	6.19	106.45	101.50
22	BA	1828	G	P-O5'-C5'	6.19	130.81	120.90
1	CA	1087	G	N9-C1'-C2'	-6.19	105.19	112.00
22	BA	1008	A	P-O3'-C3'	6.19	127.12	119.70
22	DA	52	A	P-O3'-C3'	-6.19	112.27	119.70
22	BA	1251	C	C2-N3-C4	-6.19	116.81	119.90
1	AA	884	U	P-O3'-C3'	6.18	127.12	119.70
22	BA	2424	C	N3-C4-N4	-6.18	113.67	118.00
22	DA	2893	A	P-O3'-C3'	6.18	127.12	119.70
22	DA	2504	U	O4'-C1'-N1	6.18	113.14	108.20
1	CA	1151	A	P-O3'-C3'	6.18	127.12	119.70
22	DA	2800	A	C3'-C2'-C1'	6.18	106.44	101.50
22	BA	985	C	N1-C1'-C2'	-6.18	105.20	112.00
22	BA	528	A	P-O3'-C3'	-6.18	112.29	119.70
22	BA	174	U	P-O3'-C3'	-6.17	112.29	119.70
22	BA	2755	C	O4'-C1'-N1	-6.17	103.26	108.20
22	DA	2757	A	P-O3'-C3'	-6.17	112.29	119.70
22	BA	2529	G	O4'-C1'-N9	-6.17	103.26	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	2582	G	N9-C1'-C2'	-6.17	105.21	112.00
22	BA	2578	G	P-O3'-C3'	-6.17	112.30	119.70
23	BB	12	C	N1-C1'-C2'	6.17	122.02	114.00
22	BA	528	A	C5-N7-C8	-6.16	100.82	103.90
22	DA	1901	A	P-O3'-C3'	-6.16	112.30	119.70
22	DA	2386	A	P-O3'-C3'	-6.16	112.31	119.70
23	BB	45	A	N9-C1'-C2'	-6.16	105.22	112.00
22	BA	621	A	P-O5'-C5'	-6.16	111.05	120.90
1	CA	914	A	N9-C1'-C2'	-6.16	105.22	112.00
22	BA	1707	G	C3'-C2'-C1'	6.16	106.42	101.50
22	DA	1019	U	O4'-C1'-N1	6.16	113.12	108.20
1	AA	594	U	O4'-C1'-N1	6.15	113.12	108.20
1	CA	1161	C	O4'-C1'-N1	6.15	113.12	108.20
1	CA	418	C	O4'-C1'-N1	6.15	113.12	108.20
1	AA	575	G	P-O5'-C5'	-6.15	111.06	120.90
1	AA	935	A	C3'-C2'-C1'	6.15	106.42	101.50
22	BA	2226	C	N1-C1'-C2'	-6.15	105.24	112.00
1	AA	1066	C	N1-C1'-C2'	-6.14	105.24	112.00
1	CA	74	A	C3'-C2'-C1'	6.14	106.42	101.50
22	BA	2517	C	N3-C4-C5	6.14	124.36	121.90
1	CA	980	C	O4'-C1'-N1	6.14	113.11	108.20
22	BA	66	C	O4'-C1'-N1	6.14	113.11	108.20
22	DA	1617	C	O4'-C1'-N1	6.14	113.11	108.20
22	BA	729	G	P-O5'-C5'	-6.14	111.08	120.90
22	BA	1300	G	P-O3'-C3'	6.13	127.06	119.70
1	CA	305	G	P-O3'-C3'	6.13	127.06	119.70
22	DA	1402	U	C3'-C2'-C1'	6.13	106.41	101.50
1	AA	971	G	O4'-C1'-N9	6.13	113.10	108.20
22	DA	2387	U	C3'-C2'-C1'	6.13	106.40	101.50
22	DA	2713	U	O4'-C1'-N1	-6.13	103.30	108.20
1	AA	1451	U	N1-C1'-C2'	6.13	121.96	114.00
22	BA	115	C	O4'-C1'-N1	-6.13	103.30	108.20
22	BA	1315	C	O4'-C1'-N1	-6.13	103.30	108.20
1	CA	1398	A	N9-C1'-C2'	-6.13	105.26	112.00
22	BA	2646	C	P-O3'-C3'	-6.12	112.35	119.70
22	DA	790	U	O4'-C1'-N1	6.12	113.10	108.20
22	BA	2800	A	C3'-C2'-C1'	6.12	106.40	101.50
22	BA	2889	C	N1-C2-O2	-6.12	115.23	118.90
22	DA	390	U	N1-C1'-C2'	6.12	121.96	114.00
22	DA	2712	C	O4'-C1'-N1	6.12	113.10	108.20
1	AA	559	A	O4'-C1'-N9	6.12	113.10	108.20
22	BA	557	C	P-O3'-C3'	6.12	127.04	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2066	C	C6-N1-C2	6.12	122.75	120.30
22	BA	2259	U	N1-C1'-C2'	-6.12	105.27	112.00
1	CA	1345	U	P-O3'-C3'	6.12	127.04	119.70
22	BA	2407	A	P-O5'-C5'	-6.12	111.11	120.90
22	BA	1357	C	C6-N1-C2	6.12	122.75	120.30
22	BA	2606	C	C6-N1-C2	6.12	122.75	120.30
22	BA	2729	G	P-O3'-C3'	-6.12	112.36	119.70
22	BA	1461	C	C3'-C2'-C1'	6.11	106.39	101.50
22	BA	491	G	C3'-C2'-C1'	6.11	106.39	101.50
22	DA	947	A	P-O3'-C3'	-6.11	112.37	119.70
22	BA	620	G	O3'-P-O5'	6.11	115.61	104.00
22	BA	667	U	O4'-C1'-N1	-6.11	103.31	108.20
22	DA	1255	U	O4'-C1'-N1	6.11	113.09	108.20
1	AA	547	A	O4'-C1'-N9	6.11	113.09	108.20
1	CA	439	U	C3'-C2'-C1'	6.11	106.39	101.50
1	AA	1203	C	O4'-C1'-N1	6.11	113.08	108.20
1	AA	1302	C	N1-C1'-C2'	-6.11	105.28	112.00
22	BA	1682	G	P-O5'-C5'	-6.11	111.13	120.90
1	CA	960	U	P-O3'-C3'	6.11	127.03	119.70
22	BA	2382	G	O4'-C1'-N9	6.10	113.08	108.20
22	BA	2901	C	O4'-C1'-N1	-6.10	103.32	108.20
22	BA	803	U	O4'-C1'-N1	6.10	113.08	108.20
1	CA	1380	U	P-O3'-C3'	6.10	127.02	119.70
22	DA	2023	C	O4'-C1'-N1	6.10	113.08	108.20
1	AA	183	C	O4'-C1'-N1	6.10	113.08	108.20
23	BB	25	U	P-O3'-C3'	-6.10	112.38	119.70
1	CA	122	G	N9-C1'-C2'	-6.10	105.29	112.00
1	CA	960	U	O4'-C1'-N1	6.10	113.08	108.20
22	BA	114	U	O4'-C1'-N1	-6.10	103.32	108.20
22	BA	861	A	OP1-P-O3'	6.10	118.61	105.20
1	CA	654	G	C3'-C2'-C1'	6.10	106.38	101.50
22	BA	758	C	P-O3'-C3'	6.10	127.02	119.70
22	BA	1184	U	P-O3'-C3'	6.10	127.02	119.70
22	BA	1421	G	P-O3'-C3'	-6.10	112.39	119.70
22	DA	1717	A	P-O3'-C3'	-6.10	112.38	119.70
22	BA	2250	G	N7-C8-N9	6.09	116.15	113.10
1	CA	889	A	P-O3'-C3'	6.09	127.01	119.70
1	AA	452	A	N9-C1'-C2'	-6.09	105.30	112.00
22	BA	1613	G	N1-C6-O6	-6.09	116.25	119.90
22	DA	1839	G	N9-C1'-C2'	-6.09	105.30	112.00
1	AA	1509	C	C6-N1-C2	6.09	122.73	120.30
22	BA	1398	C	C3'-C2'-C1'	6.09	106.37	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	1024	G	C3'-C2'-C1'	6.09	106.37	101.50
23	BB	97	C	C6-N1-C2	6.08	122.73	120.30
22	BA	786	C	N3-C4-C5	6.08	124.33	121.90
22	BA	937	C	C6-N1-C2	6.08	122.73	120.30
22	BA	1794	A	P-O3'-C3'	6.08	126.99	119.70
22	BA	2052	A	P-O5'-C5'	-6.08	111.17	120.90
22	DA	788	A	P-O3'-C3'	6.08	127.00	119.70
1	AA	97	G	C3'-C2'-C1'	6.08	106.36	101.50
1	AA	1258	G	P-O3'-C3'	-6.08	112.41	119.70
22	BA	584	C	O4'-C1'-N1	6.08	113.06	108.20
22	DA	2067	G	P-O3'-C3'	6.07	126.99	119.70
22	BA	1829	A	P-O3'-C3'	-6.07	112.42	119.70
1	CA	414	A	P-O3'-C3'	-6.07	112.41	119.70
22	DA	865	C	P-O3'-C3'	6.07	126.98	119.70
1	AA	247	G	P-O3'-C3'	-6.07	112.42	119.70
22	BA	1290	C	C5-C6-N1	-6.07	117.97	121.00
22	BA	2691	C	P-O5'-C5'	-6.07	111.19	120.90
22	BA	120	U	P-O5'-C5'	-6.07	111.20	120.90
1	AA	991	U	P-O3'-C3'	6.06	126.97	119.70
22	BA	1735	A	C3'-C2'-C1'	6.06	106.35	101.50
22	BA	834	G	C2-N3-C4	-6.06	108.87	111.90
22	BA	2868	A	P-O3'-C3'	-6.06	112.43	119.70
22	DA	1919	A	P-O3'-C3'	-6.06	112.43	119.70
1	AA	345	C	O4'-C1'-N1	-6.06	103.35	108.20
22	BA	2502	G	O5'-P-OP2	-6.06	100.25	105.70
1	AA	914	A	C3'-C2'-C1'	6.05	106.34	101.50
1	AA	316	C	O4'-C1'-N1	6.05	113.04	108.20
22	BA	2244	U	O4'-C1'-N1	-6.05	103.36	108.20
1	AA	1162	C	C3'-C2'-C1'	6.05	106.34	101.50
22	BA	2219	U	O4'-C1'-N1	6.05	113.04	108.20
1	CA	816	A	P-O3'-C3'	-6.05	112.44	119.70
22	BA	2463	C	P-O3'-C3'	-6.05	112.44	119.70
22	BA	2440	C	C3'-C2'-C1'	6.04	106.34	101.50
22	DA	1956	U	C3'-C2'-C1'	6.04	106.34	101.50
1	AA	1478	U	O4'-C1'-N1	-6.04	103.36	108.20
22	BA	802	A	P-O3'-C3'	-6.04	112.45	119.70
1	CA	251	G	P-O3'-C3'	6.04	126.95	119.70
22	DA	2214	C	C3'-C2'-C1'	6.04	106.33	101.50
1	AA	185	U	N1-C1'-C2'	-6.04	105.35	112.00
22	BA	206	U	N1-C1'-C2'	-6.04	105.35	112.00
22	DA	1817	G	P-O3'-C3'	-6.04	112.45	119.70
1	CA	1505	G	C3'-C2'-C1'	6.04	106.33	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	1255	U	P-O3'-C3'	-6.04	112.45	119.70
1	AA	1187	G	P-O3'-C3'	-6.04	112.45	119.70
22	BA	174	U	O4'-C1'-N1	-6.04	103.37	108.20
22	BA	385	C	P-O3'-C3'	6.04	126.94	119.70
22	BA	760	G	C5-C6-O6	-6.04	124.98	128.60
22	BA	2600	A	P-O3'-C3'	6.04	126.94	119.70
22	DA	2034	U	P-O3'-C3'	-6.04	112.46	119.70
22	DA	2036	C	P-O3'-C3'	-6.04	112.46	119.70
1	AA	1153	G	P-O3'-C3'	-6.03	112.46	119.70
22	DA	1451	C	O4'-C1'-N1	6.03	113.03	108.20
22	BA	273	G	C3'-C2'-C1'	6.03	106.33	101.50
1	AA	497	G	C3'-C2'-C1'	6.03	106.32	101.50
1	CA	209	U	P-O3'-C3'	6.03	126.94	119.70
22	DA	1693	U	N1-C1'-C2'	6.03	121.84	114.00
1	AA	30	U	N1-C1'-C2'	6.03	121.84	114.00
22	BA	575	A	O4'-C1'-N9	6.03	113.02	108.20
1	CA	115	G	P-O3'-C3'	6.03	126.93	119.70
22	DA	1320	C	P-O3'-C3'	6.03	126.93	119.70
22	BA	567	U	P-O3'-C3'	-6.02	112.47	119.70
22	BA	819	A	C8-N9-C4	6.02	108.21	105.80
22	DA	199	A	P-O3'-C3'	6.02	126.92	119.70
1	AA	198	G	C3'-C2'-C1'	6.02	106.31	101.50
1	AA	723	U	O4'-C1'-N1	6.01	113.01	108.20
22	DA	2348	U	P-O3'-C3'	-6.01	112.48	119.70
22	BA	831	G	N9-C1'-C2'	-6.01	105.39	112.00
22	BA	2311	A	P-O3'-C3'	6.01	126.91	119.70
1	AA	1095	U	C3'-C2'-C1'	6.01	106.31	101.50
22	DA	1997	C	C3'-C2'-C1'	6.01	106.31	101.50
22	BA	1761	C	O4'-C1'-N1	-6.01	103.39	108.20
1	AA	330	C	P-O3'-C3'	-6.00	112.50	119.70
22	BA	18	U	P-O5'-C5'	-6.00	111.29	120.90
1	AA	501	C	C3'-C2'-C1'	6.00	106.30	101.50
22	BA	491	G	N9-C1'-C2'	-6.00	105.40	112.00
22	BA	906	U	P-O5'-C5'	-6.00	111.30	120.90
22	BA	2051	A	OP1-P-O3'	6.00	118.40	105.20
22	BA	2606	C	N1-C1'-C2'	-6.00	105.40	112.00
1	CA	485	U	O4'-C1'-N1	-6.00	103.40	108.20
1	CA	686	U	P-O3'-C3'	6.00	126.90	119.70
22	BA	1248	G	P-O5'-C5'	-6.00	111.30	120.90
22	BA	387	U	P-O5'-C5'	-6.00	111.30	120.90
22	BA	1872	A	C3'-C2'-C1'	6.00	106.30	101.50
22	BA	2146	C	O4'-C1'-N1	6.00	113.00	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	510	C	P-O3'-C3'	-6.00	112.50	119.70
1	AA	551	U	O4'-C1'-N1	-6.00	103.40	108.20
1	AA	1448	C	P-O3'-C3'	-6.00	112.50	119.70
1	CA	1214	C	O4'-C1'-N1	6.00	113.00	108.20
22	DA	959	A	C3'-C2'-C1'	6.00	106.30	101.50
22	DA	1328	A	P-O3'-C3'	-6.00	112.50	119.70
22	DA	218	A	N9-C1'-C2'	-6.00	105.41	112.00
22	DA	2603	G	N9-C1'-C2'	-6.00	105.41	112.00
1	AA	1241	G	C3'-C2'-C1'	5.99	106.29	101.50
22	DA	2226	C	C3'-C2'-C1'	5.99	106.29	101.50
22	DA	2573	C	P-O3'-C3'	-5.99	112.51	119.70
22	BA	13	A	P-O3'-C3'	5.99	126.89	119.70
22	BA	413	C	P-O3'-C3'	-5.99	112.52	119.70
22	BA	1858	A	C3'-C2'-C1'	5.99	106.29	101.50
22	BA	1963	U	C2-N1-C1'	5.99	124.89	117.70
22	BA	2261	C	P-O3'-C3'	5.99	126.88	119.70
22	BA	2880	C	P-O3'-C3'	-5.99	112.52	119.70
22	DA	1389	G	C3'-C2'-C1'	5.98	106.29	101.50
22	BA	1115	G	P-O3'-C3'	5.98	126.88	119.70
22	BA	266	G	P-O3'-C3'	-5.98	112.52	119.70
22	BA	775	G	O4'-C1'-N9	5.98	112.98	108.20
22	BA	1618	A	C5-C6-N1	-5.98	114.71	117.70
22	DA	1803	A	C3'-C2'-C1'	5.98	106.28	101.50
22	BA	1520	U	O4'-C1'-N1	-5.98	103.42	108.20
22	BA	1969	A	P-O3'-C3'	5.98	126.88	119.70
1	AA	267	C	C3'-C2'-C1'	5.98	106.28	101.50
22	BA	914	G	N9-C1'-C2'	-5.98	105.42	112.00
22	DA	976	G	C3'-C2'-C1'	5.98	106.28	101.50
22	DA	1602	U	N1-C1'-C2'	5.98	121.77	114.00
22	BA	628	G	P-O3'-C3'	-5.98	112.53	119.70
22	DA	1437	C	O4'-C1'-N1	5.98	112.98	108.20
1	AA	537	G	P-O3'-C3'	-5.97	112.53	119.70
22	BA	1248	G	P-O3'-C3'	5.97	126.87	119.70
22	BA	1378	A	O4'-C1'-N9	5.97	112.98	108.20
22	DA	129	C	P-O5'-C5'	-5.97	111.34	120.90
1	AA	47	C	N1-C1'-C2'	5.97	121.76	114.00
22	BA	2681	C	N1-C1'-C2'	5.97	121.76	114.00
22	DA	2312	U	P-O3'-C3'	-5.97	112.53	119.70
22	BA	2656	U	C3'-C2'-C1'	5.97	106.28	101.50
22	BA	2228	G	P-O5'-C5'	-5.97	111.35	120.90
22	DA	765	C	C3'-C2'-C1'	5.97	106.27	101.50
22	BA	1015	U	P-O5'-C5'	-5.97	111.35	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	520	A	C3'-C2'-C1'	5.97	106.27	101.50
1	AA	840	C	O4'-C1'-N1	5.96	112.97	108.20
22	BA	578	G	O5'-P-OP2	-5.96	100.33	105.70
22	DA	1809	A	P-O3'-C3'	-5.96	112.54	119.70
22	DA	638	G	C3'-C2'-C1'	5.96	106.27	101.50
1	AA	199	A	C3'-C2'-C1'	5.96	106.27	101.50
22	BA	372	G	P-O3'-C3'	5.96	126.86	119.70
22	BA	1694	C	C6-N1-C2	5.96	122.68	120.30
22	DA	412	A	C3'-C2'-C1'	5.96	106.27	101.50
22	DA	2052	A	P-O3'-C3'	-5.96	112.55	119.70
22	BA	331	C	O4'-C1'-N1	5.96	112.97	108.20
22	BA	597	G	C6-C5-N7	-5.96	126.83	130.40
1	AA	1505	G	C3'-C2'-C1'	5.96	106.27	101.50
22	BA	323	C	O4'-C1'-N1	5.96	112.97	108.20
22	DA	2756	U	N1-C1'-C2'	5.96	121.74	114.00
22	BA	2715	C	O5'-P-OP2	-5.96	100.34	105.70
22	DA	586	A	P-O3'-C3'	5.96	126.85	119.70
1	CA	643	C	O4'-C1'-N1	5.95	112.96	108.20
1	CA	1297	G	P-O3'-C3'	5.95	126.84	119.70
1	AA	93	U	P-O3'-C3'	-5.95	112.56	119.70
1	AA	386	C	O4'-C1'-N1	5.95	112.96	108.20
22	BA	749	A	OP1-P-OP2	5.95	128.53	119.60
22	BA	1526	C	C6-N1-C2	5.95	122.68	120.30
22	BA	255	A	O4'-C1'-N9	-5.95	103.44	108.20
1	CA	872	A	O4'-C1'-N9	5.95	112.96	108.20
1	CA	986	U	P-O3'-C3'	-5.95	112.56	119.70
22	BA	2520	C	C3'-C2'-C1'	5.95	106.26	101.50
22	DA	2629	U	O4'-C1'-N1	5.95	112.96	108.20
22	DA	1541	C	C3'-C2'-C1'	5.94	106.25	101.50
1	AA	174	A	P-O3'-C3'	-5.94	112.57	119.70
1	AA	559	A	P-O3'-C3'	5.94	126.83	119.70
22	BA	198	C	N3-C4-C5	-5.94	119.52	121.90
22	BA	513	A	C3'-C2'-C1'	5.94	106.25	101.50
1	AA	252	U	P-O3'-C3'	-5.94	112.57	119.70
22	BA	2874	C	P-O3'-C3'	-5.94	112.57	119.70
22	BA	2447	G	O3'-P-O5'	-5.94	92.72	104.00
22	BA	935	C	P-O3'-C3'	-5.94	112.58	119.70
22	BA	2573	C	O4'-C1'-N1	-5.94	103.45	108.20
22	DA	207	A	P-O3'-C3'	-5.94	112.58	119.70
22	DA	1839	G	C3'-C2'-C1'	5.94	106.25	101.50
22	BA	504	A	P-O5'-C5'	-5.93	111.40	120.90
1	CA	1143	G	C3'-C2'-C1'	5.93	106.25	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	1558	C	N1-C1'-C2'	5.93	121.71	114.00
22	DA	1848	A	P-O3'-C3'	-5.93	112.58	119.70
22	BA	243	U	C3'-C2'-C1'	5.93	106.25	101.50
22	DA	961	C	O4'-C1'-N1	5.93	112.94	108.20
1	AA	1365	G	N9-C1'-C2'	-5.93	105.48	112.00
22	DA	673	C	O4'-C1'-N1	5.93	112.94	108.20
22	BA	748	G	O4'-C1'-N9	5.93	112.94	108.20
22	BA	2774	C	O4'-C1'-N1	5.92	112.94	108.20
1	CA	277	C	C3'-C2'-C1'	5.92	106.24	101.50
1	CA	575	G	N3-C4-N9	-5.92	122.45	126.00
1	AA	912	C	O4'-C1'-N1	-5.92	103.46	108.20
22	BA	346	A	P-O3'-C3'	-5.92	112.59	119.70
1	CA	500	G	N9-C1'-C2'	-5.92	105.49	112.00
22	BA	206	U	P-O3'-C3'	-5.92	112.60	119.70
1	CA	9	G	N9-C1'-C2'	-5.92	105.49	112.00
1	CA	276	G	P-O3'-C3'	-5.92	112.60	119.70
22	DA	374	A	C3'-C2'-C1'	5.92	106.23	101.50
22	BA	1013	C	C3'-C2'-C1'	5.92	106.23	101.50
22	BA	480	A	N9-C1'-C2'	-5.91	105.50	112.00
22	DA	14	A	C3'-C2'-C1'	5.91	106.23	101.50
22	DA	687	C	P-O3'-C3'	-5.91	112.60	119.70
22	BA	2321	U	O4'-C1'-N1	-5.91	103.47	108.20
22	DA	973	A	P-O3'-C3'	5.91	126.79	119.70
22	BA	1695	G	C3'-C2'-C1'	5.91	106.23	101.50
22	BA	1867	G	N9-C1'-C2'	-5.91	105.50	112.00
22	DA	861	A	C3'-C2'-C1'	5.91	106.23	101.50
22	BA	1784	A	P-O3'-C3'	5.91	126.79	119.70
35	BN	101	GLY	N-CA-C	5.91	127.87	113.10
1	CA	1184	G	C3'-C2'-C1'	5.91	106.23	101.50
22	DA	671	C	N1-C1'-C2'	-5.91	105.50	112.00
22	DA	2214	C	P-O3'-C3'	-5.91	112.61	119.70
1	AA	1142	G	C3'-C2'-C1'	5.91	106.22	101.50
22	BA	1340	U	C6-N1-C2	5.91	124.54	121.00
22	DA	2348	U	C3'-C2'-C1'	5.91	106.22	101.50
22	BA	2250	G	C4-C5-N7	5.90	113.16	110.80
1	AA	244	U	N1-C2-O2	5.90	126.93	122.80
22	DA	2753	A	C3'-C2'-C1'	5.90	106.22	101.50
22	BA	669	G	P-O3'-C3'	5.90	126.78	119.70
22	BA	1627	G	C8-N9-C4	-5.90	104.04	106.40
1	CA	6	G	P-O3'-C3'	-5.90	112.62	119.70
22	DA	1699	G	P-O3'-C3'	5.90	126.78	119.70
22	BA	914	G	C6-C5-N7	-5.90	126.86	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	506	G	O4'-C1'-N9	5.90	112.92	108.20
22	BA	523	C	P-O5'-C5'	-5.90	111.47	120.90
22	BA	2462	C	P-O5'-C5'	-5.90	111.46	120.90
1	CA	47	C	P-O3'-C3'	5.90	126.78	119.70
22	DA	1700	A	C3'-C2'-C1'	5.90	106.22	101.50
22	BA	2064	C	C3'-C2'-C1'	5.90	106.22	101.50
22	BA	2773	C	C6-N1-C2	5.90	122.66	120.30
22	DA	2391	G	P-O3'-C3'	5.90	126.78	119.70
22	BA	739	A	C4'-C3'-C2'	5.89	108.49	102.60
22	BA	1458	U	P-O3'-C3'	5.89	126.77	119.70
22	BA	1780	A	C5-C6-N1	-5.89	114.75	117.70
22	DA	765	C	P-O3'-C3'	-5.89	112.63	119.70
22	DA	1555	G	P-O3'-C3'	-5.89	112.63	119.70
1	AA	1213	A	P-O3'-C3'	5.89	126.77	119.70
22	DA	605	G	C3'-C2'-C1'	5.89	106.21	101.50
22	DA	2520	C	C3'-C2'-C1'	5.89	106.21	101.50
22	BA	16	C	P-O3'-C3'	-5.89	112.64	119.70
22	BA	1178	C	O4'-C1'-N1	5.89	112.91	108.20
22	BA	1379	U	C3'-C2'-C1'	5.89	106.21	101.50
22	BA	1967	C	C3'-C2'-C1'	5.89	106.21	101.50
44	BW	20	LEU	CB-CG-CD2	5.89	121.01	111.00
22	DA	2076	U	O4'-C1'-N1	5.89	112.91	108.20
1	CA	422	C	O4'-C1'-N1	-5.88	103.49	108.20
22	DA	1493	C	N1-C1'-C2'	5.88	121.65	114.00
1	AA	111	G	N9-C1'-C2'	-5.88	105.53	112.00
22	BA	1273	U	P-O5'-C5'	-5.88	111.49	120.90
22	BA	1900	A	P-O3'-C3'	5.88	126.76	119.70
22	BA	2380	C	P-O5'-C5'	-5.88	111.49	120.90
22	BA	2137	U	O4'-C1'-N1	5.88	112.90	108.20
22	DA	984	A	P-O3'-C3'	5.88	126.75	119.70
1	AA	244	U	N3-C2-O2	-5.88	118.09	122.20
1	AA	185	U	C3'-C2'-C1'	5.88	106.20	101.50
22	BA	1376	C	P-O3'-C3'	5.88	126.75	119.70
1	AA	1202	U	C3'-C2'-C1'	5.87	106.20	101.50
22	BA	373	U	C3'-C2'-C1'	5.87	106.20	101.50
22	BA	1025	G	P-O3'-C3'	5.87	126.75	119.70
22	BA	2781	A	P-O3'-C3'	-5.87	112.65	119.70
1	CA	997	U	P-O3'-C3'	-5.87	112.66	119.70
1	CA	1169	A	C3'-C2'-C1'	5.87	106.20	101.50
1	AA	488	C	C3'-C2'-C1'	5.87	106.19	101.50
22	BA	1537	G	P-O3'-C3'	-5.87	112.66	119.70
22	BA	2335	A	C3'-C2'-C1'	5.87	106.19	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2712	C	N1-C1'-C2'	5.87	121.63	114.00
22	BA	163	C	O4'-C1'-N1	5.87	112.89	108.20
1	AA	509	A	C3'-C2'-C1'	5.86	106.19	101.50
1	AA	1162	C	P-O3'-C3'	-5.86	112.66	119.70
22	BA	577	G	OP2-P-O3'	5.86	118.10	105.20
22	BA	682	G	C4-N9-C1'	5.86	134.12	126.50
22	BA	2195	U	O4'-C1'-N1	5.86	112.89	108.20
22	DA	60	G	P-O3'-C3'	5.86	126.73	119.70
1	CA	68	G	C3'-C2'-C1'	5.86	106.19	101.50
1	CA	931	C	O4'-C1'-N1	5.86	112.89	108.20
22	DA	1803	A	P-O3'-C3'	-5.86	112.67	119.70
22	BA	1020	A	P-O3'-C3'	5.86	126.73	119.70
1	CA	734	G	C3'-C2'-C1'	5.86	106.19	101.50
22	BA	1288	G	O5'-P-OP2	-5.85	100.43	105.70
22	BA	2325	G	P-O3'-C3'	-5.85	112.67	119.70
22	DA	1717	A	C3'-C2'-C1'	5.85	106.18	101.50
23	DB	87	U	P-O3'-C3'	5.85	126.72	119.70
1	AA	279	A	O4'-C1'-N9	-5.85	103.52	108.20
22	BA	2542	A	P-O5'-C5'	-5.85	111.54	120.90
22	BA	2714	G	C5-C6-O6	5.85	132.11	128.60
1	CA	214	C	P-O3'-C3'	-5.85	112.68	119.70
1	CA	534	U	P-O3'-C3'	-5.85	112.68	119.70
22	DA	2347	C	P-O3'-C3'	-5.85	112.68	119.70
1	AA	250	A	P-O3'-C3'	5.85	126.72	119.70
1	AA	874	G	N9-C1'-C2'	-5.85	105.57	112.00
22	BA	2337	G	N9-C1'-C2'	-5.85	105.57	112.00
22	BA	1452	G	N3-C4-N9	-5.85	122.49	126.00
22	BA	52	A	P-O3'-C3'	-5.84	112.69	119.70
22	BA	2249	U	P-O3'-C3'	5.84	126.71	119.70
1	CA	277	C	P-O3'-C3'	-5.84	112.69	119.70
1	AA	1184	G	P-O3'-C3'	-5.84	112.69	119.70
22	DA	2034	U	N1-C1'-C2'	-5.84	105.58	112.00
22	DA	2364	C	O4'-C1'-N1	5.84	112.87	108.20
23	BB	14	U	P-O3'-C3'	5.84	126.71	119.70
22	DA	1081	U	P-O3'-C3'	-5.84	112.69	119.70
22	DA	2447	G	O4'-C1'-N9	5.84	112.87	108.20
22	BA	621	A	N9-C1'-C2'	-5.84	105.58	112.00
1	CA	1285	A	P-O3'-C3'	5.84	126.71	119.70
22	BA	2072	C	O3'-P-O5'	-5.84	92.91	104.00
22	BA	2807	U	C5-C6-N1	-5.84	119.78	122.70
22	DA	990	A	C3'-C2'-C1'	5.84	106.17	101.50
22	BA	690	G	P-O5'-C5'	-5.83	111.56	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2325	G	C3'-C2'-C1'	5.83	106.17	101.50
22	DA	727	A	C3'-C2'-C1'	5.83	106.17	101.50
22	DA	1255	U	C2-N1-C1'	5.83	124.70	117.70
1	AA	686	U	N1-C1'-C2'	5.83	121.58	114.00
22	BA	1662	U	O4'-C1'-N1	5.83	112.87	108.20
1	CA	1381	U	N1-C1'-C2'	-5.83	105.58	112.00
1	AA	816	A	C3'-C2'-C1'	5.83	106.17	101.50
22	BA	527	C	O4'-C1'-N1	5.83	112.87	108.20
1	CA	294	U	O4'-C1'-N1	5.83	112.86	108.20
22	BA	2517	C	P-O3'-C3'	5.83	126.70	119.70
1	AA	560	A	O4'-C1'-N9	-5.83	103.54	108.20
22	BA	456	C	O4'-C1'-N1	-5.83	103.54	108.20
22	BA	2750	A	P-O3'-C3'	5.83	126.69	119.70
22	DA	492	A	C3'-C2'-C1'	5.83	106.16	101.50
22	DA	1492	G	C3'-C2'-C1'	5.83	106.16	101.50
22	BA	1697	G	C5-C6-O6	-5.83	125.10	128.60
22	BA	2344	U	N1-C1'-C2'	5.83	121.57	114.00
22	BA	2567	G	C5-C6-N1	5.83	114.41	111.50
22	DA	915	C	P-O3'-C3'	-5.83	112.71	119.70
22	DA	2895	G	P-O3'-C3'	-5.83	112.71	119.70
22	DA	1034	G	C3'-C2'-C1'	5.82	106.16	101.50
22	DA	726	G	P-O3'-C3'	5.82	126.69	119.70
22	DA	1021	A	C3'-C2'-C1'	5.82	106.16	101.50
22	DA	2267	A	N9-C1'-C2'	-5.82	105.60	112.00
22	DA	2276	G	C3'-C2'-C1'	5.82	106.16	101.50
22	BA	1101	U	N1-C1'-C2'	-5.82	105.60	112.00
1	AA	605	U	O4'-C1'-N1	5.82	112.86	108.20
22	BA	1992	G	N3-C4-N9	-5.82	122.51	126.00
1	CA	248	C	O4'-C1'-N1	5.82	112.85	108.20
22	DA	1129	A	C3'-C2'-C1'	5.82	106.15	101.50
22	DA	2094	A	C3'-C2'-C1'	5.82	106.15	101.50
1	AA	429	U	P-O3'-C3'	5.82	126.68	119.70
22	BA	829	A	C8-N9-C4	5.82	108.13	105.80
1	CA	870	U	P-O3'-C3'	5.82	126.68	119.70
22	DA	449	A	C3'-C2'-C1'	5.82	106.15	101.50
1	AA	439	U	C3'-C2'-C1'	5.81	106.15	101.50
22	BA	683	U	N1-C1'-C2'	-5.81	105.61	112.00
22	BA	1112	G	N9-C1'-C2'	-5.81	105.61	112.00
22	BA	1666	G	P-O5'-C5'	-5.81	111.60	120.90
1	CA	461	A	P-O3'-C3'	5.81	126.67	119.70
22	DA	2725	A	P-O3'-C3'	5.81	126.67	119.70
1	AA	772	U	P-O3'-C3'	-5.81	112.73	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	801	U	O4'-C1'-N1	5.81	112.85	108.20
22	BA	573	U	P-O5'-C5'	-5.81	111.60	120.90
1	AA	974	A	O4'-C1'-N9	5.81	112.85	108.20
22	BA	1007	C	N3-C4-C5	5.81	124.22	121.90
22	BA	2402	U	O4'-C1'-N1	5.81	112.84	108.20
22	BA	2734	A	P-O3'-C3'	-5.81	112.73	119.70
22	DA	976	G	N9-C1'-C2'	-5.81	105.61	112.00
25	BD	141	ARG	NE-CZ-NH1	-5.81	117.40	120.30
23	DB	56	G	P-O3'-C3'	5.80	126.67	119.70
22	BA	1943	U	N1-C1'-C2'	5.80	121.54	114.00
22	DA	2745	C	O4'-C1'-N1	-5.80	103.56	108.20
1	AA	817	C	N1-C1'-C2'	5.80	121.54	114.00
22	DA	1848	A	N9-C1'-C2'	-5.80	105.62	112.00
22	DA	2572	A	P-O3'-C3'	5.80	126.66	119.70
22	BA	1975	G	P-O3'-C3'	-5.80	112.74	119.70
1	CA	52	C	N1-C1'-C2'	-5.80	105.62	112.00
1	AA	87	C	N1-C1'-C2'	-5.80	105.62	112.00
22	DA	1838	C	N1-C1'-C2'	5.80	121.53	114.00
22	DA	2150	C	N1-C1'-C2'	-5.80	105.62	112.00
22	DA	2777	G	C3'-C2'-C1'	5.80	106.14	101.50
22	DA	947	A	C3'-C2'-C1'	5.79	106.14	101.50
22	BA	867	C	O4'-C1'-N1	5.79	112.83	108.20
22	BA	2640	G	P-O5'-C5'	-5.79	111.63	120.90
22	DA	1675	C	C3'-C2'-C1'	5.79	106.13	101.50
22	BA	753	A	C3'-C2'-C1'	5.79	106.13	101.50
22	BA	1135	C	P-O5'-C5'	-5.79	111.64	120.90
22	DA	104	A	C3'-C2'-C1'	5.79	106.13	101.50
22	DA	2151	U	C3'-C2'-C1'	5.79	106.13	101.50
22	BA	463	G	P-O5'-C5'	-5.79	111.64	120.90
22	BA	920	A	P-O3'-C3'	-5.79	112.75	119.70
22	DA	775	G	O4'-C1'-N9	5.79	112.83	108.20
22	DA	1612	C	C3'-C2'-C1'	5.79	106.13	101.50
22	BA	1160	G	P-O5'-C5'	-5.79	111.64	120.90
22	BA	73	A	C3'-C2'-C1'	5.79	106.13	101.50
22	BA	657	U	O4'-C1'-N1	-5.79	103.57	108.20
22	DA	2210	U	P-O3'-C3'	5.79	126.64	119.70
22	BA	1063	G	C3'-C2'-C1'	5.78	106.13	101.50
22	BA	1379	U	P-O5'-C5'	-5.78	111.65	120.90
22	BA	1996	C	OP1-P-O3'	5.78	117.92	105.20
1	AA	512	U	C3'-C2'-C1'	5.78	106.13	101.50
22	BA	2230	G	P-O5'-C5'	-5.78	111.65	120.90
22	BA	2653	U	O4'-C1'-N1	5.78	112.83	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2061	G	C4-C5-C6	5.78	122.27	118.80
1	CA	389	A	N9-C1'-C2'	-5.78	105.64	112.00
22	BA	2530	A	P-O3'-C3'	5.78	126.63	119.70
22	DA	1291	C	C3'-C2'-C1'	5.78	106.12	101.50
22	DA	2609	U	N1-C1'-C2'	5.78	121.51	114.00
22	BA	62	U	P-O3'-C3'	5.78	126.63	119.70
22	BA	272	A	P-O3'-C3'	-5.78	112.77	119.70
22	BA	2556	C	N1-C2-O2	-5.78	115.43	118.90
22	BA	2637	U	N1-C2-O2	-5.78	118.76	122.80
1	CA	722	G	P-O3'-C3'	-5.78	112.77	119.70
22	DA	2498	C	C3'-C2'-C1'	5.78	106.12	101.50
22	BA	932	U	P-O3'-C3'	-5.78	112.77	119.70
22	DA	1136	G	N9-C1'-C2'	-5.78	105.65	112.00
22	DA	1619	G	N9-C1'-C2'	-5.78	105.65	112.00
22	BA	2027	G	O5'-P-OP2	-5.77	100.50	105.70
1	AA	1226	C	O4'-C1'-N1	-5.77	103.58	108.20
1	AA	1323	G	P-O3'-C3'	-5.77	112.78	119.70
22	BA	1965	C	P-O5'-C5'	-5.77	111.67	120.90
1	CA	107	G	P-O3'-C3'	-5.77	112.78	119.70
22	DA	1135	C	P-O3'-C3'	-5.77	112.78	119.70
1	AA	1365	G	C3'-C2'-C1'	5.77	106.11	101.50
22	BA	452	G	P-O3'-C3'	-5.77	112.78	119.70
22	BA	1839	G	C3'-C2'-C1'	5.77	106.11	101.50
22	BA	1133	A	P-O3'-C3'	-5.76	112.78	119.70
22	BA	1027	A	N1-C6-N6	5.76	122.06	118.60
1	CA	1066	C	N1-C1'-C2'	-5.76	105.66	112.00
22	DA	740	C	C3'-C2'-C1'	5.76	106.11	101.50
1	AA	1228	C	C3'-C2'-C1'	5.76	106.11	101.50
22	BA	1266	G	C8-N9-C4	5.76	108.70	106.40
1	CA	1215	G	P-O3'-C3'	-5.76	112.79	119.70
22	DA	492	A	P-O3'-C3'	-5.76	112.79	119.70
1	AA	686	U	P-O3'-C3'	5.76	126.61	119.70
1	AA	368	U	C3'-C2'-C1'	5.76	106.11	101.50
22	BA	2200	C	P-O3'-C3'	-5.76	112.79	119.70
22	DA	273	G	C3'-C2'-C1'	5.76	106.11	101.50
22	DA	1798	U	O4'-C1'-N1	5.76	112.81	108.20
22	DA	2314	A	C3'-C2'-C1'	5.76	106.11	101.50
22	DA	2687	U	O4'-C1'-N1	5.75	112.80	108.20
1	AA	1268	G	P-O3'-C3'	5.75	126.60	119.70
22	BA	1707	G	N9-C1'-C2'	-5.75	105.67	112.00
1	CA	962	C	N1-C1'-C2'	-5.75	105.67	112.00
1	AA	469	C	C3'-C2'-C1'	5.75	106.10	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	373	A	N9-C1'-C2'	-5.75	105.67	112.00
1	AA	463	U	N1-C1'-C2'	-5.75	105.68	112.00
22	BA	1675	C	C5-C6-N1	-5.75	118.12	121.00
22	BA	2487	G	C5-C6-O6	-5.75	125.15	128.60
22	DA	397	U	O4'-C1'-N1	5.75	112.80	108.20
22	BA	761	A	C5-C6-N1	5.75	120.57	117.70
22	BA	2831	G	N1-C6-O6	5.75	123.35	119.90
1	CA	643	C	C3'-C2'-C1'	5.75	106.10	101.50
22	DA	105	C	C3'-C2'-C1'	5.75	106.10	101.50
22	DA	411	G	P-O3'-C3'	5.75	126.59	119.70
22	BA	1293	C	C6-N1-C2	5.75	122.60	120.30
1	AA	1191	A	C3'-C2'-C1'	5.74	106.09	101.50
22	BA	2791	G	O5'-P-OP1	-5.74	100.53	105.70
1	CA	1282	C	P-O3'-C3'	-5.74	112.81	119.70
22	BA	346	A	C3'-C2'-C1'	5.74	106.09	101.50
22	BA	20	C	P-O3'-C3'	5.74	126.59	119.70
22	BA	1005	C	N3-C2-O2	-5.74	117.88	121.90
22	BA	1123	C	C6-N1-C2	5.74	122.60	120.30
22	BA	981	A	C8-N9-C4	5.74	108.10	105.80
22	BA	1135	C	C3'-C2'-C1'	5.74	106.09	101.50
22	BA	1417	C	P-O3'-C3'	-5.74	112.81	119.70
1	CA	54	C	O4'-C1'-N1	5.74	112.79	108.20
1	CA	109	A	O3'-P-O5'	-5.74	93.10	104.00
22	DA	2093	G	N9-C1'-C2'	-5.74	105.69	112.00
22	BA	1446	C	O4'-C1'-N1	-5.74	103.61	108.20
22	DA	1247	A	O4'-C1'-N9	5.74	112.79	108.20
22	BA	2426	A	N1-C6-N6	5.73	122.04	118.60
23	BB	15	A	P-O3'-C3'	5.73	126.58	119.70
22	DA	983	A	C3'-C2'-C1'	5.73	106.09	101.50
22	DA	2498	C	O4'-C1'-N1	5.73	112.79	108.20
1	AA	935	A	N9-C1'-C2'	-5.73	105.70	112.00
22	DA	1027	A	C3'-C2'-C1'	5.73	106.08	101.50
22	DA	1815	A	P-O3'-C3'	5.73	126.58	119.70
1	CA	688	G	N9-C1'-C2'	-5.73	105.70	112.00
22	DA	200	U	C3'-C2'-C1'	5.73	106.08	101.50
22	DA	2638	G	P-O3'-C3'	5.73	126.58	119.70
22	DA	1699	G	C3'-C2'-C1'	-5.73	96.92	101.50
22	DA	2492	U	C3'-C2'-C1'	5.73	106.08	101.50
1	AA	508	U	P-O3'-C3'	5.73	126.57	119.70
22	BA	2018	G	N3-C2-N2	-5.73	115.89	119.90
22	BA	2683	C	N1-C2-O2	-5.73	115.46	118.90
22	BA	412	A	C3'-C2'-C1'	5.72	106.08	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1320	C	N1-C1'-C2'	5.72	121.44	114.00
22	BA	2025	C	C5-C6-N1	-5.72	118.14	121.00
22	DA	52	A	C3'-C2'-C1'	5.72	106.08	101.50
22	BA	829	A	P-O5'-C5'	-5.72	111.75	120.90
22	BA	1253	A	O4'-C1'-N9	-5.72	103.62	108.20
1	CA	381	C	P-O3'-C3'	5.72	126.57	119.70
1	CA	1128	C	O4'-C1'-N1	5.72	112.78	108.20
1	CA	689	C	O4'-C1'-N1	-5.72	103.62	108.20
1	AA	1095	U	P-O3'-C3'	-5.72	112.84	119.70
22	DA	1664	A	P-O3'-C3'	-5.72	112.84	119.70
1	AA	704	A	C3'-C2'-C1'	5.72	106.07	101.50
22	BA	302	C	C3'-C2'-C1'	5.72	106.08	101.50
22	BA	1739	A	P-O5'-C5'	-5.72	111.75	120.90
23	BB	87	U	O4'-C1'-N1	5.72	112.77	108.20
22	BA	14	A	C3'-C2'-C1'	5.72	106.07	101.50
22	BA	980	A	OP1-P-O3'	5.72	117.78	105.20
23	BB	16	G	C3'-C2'-C1'	5.72	106.07	101.50
22	DA	1945	G	C3'-C2'-C1'	5.72	106.07	101.50
22	BA	630	G	P-O3'-C3'	5.71	126.56	119.70
22	DA	1314	C	P-O3'-C3'	5.71	126.56	119.70
22	DA	2830	C	O4'-C1'-N1	5.71	112.77	108.20
22	BA	1865	U	P-O3'-C3'	5.71	126.55	119.70
22	DA	1785	A	C3'-C2'-C1'	5.71	106.07	101.50
1	AA	1085	U	P-O3'-C3'	5.71	126.55	119.70
22	BA	765	C	P-O3'-C3'	-5.71	112.85	119.70
1	CA	247	G	C3'-C2'-C1'	5.71	106.07	101.50
1	CA	509	A	P-O5'-C5'	-5.71	111.77	120.90
22	DA	2405	G	P-O3'-C3'	5.71	126.55	119.70
1	CA	577	G	C3'-C2'-C1'	5.71	106.06	101.50
23	DB	16	G	P-O3'-C3'	-5.71	112.85	119.70
22	BA	199	A	O4'-C1'-N9	5.70	112.76	108.20
22	BA	2695	U	P-O3'-C3'	5.70	126.54	119.70
22	DA	391	A	C3'-C2'-C1'	5.70	106.06	101.50
22	BA	435	C	C3'-C2'-C1'	5.70	106.06	101.50
22	DA	1183	U	O4'-C1'-N1	5.70	112.76	108.20
22	DA	1695	G	C3'-C2'-C1'	5.70	106.06	101.50
22	BA	1703	G	O3'-P-O5'	-5.70	93.17	104.00
22	BA	2197	U	N1-C1'-C2'	5.70	121.41	114.00
22	DA	227	A	P-O3'-C3'	5.70	126.54	119.70
22	DA	2752	C	O4'-C1'-N1	5.70	112.76	108.20
1	AA	1532	U	P-O3'-C3'	-5.69	112.87	119.70
1	CA	1218	C	C3'-C2'-C1'	5.69	106.05	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	128	C	P-O3'-C3'	-5.69	112.87	119.70
22	BA	11	C	N1-C2-O2	-5.69	115.49	118.90
22	DA	230	G	C3'-C2'-C1'	5.69	106.05	101.50
22	DA	1126	A	P-O3'-C3'	5.69	126.53	119.70
22	BA	2043	C	C6-N1-C2	5.69	122.58	120.30
1	CA	1196	A	P-O3'-C3'	5.69	126.53	119.70
22	BA	2543	G	P-O5'-C5'	-5.69	111.80	120.90
1	CA	173	U	P-O3'-C3'	5.69	126.52	119.70
22	DA	91	A	P-O3'-C3'	5.69	126.52	119.70
1	AA	1088	G	C3'-C2'-C1'	5.68	106.05	101.50
22	BA	774	G	O4'-C1'-N9	5.68	112.75	108.20
1	CA	95	C	P-O3'-C3'	-5.68	112.88	119.70
22	BA	459	U	C3'-C2'-C1'	5.68	106.05	101.50
1	CA	884	U	O4'-C1'-N1	5.68	112.75	108.20
22	DA	35	G	C3'-C2'-C1'	5.68	106.05	101.50
22	DA	946	C	C3'-C2'-C1'	5.68	106.05	101.50
22	BA	1206	G	P-O3'-C3'	-5.68	112.88	119.70
22	BA	2483	C	O4'-C1'-N1	-5.68	103.66	108.20
22	DA	749	A	C3'-C2'-C1'	5.68	106.04	101.50
22	BA	2816	G	N1-C6-O6	-5.68	116.49	119.90
22	DA	2459	A	C3'-C2'-C1'	5.68	106.04	101.50
22	DA	2727	A	C3'-C2'-C1'	5.68	106.04	101.50
22	BA	649	G	P-O5'-C5'	-5.68	111.82	120.90
22	DA	203	A	P-O3'-C3'	5.68	126.51	119.70
1	AA	295	C	P-O3'-C3'	-5.68	112.89	119.70
1	CA	1085	U	P-O3'-C3'	5.68	126.51	119.70
1	CA	1383	C	C3'-C2'-C1'	5.68	106.04	101.50
1	AA	231	U	P-O3'-C3'	5.67	126.51	119.70
1	AA	1302	C	O4'-C1'-N1	-5.67	103.66	108.20
22	BA	1349	C	O4'-C1'-N1	-5.67	103.66	108.20
22	DA	1009	A	C3'-C2'-C1'	5.67	106.04	101.50
22	DA	2781	A	C3'-C2'-C1'	5.67	106.04	101.50
1	AA	1447	A	O4'-C1'-N9	5.67	112.74	108.20
1	CA	308	C	P-O3'-C3'	-5.67	112.89	119.70
1	AA	1395	C	O4'-C1'-N1	-5.67	103.66	108.20
1	CA	374	A	C3'-C2'-C1'	5.67	106.04	101.50
22	DA	1811	G	C3'-C2'-C1'	5.67	106.04	101.50
1	AA	74	A	C3'-C2'-C1'	5.67	106.04	101.50
1	AA	1395	C	C3'-C2'-C1'	5.67	106.04	101.50
22	BA	584	C	N1-C1'-C2'	-5.67	105.76	112.00
22	BA	1716	U	P-O3'-C3'	-5.67	112.90	119.70
22	BA	2807	U	C6-N1-C2	5.67	124.40	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	430	A	P-O3'-C3'	-5.67	112.90	119.70
22	BA	985	C	P-O5'-C5'	-5.67	111.83	120.90
22	BA	1947	C	P-O3'-C3'	-5.67	112.90	119.70
22	BA	1999	C	N1-C1'-C2'	-5.67	105.76	112.00
23	BB	46	A	N9-C1'-C2'	-5.67	105.76	112.00
1	CA	382	A	C3'-C2'-C1'	5.67	106.03	101.50
22	BA	1213	A	N9-C1'-C2'	-5.67	105.77	112.00
22	BA	2890	G	C6-C5-N7	-5.67	127.00	130.40
1	AA	415	A	C3'-C2'-C1'	5.66	106.03	101.50
22	BA	1499	C	C3'-C2'-C1'	5.66	106.03	101.50
22	BA	2061	G	O5'-P-OP2	-5.66	100.60	105.70
22	DA	480	A	N9-C1'-C2'	-5.66	105.77	112.00
22	BA	1902	C	N1-C2-O2	-5.66	115.50	118.90
1	CA	997	U	C3'-C2'-C1'	5.66	106.03	101.50
22	BA	1956	U	P-O5'-C5'	-5.66	111.84	120.90
22	BA	2395	C	P-O5'-C5'	-5.66	111.84	120.90
22	DA	1305	C	C3'-C2'-C1'	5.66	106.03	101.50
1	AA	131	A	C3'-C2'-C1'	5.66	106.03	101.50
22	BA	919	U	N1-C2-O2	-5.66	118.84	122.80
22	BA	1142	A	C5-C6-N1	-5.66	114.87	117.70
22	BA	2623	G	N1-C2-N3	5.66	127.30	123.90
22	BA	2707	U	C5-C6-N1	-5.66	119.87	122.70
22	DA	1329	U	P-O3'-C3'	5.66	126.49	119.70
22	DA	2868	A	C3'-C2'-C1'	5.66	106.03	101.50
22	BA	1765	U	O4'-C1'-N1	-5.66	103.67	108.20
1	AA	808	C	O4'-C1'-N1	5.66	112.72	108.20
22	BA	954	G	P-O3'-C3'	5.66	126.48	119.70
22	BA	370	G	O4'-C1'-N9	-5.65	103.68	108.20
1	AA	173	U	N1-C1'-C2'	5.65	121.35	114.00
1	AA	555	U	O4'-C1'-N1	-5.65	103.68	108.20
22	BA	528	A	C2-N3-C4	-5.65	107.77	110.60
22	BA	1327	A	P-O3'-C3'	5.65	126.48	119.70
22	BA	2605	U	P-O3'-C3'	-5.65	112.92	119.70
22	DA	1669	A	C3'-C2'-C1'	5.65	106.02	101.50
1	AA	1124	G	P-O3'-C3'	5.65	126.48	119.70
22	BA	671	C	C3'-C2'-C1'	5.65	106.02	101.50
22	BA	2008	C	C4-C5-C6	5.65	120.23	117.40
23	BB	42	C	C3'-C2'-C1'	5.65	106.02	101.50
1	AA	976	G	C3'-C2'-C1'	5.65	106.02	101.50
1	AA	1499	A	P-O5'-C5'	-5.65	111.86	120.90
22	BA	73	A	P-O5'-C5'	-5.65	111.86	120.90
22	BA	310	A	P-O3'-C3'	5.65	126.48	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	933	A	C3'-C2'-C1'	5.65	106.02	101.50
22	BA	1537	G	C3'-C2'-C1'	5.65	106.02	101.50
22	DA	1972	G	N9-C1'-C2'	-5.65	105.79	112.00
22	BA	74	A	P-O3'-C3'	5.65	126.48	119.70
22	BA	413	C	C3'-C2'-C1'	5.65	106.02	101.50
1	AA	116	A	N9-C1'-C2'	-5.64	105.79	112.00
22	BA	201	C	O4'-C1'-N1	5.64	112.72	108.20
22	BA	1009	A	C3'-C2'-C1'	5.64	106.02	101.50
22	BA	1395	A	O4'-C1'-N9	5.64	112.72	108.20
1	CA	388	G	O3'-P-O5'	-5.64	93.28	104.00
22	DA	1455	G	P-O3'-C3'	-5.64	112.93	119.70
1	AA	486	U	P-O5'-C5'	-5.64	111.88	120.90
22	BA	443	A	C3'-C2'-C1'	5.64	106.01	101.50
22	BA	2347	C	C3'-C2'-C1'	5.64	106.01	101.50
1	CA	436	C	O4'-C1'-N1	-5.64	103.69	108.20
1	CA	519	C	C3'-C2'-C1'	5.64	106.01	101.50
1	CA	1202	U	C3'-C2'-C1'	5.64	106.01	101.50
22	DA	2440	C	C3'-C2'-C1'	5.64	106.01	101.50
22	DA	2554	U	P-O3'-C3'	5.64	126.47	119.70
22	BA	2508	G	P-O3'-C3'	-5.64	112.94	119.70
1	AA	972	C	C3'-C2'-C1'	5.64	106.01	101.50
22	BA	482	A	N9-C1'-C2'	-5.64	105.80	112.00
22	BA	1779	U	N3-C4-O4	-5.64	115.45	119.40
22	DA	404	A	P-O3'-C3'	5.64	126.46	119.70
22	DA	811	U	P-O3'-C3'	5.64	126.47	119.70
22	DA	1333	G	C3'-C2'-C1'	5.64	106.01	101.50
22	BA	955	U	C5-C4-O4	-5.63	122.52	125.90
22	BA	1838	C	C6-N1-C2	5.63	122.55	120.30
23	DB	12	C	O4'-C1'-N1	-5.63	103.69	108.20
22	DA	1981	A	P-O5'-C5'	-5.63	111.89	120.90
22	BA	1289	C	P-O5'-C5'	-5.63	111.89	120.90
23	BB	109	A	N9-C1'-C2'	-5.63	105.80	112.00
22	BA	45	G	P-O5'-C5'	-5.63	111.89	120.90
1	CA	686	U	N1-C1'-C2'	5.63	121.32	114.00
22	DA	1305	C	P-O3'-C3'	-5.63	112.94	119.70
22	BA	984	A	C5-N7-C8	-5.63	101.09	103.90
22	BA	1276	A	O5'-P-OP2	-5.63	100.64	105.70
22	DA	1400	U	C3'-C2'-C1'	5.63	106.00	101.50
22	DA	2024	G	N9-C1'-C2'	-5.63	105.81	112.00
22	BA	977	G	OP1-P-O3'	5.63	117.58	105.20
1	CA	1064	G	P-O3'-C3'	5.63	126.45	119.70
1	CA	1190	G	O4'-C1'-N9	5.63	112.70	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	575	A	C3'-C2'-C1'	5.63	106.00	101.50
22	BA	2065	C	C6-N1-C2	5.62	122.55	120.30
22	DA	1902	C	O4'-C1'-N1	5.62	112.70	108.20
22	DA	2585	U	N1-C1'-C2'	5.62	121.31	114.00
22	BA	398	C	O4'-C1'-N1	-5.62	103.70	108.20
1	AA	1448	C	C3'-C2'-C1'	5.62	106.00	101.50
1	AA	64	G	P-O3'-C3'	5.62	126.44	119.70
22	BA	113	U	P-O5'-C5'	-5.62	111.91	120.90
22	BA	575	A	O5'-P-OP1	-5.62	100.64	105.70
1	CA	1383	C	P-O3'-C3'	-5.62	112.96	119.70
22	BA	740	C	P-O3'-C3'	-5.62	112.96	119.70
22	DA	1821	A	C3'-C2'-C1'	5.62	105.99	101.50
22	BA	1565	C	P-O3'-C3'	5.62	126.44	119.70
22	BA	2733	A	N9-C1'-C2'	-5.61	105.83	112.00
22	DA	304	U	C3'-C2'-C1'	5.61	105.99	101.50
22	DA	2517	C	N1-C1'-C2'	5.61	121.30	114.00
22	BA	1497	U	P-O3'-C3'	5.61	126.43	119.70
1	CA	575	G	N3-C4-C5	5.61	131.41	128.60
22	DA	1916	A	P-O3'-C3'	-5.61	112.97	119.70
22	BA	980	A	P-O3'-C3'	-5.61	112.97	119.70
22	DA	1312	U	P-O3'-C3'	5.61	126.43	119.70
22	BA	1428	C	N3-C2-O2	5.61	125.83	121.90
22	BA	1144	A	P-O3'-C3'	-5.61	112.97	119.70
22	BA	1838	C	N1-C1'-C2'	5.61	121.29	114.00
1	CA	1184	G	P-O3'-C3'	-5.61	112.97	119.70
22	DA	1996	C	O4'-C1'-N1	5.61	112.69	108.20
22	DA	2500	U	O4'-C1'-N1	5.61	112.69	108.20
22	DA	2669	G	C3'-C2'-C1'	5.61	105.98	101.50
22	BA	1945	G	C3'-C2'-C1'	5.60	105.98	101.50
22	BA	2570	G	C2-N3-C4	-5.60	109.10	111.90
22	DA	1716	U	N1-C1'-C2'	-5.60	105.84	112.00
22	DA	1919	A	N9-C1'-C2'	-5.60	105.84	112.00
22	BA	2567	G	C4-C5-N7	-5.60	108.56	110.80
22	BA	1350	C	P-O3'-C3'	-5.60	112.98	119.70
22	BA	2251	G	N9-C1'-C2'	-5.60	105.84	112.00
24	BC	109	LEU	CA-CB-CG	5.60	128.18	115.30
1	CA	721	G	P-O3'-C3'	5.60	126.42	119.70
22	BA	1717	A	N9-C1'-C2'	-5.60	105.84	112.00
22	BA	2407	A	C3'-C2'-C1'	5.60	105.98	101.50
22	BA	2745	C	O4'-C1'-N1	5.60	112.68	108.20
22	DA	478	A	C3'-C2'-C1'	5.60	105.98	101.50
22	BA	814	C	O5'-P-OP2	-5.60	100.66	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	544	C	O4'-C1'-N1	5.60	112.68	108.20
1	AA	968	A	P-O3'-C3'	5.59	126.42	119.70
22	BA	1370	C	P-O3'-C3'	5.59	126.41	119.70
22	BA	1444	G	O5'-P-OP2	-5.59	100.67	105.70
1	CA	414	A	C3'-C2'-C1'	5.59	105.98	101.50
22	DA	223	A	C3'-C2'-C1'	5.59	105.97	101.50
22	DA	991	C	C3'-C2'-C1'	5.59	105.98	101.50
22	DA	2657	A	C3'-C2'-C1'	5.59	105.98	101.50
1	AA	817	C	P-O3'-C3'	5.59	126.41	119.70
22	DA	784	G	P-O3'-C3'	5.59	126.41	119.70
22	BA	1303	G	P-O5'-C5'	-5.59	111.95	120.90
1	AA	654	G	C3'-C2'-C1'	5.59	105.97	101.50
22	BA	486	C	P-O3'-C3'	-5.59	112.99	119.70
22	BA	581	C	O4'-C1'-N1	-5.59	103.73	108.20
22	BA	829	A	P-O3'-C3'	5.59	126.41	119.70
22	BA	1142	A	N3-C4-N9	-5.59	122.93	127.40
22	BA	2887	A	P-O3'-C3'	5.59	126.41	119.70
22	DA	459	U	C3'-C2'-C1'	5.59	105.97	101.50
22	BA	691	C	C5-C6-N1	-5.59	118.21	121.00
22	BA	2727	A	C3'-C2'-C1'	5.59	105.97	101.50
22	BA	1494	A	C3'-C2'-C1'	5.59	105.97	101.50
22	BA	2463	C	O4'-C1'-N1	-5.59	103.73	108.20
1	AA	1130	A	P-O3'-C3'	-5.58	113.00	119.70
1	CA	131	A	C3'-C2'-C1'	5.58	105.97	101.50
1	AA	61	G	P-O3'-C3'	-5.58	113.00	119.70
22	BA	1428	C	N1-C2-O2	-5.58	115.55	118.90
22	BA	1808	A	O4'-C1'-N9	5.58	112.67	108.20
22	BA	2744	G	C5-C6-O6	-5.58	125.25	128.60
22	BA	2890	G	C5-C6-O6	-5.58	125.25	128.60
22	DA	73	A	C3'-C2'-C1'	5.58	105.97	101.50
22	DA	826	U	P-O3'-C3'	-5.58	113.00	119.70
22	DA	1821	A	P-O3'-C3'	-5.58	113.00	119.70
1	AA	93	U	O4'-C1'-N1	5.58	112.66	108.20
22	BA	455	C	P-O5'-C5'	-5.58	111.98	120.90
22	BA	1333	G	N9-C1'-C2'	-5.58	105.86	112.00
22	BA	2034	U	N1-C1'-C2'	-5.58	105.86	112.00
1	CA	85	U	N1-C1'-C2'	5.58	121.25	114.00
1	CA	821	G	P-O3'-C3'	-5.58	113.01	119.70
1	CA	1160	G	P-O3'-C3'	-5.58	113.00	119.70
22	DA	1536	C	P-O3'-C3'	5.58	126.39	119.70
22	DA	1654	A	C3'-C2'-C1'	5.58	105.96	101.50
22	BA	747	U	N1-C1'-C2'	-5.58	105.86	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2673	G	C3'-C2'-C1'	5.58	105.96	101.50
1	AA	318	G	N3-C4-C5	5.58	131.39	128.60
22	BA	691	C	C6-N1-C2	5.58	122.53	120.30
1	CA	352	C	C3'-C2'-C1'	5.58	105.96	101.50
22	DA	312	G	C3'-C2'-C1'	5.58	105.96	101.50
1	AA	500	G	P-O3'-C3'	-5.57	113.01	119.70
22	BA	1250	G	N9-C1'-C2'	5.57	121.24	114.00
22	BA	475	C	C3'-C2'-C1'	5.57	105.96	101.50
1	CA	874	G	C3'-C2'-C1'	5.57	105.96	101.50
22	BA	310	A	P-O5'-C5'	-5.57	111.99	120.90
22	BA	575	A	P-O3'-C3'	-5.57	113.02	119.70
22	BA	2832	U	P-O3'-C3'	5.57	126.38	119.70
22	BA	1385	A	C8-N9-C4	5.57	108.03	105.80
22	BA	2450	A	C3'-C2'-C1'	5.57	105.95	101.50
22	BA	2757	A	P-O3'-C3'	-5.57	113.02	119.70
22	DA	1829	A	N9-C1'-C2'	-5.57	105.88	112.00
1	AA	1203	C	C3'-C2'-C1'	5.57	105.95	101.50
22	BA	229	C	C3'-C2'-C1'	5.57	105.95	101.50
22	BA	546	U	O4'-C1'-N1	5.57	112.65	108.20
22	BA	672	C	P-O5'-C5'	-5.57	111.99	120.90
22	BA	918	A	P-O3'-C3'	5.57	126.38	119.70
22	BA	1278	C	O4'-C1'-N1	5.57	112.65	108.20
22	BA	2215	C	P-O5'-C5'	-5.57	112.00	120.90
22	DA	2615	U	C3'-C2'-C1'	5.57	105.95	101.50
22	DA	2895	G	C3'-C2'-C1'	5.57	105.95	101.50
22	BA	528	A	C5-C6-N1	-5.56	114.92	117.70
22	BA	1730	C	O4'-C1'-N1	5.56	112.65	108.20
1	CA	71	A	C3'-C2'-C1'	5.56	105.95	101.50
22	BA	2512	C	P-O3'-C3'	-5.56	113.03	119.70
22	BA	2815	C	O4'-C1'-N1	-5.56	103.75	108.20
22	DA	1603	A	C3'-C2'-C1'	5.56	105.95	101.50
1	AA	352	C	C3'-C2'-C1'	5.56	105.94	101.50
22	BA	1263	U	P-O3'-C3'	5.56	126.37	119.70
22	BA	137	U	P-O3'-C3'	5.55	126.37	119.70
22	BA	1313	U	P-O3'-C3'	-5.55	113.03	119.70
1	CA	596	A	C3'-C2'-C1'	5.55	105.94	101.50
22	BA	1429	G	C3'-C2'-C1'	5.55	105.94	101.50
23	BB	25	U	C3'-C2'-C1'	5.55	105.94	101.50
22	DA	628	G	C3'-C2'-C1'	5.55	105.94	101.50
22	BA	763	G	C3'-C2'-C1'	5.55	105.94	101.50
1	CA	1095	U	C3'-C2'-C1'	5.55	105.94	101.50
22	DA	2877	G	N9-C1'-C2'	-5.55	105.90	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	994	A	C3'-C2'-C1'	5.55	105.94	101.50
22	BA	1780	A	C2-N3-C4	-5.55	107.83	110.60
22	DA	1523	U	O4'-C1'-N1	5.55	112.64	108.20
22	BA	411	G	P-O3'-C3'	5.55	126.36	119.70
22	BA	1937	A	P-O5'-C5'	-5.55	112.03	120.90
22	BA	2309	A	C3'-C2'-C1'	5.55	105.94	101.50
22	BA	1997	C	O5'-P-OP1	-5.54	100.71	105.70
22	DA	1026	G	C3'-C2'-C1'	5.54	105.94	101.50
1	AA	528	C	O4'-C1'-N1	-5.54	103.77	108.20
22	BA	590	A	P-O3'-C3'	-5.54	113.05	119.70
22	BA	2465	C	C6-N1-C2	5.54	122.52	120.30
22	DA	1941	C	C3'-C2'-C1'	5.54	105.93	101.50
22	BA	177	G	O4'-C1'-N9	5.54	112.63	108.20
22	BA	865	C	N1-C2-O2	-5.54	115.58	118.90
22	BA	1024	G	C3'-C2'-C1'	5.54	105.93	101.50
1	CA	1299	A	P-O3'-C3'	-5.54	113.05	119.70
22	BA	2691	C	C3'-C2'-C1'	5.54	105.93	101.50
1	AA	548	G	C3'-C2'-C1'	5.54	105.93	101.50
1	AA	1337	G	C3'-C2'-C1'	5.54	105.93	101.50
22	BA	1014	A	N1-C6-N6	-5.54	115.28	118.60
22	BA	1198	U	O5'-P-OP2	-5.54	100.72	105.70
1	CA	64	G	O4'-C1'-N9	5.54	112.63	108.20
1	CA	1182	G	P-O3'-C3'	5.54	126.34	119.70
1	CA	1191	A	C3'-C2'-C1'	5.54	105.93	101.50
22	DA	1648	U	C3'-C2'-C1'	5.54	105.93	101.50
22	DA	2458	G	C4-N9-C1'	5.54	133.70	126.50
22	BA	2551	C	P-O3'-C3'	-5.53	113.06	119.70
1	CA	247	G	N9-C1'-C2'	-5.53	105.91	112.00
1	AA	373	A	C3'-C2'-C1'	5.53	105.92	101.50
22	BA	1695	G	P-O5'-C5'	-5.53	112.05	120.90
22	DA	783	A	C3'-C2'-C1'	5.53	105.92	101.50
22	DA	2876	G	C3'-C2'-C1'	5.53	105.92	101.50
1	CA	14	U	O4'-C1'-N1	5.53	112.62	108.20
1	CA	1053	G	P-O3'-C3'	5.53	126.33	119.70
1	AA	14	U	C3'-C2'-C1'	5.53	105.92	101.50
22	BA	2716	C	N3-C4-C5	5.53	124.11	121.90
1	CA	497	G	C3'-C2'-C1'	5.53	105.92	101.50
1	AA	998	C	O4'-C1'-N1	5.52	112.62	108.20
1	AA	1127	G	P-O3'-C3'	-5.52	113.07	119.70
22	BA	996	A	C3'-C2'-C1'	5.52	105.92	101.50
1	CA	369	G	P-O3'-C3'	-5.52	113.07	119.70
22	BA	852	U	C5-C6-N1	-5.52	119.94	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1317	G	P-O3'-C3'	-5.52	113.07	119.70
22	DA	2459	A	N9-C1'-C2'	-5.52	105.92	112.00
22	BA	1829	A	C3'-C2'-C1'	5.52	105.92	101.50
1	AA	267	C	P-O5'-C5'	-5.52	112.07	120.90
22	BA	2271	G	N3-C4-C5	-5.52	125.84	128.60
22	DA	324	A	C3'-C2'-C1'	5.52	105.92	101.50
22	DA	490	C	O4'-C1'-N1	-5.52	103.78	108.20
22	BA	653	U	P-O3'-C3'	5.52	126.32	119.70
22	BA	1024	G	N9-C1'-C2'	-5.52	105.93	112.00
22	BA	2571	U	O4'-C1'-N1	-5.52	103.79	108.20
22	BA	2682	A	C3'-C2'-C1'	5.52	105.91	101.50
22	BA	2831	G	N3-C2-N2	-5.52	116.04	119.90
22	DA	1256	G	C3'-C2'-C1'	5.52	105.91	101.50
22	BA	2210	U	O4'-C1'-N1	5.52	112.61	108.20
22	BA	2319	G	O4'-C1'-N9	5.52	112.61	108.20
1	CA	238	A	P-O3'-C3'	5.52	126.32	119.70
1	AA	47	C	P-O3'-C3'	5.51	126.32	119.70
1	AA	1259	C	O4'-C1'-N1	5.51	112.61	108.20
22	DA	588	U	C3'-C2'-C1'	5.51	105.91	101.50
22	DA	1325	U	P-O3'-C3'	5.51	126.32	119.70
22	DA	1569	A	P-O3'-C3'	-5.51	113.08	119.70
22	BA	705	A	P-O3'-C3'	-5.51	113.08	119.70
22	BA	792	A	N1-C6-N6	5.51	121.91	118.60
22	BA	1692	U	N3-C2-O2	5.51	126.06	122.20
22	BA	2455	G	P-O3'-C3'	5.51	126.31	119.70
1	AA	1191	A	P-O3'-C3'	-5.51	113.09	119.70
1	AA	1322	C	P-O3'-C3'	5.51	126.31	119.70
22	BA	585	G	O3'-P-O5'	-5.51	93.53	104.00
22	DA	1324	G	O4'-C1'-N9	5.51	112.61	108.20
22	DA	1512	C	C3'-C2'-C1'	5.51	105.91	101.50
22	DA	1627	G	C3'-C2'-C1'	5.51	105.91	101.50
22	DA	1653	G	O4'-C1'-N9	5.51	112.61	108.20
1	AA	345	C	P-O5'-C5'	-5.51	112.08	120.90
1	AA	1152	A	C3'-C2'-C1'	5.51	105.91	101.50
1	AA	1349	A	C3'-C2'-C1'	5.51	105.91	101.50
1	CA	71	A	P-O3'-C3'	-5.51	113.09	119.70
1	CA	83	C	N1-C1'-C2'	-5.51	105.94	112.00
22	DA	87	U	O4'-C1'-N1	5.51	112.61	108.20
22	DA	1674	G	P-O3'-C3'	5.51	126.31	119.70
22	BA	973	A	N1-C2-N3	5.51	132.05	129.30
1	AA	1496	C	P-O3'-C3'	-5.51	113.09	119.70
22	BA	530	G	C8-N9-C4	-5.51	104.20	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	687	C	P-O5'-C5'	-5.51	112.09	120.90
22	BA	858	G	P-O5'-C5'	-5.51	112.09	120.90
1	AA	430	A	C3'-C2'-C1'	5.50	105.90	101.50
1	AA	1126	U	N1-C1'-C2'	5.50	121.16	114.00
1	CA	1148	U	C3'-C2'-C1'	5.50	105.90	101.50
1	AA	71	A	P-O3'-C3'	-5.50	113.09	119.70
1	AA	163	C	O4'-C1'-N1	-5.50	103.80	108.20
22	BA	742	A	P-O3'-C3'	-5.50	113.10	119.70
22	BA	1694	C	C5-C6-N1	-5.50	118.25	121.00
22	BA	1714	U	C3'-C2'-C1'	5.50	105.90	101.50
22	BA	2013	A	OP1-P-O3'	5.50	117.31	105.20
22	BA	2808	G	O5'-P-OP2	-5.50	100.75	105.70
22	DA	218	A	C3'-C2'-C1'	5.50	105.90	101.50
22	DA	1733	G	N9-C1'-C2'	-5.50	105.95	112.00
22	BA	975	A	P-O3'-C3'	-5.50	113.10	119.70
22	BA	1255	U	N3-C2-O2	5.50	126.05	122.20
22	BA	1426	G	P-O3'-C3'	5.50	126.30	119.70
22	BA	1475	G	O4'-C1'-N9	5.50	112.60	108.20
22	DA	1695	G	P-O3'-C3'	-5.50	113.10	119.70
1	AA	91	U	C3'-C2'-C1'	5.50	105.90	101.50
22	BA	388	G	C3'-C2'-C1'	5.50	105.90	101.50
22	BA	435	C	P-O5'-C5'	-5.50	112.10	120.90
22	BA	1866	A	C3'-C2'-C1'	5.50	105.90	101.50
1	AA	115	G	C4'-C3'-C2'	5.50	108.10	102.60
1	AA	1129	C	N1-C1'-C2'	5.50	121.15	114.00
22	BA	572	A	C3'-C2'-C1'	5.50	105.90	101.50
22	BA	1611	C	C3'-C2'-C1'	5.50	105.90	101.50
22	BA	2501	C	C2-N1-C1'	-5.50	112.75	118.80
22	DA	2880	C	C3'-C2'-C1'	5.50	105.90	101.50
1	AA	1183	U	N1-C1'-C2'	-5.50	105.95	112.00
1	AA	1381	U	C3'-C2'-C1'	5.50	105.90	101.50
22	BA	223	A	C3'-C2'-C1'	5.50	105.90	101.50
22	BA	1424	G	P-O3'-C3'	5.50	126.30	119.70
22	BA	2503	A	P-O3'-C3'	5.50	126.30	119.70
1	AA	509	A	P-O3'-C3'	-5.50	113.11	119.70
22	BA	1954	G	C5-C6-O6	-5.50	125.30	128.60
1	AA	94	G	P-O3'-C3'	5.49	126.29	119.70
22	BA	726	G	N3-C4-N9	-5.49	122.70	126.00
22	BA	2685	G	P-O5'-C5'	-5.49	112.11	120.90
23	BB	89	U	O4'-C1'-N1	5.49	112.59	108.20
22	DA	1555	G	C3'-C2'-C1'	5.49	105.89	101.50
1	AA	994	A	P-O3'-C3'	-5.49	113.11	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2879	A	O4'-C1'-N9	5.49	112.59	108.20
1	CA	92	U	P-O3'-C3'	-5.49	113.11	119.70
22	DA	2407	A	C3'-C2'-C1'	5.49	105.89	101.50
22	BA	2387	U	O4'-C1'-N1	5.49	112.59	108.20
23	DB	111	U	P-O3'-C3'	-5.49	113.11	119.70
22	BA	838	C	N1-C2-O2	-5.49	115.61	118.90
1	CA	891	U	C3'-C2'-C1'	5.49	105.89	101.50
22	DA	265	A	O4'-C1'-N9	5.49	112.59	108.20
22	DA	1799	G	P-O3'-C3'	5.49	126.29	119.70
1	AA	174	A	C3'-C2'-C1'	5.49	105.89	101.50
22	BA	567	U	O3'-P-O5'	-5.49	93.58	104.00
1	CA	452	A	N9-C1'-C2'	-5.49	105.97	112.00
22	BA	1153	C	C4-C5-C6	5.48	120.14	117.40
1	CA	1395	C	C3'-C2'-C1'	5.48	105.89	101.50
1	AA	1323	G	C3'-C2'-C1'	5.48	105.89	101.50
22	BA	1128	G	O4'-C1'-N9	5.48	112.59	108.20
22	BA	1385	A	O4'-C1'-N9	5.48	112.59	108.20
22	BA	1554	U	C4'-C3'-C2'	5.48	108.08	102.60
22	DA	1340	U	N1-C1'-C2'	-5.48	105.97	112.00
1	AA	537	G	C3'-C2'-C1'	5.48	105.88	101.50
22	BA	1753	G	P-O3'-C3'	5.48	126.28	119.70
22	DA	2758	A	C3'-C2'-C1'	5.48	105.88	101.50
22	DA	2062	A	C3'-C2'-C1'	5.48	105.88	101.50
22	BA	1229	C	C5-C6-N1	-5.48	118.26	121.00
23	BB	16	G	N9-C1'-C2'	-5.48	105.97	112.00
1	CA	93	U	P-O3'-C3'	-5.48	113.13	119.70
1	AA	191	G	O4'-C1'-N9	-5.48	103.82	108.20
22	DA	1401	G	C3'-C2'-C1'	5.48	105.88	101.50
1	AA	331	G	N9-C1'-C2'	-5.47	105.98	112.00
1	AA	874	G	C3'-C2'-C1'	5.47	105.88	101.50
22	BA	436	C	O4'-C1'-N1	5.47	112.58	108.20
22	BA	1290	C	C6-N1-C2	5.47	122.49	120.30
22	BA	1480	C	P-O5'-C5'	-5.47	112.14	120.90
22	BA	1943	U	O4'-C1'-N1	-5.47	103.82	108.20
23	BB	67	G	C3'-C2'-C1'	5.47	105.88	101.50
22	DA	49	A	P-O3'-C3'	5.47	126.27	119.70
1	AA	1381	U	P-O3'-C3'	-5.47	113.13	119.70
22	BA	535	G	OP2-P-O3'	5.47	117.24	105.20
22	BA	14	A	P-O5'-C5'	-5.47	112.15	120.90
22	BA	1511	G	P-O5'-C5'	-5.47	112.15	120.90
22	BA	2639	A	P-O3'-C3'	-5.47	113.14	119.70
22	DA	1456	G	C3'-C2'-C1'	5.47	105.88	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2281	A	P-O5'-C5'	-5.47	112.15	120.90
22	DA	1682	G	C3'-C2'-C1'	5.47	105.87	101.50
22	BA	2001	C	P-O3'-C3'	-5.46	113.14	119.70
1	CA	347	G	C3'-C2'-C1'	5.46	105.87	101.50
1	AA	794	A	C3'-C2'-C1'	5.46	105.87	101.50
1	AA	1322	C	N1-C1'-C2'	5.46	121.10	114.00
22	BA	513	A	P-O3'-C3'	-5.46	113.15	119.70
1	CA	68	G	N9-C1'-C2'	-5.46	105.99	112.00
22	DA	1249	U	P-O3'-C3'	-5.46	113.15	119.70
22	BA	1954	G	C5-C6-N1	5.46	114.23	111.50
22	BA	2428	G	P-O5'-C5'	-5.46	112.17	120.90
22	BA	2029	G	OP1-P-O3'	5.46	117.21	105.20
22	BA	2875	C	O4'-C1'-N1	-5.46	103.83	108.20
22	DA	392	U	C3'-C2'-C1'	5.46	105.86	101.50
22	DA	406	G	C3'-C2'-C1'	5.46	105.86	101.50
22	BA	1702	G	P-O5'-C5'	-5.45	112.17	120.90
22	BA	2259	U	P-O5'-C5'	-5.45	112.17	120.90
22	BA	1026	G	C3'-C2'-C1'	5.45	105.86	101.50
1	CA	381	C	N1-C1'-C2'	5.45	121.09	114.00
1	CA	962	C	O4'-C1'-N1	5.45	112.56	108.20
1	AA	1498	U	P-O3'-C3'	5.45	126.24	119.70
22	BA	2788	C	P-O5'-C5'	-5.45	112.18	120.90
22	DA	777	G	C3'-C2'-C1'	5.45	105.86	101.50
1	CA	330	C	C3'-C2'-C1'	5.45	105.86	101.50
22	BA	29	U	P-O5'-C5'	-5.45	112.19	120.90
22	BA	1564	C	P-O3'-C3'	5.45	126.23	119.70
22	DA	1144	A	N9-C1'-C2'	-5.45	106.01	112.00
22	DA	1346	G	C3'-C2'-C1'	5.45	105.86	101.50
22	DA	2199	A	C3'-C2'-C1'	5.45	105.86	101.50
1	CA	1160	G	N9-C1'-C2'	-5.44	106.01	112.00
22	BA	569	U	O4'-C1'-N1	5.44	112.55	108.20
22	DA	794	A	P-O3'-C3'	-5.44	113.17	119.70
22	DA	1934	C	O4'-C1'-N1	5.44	112.55	108.20
1	AA	1046	A	O4'-C1'-N9	5.44	112.55	108.20
22	BA	604	G	C3'-C2'-C1'	5.44	105.85	101.50
22	BA	1459	G	C3'-C2'-C1'	5.44	105.85	101.50
22	BA	1944	U	P-O3'-C3'	5.44	126.23	119.70
22	DA	622	G	C3'-C2'-C1'	5.44	105.85	101.50
22	BA	1142	A	N1-C6-N6	5.44	121.86	118.60
22	BA	1762	A	O4'-C1'-N9	-5.44	103.85	108.20
22	DA	406	G	P-O3'-C3'	-5.44	113.18	119.70
22	DA	1757	A	P-O3'-C3'	5.44	126.22	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2424	C	C2-N3-C4	-5.43	117.18	119.90
1	CA	248	C	C3'-C2'-C1'	5.43	105.85	101.50
1	CA	722	G	C3'-C2'-C1'	5.43	105.85	101.50
22	DA	2063	C	C3'-C2'-C1'	5.43	105.85	101.50
1	AA	84	U	O4'-C1'-N1	5.43	112.55	108.20
1	AA	1348	U	C3'-C2'-C1'	5.43	105.85	101.50
22	BA	528	A	N9-C1'-C2'	-5.43	106.03	112.00
22	BA	793	A	N1-C2-N3	5.43	132.02	129.30
22	BA	1619	G	N1-C6-O6	-5.43	116.64	119.90
22	BA	2567	G	C2-N3-C4	5.43	114.62	111.90
22	BA	2714	G	P-O3'-C3'	-5.43	113.18	119.70
1	CA	9	G	C3'-C2'-C1'	5.43	105.85	101.50
22	DA	1247	A	P-O3'-C3'	5.43	126.22	119.70
22	BA	694	U	O4'-C1'-N1	5.43	112.55	108.20
22	BA	1931	U	P-O3'-C3'	-5.43	113.18	119.70
1	CA	282	A	C3'-C2'-C1'	5.43	105.84	101.50
1	AA	1128	C	P-O5'-C5'	-5.43	112.21	120.90
22	BA	765	C	C3'-C2'-C1'	5.43	105.84	101.50
22	BA	568	U	O4'-C1'-N1	-5.43	103.86	108.20
22	BA	2890	G	N9-C4-C5	-5.43	103.23	105.40
23	DB	16	G	C3'-C2'-C1'	5.43	105.84	101.50
22	BA	2021	C	O4'-C1'-N1	-5.42	103.86	108.20
1	CA	353	A	O4'-C1'-N9	5.42	112.54	108.20
1	CA	1393	U	O4'-C1'-N1	-5.42	103.86	108.20
22	DA	1569	A	C3'-C2'-C1'	5.42	105.84	101.50
1	AA	352	C	O4'-C1'-N1	-5.42	103.86	108.20
1	AA	721	G	P-O3'-C3'	5.42	126.21	119.70
22	DA	1576	U	O4'-C1'-N1	5.42	112.54	108.20
22	BA	1033	U	O4'-C1'-N1	5.42	112.53	108.20
22	DA	1647	U	P-O3'-C3'	5.42	126.20	119.70
22	BA	1619	G	O5'-P-OP2	-5.42	100.83	105.70
1	CA	766	A	P-O3'-C3'	5.42	126.20	119.70
1	CA	421	U	P-O3'-C3'	5.41	126.19	119.70
22	DA	163	C	N1-C1'-C2'	-5.41	106.05	112.00
22	DA	407	G	C3'-C2'-C1'	5.41	105.83	101.50
1	AA	978	A	C3'-C2'-C1'	5.41	105.83	101.50
22	BA	1631	G	O4'-C1'-N9	5.41	112.53	108.20
22	BA	2324	U	O4'-C1'-N1	-5.41	103.87	108.20
47	BZ	16	LEU	CA-CB-CG	-5.41	102.86	115.30
1	CA	52	C	C3'-C2'-C1'	5.41	105.83	101.50
22	DA	397	U	P-O3'-C3'	-5.41	113.21	119.70
22	DA	510	C	C3'-C2'-C1'	5.41	105.83	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	2746	U	N1-C1'-C2'	-5.41	106.05	112.00
22	BA	606	U	O4'-C1'-N1	5.41	112.53	108.20
22	BA	1774	C	O4'-C1'-N1	-5.41	103.87	108.20
22	BA	2333	A	C8-N9-C4	5.41	107.96	105.80
23	BB	29	A	P-O5'-C5'	-5.41	112.25	120.90
1	CA	1086	U	C3'-C2'-C1'	5.41	105.83	101.50
22	BA	1674	G	P-O3'-C3'	5.41	126.19	119.70
1	CA	52	C	P-O3'-C3'	-5.41	113.21	119.70
22	DA	13	A	P-O3'-C3'	5.41	126.19	119.70
22	BA	681	G	P-O5'-C5'	-5.41	112.25	120.90
22	BA	1822	C	P-O5'-C5'	-5.41	112.25	120.90
1	AA	487	A	C3'-C2'-C1'	5.40	105.82	101.50
1	AA	1215	G	C3'-C2'-C1'	5.40	105.82	101.50
22	BA	1382	G	P-O5'-C5'	-5.40	112.26	120.90
22	DA	2092	U	O4'-C1'-N1	5.40	112.52	108.20
22	BA	181	A	P-O3'-C3'	-5.40	113.22	119.70
22	BA	2026	U	C5-C6-N1	-5.40	120.00	122.70
22	BA	2258	C	C4'-C3'-C2'	5.40	108.00	102.60
22	BA	1885	A	C3'-C2'-C1'	5.40	105.82	101.50
22	DA	10	A	O4'-C1'-N9	5.40	112.52	108.20
22	DA	2850	A	C3'-C2'-C1'	5.40	105.82	101.50
22	DA	806	C	C3'-C2'-C1'	5.40	105.82	101.50
22	BA	463	G	OP2-P-O3'	5.39	117.07	105.20
22	BA	1133	A	O4'-C1'-N9	5.39	112.52	108.20
22	BA	1255	U	C3'-C2'-C1'	5.39	105.81	101.50
1	AA	1153	G	C3'-C2'-C1'	5.39	105.81	101.50
1	CA	423	G	C3'-C2'-C1'	5.39	105.81	101.50
22	DA	398	C	C3'-C2'-C1'	5.39	105.81	101.50
23	DB	45	A	P-O3'-C3'	-5.39	113.23	119.70
22	BA	2383	G	C3'-C2'-C1'	5.39	105.81	101.50
22	BA	2055	C	C6-N1-C2	5.39	122.46	120.30
22	BA	2092	U	N1-C1'-C2'	5.39	121.01	114.00
1	CA	15	G	C3'-C2'-C1'	5.39	105.81	101.50
22	DA	60	G	O4'-C1'-N9	5.39	112.51	108.20
22	DA	868	U	C3'-C2'-C1'	5.39	105.81	101.50
22	DA	916	G	C3'-C2'-C1'	5.39	105.81	101.50
1	AA	64	G	O4'-C1'-N9	5.39	112.51	108.20
1	AA	1131	G	C3'-C2'-C1'	5.39	105.81	101.50
1	AA	1259	C	C3'-C2'-C1'	5.39	105.81	101.50
22	BA	412	A	N9-C1'-C2'	-5.39	106.07	112.00
22	BA	1816	C	C3'-C2'-C1'	5.39	105.81	101.50
1	CA	1218	C	O4'-C1'-N1	5.39	112.51	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	2052	A	P-O5'-C5'	-5.39	112.28	120.90
1	AA	576	C	O4'-C1'-N1	5.39	112.51	108.20
1	AA	1087	G	C3'-C2'-C1'	5.38	105.81	101.50
22	BA	2787	C	N1-C2-O2	-5.38	115.67	118.90
22	DA	35	G	N9-C1'-C2'	-5.38	106.08	112.00
22	BA	534	U	C5-C6-N1	-5.38	120.01	122.70
22	BA	867	C	N1-C1'-C2'	-5.38	106.08	112.00
22	BA	2543	G	P-O3'-C3'	-5.38	113.24	119.70
1	AA	61	G	C3'-C2'-C1'	5.38	105.80	101.50
1	AA	1131	G	N9-C1'-C2'	-5.38	106.08	112.00
1	AA	536	C	N1-C1'-C2'	-5.38	106.08	112.00
1	AA	754	C	N1-C1'-C2'	-5.38	106.08	112.00
22	BA	458	G	C3'-C2'-C1'	-5.38	97.20	101.50
22	BA	1240	U	C6-N1-C1'	-5.38	113.67	121.20
22	BA	2148	G	C3'-C2'-C1'	5.38	105.80	101.50
22	BA	2504	U	N1-C2-O2	5.38	126.56	122.80
22	BA	2607	G	P-O3'-C3'	-5.38	113.25	119.70
25	BD	10	GLY	N-CA-C	5.38	126.55	113.10
22	DA	1255	U	C6-N1-C1'	-5.38	113.67	121.20
1	AA	1304	G	C3'-C2'-C1'	5.38	105.80	101.50
1	AA	1454	G	C3'-C2'-C1'	5.38	105.80	101.50
22	BA	2546	U	C5-C4-O4	-5.38	122.67	125.90
22	BA	2836	U	P-O3'-C3'	-5.38	113.25	119.70
1	CA	642	A	P-O3'-C3'	-5.38	113.25	119.70
22	DA	2879	A	P-O3'-C3'	5.38	126.15	119.70
22	BA	303	G	C3'-C2'-C1'	5.37	105.80	101.50
22	BA	860	U	N3-C2-O2	-5.37	118.44	122.20
22	BA	984	A	O3'-P-O5'	5.37	114.21	104.00
22	BA	1272	A	C8-N9-C4	5.37	107.95	105.80
1	CA	14	U	C3'-C2'-C1'	5.37	105.80	101.50
22	BA	2424	C	C5-C6-N1	-5.37	118.31	121.00
1	AA	252	U	C3'-C2'-C1'	5.37	105.80	101.50
22	DA	1329	U	N1-C1'-C2'	5.37	120.98	114.00
1	AA	642	A	C3'-C2'-C1'	5.37	105.80	101.50
22	BA	772	C	C6-N1-C2	5.37	122.45	120.30
22	BA	1254	A	C3'-C2'-C1'	5.37	105.79	101.50
22	BA	2552	U	O4'-C1'-N1	-5.37	103.91	108.20
1	AA	384	G	P-O3'-C3'	5.37	126.14	119.70
1	CA	531	U	N1-C1'-C2'	5.37	120.98	114.00
1	AA	352	C	P-O3'-C3'	-5.37	113.26	119.70
22	BA	955	U	N3-C4-C5	5.37	117.82	114.60
22	BA	2312	U	O4'-C1'-N1	5.37	112.49	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	638	G	P-O3'-C3'	-5.37	113.26	119.70
22	DA	831	G	C3'-C2'-C1'	5.37	105.79	101.50
22	DA	1034	G	P-O3'-C3'	-5.37	113.26	119.70
22	BA	166	U	P-O3'-C3'	-5.36	113.26	119.70
22	BA	1698	A	P-O3'-C3'	5.36	126.14	119.70
22	BA	2681	C	N3-C2-O2	5.36	125.66	121.90
22	BA	2890	G	C4-C5-N7	5.36	112.94	110.80
1	CA	1449	C	O4'-C1'-N1	5.36	112.49	108.20
22	DA	2832	U	P-O3'-C3'	5.36	126.14	119.70
22	DA	2866	U	N1-C1'-C2'	5.36	120.97	114.00
1	AA	1184	G	C3'-C2'-C1'	5.36	105.79	101.50
22	DA	1498	C	C3'-C2'-C1'	5.36	105.79	101.50
1	AA	1304	G	P-O3'-C3'	-5.36	113.27	119.70
22	BA	1360	G	O5'-P-OP2	-5.36	100.88	105.70
22	BA	2231	U	N1-C1'-C2'	-5.36	106.10	112.00
1	CA	369	G	C3'-C2'-C1'	5.36	105.79	101.50
1	CA	482	A	P-O3'-C3'	-5.36	113.27	119.70
22	DA	1700	A	P-O3'-C3'	-5.36	113.27	119.70
22	BA	2705	A	P-O5'-C5'	-5.36	112.33	120.90
22	BA	1261	C	O4'-C1'-N1	5.36	112.49	108.20
22	DA	1981	A	C3'-C2'-C1'	5.36	105.79	101.50
22	BA	585	G	P-O3'-C3'	5.36	126.13	119.70
23	DB	46	A	C3'-C2'-C1'	5.36	105.78	101.50
22	BA	1657	U	P-O3'-C3'	-5.35	113.28	119.70
1	CA	1447	A	P-O3'-C3'	5.35	126.12	119.70
1	AA	966	G	P-O3'-C3'	-5.35	113.28	119.70
22	BA	677	A	OP1-P-O3'	5.35	116.97	105.20
22	BA	1828	G	P-O3'-C3'	5.35	126.12	119.70
22	BA	2645	G	O3'-P-O5'	-5.35	93.83	104.00
1	CA	6	G	C3'-C2'-C1'	5.35	105.78	101.50
1	CA	1257	A	C3'-C2'-C1'	5.35	105.78	101.50
1	AA	286	C	O4'-C1'-N1	5.35	112.48	108.20
22	BA	621	A	C3'-C2'-C1'	5.35	105.78	101.50
1	CA	347	G	P-O3'-C3'	-5.35	113.28	119.70
22	DA	274	C	C3'-C2'-C1'	5.35	105.78	101.50
22	DA	2137	U	C3'-C2'-C1'	5.35	105.78	101.50
1	AA	1522	U	P-O5'-C5'	-5.35	112.34	120.90
23	BB	45	A	C3'-C2'-C1'	5.35	105.78	101.50
1	CA	816	A	C3'-C2'-C1'	5.35	105.78	101.50
22	BA	512	G	P-O3'-C3'	5.35	126.11	119.70
22	BA	962	G	P-O5'-C5'	-5.35	112.35	120.90
1	CA	64	G	P-O3'-C3'	5.35	126.11	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2508	G	C4-N9-C1'	5.34	133.45	126.50
1	CA	1152	A	C3'-C2'-C1'	5.34	105.78	101.50
22	DA	1707	G	P-O5'-C5'	-5.34	112.35	120.90
1	CA	1349	A	C3'-C2'-C1'	5.34	105.78	101.50
22	BA	486	C	C6-N1-C2	5.34	122.44	120.30
22	BA	914	G	C4-N9-C1'	5.34	133.44	126.50
22	BA	987	C	O4'-C1'-N1	5.34	112.47	108.20
51	B3	21	PHE	N-CA-C	5.34	125.42	111.00
1	AA	722	G	C3'-C2'-C1'	5.34	105.77	101.50
22	DA	618	G	C3'-C2'-C1'	5.34	105.77	101.50
22	DA	962	G	C3'-C2'-C1'	5.34	105.77	101.50
22	DA	1289	C	P-O3'-C3'	-5.34	113.30	119.70
22	DA	1468	U	O4'-C1'-N1	5.34	112.47	108.20
22	BA	638	G	P-O3'-C3'	-5.33	113.30	119.70
22	BA	1426	G	P-O5'-C5'	-5.33	112.37	120.90
1	CA	453	G	P-O3'-C3'	-5.33	113.30	119.70
22	DA	1475	G	P-O3'-C3'	5.33	126.10	119.70
1	CA	652	U	P-O3'-C3'	5.33	126.10	119.70
22	DA	2024	G	C3'-C2'-C1'	5.33	105.77	101.50
22	DA	2036	C	C3'-C2'-C1'	5.33	105.77	101.50
22	BA	628	G	P-O5'-C5'	-5.33	112.37	120.90
22	BA	664	G	O5'-P-OP2	-5.33	100.90	105.70
22	BA	324	A	N9-C1'-C2'	-5.33	106.14	112.00
22	BA	489	G	O3'-P-O5'	-5.33	93.87	104.00
22	BA	1943	U	C4'-C3'-C2'	5.33	107.93	102.60
1	CA	389	A	P-O3'-C3'	-5.33	113.31	119.70
22	DA	618	G	P-O3'-C3'	-5.33	113.31	119.70
22	DA	2502	G	C3'-C2'-C1'	5.33	105.76	101.50
22	BA	86	G	O5'-P-OP2	-5.33	100.91	105.70
22	BA	480	A	C3'-C2'-C1'	5.33	105.76	101.50
22	BA	1510	G	N9-C1'-C2'	-5.33	106.14	112.00
1	AA	718	A	C3'-C2'-C1'	5.32	105.76	101.50
22	BA	800	A	C5-N7-C8	-5.32	101.24	103.90
22	BA	2200	C	C3'-C2'-C1'	5.32	105.76	101.50
1	CA	67	C	O4'-C1'-N1	5.32	112.46	108.20
22	DA	1157	G	C3'-C2'-C1'	5.32	105.76	101.50
22	DA	1491	G	C3'-C2'-C1'	5.32	105.76	101.50
1	AA	339	C	C5-C6-N1	-5.32	118.34	121.00
1	AA	368	U	N1-C1'-C2'	-5.32	106.15	112.00
22	BA	2007	U	P-O3'-C3'	-5.32	113.31	119.70
1	CA	563	A	P-O3'-C3'	-5.32	113.31	119.70
1	CA	1052	U	C3'-C2'-C1'	5.32	105.76	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	2837	A	C3'-C2'-C1'	5.32	105.76	101.50
22	BA	1989	G	P-O5'-C5'	-5.32	112.39	120.90
22	DA	129	C	N1-C1'-C2'	-5.32	106.15	112.00
1	CA	32	A	C3'-C2'-C1'	5.32	105.75	101.50
22	BA	2022	U	N3-C4-O4	5.32	123.12	119.40
22	DA	1972	G	C3'-C2'-C1'	5.32	105.75	101.50
1	AA	1108	G	P-O3'-C3'	-5.31	113.32	119.70
22	BA	1942	C	C3'-C2'-C1'	5.31	105.75	101.50
1	CA	1148	U	P-O3'-C3'	-5.31	113.32	119.70
22	DA	1949	G	P-O3'-C3'	5.31	126.08	119.70
22	DA	1965	C	P-O5'-C5'	-5.31	112.40	120.90
22	BA	1343	G	C3'-C2'-C1'	5.31	105.75	101.50
1	CA	590	U	O4'-C1'-N1	5.31	112.45	108.20
22	DA	223	A	P-O3'-C3'	-5.31	113.33	119.70
22	DA	572	A	O4'-C1'-N9	-5.31	103.95	108.20
22	DA	1206	G	P-O3'-C3'	-5.31	113.32	119.70
22	DA	1901	A	C3'-C2'-C1'	5.31	105.75	101.50
1	AA	1401	G	P-O5'-C5'	-5.31	112.40	120.90
22	BA	2881	U	O4'-C1'-N1	-5.31	103.95	108.20
35	BN	33	ILE	CB-CA-C	-5.31	100.98	111.60
1	CA	974	A	P-O3'-C3'	5.31	126.07	119.70
22	DA	770	G	C8-N9-C4	-5.31	104.28	106.40
1	AA	52	C	C3'-C2'-C1'	5.31	105.75	101.50
22	BA	2508	G	C8-N9-C1'	-5.31	120.10	127.00
22	BA	2615	U	C3'-C2'-C1'	5.31	105.75	101.50
22	DA	1294	U	O4'-C1'-N1	-5.31	103.95	108.20
1	AA	85	U	N1-C1'-C2'	5.31	120.90	114.00
1	AA	439	U	P-O3'-C3'	-5.31	113.33	119.70
22	DA	207	A	C3'-C2'-C1'	5.31	105.75	101.50
1	AA	246	A	P-O3'-C3'	5.31	126.07	119.70
22	BA	667	U	P-O3'-C3'	5.31	126.07	119.70
22	BA	1323	C	C6-N1-C2	5.31	122.42	120.30
22	BA	1919	A	N9-C1'-C2'	-5.31	106.16	112.00
22	BA	2236	U	P-O5'-C5'	-5.31	112.41	120.90
23	BB	12	C	P-O3'-C3'	5.31	126.07	119.70
22	DA	530	G	P-O3'-C3'	-5.31	113.33	119.70
1	AA	71	A	C3'-C2'-C1'	5.30	105.74	101.50
22	BA	2729	G	N9-C1'-C2'	-5.30	106.16	112.00
22	DA	512	G	P-O3'-C3'	5.30	126.06	119.70
22	DA	1144	A	C3'-C2'-C1'	5.30	105.74	101.50
1	AA	1382	C	C3'-C2'-C1'	5.30	105.74	101.50
22	BA	1192	G	P-O5'-C5'	-5.30	112.42	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	199	A	P-O3'-C3'	-5.30	113.34	119.70
22	DA	687	C	C3'-C2'-C1'	5.30	105.74	101.50
22	BA	2632	A	P-O5'-C5'	-5.30	112.42	120.90
22	BA	309	A	P-O3'-C3'	5.30	126.06	119.70
22	BA	1628	G	C5-C6-O6	-5.30	125.42	128.60
22	BA	2611	C	P-O3'-C3'	-5.30	113.34	119.70
47	BZ	16	LEU	CB-CG-CD2	-5.30	101.99	111.00
1	CA	309	A	P-O3'-C3'	-5.30	113.34	119.70
23	DB	90	C	C3'-C2'-C1'	5.30	105.74	101.50
1	AA	1130	A	O4'-C1'-N9	-5.30	103.96	108.20
22	BA	2661	G	P-O3'-C3'	5.30	126.06	119.70
1	CA	1332	A	C3'-C2'-C1'	5.30	105.74	101.50
22	BA	765	C	P-O5'-C5'	-5.30	112.43	120.90
22	DA	1386	C	P-O3'-C3'	-5.30	113.34	119.70
22	BA	1682	G	C3'-C2'-C1'	5.29	105.74	101.50
22	DA	1483	G	C3'-C2'-C1'	5.29	105.74	101.50
22	BA	1848	A	C3'-C2'-C1'	5.29	105.73	101.50
22	BA	2655	G	P-O3'-C3'	5.29	126.05	119.70
22	BA	2836	U	O4'-C1'-N1	5.29	112.44	108.20
22	DA	1328	A	C3'-C2'-C1'	5.29	105.73	101.50
1	AA	23	C	P-O3'-C3'	-5.29	113.35	119.70
22	BA	35	G	N9-C1'-C2'	-5.29	106.18	112.00
22	BA	1760	C	P-O3'-C3'	-5.29	113.35	119.70
33	BL	40	SER	N-CA-C	-5.29	96.72	111.00
1	CA	567	G	P-O3'-C3'	-5.29	113.35	119.70
22	DA	678	C	O4'-C1'-N1	-5.29	103.97	108.20
23	DB	13	G	C3'-C2'-C1'	5.29	105.73	101.50
22	BA	2757	A	N9-C1'-C2'	-5.29	106.18	112.00
22	BA	386	G	O3'-P-O5'	-5.29	93.95	104.00
22	DA	2300	C	C3'-C2'-C1'	5.29	105.73	101.50
22	BA	22	C	C2-N3-C4	-5.29	117.26	119.90
22	BA	1318	U	O4'-C1'-N1	5.29	112.43	108.20
1	CA	110	C	C3'-C2'-C1'	5.28	105.73	101.50
22	DA	1858	A	C3'-C2'-C1'	5.28	105.73	101.50
1	CA	1367	C	O4'-C1'-N1	5.28	112.42	108.20
1	AA	1129	C	P-O3'-C3'	5.28	126.04	119.70
1	AA	534	U	C3'-C2'-C1'	5.28	105.72	101.50
1	AA	1402	C	C6-N1-C2	5.28	122.41	120.30
22	BA	36	G	P-O3'-C3'	-5.28	113.37	119.70
22	BA	765	C	N1-C1'-C2'	-5.28	106.19	112.00
1	CA	512	U	C3'-C2'-C1'	5.28	105.72	101.50
22	DA	2551	C	O4'-C1'-N1	5.28	112.42	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	1181	U	O4'-C1'-N1	5.28	112.42	108.20
22	DA	1290	C	O4'-C1'-N1	5.28	112.42	108.20
22	DA	1739	A	C3'-C2'-C1'	5.28	105.72	101.50
1	AA	110	C	C3'-C2'-C1'	5.27	105.72	101.50
23	DB	58	A	C3'-C2'-C1'	5.27	105.72	101.50
22	BA	538	A	P-O5'-C5'	-5.27	112.47	120.90
22	BA	977	G	O3'-P-O5'	-5.27	93.98	104.00
22	BA	1956	U	P-O3'-C3'	-5.27	113.37	119.70
22	BA	2017	U	P-O5'-C5'	-5.27	112.46	120.90
22	BA	2580	U	P-O3'-C3'	5.27	126.03	119.70
22	DA	144	A	C3'-C2'-C1'	5.27	105.72	101.50
22	BA	726	G	O3'-P-O5'	5.27	114.01	104.00
1	CA	1128	C	P-O3'-C3'	-5.27	113.38	119.70
22	DA	1290	C	N1-C1'-C2'	-5.27	106.20	112.00
22	BA	1716	U	C3'-C2'-C1'	5.27	105.72	101.50
22	BA	1785	A	C3'-C2'-C1'	5.27	105.72	101.50
22	DA	2572	A	O4'-C1'-N9	5.27	112.42	108.20
22	BA	564	C	O4'-C1'-N1	5.27	112.42	108.20
22	BA	964	C	P-O5'-C5'	-5.27	112.47	120.90
22	BA	2431	U	P-O5'-C5'	-5.27	112.47	120.90
22	BA	636	G	P-O3'-C3'	5.26	126.02	119.70
22	BA	835	C	N3-C2-O2	5.26	125.59	121.90
1	CA	885	G	P-O3'-C3'	-5.26	113.38	119.70
1	CA	885	G	C3'-C2'-C1'	5.26	105.71	101.50
22	DA	2339	C	O4'-C1'-N1	5.26	112.41	108.20
22	DA	130	C	O4'-C1'-N1	5.26	112.41	108.20
1	AA	275	G	C8-N9-C4	-5.26	104.30	106.40
1	CA	174	A	C3'-C2'-C1'	5.26	105.70	101.50
22	DA	1051	G	C3'-C2'-C1'	5.26	105.70	101.50
22	DA	1077	A	C3'-C2'-C1'	5.26	105.71	101.50
22	BA	1025	G	C4'-C3'-C2'	5.25	107.86	102.60
1	AA	468	A	P-O3'-C3'	-5.25	113.40	119.70
22	BA	945	A	O4'-C1'-N9	5.25	112.40	108.20
22	BA	1675	C	C2-N3-C4	-5.25	117.27	119.90
22	DA	1206	G	C3'-C2'-C1'	5.25	105.70	101.50
22	DA	1733	G	C3'-C2'-C1'	5.25	105.70	101.50
22	DA	1916	A	C3'-C2'-C1'	5.25	105.70	101.50
22	BA	595	C	N3-C4-C5	5.25	124.00	121.90
22	BA	1091	G	O4'-C1'-N9	5.25	112.40	108.20
22	BA	1993	U	O4'-C1'-N1	5.25	112.40	108.20
22	BA	2619	C	C5-C6-N1	-5.25	118.37	121.00
22	BA	2815	C	P-O5'-C5'	-5.25	112.50	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1420	U	N3-C2-O2	5.25	125.88	122.20
1	AA	885	G	C3'-C2'-C1'	5.25	105.70	101.50
22	BA	1617	C	O4'-C1'-N1	5.25	112.40	108.20
22	BA	2501	C	C6-N1-C2	5.25	122.40	120.30
31	BJ	64	VAL	N-CA-C	5.25	125.17	111.00
22	DA	2667	C	N1-C1'-C2'	-5.25	106.23	112.00
22	BA	2881	U	N3-C2-O2	5.25	125.87	122.20
23	BB	90	C	P-O5'-C5'	-5.25	112.50	120.90
22	DA	2068	U	C3'-C2'-C1'	5.25	105.70	101.50
22	BA	958	U	C3'-C2'-C1'	5.25	105.70	101.50
22	BA	2803	G	P-O5'-C5'	-5.25	112.51	120.90
1	AA	331	G	P-O3'-C3'	-5.24	113.41	119.70
22	BA	1130	U	N1-C2-O2	5.24	126.47	122.80
22	BA	2573	C	C3'-C2'-C1'	5.24	105.69	101.50
22	BA	2831	G	P-O5'-C5'	-5.24	112.51	120.90
1	CA	1401	G	N9-C1'-C2'	-5.24	106.23	112.00
23	DB	111	U	O4'-C1'-N1	5.24	112.39	108.20
1	AA	468	A	C3'-C2'-C1'	5.24	105.69	101.50
22	BA	2561	U	O4'-C1'-N1	5.24	112.39	108.20
22	DA	672	C	P-O3'-C3'	-5.24	113.41	119.70
22	DA	974	G	P-O3'-C3'	5.24	125.99	119.70
22	DA	1064	C	P-O3'-C3'	-5.24	113.41	119.70
22	BA	781	A	P-O3'-C3'	5.24	125.99	119.70
22	DA	915	C	C3'-C2'-C1'	5.24	105.69	101.50
23	DB	69	G	N9-C1'-C2'	-5.24	106.23	112.00
1	AA	72	A	C3'-C2'-C1'	5.24	105.69	101.50
22	BA	528	A	O4'-C1'-N9	-5.24	104.01	108.20
22	BA	2652	C	P-O3'-C3'	-5.24	113.41	119.70
23	BB	5	U	N1-C1'-C2'	-5.24	106.24	112.00
22	DA	1888	G	O4'-C1'-N9	5.24	112.39	108.20
22	BA	1941	C	C3'-C2'-C1'	5.24	105.69	101.50
1	CA	132	C	C3'-C2'-C1'	5.24	105.69	101.50
22	BA	683	U	C3'-C2'-C1'	5.24	105.69	101.50
22	DA	444	C	N1-C1'-C2'	-5.24	106.24	112.00
1	CA	978	A	C3'-C2'-C1'	5.23	105.69	101.50
22	BA	637	A	N9-C1'-C2'	5.23	120.80	114.00
1	CA	402	G	P-O5'-C5'	-5.23	112.53	120.90
1	CA	1127	G	C3'-C2'-C1'	5.23	105.69	101.50
22	DA	2691	C	C3'-C2'-C1'	5.23	105.69	101.50
22	BA	25	U	C5-C4-O4	-5.23	122.76	125.90
22	BA	1646	C	P-O3'-C3'	-5.23	113.42	119.70
22	BA	1792	G	N9-C1'-C2'	-5.23	106.25	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1317	C	O4'-C1'-N1	5.23	112.38	108.20
22	DA	388	G	C3'-C2'-C1'	5.23	105.69	101.50
22	DA	1347	A	C3'-C2'-C1'	5.23	105.69	101.50
22	BA	1925	C	O4'-C1'-N1	5.23	112.38	108.20
1	AA	733	G	P-O3'-C3'	5.23	125.97	119.70
22	BA	2508	G	O4'-C1'-N9	-5.23	104.02	108.20
1	CA	316	C	C3'-C2'-C1'	5.23	105.68	101.50
22	BA	992	C	O4'-C1'-N1	5.23	112.38	108.20
22	BA	2508	G	C6-C5-N7	-5.23	127.27	130.40
1	CA	794	A	C3'-C2'-C1'	5.23	105.68	101.50
22	DA	1291	C	O4'-C1'-N1	5.23	112.38	108.20
22	BA	209	C	C6-N1-C2	5.22	122.39	120.30
22	BA	936	A	P-O5'-C5'	-5.22	112.54	120.90
22	BA	2066	C	P-O5'-C5'	-5.22	112.54	120.90
1	CA	509	A	C3'-C2'-C1'	5.22	105.68	101.50
22	BA	2405	G	P-O3'-C3'	5.22	125.97	119.70
22	DA	401	A	O4'-C1'-N9	5.22	112.38	108.20
22	DA	2069	G	N9-C1'-C2'	-5.22	106.25	112.00
22	DA	2289	G	C3'-C2'-C1'	5.22	105.68	101.50
1	AA	346	G	C3'-C2'-C1'	5.22	105.68	101.50
22	BA	2830	C	P-O5'-C5'	-5.22	112.55	120.90
1	AA	1432	G	P-O3'-C3'	5.22	125.96	119.70
22	BA	1239	G	O3'-P-O5'	-5.22	94.09	104.00
1	AA	977	A	P-O3'-C3'	-5.22	113.44	119.70
22	BA	2806	C	O3'-P-O5'	-5.22	94.09	104.00
1	CA	74	A	P-O3'-C3'	-5.22	113.44	119.70
22	DA	1327	A	C3'-C2'-C1'	5.22	105.67	101.50
22	DA	2428	G	C3'-C2'-C1'	5.22	105.67	101.50
22	BA	162	U	O4'-C1'-N1	5.21	112.37	108.20
22	BA	1839	G	N9-C1'-C2'	-5.21	106.26	112.00
22	BA	2794	C	N3-C2-O2	5.21	125.55	121.90
22	BA	2890	G	C2-N3-C4	-5.21	109.29	111.90
1	CA	389	A	C3'-C2'-C1'	5.21	105.67	101.50
22	DA	206	U	C3'-C2'-C1'	5.21	105.67	101.50
22	DA	1291	C	P-O3'-C3'	-5.21	113.44	119.70
22	DA	2337	G	C3'-C2'-C1'	5.21	105.67	101.50
1	AA	490	C	O4'-C1'-N1	5.21	112.37	108.20
1	CA	1157	A	P-O3'-C3'	5.21	125.95	119.70
22	DA	1682	G	N9-C1'-C2'	-5.21	106.27	112.00
22	BA	17	G	C8-N9-C4	-5.21	104.31	106.40
22	DA	2640	G	P-O3'-C3'	-5.21	113.45	119.70
1	AA	891	U	C3'-C2'-C1'	5.21	105.67	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1838	C	N1-C2-O2	-5.21	115.77	118.90
22	BA	2558	C	P-O5'-C5'	-5.21	112.56	120.90
22	BA	2839	G	OP2-P-O3'	5.21	116.66	105.20
1	AA	1169	A	P-O3'-C3'	-5.21	113.45	119.70
22	BA	87	U	P-O3'-C3'	-5.21	113.45	119.70
22	BA	1062	G	C3'-C2'-C1'	5.21	105.67	101.50
22	BA	1238	G	O4'-C1'-N9	5.21	112.37	108.20
22	DA	503	A	P-O3'-C3'	5.21	125.95	119.70
22	DA	868	U	O4'-C1'-N1	5.21	112.37	108.20
22	BA	978	G	C5-C6-N1	5.21	114.10	111.50
22	BA	750	A	N1-C2-N3	5.21	131.90	129.30
22	BA	1421	G	C3'-C2'-C1'	5.21	105.66	101.50
23	BB	57	A	P-O5'-C5'	-5.21	112.57	120.90
1	AA	961	U	C3'-C2'-C1'	5.20	105.66	101.50
22	BA	1380	G	N1-C6-O6	-5.20	116.78	119.90
22	DA	2179	C	C3'-C2'-C1'	5.20	105.66	101.50
1	AA	519	C	C3'-C2'-C1'	5.20	105.66	101.50
22	BA	1200	C	C5-C6-N1	-5.20	118.40	121.00
22	DA	1065	U	C3'-C2'-C1'	5.20	105.66	101.50
22	BA	1319	C	C6-N1-C2	5.20	122.38	120.30
1	CA	719	C	O4'-C1'-N1	5.20	112.36	108.20
22	BA	1794	A	P-O5'-C5'	-5.20	112.58	120.90
1	CA	1302	C	C3'-C2'-C1'	5.20	105.66	101.50
22	DA	588	U	P-O3'-C3'	-5.20	113.46	119.70
22	DA	1272	A	P-O3'-C3'	5.20	125.94	119.70
22	DA	1303	G	C3'-C2'-C1'	5.20	105.66	101.50
22	DA	2757	A	C3'-C2'-C1'	5.20	105.66	101.50
1	AA	1070	U	O4'-C1'-N1	-5.20	104.04	108.20
22	BA	1761	C	N1-C2-O2	-5.20	115.78	118.90
22	BA	673	C	O4'-C1'-N1	5.19	112.36	108.20
23	BB	79	G	C2-N3-C4	5.19	114.50	111.90
22	DA	1112	G	C3'-C2'-C1'	5.19	105.66	101.50
1	AA	812	G	O3'-P-O5'	-5.19	94.13	104.00
22	BA	530	G	P-O3'-C3'	-5.19	113.47	119.70
22	BA	2569	G	N3-C4-C5	-5.19	126.00	128.60
22	BA	769	U	P-O5'-C5'	-5.19	112.59	120.90
22	BA	984	A	N3-C4-C5	5.19	130.43	126.80
22	DA	2340	A	C3'-C2'-C1'	5.19	105.65	101.50
22	BA	119	A	O3'-P-O5'	5.19	113.86	104.00
23	DB	40	U	N1-C1'-C2'	5.19	120.75	114.00
22	BA	25	U	C6-N1-C2	5.19	124.11	121.00
22	BA	333	G	P-O3'-C3'	-5.19	113.48	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1429	G	N9-C1'-C2'	-5.19	106.30	112.00
22	BA	1760	C	O3'-P-O5'	-5.19	94.14	104.00
22	BA	2775	G	OP2-P-O3'	5.19	116.61	105.20
1	CA	503	C	O4'-C1'-N1	-5.19	104.05	108.20
22	DA	2037	A	P-O3'-C3'	-5.19	113.48	119.70
1	CA	81	A	P-O3'-C3'	5.19	125.92	119.70
22	DA	200	U	P-O3'-C3'	-5.19	113.48	119.70
22	DA	2419	U	O4'-C1'-N1	5.19	112.35	108.20
22	BA	93	G	N9-C1'-C2'	-5.18	106.30	112.00
22	BA	1125	G	C5-C6-O6	-5.18	125.49	128.60
22	BA	1330	C	C3'-C2'-C1'	5.18	105.65	101.50
1	CA	980	C	C3'-C2'-C1'	5.18	105.65	101.50
1	AA	1050	G	C3'-C2'-C1'	5.18	105.64	101.50
22	BA	270	A	P-O5'-C5'	-5.18	112.61	120.90
22	BA	873	C	C6-N1-C2	5.18	122.37	120.30
1	CA	1230	C	C3'-C2'-C1'	5.18	105.64	101.50
22	DA	1396	U	N1-C1'-C2'	5.18	120.73	114.00
22	DA	1667	G	O4'-C1'-N9	-5.18	104.06	108.20
1	AA	436	C	O4'-C1'-N1	5.18	112.34	108.20
1	AA	466	A	P-O3'-C3'	5.18	125.91	119.70
22	BA	2716	C	P-O5'-C5'	-5.18	112.62	120.90
1	CA	1095	U	P-O3'-C3'	-5.18	113.49	119.70
1	AA	166	U	P-O3'-C3'	-5.17	113.49	119.70
22	BA	523	C	C6-N1-C2	5.17	122.37	120.30
22	BA	909	A	O4'-C1'-N9	-5.17	104.06	108.20
22	BA	2055	C	N1-C1'-C2'	-5.17	106.31	112.00
1	AA	1088	G	N9-C1'-C2'	-5.17	106.31	112.00
1	AA	1258	G	C3'-C2'-C1'	5.17	105.64	101.50
22	BA	554	U	P-O3'-C3'	5.17	125.91	119.70
1	AA	486	U	O4'-C1'-N1	-5.17	104.06	108.20
22	BA	614	A	P-O5'-C5'	-5.17	112.62	120.90
1	CA	968	A	O4'-C1'-N9	5.17	112.34	108.20
22	BA	243	U	P-O3'-C3'	-5.17	113.50	119.70
22	BA	1243	C	P-O5'-C5'	-5.17	112.63	120.90
22	BA	476	G	C3'-C2'-C1'	5.17	105.64	101.50
38	BQ	52	ARG	NE-CZ-NH1	-5.17	117.72	120.30
22	DA	1937	A	P-O3'-C3'	5.17	125.90	119.70
22	DA	2500	U	P-O3'-C3'	5.17	125.90	119.70
22	BA	116	C	O4'-C1'-N1	5.17	112.33	108.20
22	BA	785	G	P-O5'-C5'	-5.17	112.63	120.90
22	BA	1146	C	O4'-C1'-N1	5.17	112.33	108.20
22	DA	1327	A	P-O3'-C3'	-5.17	113.50	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	93	U	C3'-C2'-C1'	5.16	105.63	101.50
22	BA	1210	G	P-O5'-C5'	-5.16	112.64	120.90
22	BA	1681	G	C8-N9-C4	5.16	108.47	106.40
22	BA	1784	A	C8-N9-C4	5.16	107.87	105.80
22	BA	2683	C	P-O3'-C3'	-5.16	113.50	119.70
22	DA	92	U	C3'-C2'-C1'	5.16	105.63	101.50
22	DA	1759	A	C3'-C2'-C1'	5.16	105.63	101.50
22	DA	2245	U	O4'-C1'-N1	5.16	112.33	108.20
22	DA	321	U	O4'-C1'-N1	5.16	112.33	108.20
22	BA	1806	C	O4'-C1'-N1	-5.16	104.07	108.20
22	BA	2025	C	C4-C5-C6	5.16	119.98	117.40
22	BA	767	U	O4'-C1'-N1	5.16	112.33	108.20
1	CA	404	G	P-O3'-C3'	5.16	125.89	119.70
22	DA	1943	U	N1-C1'-C2'	5.16	120.70	114.00
22	BA	1255	U	OP1-P-OP2	5.16	127.33	119.60
22	DA	321	U	P-O3'-C3'	5.16	125.89	119.70
22	DA	1965	C	O4'-C1'-N1	-5.16	104.08	108.20
22	BA	390	U	O4'-C1'-N1	-5.15	104.08	108.20
22	BA	1963	U	O4'-C1'-N1	-5.15	104.08	108.20
22	BA	2876	G	C6-C5-N7	-5.15	127.31	130.40
22	DA	2877	G	C3'-C2'-C1'	5.15	105.62	101.50
22	BA	1109	C	O4'-C1'-N1	5.15	112.32	108.20
22	BA	1971	U	OP1-P-O3'	5.15	116.53	105.20
22	DA	15	G	N9-C1'-C2'	-5.15	106.33	112.00
22	DA	234	U	P-O3'-C3'	-5.15	113.52	119.70
22	DA	528	A	P-O3'-C3'	-5.15	113.52	119.70
22	DA	587	C	N1-C1'-C2'	5.15	120.70	114.00
22	BA	1555	G	C3'-C2'-C1'	5.15	105.62	101.50
22	BA	2307	G	O4'-C1'-N9	5.15	112.32	108.20
1	CA	87	C	N1-C1'-C2'	-5.15	106.33	112.00
22	DA	752	A	P-O3'-C3'	5.15	125.88	119.70
22	DA	1023	U	C3'-C2'-C1'	5.15	105.62	101.50
22	DA	2578	G	P-O3'-C3'	-5.15	113.52	119.70
22	BA	972	A	O5'-P-OP2	-5.15	101.07	105.70
22	BA	451	U	C5-C6-N1	-5.15	120.13	122.70
22	BA	811	U	O4'-C1'-N1	5.15	112.32	108.20
22	BA	908	C	N1-C2-O2	-5.15	115.81	118.90
22	BA	1619	G	N9-C4-C5	5.15	107.46	105.40
22	BA	1981	A	C3'-C2'-C1'	5.15	105.62	101.50
1	AA	28	A	P-O5'-C5'	-5.15	112.67	120.90
1	AA	346	G	P-O3'-C3'	-5.15	113.52	119.70
22	BA	2832	U	O3'-P-O5'	-5.15	94.22	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	274	A	O4'-C1'-N9	5.14	112.32	108.20
22	DA	802	A	C3'-C2'-C1'	5.14	105.61	101.50
22	DA	2240	U	O5'-P-OP2	-5.14	101.07	105.70
22	BA	456	C	O5'-P-OP2	-5.14	101.07	105.70
22	BA	1364	G	P-O3'-C3'	5.14	125.87	119.70
22	DA	2197	U	P-O3'-C3'	5.14	125.87	119.70
22	BA	783	A	C5-C6-N1	-5.14	115.13	117.70
22	DA	1455	G	C3'-C2'-C1'	5.14	105.61	101.50
22	BA	542	C	O3'-P-O5'	-5.14	94.23	104.00
22	BA	1296	G	C5-C6-N1	5.14	114.07	111.50
1	AA	500	G	N9-C1'-C2'	-5.14	106.35	112.00
22	BA	2501	C	P-O5'-C5'	-5.14	112.68	120.90
22	BA	860	U	C3'-C2'-C1'	5.14	105.61	101.50
22	BA	1403	A	P-O3'-C3'	-5.14	113.54	119.70
22	BA	1568	G	C4-N9-C1'	5.14	133.18	126.50
22	BA	1802	A	P-O5'-C5'	-5.14	112.68	120.90
22	BA	2051	A	N1-C6-N6	5.14	121.68	118.60
22	BA	2375	G	P-O3'-C3'	-5.14	113.53	119.70
22	DA	749	A	N9-C1'-C2'	-5.14	106.35	112.00
22	BA	856	G	O3'-P-O5'	-5.13	94.25	104.00
22	BA	942	G	O3'-P-O5'	-5.13	94.24	104.00
22	BA	2781	A	C3'-C2'-C1'	5.13	105.61	101.50
22	DA	1510	G	C3'-C2'-C1'	5.13	105.61	101.50
22	BA	1989	G	C6-C5-N7	-5.13	127.32	130.40
22	BA	1989	G	O4'-C1'-N9	-5.13	104.09	108.20
22	BA	2690	U	O5'-P-OP2	-5.13	101.08	105.70
22	BA	255	A	C2-N3-C4	-5.13	108.03	110.60
1	CA	1453	G	C3'-C2'-C1'	5.13	105.60	101.50
22	DA	2347	C	C3'-C2'-C1'	5.13	105.60	101.50
22	BA	390	U	OP2-P-O3'	5.13	116.48	105.20
22	BA	2609	U	C4'-C3'-C2'	5.13	107.73	102.60
22	DA	87	U	P-O3'-C3'	-5.13	113.55	119.70
22	DA	1782	U	C3'-C2'-C1'	5.13	105.60	101.50
22	DA	2450	A	C3'-C2'-C1'	5.13	105.60	101.50
1	AA	1098	C	O4'-C1'-N1	-5.13	104.10	108.20
22	BA	1829	A	N9-C1'-C2'	-5.13	106.36	112.00
1	CA	93	U	C3'-C2'-C1'	5.13	105.60	101.50
22	DA	1267	U	C3'-C2'-C1'	5.13	105.60	101.50
22	DA	1418	G	C3'-C2'-C1'	5.13	105.60	101.50
22	DA	1783	A	O5'-P-OP2	-5.13	101.09	105.70
22	BA	2752	C	C3'-C2'-C1'	5.12	105.60	101.50
1	AA	210	C	P-O3'-C3'	5.12	125.85	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	26	G	O4'-C1'-N9	-5.12	104.10	108.20
22	BA	386	G	O4'-C1'-N9	5.12	112.30	108.20
1	AA	563	A	C3'-C2'-C1'	5.12	105.60	101.50
22	BA	55	G	N3-C2-N2	-5.12	116.31	119.90
22	BA	1653	G	O5'-P-OP2	-5.12	101.09	105.70
22	BA	2324	U	N1-C1'-C2'	5.12	120.66	114.00
22	BA	2813	A	C8-N9-C4	5.12	107.85	105.80
1	CA	1051	C	O4'-C1'-N1	5.12	112.30	108.20
22	BA	1700	A	P-O3'-C3'	-5.12	113.56	119.70
22	BA	2821	A	N9-C1'-C2'	-5.12	106.37	112.00
1	CA	963	G	O4'-C1'-N9	5.12	112.30	108.20
22	BA	52	A	C3'-C2'-C1'	5.12	105.59	101.50
22	BA	2586	U	P-O3'-C3'	-5.12	113.56	119.70
22	BA	1380	G	N9-C1'-C2'	-5.12	106.37	112.00
22	DA	2657	A	P-O3'-C3'	-5.12	113.56	119.70
1	AA	969	A	C3'-C2'-C1'	5.12	105.59	101.50
22	BA	682	G	C8-N9-C1'	-5.12	120.35	127.00
22	BA	529	A	C4'-C3'-C2'	5.11	107.71	102.60
22	BA	1114	C	P-O3'-C3'	5.11	125.84	119.70
23	BB	82	U	P-O5'-C5'	-5.11	112.72	120.90
22	DA	1399	C	C3'-C2'-C1'	5.11	105.59	101.50
22	DA	2615	U	P-O3'-C3'	-5.11	113.56	119.70
22	BA	940	G	O5'-P-OP2	-5.11	101.10	105.70
22	BA	1678	A	C5-C6-N6	-5.11	119.61	123.70
22	BA	1270	C	N3-C2-O2	5.11	125.48	121.90
22	BA	2567	G	N1-C6-O6	-5.11	116.83	119.90
22	DA	1816	C	O4'-C1'-N1	5.11	112.29	108.20
22	BA	112	U	N1-C2-O2	-5.11	119.22	122.80
22	DA	1735	A	P-O3'-C3'	-5.11	113.57	119.70
1	AA	786	G	P-O3'-C3'	5.11	125.83	119.70
22	BA	630	G	N9-C1'-C2'	-5.11	106.38	112.00
1	AA	95	C	O4'-C1'-N1	-5.11	104.11	108.20
22	BA	2055	C	O4'-C1'-N1	5.11	112.28	108.20
22	BA	2893	A	N9-C1'-C2'	5.11	120.64	114.00
1	CA	1066	C	C3'-C2'-C1'	5.11	105.58	101.50
22	BA	2608	G	P-O3'-C3'	5.10	125.82	119.70
1	CA	1455	G	C3'-C2'-C1'	5.10	105.58	101.50
22	DA	391	A	N9-C1'-C2'	-5.10	106.39	112.00
22	BA	1023	U	C3'-C2'-C1'	5.10	105.58	101.50
22	BA	2590	A	P-O5'-C5'	-5.10	112.74	120.90
22	DA	1025	G	N1-C6-O6	5.10	122.96	119.90
1	AA	1284	C	C3'-C2'-C1'	5.10	105.58	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	534	U	C3'-C2'-C1'	5.10	105.58	101.50
1	AA	316	C	C3'-C2'-C1'	5.09	105.58	101.50
1	AA	755	G	C3'-C2'-C1'	5.09	105.58	101.50
22	BA	683	U	P-O3'-C3'	-5.09	113.59	119.70
22	BA	873	C	C5-C6-N1	-5.09	118.45	121.00
22	BA	1607	C	P-O3'-C3'	5.09	125.81	119.70
22	BA	668	A	N1-C2-N3	-5.09	126.75	129.30
22	BA	809	G	N3-C4-N9	5.09	129.06	126.00
22	BA	914	G	C3'-C2'-C1'	5.09	105.57	101.50
1	CA	1093	A	P-O3'-C3'	5.09	125.81	119.70
22	DA	1451	C	P-O3'-C3'	5.09	125.81	119.70
22	DA	1856	U	O4'-C1'-N1	5.09	112.27	108.20
1	AA	41	G	P-O3'-C3'	-5.09	113.59	119.70
1	AA	245	U	C3'-C2'-C1'	5.09	105.57	101.50
22	BA	2629	U	C5-C6-N1	-5.09	120.16	122.70
31	DJ	25	LEU	CA-CB-CG	5.09	127.01	115.30
22	BA	604	G	N9-C1'-C2'	-5.09	106.40	112.00
22	BA	1784	A	C2-N3-C4	-5.09	108.06	110.60
22	BA	1799	G	P-O3'-C3'	5.09	125.80	119.70
22	BA	1913	A	P-O3'-C3'	5.09	125.80	119.70
22	BA	2264	C	C6-N1-C2	5.09	122.33	120.30
1	CA	184	G	C3'-C2'-C1'	5.09	105.57	101.50
1	CA	1283	U	C3'-C2'-C1'	5.09	105.57	101.50
1	AA	1066	C	C3'-C2'-C1'	5.08	105.57	101.50
22	BA	1992	G	N9-C4-C5	5.08	107.43	105.40
22	BA	2725	A	O5'-C5'-C4'	-5.08	102.04	111.70
22	BA	1021	A	C3'-C2'-C1'	5.08	105.57	101.50
22	BA	1327	A	N1-C6-N6	5.08	121.65	118.60
22	BA	779	U	N3-C4-O4	5.08	122.96	119.40
22	BA	1822	C	O4'-C1'-N1	-5.08	104.14	108.20
22	BA	2544	G	P-O5'-C5'	-5.08	112.77	120.90
22	BA	2547	A	P-O5'-C5'	-5.08	112.77	120.90
22	DA	777	G	P-O3'-C3'	-5.08	113.60	119.70
22	BA	974	G	N3-C4-C5	5.08	131.14	128.60
22	DA	226	A	P-O3'-C3'	5.08	125.79	119.70
22	DA	397	U	C3'-C2'-C1'	5.08	105.56	101.50
22	DA	1256	G	N9-C1'-C2'	-5.08	106.42	112.00
22	DA	2609	U	O4'-C1'-N1	5.08	112.26	108.20
1	AA	258	G	C3'-C2'-C1'	5.08	105.56	101.50
22	BA	1420	A	P-O5'-C5'	-5.08	112.78	120.90
1	CA	67	C	N1-C1'-C2'	-5.08	106.42	112.00
1	CA	529	G	P-O3'-C3'	-5.08	113.61	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	321	U	O4'-C1'-N1	5.08	112.26	108.20
22	BA	760	G	N1-C6-O6	5.08	122.94	119.90
22	BA	1006	C	C5-C6-N1	-5.08	118.46	121.00
22	BA	1461	C	O4'-C1'-N1	5.08	112.26	108.20
22	DA	763	G	C3'-C2'-C1'	5.08	105.56	101.50
22	DA	1081	U	C3'-C2'-C1'	5.08	105.56	101.50
22	BA	856	G	C6-C5-N7	-5.07	127.36	130.40
22	BA	1222	U	P-O3'-C3'	-5.07	113.61	119.70
22	BA	2329	U	O4'-C1'-N1	5.07	112.26	108.20
22	BA	2898	U	O5'-P-OP2	-5.07	101.13	105.70
22	BA	85	G	N9-C1'-C2'	-5.07	106.42	112.00
23	BB	53	A	P-O5'-C5'	-5.07	112.79	120.90
22	DA	2340	A	P-O3'-C3'	-5.07	113.62	119.70
22	BA	528	A	C4-C5-C6	5.07	119.53	117.00
22	BA	1963	U	C3'-C2'-C1'	5.07	105.56	101.50
1	AA	756	C	P-O3'-C3'	-5.07	113.62	119.70
22	BA	239	C	C3'-C2'-C1'	5.07	105.55	101.50
1	CA	252	U	C3'-C2'-C1'	5.07	105.55	101.50
22	BA	1664	A	O3'-P-O5'	-5.07	94.38	104.00
22	BA	1867	G	C3'-C2'-C1'	5.07	105.55	101.50
22	BA	2297	A	N9-C1'-C2'	-5.07	106.43	112.00
22	BA	818	G	C6-N1-C2	-5.06	122.06	125.10
22	BA	1951	U	P-O3'-C3'	5.06	125.78	119.70
22	BA	2578	G	O4'-C1'-N9	5.06	112.25	108.20
22	DA	1817	G	C3'-C2'-C1'	5.06	105.55	101.50
22	BA	464	U	P-O3'-C3'	5.06	125.77	119.70
22	BA	1240	U	C2-N1-C1'	5.06	123.78	117.70
22	DA	443	A	C3'-C2'-C1'	5.06	105.55	101.50
22	BA	662	G	O5'-P-OP2	-5.06	101.14	105.70
22	BA	200	U	C3'-C2'-C1'	5.06	105.55	101.50
22	BA	1008	A	P-O5'-C5'	5.06	129.00	120.90
22	BA	1297	C	P-O5'-C5'	-5.06	112.81	120.90
22	BA	1920	C	C3'-C2'-C1'	5.06	105.55	101.50
22	BA	2081	U	C5-C6-N1	-5.06	120.17	122.70
22	BA	2199	A	P-O5'-C5'	-5.06	112.80	120.90
22	BA	2440	C	O5'-P-OP2	-5.06	101.15	105.70
22	BA	2787	C	C6-N1-C2	5.06	122.32	120.30
1	CA	245	U	C3'-C2'-C1'	5.06	105.55	101.50
22	DA	2298	A	C3'-C2'-C1'	5.06	105.55	101.50
23	DB	18	G	C3'-C2'-C1'	5.06	105.55	101.50
22	BA	507	A	C3'-C2'-C1'	5.06	105.55	101.50
22	BA	1403	A	C3'-C2'-C1'	5.06	105.55	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1700	A	C3'-C2'-C1'	5.06	105.55	101.50
22	BA	2068	U	C3'-C2'-C1'	5.06	105.55	101.50
22	BA	2750	A	C4'-C3'-C2'	5.06	107.66	102.60
1	AA	984	C	C3'-C2'-C1'	5.06	105.55	101.50
22	BA	934	U	O4'-C1'-N1	5.06	112.25	108.20
22	BA	962	G	C2-N3-C4	-5.06	109.37	111.90
22	BA	1646	C	P-O5'-C5'	-5.06	112.81	120.90
22	BA	2514	U	C5-C6-N1	-5.06	120.17	122.70
22	BA	2662	A	C3'-C2'-C1'	5.06	105.55	101.50
22	BA	804	A	C2-N3-C4	-5.05	108.07	110.60
22	BA	1303	G	N9-C1'-C2'	-5.05	106.44	112.00
22	DA	1415	U	P-O3'-C3'	5.05	125.77	119.70
22	DA	1722	A	C3'-C2'-C1'	5.05	105.54	101.50
22	BA	702	U	O4'-C1'-N1	-5.05	104.16	108.20
22	BA	1403	A	N9-C1'-C2'	-5.05	106.44	112.00
1	CA	1161	C	P-O3'-C3'	-5.05	113.64	119.70
1	CA	915	A	C3'-C2'-C1'	5.05	105.54	101.50
22	BA	686	U	N3-C2-O2	5.05	125.73	122.20
22	BA	799	G	C5-C6-O6	-5.05	125.57	128.60
22	BA	938	G	P-O3'-C3'	-5.05	113.64	119.70
22	BA	2442	C	O5'-P-OP2	-5.05	101.16	105.70
22	BA	2543	G	C8-N9-C4	-5.05	104.38	106.40
1	AA	116	A	O5'-P-OP2	-5.05	101.16	105.70
1	AA	1087	G	N9-C1'-C2'	-5.05	106.45	112.00
22	BA	2791	G	C8-N9-C4	-5.05	104.38	106.40
22	DA	477	A	C3'-C2'-C1'	5.05	105.54	101.50
22	DA	1483	G	N9-C1'-C2'	-5.05	106.45	112.00
22	BA	1966	A	P-O5'-C5'	-5.04	112.83	120.90
1	AA	1433	A	C3'-C2'-C1'	5.04	105.53	101.50
22	BA	981	A	N1-C6-N6	5.04	121.63	118.60
22	BA	1832	C	N1-C2-O2	-5.04	115.87	118.90
22	BA	2868	A	P-O5'-C5'	-5.04	112.83	120.90
1	CA	821	G	C3'-C2'-C1'	5.04	105.53	101.50
1	CA	1449	C	C3'-C2'-C1'	5.04	105.53	101.50
22	DA	2836	U	C3'-C2'-C1'	5.04	105.53	101.50
1	AA	13	U	N1-C1'-C2'	5.04	120.55	114.00
22	BA	35	G	C5'-C4'-O4'	-5.04	103.05	109.10
22	BA	2232	C	C6-N1-C2	5.04	122.32	120.30
1	CA	1087	G	C3'-C2'-C1'	5.04	105.53	101.50
1	CA	652	U	N1-C1'-C2'	5.04	120.55	114.00
1	AA	43	C	C6-N1-C2	5.04	122.32	120.30
22	BA	1662	U	P-O5'-C5'	-5.04	112.84	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1965	C	C6-N1-C2	-5.04	118.28	120.30
22	DA	217	A	C3'-C2'-C1'	5.04	105.53	101.50
22	DA	2263	C	O4'-C1'-N1	5.04	112.23	108.20
1	AA	1319	A	P-O3'-C3'	5.04	125.75	119.70
22	BA	312	G	C3'-C2'-C1'	5.04	105.53	101.50
22	BA	612	G	P-O3'-C3'	5.04	125.74	119.70
22	BA	315	G	P-O5'-C5'	-5.03	112.85	120.90
22	BA	1377	G	P-O3'-C3'	5.03	125.74	119.70
22	BA	2063	C	C3'-C2'-C1'	5.03	105.53	101.50
1	CA	794	A	N9-C1'-C2'	-5.03	106.46	112.00
1	CA	986	U	C3'-C2'-C1'	5.03	105.53	101.50
22	BA	2385	C	C3'-C2'-C1'	5.03	105.53	101.50
1	AA	1102	A	C3'-C2'-C1'	5.03	105.52	101.50
22	BA	126	A	C3'-C2'-C1'	5.03	105.52	101.50
22	BA	466	A	C2-N3-C4	5.03	113.11	110.60
22	BA	1785	A	C8-N9-C4	-5.03	103.79	105.80
1	CA	1284	C	N1-C1'-C2'	-5.03	106.47	112.00
1	CA	1326	U	O4'-C1'-N1	5.03	112.22	108.20
22	DA	958	U	P-O3'-C3'	-5.03	113.67	119.70
22	DA	1340	U	C3'-C2'-C1'	5.03	105.52	101.50
1	AA	985	C	C3'-C2'-C1'	5.03	105.52	101.50
22	BA	1417	C	C3'-C2'-C1'	5.03	105.52	101.50
22	BA	1554	U	O3'-P-O5'	-5.03	94.45	104.00
22	BA	1791	A	OP2-P-O3'	5.03	116.26	105.20
22	BA	1926	U	O4'-C1'-N1	5.03	112.22	108.20
22	BA	2035	G	O4'-C1'-N9	5.03	112.22	108.20
22	BA	2036	C	C3'-C2'-C1'	5.03	105.52	101.50
22	BA	2486	C	C6-N1-C2	5.03	122.31	120.30
22	DA	475	C	P-O3'-C3'	-5.03	113.67	119.70
1	AA	70	U	P-O3'-C3'	5.03	125.73	119.70
22	BA	436	C	P-O3'-C3'	-5.03	113.67	119.70
22	BA	931	U	N1-C1'-C2'	5.03	120.53	114.00
22	BA	1790	C	C2-N3-C4	-5.03	117.39	119.90
22	BA	2440	C	P-O3'-C3'	-5.03	113.67	119.70
22	BA	2880	C	C3'-C2'-C1'	5.03	105.52	101.50
1	CA	451	A	P-O3'-C3'	5.03	125.73	119.70
1	CA	214	C	C3'-C2'-C1'	5.02	105.52	101.50
22	BA	159	G	P-O3'-C3'	5.02	125.73	119.70
22	BA	1074	G	C3'-C2'-C1'	5.02	105.52	101.50
22	BA	1261	C	P-O3'-C3'	5.02	125.73	119.70
22	BA	2249	U	C4'-C3'-C2'	5.02	107.62	102.60
22	BA	2756	U	C4'-C3'-C2'	5.02	107.62	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	572	A	C3'-C2'-C1'	5.02	105.52	101.50
1	AA	1062	U	O4'-C1'-N1	-5.02	104.18	108.20
22	DA	2325	G	C3'-C2'-C1'	5.02	105.52	101.50
22	BA	93	G	C3'-C2'-C1'	5.02	105.52	101.50
1	AA	754	C	P-O3'-C3'	-5.02	113.68	119.70
22	BA	2368	C	P-O3'-C3'	-5.02	113.68	119.70
22	BA	584	C	C6-N1-C2	5.02	122.31	120.30
22	BA	1675	C	C3'-C2'-C1'	5.02	105.51	101.50
22	BA	1448	G	P-O5'-C5'	-5.01	112.88	120.90
1	CA	595	A	P-O3'-C3'	5.01	125.72	119.70
22	DA	656	G	N9-C1'-C2'	-5.01	106.48	112.00
22	DA	1871	A	O4'-C1'-N9	5.01	112.21	108.20
22	DA	1931	U	C3'-C2'-C1'	5.01	105.51	101.50
1	AA	1320	C	C3'-C2'-C1'	5.01	105.51	101.50
23	BB	83	G	O5'-P-OP2	-5.01	101.19	105.70
22	BA	2456	C	OP1-P-O3'	5.01	116.22	105.20
22	DA	1455	G	N9-C1'-C2'	-5.01	106.49	112.00
22	DA	96	C	O4'-C1'-N1	-5.01	104.19	108.20
22	DA	335	C	O4'-C1'-N1	5.01	112.21	108.20
22	BA	369	U	P-O3'-C3'	5.01	125.71	119.70
22	BA	2767	C	O4'-C1'-N1	-5.01	104.19	108.20
1	AA	463	U	C3'-C2'-C1'	5.00	105.50	101.50
22	BA	847	U	C4'-C3'-C2'	5.00	107.60	102.60
22	BA	1134	A	OP1-P-OP2	5.00	127.11	119.60
22	BA	1188	U	N1-C1'-C2'	5.00	120.50	114.00
22	BA	2749	A	P-O5'-C5'	-5.00	112.89	120.90
22	DA	1560	G	C3'-C2'-C1'	5.00	105.50	101.50
22	DA	2573	C	C3'-C2'-C1'	5.00	105.50	101.50
1	AA	109	A	O3'-P-O5'	-5.00	94.50	104.00
22	BA	834	G	C6-C5-N7	-5.00	127.40	130.40
22	BA	2071	A	N9-C4-C5	5.00	107.80	105.80
22	BA	2277	G	P-O3'-C3'	-5.00	113.70	119.70

There are no chirality outliers.

All (5) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
12	AL	22	ALA	Peptide
20	AT	6	ALA	Peptide
25	BD	191	GLY	Peptide
31	BJ	110	PRO	Peptide
35	BN	101	GLY	Peptide

## 5.2 Too-close contacts ⓘ

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32895	0	16553	2319	0
1	CA	32831	0	16521	2706	0
2	AB	1705	0	1732	283	0
2	CB	1705	0	1732	260	0
3	AC	1625	0	1699	194	0
3	CC	1625	0	1699	238	0
4	AD	1643	0	1710	284	0
4	CD	1643	0	1710	269	0
5	AE	1106	0	1148	203	0
5	CE	1106	0	1148	183	0
6	AF	818	0	808	113	0
6	CF	818	0	808	134	0
7	AG	1182	0	1240	150	0
7	CG	1175	0	1230	209	0
8	AH	979	0	1034	162	0
8	CH	979	0	1034	140	0
9	AI	1022	0	1070	165	0
9	CI	1022	0	1070	178	0
10	AJ	787	0	828	169	0
10	CJ	787	0	828	142	0
11	AK	877	0	887	165	0
11	CK	877	0	887	138	0
12	AL	955	0	1019	132	0
12	CL	955	0	1019	173	0
13	AM	884	0	944	120	0
13	CM	877	0	937	176	0
14	AN	774	0	827	131	0
14	CN	769	0	822	149	0
15	AO	714	0	737	93	0
15	CO	714	0	737	71	0
16	AP	649	0	666	105	0
16	CP	639	0	656	135	0
17	AQ	649	0	691	141	0
17	CQ	649	0	691	98	0
18	AR	456	0	478	51	0
18	CR	456	0	478	95	0
19	AS	638	0	665	97	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	CS	638	0	665	118	0
20	AT	665	0	714	117	0
20	CT	665	0	714	99	0
21	AU	426	0	449	131	0
21	CU	426	0	449	126	0
22	BA	61274	0	30819	3116	1
22	DA	60995	0	30679	5725	1
23	BB	2529	0	1281	109	0
23	DB	2507	0	1270	238	0
24	BC	2083	0	2157	313	0
24	DC	2083	0	2157	347	0
25	BD	1565	0	1616	274	0
25	DD	1565	0	1616	319	0
26	BE	1552	0	1619	199	0
26	DE	1552	0	1619	321	0
27	BF	1411	0	1447	210	0
27	DF	1420	0	1460	289	0
28	BG	1323	0	1374	225	0
28	DG	1323	0	1374	229	0
29	BH	1111	0	1148	184	0
29	DH	1111	0	1148	208	0
30	BI	1032	0	1088	135	0
30	DI	1032	0	1088	149	0
31	BJ	1129	0	1162	214	0
31	DJ	1129	0	1162	205	0
32	BK	939	0	1012	150	0
32	DK	939	0	1012	188	0
33	BL	1045	0	1117	169	0
33	DL	1045	0	1117	224	0
34	BM	1074	0	1157	148	0
34	DM	1074	0	1157	156	0
35	BN	961	0	1000	131	0
35	DN	961	0	1000	228	0
36	BO	892	0	923	120	0
36	DO	892	0	923	118	0
37	BP	917	0	965	189	0
37	DP	917	0	965	184	0
38	BQ	947	0	1022	192	0
38	DQ	947	0	1022	203	0
39	BR	816	0	839	145	0
39	DR	816	0	839	147	0
40	BS	857	0	922	93	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
40	DS	857	0	922	125	0
41	BT	739	0	807	155	0
41	DT	739	0	807	174	0
42	BU	780	0	834	103	0
42	DU	780	0	834	147	0
43	BV	753	0	780	63	0
43	DV	753	0	780	118	0
44	BW	596	0	610	286	0
44	DW	596	0	610	180	0
45	BX	625	0	655	113	0
45	DX	625	0	655	128	0
46	BY	509	0	543	72	0
46	DY	509	0	543	114	0
47	BZ	449	0	491	44	0
47	DZ	449	0	491	69	0
48	B0	444	0	461	52	0
48	D0	444	0	461	92	0
49	B1	410	0	440	66	0
49	D1	410	0	440	55	0
50	B2	377	0	418	29	0
50	D2	377	0	418	65	0
51	B3	504	0	574	71	0
51	D3	504	0	574	105	0
52	B4	302	0	340	48	0
52	D4	302	0	343	48	0
53	AA	41	0	0	0	0
53	AN	2	0	0	0	0
53	BA	135	0	0	0	0
53	BB	4	0	0	0	0
53	CA	42	0	0	0	0
53	DA	133	0	0	0	0
53	DB	1	0	0	0	0
53	DC	2	0	0	0	0
53	DJ	1	0	0	0	0
54	BA	51	0	67	4	0
55	B4	1	0	0	0	0
55	D4	1	0	0	0	0
56	AA	197	0	0	12	0
56	AE	1	0	0	0	0
56	AL	1	0	0	0	0
56	AN	7	0	0	0	0
56	AT	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	AU	1	0	0	0	0
56	B3	3	0	0	0	0
56	B4	2	0	0	0	0
56	BA	605	0	0	46	0
56	BB	19	0	0	0	0
56	BC	7	0	0	0	0
56	BD	3	0	0	2	0
56	BE	1	0	0	1	0
56	BL	4	0	0	1	0
56	BN	2	0	0	0	0
56	BR	1	0	0	0	0
56	BT	2	0	0	1	0
56	BV	1	0	0	1	0
56	CA	195	0	0	3	0
56	CE	3	0	0	1	0
56	CL	1	0	0	0	0
56	CN	3	0	0	0	0
56	CT	4	0	0	0	0
56	CU	1	0	0	0	0
56	D2	1	0	0	1	0
56	D3	1	0	0	0	0
56	D4	4	0	0	0	0
56	DA	600	0	0	30	0
56	DB	3	0	0	0	0
56	DC	13	0	0	2	0
56	DD	2	0	0	0	0
56	DE	4	0	0	0	0
56	DJ	3	0	0	0	0
56	DL	4	0	0	1	0
56	DN	2	0	0	0	0
56	DT	2	0	0	0	0
56	DU	2	0	0	0	0
56	DV	2	0	0	0	0
All	All	284525	0	190908	27236	1

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 58.

All (27236) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:50:ARG:CG	37:BP:57:ALA:H	1.24	1.44
37:BP:50:ARG:HD2	37:BP:51:ASN:N	1.27	1.42
37:BP:50:ARG:HG2	37:BP:57:ALA:N	1.13	1.41
1:CA:238:A:C2'	1:CA:239:U:H5''	1.57	1.34
38:BQ:63:ARG:NH1	38:BQ:96:ASP:HA	1.37	1.34
25:BD:114:LYS:HE3	25:BD:114:LYS:N	1.41	1.33
22:BA:1063:G:OP1	30:BI:76:ALA:HB3	1.25	1.33
37:BP:50:ARG:CD	37:BP:51:ASN:H	1.42	1.32
31:BJ:111:LYS:HD3	31:BJ:112:GLY:N	1.44	1.32
45:BX:30:PRO:HB2	45:BX:32:LEU:CD1	1.61	1.31
12:CL:43:LYS:CB	12:CL:44:PRO:HD3	1.59	1.30
5:AE:152:VAL:HB	5:AE:155:LYS:NZ	1.44	1.30
25:BD:151:THR:HG22	25:BD:152:PRO:CD	1.60	1.29
22:BA:636:G:C6	33:BL:111:ILE:HD11	1.70	1.26
22:DA:1817:G:O2'	22:DA:1818:U:H5'	1.36	1.24
6:AF:16:GLU:CG	4:CD:191:SER:HB2	1.68	1.23
22:DA:2800:A:O2'	22:DA:2801:G:H4'	1.37	1.23
28:BG:84:LYS:HG3	28:BG:132:LEU:N	1.53	1.22
1:CA:1152:A:H2'	1:CA:1153:G:C8	1.75	1.22
22:BA:1073:A:C2'	22:BA:1074:G:H5''	1.69	1.22
43:BV:80:HIS:CD2	43:BV:83:LYS:H	1.58	1.21
22:DA:1401:G:H2'	22:DA:1402:U:C6	1.76	1.21
27:BF:35:LEU:HB3	27:BF:153:ILE:CG2	1.71	1.20
1:AA:430:A:O2'	1:AA:431:A:H5'	1.33	1.20
37:BP:50:ARG:HD3	37:BP:56:SER:CB	1.71	1.20
22:BA:636:G:C5	33:BL:111:ILE:HD11	1.77	1.20
26:DE:148:ILE:HD13	26:DE:187:VAL:HG21	1.23	1.20
16:AP:4:ILE:HG12	16:AP:21:VAL:HG22	1.21	1.20
1:CA:373:A:O2'	1:CA:374:A:H5'	1.35	1.20
44:DW:27:GLY:CA	44:DW:31:LEU:HD11	1.70	1.19
22:DA:784:G:C2	24:DC:227:VAL:HG21	1.77	1.19
2:AB:40:ILE:HD13	2:AB:201:GLY:HA2	1.22	1.19
7:CG:91:ARG:HG2	7:CG:92:PRO:HD2	1.24	1.18
22:DA:1064:C:O2'	22:DA:1065:U:H5'	1.40	1.18
22:BA:2585:U:O2'	22:BA:2586:U:H5'	1.42	1.18
35:DN:28:LEU:HD21	35:DN:115:LEU:HD21	1.19	1.18
1:AA:1127:G:O2'	1:AA:1128:C:H5'	1.40	1.18
40:BS:66:ILE:HA	40:BS:69:LEU:HD22	1.26	1.17
11:CK:70:ALA:HA	11:CK:73:VAL:HG22	1.24	1.17
1:AA:1531:A:C8	1:AA:1531:A:H5'	1.79	1.17
1:CA:519:C:H2'	1:CA:520:A:C8	1.80	1.17
33:BL:93:ASN:HD22	33:BL:94:THR:N	1.42	1.17

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DY:20:ASN:HD22	46:DY:50:VAL:HG22	1.09	1.17
24:BC:68:ARG:HD3	24:BC:103:ILE:HD11	1.27	1.16
51:B3:31:ILE:CD1	51:B3:34:LYS:HD2	1.73	1.16
1:CA:238:A:H2'	1:CA:239:U:C5'	1.76	1.16
38:DQ:77:LYS:HE2	38:DQ:116:LEU:HD21	1.24	1.16
22:DA:1784:A:H4'	22:DA:1785:A:O5'	1.41	1.16
32:BK:18:ARG:HB2	32:BK:45:GLU:CG	1.74	1.16
22:DA:2214:C:O2'	22:DA:2215:C:H5'	1.44	1.16
6:AF:16:GLU:HG2	4:CD:191:SER:CB	1.76	1.16
22:DA:2346:A:H3'	22:DA:2347:C:H5''	1.21	1.16
3:CC:109:GLU:HG2	3:CC:139:ASN:HB2	1.21	1.16
28:BG:137:LYS:HA	28:BG:140:ILE:HD11	1.28	1.15
28:BG:83:THR:HA	28:BG:84:LYS:NZ	1.58	1.15
22:DA:1469:A:H2'	22:DA:1470:A:C8	1.81	1.15
22:DA:118:A:N3	22:DA:178:G:H1'	1.62	1.15
25:BD:99:GLU:HG3	25:BD:100:LEU:H	1.08	1.15
22:DA:455:C:H3'	22:DA:456:C:H5'	1.25	1.15
5:AE:153:ALA:HA	5:AE:156:ARG:CB	1.76	1.15
42:DU:90:LYS:HE2	42:DU:92:VAL:HG12	1.19	1.15
39:BR:49:ILE:HD12	39:BR:52:PRO:CA	1.76	1.15
27:BF:40:GLY:HA2	27:BF:84:ILE:HD11	1.27	1.15
22:DA:2758:A:O2'	22:DA:2759:G:H5'	1.45	1.15
12:CL:89:LEU:HB3	12:CL:92:VAL:HG21	1.19	1.15
1:CA:1182:G:H4'	1:CA:1183:U:H5'	1.23	1.15
38:BQ:63:ARG:HH12	38:BQ:96:ASP:CA	1.59	1.15
1:CA:213:G:H2'	1:CA:214:C:C6	1.82	1.15
3:CC:110:LEU:HD21	3:CC:203:LYS:HD2	1.21	1.15
45:BX:58:ILE:HD12	45:BX:66:VAL:HG21	1.27	1.14
27:BF:35:LEU:HB3	27:BF:153:ILE:HG23	1.28	1.14
49:B1:8:ILE:HG23	49:B1:51:ALA:HA	1.27	1.14
34:DM:42:THR:HG22	34:DM:44:ARG:H	1.07	1.14
22:DA:143:C:H2'	22:DA:144:A:C8	1.82	1.14
1:AA:1306:A:H2'	1:AA:1307:U:H5'	1.27	1.14
22:DA:449:A:O2'	22:DA:450:G:H5'	1.42	1.14
1:AA:204:G:H3'	1:AA:205:A:H5''	1.15	1.14
22:DA:1915:U:H2'	22:DA:1916:A:C8	1.81	1.14
4:CD:25:ARG:HG2	4:CD:25:ARG:HH11	1.02	1.14
45:DX:53:LYS:HA	45:DX:56:ARG:HB3	1.29	1.14
41:BT:29:THR:HG22	41:BT:86:THR:HG22	1.27	1.14
25:BD:106:LYS:H	25:BD:106:LYS:HD2	1.11	1.14
1:AA:93:U:O2'	1:AA:94:G:H5''	1.48	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:170:ARG:HH21	26:BE:170:ARG:HG2	0.97	1.13
22:DA:996:A:H4'	38:DQ:91:ARG:HD2	1.17	1.13
1:AA:1279:G:H1'	1:AA:1282:C:N4	1.63	1.13
12:CL:82:ARG:HG2	12:CL:82:ARG:HH11	1.06	1.13
28:BG:8:VAL:HG11	28:BG:49:LEU:HB2	1.25	1.13
38:BQ:69:ARG:CB	38:BQ:69:ARG:HH21	1.60	1.13
21:CU:24:LYS:HG3	21:CU:25:ALA:H	1.05	1.13
8:AH:28:SER:HB2	8:AH:58:LEU:HB2	1.30	1.13
2:AB:9:LEU:HD12	2:AB:42:LEU:HD13	1.13	1.13
38:DQ:87:VAL:HG21	39:DR:52:PRO:HD3	1.15	1.13
25:BD:151:THR:CG2	25:BD:152:PRO:HD3	1.78	1.13
22:DA:1537:G:C2'	22:DA:1538:G:H4'	1.79	1.13
12:AL:43:LYS:HB2	12:AL:44:PRO:HD3	1.23	1.13
12:CL:83:GLY:HA2	12:CL:94:TYR:HA	1.29	1.13
39:BR:49:ILE:CD1	39:BR:52:PRO:HA	1.78	1.13
22:BA:855:G:H21	44:BW:23:LYS:HG2	1.13	1.13
32:BK:18:ARG:HB2	32:BK:45:GLU:HG2	1.15	1.12
43:DV:44:HIS:NE2	43:DV:85:LYS:HB2	1.64	1.12
1:CA:6:G:N3	1:CA:6:G:H2'	1.62	1.12
1:AA:545:C:H2'	1:AA:546:A:H5'	1.28	1.12
28:BG:104:LEU:HB2	28:BG:112:VAL:CG2	1.79	1.12
36:DO:17:LYS:HE2	36:DO:21:LEU:HD11	1.31	1.12
10:CJ:15:HIS:HA	10:CJ:18:ILE:HG22	1.29	1.12
37:BP:19:PHE:O	37:BP:20:ARG:HB3	1.45	1.12
10:AJ:36:VAL:HG22	10:AJ:76:ILE:HG12	1.20	1.12
29:DH:83:LYS:HE2	29:DH:149:GLU:HB3	1.30	1.12
4:CD:89:LEU:HD23	4:CD:199:ILE:HD11	1.26	1.12
29:DH:93:SER:HB3	29:DH:121:VAL:HG21	1.31	1.12
5:AE:155:LYS:HA	5:AE:158:LYS:NZ	1.62	1.12
26:DE:130:LYS:HB3	26:DE:133:LEU:HB3	1.19	1.12
34:DM:27:SER:H	34:DM:66:ARG:NH2	1.47	1.12
31:BJ:73:VAL:HG23	31:BJ:74:TYR:H	1.01	1.12
6:CF:92:THR:HG22	6:CF:94:HIS:H	1.13	1.12
37:DP:20:ARG:HD2	37:DP:21:PRO:HD2	1.21	1.12
26:DE:130:LYS:HG3	26:DE:133:LEU:HD13	1.27	1.12
16:AP:28:ARG:HG2	16:AP:29:ASN:ND2	1.63	1.12
21:AU:9:GLU:CG	21:AU:10:PRO:HD3	1.79	1.12
1:CA:1284:C:H3'	1:CA:1285:A:H5''	1.27	1.11
4:AD:36:ALA:HA	4:AD:41:GLY:HA3	1.11	1.11
2:AB:46:VAL:HB	2:AB:47:PRO:HD3	1.32	1.11
7:AG:12:LEU:H	7:AG:12:LEU:HD22	1.10	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:52:ARG:HH11	37:DP:52:ARG:HG2	1.12	1.11
27:BF:40:GLY:CA	27:BF:84:ILE:HD11	1.79	1.11
26:BE:79:ARG:HG2	26:BE:80:SER:H	1.11	1.11
22:BA:1070:A:C2	30:BI:9:LYS:HG2	1.84	1.11
44:DW:37:VAL:HG12	44:DW:55:ASP:HB2	1.17	1.11
1:AA:468:A:O2'	1:AA:469:C:H5'	1.51	1.11
31:DJ:75:TYR:HD1	31:DJ:84:ILE:HD11	1.11	1.11
9:AI:32:ARG:HG2	9:AI:36:GLN:CB	1.79	1.11
10:CJ:47:GLU:HB2	10:CJ:67:ILE:HG13	1.33	1.11
44:BW:28:GLU:HB3	44:BW:31:LEU:HD21	1.30	1.11
22:DA:2051:A:H4'	22:DA:2052:A:OP1	1.40	1.11
24:BC:16:VAL:HB	24:BC:203:VAL:HB	1.24	1.11
52:D4:16:ILE:HG12	52:D4:25:VAL:HG22	1.18	1.11
22:BA:1714:U:H2'	22:BA:1714:U:O2	1.47	1.11
2:CB:46:VAL:HG13	2:CB:47:PRO:HD3	1.28	1.11
29:BH:32:PRO:HB3	45:BX:38:TRP:HB3	1.29	1.11
22:BA:1060:U:C4'	22:BA:1061:U:H5'	1.81	1.10
22:BA:866:A:H5'	22:BA:866:A:C8	1.86	1.10
22:DA:197:A:H62	22:DA:2430:A:H2'	1.02	1.10
19:CS:40:PHE:HB3	19:CS:41:PRO:HD2	1.25	1.10
40:DS:32:ALA:HA	40:DS:35:ILE:HD11	1.30	1.10
32:DK:71:ARG:HB3	32:DK:72:PRO:CD	1.80	1.10
38:DQ:61:ILE:HD11	38:DQ:92:LYS:HD3	1.22	1.10
22:DA:647:G:H2'	22:DA:648:G:H8	1.15	1.10
22:BA:1188:U:H2'	22:BA:1189:A:H5'	1.32	1.10
31:BJ:44:TYR:CD2	38:BQ:63:ARG:HD3	1.86	1.10
25:BD:106:LYS:HB3	25:BD:206:ALA:HB3	1.33	1.10
22:DA:1324:G:H1'	22:DA:1616:A:N6	1.66	1.10
22:DA:2378:A:H2'	22:DA:2379:G:H5'	1.23	1.10
44:BW:76:ARG:HH21	44:BW:76:ARG:HG3	1.14	1.10
22:BA:1499:C:O2'	22:BA:1500:G:H5'	1.48	1.10
17:AQ:12:VAL:HG13	17:AQ:13:SER:H	1.00	1.10
37:BP:13:LYS:HE3	37:BP:76:HIS:HA	1.32	1.10
22:BA:1060:U:H4'	22:BA:1061:U:C5'	1.82	1.09
35:DN:54:LEU:HD11	35:DN:66:ALA:HB2	1.33	1.09
1:AA:1239:A:H62	1:AA:1299:A:N6	1.48	1.09
8:CH:68:LYS:HD3	8:CH:69:ALA:H	1.14	1.09
38:DQ:4:LYS:HE3	38:DQ:7:VAL:HG13	1.16	1.09
44:DW:23:LYS:HD2	44:DW:24:ARG:N	1.68	1.09
49:B1:24:LYS:HE2	49:B1:52:LYS:HB2	1.31	1.09
12:AL:49:ARG:HH11	12:AL:49:ARG:HG2	1.12	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:90:LEU:HB2	29:DH:123:ARG:HB3	1.31	1.09
35:BN:73:ASN:HA	35:BN:76:VAL:HG12	1.30	1.09
22:BA:1179:G:C6	22:BA:1180:U:H1'	1.87	1.09
43:BV:10:LYS:HD3	43:BV:10:LYS:H	1.05	1.09
3:CC:29:ALA:HB1	14:CN:64:ARG:HH12	0.95	1.09
44:DW:27:GLY:HA2	44:DW:31:LEU:HD11	1.31	1.09
44:BW:23:LYS:HG3	44:BW:24:ARG:O	1.52	1.09
1:AA:488:C:O2'	1:AA:489:C:H5'	1.52	1.09
26:BE:108:ILE:HD11	26:BE:180:LEU:HB3	1.31	1.09
38:BQ:4:LYS:HG3	38:BQ:5:ARG:H	1.10	1.09
1:CA:1226:C:H41	13:CM:102:LYS:HA	1.05	1.09
4:AD:47:LEU:HD21	4:AD:52:VAL:HG12	1.12	1.09
12:CL:43:LYS:HB2	12:CL:44:PRO:CD	1.82	1.09
51:B3:31:ILE:HD11	51:B3:34:LYS:CD	1.83	1.09
20:AT:43:LYS:HB3	20:AT:86:ALA:HB1	1.25	1.09
22:BA:2431:U:H5'	22:BA:2431:U:H6	1.18	1.09
22:DA:1032:A:H1'	52:D4:23:ILE:HD13	1.33	1.09
20:AT:6:ALA:HB1	20:AT:9:ARG:HB2	1.29	1.09
33:DL:117:THR:HG22	33:DL:118:THR:H	1.17	1.09
22:BA:1073:A:H2'	22:BA:1074:G:H5''	1.35	1.09
10:CJ:5:ARG:HG2	10:CJ:79:PRO:HG3	1.27	1.09
22:DA:2135:A:H3'	22:DA:2136:G:H5''	1.19	1.09
40:BS:1:MET:HE2	40:BS:1:MET:HA	1.31	1.09
4:CD:25:ARG:HH12	4:CD:30:LYS:HG2	1.04	1.08
6:CF:86:ARG:NH1	18:CR:63:TYR:HB3	1.68	1.08
21:AU:52:VAL:HG13	21:AU:53:LYS:H	1.17	1.08
4:AD:43:ARG:O	4:AD:45:PRO:HD3	1.49	1.08
25:DD:9:VAL:HG22	37:DP:4:ILE:HD11	1.33	1.08
1:AA:158:G:H2'	1:AA:159:G:H5'	1.17	1.08
22:DA:2585:U:O2'	22:DA:2586:U:H5'	1.53	1.08
22:DA:2389:G:H5''	22:DA:2390:U:H5'	1.26	1.08
44:DW:40:ARG:HG2	44:DW:40:ARG:HH11	1.16	1.08
26:DE:47:LYS:HB3	26:DE:51:GLU:HB2	1.31	1.08
39:DR:39:LEU:HA	39:DR:49:ILE:HG21	1.15	1.08
52:D4:7:VAL:HG13	52:D4:8:LYS:H	1.17	1.08
3:AC:56:ILE:HG12	3:AC:65:VAL:HG22	1.35	1.08
22:BA:2309:A:O2'	22:BA:2310:C:H5'	1.53	1.08
25:BD:120:GLY:HA2	25:BD:162:ALA:CB	1.83	1.08
1:AA:619:U:H3	4:AD:130:ASN:HB3	1.18	1.08
1:AA:204:G:H3'	1:AA:205:A:C5'	1.82	1.08
22:DA:2135:A:H2'	22:DA:2136:G:H8	0.98	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:923:A:H5''	5:AE:25:LYS:HE2	1.30	1.08
1:CA:764:C:H2'	1:CA:765:G:H5'	1.33	1.08
1:AA:721:G:H4'	1:AA:722:G:O5'	1.46	1.08
1:CA:1143:G:H2'	1:CA:1144:G:C8	1.88	1.08
1:CA:1143:G:H2'	1:CA:1144:G:H8	1.09	1.08
1:CA:213:G:H2'	1:CA:214:C:H6	1.16	1.08
22:DA:604:G:O2'	22:DA:605:G:H5'	1.54	1.08
37:BP:77:SER:OG	37:BP:79:VAL:HG13	1.54	1.08
25:DD:133:THR:HG23	25:DD:134:HIS:H	1.19	1.08
22:BA:1867:G:O2'	22:BA:1868:C:H5'	1.49	1.08
22:DA:391:A:O2'	22:DA:392:U:H5'	1.53	1.08
2:CB:130:LYS:HA	2:CB:133:ALA:HB3	1.29	1.08
11:AK:87:GLY:H	11:AK:113:THR:HG22	1.04	1.08
11:AK:87:GLY:N	11:AK:113:THR:HG22	1.68	1.08
37:BP:50:ARG:HG3	37:BP:57:ALA:O	1.53	1.08
40:DS:88:ARG:HH21	40:DS:88:ARG:HG2	1.02	1.08
22:DA:2360:G:H1'	33:DL:60:ARG:HH21	1.19	1.08
29:DH:6:LEU:HD13	29:DH:36:ALA:HA	1.31	1.08
2:AB:117:GLU:HA	2:AB:120:SER:HB2	1.31	1.08
22:DA:921:C:H2'	22:DA:922:C:H5'	1.35	1.07
38:BQ:69:ARG:HB2	38:BQ:69:ARG:NH2	1.68	1.07
1:AA:545:C:H5'	4:AD:68:GLU:HG3	1.30	1.07
17:AQ:16:MET:HB2	17:AQ:19:SER:HB3	1.31	1.07
19:AS:45:GLY:H	19:AS:61:VAL:HG23	1.13	1.07
1:AA:1021:A:H2'	1:AA:1022:A:H5''	1.36	1.07
22:BA:1073:A:C3'	22:BA:1074:G:H5''	1.82	1.07
12:CL:43:LYS:HB2	12:CL:44:PRO:HD3	1.08	1.07
45:DX:30:PRO:HG2	45:DX:32:LEU:HD21	1.11	1.07
4:CD:89:LEU:CD2	4:CD:199:ILE:HD11	1.85	1.07
21:CU:16:ARG:HD2	21:CU:19:LYS:HE2	1.36	1.07
32:BK:71:ARG:HB2	32:BK:72:PRO:HD3	1.32	1.07
4:CD:187:ARG:HH21	4:CD:191:SER:HA	1.11	1.07
43:BV:80:HIS:HD2	43:BV:83:LYS:N	1.52	1.07
25:DD:148:GLN:HG2	25:DD:152:PRO:HG2	1.31	1.07
7:CG:74:VAL:HG13	7:CG:140:VAL:HG13	1.09	1.07
10:AJ:14:ASP:HB3	10:AJ:17:LEU:HB3	1.21	1.07
2:AB:163:ILE:HG23	2:AB:164:ASP:H	1.17	1.07
5:CE:103:GLY:O	5:CE:104:ILE:HG22	1.54	1.07
22:DA:1870:C:H5''	22:DA:1871:A:H2	1.05	1.07
5:AE:89:THR:HG22	5:AE:90:GLY:H	0.93	1.07
22:DA:447:A:H5'	22:DA:449:A:C5	1.90	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:37:THR:HG22	35:DN:39:PRO:HD2	1.13	1.07
21:CU:35:GLU:HG3	21:CU:36:PHE:H	0.97	1.07
22:DA:2135:A:H2'	22:DA:2136:G:C8	1.89	1.07
22:DA:1676:A:H2	22:DA:1993:U:H5'	1.19	1.07
22:BA:1791:A:O2'	24:BC:205:GLY:HA2	1.55	1.07
2:CB:206:ILE:HA	2:CB:209:VAL:HG22	1.31	1.07
22:DA:2060:A:H2'	26:DE:63:LYS:HZ2	1.12	1.07
22:BA:265:A:H4'	22:BA:266:G:OP1	1.48	1.07
24:DC:146:LYS:HB2	24:DC:149:LYS:HB2	1.35	1.06
3:CC:29:ALA:HB1	14:CN:64:ARG:NH1	1.70	1.06
4:CD:55:ARG:HG3	4:CD:55:ARG:HH11	1.16	1.06
39:DR:27:ILE:HG22	39:DR:28:ALA:H	0.92	1.06
33:BL:109:LYS:HG2	33:BL:126:ARG:HB3	1.30	1.06
22:BA:1179:G:C5	22:BA:1180:U:H1'	1.88	1.06
22:DA:1676:A:C2	22:DA:1993:U:H5'	1.90	1.06
25:DD:29:VAL:HB	25:DD:98:VAL:HG12	1.36	1.06
38:BQ:63:ARG:HH22	38:BQ:96:ASP:N	1.53	1.06
5:AE:81:GLN:HG2	5:AE:149:PRO:HG3	1.33	1.06
11:CK:92:ARG:HH11	11:CK:92:ARG:HG3	1.20	1.06
22:BA:866:A:H5'	22:BA:866:A:H8	0.95	1.06
10:CJ:57:VAL:HG22	10:CJ:58:ASN:H	1.18	1.06
46:BY:47:ARG:HG3	46:BY:47:ARG:HH21	1.19	1.06
3:AC:128:MET:HB3	3:AC:131:ARG:HG3	1.35	1.06
30:BI:79:LEU:HA	30:BI:83:ALA:HB3	1.34	1.06
10:CJ:84:VAL:HG23	10:CJ:85:ASP:H	1.12	1.06
41:DT:10:VAL:HG23	41:DT:11:LEU:HD12	1.38	1.06
44:DW:18:LYS:HD3	44:DW:19:ARG:N	1.68	1.06
22:DA:82:U:H2'	22:DA:83:A:H5''	1.34	1.06
34:DM:42:THR:HB	34:DM:45:GLN:HG3	1.37	1.06
47:DZ:16:LEU:H	47:DZ:16:LEU:HD22	1.11	1.06
5:CE:29:ILE:HG23	5:CE:30:PHE:N	1.65	1.06
22:DA:1021:A:O2'	22:DA:1022:G:H4'	1.54	1.06
1:AA:842:U:H3'	1:AA:843:U:H5''	1.10	1.06
17:CQ:4:ILE:HG22	17:CQ:5:ARG:H	1.13	1.06
44:BW:23:LYS:HD2	44:BW:24:ARG:H	1.20	1.06
22:DA:246:C:H2'	22:DA:247:G:H5'	1.38	1.06
11:AK:22:ILE:HD11	11:AK:85:VAL:HG13	1.38	1.06
22:DA:1870:C:H5''	22:DA:1871:A:C2	1.91	1.06
25:DD:186:LEU:HD21	37:DP:3:ILE:HD11	1.38	1.06
22:DA:1079:C:H41	22:DA:1088:A:H5''	1.19	1.05
22:DA:1024:G:H3'	22:DA:1025:G:H5''	1.13	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2713:U:H3'	22:DA:2714:G:H5''	1.37	1.05
29:BH:96:THR:O	29:BH:97:ARG:HG3	1.54	1.05
22:DA:2682:A:H61	22:DA:2728:U:H1'	1.20	1.05
45:BX:30:PRO:HB2	45:BX:32:LEU:HD11	1.14	1.05
5:AE:153:ALA:HA	5:AE:156:ARG:HB2	1.34	1.05
4:CD:29:THR:C	4:CD:30:LYS:HD3	1.77	1.05
4:CD:2:ARG:HH11	4:CD:2:ARG:HB2	1.14	1.05
17:AQ:12:VAL:HG11	17:AQ:21:VAL:CG1	1.86	1.05
1:AA:489:C:O2'	1:AA:490:C:H5'	1.56	1.05
48:B0:39:ARG:HB2	48:B0:39:ARG:HH11	1.19	1.05
22:BA:412:A:O2'	22:BA:413:C:H5'	1.55	1.05
36:BO:2:ASP:HB3	36:BO:5:SER:HB2	1.37	1.05
9:AI:32:ARG:HG2	9:AI:36:GLN:HB3	1.35	1.05
29:BH:5:LEU:HD13	29:BH:13:GLY:HA2	1.36	1.05
1:CA:491:G:O2'	1:CA:492:C:H5'	1.56	1.05
10:AJ:48:ARG:HG2	10:AJ:48:ARG:HH11	1.15	1.05
22:BA:1064:C:OP1	30:BI:87:SER:O	1.72	1.05
38:BQ:86:SER:O	39:BR:51:VAL:HA	1.56	1.05
21:AU:9:GLU:HG3	21:AU:10:PRO:HD3	1.05	1.05
22:DA:1430:G:O2'	22:DA:1431:A:H5'	1.56	1.05
41:BT:61:LEU:HD12	41:BT:61:LEU:O	1.56	1.05
1:AA:1256:A:H1'	1:AA:1258:G:C5	1.92	1.05
2:AB:9:LEU:HD21	2:AB:11:ALA:HB3	1.39	1.05
2:AB:66:ILE:HB	2:AB:88:GLN:HB3	1.37	1.05
11:AK:126:ARG:HB2	21:AU:33:ARG:NH1	1.72	1.05
25:DD:141:ARG:HH11	25:DD:141:ARG:HB3	1.21	1.05
3:CC:26:LYS:HA	3:CC:26:LYS:HE3	1.39	1.05
41:DT:50:LEU:HD23	41:DT:51:PHE:H	1.19	1.05
45:DX:2:ARG:HH21	45:DX:32:LEU:HD23	1.18	1.04
4:CD:25:ARG:NH1	4:CD:30:LYS:HG2	1.70	1.04
44:BW:23:LYS:CE	44:BW:24:ARG:HG3	1.86	1.04
28:BG:72:ASN:O	28:BG:76:ILE:HG22	1.56	1.04
33:DL:103:ILE:H	33:DL:103:ILE:HD12	1.13	1.04
31:DJ:18:VAL:HG13	31:DJ:56:VAL:HA	1.37	1.04
1:AA:1007:U:H2'	1:AA:1008:U:H5''	1.35	1.04
29:BH:90:LEU:HB2	29:BH:123:ARG:HB3	1.40	1.04
7:CG:22:LEU:HA	7:CG:25:PHE:HB3	1.31	1.04
1:CA:371:A:O2'	1:CA:372:C:H5'	1.57	1.04
22:DA:396:G:O2'	22:DA:397:U:H5'	1.56	1.04
38:BQ:65:ASN:ND2	38:BQ:69:ARG:HH22	1.55	1.04
24:BC:246:PRO:HG2	24:BC:247:TRP:CZ3	1.92	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:116:LEU:HD12	2:AB:140:LEU:HD11	1.39	1.04
22:DA:573:U:H4'	22:DA:574:A:OP1	1.51	1.04
32:DK:39:ILE:HD11	32:DK:62:VAL:HG23	1.40	1.04
1:CA:137:U:H1'	1:CA:227:G:N2	1.72	1.04
17:CQ:3:LYS:NZ	17:CQ:6:THR:HG21	1.70	1.04
22:DA:2590:A:H5''	24:DC:237:ARG:HG3	1.38	1.04
34:BM:2:LEU:HD23	34:BM:69:PRO:HD2	1.38	1.04
41:DT:29:THR:HB	41:DT:87:LEU:H	1.23	1.04
46:BY:57:LEU:HA	46:BY:60:LYS:HB3	1.35	1.04
37:BP:102:ARG:HB3	37:BP:107:ALA:HB2	1.38	1.04
25:DD:51:THR:CG2	25:DD:76:GLY:HA3	1.87	1.04
38:BQ:63:ARG:CZ	38:BQ:96:ASP:HA	1.88	1.04
49:B1:33:LEU:H	49:B1:51:ALA:HB3	1.21	1.04
5:CE:95:MET:HB3	5:CE:124:ALA:HB2	1.38	1.04
21:AU:16:ARG:HH11	21:AU:19:LYS:HG3	1.23	1.04
22:DA:2291:U:H2'	22:DA:2292:U:C6	1.92	1.04
9:CI:34:LEU:HG	9:CI:35:GLU:HG3	1.36	1.04
31:BJ:81:ILE:HG23	31:BJ:82:GLY:H	1.19	1.04
22:BA:1779:U:H5	22:BA:1784:A:N7	1.56	1.04
37:BP:52:ARG:HH11	37:BP:52:ARG:CG	1.71	1.03
1:AA:94:G:H4'	1:AA:95:C:O5'	1.57	1.03
44:BW:24:ARG:HB2	44:BW:65:LYS:HD3	1.38	1.03
36:BO:88:LYS:HE2	36:BO:116:GLN:HE21	1.17	1.03
22:DA:1565:C:O2'	22:DA:1566:A:H2'	1.55	1.03
16:CP:70:ARG:O	16:CP:74:LEU:HG	1.56	1.03
22:DA:922:C:H1'	44:DW:22:VAL:HG21	1.39	1.03
2:CB:103:TRP:HD1	2:CB:107:ARG:HB3	1.23	1.03
44:BW:23:LYS:HD2	44:BW:24:ARG:N	1.74	1.03
22:DA:2060:A:H2'	26:DE:63:LYS:NZ	1.71	1.03
47:BZ:15:ARG:HG3	47:BZ:15:ARG:HH11	1.22	1.03
2:CB:19:THR:HG22	2:CB:37:VAL:HA	1.31	1.03
37:DP:91:VAL:HG22	37:DP:109:ILE:HG21	1.04	1.03
22:BA:137:U:H5''	22:BA:140:C:C5	1.94	1.03
22:DA:2517:C:O2'	22:DA:2518:A:H3'	1.58	1.03
1:CA:32:A:H2'	1:CA:33:A:C8	1.92	1.03
1:CA:33:A:H2'	1:CA:34:C:H6	1.22	1.03
41:DT:39:THR:HG21	41:DT:42:GLU:HB2	1.34	1.03
9:CI:71:ILE:HD12	9:CI:72:SER:H	1.22	1.03
26:DE:170:ARG:HH22	26:DE:176:ASP:HB2	1.18	1.03
22:BA:958:U:H6	22:BA:958:U:H5'	1.21	1.03
22:DA:274:C:H2'	22:DA:275:C:C6	1.93	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:14:LEU:HD22	5:CE:59:ILE:CD1	1.89	1.03
32:BK:108:ARG:HH11	32:BK:108:ARG:HG2	1.16	1.03
5:AE:89:THR:HG22	5:AE:90:GLY:N	1.69	1.03
32:DK:2:ILE:HG22	32:DK:3:GLN:N	1.71	1.03
28:DG:126:THR:HG22	28:DG:127:GLN:H	1.23	1.03
22:DA:1668:A:H4'	22:DA:1669:A:H5'	1.36	1.03
22:BA:1011:G:O2'	22:BA:1013:C:H5''	1.58	1.03
22:BA:1941:C:H5'	22:BA:1941:C:H6	1.21	1.03
32:DK:2:ILE:CG2	32:DK:3:GLN:H	1.72	1.03
29:BH:68:ARG:NH2	29:BH:72:ILE:HG21	1.74	1.03
27:DF:103:ILE:HA	27:DF:107:VAL:HG21	1.38	1.03
1:CA:84:U:H3	1:CA:87:C:H1'	1.20	1.03
22:DA:1060:U:H4'	22:DA:1061:U:O5'	1.59	1.02
22:DA:1056:G:H1'	22:DA:1103:A:H61	1.22	1.02
50:D2:19:ARG:HB3	50:D2:19:ARG:HH21	1.21	1.02
1:CA:597:G:H2'	1:CA:598:U:H5'	1.40	1.02
34:BM:1:MET:HE3	34:BM:2:LEU:H	1.24	1.02
7:AG:26:VAL:HG12	7:AG:42:VAL:HG21	1.06	1.02
31:BJ:124:VAL:HG23	31:BJ:125:TYR:H	1.24	1.02
6:AF:38:ARG:HB3	6:AF:63:ASN:HB2	1.38	1.02
1:AA:1225:A:H2'	1:AA:1226:C:C5	1.95	1.02
29:DH:93:SER:CB	29:DH:121:VAL:HG21	1.89	1.02
40:DS:20:VAL:HG11	40:DS:43:ALA:HB1	1.41	1.02
20:CT:26:MET:HE3	20:CT:56:ILE:HD13	1.37	1.02
1:CA:1202:U:H2'	1:CA:1203:C:H6	1.20	1.02
27:BF:7:TYR:CD2	27:BF:11:VAL:HG11	1.94	1.02
22:DA:1594:U:H2'	22:DA:1595:C:C6	1.95	1.02
1:CA:174:A:O2'	1:CA:175:C:H5'	1.60	1.02
31:BJ:2:LYS:H	31:BJ:2:LYS:HD3	0.91	1.02
1:AA:1129:C:H5''	9:AI:17:ARG:HH22	1.16	1.02
28:BG:137:LYS:CA	28:BG:140:ILE:HD11	1.90	1.02
17:AQ:12:VAL:CG1	17:AQ:21:VAL:HG13	1.88	1.02
24:DC:147:PRO:HD3	24:DC:184:GLU:HG3	1.06	1.02
1:AA:874:G:O2'	1:AA:875:U:H5'	1.57	1.02
1:AA:1328:C:H5''	13:AM:27:THR:HG21	1.41	1.02
12:AL:24:GLU:HB2	12:AL:26:CYS:SG	2.00	1.02
22:DA:491:G:H2'	22:DA:492:A:C8	1.95	1.02
4:CD:30:LYS:HD3	4:CD:30:LYS:N	1.68	1.02
44:BW:31:LEU:N	44:BW:31:LEU:HD23	1.73	1.02
22:DA:784:G:N1	24:DC:227:VAL:HG21	1.75	1.02
1:AA:206:C:H2'	1:AA:207:C:O4'	1.58	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:87:ARG:HH11	37:BP:87:ARG:HG2	1.23	1.02
35:BN:73:ASN:HA	35:BN:76:VAL:CG1	1.89	1.02
51:D3:3:ILE:HG22	51:D3:4:LYS:H	1.18	1.02
22:BA:762:U:H4'	22:BA:763:G:O5'	1.57	1.02
1:CA:254:G:H21	17:CQ:17:GLU:HG3	1.19	1.02
9:AI:98:ARG:HG2	9:AI:103:VAL:HG21	1.37	1.02
22:DA:942:G:H2'	22:DA:943:A:H5'	1.41	1.02
1:CA:537:G:H5''	12:CL:109:ARG:NH1	1.75	1.01
2:AB:9:LEU:CD1	2:AB:42:LEU:HD13	1.90	1.01
2:AB:69:VAL:HB	2:AB:162:VAL:HG12	1.34	1.01
41:BT:64:LYS:HA	41:BT:79:ASP:OD1	1.59	1.01
1:AA:414:A:H2'	1:AA:415:A:H8	1.23	1.01
22:DA:1492:G:H3'	22:DA:1493:C:C5'	1.89	1.01
5:CE:29:ILE:HG23	5:CE:30:PHE:H	1.18	1.01
31:DJ:99:ARG:HA	31:DJ:102:GLU:HB3	1.42	1.01
23:DB:24:G:H1'	23:DB:27:C:N4	1.73	1.01
17:AQ:46:HIS:HB2	17:AQ:66:LEU:HD12	1.42	1.01
14:AN:15:LEU:HD23	14:AN:18:LYS:HD2	1.41	1.01
23:DB:110:C:O2'	23:DB:111:U:H5'	1.59	1.01
42:DU:47:PRO:HB3	42:DU:54:PRO:HG3	1.38	1.01
22:DA:1313:U:H2'	22:DA:1313:U:O2	1.59	1.01
1:CA:1183:U:H3'	1:CA:1184:G:H5''	1.05	1.01
1:AA:545:C:C2'	1:AA:546:A:H5'	1.89	1.01
1:CA:982:U:H4'	1:CA:983:A:O5'	1.59	1.01
11:AK:126:ARG:HB2	21:AU:33:ARG:HH12	1.20	1.01
29:BH:89:LYS:HG2	29:BH:90:LEU:H	1.21	1.01
5:CE:14:LEU:HD22	5:CE:59:ILE:HD13	1.40	1.01
42:BU:5:ARG:HG2	42:BU:5:ARG:HH21	1.23	1.01
22:DA:1731:G:O2'	22:DA:1732:C:H5''	1.61	1.01
10:AJ:57:VAL:HG22	10:AJ:58:ASN:H	1.22	1.01
27:BF:134:GLN:HG2	27:BF:135:ILE:H	1.21	1.01
25:DD:89:GLU:HG2	25:DD:94:GLN:NE2	1.76	1.01
22:BA:990:A:H5'	22:BA:990:A:H8	1.18	1.01
1:AA:511:C:O2'	1:AA:512:U:H5''	1.59	1.01
22:DA:2199:A:H2'	22:DA:2200:C:C6	1.95	1.01
25:BD:114:LYS:CE	25:BD:114:LYS:N	2.23	1.01
1:AA:1531:A:H8	1:AA:1531:A:H5'	0.88	1.01
2:AB:9:LEU:HD23	2:AB:11:ALA:H	1.24	1.01
22:DA:1655:A:H2'	22:DA:1656:C:C6	1.96	1.01
32:BK:21:CYS:HA	32:BK:41:ILE:HD12	1.43	1.01
22:BA:1458:U:H4'	22:BA:1459:G:O5'	1.60	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:71:ARG:HB2	35:DN:71:ARG:HH21	1.20	1.01
40:BS:73:LYS:HA	40:BS:73:LYS:HE3	1.40	1.01
22:DA:1474:U:H2'	22:DA:1475:G:H5'	1.38	1.01
44:DW:37:VAL:HG23	44:DW:38:ARG:HH11	1.25	1.00
31:DJ:5:THR:HA	31:DJ:44:TYR:CD2	1.96	1.00
22:DA:1808:A:H62	45:DX:27:ARG:HH11	1.05	1.00
22:BA:2356:U:H4'	44:BW:16:GLU:HG3	1.42	1.00
43:DV:79:ARG:HG3	43:DV:80:HIS:H	1.26	1.00
22:DA:2199:A:H2'	22:DA:2200:C:H6	1.21	1.00
22:DA:412:A:O2'	22:DA:413:C:H5'	1.61	1.00
22:BA:2502:G:H5'	22:BA:2503:A:H5''	1.41	1.00
22:DA:1008:A:H5''	31:DJ:37:ARG:HH22	1.22	1.00
22:BA:2680:U:P	25:BD:114:LYS:HE2	2.02	1.00
22:DA:1069:A:H4'	22:DA:1070:A:O5'	1.61	1.00
51:B3:31:ILE:HD11	51:B3:34:LYS:HD2	1.04	1.00
37:DP:86:LYS:HA	37:DP:86:LYS:HZ2	1.21	1.00
1:AA:487:A:O2'	1:AA:488:C:H5'	1.60	1.00
31:BJ:17:VAL:HG22	31:BJ:137:PRO:HB2	1.41	1.00
12:AL:27:PRO:HB2	12:AL:28:GLN:OE1	1.59	1.00
32:DK:38:ILE:HG12	32:DK:61:VAL:HG12	1.43	1.00
1:CA:1332:A:O2'	1:CA:1333:A:H5'	1.61	1.00
51:D3:41:ARG:HG3	51:D3:41:ARG:HH21	1.27	1.00
31:BJ:2:LYS:HD3	31:BJ:2:LYS:N	1.70	1.00
16:CP:4:ILE:HG21	16:CP:57:ILE:HD11	1.44	1.00
32:DK:2:ILE:HG22	32:DK:3:GLN:H	0.87	1.00
24:BC:251:THR:HG22	24:BC:252:LYS:H	1.24	1.00
31:BJ:88:THR:HG22	31:BJ:91:GLU:CG	1.92	1.00
10:CJ:64:GLN:HB2	14:CN:98:ALA:HB3	1.42	1.00
5:AE:11:GLN:HA	5:AE:11:GLN:HE21	1.27	1.00
37:BP:50:ARG:HD3	37:BP:56:SER:HB3	1.41	1.00
22:BA:2680:U:OP1	25:BD:114:LYS:HE2	1.60	1.00
38:BQ:4:LYS:HG3	38:BQ:5:ARG:N	1.76	1.00
11:AK:109:ILE:HG21	21:AU:16:ARG:HE	1.26	1.00
25:DD:16:THR:HG22	25:DD:20:VAL:HB	1.42	1.00
14:AN:44:VAL:HG23	14:AN:45:LEU:H	1.25	1.00
1:CA:1182:G:C4'	1:CA:1183:U:H5'	1.91	1.00
24:BC:106:PRO:HB3	24:BC:141:HIS:CE1	1.95	1.00
22:DA:1537:G:H2'	22:DA:1538:G:H4'	1.42	1.00
9:CI:51:LEU:HG	9:CI:86:LEU:HD22	1.43	1.00
22:BA:2214:C:H6	22:BA:2214:C:H5'	1.26	1.00
1:CA:135:C:O2	16:CP:1:MET:HB2	1.61	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1716:U:O2'	22:BA:1717:A:H5'	1.61	1.00
22:DA:455:C:H3'	22:DA:456:C:C5'	1.91	0.99
1:AA:842:U:H3'	1:AA:843:U:C5'	1.89	0.99
29:BH:68:ARG:HH22	29:BH:72:ILE:HG21	1.23	0.99
24:DC:131:MET:HG2	24:DC:134:ILE:HD11	1.43	0.99
1:CA:1026:G:H1	1:CA:1036:A:N6	1.59	0.99
52:B4:36:ARG:HG2	52:B4:37:GLN:H	1.22	0.99
22:BA:2353:G:H1'	44:BW:30:VAL:CG1	1.92	0.99
27:BF:11:VAL:HG12	27:BF:12:VAL:H	1.28	0.99
10:AJ:51:VAL:HB	14:AN:80:ARG:HB2	1.42	0.99
14:CN:33:VAL:HG22	14:CN:40:ARG:HH21	1.26	0.99
2:AB:26:MET:HE3	2:AB:192:PRO:HG3	1.42	0.99
2:AB:209:VAL:HG23	2:AB:210:THR:H	1.24	0.99
1:AA:1184:G:O2'	1:AA:1185:G:H5'	1.62	0.99
44:DW:18:LYS:HD3	44:DW:19:ARG:H	1.20	0.99
44:DW:37:VAL:CG1	44:DW:55:ASP:HB2	1.91	0.99
22:BA:1179:G:H3'	22:BA:1180:U:H4'	1.41	0.99
1:CA:170:U:O2'	1:CA:171:A:H5'	1.62	0.99
30:DI:113:ALA:HB1	30:DI:124:MET:SD	2.02	0.99
25:DD:106:LYS:HB3	25:DD:206:ALA:CB	1.92	0.99
22:DA:607:U:O4	22:DA:619:G:H2'	1.60	0.99
29:DH:80:ILE:HB	29:DH:101:ASP:CB	1.92	0.99
52:B4:9:LYS:H	52:B4:9:LYS:HD3	1.26	0.99
1:CA:876:C:H1'	8:CH:11:THR:HG21	1.42	0.99
22:BA:1071:G:H1'	22:BA:1089:A:N7	1.78	0.99
5:AE:155:LYS:HA	5:AE:158:LYS:HZ2	1.26	0.99
9:AI:88:GLU:HG3	9:AI:89:TYR:H	1.27	0.99
1:AA:158:G:C2'	1:AA:159:G:H5'	1.92	0.99
22:BA:1941:C:H5'	22:BA:1941:C:C6	1.98	0.99
21:AU:13:VAL:HG13	21:AU:15:LEU:HG	1.45	0.99
35:BN:103:ARG:HD3	35:BN:110:MET:HE3	1.44	0.99
1:CA:1183:U:C3'	1:CA:1184:G:H5''	1.93	0.99
29:BH:117:LEU:HD11	29:BH:130:VAL:HG11	1.45	0.99
22:BA:1813:G:N3	24:BC:49:THR:HG21	1.77	0.99
24:BC:12:ARG:HH11	24:BC:12:ARG:HG3	1.22	0.99
44:BW:39:GLN:HG2	44:BW:41:GLY:H	1.26	0.99
6:CF:92:THR:O	6:CF:93:LYS:HG2	1.62	0.99
37:DP:52:ARG:HH11	37:DP:52:ARG:CG	1.75	0.99
5:CE:13:LYS:HA	5:CE:13:LYS:HE2	1.42	0.99
7:CG:71:THR:HG23	7:CG:72:VAL:HG23	1.44	0.99
23:BB:90:C:H6	23:BB:90:C:H5''	1.23	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:49:ARG:CG	12:AL:49:ARG:HH11	1.75	0.99
22:DA:1731:G:H4'	22:DA:1732:C:OP1	1.61	0.99
1:AA:559:A:H4'	1:AA:560:A:O5'	1.63	0.99
7:CG:134:VAL:HB	7:CG:137:ARG:HH21	1.24	0.99
27:DF:74:ALA:HB3	27:DF:78:ILE:HB	1.44	0.99
22:DA:960:A:H2'	22:DA:962:G:H5'	1.43	0.99
27:BF:39:VAL:HG11	27:BF:49:LEU:HD13	1.42	0.99
2:AB:58:LYS:HZ1	2:AB:62:ARG:HG3	1.22	0.99
31:DJ:44:TYR:HD1	38:DQ:63:ARG:HH21	1.06	0.99
9:AI:98:ARG:CG	9:AI:103:VAL:HG21	1.93	0.99
2:CB:89:PHE:HE2	2:CB:152:ASP:HB2	1.23	0.99
22:DA:105:C:O2'	22:DA:106:C:H6	1.45	0.98
44:BW:23:LYS:HE3	44:BW:24:ARG:HG3	1.44	0.98
10:AJ:35:GLN:HG2	10:AJ:77:VAL:HB	1.45	0.98
22:DA:616:A:O2'	22:DA:617:G:H8	1.45	0.98
22:BA:2151:U:O2'	22:BA:2152:G:H5''	1.62	0.98
44:BW:39:GLN:HG3	44:BW:42:THR:N	1.78	0.98
22:DA:206:U:HO2'	22:DA:207:A:H8	1.01	0.98
27:BF:131:VAL:HG22	27:BF:151:LEU:HD12	1.45	0.98
22:DA:2631:G:H2'	22:DA:2632:A:H5''	1.41	0.98
24:DC:94:LEU:HD13	24:DC:100:ARG:HD3	1.44	0.98
25:DD:139:SER:HB3	25:DD:142:VAL:HG21	1.45	0.98
27:BF:43:ILE:HG22	27:BF:82:TYR:CE1	1.97	0.98
21:CU:35:GLU:CG	21:CU:36:PHE:H	1.76	0.98
22:DA:2056:G:H21	48:D0:1:ALA:H3	1.05	0.98
27:BF:11:VAL:HG12	27:BF:12:VAL:N	1.77	0.98
22:BA:1627:G:C8	22:BA:1627:G:H5'	1.98	0.98
1:CA:14:U:N3	1:CA:16:A:H5''	1.79	0.98
1:CA:920:U:H2'	1:CA:921:U:C6	1.98	0.98
29:DH:31:VAL:HB	29:DH:32:PRO:HD3	1.45	0.98
41:DT:60:THR:HG22	41:DT:83:ALA:HA	1.44	0.98
35:DN:24:MET:HG2	35:DN:44:LEU:HD13	1.46	0.98
1:AA:1279:G:H1'	1:AA:1282:C:H42	1.26	0.98
32:DK:71:ARG:HB3	32:DK:72:PRO:HD3	1.41	0.98
1:AA:415:A:H2'	1:AA:416:G:C8	1.99	0.98
25:DD:68:PHE:HB3	25:DD:73:VAL:HA	1.45	0.98
7:CG:91:ARG:HG2	7:CG:92:PRO:CD	1.93	0.98
41:DT:39:THR:CG2	41:DT:42:GLU:HB2	1.94	0.98
21:AU:9:GLU:HG3	21:AU:10:PRO:CD	1.93	0.98
17:AQ:18:LYS:HA	17:AQ:47:ASP:CB	1.94	0.98
22:BA:2440:C:H6	22:BA:2440:C:H5'	1.26	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1765:U:O2'	22:DA:1766:G:H5'	1.64	0.98
7:AG:61:PHE:HE1	7:AG:65:LEU:HD22	1.27	0.98
48:D0:37:HIS:HB3	48:D0:43:THR:HG22	1.43	0.98
1:AA:1533:C:H3'	1:AA:1534:A:H5''	1.43	0.98
22:BA:866:A:C5'	22:BA:866:A:H8	1.76	0.98
1:CA:1383:C:O2'	1:CA:1384:C:H5'	1.63	0.98
1:CA:154:U:H2'	1:CA:155:A:H5'	1.44	0.98
22:DA:946:C:HO2'	22:DA:947:A:H8	1.00	0.98
22:DA:2074:U:O2'	22:DA:2075:U:H5'	1.63	0.98
22:DA:27:G:H22	22:DA:512:G:H2'	1.26	0.98
22:DA:593:U:H2'	22:DA:594:U:C6	1.98	0.98
31:BJ:88:THR:HG22	31:BJ:91:GLU:HG3	1.45	0.98
43:DV:61:LEU:HD23	43:DV:61:LEU:H	1.23	0.98
42:BU:25:LYS:HG2	42:BU:36:GLU:HB3	1.44	0.98
25:BD:13:ARG:HH12	37:BP:74:GLN:NE2	1.61	0.98
22:DA:845:A:N6	22:DA:932:U:H3	1.62	0.98
24:BC:75:ALA:HB2	24:BC:95:TYR:CD2	1.98	0.98
1:AA:965:U:H4'	1:AA:969:A:C8	1.97	0.98
22:DA:1935:G:H1'	22:DA:1964:G:N2	1.79	0.98
52:B4:9:LYS:H	52:B4:9:LYS:CD	1.77	0.97
4:AD:117:VAL:HA	4:AD:122:ILE:HD11	1.46	0.97
22:DA:2624:G:C2	22:DA:2625:G:H1'	1.98	0.97
6:CF:66:ALA:HB3	6:CF:71:ILE:HD13	1.46	0.97
9:AI:40:ARG:HA	9:AI:44:ARG:HB3	1.42	0.97
22:DA:2271:G:O2'	22:DA:2272:U:H5'	1.64	0.97
22:DA:2752:C:H2'	22:DA:2753:A:C8	1.99	0.97
45:BX:38:TRP:HB2	45:BX:45:PHE:HE2	1.26	0.97
8:AH:82:LEU:HD13	8:AH:84:ILE:HD11	1.44	0.97
22:DA:1919:A:O2'	22:DA:1920:C:H5'	1.64	0.97
7:CG:14:ASP:HB3	7:CG:18:GLY:H	1.29	0.97
33:BL:81:ASP:O	33:BL:82:LEU:HB3	1.63	0.97
10:CJ:79:PRO:HA	10:CJ:84:VAL:HG11	1.43	0.97
44:DW:18:LYS:H	44:DW:36:ILE:HG12	1.29	0.97
11:CK:92:ARG:HH11	11:CK:92:ARG:CG	1.76	0.97
35:BN:24:MET:HG2	35:BN:44:LEU:HD22	1.47	0.97
32:DK:111:LYS:HE3	32:DK:111:LYS:H	1.28	0.97
49:B1:34:GLU:HG2	49:B1:49:LYS:HG3	1.46	0.97
13:AM:89:ARG:HB3	13:AM:96:VAL:HG22	1.46	0.97
4:CD:2:ARG:HH21	4:CD:114:ARG:HD2	1.29	0.97
26:DE:170:ARG:NH2	26:DE:176:ASP:HB2	1.79	0.97
5:CE:35:LEU:HD11	5:CE:136:VAL:HG11	1.46	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:58:A:H2'	23:DB:59:A:C8	1.99	0.97
1:AA:977:A:H2'	1:AA:977:A:N3	1.78	0.97
22:DA:373:U:O2'	22:DA:374:A:H5'	1.64	0.97
1:AA:32:A:H2'	1:AA:33:A:C8	2.00	0.97
22:DA:84:A:H4'	22:DA:85:G:O5'	1.61	0.97
1:CA:413:G:N1	4:CD:32:LYS:HE3	1.79	0.97
2:AB:42:LEU:HG	2:AB:43:GLU:HG3	1.42	0.97
17:AQ:12:VAL:HG13	17:AQ:13:SER:N	1.79	0.97
31:BJ:77:HIS:CD2	31:BJ:79:GLY:H	1.82	0.97
32:DK:13:ASN:H	32:DK:13:ASN:HD22	1.07	0.97
1:CA:511:C:O2'	1:CA:512:U:H5''	1.64	0.97
22:DA:1126:A:H4'	22:DA:1127:A:O5'	1.62	0.97
34:BM:40:ARG:HB2	34:BM:93:VAL:HG21	1.42	0.97
12:CL:80:LEU:HB3	12:CL:97:VAL:HG22	1.43	0.97
22:DA:1152:C:H5''	38:DQ:79:ILE:HD12	1.46	0.97
21:CU:35:GLU:HG3	21:CU:36:PHE:N	1.75	0.97
22:DA:1534:U:H6	22:DA:1538:G:H1	1.05	0.97
22:DA:1328:A:H2'	22:DA:1330:C:H41	1.28	0.97
23:DB:16:G:O2'	23:DB:17:C:H5'	1.65	0.97
10:AJ:52:LEU:HD23	10:AJ:62:ARG:CG	1.93	0.97
22:BA:2328:A:H2'	22:BA:2329:U:C6	1.98	0.97
22:BA:508:A:H4'	22:BA:509:C:OP2	1.59	0.97
26:DE:128:ALA:HB1	26:DE:129:PRO:HD2	1.45	0.97
22:DA:2135:A:C3'	22:DA:2136:G:H5''	1.93	0.97
21:AU:16:ARG:HH11	21:AU:19:LYS:CG	1.77	0.97
22:BA:545:U:H2'	22:BA:546:U:H4'	1.43	0.97
1:AA:572:A:H5'	1:AA:573:A:OP2	1.65	0.97
1:CA:120:A:C3'	1:CA:121:U:H5''	1.95	0.97
41:BT:50:LEU:HD12	41:BT:50:LEU:H	1.25	0.97
20:CT:73:ARG:CG	20:CT:73:ARG:HH11	1.77	0.97
31:BJ:111:LYS:CD	31:BJ:112:GLY:H	1.77	0.97
34:DM:19:GLY:H	34:DM:38:ARG:NH2	1.61	0.97
14:CN:66:THR:HG23	14:CN:82:LYS:HE3	1.44	0.97
1:CA:1141:C:HO2'	1:CA:1142:G:H8	1.04	0.97
22:DA:2389:G:C5'	22:DA:2390:U:H5'	1.93	0.97
22:BA:923:G:H21	44:BW:23:LYS:NZ	1.63	0.97
22:DA:802:A:O2'	22:DA:803:U:H5'	1.65	0.97
8:AH:9:MET:HE1	8:AH:32:LYS:HA	1.47	0.97
4:CD:77:GLU:HG3	4:CD:81:LEU:CD1	1.94	0.97
22:BA:1277:G:H5'	35:BN:20:MET:CE	1.94	0.97
8:AH:105:THR:HG21	8:AH:120:LEU:HD13	1.44	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:68:ARG:HH11	29:DH:68:ARG:HG3	1.30	0.97
13:CM:64:VAL:HG12	13:CM:65:GLU:H	1.30	0.97
22:DA:2286:G:H4'	22:DA:2287:A:O4'	1.64	0.97
39:BR:51:VAL:HB	39:BR:52:PRO:CD	1.95	0.97
23:DB:86:G:H2'	23:DB:87:U:H5''	1.44	0.97
5:AE:12:GLU:HB2	5:AE:38:VAL:HG12	1.46	0.97
5:CE:74:ALA:O	5:CE:75:LEU:HB2	1.64	0.96
22:BA:1784:A:H4'	22:BA:1785:A:O5'	1.64	0.96
2:CB:110:ILE:HD13	2:CB:151:LYS:HA	1.44	0.96
22:BA:1084:A:H2'	22:BA:1085:A:C8	1.99	0.96
20:CT:60:GLN:HB3	20:CT:65:LEU:HD12	1.45	0.96
16:AP:73:ALA:O	16:AP:77:GLU:HB2	1.65	0.96
31:BJ:44:TYR:HB2	38:BQ:63:ARG:HB3	1.45	0.96
1:CA:373:A:HO2'	1:CA:374:A:H5'	1.15	0.96
22:DA:678:C:H2'	22:DA:679:C:C6	2.00	0.96
22:DA:2304:G:H22	22:DA:2312:U:H3	1.11	0.96
6:AF:86:ARG:CZ	18:AR:63:TYR:HB3	1.95	0.96
22:BA:92:U:H6	22:BA:92:U:H5''	1.28	0.96
24:DC:77:VAL:HG23	24:DC:112:GLY:H	1.26	0.96
10:CJ:11:LYS:HB3	10:CJ:71:LEU:HD13	1.45	0.96
22:DA:90:U:H3'	22:DA:91:A:H5''	1.47	0.96
16:AP:28:ARG:HG2	16:AP:29:ASN:HD22	1.24	0.96
10:AJ:48:ARG:HH11	10:AJ:48:ARG:CG	1.78	0.96
22:DA:2689:U:H4'	22:DA:2690:U:OP2	1.62	0.96
29:DH:68:ARG:HD3	29:DH:71:LYS:HD3	1.45	0.96
2:CB:160:LEU:HD22	2:CB:175:ALA:HB2	1.45	0.96
10:AJ:42:LEU:HB3	10:AJ:43:PRO:HD2	1.44	0.96
30:DI:74:PRO:HB2	30:DI:77:VAL:HG22	1.43	0.96
22:DA:1049:C:O2	22:DA:1113:U:H4'	1.65	0.96
38:DQ:57:ARG:NH1	38:DQ:92:LYS:HE2	1.80	0.96
1:AA:1381:U:HO2'	1:AA:1382:C:H6	0.96	0.96
4:AD:31:CYS:O	4:AD:32:LYS:HB2	1.63	0.96
22:BA:2820:A:H3'	22:BA:2820:A:H8	1.28	0.96
4:AD:109:THR:HG23	4:AD:112:GLU:H	1.25	0.96
26:BE:170:ARG:HH21	26:BE:170:ARG:CG	1.77	0.96
1:CA:1221:G:H4'	19:CS:35:ARG:NH2	1.79	0.96
29:DH:8:LYS:HD2	29:DH:9:VAL:N	1.81	0.96
34:DM:35:ALA:HB3	34:DM:99:GLY:H	1.29	0.96
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.00	0.96
19:AS:28:LYS:HB3	19:AS:29:PRO:HD2	1.47	0.96
22:BA:2197:U:O2'	22:BA:2198:A:H2'	1.64	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:58:VAL:CG1	42:DU:60:LYS:HG2	1.95	0.96
22:DA:1346:G:O2'	22:DA:1347:A:H8	1.48	0.96
44:DW:40:ARG:CG	44:DW:40:ARG:HH11	1.78	0.96
44:BW:18:LYS:HG3	44:BW:19:ARG:H	1.28	0.96
11:AK:87:GLY:H	11:AK:113:THR:CG2	1.75	0.96
37:DP:91:VAL:HG22	37:DP:109:ILE:CG2	1.96	0.96
4:CD:69:ARG:HG3	4:CD:69:ARG:HH11	1.31	0.96
44:DW:28:GLU:H	44:DW:31:LEU:HD21	1.29	0.96
24:DC:13:ARG:HG2	24:DC:14:HIS:CD2	2.00	0.96
22:DA:995:C:O2	31:DJ:3:THR:HG23	1.65	0.96
1:CA:1226:C:N4	13:CM:102:LYS:HA	1.81	0.96
39:DR:27:ILE:CG2	39:DR:28:ALA:H	1.78	0.96
22:BA:2148:G:H2'	22:BA:2149:U:O4'	1.64	0.96
13:CM:95:PRO:HD3	13:CM:108:ARG:HG2	1.48	0.96
22:BA:1020:A:H4'	22:BA:1021:A:O5'	1.66	0.96
8:CH:17:GLN:NE2	8:CH:69:ALA:HB1	1.80	0.96
4:AD:47:LEU:CD2	4:AD:52:VAL:HG12	1.96	0.96
1:CA:120:A:C2'	1:CA:121:U:H5''	1.95	0.96
16:AP:10:GLY:HA3	16:AP:15:PRO:HA	1.48	0.96
26:BE:146:VAL:HG23	26:BE:167:VAL:HG23	1.46	0.96
4:AD:167:PRO:HB2	4:AD:170:LEU:HD11	1.48	0.96
1:CA:1284:C:H3'	1:CA:1285:A:C5'	1.95	0.96
22:DA:1341:G:O2'	22:DA:1398:C:H5'	1.66	0.96
22:DA:304:U:HO2'	22:DA:305:C:H6	1.09	0.96
22:BA:923:G:N3	44:BW:23:LYS:HE2	1.80	0.96
32:DK:70:ARG:HB3	32:DK:76:VAL:HG22	1.47	0.96
7:CG:4:ARG:HH21	7:CG:6:ILE:HB	1.29	0.96
22:BA:1585:C:C2'	22:BA:1586:A:H5'	1.96	0.96
1:CA:508:U:H4'	1:CA:509:A:OP1	1.64	0.96
45:DX:30:PRO:HG2	45:DX:32:LEU:CD2	1.96	0.96
21:CU:24:LYS:HG3	21:CU:25:ALA:N	1.77	0.96
26:BE:79:ARG:HG2	26:BE:80:SER:N	1.80	0.96
1:AA:61:G:H2'	1:AA:62:U:C6	1.99	0.96
29:DH:115:VAL:HG12	29:DH:132:PHE:HB2	1.48	0.96
52:D4:16:ILE:HG12	52:D4:25:VAL:CG2	1.96	0.95
22:DA:2093:G:HO2'	22:DA:2094:A:H8	1.10	0.95
1:AA:982:U:H4'	1:AA:983:A:O5'	1.62	0.95
19:AS:50:VAL:HG21	19:AS:70:LEU:HB3	1.47	0.95
30:DI:96:LYS:HE2	30:DI:138:VAL:HG11	1.46	0.95
5:AE:89:THR:CG2	5:AE:90:GLY:H	1.79	0.95
38:BQ:69:ARG:HB2	38:BQ:69:ARG:HH21	1.21	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:40:ARG:HH12	14:AN:44:VAL:HG21	1.27	0.95
1:AA:975:A:H4'	1:AA:976:G:H5''	1.49	0.95
29:BH:49:ALA:HB3	29:BH:50:ARG:NH2	1.79	0.95
1:CA:652:U:HO2'	1:CA:653:U:H6	0.98	0.95
38:BQ:63:ARG:HH12	38:BQ:96:ASP:HA	0.82	0.95
34:BM:35:ALA:O	34:BM:128:THR:HA	1.66	0.95
44:DW:27:GLY:HA3	44:DW:31:LEU:HD11	1.47	0.95
22:DA:647:G:H2'	22:DA:648:G:C8	2.01	0.95
17:AQ:18:LYS:HA	17:AQ:47:ASP:HB2	1.45	0.95
32:BK:71:ARG:CB	32:BK:72:PRO:HD3	1.96	0.95
1:AA:1449:C:H2'	1:AA:1450:U:H5'	1.47	0.95
22:DA:1965:C:H3'	22:DA:1966:A:C5'	1.95	0.95
10:AJ:14:ASP:HB3	10:AJ:17:LEU:CB	1.97	0.95
39:DR:27:ILE:HG22	39:DR:28:ALA:N	1.74	0.95
1:AA:87:C:H2'	1:AA:88:U:H6	1.28	0.95
12:CL:2:THR:HB	12:CL:5:GLN:HB2	1.48	0.95
1:AA:1129:C:H5''	9:AI:17:ARG:NH2	1.81	0.95
22:BA:1188:U:C2'	22:BA:1189:A:H5'	1.94	0.95
8:AH:82:LEU:CD1	8:AH:84:ILE:HD11	1.94	0.95
32:DK:87:LEU:HB2	32:DK:92:GLU:O	1.67	0.95
22:DA:484:C:O2'	22:DA:485:C:H5'	1.65	0.95
22:BA:303:G:H2'	22:BA:304:U:H6	1.27	0.95
1:AA:1069:C:H2'	1:AA:1070:U:H5''	1.49	0.95
26:DE:130:LYS:CB	26:DE:133:LEU:HB3	1.96	0.95
31:DJ:75:TYR:CD1	31:DJ:84:ILE:HD11	2.02	0.95
22:DA:197:A:N6	22:DA:2430:A:H2'	1.81	0.95
2:CB:114:LYS:HA	2:CB:117:GLU:HG2	1.44	0.95
22:DA:1401:G:H2'	22:DA:1402:U:H6	1.26	0.95
44:DW:23:LYS:HD2	44:DW:24:ARG:H	1.26	0.95
10:AJ:40:ILE:HB	10:AJ:73:LEU:HB2	1.49	0.95
41:BT:48:GLN:HE21	41:BT:48:GLN:HA	1.29	0.95
11:AK:126:ARG:CB	21:AU:33:ARG:HH12	1.80	0.95
22:DA:1594:U:H2'	22:DA:1595:C:H6	1.30	0.95
4:CD:77:GLU:HG3	4:CD:81:LEU:HD11	1.48	0.95
22:DA:1494:A:H2'	22:DA:1495:A:C8	2.00	0.95
12:CL:42:LYS:HG2	12:CL:43:LYS:H	1.31	0.95
22:DA:1915:U:H2'	22:DA:1916:A:H8	1.25	0.95
40:DS:32:ALA:HA	40:DS:35:ILE:CD1	1.97	0.95
2:AB:67:LEU:HD13	2:AB:160:LEU:HD13	1.48	0.95
7:CG:68:VAL:HG22	7:CG:134:VAL:HG12	1.46	0.95
7:CG:88:VAL:HG22	7:CG:89:GLU:H	1.31	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:15:VAL:HG13	11:AK:78:ILE:CG2	1.96	0.95
33:BL:132:ARG:HG3	33:BL:142:ILE:HD12	1.49	0.95
4:CD:25:ARG:HG2	4:CD:25:ARG:NH1	1.70	0.95
22:DA:502:A:H5'	22:DA:503:A:OP2	1.67	0.95
25:DD:53:GLY:HA3	25:DD:77:ARG:HG3	1.49	0.95
22:BA:729:G:N3	22:BA:729:G:H2'	1.80	0.95
1:AA:566:G:H4'	1:AA:567:G:OP1	1.63	0.95
24:DC:128:THR:CG2	24:DC:188:ARG:HB3	1.96	0.95
1:CA:1299:A:N3	1:CA:1299:A:H2'	1.81	0.95
22:BA:1885:A:H2'	22:BA:1886:U:H6	1.31	0.95
22:BA:996:A:H4'	38:BQ:91:ARG:HG2	1.49	0.95
22:DA:217:A:H2'	22:DA:218:A:C8	2.01	0.95
1:AA:1306:A:C2'	1:AA:1307:U:H5'	1.97	0.95
22:DA:2056:G:H21	48:D0:1:ALA:N	1.65	0.95
17:AQ:12:VAL:HG11	17:AQ:21:VAL:HG13	0.95	0.95
21:AU:16:ARG:NH1	21:AU:19:LYS:HG3	1.80	0.95
1:AA:1382:C:O2'	1:AA:1383:C:H5'	1.66	0.95
33:BL:112:LEU:HD12	33:BL:130:GLY:HA3	1.49	0.95
27:BF:71:LYS:HD3	27:BF:80:GLN:HG3	1.46	0.95
27:BF:34:THR:HG23	27:BF:89:THR:HG23	1.47	0.95
1:AA:1348:U:O2'	1:AA:1349:A:H5'	1.67	0.95
22:BA:1421:G:O2'	22:BA:1422:G:H5'	1.65	0.95
31:DJ:110:PRO:HB2	31:DJ:111:LYS:HG2	1.49	0.94
26:BE:119:ILE:CD1	26:BE:187:VAL:HA	1.96	0.94
25:DD:51:THR:HG23	25:DD:76:GLY:HA3	1.47	0.94
23:DB:24:G:H1'	23:DB:27:C:H42	1.25	0.94
13:CM:33:LEU:HB3	13:CM:38:ILE:HB	1.48	0.94
22:DA:993:G:H1'	39:DR:91:GLN:HE21	1.30	0.94
1:CA:113:G:N2	1:CA:353:A:H8	1.65	0.94
22:DA:234:U:O2'	22:DA:235:U:H5'	1.64	0.94
5:AE:81:GLN:H	5:AE:81:GLN:NE2	1.66	0.94
7:CG:91:ARG:CG	7:CG:92:PRO:HD2	1.97	0.94
1:CA:1493:A:H8	22:DA:1913:A:H61	1.14	0.94
9:AI:51:LEU:HB3	9:AI:56:MET:HG2	1.48	0.94
1:CA:519:C:O2'	1:CA:520:A:H5'	1.66	0.94
49:B1:8:ILE:HD11	49:B1:24:LYS:HG2	1.49	0.94
1:AA:1151:A:HO2'	1:AA:1152:A:H8	0.96	0.94
1:AA:1238:A:H5'	1:AA:1336:C:H41	1.32	0.94
1:CA:369:G:O2'	1:CA:370:C:H5'	1.66	0.94
22:DA:1079:C:N4	22:DA:1088:A:H5''	1.82	0.94
10:CJ:15:HIS:HA	10:CJ:18:ILE:CG2	1.97	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:74:VAL:HG13	7:CG:140:VAL:CG1	1.97	0.94
1:AA:1251:A:H2'	1:AA:1252:A:H8	1.26	0.94
1:CA:279:A:H5''	1:CA:280:C:H3'	1.50	0.94
1:AA:1210:C:H2'	1:AA:1211:U:H5'	1.46	0.94
31:BJ:44:TYR:CD1	31:BJ:44:TYR:O	2.20	0.94
22:DA:1360:G:H2'	22:DA:1361:G:H5'	1.47	0.94
35:DN:37:THR:CG2	35:DN:39:PRO:HD2	1.97	0.94
23:DB:90:C:H6	23:DB:90:C:H5''	1.29	0.94
30:BI:15:GLY:HA2	30:BI:50:LYS:HB3	1.47	0.94
1:AA:1138:G:H2'	1:AA:1138:G:N3	1.80	0.94
22:DA:2757:A:O2'	22:DA:2758:A:H5'	1.66	0.94
12:AL:43:LYS:NZ	12:AL:44:PRO:HD3	1.82	0.94
40:DS:88:ARG:HH21	40:DS:88:ARG:CG	1.80	0.94
26:BE:119:ILE:HD13	26:BE:187:VAL:HA	1.48	0.94
25:DD:89:GLU:HG2	25:DD:94:GLN:HE22	1.30	0.94
22:BA:2328:A:H2'	22:BA:2329:U:H6	1.29	0.94
22:BA:35:G:H8	22:BA:35:G:H5'	1.30	0.94
4:AD:2:ARG:NH2	4:AD:114:ARG:HD3	1.83	0.94
4:CD:176:LYS:HG3	4:CD:178:GLU:HB2	1.48	0.94
10:AJ:53:ILE:HG22	10:AJ:61:ALA:HB1	1.46	0.94
1:CA:332:G:H2'	1:CA:333:U:H6	1.31	0.94
25:BD:14:ILE:HA	37:BP:11:GLN:HE22	1.33	0.94
12:CL:42:LYS:HD3	12:CL:43:LYS:HZ2	1.29	0.94
22:DA:784:G:HO2'	22:DA:785:G:H8	1.16	0.94
11:CK:27:ASN:HD22	11:CK:27:ASN:N	1.66	0.94
1:CA:960:U:C5'	1:CA:961:U:H5''	1.98	0.94
22:DA:2439:A:H4'	22:DA:2440:C:O5'	1.67	0.94
2:AB:165:ALA:HB2	2:AB:186:VAL:HG12	1.47	0.94
25:DD:114:LYS:HD2	25:DD:116:LYS:NZ	1.83	0.94
17:AQ:37:ILE:H	17:AQ:37:ILE:HD12	1.33	0.94
5:AE:44:ARG:HA	5:AE:71:ILE:O	1.68	0.94
12:AL:33:CYS:HA	12:AL:54:VAL:HA	1.47	0.94
26:DE:119:ILE:CD1	26:DE:143:LEU:HD21	1.97	0.94
22:DA:1023:U:H6	22:DA:1023:U:H5'	1.30	0.94
1:CA:1278:G:H4'	1:CA:1279:G:O5'	1.67	0.94
26:DE:148:ILE:CD1	26:DE:187:VAL:HG21	1.98	0.94
26:DE:149:ILE:HG23	26:DE:188:MET:CA	1.98	0.94
24:DC:16:VAL:H	24:DC:203:VAL:HG12	1.31	0.94
9:AI:51:LEU:HB3	9:AI:56:MET:CG	1.98	0.94
1:CA:33:A:H2'	1:CA:34:C:C6	2.01	0.94
22:DA:452:G:OP1	26:DE:53:THR:HG23	1.66	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:103:ARG:HD3	35:DN:110:MET:SD	2.08	0.94
22:BA:335:C:H5''	42:BU:81:ARG:HD3	1.45	0.94
25:BD:61:THR:OG1	25:BD:63:PRO:HD2	1.66	0.94
46:DY:6:LEU:HD21	46:DY:56:LEU:HD12	1.49	0.94
1:CA:1067:A:H1'	1:CA:1068:G:C8	2.03	0.94
22:DA:617:G:O2'	22:DA:618:G:H8	1.50	0.94
22:DA:2311:A:H4'	22:DA:2312:U:OP2	1.65	0.94
3:CC:148:ILE:HD13	3:CC:201:ILE:HG12	1.50	0.94
22:BA:1644:C:O2'	22:BA:1645:G:H5'	1.68	0.94
40:BS:59:GLU:HA	40:BS:64:ALA:CB	1.98	0.94
25:DD:8:LYS:HB2	25:DD:201:LEU:HD11	1.47	0.94
12:CL:43:LYS:HB3	12:CL:44:PRO:HD3	1.50	0.94
42:DU:95:PHE:H	42:DU:95:PHE:HD1	1.13	0.94
22:BA:2352:A:N1	44:BW:30:VAL:HG11	1.83	0.94
38:DQ:4:LYS:HE3	38:DQ:7:VAL:CG1	1.98	0.94
47:DZ:16:LEU:CD2	47:DZ:16:LEU:H	1.80	0.94
27:BF:10:GLU:O	27:BF:11:VAL:HB	1.67	0.94
42:BU:80:ASP:OD1	42:BU:95:PHE:HB3	1.67	0.94
1:CA:1452:C:H4'	1:CA:1453:G:O5'	1.66	0.94
37:BP:95:LYS:HG2	37:BP:97:TYR:CE1	2.02	0.94
36:DO:30:ARG:HA	36:DO:35:ILE:HD13	1.50	0.94
1:AA:1441:A:H62	1:AA:1461:G:H21	1.07	0.94
1:AA:275:G:O2'	1:AA:276:G:H5'	1.65	0.94
46:DY:18:LEU:O	46:DY:22:LEU:HD13	1.67	0.93
22:DA:1069:A:O2'	22:DA:1070:A:H5'	1.68	0.93
1:CA:1157:A:H4'	1:CA:1158:C:O5'	1.68	0.93
26:BE:170:ARG:HG2	26:BE:170:ARG:NH2	1.73	0.93
38:DQ:78:PHE:CE1	38:DQ:82:LEU:HD11	2.03	0.93
32:DK:71:ARG:CB	32:DK:72:PRO:HD3	1.98	0.93
35:DN:103:ARG:HB2	35:DN:110:MET:HG3	1.50	0.93
22:DA:2729:G:H5''	25:DD:190:LYS:NZ	1.83	0.93
7:AG:26:VAL:CG1	7:AG:42:VAL:HG21	1.98	0.93
22:DA:232:G:H4'	22:DA:233:A:OP1	1.67	0.93
28:DG:112:VAL:HG13	28:DG:150:TYR:HE1	1.31	0.93
1:CA:664:G:H22	1:CA:741:G:H1	1.14	0.93
22:BA:1962:C:H4'	22:BA:1963:U:OP1	1.65	0.93
28:BG:8:VAL:O	28:BG:9:VAL:HG12	1.65	0.93
48:D0:6:LYS:HD2	48:D0:7:PRO:HD2	1.46	0.93
40:DS:88:ARG:NH2	40:DS:88:ARG:HG2	1.77	0.93
4:AD:131:ILE:H	4:AD:131:ILE:HD12	1.33	0.93
1:AA:1021:A:C2'	1:AA:1022:A:H5''	1.98	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:32:LEU:H	41:BT:83:ALA:HB3	1.34	0.93
22:BA:2503:A:H4'	22:BA:2504:U:OP1	1.67	0.93
22:BA:603:A:H4'	22:BA:604:G:O5'	1.68	0.93
42:DU:10:VAL:HG12	42:DU:71:ILE:HA	1.48	0.93
1:CA:1097:C:H2'	1:CA:1098:C:H6	1.33	0.93
31:DJ:44:TYR:HB2	38:DQ:63:ARG:CZ	1.97	0.93
31:BJ:64:VAL:O	31:BJ:65:THR:HB	1.68	0.93
1:CA:1293:C:H2'	1:CA:1294:G:H8	1.34	0.93
2:CB:185:ILE:HG22	2:CB:199:ILE:HG13	1.48	0.93
8:CH:1:SER:HB3	8:CH:3:GLN:HG3	1.51	0.93
22:DA:2611:C:H5'	22:DA:2611:C:H6	1.31	0.93
22:DA:33:C:O2'	22:DA:34:U:H5'	1.67	0.93
19:CS:35:ARG:HA	19:CS:70:LEU:HB2	1.51	0.93
22:BA:2820:A:H3'	22:BA:2820:A:C8	2.02	0.93
1:AA:667:G:H4'	15:AO:50:HIS:ND1	1.84	0.93
22:BA:933:A:H2'	22:BA:933:A:N3	1.83	0.93
1:CA:1378:C:H3'	1:CA:1379:G:H5''	1.50	0.93
27:DF:30:VAL:HG12	27:DF:157:THR:HG21	1.50	0.93
31:BJ:2:LYS:CD	31:BJ:2:LYS:H	1.81	0.93
38:BQ:91:ARG:HB3	38:BQ:93:ILE:HG22	1.49	0.93
22:DA:2287:A:O2'	22:DA:2288:A:H3'	1.69	0.93
1:CA:537:G:H5''	12:CL:109:ARG:HH12	1.30	0.93
31:DJ:45:THR:HG21	31:DJ:50:THR:HG23	1.45	0.93
29:BH:4:ILE:HG23	29:BH:17:ASP:O	1.69	0.93
22:DA:2725:A:O2'	22:DA:2726:A:H2'	1.69	0.93
17:CQ:3:LYS:HZ1	17:CQ:6:THR:HG21	1.31	0.93
1:CA:1249:C:H2'	1:CA:1250:A:H5''	1.51	0.93
7:CG:137:ARG:CZ	7:CG:138:GLU:HG2	1.98	0.93
1:AA:1449:C:C2'	1:AA:1450:U:H5'	1.99	0.93
31:BJ:25:LEU:HD22	31:BJ:25:LEU:C	1.88	0.93
6:AF:36:ILE:HG22	6:AF:64:VAL:HG22	1.49	0.93
22:DA:1364:G:N7	45:DX:1:SER:HB2	1.84	0.93
22:DA:1324:G:H1	22:DA:1330:C:H42	1.16	0.93
2:AB:218:ALA:HA	2:AB:221:ARG:HH21	1.33	0.93
22:DA:2223:G:H2'	22:DA:2224:G:H5'	1.48	0.93
1:CA:560:A:H4'	1:CA:561:U:H5''	1.48	0.93
22:BA:558:U:P	31:BJ:113:PRO:HG2	2.09	0.93
27:BF:129:MET:HG2	27:BF:153:ILE:CD1	1.98	0.93
1:AA:667:G:H4'	15:AO:50:HIS:CE1	2.04	0.93
7:CG:100:MET:H	7:CG:100:MET:CE	1.81	0.93
38:BQ:4:LYS:HE2	38:BQ:7:VAL:HG13	1.51	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:19:TYR:O	14:AN:22:LYS:HB3	1.69	0.93
22:BA:2540:C:H2'	22:BA:2541:A:H5'	1.49	0.93
22:DA:686:U:H3	50:D2:12:ARG:HB2	1.33	0.93
26:BE:112:LEU:HD13	26:BE:186:VAL:HG11	1.51	0.93
24:DC:224:MET:SD	24:DC:229:HIS:HB2	2.09	0.93
22:DA:320:A:H4'	22:DA:322:A:N7	1.84	0.93
4:CD:34:GLU:O	4:CD:37:PRO:HD3	1.69	0.93
1:CA:183:C:O2'	1:CA:184:G:H5'	1.68	0.93
27:DF:28:PRO:HB2	27:DF:168:LEU:HD21	1.51	0.93
13:CM:78:ARG:HH21	13:CM:79:LEU:HD23	1.34	0.93
26:BE:46:GLN:HG3	26:BE:87:ALA:H	1.33	0.93
22:BA:1063:G:P	30:BI:76:ALA:HB3	2.08	0.93
22:DA:739:A:H4'	22:DA:740:C:OP1	1.67	0.93
44:BW:18:LYS:HA	44:BW:36:ILE:CG1	1.97	0.93
1:CA:1293:C:H2'	1:CA:1294:G:C8	2.04	0.93
22:DA:2626:C:C2'	22:DA:2627:G:H5'	1.97	0.93
22:DA:257:C:H2'	22:DA:258:G:O4'	1.69	0.93
37:BP:52:ARG:HH11	37:BP:52:ARG:HG3	1.31	0.92
12:CL:109:ARG:HB2	12:CL:118:VAL:HG21	1.50	0.92
22:DA:300:A:H1'	22:DA:333:G:N2	1.83	0.92
4:AD:89:LEU:HD21	4:AD:199:ILE:HD11	1.50	0.92
27:DF:42:ALA:HB2	27:DF:49:LEU:HD21	1.51	0.92
22:DA:1026:G:O2'	22:DA:1027:A:H5'	1.69	0.92
20:CT:23:ARG:HB3	20:CT:60:GLN:HE22	1.31	0.92
21:AU:36:PHE:HD1	21:AU:39:LYS:HB3	1.32	0.92
1:CA:91:U:O2'	1:CA:92:U:H5''	1.69	0.92
33:DL:17:LYS:NZ	33:DL:19:LEU:HD22	1.85	0.92
6:CF:11:HIS:HD2	6:CF:54:LEU:HD21	1.31	0.92
22:BA:469:G:O6	50:B2:37:LYS:HE2	1.69	0.92
23:DB:75:G:H1	23:DB:102:G:N2	1.66	0.92
1:CA:668:G:O2'	15:CO:45:HIS:HB3	1.69	0.92
9:CI:17:ARG:HB2	9:CI:65:THR:HB	1.50	0.92
1:AA:1531:A:H8	1:AA:1531:A:C5'	1.81	0.92
32:BK:18:ARG:H	32:BK:45:GLU:HB2	1.31	0.92
1:CA:1268:G:H21	1:CA:1327:C:H1'	1.30	0.92
22:BA:1340:U:H4'	22:BA:1341:G:OP2	1.65	0.92
31:BJ:56:VAL:HG12	31:BJ:57:LEU:H	1.33	0.92
1:AA:1319:A:H4'	1:AA:1320:C:OP1	1.68	0.92
22:BA:1277:G:H5'	35:BN:20:MET:HE1	1.48	0.92
27:DF:122:ASP:HB2	27:DF:126:ASN:HB2	1.48	0.92
12:CL:43:LYS:CB	12:CL:44:PRO:CD	2.40	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:104:LEU:HB2	28:BG:112:VAL:HG21	1.49	0.92
1:CA:1219:A:OP1	14:CN:52:ARG:HG3	1.70	0.92
1:AA:1123:U:H4'	10:AJ:39:PRO:HD2	1.48	0.92
22:DA:1783:A:H5'	22:DA:2608:G:H4'	1.50	0.92
22:DA:593:U:H2'	22:DA:594:U:H6	1.32	0.92
22:DA:975:A:O2'	22:DA:976:G:H8	1.53	0.92
1:CA:940:C:HO2'	1:CA:1374:A:H2	1.11	0.92
2:AB:100:LEU:HB3	2:AB:174:GLU:HG2	1.51	0.92
25:BD:113:SER:C	25:BD:114:LYS:HE3	1.90	0.92
26:DE:108:ILE:HD11	26:DE:181:ILE:HB	1.50	0.92
25:BD:99:GLU:HG3	25:BD:100:LEU:N	1.85	0.92
4:CD:25:ARG:HH11	4:CD:25:ARG:CG	1.82	0.92
34:DM:27:SER:H	34:DM:66:ARG:HH22	1.12	0.92
21:CU:16:ARG:HG3	21:CU:19:LYS:CG	1.99	0.92
1:AA:439:U:O2'	1:AA:440:C:H5'	1.69	0.92
36:BO:76:LYS:O	36:BO:80:GLU:HG2	1.70	0.92
22:DA:1647:U:H5''	22:DA:1648:U:OP1	1.68	0.92
22:BA:1073:A:H3'	22:BA:1074:G:H5''	1.51	0.92
29:DH:27:ARG:HH11	45:DX:59:ASP:HA	1.35	0.92
22:DA:1669:A:H2'	22:DA:1669:A:N3	1.80	0.92
1:AA:60:A:H4'	1:AA:61:G:O5'	1.70	0.92
22:DA:279:A:H61	22:DA:361:G:H1'	1.34	0.92
22:DA:183:C:H2'	22:DA:184:C:H5'	1.52	0.92
22:BA:962:G:H21	22:BA:2250:G:H1	1.14	0.92
22:DA:671:C:O2'	22:DA:672:C:H5'	1.69	0.92
30:BI:23:VAL:HB	30:BI:27:LEU:HB3	1.49	0.92
11:CK:81:LEU:HD11	11:CK:104:PHE:CD2	2.04	0.92
22:DA:1808:A:H3'	22:DA:1809:A:H8	1.33	0.92
1:AA:1157:A:H1'	1:AA:1181:G:C2	2.04	0.92
1:AA:939:G:H5'	7:AG:101:ARG:HH12	1.34	0.92
48:B0:9:ARG:HH21	48:B0:9:ARG:HG3	1.34	0.92
38:BQ:111:LYS:CE	39:BR:50:GLY:HA2	1.99	0.92
1:AA:209:U:H5'	1:AA:210:C:OP2	1.70	0.92
41:BT:29:THR:HA	41:BT:86:THR:HA	1.49	0.92
1:CA:977:A:O2'	1:CA:978:A:H5''	1.70	0.92
41:BT:39:THR:HB	41:BT:42:GLU:HB2	1.50	0.92
27:DF:39:VAL:HG22	27:DF:49:LEU:HG	1.52	0.92
22:DA:1734:G:O2'	22:DA:1735:A:H8	1.53	0.92
25:BD:5:VAL:H	25:BD:32:ASN:HD21	1.10	0.92
27:DF:64:PRO:HA	27:DF:88:VAL:HG22	1.51	0.92
21:CU:15:LEU:HD12	21:CU:15:LEU:O	1.68	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:91:LYS:HB3	30:DI:94:LYS:HB2	1.52	0.92
1:AA:158:G:H2'	1:AA:159:G:C5'	2.00	0.92
11:AK:108:ASN:HB3	21:AU:6:ARG:HG2	1.49	0.92
1:CA:920:U:H2'	1:CA:921:U:H6	1.33	0.92
22:BA:636:G:C6	33:BL:111:ILE:CD1	2.52	0.92
22:DA:338:G:C2'	22:DA:339:U:H5'	1.99	0.92
22:DA:320:A:H2'	26:DE:131:THR:OG1	1.67	0.92
18:CR:72:ARG:NH2	21:CU:3:ILE:HD13	1.85	0.92
32:DK:7:MET:CE	32:DK:7:MET:HA	1.98	0.92
22:DA:234:U:H6	22:DA:234:U:H5''	1.32	0.92
15:AO:63:ARG:HD3	15:AO:87:ARG:HH22	1.33	0.92
44:BW:14:ASP:O	44:BW:15:SER:HB2	1.70	0.92
22:BA:491:G:H2'	22:BA:492:A:C8	2.05	0.92
1:CA:721:G:H4'	1:CA:722:G:O5'	1.69	0.92
1:AA:174:A:O2'	1:AA:175:C:H5'	1.70	0.92
22:BA:855:G:N2	44:BW:23:LYS:HG2	1.84	0.91
33:DL:108:ALA:HB3	33:DL:125:LEU:HD22	1.53	0.91
32:BK:21:CYS:HA	32:BK:41:ILE:CD1	2.00	0.91
8:CH:11:THR:HG22	8:CH:14:ARG:HH12	1.35	0.91
11:AK:15:VAL:HG13	11:AK:78:ILE:HG23	1.49	0.91
35:DN:34:ILE:HG22	35:DN:113:ILE:HG22	1.49	0.91
50:D2:19:ARG:HB3	50:D2:19:ARG:NH2	1.85	0.91
4:CD:32:LYS:HB3	4:CD:35:GLN:OE1	1.71	0.91
2:CB:79:VAL:HA	2:CB:213:LEU:HD21	1.49	0.91
41:DT:50:LEU:HD23	41:DT:51:PHE:N	1.84	0.91
27:BF:134:GLN:O	27:BF:136:ILE:HG12	1.67	0.91
1:CA:1026:G:H1	1:CA:1036:A:H61	1.06	0.91
46:BY:9:LYS:HZ2	46:BY:9:LYS:HA	1.35	0.91
14:CN:89:ARG:HG3	14:CN:91:GLU:HG3	1.50	0.91
35:DN:73:ASN:HA	35:DN:76:VAL:HG22	1.50	0.91
33:DL:23:ILE:HG13	39:DR:82:HIS:CE1	2.06	0.91
16:AP:28:ARG:HE	16:AP:29:ASN:HD21	1.07	0.91
22:BA:2431:U:C6	22:BA:2431:U:H5'	2.05	0.91
5:CE:104:ILE:H	5:CE:122:VAL:H	0.96	0.91
11:AK:124:LYS:NZ	21:AU:33:ARG:HH21	1.68	0.91
22:DA:2848:G:HO2'	22:DA:2849:U:H6	0.93	0.91
12:CL:42:LYS:HD2	12:CL:43:LYS:HG2	1.53	0.91
49:B1:33:LEU:N	49:B1:51:ALA:HB3	1.84	0.91
24:BC:16:VAL:H	24:BC:203:VAL:HG12	1.34	0.91
37:BP:77:SER:HG	37:BP:79:VAL:HG13	1.36	0.91
22:DA:822:G:O6	22:DA:943:A:H2	1.52	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:73:LYS:HE3	40:BS:74:ILE:H	1.36	0.91
8:CH:11:THR:HG22	8:CH:14:ARG:NH1	1.86	0.91
24:DC:75:ALA:HB2	24:DC:95:TYR:CD1	2.04	0.91
22:BA:1585:C:H2'	22:BA:1586:A:O4'	1.70	0.91
1:CA:209:U:H5''	1:CA:210:C:OP2	1.70	0.91
3:AC:110:LEU:HD21	3:AC:143:LEU:HD23	1.49	0.91
1:AA:569:C:H5''	1:AA:570:G:OP1	1.70	0.91
1:AA:1127:G:C2'	1:AA:1128:C:H5'	2.00	0.91
1:AA:98:A:H2'	1:AA:99:C:H6	1.33	0.91
17:AQ:12:VAL:CG1	17:AQ:13:SER:H	1.82	0.91
21:AU:39:LYS:H	21:AU:40:PRO:HD2	1.34	0.91
18:AR:35:SER:HA	18:AR:71:ASP:HB3	1.53	0.91
32:DK:2:ILE:O	32:DK:3:GLN:HB3	1.71	0.91
1:AA:414:A:H2'	1:AA:415:A:C8	2.06	0.91
40:BS:73:LYS:HE3	40:BS:74:ILE:N	1.84	0.91
3:CC:149:LYS:HE3	3:CC:200:TRP:CE3	2.06	0.91
41:DT:38:ALA:HB1	41:DT:81:LYS:NZ	1.84	0.91
22:BA:100:U:H4'	22:BA:101:A:O5'	1.68	0.91
22:DA:1605:C:H4'	22:DA:1610:A:C6	2.06	0.91
36:DO:17:LYS:HE3	36:DO:17:LYS:O	1.70	0.91
22:DA:1060:U:C4'	22:DA:1061:U:H2'	2.00	0.91
38:DQ:79:ILE:HA	38:DQ:82:LEU:HD12	1.50	0.91
1:CA:1304:G:H1'	1:CA:1333:A:H61	1.36	0.91
22:DA:618:G:N2	22:DA:619:G:H1'	1.86	0.91
36:DO:31:THR:HG21	36:DO:36:TYR:HE2	1.36	0.91
22:DA:1458:U:O3'	22:DA:1459:G:H4'	1.70	0.91
13:AM:106:ARG:HH21	13:AM:112:ARG:HB3	1.32	0.91
22:BA:1064:C:H5'	30:BI:88:GLY:HA3	1.49	0.91
1:CA:1152:A:H2'	1:CA:1153:G:H8	1.19	0.91
12:CL:89:LEU:CB	12:CL:92:VAL:HG21	2.00	0.91
22:DA:649:G:H2'	22:DA:650:C:C6	2.06	0.91
25:DD:148:GLN:CG	25:DD:152:PRO:HG2	2.01	0.91
41:BT:61:LEU:C	41:BT:61:LEU:HD12	1.91	0.91
1:CA:1242:G:C2	1:CA:1243:C:H1'	2.06	0.91
1:AA:1183:U:H3'	1:AA:1184:G:H5''	1.53	0.91
26:DE:119:ILE:HD13	26:DE:143:LEU:HD21	1.49	0.91
1:CA:1446:A:H2'	1:CA:1447:A:H5'	1.52	0.91
41:DT:38:ALA:HB1	41:DT:81:LYS:HZ3	1.30	0.91
22:BA:1653:G:H1	35:BN:11:ASN:ND2	1.69	0.91
44:DW:13:ARG:HG3	44:DW:14:ASP:H	1.35	0.91
22:BA:894:U:H2'	22:BA:895:U:C6	2.06	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:45:THR:HG23	30:DI:54:ILE:HD13	1.51	0.91
45:BX:6:VAL:HG13	45:BX:7:THR:HG23	1.53	0.91
29:DH:26:ALA:HB2	29:DH:30:LEU:HD12	1.51	0.91
22:DA:2379:G:H2'	22:DA:2380:C:H6	1.36	0.91
1:AA:274:A:HO2'	1:AA:275:G:H8	1.18	0.91
1:CA:808:C:OP1	15:CO:47:LYS:HE2	1.70	0.91
26:DE:111:GLU:HA	26:DE:114:ARG:HE	1.35	0.91
33:BL:91:ASP:H	33:BL:94:THR:HG21	1.36	0.91
21:CU:24:LYS:CG	21:CU:25:ALA:H	1.83	0.91
27:BF:72:SER:HB2	27:BF:80:GLN:H	1.36	0.91
23:DB:75:G:H1	23:DB:102:G:H22	0.91	0.91
17:AQ:22:VAL:HG21	17:AQ:60:ILE:HD11	1.51	0.91
1:CA:456:A:H2'	1:CA:457:G:H8	1.36	0.91
25:DD:34:VAL:HG12	25:DD:48:ILE:HD11	1.53	0.91
22:BA:1664:A:H5''	22:BA:1665:A:OP2	1.69	0.91
1:CA:1217:C:O2'	1:CA:1218:C:H6	1.54	0.91
25:BD:120:GLY:HA2	25:BD:162:ALA:HB1	1.50	0.91
22:DA:2729:G:H5''	25:DD:190:LYS:HZ3	1.35	0.91
16:CP:1:MET:HA	16:CP:1:MET:CE	2.01	0.91
22:BA:1935:G:H1'	22:BA:1964:G:N2	1.86	0.91
22:DA:786:C:C2'	22:DA:787:C:H5'	2.01	0.91
22:DA:1508:A:H4'	22:DA:1509:A:OP1	1.71	0.91
25:DD:124:ARG:HH11	25:DD:125:TRP:HE1	1.05	0.91
22:BA:215:G:H4'	22:BA:216:A:H4'	1.52	0.91
50:B2:3:ARG:HH21	50:B2:3:ARG:HG2	1.33	0.91
28:BG:84:LYS:HG3	28:BG:132:LEU:H	1.28	0.90
22:DA:1790:C:O2'	24:DC:207:ALA:HB2	1.71	0.90
22:DA:1808:A:H3'	22:DA:1809:A:C8	2.06	0.90
22:DA:1606:C:H4'	22:DA:1607:C:H5'	1.53	0.90
1:AA:674:G:H4'	18:AR:69:TYR:CD1	2.06	0.90
9:AI:128:LYS:HD2	9:AI:129:ARG:H	1.35	0.90
22:DA:1967:C:H6	22:DA:1967:C:H5''	1.37	0.90
31:BJ:43:GLU:O	31:BJ:45:THR:CG2	2.20	0.90
22:DA:2748:A:H1'	28:DG:66:THR:CG2	2.01	0.90
12:AL:87:LYS:O	12:AL:88:ASP:HB2	1.71	0.90
1:CA:1215:G:HO2'	1:CA:1216:A:H8	0.91	0.90
1:AA:684:U:H1'	11:AK:39:ASN:O	1.71	0.90
23:DB:56:G:H4'	23:DB:57:A:O5'	1.69	0.90
13:CM:12:LYS:HE3	13:CM:12:LYS:HA	1.52	0.90
13:CM:13:HIS:HB3	13:CM:16:ILE:HD13	1.51	0.90
1:AA:1046:A:O2'	1:AA:1047:G:H5'	1.72	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1210:C:C2'	1:AA:1211:U:H5'	2.01	0.90
22:DA:684:G:H5'	50:D2:16:HIS:CE1	2.05	0.90
10:CJ:30:LYS:CG	10:CJ:36:VAL:HG22	2.00	0.90
1:CA:1125:U:C6	10:CJ:40:ILE:HG12	2.06	0.90
4:CD:32:LYS:O	4:CD:33:ILE:HG22	1.71	0.90
1:AA:94:G:H4'	1:AA:95:C:C5'	2.00	0.90
1:AA:255:G:H2'	1:AA:256:U:H6	1.36	0.90
25:BD:120:GLY:HA2	25:BD:162:ALA:HB2	1.50	0.90
22:BA:1032:A:H1'	52:B4:23:ILE:HD13	1.52	0.90
22:BA:1060:U:H4'	22:BA:1061:U:H5'	0.93	0.90
3:CC:190:THR:HG22	3:CC:191:THR:H	1.35	0.90
45:DX:30:PRO:CG	45:DX:32:LEU:HD21	2.01	0.90
22:DA:2756:U:O2'	22:DA:2757:A:H5'	1.70	0.90
1:CA:1158:C:H2'	1:CA:1158:C:O2	1.69	0.90
49:B1:33:LEU:HB3	49:B1:51:ALA:CB	2.02	0.90
38:DQ:87:VAL:HG12	38:DQ:88:GLU:H	1.32	0.90
20:AT:43:LYS:CB	20:AT:86:ALA:HB1	2.00	0.90
40:BS:73:LYS:CA	40:BS:73:LYS:HE3	2.02	0.90
27:DF:91:ARG:HH21	27:DF:91:ARG:HB3	1.35	0.90
29:DH:116:ARG:O	29:DH:117:LEU:HG	1.72	0.90
22:DA:95:A:H2'	22:DA:96:C:C5'	2.01	0.90
25:DD:133:THR:HG23	25:DD:134:HIS:N	1.83	0.90
22:DA:748:G:O6	22:DA:751:A:H5'	1.72	0.90
27:DF:91:ARG:NH2	27:DF:91:ARG:HB3	1.86	0.90
26:DE:111:GLU:HB2	26:DE:114:ARG:HH21	1.33	0.90
28:DG:18:ILE:HD12	28:DG:42:VAL:HG13	1.52	0.90
3:CC:112:ALA:HB2	3:CC:182:ASP:HB3	1.53	0.90
12:CL:42:LYS:HG2	12:CL:43:LYS:N	1.86	0.90
41:DT:13:ALA:HB1	41:DT:14:PRO:HD2	1.54	0.90
1:CA:1067:A:H4'	1:CA:1068:G:O5'	1.71	0.90
31:BJ:73:VAL:HG23	31:BJ:74:TYR:N	1.85	0.90
22:DA:2378:A:C2'	22:DA:2379:G:H5'	2.01	0.90
5:CE:103:GLY:HA3	5:CE:121:ASN:HA	1.53	0.90
22:DA:1024:G:C3'	22:DA:1025:G:H5''	2.01	0.90
1:AA:795:C:H5''	1:AA:796:C:OP2	1.72	0.90
21:AU:33:ARG:HE	21:AU:34:ARG:HG3	1.35	0.90
24:BC:12:ARG:HH11	24:BC:12:ARG:CG	1.83	0.90
22:DA:1700:A:H2'	22:DA:1701:A:H5'	1.52	0.90
20:AT:33:LYS:N	20:AT:33:LYS:HE2	1.86	0.90
22:BA:1936:A:H2	22:BA:1943:U:C5	1.89	0.90
25:BD:151:THR:CG2	25:BD:152:PRO:CD	2.43	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:386:C:C5	1:CA:387:U:C5	2.60	0.90
1:AA:1241:G:HO2'	1:AA:1242:G:H8	0.93	0.90
22:DA:1255:U:H5'	22:DA:2502:G:H22	1.37	0.90
38:DQ:4:LYS:CE	38:DQ:7:VAL:HG13	2.02	0.90
22:DA:2714:G:O2'	22:DA:2715:C:H5'	1.72	0.90
22:DA:526:A:N6	22:DA:2626:C:H4'	1.85	0.90
25:BD:91:THR:O	25:BD:93:GLY:N	2.05	0.90
3:CC:39:ARG:HG2	3:CC:54:ILE:HD13	1.54	0.90
12:CL:89:LEU:HB3	12:CL:92:VAL:CG2	1.99	0.90
38:DQ:87:VAL:HG21	39:DR:52:PRO:CD	2.00	0.90
9:CI:51:LEU:HG	9:CI:86:LEU:CD2	2.01	0.90
1:CA:876:C:C1'	8:CH:11:THR:HG21	2.01	0.90
3:CC:46:LEU:HD22	3:CC:75:VAL:HG22	1.52	0.90
22:DA:1231:U:H2'	22:DA:1232:G:H8	1.37	0.90
22:BA:1929:G:H4'	22:BA:1930:G:OP1	1.69	0.90
39:DR:2:TYR:HD2	39:DR:42:ALA:HB2	1.35	0.90
5:AE:81:GLN:N	5:AE:81:GLN:HE21	1.70	0.90
22:DA:1817:G:HO2'	22:DA:1818:U:H5'	1.28	0.90
22:DA:1388:G:HO2'	22:DA:1389:G:H8	0.90	0.90
22:DA:1207:C:HO2'	22:DA:1208:C:H6	0.92	0.90
22:DA:246:C:C2'	22:DA:247:G:H5'	2.01	0.90
35:BN:79:LEU:O	35:BN:80:PHE:HB2	1.70	0.90
22:DA:659:G:H4'	26:DE:95:LYS:HD3	1.54	0.90
19:AS:45:GLY:N	19:AS:61:VAL:HG23	1.87	0.90
1:AA:693:G:C2'	1:AA:694:A:H5'	2.02	0.90
1:CA:268:U:H2'	1:CA:269:C:C6	2.07	0.90
22:BA:2502:G:H5'	22:BA:2503:A:C5'	2.02	0.90
29:BH:41:LYS:HA	29:BH:44:ILE:HG12	1.53	0.90
26:DE:23:PHE:HB2	26:DE:114:ARG:HH22	1.37	0.90
22:BA:417:C:H2'	22:BA:418:C:H6	1.37	0.90
1:AA:49:U:O4	1:AA:365:U:H5	1.54	0.90
17:CQ:25:GLU:HG3	17:CQ:40:THR:HG22	1.54	0.90
22:BA:143:C:HO2'	22:BA:144:A:H8	1.19	0.90
2:AB:67:LEU:HD21	2:AB:91:VAL:HG23	1.54	0.90
1:CA:1288:A:O2'	1:CA:1289:A:H8	1.55	0.90
32:DK:13:ASN:HD21	32:DK:97:THR:H	1.13	0.90
22:BA:777:G:O2'	22:BA:778:G:H5'	1.71	0.90
34:BM:114:ARG:HG2	34:BM:130:PHE:CE1	2.07	0.90
7:AG:119:LEU:HD21	7:AG:123:LEU:HD23	1.53	0.90
1:CA:1283:U:O2'	1:CA:1284:C:H5'	1.72	0.89
22:BA:1799:G:H4'	22:BA:1800:C:O5'	1.71	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1143:G:H2'	1:AA:1144:G:H8	1.35	0.89
33:DL:92:LEU:HD22	33:DL:124:GLY:HA3	1.51	0.89
22:BA:1746:A:H2'	22:BA:1747:U:C6	2.08	0.89
26:DE:79:ARG:HG2	26:DE:80:SER:H	1.36	0.89
17:CQ:45:VAL:HG21	17:CQ:60:ILE:HG21	1.52	0.89
22:DA:1338:G:H4'	41:DT:18:GLU:OE2	1.72	0.89
22:DA:142:A:HO2'	22:DA:143:C:H6	0.92	0.89
35:DN:51:LEU:HD23	35:DN:54:LEU:HD21	1.52	0.89
1:CA:1217:C:HO2'	1:CA:1218:C:H6	1.04	0.89
1:CA:960:U:H5'	1:CA:961:U:H5''	1.54	0.89
3:AC:56:ILE:CG1	3:AC:65:VAL:HG22	2.02	0.89
22:DA:2291:U:H2'	22:DA:2292:U:H6	1.31	0.89
34:DM:7:THR:HG22	34:DM:9:PHE:H	1.36	0.89
5:AE:14:LEU:O	5:AE:14:LEU:HD13	1.70	0.89
22:DA:1635:A:O2'	22:DA:1636:U:H5'	1.71	0.89
29:DH:61:VAL:HG13	29:DH:62:LEU:HG	1.51	0.89
22:BA:243:U:OP1	51:B3:5:THR:HG21	1.72	0.89
5:AE:103:GLY:HA2	5:AE:121:ASN:HA	1.53	0.89
10:CJ:40:ILE:HG22	10:CJ:42:LEU:CD1	2.03	0.89
22:BA:1498:C:O2'	22:BA:1499:C:H6	1.55	0.89
1:CA:1218:C:O2'	1:CA:1219:A:H8	1.54	0.89
9:CI:71:ILE:CD1	9:CI:72:SER:H	1.85	0.89
15:AO:26:VAL:HG12	15:AO:30:LEU:HD12	1.52	0.89
47:BZ:40:THR:HG22	47:BZ:43:ILE:HG23	1.55	0.89
1:CA:238:A:H2'	1:CA:239:U:H5''	0.90	0.89
22:DA:528:A:O2'	22:DA:529:A:H5''	1.71	0.89
22:DA:27:G:N2	22:DA:512:G:H2'	1.86	0.89
1:CA:961:U:O2'	1:CA:962:C:H6	1.54	0.89
14:CN:40:ARG:NH1	19:CS:6:LYS:HB2	1.88	0.89
32:DK:7:MET:HA	32:DK:7:MET:HE3	1.53	0.89
22:DA:2668:G:HO2'	22:DA:2669:G:H8	0.94	0.89
13:CM:77:LYS:HA	13:CM:80:MET:HE2	1.52	0.89
27:DF:91:ARG:HA	27:DF:95:MET:SD	2.12	0.89
22:DA:1700:A:C2'	22:DA:1701:A:H5'	2.02	0.89
22:DA:1361:G:O2'	22:DA:1362:C:H5'	1.72	0.89
45:BX:58:ILE:CD1	45:BX:66:VAL:HG21	2.02	0.89
49:B1:8:ILE:CG2	49:B1:51:ALA:HA	2.02	0.89
11:CK:26:PHE:CZ	11:CK:88:PRO:HG2	2.08	0.89
1:CA:1366:C:O2'	1:CA:1367:C:H5'	1.73	0.89
21:AU:3:ILE:HA	21:AU:19:LYS:NZ	1.86	0.89
29:BH:2:GLN:O	29:BH:3:VAL:HG22	1.70	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:96:VAL:O	26:BE:96:VAL:HG12	1.72	0.89
45:BX:5:GLN:HE21	45:BX:49:ARG:H	1.20	0.89
24:DC:255:LYS:O	24:DC:256:THR:HG23	1.72	0.89
12:CL:82:ARG:HG2	12:CL:82:ARG:NH1	1.86	0.89
46:DY:37:LEU:HD13	46:DY:42:LEU:CD1	2.01	0.89
22:DA:2746:U:H2'	22:DA:2747:G:H5'	1.53	0.89
33:DL:63:LYS:HB3	51:D3:12:ARG:HD2	1.54	0.89
19:CS:40:PHE:CB	19:CS:41:PRO:HD2	2.01	0.89
8:CH:76:ARG:HD3	8:CH:77:VAL:N	1.88	0.89
12:AL:23:LEU:HB2	12:AL:58:ASN:ND2	1.88	0.89
22:DA:1552:A:N3	22:DA:1552:A:H2'	1.88	0.89
1:CA:1245:C:O2'	1:CA:1246:A:H8	1.56	0.89
24:BC:251:THR:HG22	24:BC:252:LYS:N	1.86	0.89
16:AP:19:VAL:HG22	16:AP:36:VAL:HG12	1.55	0.89
1:CA:728:A:O2'	1:CA:729:A:H5'	1.72	0.89
22:BA:1414:C:C4	22:BA:1415:U:H5	1.91	0.89
34:DM:34:LYS:HB2	34:DM:131:VAL:CG2	2.02	0.89
22:DA:118:A:OP2	22:DA:119:A:H3'	1.72	0.89
22:DA:1807:G:H2'	22:DA:1808:A:H5'	1.52	0.89
1:CA:1102:A:H2'	1:CA:1103:C:H6	1.36	0.89
45:BX:58:ILE:HD11	45:BX:66:VAL:HG11	1.55	0.89
40:DS:84:ARG:HB3	40:DS:96:ILE:CG2	2.02	0.89
7:CG:107:ALA:O	7:CG:118:ARG:HB3	1.73	0.89
22:BA:1287:A:H5'	35:BN:103:ARG:HD2	1.54	0.89
22:BA:2138:G:H1	22:BA:2153:C:N4	1.70	0.89
22:DA:2626:C:O2'	22:DA:2627:G:H5'	1.72	0.89
6:CF:11:HIS:CD2	6:CF:54:LEU:HD21	2.08	0.89
24:BC:20:ASN:HD21	24:BC:22:GLU:HG2	1.36	0.89
40:BS:96:ILE:HD12	40:BS:96:ILE:C	1.92	0.89
31:BJ:44:TYR:HD2	38:BQ:63:ARG:HD3	1.28	0.89
1:AA:1279:G:N3	1:AA:1279:G:H2'	1.85	0.89
34:DM:36:VAL:HG21	34:DM:129:THR:HG22	1.51	0.89
8:CH:68:LYS:HD3	8:CH:69:ALA:N	1.86	0.89
5:CE:28:ARG:HG2	5:CE:29:ILE:N	1.88	0.89
42:BU:5:ARG:HH21	42:BU:5:ARG:CG	1.84	0.89
28:DG:106:LEU:HB2	28:DG:108:PHE:HE1	1.34	0.89
22:BA:153:U:O2'	22:BA:154:U:H5'	1.72	0.89
22:DA:127:A:N7	50:D2:46:LYS:HE3	1.88	0.89
22:DA:861:A:H2'	22:DA:862:G:H8	1.36	0.89
2:AB:58:LYS:NZ	2:AB:62:ARG:HG3	1.87	0.89
25:BD:110:THR:HG23	25:BD:171:THR:HG22	1.53	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:110:SER:O	26:BE:113:VAL:HG12	1.73	0.89
1:AA:642:A:O2'	1:AA:643:C:H5'	1.73	0.89
38:BQ:93:ILE:HG23	38:BQ:94:LEU:N	1.86	0.89
22:DA:1056:G:H1'	22:DA:1103:A:N6	1.88	0.89
22:DA:164:C:O2'	22:DA:165:A:H5'	1.72	0.89
22:DA:1913:A:H4'	22:DA:1914:C:OP1	1.70	0.89
25:BD:106:LYS:N	25:BD:106:LYS:HD2	1.87	0.89
34:DM:36:VAL:HG22	43:DV:82:TYR:HB2	1.54	0.89
22:DA:1611:C:O2'	22:DA:1612:C:H6	1.55	0.89
1:AA:1202:U:O2'	1:AA:1203:C:H5'	1.72	0.89
4:AD:145:ARG:HH11	4:AD:147:LYS:HE3	1.36	0.89
22:BA:1056:G:O2'	22:BA:1086:A:H1'	1.73	0.89
25:DD:49:GLN:HE21	25:DD:79:LEU:HB3	1.37	0.89
34:DM:8:LYS:HA	34:DM:8:LYS:HE3	1.53	0.89
1:CA:239:U:H5'	1:CA:239:U:H6	1.37	0.88
40:BS:66:ILE:HD13	40:BS:67:ASP:N	1.88	0.88
24:BC:106:PRO:HB3	24:BC:141:HIS:HE1	1.35	0.88
45:DX:53:LYS:HA	45:DX:56:ARG:CB	2.04	0.88
12:AL:43:LYS:HB2	12:AL:44:PRO:CD	2.03	0.88
1:CA:91:U:HO2'	1:CA:92:U:H6	1.17	0.88
1:CA:1454:G:O2'	1:CA:1455:G:H5''	1.72	0.88
31:BJ:25:LEU:HD22	31:BJ:26:GLY:N	1.88	0.88
17:AQ:45:VAL:HG21	17:AQ:60:ILE:CD1	2.03	0.88
1:AA:184:G:O2'	1:AA:185:U:H6	1.56	0.88
1:CA:1175:G:O2'	1:CA:1176:A:H5'	1.72	0.88
3:AC:134:LYS:HE3	3:AC:138:GLN:HE22	1.38	0.88
29:DH:3:VAL:HG12	29:DH:38:PRO:HA	1.55	0.88
2:CB:128:LEU:HB3	2:CB:131:LYS:HB3	1.53	0.88
33:BL:110:VAL:O	33:BL:111:ILE:HB	1.71	0.88
28:BG:126:THR:HG22	28:BG:127:GLN:N	1.88	0.88
6:CF:86:ARG:HH11	18:CR:63:TYR:HB3	1.28	0.88
21:CU:16:ARG:HG3	21:CU:19:LYS:HG2	1.53	0.88
1:CA:199:A:O2'	1:CA:200:G:H5''	1.72	0.88
1:AA:1157:A:H1'	1:AA:1181:G:N2	1.88	0.88
22:DA:786:C:H2'	22:DA:787:C:H5'	1.55	0.88
22:BA:1348:C:H2'	22:BA:1349:C:H5'	1.53	0.88
22:DA:1469:A:H2'	22:DA:1470:A:H8	1.33	0.88
1:AA:1258:G:O2'	1:AA:1259:C:H6	1.55	0.88
22:DA:302:C:O2'	22:DA:303:G:H8	1.57	0.88
44:BW:23:LYS:O	44:BW:66:VAL:HB	1.73	0.88
37:BP:20:ARG:HD3	37:BP:112:ARG:NH1	1.89	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:36:VAL:HG22	10:AJ:76:ILE:CG1	2.03	0.88
7:CG:78:ARG:HA	7:CG:84:TYR:HB2	1.56	0.88
20:AT:4:LYS:HE2	20:AT:5:SER:HB3	1.53	0.88
41:BT:31:VAL:C	41:BT:32:LEU:HD23	1.94	0.88
1:CA:1372:U:H5''	9:CI:71:ILE:HD11	1.55	0.88
7:AG:26:VAL:HG12	7:AG:42:VAL:CG2	2.00	0.88
4:AD:117:VAL:CA	4:AD:122:ILE:HD11	2.03	0.88
34:DM:35:ALA:HB3	34:DM:99:GLY:N	1.88	0.88
1:CA:1499:A:O2'	1:CA:1500:A:H5'	1.72	0.88
1:AA:1025:U:H5''	1:AA:1026:G:H5'	1.54	0.88
24:BC:28:PRO:HG2	24:BC:33:LEU:HD11	1.54	0.88
37:BP:33:GLU:HG3	37:BP:34:GLY:H	1.38	0.88
22:DA:1673:G:H2'	22:DA:1674:G:H5'	1.55	0.88
24:DC:173:LEU:HD22	24:DC:173:LEU:H	1.35	0.88
10:CJ:84:VAL:HG23	10:CJ:85:ASP:N	1.88	0.88
27:BF:35:LEU:HB3	27:BF:153:ILE:HG22	1.53	0.88
26:DE:149:ILE:O	26:DE:188:MET:HA	1.73	0.88
1:CA:375:U:OP1	16:CP:70:ARG:HD3	1.73	0.88
22:DA:1237:A:C2	22:DA:1238:G:H1'	2.08	0.88
26:DE:129:PRO:HD3	26:DE:156:ASN:OD1	1.73	0.88
4:CD:29:THR:HG22	4:CD:30:LYS:CD	2.03	0.88
20:AT:82:ILE:O	20:AT:86:ALA:HB3	1.72	0.88
5:CE:104:ILE:N	5:CE:122:VAL:H	1.71	0.88
35:DN:37:THR:HB	35:DN:40:LYS:HB2	1.54	0.88
7:CG:4:ARG:NH2	7:CG:6:ILE:HB	1.89	0.88
17:CQ:58:VAL:HB	17:CQ:74:LEU:HD11	1.56	0.88
40:BS:43:ALA:HA	40:BS:46:LEU:HD12	1.54	0.88
23:BB:45:A:O2'	23:BB:46:A:H5'	1.73	0.88
22:DA:2069:G:O2'	22:DA:2070:A:H5'	1.73	0.88
31:BJ:110:PRO:HB2	31:BJ:111:LYS:HG3	1.56	0.88
1:AA:1021:A:H2'	1:AA:1022:A:C5'	2.02	0.88
11:CK:74:LYS:HA	11:CK:78:ILE:HD11	1.55	0.88
22:DA:1754:A:OP1	37:DP:93:LYS:HE3	1.73	0.88
1:AA:184:G:HO2'	1:AA:185:U:H6	1.01	0.88
22:BA:784:G:C6	24:BC:227:VAL:HG11	2.07	0.88
2:AB:36:LYS:HA	2:AB:36:LYS:HE3	1.53	0.88
1:CA:531:U:H5''	1:CA:532:A:OP1	1.74	0.88
37:DP:86:LYS:HA	37:DP:86:LYS:NZ	1.87	0.88
22:BA:990:A:H5'	22:BA:990:A:C8	2.08	0.88
42:DU:59:GLU:C	42:DU:60:LYS:HD2	1.94	0.88
22:BA:2540:C:C2'	22:BA:2541:A:H5'	2.03	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:29:ILE:HG23	14:AN:34:ASN:ND2	1.87	0.88
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.09	0.88
12:CL:19:ASN:H	12:CL:19:ASN:HD22	1.16	0.88
1:CA:674:G:H4'	18:CR:69:TYR:CD1	2.09	0.88
22:DA:2136:G:H2'	22:DA:2137:U:H5	1.38	0.88
47:DZ:20:LYS:O	47:DZ:24:LEU:HD13	1.74	0.88
4:AD:145:ARG:NH1	4:AD:147:LYS:HE3	1.89	0.88
22:DA:1231:U:H2'	22:DA:1232:G:C8	2.08	0.88
17:CQ:58:VAL:CG1	17:CQ:74:LEU:HD11	2.04	0.88
22:BA:2207:C:H2'	22:BA:2208:C:H6	1.39	0.88
24:DC:122:ALA:HB3	24:DC:127:ASN:HD22	1.39	0.88
2:AB:139:GLU:O	2:AB:143:LEU:HD23	1.73	0.88
46:BY:31:GLN:HG2	46:BY:37:LEU:HB2	1.52	0.88
5:AE:152:VAL:HB	5:AE:155:LYS:HZ2	1.08	0.88
5:AE:155:LYS:HD2	5:AE:156:ARG:H	1.35	0.88
1:AA:430:A:HO2'	1:AA:431:A:H5'	1.12	0.88
24:BC:80:LEU:HD11	24:BC:109:LEU:HG	1.53	0.88
22:DA:2053:G:H2'	22:DA:2054:A:O4'	1.72	0.88
22:DA:1307:A:H62	22:DA:1606:C:H6	1.14	0.88
47:DZ:6:ILE:HD12	47:DZ:47:ILE:HD11	1.56	0.88
41:DT:87:LEU:HD23	41:DT:88:LYS:N	1.89	0.88
3:AC:166:TRP:H	3:AC:166:TRP:HE3	1.17	0.88
22:DA:873:C:H4'	34:DM:64:TRP:HE1	1.37	0.88
1:AA:653:U:O2'	1:AA:654:G:H5'	1.72	0.88
22:DA:2493:U:H3'	22:DA:2494:G:H5''	1.54	0.88
33:BL:110:VAL:HG11	33:BL:131:ALA:HB1	1.56	0.88
22:DA:297:G:H5''	42:DU:84:PHE:HB2	1.55	0.88
1:CA:962:C:O2'	1:CA:963:G:H8	1.57	0.88
22:DA:2713:U:H3'	22:DA:2714:G:C5'	2.04	0.88
1:CA:94:G:H4'	1:CA:95:C:OP1	1.71	0.88
3:CC:140:ALA:O	3:CC:145:ALA:HB3	1.74	0.88
1:CA:456:A:H2'	1:CA:457:G:C8	2.09	0.88
22:BA:2661:G:O2'	22:BA:2662:A:H5'	1.74	0.88
22:BA:357:C:H2'	22:BA:358:U:C6	2.09	0.88
22:BA:483:A:O2'	42:BU:56:GLY:HA2	1.73	0.88
25:DD:173:GLN:HA	25:DD:173:GLN:HE21	1.39	0.88
22:DA:2324:U:H5''	22:DA:2325:G:H5''	1.56	0.88
22:DA:921:C:C2'	22:DA:922:C:H5'	2.04	0.88
2:AB:40:ILE:HG13	2:AB:41:ASN:H	1.39	0.88
22:DA:528:A:N1	22:DA:2042:A:H2'	1.88	0.88
1:CA:960:U:H4'	1:CA:961:U:C5'	2.03	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:77:HIS:HD2	31:BJ:79:GLY:N	1.71	0.88
24:DC:144:GLU:HA	24:DC:151:GLY:HA2	1.56	0.88
13:CM:13:HIS:HB2	13:CM:43:LYS:HE2	1.55	0.88
7:CG:100:MET:HE3	7:CG:100:MET:H	1.36	0.88
13:AM:19:THR:HA	13:AM:24:VAL:HG23	1.56	0.88
22:BA:1429:G:O2'	22:BA:1430:G:H5'	1.73	0.88
15:AO:9:LYS:O	15:AO:13:GLU:HG3	1.74	0.88
37:BP:9:GLN:HA	37:BP:12:MET:HG3	1.56	0.87
31:BJ:88:THR:CG2	31:BJ:91:GLU:HG3	2.04	0.87
22:BA:1056:G:H5''	22:BA:1057:A:H5'	1.54	0.87
7:CG:28:ILE:HG21	7:CG:100:MET:HG3	1.54	0.87
22:BA:1510:G:H2'	22:BA:1511:G:H8	1.39	0.87
5:AE:81:GLN:HG2	5:AE:149:PRO:CG	2.04	0.87
10:CJ:40:ILE:HG22	10:CJ:42:LEU:HD12	1.55	0.87
5:CE:28:ARG:HG2	5:CE:29:ILE:H	1.39	0.87
41:BT:15:HIS:HB3	41:BT:31:VAL:CG2	2.04	0.87
7:CG:63:VAL:HG11	7:CG:127:ALA:HB2	1.57	0.87
24:BC:246:PRO:HG2	24:BC:247:TRP:CH2	2.09	0.87
23:DB:30:C:H2'	23:DB:31:C:H5'	1.56	0.87
51:D3:41:ARG:CG	51:D3:41:ARG:HH21	1.87	0.87
34:BM:40:ARG:HB2	34:BM:93:VAL:CG2	2.05	0.87
1:AA:983:A:O2'	1:AA:984:C:H5'	1.74	0.87
1:AA:274:A:O2'	1:AA:275:G:H8	1.55	0.87
35:BN:12:ARG:HG3	35:BN:12:ARG:HH21	1.37	0.87
37:DP:50:ARG:HA	37:DP:57:ALA:O	1.74	0.87
22:DA:1387:A:N6	22:DA:1401:G:C6	2.41	0.87
1:AA:426:U:O2'	1:AA:427:U:H5'	1.73	0.87
1:CA:481:G:H4'	1:CA:482:A:OP1	1.74	0.87
31:DJ:73:VAL:HB	31:DJ:75:TYR:CE2	2.08	0.87
25:DD:114:LYS:HD2	25:DD:116:LYS:HZ2	1.37	0.87
1:AA:1381:U:O2'	1:AA:1382:C:H5'	1.73	0.87
1:CA:752:G:H1'	1:CA:754:C:N4	1.87	0.87
1:CA:245:U:O2'	1:CA:246:A:H5'	1.74	0.87
56:BA:3776:HOH:O	31:BJ:39:LYS:HE3	1.73	0.87
22:DA:1343:G:H2'	22:DA:1344:U:C5	2.09	0.87
1:AA:469:C:H2'	1:AA:470:C:C6	2.09	0.87
44:BW:40:ARG:HD3	44:BW:45:HIS:CE1	2.09	0.87
29:BH:8:LYS:O	29:BH:13:GLY:HA3	1.73	0.87
47:DZ:16:LEU:HD22	47:DZ:16:LEU:N	1.89	0.87
22:DA:2102:G:H2'	22:DA:2103:C:H5'	1.56	0.87
1:CA:844:G:O2'	1:CA:845:A:H5''	1.75	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:64:TRP:HZ3	34:BM:106:ASP:HB2	1.39	0.87
41:BT:70:HIS:HB2	41:BT:73:ARG:O	1.73	0.87
22:DA:1401:G:H2'	22:DA:1402:U:C5	2.09	0.87
22:DA:311:A:O2'	22:DA:332:A:H5'	1.75	0.87
39:DR:39:LEU:CA	39:DR:49:ILE:HG21	2.04	0.87
1:AA:267:C:O2'	1:AA:268:U:H5'	1.73	0.87
22:DA:1740:G:O2'	22:DA:1741:C:H5'	1.74	0.87
22:DA:616:A:HO2'	22:DA:617:G:H8	1.09	0.87
24:DC:122:ALA:HB3	24:DC:127:ASN:ND2	1.89	0.87
1:CA:818:G:O2'	1:CA:819:A:H5'	1.73	0.87
1:CA:571:U:H5''	1:CA:572:A:OP2	1.74	0.87
29:DH:78:VAL:HG11	29:DH:144:VAL:HG12	1.54	0.87
22:BA:1073:A:H3'	22:BA:1074:G:C5'	2.03	0.87
5:AE:153:ALA:CA	5:AE:156:ARG:HB2	2.03	0.87
22:DA:2800:A:C4	22:DA:2801:G:H1'	2.08	0.87
1:CA:519:C:O2'	1:CA:520:A:C5'	2.23	0.87
22:DA:1204:A:H4'	22:DA:1205:A:C5'	2.05	0.87
22:DA:1327:A:H2'	22:DA:1328:A:C8	2.09	0.87
41:DT:29:THR:H	41:DT:87:LEU:CB	1.88	0.87
27:DF:137:PHE:HB2	27:DF:138:PRO:HD2	1.57	0.87
22:BA:1627:G:H5'	22:BA:1627:G:H8	1.37	0.87
1:CA:113:G:H21	1:CA:353:A:H8	0.92	0.87
24:DC:67:LYS:HB3	24:DC:150:GLY:HA2	1.53	0.87
22:DA:1447:C:H2'	22:DA:1448:G:C8	2.09	0.87
25:BD:169:ARG:O	25:BD:170:VAL:HG13	1.75	0.87
32:BK:95:ILE:O	32:BK:95:ILE:HD12	1.73	0.87
24:DC:159:THR:O	24:DC:194:VAL:HG12	1.75	0.87
28:BG:8:VAL:CG1	28:BG:49:LEU:HB2	2.04	0.87
22:DA:2379:G:H2'	22:DA:2380:C:C6	2.10	0.87
23:DB:12:C:H4'	23:DB:13:G:OP1	1.73	0.87
22:DA:2624:G:N2	22:DA:2625:G:H1'	1.88	0.87
36:DO:27:VAL:HB	36:DO:38:GLN:HG3	1.57	0.87
22:DA:779:U:OP1	24:DC:48:ILE:HG13	1.74	0.87
23:DB:40:U:O2	23:DB:43:C:H2'	1.74	0.87
1:AA:224:U:O2'	1:AA:225:C:H5'	1.74	0.87
22:BA:1936:A:C2	22:BA:1943:U:H5	1.93	0.87
5:AE:156:ARG:O	5:AE:158:LYS:N	2.08	0.87
5:AE:81:GLN:H	5:AE:81:GLN:HE21	0.88	0.87
22:BA:1188:U:H2'	22:BA:1189:A:C5'	2.05	0.87
5:CE:104:ILE:H	5:CE:122:VAL:N	1.73	0.87
1:AA:996:A:C2	1:AA:1046:A:H5'	2.10	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:365:U:H5''	1:AA:366:A:OP1	1.75	0.87
1:AA:116:A:H2'	1:AA:117:G:H8	1.40	0.87
29:BH:82:SER:O	29:BH:83:LYS:HB2	1.75	0.87
33:BL:93:ASN:ND2	33:BL:94:THR:N	2.22	0.87
1:CA:1278:G:H4'	1:CA:1279:G:C5'	2.03	0.87
22:DA:727:A:H2'	22:DA:728:G:C8	2.10	0.87
22:DA:116:C:H5''	22:DA:128:C:H41	1.40	0.87
21:CU:39:LYS:N	21:CU:40:PRO:HD2	1.89	0.87
1:CA:1226:C:H5''	13:CM:94:LEU:HD21	1.57	0.87
4:AD:194:ILE:O	4:AD:194:ILE:HG13	1.74	0.87
1:AA:792:A:H4'	1:AA:793:U:O5'	1.73	0.87
37:BP:102:ARG:CB	37:BP:107:ALA:HB2	2.05	0.87
23:DB:65:U:H3'	23:DB:108:A:N6	1.90	0.87
14:AN:22:LYS:HG3	14:AN:23:ARG:N	1.90	0.87
22:BA:558:U:OP1	31:BJ:113:PRO:HG2	1.75	0.87
22:BA:2579:C:C2'	22:BA:2580:U:H5'	2.04	0.87
2:AB:132:GLU:O	2:AB:136:ARG:HB2	1.75	0.87
2:AB:108:GLN:H	2:AB:108:GLN:HE21	1.21	0.87
22:DA:2423:U:H5''	22:DA:2424:C:OP1	1.73	0.87
22:BA:1070:A:C2	30:BI:9:LYS:CG	2.58	0.86
4:CD:187:ARG:NH2	4:CD:191:SER:HA	1.90	0.86
1:CA:1125:U:C5	10:CJ:40:ILE:HG12	2.10	0.86
22:DA:739:A:O2'	22:DA:740:C:C5	2.28	0.86
42:DU:14:THR:HG23	42:DU:15:GLY:H	1.38	0.86
22:DA:2748:A:H1'	28:DG:66:THR:HG22	1.56	0.86
13:AM:89:ARG:CB	13:AM:96:VAL:HG22	2.04	0.86
1:CA:764:C:C2'	1:CA:765:G:H5'	2.04	0.86
32:DK:60:ALA:HA	32:DK:87:LEU:CD2	2.05	0.86
16:CP:1:MET:HA	16:CP:1:MET:HE3	1.56	0.86
23:DB:45:A:H2'	23:DB:46:A:C8	2.09	0.86
2:CB:119:GLN:HG3	2:CB:124:THR:HG21	1.57	0.86
22:BA:1062:G:OP1	22:BA:1070:A:H4'	1.75	0.86
16:CP:74:LEU:O	16:CP:78:VAL:HG23	1.74	0.86
22:DA:861:A:H2'	22:DA:862:G:C8	2.10	0.86
39:DR:39:LEU:HB3	39:DR:49:ILE:HD13	1.57	0.86
51:D3:3:ILE:HG22	51:D3:4:LYS:N	1.87	0.86
2:AB:100:LEU:HD12	2:AB:178:LEU:HD23	1.57	0.86
22:DA:2356:U:H4'	44:DW:16:GLU:HG3	1.57	0.86
44:DW:43:LYS:HD2	44:DW:79:ILE:HD11	1.56	0.86
22:BA:409:G:O2'	22:BA:410:G:H5'	1.74	0.86
33:DL:68:SER:O	33:DL:69:ARG:HB2	1.74	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:335:C:H2'	1:CA:336:A:C8	2.10	0.86
1:CA:238:A:C3'	1:CA:239:U:H5''	2.04	0.86
1:CA:451:A:H4'	1:CA:452:A:O5'	1.72	0.86
22:DA:1070:A:H5'	22:DA:1071:G:H5''	1.57	0.86
2:CB:103:TRP:CD1	2:CB:107:ARG:HB3	2.10	0.86
41:BT:29:THR:CG2	41:BT:86:THR:HG22	2.04	0.86
1:AA:1303:C:H2'	1:AA:1304:G:C8	2.11	0.86
43:BV:10:LYS:N	43:BV:10:LYS:HD3	1.87	0.86
1:CA:17:U:H2'	1:CA:18:C:C6	2.10	0.86
25:BD:34:VAL:HG22	25:BD:94:GLN:H	1.40	0.86
22:DA:1489:C:H4'	22:DA:1490:A:OP1	1.76	0.86
12:CL:79:ILE:HD12	12:CL:96:THR:HG21	1.54	0.86
1:AA:109:A:H2'	1:AA:326:G:N2	1.88	0.86
22:BA:2571:U:O2'	25:BD:151:THR:HG21	1.76	0.86
22:DA:92:U:H2'	22:DA:93:G:C8	2.10	0.86
41:DT:4:GLU:HG3	41:DT:6:ARG:HH21	1.38	0.86
44:BW:18:LYS:HG3	44:BW:19:ARG:N	1.85	0.86
1:CA:1048:G:H21	1:CA:1214:C:H5	1.20	0.86
22:DA:2136:G:H2'	22:DA:2137:U:C5	2.09	0.86
25:DD:29:VAL:HB	25:DD:98:VAL:CG1	2.05	0.86
22:DA:1305:C:HO2'	22:DA:1306:C:H6	0.93	0.86
22:DA:1166:G:N2	22:DA:1184:U:H1'	1.90	0.86
1:AA:1234:C:C2'	1:AA:1235:U:H5'	2.05	0.86
4:CD:69:ARG:CG	4:CD:69:ARG:HH11	1.88	0.86
1:CA:559:A:H4'	1:CA:560:A:O5'	1.73	0.86
1:AA:116:A:H2'	1:AA:117:G:C8	2.10	0.86
1:AA:495:A:H4'	1:AA:496:A:O5'	1.75	0.86
1:CA:913:A:H4'	1:CA:914:A:O5'	1.73	0.86
28:DG:124:CYS:HB3	28:DG:130:ILE:HA	1.54	0.86
28:BG:83:THR:HA	28:BG:84:LYS:HZ1	1.36	0.86
1:CA:1142:G:H2'	1:CA:1143:G:C8	2.09	0.86
22:DA:2287:A:HO2'	22:DA:2288:A:H3'	1.37	0.86
22:DA:996:A:C4'	38:DQ:91:ARG:HD2	2.05	0.86
22:DA:1539:U:HO2'	22:DA:1540:G:H8	0.87	0.86
44:BW:46:ALA:HB3	44:BW:79:ILE:O	1.74	0.86
37:DP:52:ARG:NH1	37:DP:52:ARG:HG2	1.90	0.86
14:CN:66:THR:CG2	14:CN:82:LYS:HE3	2.06	0.86
10:AJ:57:VAL:HG22	10:AJ:58:ASN:N	1.88	0.86
1:CA:1348:U:H4'	9:CI:121:ARG:HG3	1.57	0.86
24:DC:239:PHE:HD1	24:DC:240:GLY:H	1.20	0.86
22:BA:2636:C:H2'	22:BA:2637:U:C6	2.09	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:24:VAL:HG23	5:CE:26:GLY:H	1.39	0.86
5:AE:152:VAL:HB	5:AE:155:LYS:HZ1	1.33	0.86
22:DA:858:G:H2'	22:DA:2268:A:N3	1.90	0.86
1:AA:1284:C:H2'	1:AA:1285:A:C8	2.10	0.86
22:DA:45:G:H5'	22:DA:46:G:H5'	1.57	0.86
34:DM:38:ARG:O	34:DM:126:ILE:HG21	1.76	0.86
1:AA:792:A:O2'	1:AA:794:A:N7	2.09	0.86
41:DT:29:THR:H	41:DT:87:LEU:HB2	1.40	0.86
1:CA:1005:A:C5	1:CA:1006:G:H1'	2.11	0.86
24:DC:94:LEU:HA	24:DC:100:ARG:HG2	1.57	0.86
22:DA:1965:C:H3'	22:DA:1966:A:H5''	1.54	0.86
15:AO:26:VAL:HG12	15:AO:30:LEU:CD1	2.06	0.86
39:BR:49:ILE:HB	39:BR:51:VAL:O	1.76	0.86
22:DA:2758:A:HO2'	22:DA:2759:G:H5'	1.41	0.86
22:BA:1779:U:C5	22:BA:1784:A:N7	2.43	0.86
2:CB:184:ALA:O	2:CB:199:ILE:HG12	1.74	0.86
7:AG:110:ARG:NH1	7:AG:122:GLU:HG2	1.90	0.86
22:DA:794:A:H2'	22:DA:795:C:H6	1.41	0.86
22:DA:1013:C:O2'	22:DA:1014:A:H5'	1.76	0.86
5:AE:29:ILE:HD12	5:AE:30:PHE:N	1.91	0.86
33:BL:110:VAL:HG12	33:BL:111:ILE:N	1.89	0.86
22:DA:765:C:H2'	22:DA:766:U:C6	2.11	0.86
22:DA:312:G:H5'	22:DA:331:C:O2'	1.74	0.86
1:CA:429:U:H1'	1:CA:430:A:H5''	1.57	0.86
4:CD:2:ARG:NH1	4:CD:2:ARG:HB2	1.91	0.86
1:AA:486:U:C2'	1:AA:487:A:H5'	2.05	0.86
23:DB:46:A:H2'	23:DB:47:C:C6	2.11	0.86
10:CJ:30:LYS:HG2	10:CJ:36:VAL:HG22	1.57	0.86
22:DA:873:C:H4'	34:DM:64:TRP:NE1	1.91	0.86
22:BA:272:A:HO2'	22:BA:273:G:H8	0.92	0.86
18:CR:22:TYR:HA	18:CR:57:ALA:HB1	1.58	0.86
22:BA:2063:C:H6	22:BA:2063:C:H5'	1.41	0.86
40:DS:4:ILE:HD12	40:DS:5:ALA:N	1.90	0.86
31:BJ:111:LYS:CD	31:BJ:112:GLY:N	2.33	0.86
12:CL:42:LYS:HD3	12:CL:43:LYS:NZ	1.89	0.86
1:CA:482:A:H2'	1:CA:483:C:C6	2.10	0.86
28:BG:137:LYS:HA	28:BG:140:ILE:CD1	2.06	0.86
1:CA:1239:A:H1'	1:CA:1241:G:C4	2.10	0.86
10:AJ:52:LEU:HD23	10:AJ:62:ARG:HG3	1.57	0.86
46:BY:9:LYS:NZ	46:BY:9:LYS:HA	1.91	0.86
1:CA:990:C:H2'	1:CA:991:U:O4'	1.74	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1716:U:HO2'	22:DA:1717:A:H8	0.90	0.86
44:BW:37:VAL:C	44:BW:38:ARG:HG2	1.95	0.86
22:DA:851:C:H2'	22:DA:852:U:C6	2.10	0.86
37:BP:50:ARG:CD	37:BP:51:ASN:N	2.14	0.86
1:CA:1285:A:H4'	1:CA:1286:U:OP1	1.76	0.86
22:DA:860:U:HO2'	22:DA:861:A:H8	0.88	0.86
22:DA:915:C:O2'	22:DA:916:G:H5'	1.75	0.86
26:BE:149:ILE:HD11	26:BE:172:ALA:HA	1.56	0.86
34:BM:1:MET:CE	34:BM:2:LEU:H	1.88	0.86
22:DA:2875:C:HO2'	22:DA:2876:G:H8	0.87	0.86
22:BA:2103:C:H2'	22:BA:2104:C:H5'	1.58	0.86
16:CP:16:PHE:CE2	16:CP:40:ASN:HB2	2.10	0.86
39:BR:80:ARG:C	39:BR:81:LYS:HD3	1.97	0.85
22:DA:1062:G:H22	22:DA:1077:A:H2	1.19	0.85
1:AA:1258:G:HO2'	1:AA:1259:C:H6	0.86	0.85
22:DA:2214:C:O2'	22:DA:2215:C:C5'	2.22	0.85
22:DA:1534:U:H6	22:DA:1538:G:N1	1.74	0.85
20:AT:43:LYS:HB3	20:AT:86:ALA:CB	2.06	0.85
35:DN:103:ARG:HB2	35:DN:110:MET:CG	2.06	0.85
20:CT:62:ALA:HA	20:CT:67:HIS:CE1	2.11	0.85
25:DD:34:VAL:HG12	25:DD:48:ILE:CD1	2.06	0.85
38:DQ:15:LYS:HE3	38:DQ:19:GLN:NE2	1.89	0.85
34:DM:76:LYS:NZ	34:DM:84:LYS:H	1.74	0.85
24:BC:67:LYS:HG2	24:BC:150:GLY:HA2	1.56	0.85
37:BP:3:ILE:HD13	37:BP:3:ILE:O	1.76	0.85
1:CA:202:G:HO2'	1:CA:468:A:H8	0.90	0.85
37:BP:50:ARG:HD3	37:BP:56:SER:HB2	1.55	0.85
16:CP:67:ILE:HD11	16:CP:75:ILE:CD1	2.06	0.85
22:DA:2267:A:N6	22:DA:2272:U:H3	1.73	0.85
44:DW:18:LYS:H	44:DW:36:ILE:CG1	1.88	0.85
22:DA:96:C:H4'	46:DY:41:HIS:CD2	2.11	0.85
42:DU:83:GLY:O	42:DU:93:ARG:HA	1.76	0.85
25:BD:97:SER:C	25:BD:99:GLU:HG2	1.96	0.85
22:DA:1537:G:O2'	22:DA:1538:G:H4'	1.75	0.85
22:BA:855:G:H21	44:BW:23:LYS:CG	1.88	0.85
22:BA:2353:G:H1'	44:BW:30:VAL:HG13	1.58	0.85
22:DA:1307:A:N6	22:DA:1606:C:H6	1.72	0.85
22:DA:1328:A:H2'	22:DA:1330:C:N4	1.91	0.85
22:DA:1616:A:H8	22:DA:1616:A:OP1	1.58	0.85
16:CP:48:GLU:HG3	16:CP:51:ARG:HE	1.39	0.85
22:BA:726:G:O2'	22:BA:727:A:P	2.32	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:29:ARG:HG3	38:BQ:29:ARG:HH11	1.40	0.85
22:DA:83:A:N6	22:DA:101:A:H5'	1.91	0.85
26:DE:133:LEU:O	26:DE:137:LYS:HB2	1.74	0.85
18:CR:72:ARG:H	18:CR:72:ARG:HE	1.18	0.85
32:DK:118:LEU:O	32:DK:120:PRO:HD2	1.76	0.85
1:AA:263:A:H2'	1:AA:264:C:C5	2.11	0.85
9:CI:51:LEU:HB2	9:CI:56:MET:SD	2.16	0.85
48:B0:33:SER:OG	48:B0:35:GLU:HG3	1.76	0.85
26:DE:44:ARG:HG3	26:DE:44:ARG:HH21	1.39	0.85
8:CH:93:LYS:N	8:CH:93:LYS:HD3	1.91	0.85
36:BO:40:ILE:HG12	36:BO:47:VAL:HG12	1.57	0.85
44:DW:9:THR:HG23	44:DW:10:ARG:HG3	1.56	0.85
22:DA:324:A:C2	22:DA:325:G:H1'	2.11	0.85
13:AM:95:PRO:HG3	13:AM:101:THR:HG22	1.57	0.85
22:DA:249:C:H5''	22:DA:2394:C:O2'	1.77	0.85
19:CS:40:PHE:HB3	19:CS:41:PRO:CD	2.06	0.85
1:CA:1343:G:H1'	9:CI:122:ARG:NH1	1.91	0.85
22:DA:387:U:H4'	22:DA:388:G:O5'	1.74	0.85
1:CA:729:A:H2'	1:CA:730:G:H8	1.42	0.85
23:BB:46:A:H2'	23:BB:47:C:C6	2.11	0.85
1:AA:198:G:HO2'	1:AA:199:A:H8	0.85	0.85
12:AL:34:THR:HG22	12:AL:35:ARG:NE	1.91	0.85
44:DW:37:VAL:HG12	44:DW:55:ASP:CB	2.04	0.85
10:CJ:15:HIS:CE1	10:CJ:68:ARG:HD3	2.11	0.85
31:BJ:77:HIS:HD2	31:BJ:79:GLY:H	0.90	0.85
22:BA:958:U:H5'	22:BA:958:U:C6	2.10	0.85
16:AP:79:ASN:O	16:AP:80:LYS:HB2	1.75	0.85
1:CA:1454:G:HO2'	1:CA:1455:G:H8	0.87	0.85
12:AL:72:ASN:OD1	12:AL:104:SER:HB3	1.76	0.85
1:CA:223:A:H2'	1:CA:224:U:H6	1.42	0.85
22:BA:1068:G:H2'	22:BA:1069:A:H5'	1.58	0.85
5:AE:153:ALA:HA	5:AE:156:ARG:CA	2.05	0.85
41:DT:14:PRO:O	41:DT:15:HIS:HB2	1.77	0.85
38:DQ:77:LYS:CE	38:DQ:116:LEU:HD21	2.06	0.85
22:DA:2378:A:H2'	22:DA:2379:G:C5'	2.05	0.85
22:DA:477:A:HO2'	22:DA:478:A:H8	0.88	0.85
22:DA:639:U:H2'	22:DA:640:C:H6	1.41	0.85
41:BT:18:GLU:HA	41:BT:18:GLU:OE2	1.73	0.85
22:DA:2094:A:O2'	22:DA:2095:A:H5''	1.77	0.85
22:BA:646:U:H3'	22:BA:647:G:H5''	1.58	0.85
22:DA:1092:C:H2'	22:DA:1093:G:H5'	1.58	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:335:C:HO2'	22:DA:336:C:H6	1.22	0.85
42:DU:14:THR:HG21	42:DU:64:ILE:HD11	1.58	0.85
2:CB:103:TRP:CH2	2:CB:156:LEU:HB3	2.11	0.85
4:CD:33:ILE:O	4:CD:35:GLN:HG2	1.75	0.85
39:DR:39:LEU:HA	39:DR:49:ILE:CG2	2.06	0.85
44:BW:40:ARG:HB2	44:BW:56:HIS:ND1	1.91	0.85
43:DV:77:VAL:HG23	43:DV:89:ILE:CG2	2.07	0.85
37:BP:61:ARG:HG2	37:BP:70:GLU:HG2	1.58	0.85
18:CR:39:VAL:HG13	18:CR:40:PRO:HD2	1.58	0.85
4:AD:195:ASN:O	4:AD:196:GLU:HG3	1.77	0.85
1:AA:1142:G:H2'	1:AA:1143:G:O4'	1.76	0.85
47:DZ:53:MET:O	47:DZ:54:VAL:HG13	1.76	0.85
32:BK:108:ARG:HH11	32:BK:108:ARG:CG	1.89	0.85
24:DC:94:LEU:HB2	24:DC:100:ARG:HD2	1.55	0.85
47:DZ:18:LYS:O	47:DZ:22:THR:HG23	1.77	0.85
22:BA:528:A:C2	22:BA:2043:C:H4'	2.12	0.85
22:BA:434:U:H4'	22:BA:435:C:OP1	1.74	0.85
5:AE:131:ASN:O	5:AE:135:VAL:HG12	1.77	0.85
1:AA:1128:C:O2'	1:AA:1129:C:H5'	1.76	0.85
1:AA:1129:C:C5'	9:AI:17:ARG:HH22	1.89	0.85
1:CA:522:C:H41	12:CL:49:ARG:HH22	1.21	0.85
22:DA:310:A:O2'	22:DA:311:A:H8	1.60	0.85
32:BK:18:ARG:HG3	32:BK:18:ARG:HH11	1.40	0.85
40:DS:95:ARG:O	40:DS:96:ILE:HG22	1.76	0.85
1:CA:951:G:H2'	1:CA:952:U:C6	2.12	0.85
37:DP:109:ILE:O	37:DP:110:LYS:HG3	1.77	0.85
7:AG:61:PHE:CE1	7:AG:65:LEU:HD22	2.11	0.85
1:AA:484:G:H4'	1:AA:485:U:O5'	1.76	0.85
22:BA:303:G:H2'	22:BA:304:U:C6	2.12	0.85
2:CB:164:ASP:HB3	2:CB:167:HIS:HB3	1.59	0.85
22:DA:279:A:N6	22:DA:361:G:H1'	1.92	0.85
24:BC:33:LEU:HD21	24:BC:62:ARG:HD3	1.57	0.85
44:BW:37:VAL:HG11	44:BW:55:ASP:HB2	1.57	0.85
4:CD:195:ASN:HB3	4:CD:197:HIS:CD2	2.12	0.85
31:BJ:111:LYS:HD3	31:BJ:112:GLY:H	1.04	0.85
22:DA:217:A:C2'	22:DA:218:A:C8	2.60	0.85
25:BD:174:SER:O	25:BD:175:LEU:HB2	1.75	0.85
21:CU:36:PHE:CD1	21:CU:40:PRO:HB3	2.12	0.85
22:DA:2023:C:HO2'	22:DA:2024:G:H8	1.23	0.85
22:DA:802:A:H2'	22:DA:803:U:C6	2.10	0.85
21:AU:36:PHE:HB3	21:AU:40:PRO:HD3	1.59	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:607:U:H5	22:DA:619:G:C5	1.95	0.85
1:AA:961:U:H2'	1:AA:962:C:H6	1.41	0.85
1:AA:198:G:O2'	1:AA:199:A:H8	1.59	0.85
22:BA:2790:U:H4'	22:BA:2791:G:OP1	1.75	0.85
24:DC:145:MET:HE2	24:DC:181:ARG:HH22	1.42	0.85
1:CA:1124:G:H4'	1:CA:1125:U:OP1	1.74	0.85
44:DW:17:ALA:O	44:DW:18:LYS:HB3	1.74	0.85
24:DC:16:VAL:HG11	24:DC:201:LEU:O	1.77	0.85
22:DA:329:G:O6	42:DU:16:LYS:HB2	1.76	0.85
41:DT:1:MET:HG2	41:DT:4:GLU:HA	1.59	0.85
1:AA:500:G:H2'	1:AA:501:C:C6	2.12	0.85
11:AK:124:LYS:HE3	21:AU:34:ARG:HG2	1.56	0.85
36:BO:88:LYS:CE	36:BO:116:GLN:HE21	1.89	0.85
22:DA:942:G:C2'	22:DA:943:A:H5'	2.07	0.85
10:AJ:57:VAL:CG2	10:AJ:58:ASN:H	1.90	0.85
19:AS:51:HIS:CD2	19:AS:53:GLY:H	1.95	0.85
25:DD:106:LYS:HB3	25:DD:206:ALA:HB3	1.55	0.85
1:CA:563:A:N3	1:CA:563:A:H2'	1.92	0.85
2:AB:89:PHE:HB3	2:AB:149:GLY:HA2	1.58	0.85
4:CD:84:ASN:HD22	4:CD:84:ASN:C	1.80	0.85
1:CA:1054:C:O2'	1:CA:1055:A:H5''	1.76	0.85
22:DA:2868:A:H2'	22:DA:2869:G:C8	2.12	0.85
22:BA:74:A:H4'	22:BA:75:G:O5'	1.75	0.85
1:CA:386:C:C5	1:CA:387:U:H5	1.95	0.84
21:CU:3:ILE:HG23	21:CU:18:PHE:HD1	1.41	0.84
22:DA:649:G:H2'	22:DA:650:C:H6	1.38	0.84
29:DH:90:LEU:CB	29:DH:123:ARG:HB3	2.07	0.84
1:AA:275:G:H2'	1:AA:276:G:H8	1.39	0.84
1:AA:939:G:H5'	7:AG:101:ARG:NH1	1.92	0.84
22:DA:2191:A:H5''	22:DA:2192:U:OP2	1.76	0.84
15:AO:29:ALA:HA	15:AO:84:LEU:HD21	1.59	0.84
26:DE:98:LYS:O	26:DE:99:LYS:HB2	1.77	0.84
22:DA:668:A:H2'	22:DA:670:A:H62	1.40	0.84
22:DA:95:A:H2'	22:DA:96:C:H5''	1.59	0.84
44:BW:40:ARG:HG2	44:BW:52:CYS:SG	2.17	0.84
1:AA:500:G:H5'	12:AL:120:ARG:HH12	1.42	0.84
6:CF:15:SER:OG	6:CF:58:HIS:HD2	1.59	0.84
22:BA:2352:A:C2	44:BW:30:VAL:HG11	2.12	0.84
22:DA:477:A:O2'	22:DA:478:A:H8	1.57	0.84
1:CA:764:C:H2'	1:CA:765:G:C5'	2.08	0.84
1:CA:78:A:H2'	1:CA:79:G:C8	2.12	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1735:A:O2'	22:DA:1736:U:H6	1.59	0.84
1:CA:752:G:H1'	1:CA:754:C:H41	1.39	0.84
22:BA:1885:A:H2'	22:BA:1886:U:C6	2.11	0.84
22:DA:1746:A:H2'	22:DA:1747:U:H6	1.40	0.84
22:DA:426:C:O2'	22:DA:427:U:H5'	1.77	0.84
22:DA:999:U:C2'	22:DA:1000:A:H5'	2.07	0.84
39:BR:24:LYS:HA	39:BR:94:THR:HG23	1.59	0.84
2:AB:32:GLY:HA3	2:AB:39:ILE:H	1.40	0.84
31:DJ:35:ARG:HH12	31:DJ:140:LEU:HD11	1.42	0.84
22:DA:1611:C:HO2'	22:DA:1612:C:H6	0.85	0.84
1:CA:1322:C:O2'	1:CA:1323:G:H5'	1.77	0.84
21:AU:19:LYS:HE2	21:AU:19:LYS:CA	2.07	0.84
31:BJ:124:VAL:HG23	31:BJ:125:TYR:N	1.87	0.84
8:AH:17:GLN:HE21	8:AH:71:VAL:HG23	1.42	0.84
40:BS:73:LYS:CE	40:BS:73:LYS:HA	2.00	0.84
22:DA:412:A:N6	22:DA:2412:A:O4'	2.10	0.84
22:DA:2425:A:H4'	22:DA:2426:A:O5'	1.75	0.84
1:AA:914:A:O2'	1:AA:915:A:H5'	1.77	0.84
22:DA:1956:U:O2'	22:DA:1957:C:H5'	1.77	0.84
14:CN:27:LYS:HB2	14:CN:45:LEU:CD2	2.08	0.84
22:DA:2271:G:H2'	22:DA:2272:U:H6	1.42	0.84
22:DA:1915:U:O2'	22:DA:1916:A:H5'	1.76	0.84
31:DJ:111:LYS:HB2	31:DJ:115:GLY:N	1.92	0.84
43:BV:10:LYS:NZ	43:BV:11:GLU:HG3	1.93	0.84
4:AD:11:SER:HA	4:AD:18:LEU:HD12	1.59	0.84
1:AA:1374:A:H2'	1:AA:1375:A:C8	2.13	0.84
22:DA:813:U:H2'	22:DA:814:C:H6	1.42	0.84
17:AQ:45:VAL:HG21	17:AQ:60:ILE:HD13	1.59	0.84
4:CD:53:GLN:HG2	4:CD:198:LEU:HD22	1.59	0.84
29:BH:125:THR:HG23	29:BH:126:GLY:H	1.41	0.84
5:AE:135:VAL:O	5:AE:139:THR:HG22	1.78	0.84
5:AE:155:LYS:CD	5:AE:156:ARG:H	1.89	0.84
1:AA:98:A:H2'	1:AA:99:C:C6	2.12	0.84
1:AA:16:A:O2'	1:AA:17:U:H5'	1.77	0.84
16:CP:4:ILE:HD12	16:CP:4:ILE:N	1.93	0.84
1:CA:142:G:C2	1:CA:143:A:H1'	2.11	0.84
1:AA:451:A:H4'	1:AA:452:A:O5'	1.77	0.84
32:BK:113:MET:SD	32:BK:116:ILE:HD11	2.17	0.84
37:DP:50:ARG:HB3	37:DP:57:ALA:N	1.89	0.84
1:CA:47:C:O2'	1:CA:48:C:H5'	1.77	0.84
48:B0:47:TYR:CE2	48:B0:52:LYS:HB2	2.11	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:53:A:O2'	23:BB:54:G:H5'	1.78	0.84
22:DA:915:C:H2'	22:DA:916:G:C8	2.12	0.84
44:BW:23:LYS:CD	44:BW:24:ARG:H	1.90	0.84
32:DK:21:CYS:HA	32:DK:41:ILE:HD12	1.59	0.84
17:AQ:18:LYS:CA	17:AQ:47:ASP:HB2	2.06	0.84
22:DA:491:G:H2'	22:DA:492:A:H8	1.42	0.84
1:CA:277:C:H2'	1:CA:278:G:H8	1.43	0.84
3:AC:142:ARG:HB3	3:AC:143:LEU:HD13	1.60	0.84
1:CA:821:G:H2'	1:CA:822:U:C6	2.12	0.84
42:DU:42:LYS:HD3	42:DU:57:ILE:HD12	1.59	0.84
22:DA:2216:G:HO2'	22:DA:2217:G:H8	0.88	0.84
1:CA:794:A:H2'	1:CA:795:C:C6	2.13	0.84
1:CA:951:G:H2'	1:CA:952:U:H6	1.40	0.84
42:BU:35:VAL:HG12	42:BU:38:ILE:HG12	1.57	0.84
22:DA:1654:A:O2'	22:DA:1655:A:H8	1.58	0.84
9:CI:23:GLY:H	9:CI:60:LEU:HA	1.42	0.84
22:BA:2138:G:H1	22:BA:2153:C:H42	1.23	0.84
22:BA:545:U:H2'	22:BA:546:U:C4'	2.07	0.84
22:DA:672:C:H5'	22:DA:672:C:H6	1.43	0.84
28:BG:60:GLY:O	28:BG:61:TRP:HB2	1.75	0.84
28:DG:175:LYS:O	28:DG:175:LYS:HD3	1.77	0.84
22:BA:2444:G:OP2	26:BE:63:LYS:HE2	1.75	0.84
28:BG:84:LYS:HE2	28:BG:84:LYS:N	1.93	0.84
2:AB:163:ILE:O	2:AB:185:ILE:HG12	1.78	0.84
23:DB:57:A:HO2'	23:DB:58:A:H8	0.84	0.84
1:CA:1165:U:H2'	1:CA:1166:G:H5'	1.60	0.84
1:AA:1003:G:N2	1:AA:1005:A:H5'	1.92	0.84
35:BN:36:THR:HG23	35:BN:37:THR:O	1.76	0.84
36:DO:23:ALA:O	36:DO:42:PRO:HG3	1.76	0.84
41:DT:10:VAL:HG23	41:DT:11:LEU:H	1.43	0.84
29:BH:31:VAL:HB	29:BH:32:PRO:CD	2.07	0.84
10:CJ:51:VAL:HB	14:CN:80:ARG:HB2	1.58	0.84
27:BF:131:VAL:CG2	27:BF:151:LEU:HD12	2.07	0.84
27:BF:132:ARG:O	27:BF:133:GLU:HB3	1.74	0.84
32:BK:19:VAL:HG22	32:BK:41:ILE:HG13	1.57	0.84
16:AP:37:GLY:HA2	16:AP:51:ARG:NH1	1.92	0.84
13:CM:68:LEU:HD22	13:CM:69:ARG:HH11	1.41	0.84
1:AA:1409:C:O2'	1:AA:1410:A:H5'	1.76	0.84
5:AE:103:GLY:O	5:AE:104:ILE:HG22	1.77	0.84
1:CA:1143:G:C2'	1:CA:1144:G:H8	1.91	0.84
26:DE:130:LYS:HB3	26:DE:133:LEU:CB	2.07	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:89:LYS:HD2	29:DH:124:THR:HA	1.58	0.84
22:DA:604:G:HO2'	22:DA:605:G:H8	1.25	0.84
17:CQ:4:ILE:HG22	17:CQ:5:ARG:N	1.92	0.84
35:DN:71:ARG:HB2	35:DN:71:ARG:NH2	1.92	0.84
33:DL:92:LEU:CD2	33:DL:124:GLY:HA3	2.07	0.84
24:DC:106:PRO:HB3	24:DC:141:HIS:CE1	2.12	0.84
37:BP:50:ARG:CD	37:BP:56:SER:CB	2.55	0.83
8:AH:48:PHE:O	8:AH:49:LYS:HB2	1.75	0.83
41:DT:44:LYS:O	41:DT:48:GLN:HG2	1.78	0.83
22:DA:1210:G:H5''	22:DA:1211:C:H3'	1.57	0.83
38:DQ:61:ILE:CD1	38:DQ:92:LYS:HD3	2.04	0.83
1:AA:545:C:C5'	4:AD:68:GLU:HG3	2.07	0.83
1:AA:548:G:H2'	1:AA:549:C:C6	2.13	0.83
6:CF:61:LEU:HD13	6:CF:62:MET:N	1.93	0.83
2:AB:163:ILE:HG23	2:AB:164:ASP:N	1.92	0.83
22:DA:1451:C:H42	22:DA:1461:C:H42	1.24	0.83
22:DA:2310:C:H2'	22:DA:2311:A:H5''	1.57	0.83
24:DC:64:VAL:HG11	24:DC:66:PHE:CZ	2.13	0.83
40:BS:82:MET:HG3	40:BS:98:LYS:HB2	1.57	0.83
9:AI:23:GLY:H	9:AI:60:LEU:HA	1.43	0.83
22:DA:867:C:HO2'	22:DA:868:U:H6	0.95	0.83
34:BM:35:ALA:O	34:BM:36:VAL:HG12	1.76	0.83
1:AA:924:C:H2'	1:AA:925:G:H8	1.42	0.83
7:CG:74:VAL:CG1	7:CG:140:VAL:HG13	2.03	0.83
22:DA:1139:G:O2'	22:DA:1140:C:H5'	1.77	0.83
47:BZ:15:ARG:NH1	47:BZ:15:ARG:HG3	1.90	0.83
22:DA:2517:C:HO2'	22:DA:2518:A:H3'	1.39	0.83
22:BA:957:C:H4'	22:BA:958:U:OP1	1.78	0.83
22:DA:1438:U:C4	22:DA:1439:A:H2	1.96	0.83
19:AS:4:LEU:HD22	19:AS:8:PRO:HA	1.58	0.83
32:DK:13:ASN:H	32:DK:13:ASN:ND2	1.74	0.83
22:BA:2092:U:H4'	22:BA:2093:G:O5'	1.78	0.83
22:BA:278:A:C2	22:BA:362:A:C8	2.67	0.83
34:BM:62:LYS:HD3	34:BM:64:TRP:CZ2	2.13	0.83
22:DA:2190:G:H5'	22:DA:2191:A:OP2	1.77	0.83
46:BY:17:GLU:HG3	46:BY:18:LEU:N	1.92	0.83
17:CQ:59:GLU:HB3	17:CQ:76:ARG:O	1.77	0.83
27:DF:147:ARG:O	27:DF:148:VAL:HG22	1.78	0.83
39:BR:9:GLY:C	39:BR:10:LYS:HD3	1.98	0.83
22:BA:1063:G:OP1	30:BI:76:ALA:CB	2.19	0.83
1:CA:1183:U:H3'	1:CA:1184:G:C5'	2.01	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:89:U:O2'	1:AA:90:C:H5''	1.77	0.83
38:DQ:61:ILE:HD11	38:DQ:92:LYS:CD	2.07	0.83
22:BA:923:G:H21	44:BW:23:LYS:HZ3	1.23	0.83
1:AA:545:C:H5'	4:AD:68:GLU:CG	2.08	0.83
6:CF:86:ARG:HD3	18:CR:63:TYR:O	1.78	0.83
44:BW:28:GLU:HB3	44:BW:31:LEU:CD2	2.07	0.83
22:DA:251:A:H4'	33:DL:47:ARG:NH2	1.93	0.83
21:AU:52:VAL:HG13	21:AU:53:LYS:N	1.92	0.83
22:BA:2311:A:H1'	27:BF:78:ILE:CD1	2.08	0.83
34:BM:2:LEU:CD2	34:BM:69:PRO:HD2	2.08	0.83
22:BA:1421:G:HO2'	22:BA:1422:G:H5'	1.40	0.83
32:BK:95:ILE:C	32:BK:95:ILE:HD12	1.98	0.83
34:DM:76:LYS:HZ3	34:DM:84:LYS:H	1.22	0.83
1:CA:1038:C:H2'	1:CA:1039:G:H8	1.43	0.83
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.12	0.83
22:DA:1339:G:H5'	22:DA:1393:A:N1	1.93	0.83
1:AA:431:A:O2'	1:AA:432:A:H5'	1.77	0.83
22:DA:82:U:C2'	22:DA:83:A:H5''	2.07	0.83
22:DA:91:A:O2'	22:DA:92:U:H5''	1.79	0.83
22:DA:454:A:H4'	22:DA:455:C:OP2	1.78	0.83
27:BF:43:ILE:HG22	27:BF:82:TYR:CD1	2.13	0.83
25:BD:104:VAL:HA	25:BD:106:LYS:NZ	1.94	0.83
38:DQ:4:LYS:HZ2	38:DQ:6:GLY:HA3	1.42	0.83
24:DC:147:PRO:CD	24:DC:184:GLU:HG3	2.02	0.83
27:BF:37:MET:HG2	27:BF:56:LEU:HG	1.58	0.83
22:DA:2303:G:H5'	27:DF:121:PHE:CE1	2.14	0.83
1:AA:1151:A:O2'	1:AA:1152:A:H5''	1.78	0.83
22:DA:867:C:O2'	22:DA:868:U:H6	1.60	0.83
1:CA:1172:C:O2'	1:CA:1173:U:H5'	1.79	0.83
22:BA:372:G:O4'	45:BX:60:LYS:HE3	1.77	0.83
26:DE:18:THR:HG22	26:DE:106:LYS:HE2	1.58	0.83
30:DI:104:GLN:HA	30:DI:107:GLU:CB	2.08	0.83
1:CA:366:A:O2'	1:CA:394:G:N2	2.11	0.83
22:DA:2267:A:H61	22:DA:2272:U:H3	1.27	0.83
9:AI:9:GLY:HA2	9:AI:80:HIS:CD2	2.14	0.83
49:B1:24:LYS:HE2	49:B1:52:LYS:CB	2.06	0.83
21:CU:16:ARG:HD2	21:CU:19:LYS:CE	2.07	0.83
22:DA:1432:G:O2'	22:DA:1433:A:H5'	1.77	0.83
1:AA:1314:C:OP2	19:AS:5:LYS:HD2	1.78	0.83
9:AI:40:ARG:CA	9:AI:44:ARG:HB3	2.08	0.83
1:AA:855:U:H2'	1:AA:856:C:H6	1.44	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:13:ARG:HG2	4:AD:55:ARG:HH21	1.42	0.83
1:CA:106:C:O2'	1:CA:107:G:H5'	1.77	0.83
4:CD:125:ASN:ND2	4:CD:141:VAL:H	1.76	0.83
37:DP:48:ALA:HB3	37:DP:59:THR:OG1	1.78	0.83
29:BH:32:PRO:HB3	45:BX:38:TRP:CB	2.07	0.83
22:BA:1178:C:H2'	22:BA:1179:G:N7	1.94	0.83
35:DN:38:LEU:HB3	35:DN:39:PRO:HD3	1.59	0.83
6:AF:61:LEU:HD12	6:AF:62:MET:H	1.42	0.83
1:AA:1202:U:O2'	1:AA:1203:C:C5'	2.26	0.83
22:DA:1965:C:H2'	22:DA:1966:A:C8	2.13	0.83
1:CA:575:G:H4'	1:CA:576:C:O5'	1.75	0.83
2:CB:49:PHE:HA	2:CB:52:ALA:HB3	1.61	0.83
42:BU:93:ARG:NH1	42:BU:102:ILE:HD11	1.93	0.83
22:BA:2188:U:H2'	22:BA:2189:U:H6	1.43	0.83
45:BX:30:PRO:CB	45:BX:32:LEU:HD11	2.03	0.83
48:D0:46:GLY:HA2	48:D0:54:ILE:HD11	1.58	0.83
46:DY:20:ASN:ND2	46:DY:50:VAL:HG22	1.92	0.83
34:DM:27:SER:N	34:DM:66:ARG:NH2	2.27	0.83
32:DK:71:ARG:CG	32:DK:72:PRO:HD3	2.08	0.83
1:CA:982:U:H1'	1:CA:983:A:N7	1.94	0.83
31:DJ:64:VAL:HG22	31:DJ:68:LYS:HG3	1.58	0.83
1:AA:1007:U:C2'	1:AA:1008:U:H5''	2.07	0.83
31:BJ:56:VAL:HG12	31:BJ:57:LEU:N	1.91	0.83
26:BE:23:PHE:CD1	26:BE:111:GLU:HG3	2.14	0.83
38:DQ:34:ALA:O	38:DQ:38:VAL:HG23	1.78	0.83
36:BO:15:ARG:HG3	36:BO:15:ARG:HH11	1.44	0.83
9:AI:100:ALA:HB1	9:AI:102:PHE:CE2	2.12	0.83
44:BW:9:THR:HG22	44:BW:10:ARG:NH1	1.94	0.83
22:DA:1278:C:O2'	35:DN:27:SER:HB3	1.79	0.83
1:CA:496:A:N3	1:CA:496:A:H2'	1.92	0.83
1:CA:1328:C:H5''	13:CM:27:THR:HG21	1.61	0.83
12:CL:42:LYS:CD	12:CL:43:LYS:HG2	2.08	0.83
24:DC:16:VAL:N	24:DC:203:VAL:HG12	1.93	0.83
22:DA:1809:A:C2	22:DA:1810:A:C5	2.66	0.83
1:CA:547:A:H4'	1:CA:548:G:O5'	1.77	0.83
8:AH:77:VAL:HG23	8:AH:126:CYS:HA	1.59	0.83
51:D3:3:ILE:CG2	51:D3:4:LYS:H	1.91	0.83
1:CA:1304:G:H1'	1:CA:1333:A:N6	1.92	0.83
12:AL:34:THR:HG22	12:AL:35:ARG:HE	1.39	0.83
27:BF:127:TYR:O	27:BF:128:SER:HB2	1.78	0.83
28:BG:35:THR:C	28:BG:36:LEU:HD22	1.98	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2758:A:H2'	22:BA:2759:G:H5'	1.59	0.83
5:AE:79:THR:HB	5:AE:121:ASN:ND2	1.93	0.83
33:BL:30:THR:O	33:BL:33:ARG:HG2	1.78	0.83
33:BL:77:ILE:CD1	33:BL:108:ALA:HB1	2.09	0.83
35:DN:35:LYS:HG2	35:DN:112:TYR:CE1	2.14	0.83
11:CK:70:ALA:HA	11:CK:73:VAL:CG2	2.06	0.83
1:AA:1533:C:H3'	1:AA:1534:A:C5'	2.08	0.83
21:CU:38:GLU:N	21:CU:40:PRO:HD2	1.92	0.83
17:AQ:74:LEU:H	17:AQ:74:LEU:HD12	1.44	0.83
40:DS:8:ARG:O	40:DS:9:HIS:HB2	1.76	0.83
22:DA:637:A:H4'	22:DA:638:G:O5'	1.79	0.83
7:AG:38:ALA:O	7:AG:42:VAL:HG23	1.79	0.83
2:AB:67:LEU:HD21	2:AB:91:VAL:CG2	2.08	0.83
14:AN:46:LYS:HD2	19:AS:12:LEU:HD21	1.58	0.83
52:B4:10:LEU:HD12	52:B4:33:HIS:CD2	2.14	0.83
1:AA:299:G:H2'	1:AA:300:A:C8	2.12	0.83
1:CA:1450:U:H4'	1:CA:1451:U:C5	2.13	0.83
26:DE:75:SER:O	26:DE:78:TRP:HB2	1.79	0.83
25:DD:112:THR:HG22	25:DD:113:SER:N	1.94	0.83
22:DA:170:U:H2'	22:DA:171:U:H6	1.43	0.83
22:DA:1936:A:H2'	22:DA:1945:G:O6	1.79	0.83
22:DA:1808:A:N6	45:DX:27:ARG:HH11	1.77	0.83
38:BQ:85:ALA:O	38:BQ:87:VAL:O	1.96	0.83
28:BG:126:THR:HG22	28:BG:127:GLN:H	1.43	0.83
10:CJ:10:LEU:CD2	10:CJ:98:VAL:HG22	2.08	0.83
31:BJ:73:VAL:CG2	31:BJ:74:TYR:H	1.84	0.83
22:DA:558:U:H5''	31:DJ:111:LYS:HD2	1.60	0.83
52:D4:16:ILE:CG1	52:D4:25:VAL:HG22	2.06	0.83
8:CH:62:LEU:HD22	8:CH:62:LEU:H	1.41	0.83
51:D3:18:LYS:CD	51:D3:19:GLY:H	1.91	0.83
31:DJ:25:LEU:HD22	31:DJ:26:GLY:N	1.93	0.83
21:AU:39:LYS:N	21:AU:40:PRO:HD2	1.94	0.83
41:DT:29:THR:HB	41:DT:87:LEU:N	1.92	0.83
8:AH:74:ILE:HD12	8:AH:128:VAL:HG22	1.61	0.83
23:DB:65:U:H3'	23:DB:108:A:H61	1.44	0.83
22:BA:491:G:H2'	22:BA:492:A:H8	1.42	0.83
13:AM:2:ARG:O	13:AM:3:ILE:HG12	1.79	0.83
20:CT:4:LYS:HB3	20:CT:6:ALA:H	1.44	0.83
28:BG:33:THR:C	28:BG:34:ARG:HD3	2.00	0.83
24:DC:110:LYS:HB3	24:DC:113:ASP:OD2	1.79	0.82
22:DA:92:U:H2'	22:DA:93:G:H8	1.44	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:10:ALA:O	29:BH:12:LEU:N	2.12	0.82
7:CG:142:ARG:O	7:CG:146:ALA:HB3	1.79	0.82
5:AE:12:GLU:CB	5:AE:38:VAL:HG12	2.07	0.82
29:DH:97:ARG:O	29:DH:98:ASP:HB2	1.77	0.82
1:AA:107:G:H2'	1:AA:108:G:H5'	1.59	0.82
22:DA:2531:A:H5''	28:DG:156:TYR:CZ	2.13	0.82
1:AA:1055:A:H1'	3:AC:155:ARG:HH21	1.43	0.82
47:DZ:15:ARG:N	47:DZ:15:ARG:HD2	1.91	0.82
3:AC:76:ILE:HA	3:AC:83:VAL:HG23	1.59	0.82
26:DE:128:ALA:HB1	26:DE:129:PRO:CD	2.09	0.82
1:CA:1101:A:H4'	1:CA:1102:A:O5'	1.78	0.82
34:DM:42:THR:HG22	34:DM:44:ARG:N	1.92	0.82
38:DQ:87:VAL:HG11	39:DR:52:PRO:HG3	1.60	0.82
44:BW:28:GLU:CG	44:BW:29:SER:H	1.92	0.82
22:DA:2360:G:C1'	33:DL:60:ARG:HH21	1.92	0.82
3:CC:29:ALA:CB	14:CN:64:ARG:HH12	1.86	0.82
1:CA:1226:C:H41	13:CM:102:LYS:CA	1.90	0.82
2:CB:206:ILE:HA	2:CB:209:VAL:CG2	2.06	0.82
21:AU:3:ILE:HA	21:AU:19:LYS:HZ2	1.44	0.82
1:CA:17:U:H2'	1:CA:18:C:H6	1.44	0.82
13:CM:13:HIS:HB3	13:CM:16:ILE:HB	1.61	0.82
28:BG:33:THR:HA	28:BG:34:ARG:HH11	1.44	0.82
3:CC:41:TYR:HE1	3:CC:89:VAL:HG12	1.44	0.82
24:DC:52:HIS:NE2	24:DC:218:THR:HG23	1.94	0.82
11:AK:51:PHE:HE1	11:AK:60:PHE:HE2	1.28	0.82
3:CC:166:TRP:O	3:CC:167:TYR:HB2	1.77	0.82
2:AB:131:LYS:O	2:AB:135:MET:HB2	1.78	0.82
14:AN:60:ARG:O	14:AN:61:ASN:HB2	1.76	0.82
5:CE:48:GLY:HA3	5:CE:66:ALA:HB2	1.61	0.82
4:CD:187:ARG:HH21	4:CD:191:SER:CA	1.91	0.82
1:CA:1361:G:H2'	1:CA:1362:A:H5'	1.61	0.82
25:DD:51:THR:HG21	25:DD:75:ALA:O	1.79	0.82
22:DA:1962:C:H4'	22:DA:1963:U:OP1	1.77	0.82
22:BA:243:U:O2'	22:BA:244:A:H5'	1.79	0.82
28:DG:120:ILE:HG13	28:DG:140:ILE:HG22	1.60	0.82
22:BA:704:G:O2'	22:BA:726:G:N2	2.13	0.82
3:CC:18:ASN:HA	3:CC:55:VAL:HG12	1.61	0.82
22:DA:2143:C:H5'	22:DA:2144:G:OP2	1.79	0.82
1:AA:1083:U:H5''	1:AA:1086:U:H5	1.43	0.82
22:DA:2210:U:H4'	22:DA:2211:A:O5'	1.79	0.82
49:B1:49:LYS:O	49:B1:50:GLU:HB3	1.78	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:9:LEU:HD12	2:AB:42:LEU:CD1	2.04	0.82
22:BA:2352:A:C6	44:BW:30:VAL:HG11	2.14	0.82
42:DU:43:LYS:HE3	42:DU:45:GLN:CD	1.99	0.82
27:BF:11:VAL:CG1	27:BF:12:VAL:N	2.42	0.82
22:BA:2440:C:C6	22:BA:2440:C:H5'	2.12	0.82
12:AL:113:ARG:HB3	12:AL:118:VAL:HB	1.61	0.82
23:BB:109:A:O2'	23:BB:110:C:H5'	1.77	0.82
2:AB:127:LYS:HG3	2:AB:128:LEU:H	1.44	0.82
5:AE:155:LYS:HA	5:AE:158:LYS:HZ3	1.41	0.82
22:DA:2324:U:C5'	22:DA:2325:G:H5''	2.09	0.82
22:DA:2346:A:H3'	22:DA:2347:C:C5'	2.08	0.82
32:BK:18:ARG:N	32:BK:45:GLU:HB2	1.94	0.82
5:CE:76:ASN:O	5:CE:79:THR:HG22	1.79	0.82
41:BT:44:LYS:HG3	41:BT:55:VAL:HG11	1.61	0.82
1:AA:1314:C:O2'	1:AA:1315:U:H5'	1.78	0.82
1:CA:14:U:H3	1:CA:16:A:H5''	1.41	0.82
22:DA:1935:G:H1	22:DA:1962:C:H2'	1.44	0.82
26:BE:146:VAL:HG23	26:BE:167:VAL:CG2	2.09	0.82
27:BF:34:THR:CG2	27:BF:89:THR:HG23	2.09	0.82
22:DA:1453:A:C8	35:DN:73:ASN:HB3	2.13	0.82
22:BA:2800:A:C2	22:BA:2895:G:H1'	2.14	0.82
22:BA:1150:C:H2'	22:BA:1151:A:O5'	1.78	0.82
1:CA:530:G:H5''	1:CA:531:U:OP1	1.80	0.82
10:CJ:15:HIS:CA	10:CJ:18:ILE:HG22	2.07	0.82
22:DA:1288:G:C8	22:DA:1327:A:N6	2.48	0.82
20:AT:82:ILE:HD12	20:AT:83:ASN:N	1.93	0.82
22:DA:1245:G:H4'	26:DE:33:VAL:HG11	1.58	0.82
22:DA:638:G:H2'	22:DA:639:U:C6	2.15	0.82
27:DF:49:LEU:H	27:DF:49:LEU:HD22	1.43	0.82
32:DK:60:ALA:HA	32:DK:87:LEU:HD23	1.61	0.82
4:AD:117:VAL:N	4:AD:122:ILE:HD11	1.95	0.82
22:DA:1673:G:C2'	22:DA:1674:G:H5'	2.09	0.82
24:BC:165:ALA:HB3	24:BC:172:THR:HG23	1.60	0.82
18:AR:44:THR:OG1	18:AR:46:THR:HG22	1.79	0.82
25:BD:12:THR:HG23	25:BD:13:ARG:N	1.95	0.82
37:BP:50:ARG:HG2	37:BP:56:SER:C	1.99	0.82
1:AA:1130:A:H8	1:AA:1130:A:H5''	1.43	0.82
11:CK:88:PRO:HG3	21:CU:28:LEU:CD1	2.10	0.82
44:BW:49:ASN:HA	44:BW:61:LYS:HB2	1.61	0.82
40:DS:96:ILE:O	40:DS:96:ILE:HG23	1.80	0.82
39:DR:90:ARG:O	39:DR:91:GLN:HB3	1.79	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:78:VAL:HB	29:DH:144:VAL:HA	1.60	0.82
22:DA:590:A:H2'	22:DA:591:U:H6	1.43	0.82
37:BP:92:ARG:O	37:BP:93:LYS:HB2	1.79	0.82
37:BP:50:ARG:CD	37:BP:56:SER:HB2	2.10	0.82
22:BA:1073:A:C3'	22:BA:1074:G:C5'	2.57	0.82
26:DE:147:LEU:CG	26:DE:186:VAL:HG23	2.08	0.82
44:BW:18:LYS:HA	44:BW:36:ILE:HG13	1.58	0.82
1:CA:1372:U:C5'	9:CI:71:ILE:HD11	2.09	0.82
22:DA:1422:G:H4'	22:DA:1493:C:OP1	1.79	0.82
1:AA:977:A:H3'	1:AA:1362:A:N6	1.94	0.82
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.42	0.82
3:AC:153:SER:HB3	3:AC:164:THR:HG22	1.60	0.82
25:DD:187:LEU:HD12	25:DD:188:LEU:H	1.43	0.82
22:BA:2068:U:H5''	22:BA:2068:U:H6	1.44	0.82
31:BJ:44:TYR:HD1	31:BJ:44:TYR:O	1.58	0.82
22:BA:1061:U:H3'	22:BA:1062:G:H5''	1.61	0.82
22:DA:1056:G:C1'	22:DA:1103:A:H61	1.93	0.82
38:BQ:65:ASN:HD21	38:BQ:69:ARG:HH22	1.28	0.82
10:AJ:35:GLN:HG2	10:AJ:77:VAL:CB	2.09	0.82
29:DH:84:ALA:HB3	29:DH:148:ALA:CB	2.10	0.82
11:AK:124:LYS:HZ1	21:AU:33:ARG:HH21	1.25	0.82
7:CG:59:GLU:HG3	7:CG:60:ALA:N	1.93	0.82
12:AL:62:VAL:HG21	12:AL:94:TYR:CE2	2.14	0.82
32:DK:113:MET:O	32:DK:116:ILE:HG12	1.79	0.82
23:DB:88:C:OP2	23:DB:88:C:H3'	1.79	0.82
41:BT:73:ARG:NH2	41:BT:73:ARG:HB3	1.93	0.82
1:CA:106:C:C2'	1:CA:107:G:H5'	2.09	0.82
2:CB:146:SER:HB2	2:CB:147:LEU:HD12	1.61	0.82
7:CG:110:ARG:HG3	7:CG:111:GLY:H	1.45	0.82
22:BA:250:G:H2'	22:BA:251:A:C8	2.13	0.82
22:DA:874:G:H5'	22:DA:875:G:OP2	1.80	0.82
1:CA:1234:C:H4'	1:CA:1364:U:O2'	1.80	0.82
11:CK:106:ILE:HD11	11:CK:109:ILE:HD11	1.60	0.82
15:CO:25:GLU:HG2	15:CO:80:LEU:HG	1.60	0.82
22:BA:856:G:H1'	44:BW:23:LYS:HB3	1.60	0.82
22:DA:2612:C:O2	48:D0:1:ALA:HB2	1.80	0.82
11:AK:126:ARG:N	21:AU:33:ARG:HH22	1.78	0.82
27:DF:103:ILE:HA	27:DF:107:VAL:CG2	2.10	0.82
27:BF:134:GLN:HG2	27:BF:135:ILE:N	1.95	0.82
29:DH:80:ILE:HB	29:DH:101:ASP:OD2	1.80	0.82
16:AP:57:ILE:O	16:AP:61:VAL:HG23	1.79	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1706:C:H4'	22:DA:1707:G:OP2	1.77	0.82
2:CB:127:LYS:HE3	2:CB:132:GLU:HG3	1.62	0.82
6:AF:3:HIS:H	6:AF:92:THR:CG2	1.93	0.82
51:B3:61:LEU:HB3	51:B3:64:ALA:HB2	1.60	0.82
1:CA:948:C:H5''	13:CM:104:ASN:HB3	1.59	0.82
1:AA:1118:U:H2'	1:AA:1119:C:H6	1.45	0.81
40:BS:66:ILE:HA	40:BS:69:LEU:CD2	2.08	0.81
1:AA:1227:A:N3	1:AA:1227:A:H2'	1.93	0.81
1:AA:17:U:H2'	1:AA:18:C:C6	2.15	0.81
35:DN:73:ASN:HD22	35:DN:76:VAL:HG21	1.44	0.81
25:DD:124:ARG:HD3	25:DD:125:TRP:NE1	1.94	0.81
17:CQ:58:VAL:HB	17:CQ:74:LEU:CD1	2.10	0.81
1:CA:1168:U:H2'	1:CA:1168:U:O2	1.80	0.81
20:CT:2:ASN:N	20:CT:7:LYS:HZ3	1.77	0.81
24:BC:79:ARG:NH2	24:BC:92:LEU:HD22	1.94	0.81
37:BP:51:ASN:O	37:BP:52:ARG:HG2	1.80	0.81
22:BA:1069:A:O2'	22:BA:1070:A:H5''	1.79	0.81
10:CJ:84:VAL:CG2	10:CJ:85:ASP:H	1.93	0.81
22:DA:1069:A:N6	22:DA:1073:A:H5''	1.94	0.81
22:DA:338:G:H2'	22:DA:339:U:H5'	1.59	0.81
22:DA:67:U:H2'	22:DA:68:G:H8	1.45	0.81
52:D4:7:VAL:HG13	52:D4:8:LYS:N	1.93	0.81
22:DA:503:A:H4'	22:DA:504:A:O5'	1.80	0.81
1:AA:924:C:H2'	1:AA:925:G:C8	2.15	0.81
42:DU:47:PRO:HB3	42:DU:54:PRO:CG	2.10	0.81
27:BF:100:GLU:HG2	27:BF:104:THR:OG1	1.80	0.81
22:DA:1305:C:O2'	22:DA:1306:C:H6	1.62	0.81
24:BC:76:VAL:O	24:BC:76:VAL:CG2	2.27	0.81
22:DA:1965:C:H5'	22:DA:1966:A:H5''	1.62	0.81
1:CA:335:C:H2'	1:CA:336:A:H8	1.45	0.81
22:DA:2552:U:C2	22:DA:2554:U:H5'	2.15	0.81
39:DR:48:LYS:H	39:DR:48:LYS:HD2	1.42	0.81
49:D1:47:ILE:H	49:D1:47:ILE:HD12	1.43	0.81
24:BC:131:MET:HA	24:BC:134:ILE:HD12	1.59	0.81
38:BQ:63:ARG:HH22	38:BQ:96:ASP:CA	1.93	0.81
38:BQ:91:ARG:NH2	38:BQ:93:ILE:HD13	1.96	0.81
22:DA:1813:G:N3	24:DC:49:THR:HB	1.95	0.81
24:DC:35:LYS:HB3	24:DC:35:LYS:NZ	1.95	0.81
1:CA:1281:C:H5''	1:CA:1282:C:H5	1.44	0.81
22:DA:1346:G:O2'	22:DA:1347:A:C8	2.27	0.81
1:CA:373:A:H2'	1:CA:374:A:H8	1.45	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:15:VAL:HG22	24:DC:204:LEU:O	1.81	0.81
42:DU:35:VAL:HG12	42:DU:36:GLU:H	1.43	0.81
46:DY:2:LYS:HD2	46:DY:4:LYS:HE3	1.61	0.81
22:DA:79:C:H2'	22:DA:80:G:O4'	1.80	0.81
2:CB:99:MET:HA	2:CB:106:VAL:HG21	1.61	0.81
11:CK:92:ARG:HG3	11:CK:92:ARG:NH1	1.94	0.81
22:DA:1324:G:H1	22:DA:1330:C:N4	1.76	0.81
1:CA:972:C:O2'	10:CJ:57:VAL:HG23	1.80	0.81
25:BD:118:PHE:HD2	25:BD:119:ALA:H	1.28	0.81
35:DN:37:THR:HG22	35:DN:39:PRO:CD	2.05	0.81
36:BO:7:ARG:HG3	36:BO:96:GLY:HA3	1.60	0.81
37:DP:91:VAL:CG2	37:DP:109:ILE:HG21	2.00	0.81
27:DF:43:ILE:HG23	27:DF:44:ALA:H	1.44	0.81
6:AF:38:ARG:HG3	6:AF:39:LEU:N	1.94	0.81
31:BJ:124:VAL:O	31:BJ:125:TYR:HB2	1.78	0.81
20:CT:26:MET:HE3	20:CT:30:PHE:HD1	1.44	0.81
17:CQ:18:LYS:HD3	17:CQ:48:GLU:OE2	1.78	0.81
22:DA:614:A:H4'	22:DA:616:A:H62	1.45	0.81
22:BA:1287:A:OP2	35:BN:103:ARG:HG3	1.80	0.81
1:AA:563:A:H2'	1:AA:563:A:N3	1.94	0.81
13:CM:64:VAL:HG12	13:CM:65:GLU:HG3	1.61	0.81
18:AR:31:TYR:CD2	18:AR:54:LEU:HD21	2.16	0.81
4:CD:176:LYS:HG3	4:CD:178:GLU:CB	2.11	0.81
1:CA:332:G:H2'	1:CA:333:U:C6	2.15	0.81
2:AB:101:THR:HG22	2:AB:174:GLU:OE1	1.80	0.81
27:DF:65:LEU:HD11	27:DF:67:THR:HG22	1.59	0.81
22:DA:834:G:H1'	22:DA:2358:A:N3	1.96	0.81
22:DA:1447:C:H2'	22:DA:1448:G:H8	1.43	0.81
1:AA:1506:U:H3'	56:AA:1802:HOH:O	1.80	0.81
33:BL:74:THR:HG23	33:BL:107:PHE:HB2	1.62	0.81
1:AA:352:C:H6	1:AA:352:C:H5"	1.45	0.81
1:CA:701:U:H4'	1:CA:702:A:C5'	2.10	0.81
3:AC:129:PHE:CE2	3:AC:156:LEU:HD23	2.15	0.81
6:AF:11:HIS:HD2	6:AF:13:ASP:H	1.23	0.81
23:BB:88:C:H6	23:BB:88:C:H5'	1.44	0.81
1:CA:1128:C:H4'	1:CA:1148:U:H3	1.44	0.81
11:CK:44:ALA:HB3	11:CK:69:CYS:HB2	1.63	0.81
6:CF:2:ARG:HH21	6:CF:91:ARG:HB2	1.44	0.81
22:DA:660:C:H5"	26:DE:94:GLN:OE1	1.80	0.81
22:DA:2136:G:HO2'	22:DA:2137:U:H6	0.84	0.81
1:AA:865:A:H2'	1:AA:866:C:C6	2.15	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:144:GLU:HB3	24:DC:187:CYS:HB2	1.62	0.81
22:DA:413:C:H2'	22:DA:414:C:C6	2.15	0.81
35:BN:103:ARG:HB2	35:BN:110:MET:CE	2.10	0.81
6:AF:49:TYR:HE2	6:AF:51:ILE:HB	1.42	0.81
22:DA:810:U:O4	33:DL:30:THR:HG22	1.80	0.81
14:CN:89:ARG:HG3	14:CN:91:GLU:CG	2.10	0.81
22:DA:2552:U:O2	22:DA:2554:U:H5'	1.80	0.81
22:DA:2771:C:H2'	22:DA:2772:C:H6	1.45	0.81
1:AA:246:A:H4'	1:AA:247:G:OP1	1.80	0.81
22:BA:1110:G:O2'	22:BA:1111:A:H8	1.63	0.81
47:DZ:4:ILE:HD12	47:DZ:58:GLU:HA	1.61	0.81
14:AN:51:PRO:O	14:AN:52:ARG:HB2	1.80	0.81
45:DX:31:ASN:ND2	45:DX:31:ASN:H	1.79	0.81
3:AC:174:LEU:HD12	3:AC:174:LEU:O	1.79	0.81
22:BA:1248:G:OP2	26:BE:44:ARG:NH1	2.13	0.81
1:AA:556:C:C2'	1:AA:557:G:H5'	2.10	0.81
22:DA:85:G:O2'	22:DA:86:G:H5''	1.80	0.81
45:DX:2:ARG:HH21	45:DX:32:LEU:CD2	1.91	0.81
24:BC:16:VAL:H	24:BC:203:VAL:CG1	1.92	0.81
22:DA:249:C:H2'	22:DA:249:C:O2	1.80	0.81
51:D3:21:PHE:HB2	51:D3:49:VAL:HG13	1.62	0.81
12:AL:85:ARG:CZ	12:AL:87:LYS:HB3	2.11	0.81
36:BO:2:ASP:HB3	36:BO:5:SER:CB	2.10	0.81
22:DA:1474:U:C2'	22:DA:1475:G:H5'	2.10	0.81
8:AH:9:MET:CE	8:AH:32:LYS:HA	2.11	0.81
4:CD:77:GLU:O	4:CD:81:LEU:HD12	1.81	0.81
13:CM:11:HIS:N	13:CM:44:ILE:HD12	1.93	0.81
22:DA:2657:A:H2'	22:DA:2658:C:C6	2.16	0.81
1:CA:1329:A:H5''	13:CM:25:GLY:H	1.45	0.81
5:CE:44:ARG:HG2	5:CE:72:ASN:HA	1.61	0.81
43:BV:20:LEU:HD23	43:BV:25:LYS:HB2	1.62	0.81
42:DU:85:ARG:HE	42:DU:85:ARG:HA	1.45	0.81
22:BA:1078:U:H4'	22:BA:1079:C:H6	1.45	0.81
35:DN:92:GLY:H	35:DN:94:TYR:HE1	1.28	0.81
44:BW:28:GLU:HB3	44:BW:31:LEU:HD11	1.61	0.81
24:BC:15:VAL:HA	24:BC:203:VAL:HG11	1.62	0.81
22:DA:2360:G:H5''	22:DA:2361:G:OP2	1.79	0.81
10:AJ:19:ASP:HA	10:AJ:22:THR:HB	1.62	0.81
22:DA:1012:U:O4	31:DJ:30:THR:HG21	1.81	0.81
31:DJ:17:VAL:HG23	31:DJ:137:PRO:HB2	1.63	0.81
22:DA:2875:C:O2'	22:DA:2876:G:H8	1.63	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:23:LEU:HB2	12:AL:58:ASN:HD22	1.45	0.81
24:BC:251:THR:CG2	24:BC:252:LYS:H	1.91	0.81
1:AA:560:A:H5'	1:AA:566:G:N2	1.96	0.81
16:CP:38:PHE:HE2	16:CP:51:ARG:HB3	1.44	0.81
32:BK:10:VAL:CB	32:BK:16:ALA:HB1	2.11	0.81
36:DO:115:LEU:H	36:DO:115:LEU:HD13	1.44	0.81
22:DA:2893:A:H4'	22:DA:2894:G:O5'	1.79	0.81
36:BO:41:ALA:HB2	36:BO:48:LEU:HD21	1.63	0.81
1:AA:1468:A:H2'	1:AA:1469:C:H5'	1.61	0.81
1:CA:239:U:C6	1:CA:239:U:H5'	2.16	0.81
22:BA:1078:U:H4'	22:BA:1079:C:C6	2.16	0.81
10:CJ:5:ARG:CG	10:CJ:79:PRO:HG3	2.10	0.81
38:DQ:91:ARG:NH1	39:DR:10:LYS:HB3	1.96	0.81
21:AU:10:PRO:O	21:AU:11:PHE:HB3	1.78	0.81
35:BN:73:ASN:CA	35:BN:76:VAL:HG12	2.09	0.81
9:CI:27:ILE:HD13	9:CI:62:LEU:HB3	1.62	0.81
9:CI:24:ASN:O	9:CI:61:ASP:HA	1.80	0.81
20:CT:26:MET:CE	20:CT:56:ILE:HD13	2.11	0.81
1:CA:210:C:H2'	1:CA:210:C:O2	1.81	0.81
1:AA:496:A:H2'	1:AA:496:A:N3	1.94	0.81
8:AH:110:MET:HE2	8:AH:114:ALA:HB1	1.63	0.81
22:DA:870:U:H2'	22:DA:871:U:H5'	1.61	0.81
32:DK:28:SER:O	32:DK:29:HIS:HB2	1.78	0.81
22:DA:2776:A:H4'	22:DA:2777:G:O5'	1.80	0.81
1:CA:110:C:H2'	1:CA:111:G:C8	2.16	0.81
16:AP:48:GLU:HG3	16:AP:49:GLY:H	1.44	0.81
22:DA:5:A:C2	22:DA:2899:A:C2	2.69	0.81
31:DJ:127:GLY:O	31:DJ:129:GLU:HG3	1.79	0.81
22:BA:995:C:H5'	22:BA:995:C:H6	1.45	0.81
22:BA:1062:G:O2'	22:BA:1063:G:C8	2.34	0.81
45:BX:52:ALA:O	45:BX:53:LYS:HB2	1.79	0.81
5:AE:114:LEU:HD21	5:AE:122:VAL:CG2	2.11	0.81
22:DA:2283:C:O2'	22:DA:2284:A:H5'	1.81	0.81
22:DA:2353:G:H1'	44:DW:30:VAL:HG13	1.63	0.81
44:DW:28:GLU:H	44:DW:31:LEU:CD2	1.94	0.81
22:DA:304:U:O2'	22:DA:305:C:H6	1.63	0.81
42:DU:14:THR:HG23	42:DU:15:GLY:N	1.95	0.81
44:BW:17:ALA:HA	44:BW:35:ILE:HG23	1.60	0.81
1:CA:983:A:O2'	1:CA:984:C:H5'	1.81	0.81
22:DA:1024:G:H3'	22:DA:1025:G:C5'	2.06	0.81
17:CQ:4:ILE:CG2	17:CQ:5:ARG:H	1.94	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:59:GLU:OE2	7:CG:63:VAL:HG23	1.80	0.81
1:CA:1239:A:H5''	7:CG:118:ARG:HH12	1.46	0.81
27:DF:65:LEU:HG	27:DF:67:THR:HG23	1.62	0.81
20:CT:3:ILE:O	20:CT:4:LYS:HG2	1.80	0.81
22:BA:2393:U:H5'	33:BL:60:ARG:O	1.81	0.81
45:BX:35:HIS:HB3	45:BX:37:PHE:CE2	2.15	0.81
1:CA:1463:U:H2'	1:CA:1464:U:C6	2.15	0.81
11:CK:60:PHE:O	11:CK:64:VAL:HG13	1.80	0.81
44:DW:49:ASN:ND2	44:DW:81:ILE:HG23	1.94	0.81
22:DA:336:C:O2'	22:DA:337:C:H6	1.63	0.81
24:BC:106:PRO:O	24:BC:109:LEU:HD13	1.81	0.81
1:AA:214:C:H2'	1:AA:215:C:H6	1.46	0.81
32:DK:118:LEU:C	32:DK:120:PRO:HD2	2.01	0.81
26:BE:108:ILE:HD11	26:BE:180:LEU:CB	2.09	0.81
14:CN:60:ARG:HG2	14:CN:61:ASN:H	1.46	0.81
10:AJ:8:ILE:HG23	10:AJ:100:ILE:CG2	2.10	0.81
22:BA:1339:G:N2	22:BA:1603:A:H1'	1.96	0.81
7:CG:4:ARG:HD2	7:CG:5:VAL:H	1.44	0.81
35:BN:103:ARG:CD	35:BN:110:MET:HE3	2.11	0.81
23:BB:46:A:H2'	23:BB:47:C:H6	1.46	0.81
16:CP:16:PHE:HE2	16:CP:40:ASN:HB2	1.45	0.81
22:BA:1707:G:H2'	22:BA:1708:C:C6	2.15	0.81
31:BJ:12:LYS:O	31:BJ:13:ARG:HB2	1.80	0.81
39:BR:49:ILE:CB	39:BR:51:VAL:O	2.29	0.81
37:DP:88:ARG:HH11	37:DP:112:ARG:NH2	1.79	0.81
38:BQ:8:ILE:O	38:BQ:8:ILE:HD12	1.80	0.81
1:CA:962:C:N4	1:CA:974:A:H61	1.78	0.81
22:DA:2136:G:O2'	22:DA:2137:U:H6	1.64	0.81
22:DA:2733:A:O2'	22:DA:2734:A:H5'	1.81	0.81
1:AA:977:A:H3'	1:AA:1362:A:H62	1.45	0.81
14:AN:40:ARG:HH12	14:AN:44:VAL:CG2	1.93	0.81
22:DA:2311:A:H3'	22:DA:2312:U:H6	1.44	0.81
9:AI:44:ARG:HG3	9:AI:45:MET:HE1	1.63	0.81
29:DH:68:ARG:CD	29:DH:71:LYS:HD3	2.11	0.81
2:CB:164:ASP:CB	2:CB:167:HIS:HB3	2.11	0.81
25:DD:48:ILE:HG22	25:DD:84:LEU:HD23	1.63	0.81
7:AG:119:LEU:CD2	7:AG:123:LEU:HD23	2.10	0.81
22:DA:852:U:H2'	22:DA:853:C:C6	2.16	0.81
45:DX:31:ASN:HD22	45:DX:31:ASN:H	1.29	0.81
32:DK:27:GLY:HA3	32:DK:30:ARG:HD3	1.62	0.81
31:DJ:106:LYS:HE2	31:DJ:106:LYS:HA	1.63	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:105:THR:O	2:CB:108:GLN:HG2	1.81	0.81
25:BD:172:VAL:O	25:BD:173:GLN:HB2	1.80	0.81
11:CK:55:ARG:H	11:CK:55:ARG:HD2	1.44	0.81
22:BA:1159:U:C2'	22:BA:1160:G:H5'	2.10	0.80
1:AA:429:U:O3'	4:AD:8:LEU:HD23	1.81	0.80
49:D1:8:ILE:HD11	49:D1:52:LYS:HE3	1.63	0.80
22:DA:704:G:C2'	22:DA:726:G:H22	1.94	0.80
22:DA:1064:C:O2'	22:DA:1065:U:C5'	2.27	0.80
29:DH:27:ARG:NH1	45:DX:59:ASP:HA	1.96	0.80
39:DR:39:LEU:O	39:DR:40:MET:HB2	1.82	0.80
8:CH:52:GLY:HA3	8:CH:56:PRO:HA	1.60	0.80
20:CT:26:MET:HE3	20:CT:56:ILE:CD1	2.11	0.80
22:DA:1492:G:H3'	22:DA:1493:C:H5'	1.61	0.80
23:DB:109:A:HO2'	23:DB:110:C:H6	1.25	0.80
1:AA:1202:U:O4'	14:AN:68:ARG:HD2	1.80	0.80
22:BA:1286:A:H4'	22:BA:1287:A:OP1	1.78	0.80
29:DH:68:ARG:HH11	29:DH:68:ARG:CG	1.94	0.80
22:BA:2094:A:H4'	29:BH:25:TYR:CE1	2.16	0.80
1:CA:202:G:O2'	1:CA:468:A:H8	1.63	0.80
22:DA:2823:A:C5	22:DA:2824:C:C5	2.68	0.80
1:AA:646:G:H2'	1:AA:647:C:H5'	1.64	0.80
8:CH:45:ILE:C	8:CH:63:LYS:HD2	2.02	0.80
22:DA:2603:G:H4'	22:DA:2603:G:OP2	1.82	0.80
13:CM:52:ILE:HG13	13:CM:56:ARG:HH21	1.45	0.80
31:BJ:43:GLU:O	31:BJ:45:THR:HG23	1.81	0.80
5:AE:152:VAL:CB	5:AE:155:LYS:HZ2	1.92	0.80
1:AA:429:U:C3'	4:AD:8:LEU:HD23	2.11	0.80
1:AA:1130:A:H5''	1:AA:1130:A:C8	2.17	0.80
52:D4:19:ARG:O	52:D4:20:ASP:HB2	1.82	0.80
1:CA:1102:A:H2'	1:CA:1103:C:C6	2.16	0.80
12:AL:43:LYS:HZ3	12:AL:44:PRO:HD3	1.44	0.80
37:BP:87:ARG:NH1	37:BP:87:ARG:HG2	1.94	0.80
16:AP:28:ARG:HE	16:AP:29:ASN:ND2	1.79	0.80
22:DA:2024:G:O2'	22:DA:2025:C:H5'	1.81	0.80
20:AT:34:VAL:HG11	20:AT:78:LEU:HD22	1.63	0.80
19:AS:43:MET:O	19:AS:61:VAL:HG21	1.81	0.80
10:AJ:8:ILE:HG23	10:AJ:100:ILE:HG22	1.63	0.80
23:DB:13:G:H5''	23:DB:13:G:H8	1.45	0.80
22:DA:432:A:O2'	22:DA:433:C:H5'	1.81	0.80
15:CO:47:LYS:HD2	15:CO:47:LYS:H	1.46	0.80
28:DG:167:VAL:HG23	28:DG:168:VAL:H	1.46	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:48:GLU:CG	16:AP:49:GLY:H	1.93	0.80
1:AA:6:G:O6	5:AE:98:ALA:HB1	1.80	0.80
11:AK:106:ILE:O	11:AK:106:ILE:HD13	1.81	0.80
9:AI:119:LYS:HG3	9:AI:122:ARG:HB3	1.62	0.80
22:BA:1139:G:O2'	22:BA:1140:C:H5'	1.81	0.80
28:BG:120:ILE:HD13	28:BG:121:THR:N	1.96	0.80
22:DA:1388:G:O2'	22:DA:1389:G:H8	1.62	0.80
22:DA:2286:G:N7	49:D1:33:LEU:HD21	1.97	0.80
22:DA:2352:A:C6	44:DW:30:VAL:HG11	2.15	0.80
46:DY:4:LYS:H	46:DY:4:LYS:HD3	1.45	0.80
46:DY:17:GLU:HG3	46:DY:53:VAL:HG11	1.61	0.80
22:DA:1364:G:C8	45:DX:1:SER:HB2	2.16	0.80
1:AA:204:G:H1'	1:AA:465:A:C2	2.16	0.80
7:CG:74:VAL:HG11	7:CG:143:MET:HB2	1.63	0.80
22:DA:1996:C:H4'	22:DA:1997:C:OP1	1.78	0.80
1:CA:1202:U:H2'	1:CA:1203:C:C6	2.11	0.80
4:AD:121:ALA:C	4:AD:122:ILE:HD13	2.00	0.80
8:AH:9:MET:HE2	8:AH:32:LYS:HG2	1.62	0.80
30:DI:104:GLN:HA	30:DI:107:GLU:HB2	1.63	0.80
1:CA:157:U:O2'	1:CA:158:G:H5'	1.81	0.80
7:AG:100:MET:O	7:AG:104:VAL:HG23	1.80	0.80
16:CP:71:VAL:O	16:CP:74:LEU:HB2	1.80	0.80
22:DA:1533:C:C2'	22:DA:1534:U:H5'	2.11	0.80
44:BW:35:ILE:HG23	44:BW:35:ILE:O	1.79	0.80
11:AK:126:ARG:CA	21:AU:33:ARG:HH12	1.94	0.80
22:DA:1301:A:C8	22:DA:1303:G:C8	2.69	0.80
1:CA:279:A:C5'	1:CA:280:C:H3'	2.10	0.80
28:DG:117:PRO:HD2	28:DG:120:ILE:CG2	2.12	0.80
22:BA:1378:A:O2'	22:BA:1379:U:H3'	1.80	0.80
32:BK:91:SER:O	32:BK:93:GLN:HB2	1.81	0.80
8:AH:46:GLU:O	8:AH:47:ASP:HB3	1.80	0.80
4:AD:16:THR:HG22	4:AD:17:ASP:O	1.81	0.80
1:CA:1118:U:H1'	1:CA:1179:A:C4	2.16	0.80
43:DV:63:ILE:O	43:DV:70:ILE:HD11	1.82	0.80
1:AA:547:A:H4'	1:AA:548:G:O5'	1.82	0.80
28:BG:126:THR:HG22	28:BG:128:THR:H	1.45	0.80
17:AQ:51:GLU:HG2	17:AQ:52:CYS:SG	2.21	0.80
22:DA:1918:A:H4'	22:DA:1919:A:OP1	1.80	0.80
6:AF:86:ARG:HD2	18:AR:63:TYR:O	1.80	0.80
1:AA:1374:A:H2'	1:AA:1375:A:H8	1.45	0.80
4:CD:195:ASN:HB3	4:CD:197:HIS:NE2	1.97	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:110:SER:O	26:DE:113:VAL:HG12	1.80	0.80
22:BA:2813:A:H2	22:BA:2887:A:H61	1.25	0.80
22:BA:1417:C:O2'	22:BA:1418:G:H5'	1.81	0.80
36:DO:11:ALA:HB2	36:DO:96:GLY:N	1.96	0.80
22:DA:1340:U:OP1	22:DA:1340:U:H4'	1.81	0.80
22:DA:738:G:H2'	22:DA:739:A:C8	2.17	0.80
24:BC:106:PRO:CB	24:BC:141:HIS:HE1	1.95	0.80
51:D3:18:LYS:HD2	51:D3:19:GLY:H	1.47	0.80
22:DA:603:A:H4'	22:DA:604:G:O5'	1.80	0.80
26:DE:29:HIS:ND1	33:DL:6:LEU:HD22	1.96	0.80
5:CE:104:ILE:HA	5:CE:122:VAL:CG2	2.11	0.80
24:BC:20:ASN:HD22	24:BC:20:ASN:C	1.83	0.80
8:CH:93:LYS:H	8:CH:93:LYS:HD3	1.45	0.80
22:DA:1975:G:C5	22:DA:1976:U:C5	2.70	0.80
22:BA:1734:G:O2'	22:BA:1735:A:H8	1.64	0.80
7:AG:4:ARG:HA	7:AG:4:ARG:HE	1.46	0.80
28:BG:11:PRO:O	28:BG:14:VAL:HG22	1.82	0.80
22:DA:1645:G:OP1	22:DA:1646:C:H5'	1.82	0.80
30:DI:50:LYS:HE2	30:DI:50:LYS:HA	1.62	0.80
22:BA:2543:G:H8	22:BA:2543:G:H5'	1.47	0.80
22:DA:1401:G:O2'	22:DA:1402:U:H5'	1.80	0.80
13:AM:79:LEU:HD22	13:AM:86:ARG:HB2	1.64	0.80
11:CK:110:THR:HG22	21:CU:4:LYS:HA	1.63	0.80
22:DA:528:A:C2	22:DA:2042:A:H2'	2.16	0.80
1:CA:936:C:HO2'	1:CA:937:A:H8	1.26	0.80
41:BT:45:ALA:O	41:BT:48:GLN:HB2	1.82	0.80
17:CQ:68:LYS:O	17:CQ:69:THR:HG23	1.81	0.80
22:BA:1022:G:N2	22:BA:1142:A:C2	2.49	0.80
27:DF:30:VAL:HG12	27:DF:157:THR:CG2	2.10	0.80
1:CA:1533:C:H2'	1:CA:1534:A:H5''	1.63	0.80
22:BA:1253:A:H3'	22:BA:1254:A:H5''	1.62	0.80
46:DY:19:LEU:HA	46:DY:22:LEU:HB2	1.63	0.80
48:D0:42:ILE:HD11	48:D0:48:TYR:HB2	1.62	0.80
22:DA:84:A:C4	22:DA:103:A:N6	2.50	0.80
22:DA:455:C:N4	22:DA:472:A:H2'	1.96	0.80
40:DS:32:ALA:O	40:DS:33:LEU:HB2	1.80	0.80
1:CA:1218:C:O2'	1:CA:1219:A:C8	2.30	0.80
1:CA:960:U:O2'	1:CA:1223:C:H4'	1.82	0.80
22:DA:1022:G:H22	22:DA:1142:A:H2	1.30	0.80
7:CG:42:VAL:HG12	7:CG:43:TYR:HD2	1.46	0.80
1:CA:1240:U:O4'	7:CG:41:ILE:HD11	1.82	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2631:G:C2'	22:DA:2632:A:H5''	2.12	0.80
22:DA:2461:A:H1'	22:DA:2492:U:H3	1.46	0.80
39:DR:62:GLU:HB3	39:DR:97:LYS:HB3	1.64	0.80
51:B3:22:LYS:HA	51:B3:47:ALA:O	1.80	0.80
22:DA:487:C:C2'	22:DA:488:G:H5'	2.12	0.80
31:BJ:44:TYR:CD2	38:BQ:63:ARG:CD	2.65	0.80
12:CL:83:GLY:HA2	12:CL:94:TYR:CA	2.11	0.80
49:B1:7:LYS:HA	49:B1:23:THR:HG22	1.63	0.80
28:BG:140:ILE:N	28:BG:140:ILE:HD12	1.95	0.80
43:DV:70:ILE:HD13	43:DV:70:ILE:N	1.97	0.80
34:DM:66:ARG:HD2	34:DM:101:VAL:CG1	2.11	0.80
25:DD:146:ILE:HG13	25:DD:155:VAL:HG22	1.64	0.80
12:AL:85:ARG:HH21	12:AL:87:LYS:HD2	1.44	0.80
33:DL:117:THR:HG22	33:DL:118:THR:N	1.95	0.80
10:AJ:48:ARG:HG2	10:AJ:48:ARG:NH1	1.89	0.80
32:DK:17:ARG:HG2	32:DK:18:ARG:H	1.44	0.80
1:CA:77:A:H2'	1:CA:78:A:C8	2.17	0.80
8:AH:83:ARG:O	8:AH:84:ILE:HD13	1.82	0.80
22:DA:1656:C:C2'	22:DA:1657:U:H5'	2.12	0.80
52:B4:9:LYS:HB3	52:B4:14:CYS:HB3	1.64	0.80
2:CB:89:PHE:HB3	2:CB:149:GLY:O	1.82	0.80
37:BP:95:LYS:HG2	37:BP:97:TYR:CZ	2.16	0.80
39:BR:29:THR:O	39:BR:63:VAL:HG22	1.81	0.80
21:CU:53:LYS:HB2	21:CU:53:LYS:NZ	1.97	0.80
22:BA:1076:C:H2'	22:BA:1077:A:H8	1.46	0.80
41:DT:67:VAL:O	41:DT:68:LYS:HG3	1.82	0.80
2:AB:9:LEU:HD23	2:AB:11:ALA:N	1.97	0.80
8:CH:23:ALA:HA	8:CH:62:LEU:CD2	2.12	0.80
1:AA:486:U:H5''	1:AA:486:U:C6	2.17	0.80
1:CA:982:U:H1'	1:CA:983:A:C8	2.17	0.80
2:AB:185:ILE:HA	2:AB:199:ILE:HB	1.62	0.80
52:B4:37:GLN:O	52:B4:37:GLN:HG2	1.82	0.80
22:DA:1166:G:H22	22:DA:1184:U:H1'	1.44	0.80
22:BA:1277:G:H4'	35:BN:20:MET:HE2	1.64	0.80
1:CA:753:A:H4'	1:CA:754:C:O5'	1.82	0.80
40:BS:48:LYS:O	40:BS:52:GLU:HG3	1.81	0.80
22:DA:1833:C:C4	22:DA:1834:U:C4	2.70	0.80
37:BP:50:ARG:CG	37:BP:57:ALA:N	2.04	0.79
22:DA:915:C:H2'	22:DA:916:G:H8	1.47	0.79
22:DA:95:A:H1'	46:DY:40:SER:HB2	1.63	0.79
31:DJ:45:THR:H	31:DJ:46:PRO:CD	1.94	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:15:HIS:HE1	10:CJ:68:ARG:HD3	1.46	0.79
22:DA:2016:U:O2'	22:DA:2017:U:H5'	1.81	0.79
22:DA:192:C:H2'	22:DA:193:U:H5'	1.62	0.79
23:DB:94:A:OP1	43:DV:19:ARG:HD3	1.80	0.79
27:DF:48:LEU:HG	27:DF:49:LEU:HD22	1.63	0.79
1:CA:247:G:O6	1:CA:278:G:C6	2.35	0.79
42:DU:54:PRO:HG2	42:DU:55:GLY:H	1.47	0.79
22:DA:2195:U:O2'	22:DA:2196:C:H5'	1.82	0.79
32:BK:21:CYS:HB2	32:BK:39:ILE:HD11	1.61	0.79
19:AS:3:SER:O	19:AS:5:LYS:HG3	1.82	0.79
1:CA:166:U:H2'	1:CA:167:A:H5'	1.64	0.79
17:AQ:6:THR:O	17:AQ:7:LEU:HD12	1.82	0.79
47:BZ:40:THR:CG2	47:BZ:43:ILE:HG23	2.12	0.79
22:DA:999:U:O2'	22:DA:1000:A:H5'	1.82	0.79
16:CP:46:LYS:HE2	16:CP:47:GLU:N	1.96	0.79
23:BB:25:U:O2'	23:BB:26:C:H5'	1.82	0.79
22:BA:2816:G:O3'	35:BN:99:LYS:HE2	1.82	0.79
33:BL:27:LEU:N	33:BL:27:LEU:HD12	1.97	0.79
22:BA:2602:A:H4'	22:BA:2603:G:OP2	1.81	0.79
22:BA:2341:G:H2'	22:BA:2342:C:H6	1.48	0.79
5:AE:136:VAL:O	5:AE:136:VAL:HG22	1.81	0.79
1:CA:1148:U:O2'	1:CA:1149:C:H5'	1.82	0.79
22:DA:1359:A:C2	22:DA:1360:G:H1'	2.15	0.79
44:BW:23:LYS:CD	44:BW:24:ARG:N	2.44	0.79
22:BA:1998:A:OP2	25:BD:141:ARG:NH2	2.15	0.79
5:CE:29:ILE:CG2	5:CE:30:PHE:N	2.39	0.79
46:BY:57:LEU:HA	46:BY:60:LYS:CB	2.13	0.79
14:AN:40:ARG:NH1	14:AN:44:VAL:HG21	1.97	0.79
27:DF:28:PRO:CB	27:DF:168:LEU:HD21	2.11	0.79
17:CQ:58:VAL:CB	17:CQ:74:LEU:HD11	2.12	0.79
1:CA:1167:A:N7	1:CA:1169:A:N6	2.31	0.79
29:DH:1:MET:HE3	29:DH:23:ALA:HB2	1.64	0.79
28:BG:142:GLN:NE2	28:BG:142:GLN:HA	1.97	0.79
45:DX:20:ALA:O	45:DX:21:LEU:HB2	1.83	0.79
5:AE:104:ILE:O	5:AE:104:ILE:HG23	1.81	0.79
24:DC:173:LEU:N	24:DC:173:LEU:HD22	1.97	0.79
22:DA:1394:U:H3'	22:DA:1394:U:H6	1.47	0.79
30:DI:5:GLN:OE1	30:DI:59:THR:HG21	1.81	0.79
1:AA:548:G:H2'	1:AA:549:C:H6	1.48	0.79
22:DA:637:A:OP2	33:DL:112:LEU:HD22	1.82	0.79
41:DT:28:ASN:HB2	41:DT:87:LEU:HB3	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:144:GLU:HG3	24:DC:151:GLY:N	1.98	0.79
22:DA:240:C:H3'	22:DA:241:A:H5''	1.63	0.79
22:DA:989:G:H4'	22:DA:990:A:OP1	1.81	0.79
42:BU:5:ARG:HG2	42:BU:5:ARG:NH2	1.91	0.79
22:DA:2201:G:H2'	22:DA:2202:U:H6	1.48	0.79
22:BA:2327:A:H2'	22:BA:2328:A:C8	2.17	0.79
1:CA:1038:C:H2'	1:CA:1039:G:C8	2.16	0.79
4:AD:54:LEU:C	4:AD:54:LEU:HD23	2.03	0.79
32:BK:10:VAL:HB	32:BK:16:ALA:HB1	1.63	0.79
22:BA:1734:G:HO2'	22:BA:1735:A:H8	0.81	0.79
25:BD:140:HIS:NE2	56:BD:302:HOH:O	2.15	0.79
1:CA:1422:G:H5''	32:DK:48:PRO:HB3	1.64	0.79
25:DD:110:THR:OG1	25:DD:171:THR:HG22	1.82	0.79
38:BQ:111:LYS:HE2	39:BR:50:GLY:HA2	1.62	0.79
11:CK:126:ARG:HB2	21:CU:33:ARG:HD2	1.63	0.79
22:DA:1533:C:H2'	22:DA:1534:U:H5'	1.65	0.79
7:AG:12:LEU:HD22	7:AG:12:LEU:N	1.94	0.79
2:CB:46:VAL:HG13	2:CB:47:PRO:CD	2.11	0.79
1:CA:642:A:O2'	1:CA:643:C:H6	1.64	0.79
14:CN:52:ARG:HA	14:CN:52:ARG:NE	1.98	0.79
41:BT:40:LYS:CA	41:BT:43:ILE:HG23	2.12	0.79
4:AD:122:ILE:N	4:AD:122:ILE:HD13	1.97	0.79
35:BN:32:GLU:OE1	35:BN:118:ARG:HA	1.83	0.79
1:CA:663:A:O2'	1:CA:664:G:H5'	1.82	0.79
46:BY:5:GLU:O	46:BY:8:GLU:HB2	1.82	0.79
22:DA:1698:A:H1'	22:DA:1700:A:OP2	1.82	0.79
22:BA:2341:G:H2'	22:BA:2342:C:C6	2.17	0.79
22:DA:2902:C:H2'	22:DA:2903:U:O4'	1.81	0.79
22:BA:2021:C:P	48:B0:8:THR:HG21	2.23	0.79
22:DA:1197:G:H5'	22:DA:1227:G:O2'	1.82	0.79
36:BO:31:THR:HG23	36:BO:34:HIS:H	1.47	0.79
5:AE:155:LYS:H	5:AE:155:LYS:HD2	1.45	0.79
10:CJ:80:THR:O	10:CJ:84:VAL:HG22	1.82	0.79
26:DE:148:ILE:HA	26:DE:187:VAL:HB	1.65	0.79
22:DA:217:A:O2'	22:DA:218:A:C8	2.36	0.79
1:CA:413:G:C6	4:CD:32:LYS:HE3	2.17	0.79
5:CE:143:LEU:O	5:CE:144:GLU:HB2	1.81	0.79
48:B0:39:ARG:HG2	48:B0:40:HIS:ND1	1.97	0.79
35:DN:2:ARG:HD2	35:DN:2:ARG:O	1.83	0.79
1:AA:415:A:H2'	1:AA:416:G:H8	1.44	0.79
10:AJ:52:LEU:HD21	10:AJ:62:ARG:HE	1.45	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:73:ILE:HG21	34:BM:91:TYR:CZ	2.16	0.79
22:DA:1023:U:C6	22:DA:1023:U:H5'	2.17	0.79
6:CF:54:LEU:HD13	6:CF:55:HIS:H	1.48	0.79
12:AL:2:THR:HG22	12:AL:4:ASN:H	1.47	0.79
3:CC:113:LYS:HE3	3:CC:184:ASN:HD21	1.46	0.79
23:BB:45:A:H2'	23:BB:46:A:H8	1.46	0.79
22:BA:2813:A:H2	22:BA:2887:A:N6	1.80	0.79
29:BH:81:ALA:O	29:BH:102:ALA:HB2	1.80	0.79
22:DA:1107:G:H2'	22:DA:1108:U:H5'	1.63	0.79
41:DT:5:GLU:OE2	46:DY:18:LEU:HD21	1.81	0.79
1:CA:482:A:O2'	1:CA:483:C:H5'	1.83	0.79
16:CP:52:LEU:HD22	16:CP:78:VAL:HG21	1.65	0.79
22:DA:1275:A:N7	35:DN:16:HIS:HB2	1.98	0.79
14:CN:20:PHE:CA	14:CN:24:ALA:HB2	2.13	0.79
41:BT:61:LEU:C	41:BT:61:LEU:CD1	2.51	0.79
5:CE:131:ASN:O	5:CE:135:VAL:HG23	1.83	0.79
22:DA:241:A:H4'	22:DA:242:G:OP1	1.83	0.79
22:BA:35:G:C8	22:BA:35:G:H5'	2.15	0.79
3:CC:113:LYS:HG3	3:CC:184:ASN:ND2	1.97	0.79
32:BK:116:ILE:HD12	32:BK:117:SER:N	1.97	0.79
33:DL:119:PRO:HB3	33:DL:139:GLY:O	1.83	0.79
30:BI:53:PRO:HD2	30:BI:77:VAL:HG21	1.64	0.79
13:AM:28:ARG:O	13:AM:32:ILE:HG12	1.82	0.79
1:AA:125:U:C2'	1:AA:126:G:H5'	2.12	0.79
3:AC:71:ARG:O	3:AC:74:ILE:HG22	1.83	0.79
12:CL:34:THR:HG22	12:CL:35:ARG:HG2	1.63	0.79
15:AO:55:LEU:HD12	15:AO:55:LEU:O	1.82	0.79
7:AG:30:MET:HG2	7:AG:31:VAL:N	1.98	0.79
1:AA:807:A:H2'	1:AA:808:C:H6	1.48	0.79
33:BL:110:VAL:HG12	33:BL:111:ILE:H	1.48	0.79
28:BG:120:ILE:HD11	28:BG:132:LEU:HB2	1.63	0.79
22:DA:1387:A:C5'	22:DA:1469:A:H1'	2.12	0.79
1:CA:522:C:H41	12:CL:49:ARG:NH2	1.80	0.79
39:BR:51:VAL:HB	39:BR:52:PRO:HD2	1.64	0.79
16:AP:29:ASN:HD22	16:AP:29:ASN:N	1.79	0.79
29:BH:31:VAL:HB	29:BH:32:PRO:HD2	1.64	0.79
26:BE:189:THR:OG1	26:BE:191:ASP:HB3	1.81	0.79
22:DA:663:G:OP1	33:DL:17:LYS:HG2	1.82	0.79
1:AA:1234:C:O2'	1:AA:1235:U:H5'	1.83	0.79
32:DK:13:ASN:HD21	32:DK:97:THR:N	1.80	0.79
20:CT:23:ARG:HB3	20:CT:60:GLN:NE2	1.97	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:72:SER:HB2	27:BF:80:GLN:N	1.95	0.79
1:AA:1060:U:C5	3:AC:1:GLY:HA3	2.18	0.79
13:AM:106:ARG:HH21	13:AM:112:ARG:CB	1.96	0.79
32:DK:88:ASN:HB2	32:DK:91:SER:HB2	1.64	0.79
42:BU:15:GLY:O	42:BU:17:ASP:N	2.15	0.79
22:BA:529:A:H4'	22:BA:530:G:OP1	1.81	0.79
22:BA:2425:A:H5'	22:BA:2427:C:O4'	1.82	0.79
26:DE:112:LEU:HD12	26:DE:118:LEU:HD13	1.63	0.79
22:DA:1355:G:O2'	22:DA:1356:G:H5'	1.82	0.79
22:DA:2214:C:H2'	22:DA:2215:C:C6	2.18	0.79
22:DA:2361:G:OP1	51:D3:25:HIS:HA	1.83	0.79
29:DH:84:ALA:HB3	29:DH:148:ALA:HA	1.65	0.79
22:DA:604:G:O2'	22:DA:605:G:H8	1.65	0.79
29:DH:6:LEU:HD13	29:DH:36:ALA:CA	2.09	0.79
1:CA:940:C:H5'	7:CG:101:ARG:NH2	1.98	0.79
51:B3:26:ALA:O	51:B3:27:ASN:HB2	1.81	0.79
31:BJ:44:TYR:O	31:BJ:45:THR:HG22	1.83	0.79
22:DA:1345:C:OP2	22:DA:1345:C:H3'	1.83	0.79
6:CF:2:ARG:HG2	6:CF:4:TYR:CZ	2.18	0.79
40:DS:20:VAL:CG1	40:DS:43:ALA:HB1	2.12	0.79
40:DS:32:ALA:CA	40:DS:35:ILE:HD11	2.11	0.79
1:CA:78:A:H2'	1:CA:79:G:H8	1.48	0.79
33:DL:17:LYS:HZ3	33:DL:19:LEU:HD22	1.42	0.79
17:CQ:46:HIS:HB2	17:CQ:70:LYS:CE	2.13	0.79
1:CA:132:C:O2'	1:CA:133:U:H5'	1.83	0.79
2:CB:110:ILE:HD11	2:CB:150:ILE:HG23	1.64	0.79
22:BA:2093:G:O2'	22:BA:2094:A:H5'	1.82	0.79
24:DC:128:THR:HG22	24:DC:188:ARG:HB3	1.63	0.79
29:BH:94:ILE:HG21	29:BH:99:ILE:HG12	1.63	0.79
13:AM:47:LEU:HD23	13:AM:51:GLN:HB3	1.65	0.79
14:AN:47:LEU:HD23	14:AN:47:LEU:O	1.82	0.79
3:CC:120:THR:O	3:CC:120:THR:HG22	1.82	0.79
24:DC:181:ARG:HE	24:DC:265:PHE:HB2	1.48	0.79
22:DA:2882:A:C5'	35:DN:96:ARG:HD3	2.13	0.79
12:CL:98:ARG:HD3	12:CL:103:CYS:SG	2.22	0.79
24:BC:16:VAL:N	24:BC:203:VAL:CG1	2.46	0.79
1:AA:1239:A:H62	1:AA:1299:A:H62	1.25	0.79
1:AA:489:C:C2'	1:AA:490:C:H5'	2.12	0.79
38:BQ:4:LYS:NZ	38:BQ:8:ILE:HG23	1.98	0.79
1:AA:1124:G:H2'	1:AA:1145:A:H61	1.48	0.79
10:AJ:8:ILE:HD12	10:AJ:74:VAL:HG11	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:105:ILE:HD11	27:BF:138:PRO:HG2	1.65	0.79
1:AA:1158:C:H2'	1:AA:1158:C:O2	1.82	0.79
28:DG:104:LEU:HB3	28:DG:106:LEU:HD21	1.62	0.79
1:AA:654:G:H2'	1:AA:655:A:H8	1.47	0.79
45:BX:65:THR:O	45:BX:68:ALA:HB3	1.81	0.79
28:BG:3:VAL:O	28:BG:68:ARG:HG3	1.82	0.79
22:BA:915:C:H6	22:BA:915:C:H5''	1.45	0.79
1:AA:518:C:H2'	1:AA:530:G:C8	2.18	0.79
22:BA:2547:A:H2'	22:BA:2548:U:C6	2.17	0.79
22:DA:1794:A:H2'	22:DA:1795:C:H6	1.49	0.78
22:DA:1827:U:C4'	22:DA:1970:A:O2'	2.31	0.78
22:DA:79:C:H42	22:DA:107:G:H1	1.31	0.78
9:CI:113:LYS:HG3	9:CI:119:LYS:HA	1.63	0.78
5:CE:82:HIS:HB2	5:CE:83:PRO:HD2	1.64	0.78
22:DA:960:A:C2'	22:DA:962:G:H5'	2.11	0.78
33:BL:81:ASP:O	33:BL:82:LEU:CB	2.29	0.78
12:AL:33:CYS:HA	12:AL:53:ARG:O	1.82	0.78
20:AT:28:ARG:O	20:AT:32:LYS:HG2	1.83	0.78
20:AT:53:MET:O	20:AT:56:ILE:HG22	1.83	0.78
5:AE:29:ILE:HD12	5:AE:30:PHE:H	1.45	0.78
3:CC:41:TYR:HE1	3:CC:89:VAL:CG1	1.95	0.78
32:DK:27:GLY:HA3	32:DK:30:ARG:CD	2.12	0.78
18:CR:19:GLU:CD	18:CR:20:ILE:H	1.86	0.78
15:AO:16:ARG:HD3	15:AO:16:ARG:H	1.46	0.78
22:DA:287:G:O2'	22:DA:288:U:H5'	1.82	0.78
22:DA:2582:G:H2'	22:DA:2582:G:N3	1.97	0.78
34:BM:53:MET:O	34:BM:56:ALA:HB3	1.82	0.78
22:DA:1241:A:H5'	22:DA:1241:A:N3	1.99	0.78
32:BK:18:ARG:CB	32:BK:45:GLU:HG2	2.08	0.78
1:CA:1097:C:H2'	1:CA:1098:C:C6	2.17	0.78
1:AA:1298:U:H4'	1:AA:1299:A:O5'	1.82	0.78
1:AA:486:U:H6	1:AA:486:U:H5''	1.46	0.78
25:DD:141:ARG:HB3	25:DD:141:ARG:NH1	1.97	0.78
1:CA:87:C:O2'	1:CA:88:U:H4'	1.82	0.78
22:DA:2628:C:O2'	22:DA:2781:A:H2'	1.82	0.78
17:CQ:25:GLU:HA	17:CQ:39:ARG:O	1.83	0.78
22:BA:1414:C:C4	22:BA:1415:U:C5	2.72	0.78
22:DA:2019:A:H4'	38:DQ:33:VAL:HG21	1.64	0.78
47:BZ:1:ALA:O	47:BZ:3:THR:HG22	1.83	0.78
3:AC:52:SER:HB2	3:AC:111:ASP:OD2	1.83	0.78
22:DA:1931:U:H2'	22:DA:1932:A:H8	1.48	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:590:U:O2'	1:CA:591:U:H5'	1.83	0.78
22:DA:1521:G:C6	22:DA:1522:A:N6	2.51	0.78
26:DE:166:LYS:HE2	26:DE:166:LYS:HA	1.65	0.78
33:BL:91:ASP:H	33:BL:94:THR:CG2	1.95	0.78
22:DA:729:G:H3'	22:DA:730:A:C5'	2.13	0.78
22:DA:1060:U:O4'	22:DA:1061:U:H2'	1.83	0.78
49:B1:10:LEU:HD21	49:B1:33:LEU:HD23	1.65	0.78
41:BT:28:ASN:C	41:BT:91:GLN:HE22	1.85	0.78
22:DA:2244:U:H2'	22:DA:2245:U:O4'	1.83	0.78
17:AQ:11:VAL:HG12	17:AQ:12:VAL:HG12	1.65	0.78
22:DA:623:C:H2'	22:DA:624:C:H6	1.47	0.78
25:BD:118:PHE:O	25:BD:120:GLY:N	2.16	0.78
47:DZ:6:ILE:CD1	47:DZ:47:ILE:HD11	2.13	0.78
29:DH:80:ILE:HB	29:DH:101:ASP:HB2	1.63	0.78
28:DG:93:TYR:H	28:DG:93:TYR:HD2	1.30	0.78
27:DF:32:LYS:HB3	27:DF:156:THR:HB	1.63	0.78
6:AF:3:HIS:H	6:AF:92:THR:HG23	1.49	0.78
6:AF:92:THR:O	6:AF:93:LYS:HG2	1.83	0.78
3:AC:146:LYS:HB2	3:AC:202:PHE:CD2	2.18	0.78
1:CA:719:C:H3'	1:CA:720:C:C6	2.19	0.78
22:DA:2058:A:H5''	22:DA:2059:A:OP2	1.83	0.78
4:CD:104:MET:SD	4:CD:142:VAL:HG13	2.24	0.78
23:DB:50:A:C2	23:DB:51:G:H1'	2.19	0.78
11:AK:91:GLY:HA2	11:AK:94:SER:HB3	1.65	0.78
33:DL:73:ILE:O	33:DL:105:ILE:HA	1.84	0.78
22:BA:2707:U:O2	35:BN:71:ARG:NH1	2.17	0.78
22:BA:668:A:H2'	22:BA:670:A:H62	1.48	0.78
44:DW:37:VAL:CG2	44:DW:38:ARG:HH11	1.96	0.78
1:CA:32:A:H2'	1:CA:33:A:H8	1.42	0.78
22:DA:336:C:HO2'	22:DA:337:C:H6	0.81	0.78
22:DA:116:C:O2'	22:DA:117:G:H5'	1.83	0.78
22:DA:2214:C:H2'	22:DA:2215:C:H6	1.49	0.78
21:AU:7:GLU:HB2	21:AU:11:PHE:CE1	2.18	0.78
1:AA:1299:A:N3	1:AA:1299:A:H2'	1.98	0.78
32:DK:2:ILE:HB	32:DK:33:ALA:HB3	1.66	0.78
22:DA:2093:G:O6	22:DA:2225:A:C8	2.37	0.78
28:DG:88:LEU:HD13	28:DG:93:TYR:HB3	1.65	0.78
22:DA:674:G:O2'	26:DE:69:ARG:HG3	1.82	0.78
22:BA:277:G:H4'	22:BA:278:A:N7	1.98	0.78
22:DA:632:A:H5''	33:DL:68:SER:OG	1.84	0.78
36:BO:58:ILE:O	36:BO:59:ALA:HB2	1.82	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:202:LEU:HD22	4:CD:203:TYR:HE2	1.49	0.78
1:AA:154:U:O2'	1:AA:155:A:H5'	1.83	0.78
1:AA:986:U:H2'	1:AA:987:G:O4'	1.83	0.78
10:CJ:35:GLN:HG2	10:CJ:76:ILE:HG23	1.64	0.78
22:BA:284:U:H2'	22:BA:285:G:H8	1.46	0.78
30:BI:100:ILE:HG22	30:BI:101:SER:H	1.47	0.78
1:AA:232:G:O2'	1:AA:233:C:H5'	1.83	0.78
7:AG:68:VAL:HG21	7:AG:103:ILE:HD11	1.65	0.78
37:BP:80:VAL:HG12	37:BP:81:ASP:N	1.98	0.78
16:CP:52:LEU:HD23	16:CP:80:LYS:NZ	1.99	0.78
22:DA:762:U:H4'	22:DA:763:G:O5'	1.83	0.78
1:CA:33:A:O2'	1:CA:34:C:H5'	1.84	0.78
1:CA:1182:G:H4'	1:CA:1183:U:C5'	2.11	0.78
4:CD:2:ARG:HH21	4:CD:114:ARG:CD	1.96	0.78
44:BW:28:GLU:CB	44:BW:31:LEU:HD11	2.13	0.78
22:DA:1607:C:H4'	22:DA:1608:A:C8	2.18	0.78
1:CA:1218:C:HO2'	1:CA:1219:A:H8	0.79	0.78
1:AA:865:A:H2'	1:AA:866:C:H6	1.48	0.78
2:AB:130:LYS:HA	2:AB:130:LYS:NZ	1.99	0.78
36:BO:116:GLN:HA	36:BO:116:GLN:OE1	1.83	0.78
22:BA:1326:U:O2'	22:BA:1327:A:H5'	1.83	0.78
4:AD:170:LEU:N	4:AD:170:LEU:HD12	1.99	0.78
36:DO:18:LEU:HD13	36:DO:25:ARG:HG2	1.65	0.78
44:BW:37:VAL:HG13	44:BW:55:ASP:O	1.84	0.78
4:CD:115:GLN:HE21	4:CD:153:ARG:NH2	1.82	0.78
22:BA:1735:A:O2'	22:BA:1736:U:H5'	1.84	0.78
1:AA:536:C:O2'	1:AA:537:G:H5'	1.82	0.78
14:AN:92:ILE:HG21	14:AN:95:LEU:HD22	1.66	0.78
1:AA:1386:G:H2'	1:AA:1387:G:H8	1.48	0.78
30:BI:33:ASN:HB3	30:BI:36:GLU:HB2	1.66	0.78
28:DG:16:VAL:HG11	28:DG:44:HIS:CD2	2.18	0.78
22:BA:842:U:O4	56:BA:3583:HOH:O	2.02	0.78
28:BG:83:THR:HA	28:BG:84:LYS:CE	2.13	0.78
22:DA:1338:G:H4'	41:DT:18:GLU:CG	2.13	0.78
26:DE:147:LEU:HG	26:DE:186:VAL:HG23	1.65	0.78
1:AA:1533:C:C3'	1:AA:1534:A:H5''	2.13	0.78
22:DA:1809:A:O2'	22:DA:1810:A:C8	2.37	0.78
49:B1:9:LYS:O	49:B1:50:GLU:HG3	1.84	0.78
22:DA:2015:A:C4	48:D0:2:VAL:HG11	2.18	0.78
17:AQ:20:ILE:N	17:AQ:47:ASP:OD1	2.17	0.78
51:D3:15:LYS:HZ1	51:D3:19:GLY:HA2	1.46	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:52:VAL:CG1	21:AU:53:LYS:H	1.96	0.78
22:DA:2585:U:HO2'	22:DA:2586:U:H5'	1.48	0.78
1:CA:249:U:H5'	1:CA:250:A:OP2	1.84	0.78
22:DA:975:A:O2'	22:DA:976:G:C8	2.31	0.78
22:DA:674:G:OP1	26:DE:71:GLY:HA3	1.82	0.78
38:DQ:24:TYR:O	38:DQ:27:ARG:HB3	1.84	0.78
3:CC:41:TYR:CE1	3:CC:89:VAL:HG12	2.17	0.78
22:DA:1516:G:O2'	22:DA:1517:G:H5'	1.84	0.78
22:BA:662:G:H4'	33:BL:15:ALA:O	1.82	0.78
25:BD:1:MET:HG2	25:BD:205:PRO:HG2	1.64	0.78
35:BN:65:LEU:HD11	35:BN:69:ARG:NH2	1.99	0.78
1:AA:328:C:O2	1:AA:328:C:H2'	1.83	0.78
22:DA:1819:A:H4'	22:DA:1820:U:H5'	1.66	0.78
22:DA:1273:U:H4'	22:DA:1275:A:OP2	1.84	0.78
12:CL:107:LYS:O	12:CL:108:ASP:HB2	1.83	0.78
3:CC:110:LEU:O	3:CC:110:LEU:HD23	1.83	0.78
4:CD:2:ARG:NH2	4:CD:114:ARG:HD2	1.99	0.78
38:DQ:90:ASP:O	38:DQ:94:LEU:HB2	1.83	0.78
22:DA:2023:C:O2'	22:DA:2024:G:H8	1.66	0.78
2:AB:66:ILE:HB	2:AB:88:GLN:CB	2.14	0.78
1:CA:66:A:H2'	1:CA:66:A:N3	1.99	0.78
32:BK:43:ILE:CD1	32:BK:52:VAL:HG21	2.13	0.78
25:DD:159:LYS:HE2	25:DD:160:LYS:N	1.99	0.78
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.19	0.78
22:DA:1847:A:O2'	22:DA:1848:A:C8	2.36	0.78
39:BR:64:VAL:HG12	39:BR:64:VAL:O	1.81	0.78
31:DJ:36:LEU:HD12	31:DJ:121:LYS:HB2	1.64	0.78
22:DA:1815:A:H4'	22:DA:1816:C:OP1	1.82	0.78
35:DN:96:ARG:HG2	35:DN:98:LEU:HD13	1.65	0.78
24:BC:104:LEU:O	24:BC:105:ALA:HB2	1.83	0.78
10:CJ:12:ALA:HB3	10:CJ:18:ILE:HB	1.66	0.78
6:CF:92:THR:HG22	6:CF:94:HIS:N	1.96	0.78
1:CA:1316:G:N2	1:CA:1318:A:H3'	1.98	0.78
1:CA:1319:A:OP2	19:CS:4:LEU:HD21	1.84	0.78
4:CD:55:ARG:NH1	4:CD:55:ARG:HG3	1.81	0.78
2:AB:116:LEU:CD1	2:AB:140:LEU:HD11	2.14	0.78
21:AU:19:LYS:HE2	21:AU:19:LYS:N	1.99	0.78
25:DD:16:THR:CG2	25:DD:20:VAL:HB	2.14	0.78
29:DH:94:ILE:HG13	29:DH:98:ASP:CG	2.03	0.78
2:AB:106:VAL:O	2:AB:110:ILE:HD13	1.83	0.78
4:CD:115:GLN:HE21	4:CD:153:ARG:HH22	1.28	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:22:VAL:HG22	28:BG:36:LEU:CD1	2.14	0.78
3:CC:166:TRP:HE3	3:CC:166:TRP:H	1.31	0.78
25:DD:177:VAL:HG12	25:DD:187:LEU:HD11	1.65	0.78
40:BS:36:LEU:HD23	40:BS:48:LYS:HA	1.66	0.78
39:BR:60:LYS:H	39:BR:100:GLY:HA3	1.48	0.78
1:AA:596:A:H2'	1:AA:597:G:H8	1.48	0.78
10:AJ:91:ASP:C	10:AJ:92:LEU:HD23	2.04	0.78
27:DF:7:TYR:O	27:DF:8:LYS:HG3	1.83	0.78
4:AD:25:ARG:NH1	4:AD:30:LYS:HE3	1.97	0.78
1:CA:373:A:H5'	1:CA:373:A:H8	1.49	0.78
22:DA:1372:U:H2'	22:DA:1373:A:C8	2.18	0.78
22:DA:2211:A:OP2	22:DA:2211:A:H4'	1.82	0.78
2:CB:103:TRP:O	2:CB:107:ARG:HG2	1.83	0.78
38:BQ:69:ARG:CB	38:BQ:69:ARG:NH2	2.35	0.78
44:BW:50:VAL:O	44:BW:52:CYS:N	2.16	0.78
37:BP:112:ARG:C	37:BP:113:LEU:HD23	2.03	0.78
44:BW:30:VAL:HA	44:BW:60:ALA:HB3	1.66	0.78
22:DA:1261:C:H2'	22:DA:1262:A:H5''	1.66	0.78
22:DA:2502:G:H5'	22:DA:2503:A:H5''	1.65	0.78
12:AL:49:ARG:NH1	12:AL:49:ARG:HG2	1.89	0.78
1:CA:934:C:H4'	1:CA:935:A:OP1	1.82	0.78
33:DL:79:LEU:HA	33:DL:82:LEU:HD11	1.64	0.78
41:BT:32:LEU:N	41:BT:83:ALA:HB3	1.96	0.78
31:BJ:64:VAL:CG1	31:BJ:68:LYS:HB2	2.14	0.78
36:BO:31:THR:HG22	36:BO:34:HIS:O	1.82	0.78
9:CI:11:ARG:HD3	9:CI:106:ASP:OD1	1.82	0.78
28:DG:22:VAL:HG12	28:DG:23:ILE:H	1.49	0.78
22:BA:641:U:H5''	22:BA:642:U:OP2	1.84	0.78
32:BK:77:ILE:N	32:BK:77:ILE:HD12	1.99	0.78
40:DS:29:VAL:HG23	40:DS:69:LEU:O	1.84	0.78
22:BA:1438:U:O2'	22:BA:1439:A:H5'	1.84	0.78
4:AD:25:ARG:HH11	4:AD:30:LYS:HE3	1.48	0.78
26:DE:149:ILE:HG23	26:DE:188:MET:CB	2.13	0.78
22:DA:1693:U:H4'	22:DA:1694:C:OP2	1.82	0.78
41:DT:6:ARG:O	41:DT:9:LYS:HD2	1.83	0.78
22:DA:1542:U:O2'	22:DA:1543:G:H5'	1.84	0.78
22:BA:855:G:N3	44:BW:23:LYS:HD3	1.98	0.78
40:DS:20:VAL:HG23	40:DS:23:LEU:HD12	1.65	0.78
31:DJ:18:VAL:CG1	31:DJ:56:VAL:HA	2.14	0.78
22:DA:1738:G:HO2'	22:DA:1739:A:H8	1.32	0.78
10:CJ:26:VAL:O	10:CJ:30:LYS:HB3	1.84	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:42:ASP:HB3	20:CT:45:ALA:HB3	1.66	0.78
10:CJ:5:ARG:C	10:CJ:6:ILE:HD12	2.04	0.77
1:CA:374:A:H5''	1:CA:452:A:N1	1.99	0.77
44:DW:49:ASN:CG	44:DW:81:ILE:HG23	2.04	0.77
41:DT:3:ARG:HD2	41:DT:42:GLU:HG2	1.64	0.77
42:DU:36:GLU:O	42:DU:38:ILE:HD12	1.84	0.77
22:DA:379:G:C6	22:DA:396:G:O6	2.37	0.77
41:BT:26:LYS:O	41:BT:27:SER:HB2	1.84	0.77
1:AA:96:U:HO2'	1:AA:97:G:H8	1.32	0.77
28:BG:8:VAL:CG1	28:BG:9:VAL:N	2.46	0.77
31:DJ:59:ALA:O	31:DJ:62:VAL:HG12	1.84	0.77
24:BC:246:PRO:CG	24:BC:247:TRP:CZ3	2.66	0.77
31:BJ:88:THR:HG23	31:BJ:91:GLU:H	1.49	0.77
22:DA:794:A:H2'	22:DA:795:C:C6	2.19	0.77
1:AA:1469:C:H2'	1:AA:1470:U:H5'	1.67	0.77
36:DO:67:ASN:H	36:DO:70:ALA:HB3	1.48	0.77
4:AD:172:VAL:HG13	4:AD:173:ASP:N	1.99	0.77
22:BA:556:A:H5''	22:BA:557:C:OP2	1.84	0.77
1:AA:1016:A:C8	1:AA:1017:U:H1'	2.19	0.77
30:BI:3:LYS:HD2	30:BI:4:VAL:HG23	1.66	0.77
22:BA:1199:U:H2'	22:BA:1200:C:C6	2.18	0.77
4:CD:159:GLU:OE2	4:CD:160:LEU:HD22	1.84	0.77
1:CA:1387:G:H2'	1:CA:1388:C:H6	1.48	0.77
11:AK:81:LEU:HD22	11:AK:104:PHE:CD1	2.19	0.77
37:BP:83:ILE:HD13	37:BP:83:ILE:C	2.04	0.77
22:DA:1830:C:H5'	24:DC:14:HIS:HE1	1.49	0.77
22:DA:2887:A:H1'	48:D0:39:ARG:HH22	1.49	0.77
9:AI:88:GLU:HG3	9:AI:89:TYR:N	1.99	0.77
22:DA:82:U:H2'	22:DA:83:A:C5'	2.12	0.77
22:DA:1574:C:O5'	22:DA:1574:C:H6	1.66	0.77
22:DA:1808:A:C3'	22:DA:1809:A:H8	1.95	0.77
21:CU:35:GLU:O	21:CU:36:PHE:CD2	2.37	0.77
44:BW:51:GLY:HA3	44:BW:59:PHE:CE2	2.19	0.77
40:DS:20:VAL:HG11	40:DS:43:ALA:CB	2.13	0.77
19:CS:52:ASN:ND2	19:CS:54:ARG:HG2	1.99	0.77
22:DA:2135:A:C2'	22:DA:2136:G:H8	1.91	0.77
52:B4:9:LYS:C	52:B4:10:LEU:HD23	2.02	0.77
2:CB:89:PHE:CE2	2:CB:152:ASP:HB2	2.14	0.77
2:CB:131:LYS:O	2:CB:131:LYS:HE3	1.84	0.77
1:CA:820:U:H4'	1:CA:821:G:OP2	1.84	0.77
1:CA:821:G:H2'	1:CA:822:U:H6	1.48	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:79:ILE:HD12	12:AL:96:THR:HG21	1.65	0.77
22:DA:2142:A:H61	22:DA:2150:C:N4	1.81	0.77
22:DA:1248:G:O2'	38:DQ:2:ARG:HA	1.84	0.77
33:BL:68:SER:HB3	33:BL:71:ALA:HB2	1.64	0.77
22:BA:1073:A:H8	22:BA:1073:A:P	2.08	0.77
33:BL:110:VAL:CG1	33:BL:111:ILE:N	2.47	0.77
22:DA:2204:G:OP2	24:DC:149:LYS:HD2	1.84	0.77
44:DW:40:ARG:NH1	44:DW:40:ARG:HG2	1.87	0.77
22:DA:1830:C:H5'	24:DC:14:HIS:CE1	2.18	0.77
40:BS:66:ILE:C	40:BS:66:ILE:HD13	2.04	0.77
22:DA:2757:A:N1	28:DG:66:THR:HG21	1.99	0.77
1:CA:1102:A:O2'	1:CA:1103:C:H5'	1.84	0.77
34:DM:42:THR:HB	34:DM:45:GLN:CG	2.14	0.77
31:DJ:44:TYR:HB2	38:DQ:63:ARG:NH2	1.99	0.77
44:BW:40:ARG:H	44:BW:56:HIS:HB3	1.49	0.77
44:BW:28:GLU:OE2	44:BW:28:GLU:HA	1.84	0.77
1:CA:1380:U:H4'	1:CA:1381:U:OP1	1.84	0.77
22:DA:991:C:O5'	22:DA:991:C:H6	1.67	0.77
14:AN:40:ARG:NH1	14:AN:44:VAL:HG11	1.98	0.77
22:DA:2311:A:H5'	22:DA:2312:U:C5	2.20	0.77
16:AP:19:VAL:HG22	16:AP:36:VAL:CG1	2.14	0.77
22:DA:225:C:H2'	22:DA:226:A:O4'	1.83	0.77
50:B2:3:ARG:HG2	50:B2:3:ARG:NH2	1.97	0.77
33:DL:123:ARG:HG2	33:DL:143:GLU:HB3	1.66	0.77
29:DH:41:LYS:HA	29:DH:44:ILE:CG1	2.14	0.77
22:DA:2492:U:H2'	22:DA:2493:U:H6	1.49	0.77
37:DP:26:GLU:OE1	37:DP:28:LYS:HE3	1.85	0.77
22:BA:45:G:H5''	22:BA:46:G:OP1	1.83	0.77
39:DR:3:ALA:HB2	39:DR:101:ILE:HD13	1.65	0.77
31:BJ:44:TYR:HA	38:BQ:59:LEU:CD2	2.15	0.77
4:AD:34:GLU:O	4:AD:37:PRO:HD3	1.84	0.77
49:D1:51:ALA:O	49:D1:52:LYS:HB2	1.83	0.77
22:DA:2331:G:H1'	44:DW:40:ARG:HB3	1.66	0.77
22:DA:1539:U:O2'	22:DA:1540:G:H8	1.66	0.77
8:CH:23:ALA:HA	8:CH:62:LEU:HD23	1.66	0.77
22:BA:1179:G:OP2	22:BA:1180:U:H5''	1.84	0.77
48:B0:39:ARG:HB2	48:B0:39:ARG:NH1	1.97	0.77
41:BT:39:THR:HB	41:BT:42:GLU:H	1.49	0.77
2:AB:86:CYS:SG	2:AB:221:ARG:HB2	2.24	0.77
27:BF:3:LEU:HD23	27:BF:100:GLU:HG3	1.66	0.77
1:AA:1381:U:O2'	1:AA:1382:C:C5'	2.32	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:675:A:OP1	26:DE:60:TRP:HZ2	1.66	0.77
22:DA:2261:C:N4	44:DW:10:ARG:HB3	2.00	0.77
22:BA:2795:C:H2'	22:BA:2796:U:H6	1.48	0.77
35:DN:7:GLY:HA2	35:DN:46:ARG:NH2	1.99	0.77
49:B1:13:SER:HB3	49:B1:47:ILE:O	1.83	0.77
29:BH:62:LEU:C	29:BH:62:LEU:HD12	2.05	0.77
22:BA:1252:G:N3	38:BQ:32:ARG:HG2	1.99	0.77
22:BA:898:C:H2'	22:BA:899:A:H5'	1.66	0.77
42:BU:87:GLU:HG3	42:BU:88:ASP:N	1.98	0.77
1:CA:8:A:C5	4:CD:205:LYS:HG3	2.19	0.77
28:BG:83:THR:HA	28:BG:84:LYS:HZ3	1.48	0.77
44:DW:39:GLN:HE22	44:DW:58:LEU:HD23	1.48	0.77
39:BR:49:ILE:HD12	39:BR:52:PRO:HA	0.86	0.77
1:CA:936:C:O2'	1:CA:937:A:H8	1.66	0.77
19:AS:46:LEU:H	19:AS:61:VAL:CG2	1.98	0.77
24:BC:244:VAL:HB	24:BC:249:VAL:O	1.85	0.77
22:BA:92:U:H5''	22:BA:92:U:C6	2.17	0.77
1:AA:961:U:H2'	1:AA:962:C:C6	2.19	0.77
40:BS:59:GLU:HA	40:BS:64:ALA:HB2	1.65	0.77
22:BA:2330:G:H21	44:BW:38:ARG:HA	1.48	0.77
47:DZ:4:ILE:CD1	47:DZ:58:GLU:HA	2.15	0.77
7:CG:148:LYS:HD3	7:CG:148:LYS:O	1.85	0.77
33:BL:27:LEU:H	33:BL:27:LEU:HD12	1.49	0.77
26:BE:83:VAL:HG12	26:BE:83:VAL:O	1.85	0.77
25:DD:21:SER:O	25:DD:23:PRO:HD3	1.84	0.77
30:BI:104:GLN:O	30:BI:105:LEU:HB2	1.84	0.77
34:BM:31:PHE:CE2	34:BM:110:GLU:HG2	2.19	0.77
22:BA:1993:U:H4'	25:BD:133:THR:HG21	1.67	0.77
1:CA:1399:C:H4'	1:CA:1400:C:O5'	1.84	0.77
4:CD:204:SER:HB2	5:CE:105:ILE:HD11	1.67	0.77
34:BM:132:THR:HG22	34:BM:133:LYS:H	1.50	0.77
1:CA:520:A:H2'	1:CA:521:G:O4'	1.84	0.77
22:DA:323:C:H6	26:DE:165:HIS:CE1	2.03	0.77
29:BH:5:LEU:CD1	29:BH:13:GLY:HA2	2.15	0.77
51:D3:22:LYS:H	51:D3:48:MET:CB	1.96	0.77
35:DN:51:LEU:HA	35:DN:54:LEU:HD22	1.66	0.77
22:DA:2223:G:C2'	22:DA:2224:G:H5'	2.14	0.77
1:CA:112:G:C2'	1:CA:113:G:H5'	2.14	0.77
36:DO:4:LYS:HG3	36:DO:8:ILE:CD1	2.15	0.77
23:DB:44:G:H5''	27:DF:91:ARG:CZ	2.14	0.77
23:DB:46:A:H2'	23:DB:47:C:H6	1.48	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:83:THR:C	28:DG:84:LYS:HD3	2.04	0.77
26:DE:44:ARG:CG	26:DE:44:ARG:HH21	1.98	0.77
13:CM:68:LEU:HD22	13:CM:69:ARG:NH1	2.00	0.77
1:AA:514:C:O2'	1:AA:515:G:H5'	1.83	0.77
1:CA:1264:U:H2'	1:CA:1265:C:C6	2.19	0.77
6:AF:55:HIS:O	6:AF:56:LYS:HB2	1.84	0.77
11:CK:30:ILE:HG12	11:CK:45:THR:CG2	2.15	0.77
27:DF:140:ILE:O	27:DF:141:ASP:HB2	1.82	0.77
13:AM:113:LYS:H	13:AM:114:PRO:CD	1.97	0.77
51:D3:32:LEU:HA	51:D3:35:LYS:HG3	1.66	0.77
22:DA:876:C:H3'	22:DA:877:A:H8	1.49	0.77
22:DA:1399:C:O2'	22:DA:1400:U:H5'	1.85	0.77
22:DA:1204:A:H4'	22:DA:1205:A:H5''	1.64	0.77
22:DA:449:A:HO2'	22:DA:450:G:H5'	1.46	0.77
28:DG:139:VAL:HA	28:DG:142:GLN:HB3	1.66	0.77
22:DA:247:G:H4'	22:DA:386:G:C5	2.19	0.77
22:DA:655:A:O2'	22:DA:656:G:C8	2.38	0.77
27:DF:39:VAL:HA	27:DF:49:LEU:HG	1.64	0.77
1:CA:277:C:O2'	1:CA:278:G:H5'	1.83	0.77
25:DD:73:VAL:O	25:DD:74:GLU:HB2	1.84	0.77
36:DO:30:ARG:HG2	36:DO:31:THR:N	1.98	0.77
22:DA:172:A:H2'	22:DA:173:A:C8	2.18	0.77
22:DA:172:A:O2'	22:DA:173:A:H5'	1.84	0.77
22:BA:2887:A:H2'	22:BA:2887:A:N3	1.98	0.77
22:DA:2068:U:H5''	22:DA:2068:U:H6	1.48	0.77
37:BP:52:ARG:HG3	37:BP:52:ARG:NH1	1.94	0.77
22:BA:1063:G:H2'	22:BA:1064:C:H6	1.49	0.77
22:DA:2333:A:C2	22:DA:2335:A:N6	2.53	0.77
12:CL:85:ARG:HG2	12:CL:86:VAL:H	1.49	0.77
22:DA:1208:C:C2	22:DA:1209:U:C5	2.73	0.77
1:AA:93:U:HO2'	1:AA:94:G:H5''	1.47	0.77
8:AH:28:SER:CB	8:AH:58:LEU:HB2	2.12	0.77
44:BW:28:GLU:CB	44:BW:31:LEU:HD21	2.12	0.77
33:DL:120:VAL:HG12	33:DL:121:THR:H	1.50	0.77
1:AA:619:U:N3	4:AD:130:ASN:HB3	1.98	0.77
25:DD:149:ASN:O	25:DD:152:PRO:HD2	1.84	0.77
27:DF:49:LEU:HA	27:DF:52:ALA:HB3	1.67	0.77
29:DH:80:ILE:CG2	29:DH:101:ASP:HB2	2.15	0.77
32:DK:97:THR:O	32:DK:98:ARG:HB2	1.84	0.77
20:CT:73:ARG:HG2	20:CT:73:ARG:HH11	1.47	0.77
22:DA:2476:A:C2'	22:DA:2477:U:H5'	2.15	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1537:G:H5''	22:BA:1537:G:N3	2.00	0.77
1:CA:125:U:O2'	1:CA:126:G:H5'	1.84	0.77
6:AF:8:PHE:HE1	6:AF:21:MET:CE	1.98	0.77
22:BA:709:U:H2'	22:BA:710:U:O4'	1.85	0.77
22:DA:100:U:H1'	22:DA:101:A:C5	2.20	0.77
22:DA:35:G:O2'	22:DA:36:G:O5'	2.01	0.77
27:BF:39:VAL:CG1	27:BF:49:LEU:HD13	2.14	0.77
25:BD:106:LYS:HB3	25:BD:206:ALA:CB	2.13	0.77
1:AA:693:G:O2'	1:AA:694:A:H5'	1.84	0.77
9:CI:71:ILE:HD12	9:CI:72:SER:N	1.97	0.77
27:DF:113:PHE:CE2	27:DF:116:LEU:HD22	2.20	0.77
1:AA:274:A:O2'	1:AA:275:G:C8	2.33	0.77
23:DB:45:A:H2'	23:DB:46:A:H8	1.50	0.77
22:DA:2848:G:O2'	22:DA:2849:U:H6	1.66	0.77
27:DF:12:VAL:HG12	27:DF:16:MET:HG3	1.67	0.77
22:DA:1317:G:H2'	22:DA:1318:U:O4'	1.84	0.77
1:CA:711:G:O2'	1:CA:712:A:H5'	1.84	0.77
1:AA:306:A:H2'	1:AA:307:C:C6	2.20	0.77
22:DA:1366:A:O2'	22:DA:1367:A:H5'	1.85	0.77
22:BA:324:A:O2'	22:BA:325:G:H5'	1.84	0.77
1:AA:141:G:N2	1:AA:142:G:H1'	1.99	0.77
22:DA:2800:A:C2'	22:DA:2801:G:H4'	2.15	0.77
22:DA:2385:C:HO2'	22:DA:2386:A:H8	1.31	0.77
44:DW:39:GLN:HG2	44:DW:42:THR:HB	1.65	0.77
32:DK:11:ALA:O	32:DK:99:ILE:HG23	1.84	0.77
37:DP:21:PRO:HA	37:DP:46:VAL:HG12	1.66	0.77
44:BW:28:GLU:HG3	44:BW:29:SER:H	1.49	0.77
22:DA:2699:C:H2'	22:DA:2700:A:C8	2.19	0.77
16:CP:4:ILE:HD12	16:CP:4:ILE:H	1.47	0.77
17:CQ:3:LYS:HZ2	17:CQ:6:THR:HG21	1.50	0.77
27:DF:45:ASP:OD2	27:DF:47:LYS:HB2	1.85	0.77
1:CA:191:G:H2'	1:CA:192:A:H8	1.49	0.77
27:BF:37:MET:HA	27:BF:37:MET:HE3	1.66	0.77
48:B0:9:ARG:HH21	48:B0:9:ARG:CG	1.98	0.77
9:AI:79:ARG:O	9:AI:83:THR:HG23	1.86	0.77
3:AC:153:SER:CB	3:AC:164:THR:HG22	2.14	0.77
33:BL:61:LEU:O	51:B3:12:ARG:HD3	1.85	0.77
7:CG:148:LYS:NZ	7:CG:148:LYS:HB2	2.00	0.77
22:BA:2470:G:O2'	22:BA:2471:A:H5'	1.85	0.77
21:CU:9:GLU:HB3	21:CU:10:PRO:CD	2.14	0.77
22:DA:1742:U:H2'	22:DA:1743:G:C8	2.20	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:59:HIS:HE1	16:AP:63:GLN:HE22	1.30	0.77
25:DD:40:LEU:HA	25:DD:44:GLY:HA2	1.67	0.77
1:AA:637:C:C2'	1:AA:638:U:H5'	2.15	0.77
22:DA:1238:G:O2'	22:DA:1239:G:H5'	1.85	0.76
22:DA:217:A:O2'	22:DA:218:A:H8	1.67	0.76
2:AB:9:LEU:CD2	2:AB:11:ALA:HB3	2.14	0.76
31:DJ:74:TYR:HE2	31:DJ:103:ILE:HD11	1.48	0.76
22:DA:747:U:O2	22:DA:2014:A:H1'	1.84	0.76
31:DJ:111:LYS:HB2	31:DJ:115:GLY:H	1.49	0.76
43:DV:16:ALA:HA	43:DV:19:ARG:CZ	2.15	0.76
29:BH:90:LEU:CB	29:BH:123:ARG:HB3	2.14	0.76
42:BU:38:ILE:HG22	42:BU:39:ASN:N	1.99	0.76
24:BC:76:VAL:O	24:BC:76:VAL:HG23	1.84	0.76
17:AQ:37:ILE:N	17:AQ:37:ILE:HD12	1.99	0.76
38:BQ:29:ARG:HH11	38:BQ:29:ARG:CG	1.98	0.76
22:DA:589:U:H2'	22:DA:590:A:H8	1.49	0.76
1:AA:1399:C:H4'	1:AA:1400:C:O5'	1.85	0.76
40:DS:55:ILE:O	40:DS:59:GLU:HG2	1.85	0.76
37:BP:67:GLU:HA	37:BP:67:GLU:OE1	1.84	0.76
40:DS:18:ARG:HA	40:DS:76:VAL:HG11	1.66	0.76
23:BB:66:A:H4'	23:BB:67:G:OP1	1.85	0.76
14:AN:86:ALA:O	14:AN:91:GLU:HB2	1.85	0.76
24:DC:20:ASN:HB2	24:DC:23:LEU:HD22	1.65	0.76
22:DA:2353:G:H2'	22:DA:2354:C:O4'	1.83	0.76
22:BA:2585:U:HO2'	22:BA:2586:U:H5'	1.47	0.76
21:CU:39:LYS:N	21:CU:40:PRO:CD	2.48	0.76
22:BA:1494:A:O2'	22:BA:1495:A:H5'	1.85	0.76
19:CS:52:ASN:HD21	19:CS:54:ARG:HG2	1.50	0.76
11:AK:86:LYS:HA	11:AK:113:THR:HG22	1.65	0.76
22:BA:1461:C:O2'	22:BA:1462:C:H5'	1.85	0.76
31:DJ:37:ARG:HG3	31:DJ:118:MET:SD	2.25	0.76
23:DB:86:G:C2'	23:DB:87:U:H5''	2.15	0.76
4:AD:167:PRO:CB	4:AD:170:LEU:HD11	2.14	0.76
15:AO:63:ARG:HG2	15:AO:87:ARG:HH12	1.50	0.76
39:BR:42:ALA:HA	39:BR:46:GLU:HB2	1.66	0.76
1:CA:1248:A:HO2'	9:CI:37:TYR:HD1	1.33	0.76
22:DA:181:A:H2	22:DA:434:U:H1'	1.49	0.76
22:DA:382:A:H2'	22:DA:383:C:H5''	1.66	0.76
37:BP:80:VAL:O	37:BP:81:ASP:HB3	1.85	0.76
22:DA:338:G:O2'	22:DA:339:U:H5'	1.82	0.76
46:DY:37:LEU:HD13	46:DY:42:LEU:HD11	1.65	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2756:U:C1'	22:DA:2757:A:H5''	2.15	0.76
22:DA:600:G:C5'	26:DE:27:LEU:HD22	2.15	0.76
22:BA:1778:U:H2'	22:BA:1784:A:N6	2.00	0.76
22:DA:1662:U:H2'	22:DA:1663:G:H5''	1.67	0.76
24:BC:252:LYS:HZ3	24:BC:252:LYS:HB2	1.50	0.76
22:BA:1141:U:H4'	22:BA:1142:A:O5'	1.85	0.76
32:BK:70:ARG:HD3	32:BK:76:VAL:CG2	2.15	0.76
22:BA:1434:A:H2'	22:BA:1435:G:C8	2.20	0.76
40:BS:5:ALA:HB3	40:BS:54:ALA:HB2	1.67	0.76
34:BM:8:LYS:HE3	34:BM:8:LYS:HA	1.68	0.76
1:CA:1258:G:O2'	1:CA:1259:C:H5'	1.85	0.76
22:DA:1343:G:H2'	22:DA:1344:U:H5	1.48	0.76
1:CA:373:A:C8	1:CA:373:A:H5'	2.20	0.76
22:DA:2285:C:H5	49:D1:5:ARG:HH22	1.32	0.76
12:CL:97:VAL:HG23	12:CL:97:VAL:O	1.83	0.76
44:BW:77:LYS:O	44:BW:78:PHE:HB2	1.85	0.76
34:DM:66:ARG:HD2	34:DM:101:VAL:HG13	1.65	0.76
22:DA:1309:G:OP1	50:D2:9:VAL:HG12	1.85	0.76
44:BW:73:PRO:CG	44:BW:76:ARG:HD2	2.14	0.76
41:BT:40:LYS:H	41:BT:43:ILE:CG2	1.99	0.76
33:DL:108:ALA:CB	33:DL:125:LEU:HD22	2.16	0.76
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.01	0.76
13:CM:64:VAL:HG12	13:CM:65:GLU:N	2.00	0.76
22:BA:1420:A:O2'	22:BA:1421:G:H5'	1.85	0.76
22:BA:893:C:H2'	22:BA:894:U:O4'	1.85	0.76
26:DE:44:ARG:NH2	26:DE:44:ARG:HG3	1.98	0.76
37:BP:67:GLU:HG3	37:BP:68:GLY:H	1.50	0.76
22:BA:747:U:C5	22:BA:2613:U:C5	2.74	0.76
4:CD:148:ALA:O	4:CD:151:GLN:HB2	1.84	0.76
41:BT:8:LEU:HD12	41:BT:46:ALA:HA	1.67	0.76
30:DI:102:ARG:NH1	30:DI:105:LEU:HD13	2.01	0.76
1:CA:513:C:H2'	1:CA:514:C:H6	1.51	0.76
5:AE:105:ILE:HD11	5:AE:123:LEU:HD23	1.66	0.76
6:AF:16:GLU:HG2	4:CD:191:SER:HB2	0.82	0.76
1:CA:1279:G:H5''	10:CJ:9:ARG:HH22	1.50	0.76
22:DA:1605:C:H4'	22:DA:1610:A:N1	1.99	0.76
41:DT:58:VAL:HG23	41:DT:84:TYR:O	1.86	0.76
42:DU:34:ILE:HG12	42:DU:62:ALA:O	1.85	0.76
21:CU:36:PHE:HD1	21:CU:40:PRO:HB3	1.47	0.76
4:CD:57:LYS:HB2	4:CD:199:ILE:HB	1.67	0.76
26:BE:119:ILE:HD11	26:BE:187:VAL:CG2	2.16	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1215:G:O2'	1:CA:1216:A:H8	1.69	0.76
5:CE:104:ILE:HA	5:CE:122:VAL:HB	1.67	0.76
29:BH:89:LYS:HG2	29:BH:90:LEU:N	2.00	0.76
23:DB:57:A:O2'	23:DB:58:A:H8	1.66	0.76
22:DA:1722:A:C6	22:DA:1739:A:C8	2.73	0.76
7:CG:30:MET:O	7:CG:31:VAL:HB	1.86	0.76
35:BN:103:ARG:HB2	35:BN:110:MET:HE2	1.66	0.76
37:BP:33:GLU:CG	37:BP:34:GLY:H	1.97	0.76
23:BB:66:A:H61	23:BB:107:G:H2'	1.49	0.76
30:BI:7:TYR:HB3	30:BI:58:ILE:H	1.50	0.76
22:BA:2210:U:H4'	22:BA:2211:A:C5'	2.14	0.76
19:AS:62:THR:HB	19:AS:65:MET:HG3	1.68	0.76
13:AM:26:LYS:O	13:AM:30:LYS:HG3	1.83	0.76
36:BO:24:THR:HG22	36:BO:42:PRO:HD3	1.68	0.76
45:BX:30:PRO:HB2	45:BX:32:LEU:HD13	1.67	0.76
26:DE:105:LEU:HD12	26:DE:200:LEU:HD11	1.68	0.76
22:DA:2283:C:H5''	22:DA:2283:C:H6	1.49	0.76
22:DA:340:A:H2'	22:DA:341:C:H5'	1.68	0.76
42:DU:81:ARG:HD2	42:DU:81:ARG:N	2.00	0.76
22:DA:162:U:H5''	22:DA:163:C:OP1	1.86	0.76
44:BW:40:ARG:HB2	44:BW:56:HIS:CG	2.21	0.76
29:BH:6:LEU:O	29:BH:15:LEU:HA	1.86	0.76
29:DH:84:ALA:HB3	29:DH:148:ALA:CA	2.16	0.76
26:DE:29:HIS:HB2	33:DL:6:LEU:HD21	1.67	0.76
41:DT:29:THR:CB	41:DT:86:THR:H	1.99	0.76
1:CA:84:U:N3	1:CA:87:C:H1'	1.97	0.76
8:AH:88:LYS:HG3	8:AH:89:ASP:N	2.01	0.76
22:BA:2250:G:N2	22:BA:2496:C:H5''	1.99	0.76
22:DA:2492:U:H2'	22:DA:2493:U:C6	2.21	0.76
34:BM:62:LYS:HD3	34:BM:64:TRP:CH2	2.20	0.76
7:AG:96:ASN:O	7:AG:100:MET:HG3	1.86	0.76
22:DA:487:C:H2'	22:DA:488:G:H5'	1.68	0.76
14:AN:88:MET:CE	14:AN:97:LYS:HD2	2.15	0.76
4:AD:166:LYS:NZ	4:AD:166:LYS:HB3	2.01	0.76
39:BR:16:GLU:HA	39:BR:98:ILE:HG22	1.66	0.76
42:BU:52:ASN:C	42:BU:54:PRO:HD2	2.05	0.76
49:D1:10:LEU:HD23	49:D1:20:TYR:HB3	1.66	0.76
22:BA:2086:U:H2'	22:BA:2087:G:C8	2.21	0.76
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.20	0.76
33:BL:110:VAL:CG1	33:BL:131:ALA:HB1	2.15	0.76
4:CD:191:SER:O	4:CD:192:ALA:CB	2.32	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:29:THR:C	4:AD:30:LYS:HD3	2.05	0.76
1:CA:792:A:O2'	1:CA:794:A:N7	2.18	0.76
31:BJ:17:VAL:CG2	31:BJ:137:PRO:HB2	2.15	0.76
7:CG:124:SER:O	7:CG:128:GLU:HG2	1.86	0.76
32:DK:13:ASN:ND2	32:DK:97:THR:H	1.82	0.76
42:DU:40:LEU:HA	42:DU:61:GLU:HA	1.66	0.76
22:DA:993:G:H1'	39:DR:91:GLN:NE2	2.01	0.76
22:DA:234:U:C6	22:DA:234:U:H5''	2.19	0.76
22:BA:276:U:O2'	22:BA:278:A:N7	2.19	0.76
22:DA:2846:G:OP1	37:DP:51:ASN:HB2	1.86	0.76
41:BT:4:GLU:OE1	41:BT:6:ARG:HG3	1.86	0.76
22:BA:800:A:H4'	22:BA:801:G:O5'	1.86	0.76
38:BQ:81:GLY:HA2	38:BQ:116:LEU:CD1	2.16	0.76
21:AU:38:GLU:OE2	21:AU:41:THR:HG21	1.86	0.76
49:D1:16:THR:HG21	49:D1:41:VAL:HB	1.67	0.76
22:DA:90:U:H3'	22:DA:91:A:C5'	2.16	0.76
22:DA:1428:C:C5	22:DA:1569:A:H5'	2.21	0.76
39:BR:39:LEU:N	39:BR:39:LEU:HD23	2.00	0.76
2:CB:103:TRP:HA	2:CB:106:VAL:HB	1.66	0.76
2:CB:95:TRP:HZ2	2:CB:100:LEU:HD13	1.49	0.76
48:D0:6:LYS:HD2	48:D0:7:PRO:CD	2.15	0.76
22:DA:2431:U:O2	22:DA:2433:A:C8	2.39	0.76
22:DA:647:G:O2'	22:DA:648:G:H5'	1.84	0.76
1:CA:642:A:O2'	1:CA:643:C:C6	2.38	0.76
14:CN:60:ARG:HH22	14:CN:70:HIS:HB3	1.49	0.76
5:CE:104:ILE:HD13	5:CE:122:VAL:HG21	1.65	0.76
47:DZ:23:LEU:HD21	47:DZ:53:MET:HE1	1.68	0.76
24:BC:246:PRO:HG2	24:BC:247:TRP:CE3	2.20	0.76
27:DF:43:ILE:HD13	27:DF:77:LYS:HG2	1.67	0.76
8:AH:83:ARG:C	8:AH:84:ILE:HD13	2.04	0.76
22:DA:1453:A:H4'	22:DA:1454:C:OP2	1.85	0.76
22:BA:357:C:H2'	22:BA:358:U:H6	1.50	0.76
28:BG:68:ARG:HD2	28:BG:68:ARG:C	2.06	0.76
3:CC:12:GLY:O	3:CC:13:ILE:HD13	1.86	0.76
28:BG:18:ILE:HD12	28:BG:42:VAL:HG13	1.67	0.76
22:DA:922:C:H2'	22:DA:923:G:H8	1.50	0.76
22:DA:1273:U:O3'	22:DA:1274:A:H3'	1.86	0.76
28:BG:8:VAL:HG12	28:BG:49:LEU:H	1.51	0.76
24:BC:15:VAL:HA	24:BC:203:VAL:CG1	2.16	0.76
33:DL:89:VAL:HG23	33:DL:121:THR:HG23	1.66	0.76
22:BA:1339:G:H21	22:BA:1603:A:H1'	1.48	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:19:LYS:HE2	21:AU:19:LYS:HA	1.65	0.76
29:BH:67:ALA:HA	29:BH:138:VAL:HB	1.67	0.76
27:DF:39:VAL:HG13	27:DF:49:LEU:CD2	2.16	0.76
2:CB:114:LYS:HA	2:CB:117:GLU:CG	2.15	0.76
1:CA:16:A:C2'	1:CA:17:U:H5'	2.16	0.76
22:DA:1765:U:C2'	22:DA:1766:G:H5'	2.16	0.76
1:AA:184:G:C4	1:AA:185:U:C5	2.73	0.76
22:BA:2207:C:H2'	22:BA:2208:C:C6	2.21	0.76
1:AA:108:G:H2'	1:AA:109:A:OP1	1.86	0.76
22:DA:590:A:H2'	22:DA:591:U:C6	2.21	0.76
22:DA:1107:G:C2'	22:DA:1108:U:H5'	2.15	0.76
1:AA:536:C:H2'	1:AA:537:G:C8	2.20	0.76
3:AC:6:PRO:HG2	3:AC:183:TYR:CD2	2.20	0.76
7:AG:121:ASN:O	7:AG:125:ASP:HB2	1.86	0.76
8:CH:100:ILE:HD12	8:CH:100:ILE:C	2.05	0.76
16:CP:54:LEU:H	16:CP:54:LEU:HD23	1.51	0.76
22:BA:2630:G:O2'	22:BA:2631:G:H5'	1.86	0.76
1:AA:189:A:H2'	1:AA:190:A:C8	2.21	0.76
38:BQ:63:ARG:HH22	38:BQ:95:ALA:C	1.88	0.76
8:AH:63:LYS:HB2	8:AH:70:VAL:HG21	1.67	0.76
16:CP:67:ILE:HD11	16:CP:75:ILE:HD12	1.67	0.76
46:DY:25:GLN:HB2	46:DY:46:VAL:HG11	1.68	0.76
22:DA:1361:G:C2'	22:DA:1362:C:H5'	2.17	0.76
22:DA:49:A:H4'	22:DA:50:U:O5'	1.86	0.76
6:CF:42:TRP:HB2	6:CF:59:TYR:HB2	1.68	0.76
22:BA:2352:A:H5''	22:BA:2353:G:OP2	1.86	0.76
22:DA:2015:A:C5	48:D0:2:VAL:HG11	2.20	0.76
33:DL:3:LEU:HD12	33:DL:4:ASN:N	2.01	0.76
1:AA:619:U:H3	4:AD:130:ASN:CB	1.97	0.76
5:CE:95:MET:HE1	5:CE:143:LEU:HD21	1.68	0.76
22:DA:2843:G:N2	22:DA:2875:C:N3	2.34	0.76
20:CT:54:GLN:N	20:CT:55:PRO:HD2	2.00	0.76
22:DA:489:G:H2'	22:DA:491:G:H8	1.50	0.76
1:CA:269:C:H2'	1:CA:270:A:C8	2.21	0.76
1:CA:254:G:N2	17:CQ:17:GLU:HG3	1.99	0.76
1:CA:1348:U:HO2'	1:CA:1349:A:H8	1.34	0.76
1:CA:154:U:H2'	1:CA:155:A:C5'	2.15	0.76
9:AI:44:ARG:HG3	9:AI:45:MET:CE	2.16	0.76
10:AJ:53:ILE:HG22	10:AJ:61:ALA:CB	2.16	0.76
13:AM:106:ARG:HH12	13:AM:109:LYS:HD3	1.51	0.76
22:BA:1653:G:H1	35:BN:11:ASN:HD21	1.33	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:22:VAL:HG21	17:CQ:58:VAL:HG21	1.68	0.76
1:CA:914:A:O2'	1:CA:915:A:C5'	2.34	0.76
16:CP:38:PHE:HE2	16:CP:51:ARG:CB	1.98	0.76
1:AA:291:U:O2'	1:AA:292:G:H5'	1.86	0.76
1:AA:1014:A:H4'	19:AS:13:HIS:CD2	2.20	0.76
22:DA:26:G:H1'	22:DA:515:A:H61	1.48	0.76
33:BL:64:PHE:HD1	33:BL:64:PHE:O	1.68	0.76
24:BC:257:ARG:CG	24:BC:269:ARG:HH22	1.98	0.75
22:DA:1351:C:O2'	22:DA:1571:A:H1'	1.84	0.75
27:BF:84:ILE:HG13	27:BF:84:ILE:O	1.86	0.75
1:CA:1074:G:H4'	2:CB:101:THR:O	1.85	0.75
44:BW:24:ARG:CD	44:BW:25:PHE:N	2.48	0.75
22:BA:1499:C:O2'	22:BA:1500:G:C5'	2.30	0.75
1:AA:265:G:H2'	1:AA:266:G:H5'	1.68	0.75
1:CA:599:C:H4'	8:CH:121:GLY:HA3	1.68	0.75
38:DQ:4:LYS:CE	38:DQ:7:VAL:H	1.99	0.75
10:CJ:57:VAL:HG22	10:CJ:58:ASN:N	1.98	0.75
22:BA:1873:G:O2'	22:BA:1874:C:H5'	1.86	0.75
1:CA:251:G:H4'	1:CA:252:U:C5'	2.16	0.75
17:CQ:46:HIS:HB2	17:CQ:70:LYS:HE3	1.67	0.75
22:BA:2152:G:O2'	22:BA:2153:C:H5'	1.86	0.75
2:CB:162:VAL:HG13	2:CB:184:ALA:HB2	1.67	0.75
2:AB:95:TRP:HH2	2:AB:100:LEU:HB2	1.51	0.75
22:DA:852:U:H2'	22:DA:853:C:H6	1.48	0.75
36:BO:59:ALA:HA	36:BO:62:LEU:HD13	1.66	0.75
10:AJ:65:TYR:CB	14:AN:95:LEU:HD11	2.15	0.75
22:DA:1742:U:H2'	22:DA:1743:G:H8	1.51	0.75
25:DD:40:LEU:H	25:DD:40:LEU:HD12	1.50	0.75
11:CK:15:VAL:O	11:CK:16:SER:HB2	1.85	0.75
22:BA:1919:A:C8	22:BA:1919:A:H5'	2.21	0.75
1:CA:922:G:H2'	1:CA:923:A:C8	2.21	0.75
22:BA:2415:G:H4'	33:BL:66:PHE:HB3	1.67	0.75
22:BA:2847:U:C2'	22:BA:2848:G:H5'	2.15	0.75
38:BQ:57:ARG:HG2	38:BQ:61:ILE:HD12	1.67	0.75
5:AE:80:LEU:HD12	5:AE:146:MET:CE	2.16	0.75
1:AA:413:G:N2	1:AA:428:G:O2'	2.20	0.75
44:DW:27:GLY:HA2	44:DW:31:LEU:CD1	2.14	0.75
22:DA:335:C:O2'	22:DA:336:C:H6	1.68	0.75
24:BC:104:LEU:O	24:BC:105:ALA:CB	2.35	0.75
24:BC:257:ARG:HG3	24:BC:269:ARG:HH22	1.51	0.75
1:CA:1071:C:H4'	5:CE:53:ARG:NH1	2.01	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:29:ALA:CB	10:AJ:36:VAL:HG21	2.15	0.75
32:DK:39:ILE:HD11	32:DK:62:VAL:CG2	2.14	0.75
1:CA:640:A:O2'	8:CH:106:SER:HB2	1.86	0.75
42:DU:45:GLN:HE21	42:DU:45:GLN:HA	1.50	0.75
1:AA:158:G:C2'	1:AA:159:G:C5'	2.62	0.75
27:BF:109:ARG:CB	27:BF:136:ILE:HG22	2.15	0.75
9:CI:59:LYS:HE3	9:CI:60:LEU:CG	2.15	0.75
22:BA:2148:G:C2'	22:BA:2149:U:O4'	2.34	0.75
4:AD:170:LEU:HD12	4:AD:170:LEU:H	1.51	0.75
2:AB:95:TRP:CH2	2:AB:100:LEU:HB2	2.21	0.75
14:CN:27:LYS:HB2	14:CN:45:LEU:HD23	1.65	0.75
25:DD:187:LEU:O	25:DD:188:LEU:HD23	1.86	0.75
33:BL:68:SER:HB3	33:BL:71:ALA:CB	2.15	0.75
22:DA:2636:C:H4'	25:DD:81:GLU:OE1	1.86	0.75
23:BB:33:G:O2'	23:BB:34:A:H5'	1.85	0.75
1:CA:647:C:H2'	1:CA:648:A:H8	1.52	0.75
22:BA:506:G:H4'	22:BA:507:A:H5'	1.67	0.75
47:DZ:31:ILE:O	47:DZ:31:ILE:HG13	1.86	0.75
42:BU:73:ASN:ND2	42:BU:76:THR:HG23	2.01	0.75
36:DO:17:LYS:HE2	36:DO:21:LEU:CD1	2.12	0.75
22:DA:1092:C:C2'	22:DA:1093:G:H5'	2.17	0.75
1:CA:518:C:H4'	1:CA:519:C:H5''	1.68	0.75
44:BW:39:GLN:HG2	44:BW:40:ARG:N	2.01	0.75
22:BA:1784:A:H4'	22:BA:1785:A:C5'	2.15	0.75
32:DK:17:ARG:CG	32:DK:18:ARG:H	1.99	0.75
1:CA:1347:G:H22	1:CA:1373:G:H2'	1.50	0.75
1:AA:970:C:H5''	1:AA:971:G:OP1	1.86	0.75
8:AH:105:THR:HG22	8:AH:121:GLY:O	1.85	0.75
22:BA:1084:A:H2'	22:BA:1085:A:H8	1.51	0.75
1:AA:87:C:H2'	1:AA:88:U:C6	2.18	0.75
1:AA:1210:C:H2'	1:AA:1211:U:C5'	2.15	0.75
22:BA:705:A:N6	22:BA:726:G:H1'	2.01	0.75
1:AA:382:A:H2'	1:AA:383:A:C8	2.21	0.75
22:DA:2829:A:H2'	22:DA:2830:C:H5'	1.66	0.75
5:AE:120:HIS:O	5:AE:121:ASN:HB3	1.86	0.75
5:AE:89:THR:CG2	5:AE:90:GLY:N	2.42	0.75
33:BL:101:ILE:CG2	33:BL:102:GLY:N	2.49	0.75
22:DA:1338:G:O2'	41:DT:18:GLU:HG3	1.86	0.75
1:CA:519:C:H2'	1:CA:520:A:H8	1.49	0.75
22:DA:70:G:OP2	22:DA:70:G:H8	1.67	0.75
46:DY:57:LEU:O	46:DY:57:LEU:HD13	1.85	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:88:ARG:HH11	37:DP:112:ARG:HH21	1.34	0.75
26:BE:79:ARG:CG	26:BE:80:SER:H	1.85	0.75
22:DA:2052:A:O2'	22:DA:2053:G:H5'	1.86	0.75
22:BA:197:A:N6	22:BA:2430:A:H2'	2.01	0.75
22:DA:2590:A:O3'	24:DC:237:ARG:HD2	1.86	0.75
23:BB:90:C:C6	23:BB:90:C:H5''	2.16	0.75
22:DA:2314:A:C2	22:DA:2315:G:C5	2.75	0.75
2:CB:110:ILE:CD1	2:CB:151:LYS:HA	2.16	0.75
1:CA:119:A:H5'	1:CA:120:A:O5'	1.86	0.75
1:AA:1151:A:C6	1:AA:1152:A:N6	2.54	0.75
37:DP:50:ARG:HB3	37:DP:57:ALA:H	1.47	0.75
34:BM:64:TRP:CZ3	34:BM:106:ASP:HB2	2.20	0.75
28:DG:164:ALA:O	28:DG:165:ASP:HB2	1.83	0.75
22:DA:866:A:HO2'	22:DA:867:C:H6	1.31	0.75
22:DA:172:A:H2'	22:DA:173:A:H8	1.50	0.75
22:BA:1182:G:H2'	22:BA:1183:U:O4'	1.87	0.75
20:CT:81:GLN:O	20:CT:82:ILE:HG23	1.87	0.75
2:AB:17:HIS:CD2	2:AB:202:ASN:HD21	2.04	0.75
28:BG:86:LEU:N	28:BG:86:LEU:HD12	2.01	0.75
16:CP:68:SER:O	16:CP:71:VAL:HG22	1.86	0.75
22:DA:1827:U:H4'	22:DA:1970:A:O2'	1.87	0.75
8:CH:57:GLU:O	8:CH:58:LEU:HB2	1.85	0.75
1:CA:764:C:O2	1:CA:764:C:H2'	1.86	0.75
31:DJ:25:LEU:HD12	31:DJ:64:VAL:HA	1.67	0.75
2:AB:67:LEU:CD2	2:AB:91:VAL:HG23	2.16	0.75
1:AA:414:A:C2'	1:AA:415:A:H8	1.99	0.75
23:DB:110:C:O2'	23:DB:111:U:C5'	2.33	0.75
22:DA:2415:G:H4'	33:DL:66:PHE:HB2	1.69	0.75
19:AS:55:GLN:HA	19:AS:55:GLN:HE21	1.51	0.75
22:DA:846:U:O2'	22:DA:847:U:H5''	1.86	0.75
31:BJ:64:VAL:HG13	31:BJ:68:LYS:HB2	1.69	0.75
4:AD:167:PRO:HB2	4:AD:170:LEU:CD1	2.16	0.75
1:CA:1450:U:H4'	1:CA:1451:U:H5	1.51	0.75
36:DO:57:ALA:C	36:DO:58:ILE:HD12	2.07	0.75
27:DF:122:ASP:HB2	27:DF:126:ASN:CB	2.17	0.75
1:AA:66:A:H2'	1:AA:66:A:N3	2.02	0.75
4:AD:172:VAL:HG22	4:AD:173:ASP:H	1.52	0.75
31:DJ:92:MET:CE	31:DJ:92:MET:HA	2.16	0.75
35:BN:98:LEU:HD22	48:B0:42:ILE:HD11	1.69	0.75
22:BA:1901:A:H2'	22:BA:1902:C:H6	1.51	0.75
22:BA:914:G:C8	22:BA:914:G:H5''	2.22	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:4:LYS:O	21:AU:4:LYS:HD2	1.86	0.75
28:BG:84:LYS:CG	28:BG:132:LEU:H	1.99	0.75
22:DA:784:G:O2'	22:DA:785:G:H8	1.68	0.75
26:DE:126:VAL:HG11	26:DE:134:LEU:HD22	1.68	0.75
31:DJ:44:TYR:O	31:DJ:45:THR:HB	1.87	0.75
3:CC:33:ASP:O	3:CC:37:LYS:HG2	1.87	0.75
1:CA:942:G:N2	1:CA:1342:C:H1'	2.02	0.75
20:AT:8:LYS:O	20:AT:11:ILE:HG23	1.87	0.75
25:DD:10:GLY:O	25:DD:11:MET:HB2	1.85	0.75
22:DA:1663:G:HO2'	22:DA:1664:A:H8	1.33	0.75
27:DF:43:ILE:HD13	27:DF:82:TYR:HE2	1.51	0.75
10:AJ:56:HIS:HD2	10:AJ:57:VAL:HG12	1.51	0.75
22:DA:2197:U:O2'	22:DA:2198:A:H2'	1.86	0.75
22:DA:1639:C:H2'	22:DA:1640:A:H5''	1.68	0.75
24:BC:77:VAL:HA	24:BC:93:VAL:HA	1.68	0.75
25:DD:8:LYS:HB2	25:DD:201:LEU:CD1	2.16	0.75
29:DH:41:LYS:HA	29:DH:44:ILE:HG12	1.68	0.75
22:BA:274:C:O2'	22:BA:275:C:H5'	1.85	0.75
1:CA:569:C:H5''	1:CA:570:G:OP1	1.86	0.75
4:CD:97:LEU:HB2	4:CD:134:TYR:HB3	1.67	0.75
1:AA:1387:G:H2'	1:AA:1388:C:C6	2.21	0.75
22:BA:2297:A:C8	22:BA:2297:A:H5''	2.21	0.75
27:DF:129:MET:HG3	27:DF:153:ILE:HD12	1.68	0.75
34:BM:23:GLY:O	34:BM:101:VAL:HG12	1.86	0.75
22:BA:686:U:H4'	22:BA:687:C:OP2	1.84	0.75
36:BO:43:ASN:HD21	36:BO:46:GLU:HG2	1.51	0.75
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.21	0.75
31:BJ:6:ALA:HB2	31:BJ:45:THR:HG21	1.69	0.75
31:BJ:111:LYS:HE2	31:BJ:115:GLY:H	1.52	0.75
1:CA:1152:A:C2'	1:CA:1153:G:H8	1.96	0.75
26:DE:147:LEU:O	26:DE:148:ILE:HB	1.85	0.75
22:DA:2384:U:H5''	22:DA:2386:A:OP1	1.86	0.75
2:CB:95:TRP:CZ2	2:CB:100:LEU:HD13	2.20	0.75
31:BJ:74:TYR:OH	31:BJ:100:VAL:HG13	1.87	0.75
17:AQ:13:SER:O	17:AQ:20:ILE:HD11	1.87	0.75
1:CA:971:G:H2'	1:CA:1365:G:O2'	1.86	0.75
22:DA:602:A:H4'	22:DA:604:G:O3'	1.86	0.75
3:AC:35:ASP:OD1	3:AC:56:ILE:HG21	1.87	0.75
7:CG:30:MET:SD	7:CG:35:LYS:HB2	2.27	0.75
22:DA:374:A:N6	22:DA:401:A:C8	2.54	0.75
6:AF:51:ILE:CD1	6:AF:86:ARG:HG3	2.17	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2820:A:C8	22:BA:2820:A:C3'	2.68	0.75
36:DO:58:ILE:O	36:DO:62:LEU:HB2	1.87	0.75
22:BA:2250:G:H21	22:BA:2496:C:H5''	1.52	0.75
22:BA:1936:A:C2	22:BA:1943:U:C5	2.70	0.75
1:AA:143:A:H5'	1:AA:144:G:H5'	1.66	0.75
22:DA:589:U:O2'	22:DA:590:A:H5'	1.86	0.75
43:BV:20:LEU:CD2	43:BV:25:LYS:HB2	2.17	0.75
38:BQ:26:ALA:HB1	38:BQ:30:VAL:CG2	2.17	0.75
49:D1:16:THR:CG2	49:D1:41:VAL:HB	2.16	0.75
1:AA:830:G:O2'	1:AA:831:A:H5'	1.86	0.75
1:AA:1039:G:O2'	1:AA:1040:U:H5'	1.86	0.75
22:DA:1803:A:O2'	22:DA:1804:C:O4'	2.04	0.75
22:DA:2880:C:H1'	35:DN:93:GLY:H	1.52	0.75
1:AA:1118:U:H2'	1:AA:1119:C:C6	2.20	0.75
22:DA:445:C:H2'	22:DA:446:G:C8	2.21	0.75
28:DG:1:SER:HB2	28:DG:61:TRP:HE3	1.52	0.75
6:CF:6:ILE:HD12	6:CF:6:ILE:N	2.01	0.75
22:DA:188:G:H2'	22:DA:189:G:H5'	1.69	0.75
10:AJ:11:LYS:CG	10:AJ:97:ASP:HB3	2.16	0.75
7:CG:14:ASP:HB3	7:CG:18:GLY:N	2.00	0.75
3:CC:152:VAL:HG23	3:CC:156:LEU:HD21	1.67	0.75
12:AL:2:THR:HB	12:AL:5:GLN:HG3	1.69	0.75
31:DJ:57:LEU:HG	31:DJ:128:ASN:H	1.51	0.75
22:DA:1519:G:H5'	22:DA:1520:U:OP2	1.86	0.75
37:BP:63:ILE:HA	37:BP:68:GLY:HA2	1.69	0.75
2:CB:59:ILE:HA	2:CB:62:ARG:HD3	1.68	0.75
4:AD:191:SER:OG	4:AD:192:ALA:N	2.20	0.75
22:DA:716:A:H2'	22:DA:717:C:H5''	1.69	0.75
2:CB:56:LEU:HD23	2:CB:183:PHE:CE1	2.21	0.75
11:CK:82:GLU:CB	11:CK:108:ASN:HB3	2.17	0.75
1:CA:117:G:O2'	1:CA:118:U:H5'	1.87	0.75
5:AE:80:LEU:HD23	5:AE:122:VAL:HG11	1.68	0.75
22:DA:2798:U:H5'	22:DA:2800:A:N7	2.02	0.75
22:DA:704:G:H2'	22:DA:726:G:H22	1.51	0.75
28:DG:53:PRO:HB3	28:DG:61:TRP:H	1.51	0.75
1:AA:462:G:H3'	1:AA:463:U:H6	1.51	0.75
1:CA:408:A:C2	1:CA:435:A:C2	2.74	0.75
1:CA:413:G:N2	1:CA:428:G:O2'	2.20	0.75
41:BT:29:THR:HA	41:BT:86:THR:CA	2.16	0.75
34:DM:27:SER:N	34:DM:66:ARG:HH22	1.85	0.75
6:CF:9:MET:HE1	18:CR:64:LEU:O	1.86	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:146:ILE:HD12	25:DD:155:VAL:HG21	1.69	0.75
8:CH:23:ALA:HB1	8:CH:60:LEU:O	1.87	0.75
43:BV:10:LYS:H	43:BV:10:LYS:CD	1.88	0.75
1:CA:1221:G:N2	1:CA:1222:G:H1'	2.02	0.75
1:CA:996:A:O2'	1:CA:997:U:C6	2.39	0.75
46:BY:59:GLU:O	46:BY:63:ALA:HB3	1.87	0.75
36:BO:88:LYS:HE2	36:BO:116:GLN:NE2	1.98	0.75
23:DB:91:C:H2'	23:DB:92:C:H6	1.51	0.75
3:AC:134:LYS:HE3	3:AC:138:GLN:NE2	2.01	0.75
29:DH:78:VAL:HG21	29:DH:144:VAL:HG13	1.69	0.75
22:DA:589:U:C2'	22:DA:590:A:H5'	2.17	0.75
5:CE:65:LYS:NZ	5:CE:68:ARG:HD3	2.01	0.75
16:AP:48:GLU:HG3	16:AP:49:GLY:N	2.02	0.75
12:CL:14:LYS:HG3	12:CL:14:LYS:O	1.85	0.75
22:BA:2199:A:H5'	22:BA:2200:C:H5	1.51	0.75
3:CC:126:ARG:HE	3:CC:126:ARG:HA	1.52	0.75
25:BD:15:PHE:H	37:BP:11:GLN:NE2	1.85	0.74
31:BJ:6:ALA:CB	31:BJ:45:THR:HG21	2.17	0.74
5:AE:153:ALA:CA	5:AE:156:ARG:CB	2.59	0.74
25:BD:151:THR:HG22	25:BD:152:PRO:HD3	0.82	0.74
27:BF:129:MET:CE	27:BF:153:ILE:HD11	2.17	0.74
42:DU:90:LYS:HE2	42:DU:92:VAL:CG1	2.09	0.74
22:DA:1915:U:C2'	22:DA:1916:A:H8	2.00	0.74
43:DV:89:ILE:HD12	43:DV:91:PHE:CZ	2.22	0.74
22:BA:1462:C:C2'	22:BA:1463:C:H5'	2.16	0.74
1:AA:1151:A:H5'	10:AJ:42:LEU:O	1.86	0.74
35:BN:1:MET:O	35:BN:2:ARG:HB2	1.87	0.74
3:CC:6:PRO:HG2	3:CC:183:TYR:CD2	2.22	0.74
25:DD:49:GLN:NE2	25:DD:79:LEU:HB3	2.01	0.74
29:DH:78:VAL:HG22	29:DH:100:ALA:HA	1.69	0.74
1:CA:495:A:H4'	1:CA:496:A:O5'	1.86	0.74
34:DM:2:LEU:HB3	34:DM:69:PRO:HG2	1.68	0.74
37:DP:28:LYS:HB3	37:DP:39:LEU:HD23	1.67	0.74
22:DA:1413:A:H2'	22:DA:1414:C:C6	2.21	0.74
1:AA:473:U:H2'	1:AA:474:G:H8	1.52	0.74
28:BG:23:ILE:HD12	28:BG:23:ILE:H	1.52	0.74
22:BA:384:A:H2'	22:BA:385:C:H5'	1.68	0.74
11:AK:17:ASP:HA	11:AK:80:ASN:O	1.87	0.74
22:BA:2358:A:H61	33:BL:54:GLN:HE22	1.35	0.74
25:DD:181:ASP:HB3	25:DD:183:GLU:OE2	1.87	0.74
22:DA:2542:A:H4'	22:DA:2543:G:C5'	2.16	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2571:U:O2'	25:BD:151:THR:CG2	2.35	0.74
26:DE:147:LEU:CB	26:DE:186:VAL:HG23	2.17	0.74
49:D1:25:ASN:HB3	49:D1:28:THR:OG1	1.86	0.74
35:DN:97:ILE:HG13	35:DN:98:LEU:N	2.01	0.74
1:AA:397:A:N7	1:AA:547:A:O2'	2.20	0.74
37:DP:88:ARG:HE	37:DP:112:ARG:HH21	1.33	0.74
45:BX:38:TRP:HB2	45:BX:45:PHE:CE2	2.16	0.74
1:AA:486:U:O2'	1:AA:487:A:H5'	1.85	0.74
1:CA:997:U:O2'	1:CA:998:C:H5'	1.87	0.74
11:AK:108:ASN:CB	21:AU:6:ARG:HG2	2.17	0.74
40:DS:49:LYS:HB3	40:DS:49:LYS:NZ	2.03	0.74
24:BC:94:LEU:HD12	24:BC:95:TYR:N	2.02	0.74
1:CA:120:A:H3'	1:CA:121:U:H5''	1.68	0.74
22:BA:2196:C:O3'	4:CD:150:LYS:HD2	1.87	0.74
3:CC:46:LEU:CD2	3:CC:75:VAL:HG22	2.16	0.74
29:DH:99:ILE:HG22	29:DH:100:ALA:N	2.02	0.74
22:DA:1746:A:H2'	22:DA:1747:U:C6	2.20	0.74
1:CA:701:U:H4'	1:CA:702:A:H5''	1.69	0.74
1:CA:50:A:H2	1:CA:360:G:N3	1.85	0.74
45:DX:63:ILE:O	45:DX:67:LEU:HD12	1.87	0.74
42:BU:91:LYS:O	42:BU:92:VAL:HB	1.86	0.74
22:DA:641:U:H5''	22:DA:642:U:OP2	1.85	0.74
31:BJ:39:LYS:HA	31:BJ:43:GLU:HG3	1.69	0.74
22:BA:1064:C:H5'	30:BI:88:GLY:CA	2.17	0.74
25:BD:151:THR:CG2	25:BD:152:PRO:N	2.47	0.74
41:DT:45:ALA:HA	41:DT:48:GLN:CG	2.17	0.74
46:DY:18:LEU:O	46:DY:18:LEU:HD13	1.86	0.74
1:AA:425:G:C2'	1:AA:426:U:H5'	2.17	0.74
44:DW:23:LYS:CD	44:DW:24:ARG:N	2.50	0.74
30:DI:52:LEU:HD12	30:DI:53:PRO:HD2	1.68	0.74
9:AI:51:LEU:CB	9:AI:56:MET:HG2	2.17	0.74
1:CA:519:C:C2'	1:CA:520:A:C8	2.67	0.74
21:CU:38:GLU:HG2	21:CU:41:THR:OG1	1.85	0.74
28:BG:104:LEU:HD22	28:BG:106:LEU:HD11	1.67	0.74
16:AP:28:ARG:NE	16:AP:29:ASN:HD21	1.83	0.74
1:CA:1316:G:H22	1:CA:1318:A:H3'	1.52	0.74
22:BA:1654:A:H4'	25:BD:118:PHE:CZ	2.21	0.74
29:DH:33:GLN:O	29:DH:35:LYS:HG2	1.88	0.74
22:DA:574:A:H4'	22:DA:575:A:H5'	1.66	0.74
27:DF:39:VAL:HG22	27:DF:49:LEU:CG	2.16	0.74
22:BA:1820:U:O2	24:BC:199:HIS:HB3	1.86	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2738:A:H2	22:DA:2766:A:H61	1.33	0.74
22:DA:2369:A:O2'	22:DA:2370:G:H5'	1.87	0.74
38:DQ:108:LEU:HD23	38:DQ:108:LEU:O	1.88	0.74
22:BA:794:A:H2'	22:BA:795:C:C6	2.21	0.74
49:D1:32:LYS:HE3	49:D1:52:LYS:OXT	1.88	0.74
39:BR:39:LEU:HD23	39:BR:39:LEU:H	1.52	0.74
28:DG:1:SER:HB2	28:DG:61:TRP:CE3	2.23	0.74
45:DX:58:ILE:HG12	45:DX:66:VAL:HG21	1.69	0.74
11:CK:88:PRO:HG3	21:CU:28:LEU:HD13	1.69	0.74
9:AI:32:ARG:HG2	9:AI:36:GLN:HB2	1.70	0.74
25:BD:121:THR:HG22	25:BD:125:TRP:HD1	1.52	0.74
10:AJ:14:ASP:CB	10:AJ:17:LEU:HB3	2.10	0.74
1:AA:1324:A:H2'	1:AA:1325:C:H6	1.53	0.74
1:CA:1298:U:H4'	1:CA:1299:A:O5'	1.86	0.74
10:AJ:53:ILE:CG2	10:AJ:61:ALA:HB1	2.18	0.74
29:DH:96:THR:HG21	29:DH:112:LYS:HZ3	1.52	0.74
1:AA:113:G:H2'	1:AA:114:U:H6	1.51	0.74
45:DX:67:LEU:HD23	45:DX:77:TYR:CZ	2.22	0.74
7:AG:129:ASN:HA	7:AG:134:VAL:HG11	1.68	0.74
22:BA:287:G:H1	22:BA:353:C:H42	1.33	0.74
9:CI:45:MET:CE	9:CI:48:ARG:HG3	2.18	0.74
25:DD:12:THR:CG2	25:DD:13:ARG:N	2.50	0.74
31:BJ:44:TYR:HB2	38:BQ:63:ARG:CB	2.17	0.74
30:BI:115:ASP:O	30:BI:116:MET:HG2	1.86	0.74
33:BL:94:THR:HG22	33:BL:95:LEU:H	1.51	0.74
22:DA:1076:C:O2	30:DI:92:PRO:HG2	1.87	0.74
22:DA:1652:A:OP1	35:DN:8:ARG:HD3	1.87	0.74
1:CA:970:C:H5''	1:CA:971:G:OP1	1.86	0.74
1:CA:491:G:C2'	1:CA:492:C:H5'	2.17	0.74
21:AU:33:ARG:NE	21:AU:34:ARG:HG3	2.01	0.74
33:DL:103:ILE:N	33:DL:103:ILE:HD12	1.98	0.74
46:BY:56:LEU:O	46:BY:57:LEU:HB3	1.87	0.74
22:DA:1492:G:H3'	22:DA:1493:C:H5''	1.69	0.74
7:CG:27:ASN:OD1	7:CG:35:LYS:HD2	1.88	0.74
1:CA:920:U:C2	1:CA:921:U:C5	2.75	0.74
3:CC:148:ILE:CD1	3:CC:201:ILE:HG12	2.17	0.74
26:BE:46:GLN:HG3	26:BE:87:ALA:N	2.01	0.74
22:BA:962:G:N2	22:BA:2250:G:H1	1.86	0.74
22:BA:272:A:O2'	22:BA:273:G:H8	1.67	0.74
22:BA:2795:C:H2'	22:BA:2796:U:C6	2.23	0.74
4:CD:202:LEU:HD22	4:CD:203:TYR:CE2	2.22	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:78:LEU:HD13	30:BI:108:ILE:HG23	1.69	0.74
22:BA:2210:U:H4'	22:BA:2211:A:O5'	1.86	0.74
24:BC:199:HIS:CE1	24:BC:202:ARG:HH22	2.04	0.74
36:DO:48:LEU:HD13	36:DO:87:ILE:HD12	1.69	0.74
19:CS:38:THR:N	19:CS:69:LYS:HD3	2.03	0.74
3:CC:168:ARG:HG3	3:CC:169:GLU:N	2.03	0.74
27:BF:45:ASP:HB3	27:BF:48:LEU:HB2	1.67	0.74
25:BD:70:LYS:O	25:BD:71:ALA:CB	2.35	0.74
5:AE:155:LYS:CD	5:AE:156:ARG:N	2.49	0.74
22:DA:105:C:H2'	22:DA:106:C:C5	2.23	0.74
22:DA:86:G:O2'	22:DA:87:U:H5'	1.87	0.74
22:DA:1050:A:O2'	22:DA:1051:G:H5'	1.86	0.74
1:AA:206:C:H2'	1:AA:207:C:C4'	2.17	0.74
31:DJ:45:THR:OG1	31:DJ:48:VAL:HB	1.86	0.74
22:BA:855:G:N3	44:BW:23:LYS:CD	2.50	0.74
6:CF:2:ARG:NH2	6:CF:91:ARG:HB2	2.02	0.74
12:AL:85:ARG:NH2	12:AL:87:LYS:HD2	2.03	0.74
31:BJ:88:THR:HG22	31:BJ:91:GLU:CB	2.17	0.74
1:AA:968:A:H4'	1:AA:969:A:OP2	1.84	0.74
22:DA:374:A:H2'	22:DA:375:G:C8	2.23	0.74
20:CT:73:ARG:HG3	20:CT:73:ARG:HH11	1.51	0.74
22:DA:279:A:C2	22:DA:362:A:H4'	2.21	0.74
29:DH:61:VAL:HG13	29:DH:62:LEU:H	1.51	0.74
22:BA:1430:G:O2'	22:BA:1431:A:H5'	1.88	0.74
37:DP:57:ALA:HA	37:DP:75:THR:HB	1.69	0.74
31:BJ:114:LEU:HD22	31:BJ:118:MET:CE	2.18	0.74
1:CA:1011:C:H2'	1:CA:1012:A:H8	1.52	0.74
28:BG:30:GLY:HA3	28:BG:78:VAL:HG12	1.70	0.74
22:BA:613:A:C8	22:BA:616:A:N1	2.55	0.74
30:BI:79:LEU:HD13	30:BI:135:MET:SD	2.28	0.74
33:BL:91:ASP:HB3	33:BL:94:THR:HB	1.69	0.74
22:DA:1799:G:H4'	22:DA:1800:C:O5'	1.86	0.74
22:DA:855:G:N3	44:DW:23:LYS:HE3	2.02	0.74
22:DA:765:C:H2'	22:DA:766:U:H6	1.49	0.74
42:DU:33:VAL:O	42:DU:34:ILE:HG13	1.87	0.74
44:BW:39:GLN:CG	44:BW:41:GLY:H	1.99	0.74
37:BP:19:PHE:O	37:BP:20:ARG:CB	2.32	0.74
6:CF:61:LEU:HD13	6:CF:62:MET:H	1.52	0.74
35:DN:51:LEU:HA	35:DN:54:LEU:CD2	2.18	0.74
19:CS:35:ARG:HH21	19:CS:51:HIS:HD2	1.36	0.74
2:AB:133:ALA:O	2:AB:137:THR:HG23	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DF:134:GLN:HB2	27:DF:137:PHE:HE2	1.51	0.74
22:DA:1656:C:O2'	22:DA:1657:U:H5'	1.87	0.74
10:AJ:52:LEU:CD2	10:AJ:62:ARG:HE	2.00	0.74
1:AA:558:G:C4	1:AA:559:A:C2	2.75	0.74
42:BU:25:LYS:O	42:BU:26:ASN:HB3	1.86	0.74
32:DK:13:ASN:N	32:DK:13:ASN:HD22	1.76	0.74
1:AA:1449:C:H2'	1:AA:1450:U:C5'	2.17	0.74
22:DA:2296:U:O2'	22:DA:2297:A:H8	1.70	0.74
1:AA:855:U:H2'	1:AA:856:C:C6	2.22	0.74
28:DG:34:ARG:O	28:DG:35:THR:HG23	1.87	0.74
22:DA:714:U:H2'	22:DA:716:A:OP2	1.87	0.74
2:CB:56:LEU:HD23	2:CB:183:PHE:CD1	2.22	0.74
10:AJ:49:PHE:HE1	10:AJ:67:ILE:HG13	1.53	0.74
37:DP:32:VAL:HA	37:DP:37:LYS:HA	1.68	0.74
24:DC:119:VAL:HG13	24:DC:133:ASN:ND2	2.02	0.74
5:AE:45:VAL:HG21	5:AE:117:ALA:HB2	1.68	0.74
22:BA:2052:A:H4'	25:BD:148:GLN:O	1.88	0.74
22:DA:105:C:H2'	22:DA:106:C:H5	1.52	0.74
22:DA:1237:A:H2	22:DA:1238:G:H1'	1.50	0.74
22:DA:297:G:H5''	42:DU:84:PHE:CB	2.18	0.74
42:DU:35:VAL:HG12	42:DU:36:GLU:N	2.02	0.74
25:BD:107:VAL:H	25:BD:206:ALA:H	1.34	0.74
21:CU:33:ARG:HH22	21:CU:34:ARG:HH11	1.34	0.74
8:AH:58:LEU:HD22	8:AH:59:GLU:N	2.03	0.74
6:CF:39:LEU:HD12	6:CF:40:GLU:N	2.03	0.74
1:CA:577:G:O2'	1:CA:578:C:H5'	1.86	0.74
22:DA:2060:A:C2'	26:DE:63:LYS:NZ	2.48	0.74
28:BG:73:SER:HA	28:BG:76:ILE:CG2	2.18	0.74
47:BZ:13:ILE:HG22	47:BZ:14:GLY:N	2.03	0.74
8:AH:75:GLN:HA	8:AH:75:GLN:OE1	1.87	0.74
1:CA:254:G:O2'	1:CA:255:G:H5'	1.88	0.74
25:DD:118:PHE:CD1	25:DD:119:ALA:N	2.56	0.74
22:DA:2310:C:H2'	22:DA:2311:A:C5'	2.18	0.74
2:AB:100:LEU:HD12	2:AB:178:LEU:CD2	2.18	0.74
1:AA:366:A:O2'	1:AA:394:G:N2	2.21	0.74
22:DA:286:U:H2'	22:DA:287:G:H8	1.53	0.74
22:DA:1366:A:H2'	22:DA:1367:A:H8	1.52	0.74
1:CA:1081:A:H5'	5:CE:22:LYS:HD2	1.69	0.74
3:CC:35:ASP:CG	3:CC:56:ILE:HD12	2.07	0.74
1:AA:605:U:O2'	1:AA:606:G:H5'	1.87	0.74
4:AD:138:PRO:O	4:AD:139:ASN:HB2	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:771:G:O2'	22:DA:772:C:H5'	1.86	0.74
30:BI:126:ARG:HA	30:BI:129:GLU:HB2	1.69	0.74
1:CA:1254:A:H2'	1:CA:1255:G:C8	2.23	0.74
26:DE:148:ILE:HD13	26:DE:187:VAL:CG2	2.13	0.74
12:CL:113:ARG:HB3	12:CL:118:VAL:HB	1.69	0.74
1:AA:1306:A:H2'	1:AA:1307:U:C5'	2.14	0.74
4:CD:29:THR:HG22	4:CD:30:LYS:HD3	1.70	0.74
38:BQ:69:ARG:CG	38:BQ:69:ARG:HH21	2.00	0.74
1:AA:255:G:H4'	17:AQ:18:LYS:HE3	1.70	0.74
2:AB:218:ALA:HA	2:AB:221:ARG:NH2	2.03	0.74
5:CE:14:LEU:HD13	5:CE:36:THR:HG22	1.70	0.74
22:BA:1011:G:HO2'	22:BA:1013:C:H5''	1.52	0.74
1:AA:1202:U:H2'	1:AA:1203:C:C6	2.23	0.74
3:CC:6:PRO:HG3	3:CC:200:TRP:HE1	1.52	0.74
32:BK:114:LYS:HE2	32:BK:114:LYS:HA	1.69	0.74
22:DA:2461:A:H1'	22:DA:2492:U:N3	2.03	0.74
29:BH:62:LEU:HD12	29:BH:63:ALA:N	2.03	0.74
31:DJ:70:THR:HG22	31:DJ:90:GLU:OE2	1.86	0.74
3:CC:63:ILE:HG12	3:CC:65:VAL:HG23	1.69	0.74
20:CT:12:GLN:O	20:CT:12:GLN:HG2	1.87	0.74
31:BJ:44:TYR:C	31:BJ:45:THR:HG22	2.09	0.74
45:BX:52:ALA:O	45:BX:53:LYS:CB	2.36	0.74
1:CA:36:C:H4'	12:CL:118:VAL:O	1.87	0.74
41:DT:67:VAL:HG23	41:DT:75:GLY:O	1.88	0.74
1:CA:1408:A:C2	1:CA:1492:A:N6	2.56	0.74
1:CA:1495:U:O2'	1:CA:1496:C:H5'	1.88	0.74
22:DA:2615:U:O2'	22:DA:2616:C:H5'	1.88	0.74
22:DA:1281:G:C6	22:DA:1290:C:N4	2.56	0.74
17:AQ:20:ILE:HB	17:AQ:47:ASP:OD1	1.87	0.74
8:CH:54:THR:HG23	8:CH:55:LYS:H	1.52	0.74
27:DF:135:ILE:N	27:DF:135:ILE:HD12	2.03	0.74
1:CA:254:G:H4'	17:CQ:16:MET:HE3	1.70	0.74
9:CI:59:LYS:HE3	9:CI:60:LEU:HG	1.70	0.74
10:AJ:52:LEU:HD23	10:AJ:62:ARG:HG2	1.69	0.74
1:AA:1152:A:H2'	1:AA:1153:G:H8	1.51	0.74
22:BA:2094:A:H5'	29:BH:25:TYR:CD1	2.23	0.74
17:AQ:7:LEU:HD23	17:AQ:24:ILE:CD1	2.18	0.74
2:CB:127:LYS:HE2	2:CB:136:ARG:HH21	1.52	0.74
22:DA:2493:U:H5''	22:DA:2494:G:OP2	1.87	0.74
22:BA:2758:A:C2'	22:BA:2759:G:H5'	2.18	0.74
26:DE:146:VAL:HB	26:DE:167:VAL:HB	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:228:C:H4'	22:BA:229:C:H5''	1.68	0.74
27:BF:106:ALA:N	27:BF:108:PRO:HD2	2.02	0.74
1:CA:313:A:H2'	1:CA:314:C:C6	2.21	0.74
45:BX:34:SER:HA	45:BX:49:ARG:HA	1.70	0.73
28:BG:84:LYS:CG	28:BG:132:LEU:N	2.45	0.73
39:BR:49:ILE:O	39:BR:51:VAL:O	2.05	0.73
44:BW:47:GLY:O	44:BW:49:ASN:N	2.20	0.73
1:AA:255:G:H2'	1:AA:256:U:C6	2.22	0.73
22:BA:1654:A:O2'	25:BD:118:PHE:CG	2.41	0.73
22:DA:2544:G:H5'	22:DA:2645:G:N7	2.03	0.73
22:DA:2726:A:O2'	22:DA:2727:A:H5'	1.86	0.73
1:CA:1372:U:H5''	9:CI:71:ILE:CD1	2.18	0.73
22:DA:1008:A:C5'	31:DJ:37:ARG:HH22	1.99	0.73
9:CI:15:ALA:O	9:CI:66:VAL:HG23	1.88	0.73
4:AD:147:LYS:O	4:AD:149:LYS:HB2	1.88	0.73
26:BE:142:ALA:C	26:BE:143:LEU:HD23	2.08	0.73
1:CA:1295:U:H2'	1:CA:1296:C:C6	2.23	0.73
36:DO:70:ALA:O	36:DO:74:VAL:HG23	1.87	0.73
27:DF:12:VAL:HA	27:DF:15:LEU:HB2	1.70	0.73
51:D3:23:HIS:O	51:D3:46:LYS:HB2	1.88	0.73
1:CA:129:A:O2'	1:CA:130:A:C8	2.40	0.73
38:BQ:93:ILE:CG2	38:BQ:94:LEU:N	2.50	0.73
5:AE:149:PRO:O	5:AE:152:VAL:HG22	1.88	0.73
41:DT:61:LEU:O	41:DT:61:LEU:HD12	1.88	0.73
1:CA:429:U:H3'	4:CD:8:LEU:HD23	1.70	0.73
10:AJ:29:ALA:HB1	10:AJ:36:VAL:HG21	1.69	0.73
22:DA:2720:U:H5''	37:DP:52:ARG:NH2	2.03	0.73
25:DD:146:ILE:CD1	25:DD:155:VAL:HG21	2.17	0.73
1:AA:257:G:H2'	1:AA:258:G:H8	1.53	0.73
22:DA:481:G:O2'	22:DA:507:A:N6	2.19	0.73
33:DL:100:ILE:O	33:DL:101:ILE:HB	1.88	0.73
8:AH:14:ARG:HB2	8:AH:74:ILE:CG2	2.17	0.73
22:DA:1438:U:O2'	22:DA:1439:A:H5'	1.87	0.73
22:DA:810:U:C4	33:DL:30:THR:HG22	2.24	0.73
25:DD:127:PHE:CZ	25:DD:160:LYS:HD2	2.23	0.73
22:BA:2773:C:OP1	25:BD:171:THR:HG23	1.88	0.73
1:CA:223:A:C5	1:CA:224:U:C5	2.76	0.73
22:DA:1929:G:H4'	22:DA:1930:G:OP1	1.87	0.73
1:AA:747:A:H2'	1:AA:748:G:H1'	1.70	0.73
1:CA:1031:C:H5'	1:CA:1032:G:H5''	1.71	0.73
22:BA:1590:A:H2'	22:BA:1591:A:C8	2.23	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BV:5:ASN:ND2	43:BV:5:ASN:H	1.86	0.73
1:CA:1145:A:O2'	1:CA:1146:A:H5''	1.88	0.73
22:DA:2330:G:N1	22:DA:2386:A:C6	2.57	0.73
1:AA:1256:A:H1'	1:AA:1258:G:C6	2.23	0.73
22:DA:58:G:N2	22:DA:59:U:H1'	2.03	0.73
4:CD:29:THR:HB	4:CD:30:LYS:HE3	1.71	0.73
32:DK:39:ILE:CD1	32:DK:62:VAL:HG23	2.17	0.73
29:BH:18:GLN:HE21	29:BH:18:GLN:HA	1.53	0.73
8:CH:102:VAL:HG23	8:CH:125:ILE:HB	1.71	0.73
51:D3:15:LYS:NZ	51:D3:19:GLY:HA2	2.02	0.73
22:BA:1871:A:O2'	22:BA:1872:A:C8	2.39	0.73
22:DA:1139:G:N3	22:DA:1143:A:H2	1.86	0.73
31:DJ:25:LEU:HB2	31:DJ:62:VAL:HG21	1.70	0.73
2:AB:137:THR:HA	2:AB:140:LEU:HD13	1.70	0.73
22:DA:2093:G:C2	22:DA:2094:A:C5	2.77	0.73
35:BN:2:ARG:HA	35:BN:5:LYS:HD2	1.69	0.73
26:BE:142:ALA:O	26:BE:143:LEU:HD23	1.88	0.73
12:CL:7:VAL:O	12:CL:7:VAL:HG12	1.88	0.73
22:BA:1415:U:O2	22:BA:1415:U:H2'	1.86	0.73
22:BA:409:G:HO2'	22:BA:410:G:H5'	1.53	0.73
1:AA:1088:G:H21	1:AA:1167:A:H62	1.35	0.73
1:CA:158:G:H2'	1:CA:159:G:H8	1.51	0.73
7:CG:16:LYS:HE2	9:CI:45:MET:SD	2.29	0.73
22:DA:2096:C:O2'	22:DA:2097:A:H5'	1.87	0.73
18:CR:41:SER:HB3	18:CR:51:GLN:HG2	1.69	0.73
22:DA:2341:G:O2'	22:DA:2342:C:H5'	1.87	0.73
9:AI:84:ARG:O	9:AI:87:MET:HB3	1.88	0.73
42:DU:81:ARG:CB	42:DU:96:LYS:HD2	2.18	0.73
39:BR:49:ILE:HG21	39:BR:53:PHE:H	1.54	0.73
22:DA:2756:U:H1'	22:DA:2757:A:H5''	1.70	0.73
22:BA:855:G:H1'	44:BW:23:LYS:HD3	1.70	0.73
44:BW:40:ARG:HD3	44:BW:45:HIS:HE1	1.51	0.73
37:BP:24:THR:O	37:BP:44:GLY:O	2.05	0.73
10:AJ:35:GLN:CG	10:AJ:77:VAL:HB	2.18	0.73
22:BA:1867:G:O2'	22:BA:1868:C:C5'	2.35	0.73
47:DZ:51:SER:HA	47:DZ:54:VAL:CG2	2.19	0.73
1:CA:1458:G:O2'	20:CT:22:SER:HB3	1.87	0.73
1:CA:90:C:O2'	1:CA:91:U:C6	2.39	0.73
10:CJ:64:GLN:CB	14:CN:98:ALA:HB3	2.19	0.73
22:BA:2742:G:C2'	22:BA:2743:U:H5'	2.18	0.73
1:AA:1162:C:H2'	1:AA:1163:A:C8	2.23	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:274:A:O2'	1:AA:275:G:O4'	2.05	0.73
35:DN:55:ALA:CB	35:DN:79:LEU:HD22	2.17	0.73
22:DA:1507:C:H5'	22:DA:1508:A:OP2	1.88	0.73
22:BA:2015:A:C2	48:B0:2:VAL:HG23	2.22	0.73
13:AM:15:VAL:HA	13:AM:33:LEU:CD1	2.18	0.73
28:DG:86:LEU:HA	28:DG:163:TYR:HB3	1.70	0.73
38:DQ:15:LYS:HE3	38:DQ:19:GLN:HE21	1.49	0.73
2:AB:77:GLU:HB2	2:AB:80:LYS:HE2	1.69	0.73
1:CA:1165:U:C2'	1:CA:1166:G:H5'	2.19	0.73
4:AD:13:ARG:CG	4:AD:55:ARG:HH21	2.00	0.73
1:AA:647:C:O2'	1:AA:648:A:H5'	1.89	0.73
4:CD:137:SER:CB	4:CD:138:PRO:HD2	2.18	0.73
22:BA:743:A:O3'	56:BA:3652:HOH:O	2.05	0.73
9:CI:100:ALA:HB1	9:CI:102:PHE:CE2	2.22	0.73
24:BC:259:ASN:O	24:BC:260:LYS:HB2	1.88	0.73
22:DA:2271:G:C2'	22:DA:2272:U:H5'	2.18	0.73
22:DA:206:U:O2'	22:DA:207:A:H5'	1.89	0.73
1:AA:258:G:N2	1:AA:259:G:H1'	2.03	0.73
38:BQ:4:LYS:HZ2	38:BQ:5:ARG:CA	2.01	0.73
22:DA:2136:G:N3	22:DA:2137:U:C5	2.56	0.73
11:AK:21:HIS:CD2	11:AK:34:THR:HG22	2.24	0.73
22:DA:274:C:H2'	22:DA:275:C:H6	1.51	0.73
22:DA:2092:U:H4'	22:DA:2093:G:H5''	1.69	0.73
22:BA:2438:U:O2'	22:BA:2439:A:H5''	1.88	0.73
24:BC:93:VAL:CG1	24:BC:94:LEU:N	2.52	0.73
13:CM:13:HIS:HB3	13:CM:16:ILE:CD1	2.19	0.73
6:AF:86:ARG:NH2	18:AR:63:TYR:HB3	2.03	0.73
1:AA:86:G:N2	1:AA:87:C:H41	1.86	0.73
42:BU:71:ILE:HD11	42:BU:81:ARG:H	1.53	0.73
28:DG:106:LEU:HB2	28:DG:108:PHE:CE1	2.19	0.73
11:CK:78:ILE:HD13	11:CK:78:ILE:H	1.52	0.73
29:DH:2:GLN:O	29:DH:3:VAL:HG22	1.89	0.73
29:DH:94:ILE:HG13	29:DH:98:ASP:OD1	1.88	0.73
28:BG:59:ASP:HB2	28:BG:63:GLN:HG2	1.70	0.73
17:CQ:59:GLU:HG2	17:CQ:76:ARG:HG2	1.69	0.73
24:BC:79:ARG:NH2	24:BC:81:GLU:OE2	2.21	0.73
13:AM:10:ASP:CG	13:AM:11:HIS:H	1.91	0.73
3:AC:14:VAL:O	3:AC:15:LYS:HD2	1.88	0.73
22:DA:2519:U:C6	22:DA:2542:A:N6	2.57	0.73
22:BA:2492:U:O2'	22:BA:2493:U:H5'	1.88	0.73
22:BA:1558:C:H4'	22:BA:1559:U:O5'	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:913:U:H4'	22:DA:914:G:OP1	1.86	0.73
2:CB:44:LYS:O	2:CB:48:MET:HG3	1.89	0.73
1:CA:1106:G:O2'	1:CA:1107:C:H5'	1.89	0.73
16:AP:2:VAL:HG23	16:AP:65:ALA:HA	1.69	0.73
22:DA:1388:G:N3	22:DA:1389:G:C8	2.57	0.73
24:BC:257:ARG:NE	24:BC:269:ARG:NH2	2.37	0.73
27:BF:43:ILE:HG22	27:BF:82:TYR:HE1	1.53	0.73
22:DA:135:U:H2'	22:DA:136:G:C8	2.23	0.73
22:DA:144:A:H2'	22:DA:145:C:C6	2.23	0.73
22:DA:246:C:H2'	22:DA:247:G:C5'	2.18	0.73
22:DA:480:A:H3'	22:DA:481:G:C5'	2.18	0.73
1:AA:488:C:HO2'	1:AA:489:C:H5'	1.53	0.73
1:CA:1224:U:H5'	1:CA:1225:A:OP2	1.88	0.73
33:DL:128:THR:HG22	33:DL:130:GLY:H	1.53	0.73
41:DT:30:ILE:O	41:DT:85:VAL:HG23	1.88	0.73
31:BJ:56:VAL:CG1	31:BJ:57:LEU:H	2.01	0.73
22:DA:1654:A:N3	22:DA:1655:A:C8	2.56	0.73
22:DA:1438:U:C2'	22:DA:1439:A:H5'	2.19	0.73
1:AA:1355:G:O2'	1:AA:1356:G:H5'	1.89	0.73
8:AH:88:LYS:HG3	8:AH:89:ASP:H	1.53	0.73
22:DA:231:A:O2'	22:DA:232:G:C5'	2.37	0.73
40:BS:63:GLY:O	40:BS:64:ALA:HB3	1.89	0.73
17:AQ:22:VAL:HG21	17:AQ:60:ILE:CD1	2.17	0.73
22:DA:1967:C:H6	22:DA:1967:C:C5'	2.01	0.73
1:AA:221:C:O2'	1:AA:222:C:H5'	1.89	0.73
3:CC:41:TYR:CE1	3:CC:89:VAL:CG1	2.70	0.73
25:DD:177:VAL:HA	25:DD:188:LEU:O	1.88	0.73
9:AI:119:LYS:HG3	9:AI:122:ARG:CB	2.19	0.73
1:CA:157:U:C2'	1:CA:158:G:H5'	2.18	0.73
22:BA:2383:G:O2'	22:BA:2384:U:H5'	1.88	0.73
35:DN:70:THR:O	35:DN:70:THR:HG22	1.89	0.73
22:BA:2355:G:H4'	44:BW:20:LEU:HD13	1.69	0.73
33:BL:55:MET:HE3	33:BL:55:MET:HA	1.71	0.73
38:BQ:63:ARG:NH2	38:BQ:96:ASP:HA	2.02	0.73
33:BL:127:VAL:HG11	33:BL:142:ILE:HG21	1.70	0.73
1:CA:1148:U:O2'	1:CA:1149:C:C5'	2.37	0.73
22:DA:1387:A:H5'	22:DA:1469:A:H1'	1.70	0.73
41:DT:61:LEU:C	41:DT:61:LEU:HD12	2.09	0.73
1:CA:502:A:O2'	1:CA:503:C:H5'	1.88	0.73
22:DA:338:G:H2'	22:DA:339:U:C5'	2.19	0.73
44:BW:39:GLN:C	44:BW:41:GLY:N	2.34	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DV:79:ARG:HG3	43:DV:80:HIS:N	2.02	0.73
1:CA:734:G:O2'	1:CA:735:C:H5'	1.88	0.73
24:BC:15:VAL:CA	24:BC:203:VAL:HG11	2.17	0.73
1:CA:642:A:HO2'	1:CA:643:C:H6	1.35	0.73
1:CA:978:A:O2'	1:CA:979:C:H5'	1.87	0.73
26:DE:24:ASN:O	26:DE:28:VAL:HG13	1.88	0.73
2:CB:19:THR:HG22	2:CB:37:VAL:CA	2.15	0.73
23:DB:17:C:H42	23:DB:68:C:H42	1.37	0.73
2:AB:209:VAL:HG23	2:AB:210:THR:N	2.04	0.73
22:DA:959:A:H2'	22:DA:960:A:C8	2.23	0.73
22:BA:1107:G:H2'	22:BA:1108:U:H6	1.54	0.73
22:BA:2656:U:C5	22:BA:2664:G:N2	2.56	0.73
22:BA:580:U:H2'	22:BA:581:C:C6	2.24	0.73
22:DA:2476:A:H2'	22:DA:2477:U:H5'	1.70	0.73
15:CO:55:LEU:HA	15:CO:58:MET:HG3	1.69	0.73
37:DP:62:LYS:HD3	37:DP:64:SER:HB2	1.70	0.73
1:AA:429:U:H3'	4:AD:8:LEU:HD23	1.69	0.73
44:DW:30:VAL:O	44:DW:30:VAL:HG22	1.89	0.73
22:DA:1695:G:C8	24:DC:7:PRO:HB2	2.24	0.73
22:DA:1277:G:H5'	35:DN:20:MET:SD	2.29	0.73
22:DA:2815:C:H2'	22:DA:2816:G:O4'	1.88	0.73
49:B1:34:GLU:CG	49:B1:49:LYS:HG3	2.18	0.73
44:BW:50:VAL:HG12	44:BW:51:GLY:N	2.04	0.73
34:DM:66:ARG:CZ	34:DM:101:VAL:HG11	2.18	0.73
11:CK:27:ASN:HD22	11:CK:27:ASN:H	1.33	0.73
1:CA:597:G:H2'	1:CA:598:U:C5'	2.16	0.73
14:CN:2:LYS:HD3	14:CN:5:MET:CG	2.19	0.73
22:DA:638:G:O2'	22:DA:639:U:O4'	2.07	0.73
22:BA:1870:C:H4'	22:BA:1871:A:OP1	1.88	0.73
22:BA:2214:C:C6	22:BA:2214:C:H5'	2.17	0.73
1:AA:1447:A:H5'	1:AA:1448:C:OP2	1.87	0.73
1:CA:210:C:C2'	1:CA:210:C:O2	2.37	0.73
1:CA:406:G:H21	4:CD:115:GLN:HE22	1.35	0.73
23:BB:28:C:OP1	36:BO:31:THR:HG21	1.88	0.73
10:AJ:81:GLU:O	10:AJ:85:ASP:HB2	1.89	0.73
1:CA:855:U:H5	1:CA:871:U:O4	1.71	0.73
39:BR:45:GLU:HA	39:BR:45:GLU:OE2	1.89	0.73
22:BA:1988:G:C2'	22:BA:1989:G:H5'	2.19	0.73
30:DI:132:ALA:HB1	30:DI:137:LEU:HD12	1.70	0.73
24:DC:146:LYS:HG3	24:DC:149:LYS:HD3	1.71	0.73
42:DU:81:ARG:HB2	42:DU:96:LYS:HD2	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:33:C:O2'	22:DA:34:U:C5'	2.36	0.73
1:CA:1493:A:H8	22:DA:1913:A:N6	1.86	0.73
4:CD:34:GLU:O	4:CD:36:ALA:N	2.22	0.73
38:DQ:87:VAL:CG2	39:DR:52:PRO:HD3	2.09	0.73
6:CF:61:LEU:HD11	6:CF:63:ASN:OD1	1.88	0.73
32:DK:41:ILE:HG22	32:DK:58:LEU:O	1.88	0.73
1:CA:933:G:OP1	7:CG:3:ARG:HD3	1.88	0.73
19:AS:41:PRO:O	19:AS:44:ILE:HG13	1.88	0.73
22:BA:958:U:H6	22:BA:958:U:C5'	2.01	0.73
27:DF:48:LEU:HD23	27:DF:48:LEU:H	1.52	0.73
1:CA:252:U:H2'	1:CA:253:A:C8	2.24	0.73
23:DB:59:A:H2'	23:DB:60:C:H6	1.53	0.73
14:AN:22:LYS:HG3	14:AN:23:ARG:H	1.54	0.73
9:CI:75:ALA:HA	9:CI:78:ILE:HD12	1.70	0.73
1:AA:1183:U:H3'	1:AA:1184:G:C5'	2.18	0.73
4:AD:145:ARG:HD2	4:AD:147:LYS:HE2	1.69	0.73
29:BH:49:ALA:HB3	29:BH:50:ARG:HH21	1.53	0.73
1:AA:757:U:O2'	1:AA:879:C:H1'	1.88	0.73
28:DG:115:GLN:HG2	28:DG:116:LEU:N	2.01	0.73
22:DA:173:A:H2'	22:DA:174:U:H6	1.53	0.73
1:AA:747:A:H5'	1:AA:748:G:OP2	1.88	0.73
22:DA:2472:G:H2'	22:DA:2475:C:H42	1.51	0.73
29:BH:147:VAL:HG12	29:BH:149:GLU:HG3	1.69	0.73
41:BT:33:LYS:HG3	41:BT:80:TRP:CE3	2.22	0.73
22:BA:864:G:O2'	22:BA:865:C:H5'	1.89	0.73
12:CL:72:ASN:HD22	12:CL:72:ASN:H	1.37	0.73
14:CN:47:LEU:O	14:CN:50:LEU:HG	1.89	0.73
15:CO:7:THR:O	15:CO:11:VAL:HG23	1.89	0.73
1:CA:1283:U:H2'	1:CA:1284:C:C6	2.24	0.73
38:DQ:91:ARG:HG3	39:DR:11:GLN:CD	2.09	0.73
6:CF:18:VAL:HB	6:CF:19:PRO:CD	2.19	0.73
21:CU:16:ARG:CG	21:CU:19:LYS:HG2	2.19	0.73
22:DA:679:C:H2'	22:DA:680:C:H6	1.54	0.73
4:AD:57:LYS:HB3	4:AD:199:ILE:HB	1.70	0.73
2:AB:117:GLU:CA	2:AB:120:SER:HB2	2.14	0.73
46:BY:47:ARG:NH2	46:BY:47:ARG:HG3	1.97	0.73
22:DA:571:U:H4'	22:DA:573:U:H5	1.53	0.73
27:DF:46:LYS:HD3	27:DF:46:LYS:O	1.87	0.73
22:DA:241:A:H1'	22:DA:243:U:C5	2.24	0.73
2:CB:90:PHE:HE1	2:CB:92:ASN:HD22	1.34	0.73
22:DA:228:C:C5'	22:DA:229:C:C5	2.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:756:C:O2'	1:CA:757:U:H5'	1.89	0.73
22:DA:1490:A:C8	24:DC:73:ILE:HD12	2.24	0.73
22:BA:2777:G:H5''	22:BA:2778:A:OP1	1.89	0.73
1:AA:536:C:HO2'	1:AA:537:G:H5'	1.54	0.73
22:BA:513:A:O2'	22:BA:514:A:H5'	1.87	0.73
22:DA:982:C:H5''	22:DA:983:A:OP1	1.88	0.73
4:CD:93:LEU:O	4:CD:96:ARG:HG3	1.89	0.73
22:DA:1179:G:O2'	22:DA:1180:U:H5'	1.88	0.73
22:BA:65:U:H2'	22:BA:66:C:H6	1.51	0.73
31:BJ:9:GLU:OE2	31:BJ:9:GLU:HA	1.87	0.73
1:CA:802:A:H2'	1:CA:803:G:H5'	1.69	0.73
22:BA:1695:G:C8	24:BC:7:PRO:HG2	2.24	0.73
22:DA:1338:G:H5''	41:DT:17:SER:HB3	1.71	0.72
22:DA:781:A:H5''	22:DA:782:A:OP1	1.89	0.72
46:DY:50:VAL:HA	46:DY:53:VAL:HG23	1.69	0.72
22:DA:1262:A:H61	22:DA:2017:U:H3	1.35	0.72
12:AL:86:VAL:HG11	12:AL:89:LEU:HD23	1.71	0.72
10:AJ:40:ILE:HB	10:AJ:73:LEU:CB	2.18	0.72
41:BT:54:GLU:O	41:BT:55:VAL:HB	1.88	0.72
9:CI:61:ASP:O	9:CI:62:LEU:HD22	1.89	0.72
1:CA:265:G:C2'	1:CA:266:G:H5'	2.19	0.72
22:DA:1739:A:H2'	22:DA:1740:G:C8	2.23	0.72
27:BF:134:GLN:HE21	27:BF:134:GLN:N	1.87	0.72
1:AA:1215:G:O2'	1:AA:1216:A:H5'	1.88	0.72
1:AA:558:G:C5	1:AA:559:A:C2	2.76	0.72
25:DD:79:LEU:HD22	25:DD:79:LEU:N	2.03	0.72
22:DA:2458:G:O2'	22:DA:2460:U:C5	2.42	0.72
3:CC:120:THR:HG23	3:CC:187:GLU:O	1.89	0.72
1:CA:1503:A:C8	1:CA:1531:A:H1'	2.23	0.72
1:CA:690:G:H2'	1:CA:691:G:O4'	1.89	0.72
25:BD:114:LYS:H	25:BD:114:LYS:CE	2.02	0.72
1:CA:374:A:H2'	1:CA:375:U:C6	2.24	0.72
22:DA:2271:G:H2'	22:DA:2272:U:C6	2.22	0.72
4:CD:29:THR:HG22	4:CD:30:LYS:HD2	1.72	0.72
38:DQ:91:ARG:HD3	39:DR:11:GLN:HG3	1.71	0.72
1:CA:795:C:H5''	11:CK:127:ARG:HH21	1.54	0.72
1:CA:795:C:H5''	1:CA:796:C:OP2	1.89	0.72
52:D4:7:VAL:CG1	52:D4:8:LYS:H	1.97	0.72
1:CA:937:A:O2'	1:CA:938:A:H5'	1.90	0.72
36:BO:106:LEU:HD12	36:BO:106:LEU:C	2.10	0.72
22:DA:1552:A:O2'	22:DA:1553:A:H5'	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2311:A:H1'	27:DF:78:ILE:HD11	1.70	0.72
22:BA:1277:G:C5'	35:BN:20:MET:CE	2.67	0.72
10:AJ:20:GLN:HE21	10:AJ:20:GLN:HA	1.53	0.72
28:DG:122:ALA:HB1	28:DG:131:VAL:O	1.89	0.72
22:DA:1717:A:H2'	22:DA:1718:G:O4'	1.88	0.72
22:DA:2142:A:H2'	22:DA:2143:C:H4'	1.71	0.72
16:CP:46:LYS:HE2	16:CP:47:GLU:H	1.52	0.72
30:BI:33:ASN:HD22	30:BI:64:ARG:NH2	1.85	0.72
22:BA:2808:G:N2	22:BA:2891:U:C6	2.56	0.72
4:CD:127:ARG:HG2	4:CD:127:ARG:HH11	1.53	0.72
33:BL:127:VAL:HG23	33:BL:131:ALA:HB3	1.71	0.72
28:BG:85:LYS:C	28:BG:86:LEU:HD12	2.10	0.72
41:DT:43:ILE:HG21	41:DT:58:VAL:HG11	1.71	0.72
44:DW:20:LEU:HD12	44:DW:20:LEU:N	2.05	0.72
35:DN:28:LEU:C	35:DN:28:LEU:HD23	2.10	0.72
22:DA:105:C:O2'	22:DA:106:C:C6	2.29	0.72
42:DU:91:LYS:O	42:DU:92:VAL:HG22	1.89	0.72
25:BD:99:GLU:CG	25:BD:100:LEU:H	1.93	0.72
6:CF:42:TRP:HB2	6:CF:59:TYR:CB	2.18	0.72
22:DA:2235:G:H2'	22:DA:2236:U:H6	1.54	0.72
38:DQ:4:LYS:NZ	38:DQ:6:GLY:HA3	2.04	0.72
1:CA:961:U:HO2'	1:CA:962:C:H6	0.77	0.72
41:BT:40:LYS:N	41:BT:43:ILE:HG23	2.05	0.72
11:AK:124:LYS:HE3	21:AU:34:ARG:CG	2.19	0.72
22:DA:575:A:C2	22:DA:576:U:C5	2.77	0.72
41:DT:29:THR:N	41:DT:87:LEU:HB2	2.03	0.72
1:CA:265:G:O2'	17:CQ:67:SER:HA	1.89	0.72
22:DA:412:A:C2'	22:DA:413:C:H5'	2.19	0.72
22:BA:2150:C:H2'	22:BA:2151:U:C5	2.23	0.72
8:AH:9:MET:HE2	8:AH:32:LYS:CG	2.18	0.72
1:AA:628:G:H2'	1:AA:629:A:C8	2.24	0.72
1:CA:1296:C:O2'	1:CA:1302:C:C4	2.42	0.72
37:DP:49:ILE:H	37:DP:95:LYS:HE2	1.52	0.72
6:AF:9:MET:HE2	6:AF:59:TYR:CE2	2.24	0.72
3:AC:122:GLN:HB3	3:AC:127:VAL:CG2	2.19	0.72
1:AA:461:A:H3'	1:AA:461:A:N3	2.02	0.72
42:DU:13:LEU:H	42:DU:13:LEU:HD12	1.52	0.72
39:BR:21:ARG:NH2	39:BR:93:PHE:CZ	2.57	0.72
22:BA:996:A:O2'	38:BQ:91:ARG:HG3	1.88	0.72
5:AE:80:LEU:HD23	5:AE:122:VAL:CG1	2.20	0.72
22:BA:671:C:H3'	33:BL:42:SER:OG	1.88	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:125:A:H4'	22:DA:126:A:OP2	1.89	0.72
1:CA:6:G:N3	1:CA:6:G:C2'	2.45	0.72
32:DK:99:ILE:HG13	32:DK:118:LEU:HD12	1.71	0.72
1:AA:250:A:H4'	1:AA:251:G:O5'	1.90	0.72
14:CN:63:CYS:SG	14:CN:82:LYS:HG3	2.29	0.72
1:AA:1142:G:C2	1:AA:1143:G:H1'	2.24	0.72
2:AB:163:ILE:CG2	2:AB:164:ASP:H	1.97	0.72
1:CA:71:A:C2	1:CA:72:A:C8	2.76	0.72
22:DA:2197:U:C5	22:DA:2224:G:C6	2.77	0.72
32:DK:94:PRO:HG3	32:DK:115:ILE:HD12	1.71	0.72
2:CB:114:LYS:CA	2:CB:117:GLU:HG2	2.18	0.72
8:AH:105:THR:HG21	8:AH:120:LEU:CD1	2.18	0.72
23:DB:8:C:H5''	36:DO:15:ARG:HH12	1.52	0.72
34:DM:34:LYS:HB2	34:DM:131:VAL:HG21	1.71	0.72
28:DG:167:VAL:HG23	28:DG:168:VAL:N	2.04	0.72
3:CC:166:TRP:HE3	3:CC:166:TRP:N	1.87	0.72
5:CE:38:VAL:HG12	5:CE:39:GLY:N	2.04	0.72
5:CE:44:ARG:NH2	5:CE:70:MET:HB2	2.04	0.72
1:CA:1533:C:C2'	1:CA:1534:A:H5''	2.19	0.72
27:DF:8:LYS:HB2	27:DF:8:LYS:NZ	2.05	0.72
26:DE:146:VAL:HG12	26:DE:167:VAL:HG23	1.70	0.72
1:CA:338:A:H61	1:CA:351:G:H1	1.37	0.72
3:AC:158:GLY:HA2	3:AC:192:TYR:CE1	2.23	0.72
22:BA:2146:C:H4'	22:BA:2147:A:O5'	1.88	0.72
22:DA:1597:A:O3'	22:DA:1598:A:H8	1.72	0.72
1:AA:279:A:H5''	1:AA:281:G:O4'	1.88	0.72
10:CJ:11:LYS:HB3	10:CJ:71:LEU:CD1	2.16	0.72
1:CA:374:A:H2'	1:CA:375:U:H6	1.54	0.72
22:DA:1090:A:H2'	22:DA:1091:G:H5''	1.71	0.72
22:DA:142:A:O2'	22:DA:143:C:H6	1.68	0.72
1:AA:501:C:O2'	1:AA:502:A:H5'	1.88	0.72
31:DJ:111:LYS:HB2	31:DJ:115:GLY:CA	2.20	0.72
22:BA:1179:G:H3'	22:BA:1180:U:C4'	2.20	0.72
41:BT:2:ILE:HG12	41:BT:3:ARG:HG2	1.71	0.72
29:BH:117:LEU:CD1	29:BH:130:VAL:HG11	2.18	0.72
1:AA:874:G:HO2'	1:AA:875:U:H5'	1.53	0.72
22:DA:2631:G:H2'	22:DA:2632:A:C5'	2.19	0.72
43:DV:61:LEU:CD2	43:DV:61:LEU:H	2.01	0.72
41:BT:50:LEU:HD12	41:BT:50:LEU:N	2.04	0.72
1:AA:1094:G:O2'	1:AA:1095:U:P	2.47	0.72
13:CM:78:ARG:HH21	13:CM:79:LEU:CD2	2.03	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:185:G:H2'	22:DA:186:G:C8	2.24	0.72
26:DE:73:ILE:HG13	26:DE:78:TRP:HE1	1.54	0.72
37:DP:63:ILE:HA	37:DP:68:GLY:HA2	1.70	0.72
1:AA:1464:U:H2'	1:AA:1465:A:H8	1.53	0.72
23:BB:16:G:O2'	23:BB:17:C:H5'	1.90	0.72
22:DA:15:G:OP1	48:D0:20:ALA:HB2	1.88	0.72
26:DE:122:GLU:HA	26:DE:190:ALA:HB2	1.71	0.72
7:AG:37:THR:O	7:AG:41:ILE:HG13	1.88	0.72
22:DA:443:A:H61	26:DE:36:ALA:HB1	1.55	0.72
5:AE:152:VAL:O	5:AE:155:LYS:HD2	1.89	0.72
5:AE:79:THR:OG1	5:AE:80:LEU:N	2.23	0.72
33:BL:77:ILE:HG12	33:BL:95:LEU:HD13	1.70	0.72
28:BG:84:LYS:HB3	28:BG:132:LEU:O	1.88	0.72
26:DE:108:ILE:HD13	26:DE:108:ILE:O	1.89	0.72
22:DA:740:C:C5	22:DA:1981:A:C2	2.77	0.72
12:CL:80:LEU:HD23	12:CL:97:VAL:HG21	1.70	0.72
25:BD:104:VAL:HA	25:BD:106:LYS:HZ3	1.52	0.72
21:CU:3:ILE:HG23	21:CU:18:PHE:CD1	2.25	0.72
10:AJ:11:LYS:HG3	10:AJ:97:ASP:HB3	1.71	0.72
1:CA:82:G:H2'	1:CA:83:C:H4'	1.71	0.72
22:DA:971:G:H2'	22:DA:972:A:H5'	1.72	0.72
22:DA:1722:A:N6	22:DA:1739:A:C8	2.58	0.72
22:BA:1277:G:C5'	35:BN:20:MET:HE1	2.20	0.72
16:AP:51:ARG:O	16:AP:52:LEU:HD12	1.90	0.72
1:AA:1151:A:C4	1:AA:1152:A:N7	2.57	0.72
1:AA:1152:A:H2'	1:AA:1153:G:C8	2.24	0.72
1:CA:330:C:O2'	1:CA:331:G:H5'	1.90	0.72
1:CA:1170:A:H2'	1:CA:1171:A:O4'	1.89	0.72
24:BC:79:ARG:HH22	24:BC:92:LEU:HD22	1.51	0.72
1:CA:345:C:H4'	1:CA:346:G:H5''	1.71	0.72
1:AA:597:G:H5''	1:AA:598:U:OP2	1.89	0.72
34:DM:57:VAL:HA	34:DM:112:LEU:HD11	1.70	0.72
22:DA:2889:C:O2'	22:DA:2890:G:H5'	1.89	0.72
44:BW:67:LYS:O	44:BW:68:PHE:HB2	1.88	0.72
41:DT:20:ALA:HB1	41:DT:31:VAL:HG21	1.69	0.72
22:DA:1080:A:C4	22:DA:1081:U:C5	2.77	0.72
26:DE:130:LYS:CG	26:DE:133:LEU:HD13	2.16	0.72
22:DA:2758:A:O2'	22:DA:2759:G:C5'	2.34	0.72
34:DM:36:VAL:HG21	34:DM:129:THR:CG2	2.20	0.72
22:DA:2392:A:C2	33:DL:55:MET:HG2	2.25	0.72
1:AA:254:G:O2'	1:AA:255:G:H5'	1.88	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:84:ALA:HB3	29:DH:148:ALA:HB2	1.70	0.72
29:BH:111:ALA:O	29:BH:112:LYS:HD3	1.89	0.72
22:DA:2094:A:O2'	22:DA:2095:A:C5'	2.37	0.72
35:BN:33:ILE:HG23	35:BN:114:GLU:HB3	1.71	0.72
34:BM:12:MET:HE3	34:BM:71:LYS:HG3	1.69	0.72
13:CM:12:LYS:H	13:CM:44:ILE:HG13	1.52	0.72
20:CT:62:ALA:HA	20:CT:67:HIS:NE2	2.05	0.72
22:DA:2297:A:C2	22:DA:2298:A:N7	2.58	0.72
36:DO:31:THR:HG21	36:DO:36:TYR:CE2	2.24	0.72
22:DA:1700:A:H2'	22:DA:1701:A:C5'	2.19	0.72
34:BM:114:ARG:HG2	34:BM:130:PHE:CZ	2.24	0.72
44:BW:8:SER:O	44:BW:9:THR:CB	2.37	0.72
22:BA:1434:A:H2'	22:BA:1435:G:H8	1.55	0.72
33:BL:64:PHE:O	33:BL:64:PHE:CD1	2.42	0.72
1:CA:338:A:N6	1:CA:351:G:H1	1.88	0.72
4:AD:160:LEU:H	4:AD:160:LEU:HD13	1.54	0.72
39:BR:74:ILE:HB	39:BR:87:GLN:HB3	1.70	0.72
25:BD:14:ILE:CA	37:BP:11:GLN:HE22	2.02	0.72
22:BA:1152:C:O2'	22:BA:1153:C:H5'	1.88	0.72
22:DA:1339:G:H21	22:DA:1603:A:H1'	1.54	0.72
22:DA:2353:G:N3	44:DW:30:VAL:HG13	2.04	0.72
41:DT:9:LYS:O	41:DT:9:LYS:HG2	1.89	0.72
24:BC:89:ASN:O	24:BC:90:ILE:HD13	1.89	0.72
22:DA:217:A:C2'	22:DA:218:A:H8	2.02	0.72
1:AA:92:U:O2'	1:AA:93:U:C6	2.43	0.72
44:BW:73:PRO:HG3	44:BW:76:ARG:HD2	1.69	0.72
1:AA:1299:A:C8	1:AA:1301:U:H1'	2.24	0.72
1:CA:972:C:H4'	10:CJ:59:LYS:HG2	1.70	0.72
22:BA:989:G:C8	47:BZ:13:ILE:HD11	2.24	0.72
6:AF:38:ARG:NH1	6:AF:61:LEU:HD21	2.04	0.72
1:CA:68:G:N2	1:CA:152:A:H1'	2.05	0.72
1:CA:275:G:OP1	17:CQ:15:LYS:HD2	1.90	0.72
7:CG:119:LEU:C	7:CG:119:LEU:HD23	2.10	0.72
25:DD:107:VAL:HG12	25:DD:109:VAL:HG23	1.71	0.72
7:CG:99:ALA:HB3	7:CG:100:MET:CE	2.20	0.72
22:DA:671:C:O2'	22:DA:672:C:C5'	2.38	0.72
26:DE:111:GLU:CB	26:DE:114:ARG:HH21	2.01	0.72
22:BA:1268:A:C2	22:BA:2013:A:C4	2.78	0.72
44:BW:37:VAL:HG22	44:BW:55:ASP:O	1.89	0.72
22:DA:865:C:H5''	22:DA:866:A:OP1	1.89	0.72
22:BA:1253:A:C3'	22:BA:1254:A:H5''	2.19	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2786:U:O2'	25:BD:66:GLY:HA3	1.90	0.72
30:DI:112:LYS:NZ	30:DI:128:ILE:HD12	2.04	0.72
23:BB:112:G:H2'	23:BB:113:C:C6	2.24	0.72
44:BW:54:ARG:HH11	44:BW:54:ARG:HB2	1.54	0.72
1:AA:423:G:H2'	1:AA:424:G:O4'	1.90	0.72
11:AK:13:LYS:O	11:AK:14:GLN:HB3	1.89	0.72
5:AE:155:LYS:HD3	5:AE:156:ARG:N	2.05	0.72
22:DA:1342:A:C6	22:DA:1397:U:C6	2.78	0.72
22:DA:77:G:N2	22:DA:110:G:HI'	2.05	0.72
34:DM:41:LEU:C	34:DM:93:VAL:HG23	2.10	0.72
44:BW:18:LYS:CA	44:BW:36:ILE:HG13	2.20	0.72
28:BG:104:LEU:CB	28:BG:112:VAL:CG2	2.65	0.72
21:AU:9:GLU:CB	21:AU:10:PRO:HD3	2.19	0.72
22:DA:1031:G:O2'	52:D4:7:VAL:HG12	1.90	0.72
22:DA:1608:A:C8	22:DA:1611:C:N4	2.57	0.72
1:AA:251:G:H4'	1:AA:252:U:O5'	1.89	0.72
8:CH:28:SER:HB2	8:CH:57:GLU:O	1.89	0.72
22:BA:1179:G:C5	22:BA:1180:U:C1'	2.71	0.72
1:CA:936:C:H5'	1:CA:1383:C:N3	2.05	0.72
4:AD:196:GLU:HA	4:AD:199:ILE:CG2	2.19	0.72
22:DA:1735:A:HO2'	22:DA:1736:U:H6	0.79	0.72
1:CA:120:A:O2'	1:CA:121:U:H5''	1.90	0.72
22:DA:183:C:C2'	22:DA:184:C:H5'	2.20	0.72
9:AI:83:THR:HG21	9:AI:102:PHE:CB	2.19	0.72
7:AG:4:ARG:NE	7:AG:4:ARG:HA	2.03	0.72
28:DG:7:PRO:O	28:DG:8:VAL:HB	1.89	0.72
22:DA:644:A:O2'	22:DA:645:C:H5''	1.90	0.72
25:BD:70:LYS:O	25:BD:71:ALA:HB3	1.90	0.72
2:CB:26:MET:HE2	2:CB:29:PHE:HD2	1.54	0.72
1:CA:464:U:C4	1:CA:466:A:H4'	2.24	0.72
26:DE:90:GLN:OE1	26:DE:90:GLN:HA	1.90	0.72
1:CA:953:G:C6	1:CA:1229:A:N6	2.57	0.72
38:BQ:23:TYR:O	38:BQ:28:SER:HB3	1.89	0.72
1:AA:1368:A:O2'	1:AA:1369:C:H5'	1.90	0.72
5:AE:80:LEU:HD12	5:AE:146:MET:SD	2.30	0.72
41:DT:11:LEU:HD12	41:DT:11:LEU:H	1.53	0.72
22:DA:740:C:C6	22:DA:1981:A:C2	2.77	0.72
35:DN:28:LEU:HD13	35:DN:48:VAL:HG11	1.72	0.72
22:DA:1353:A:O2'	22:DA:1354:A:H5'	1.89	0.72
22:DA:1357:C:C5	56:DA:3415:HOH:O	2.43	0.72
22:DA:53:A:C2	22:DA:179:C:H4'	2.25	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:412:A:H4'	1:CA:413:G:OP1	1.89	0.72
18:CR:39:VAL:CG1	18:CR:40:PRO:HD2	2.20	0.72
32:DK:104:THR:OG1	32:DK:106:GLU:HB2	1.89	0.72
22:DA:2438:U:O2'	22:DA:2439:A:H5''	1.90	0.72
22:BA:386:G:H4'	22:BA:387:U:OP2	1.90	0.72
36:BO:75:GLY:HA2	36:BO:106:LEU:HD13	1.70	0.72
47:BZ:9:THR:HG23	47:BZ:10:ARG:HB2	1.71	0.72
24:BC:251:THR:HG22	24:BC:252:LYS:NZ	2.04	0.72
22:BA:1813:G:N3	24:BC:49:THR:CG2	2.53	0.72
24:DC:94:LEU:CD1	24:DC:100:ARG:HD3	2.19	0.72
13:CM:77:LYS:HA	13:CM:80:MET:CE	2.20	0.72
23:BB:45:A:H2'	23:BB:46:A:C8	2.25	0.72
32:DK:28:SER:O	32:DK:29:HIS:CB	2.37	0.72
1:AA:596:A:H5'	1:AA:596:A:C8	2.25	0.72
39:BR:97:LYS:O	39:BR:98:ILE:HB	1.89	0.72
1:AA:68:G:C5	1:AA:69:G:H1'	2.25	0.72
7:CG:112:ASP:HB3	7:CG:117:LEU:HB3	1.71	0.72
4:AD:61:ARG:HH21	4:AD:67:LEU:HD23	1.54	0.72
1:CA:260:G:OP1	20:CT:74:HIS:HE1	1.73	0.72
15:AO:73:ASP:CG	15:AO:76:ARG:HG3	2.10	0.72
1:CA:1128:C:C4'	1:CA:1148:U:H3	2.03	0.71
1:AA:425:G:H2'	1:AA:426:U:H5'	1.71	0.71
22:DA:2056:G:C2	22:DA:2057:G:C8	2.78	0.71
22:DA:800:A:H4'	22:DA:801:G:O5'	1.88	0.71
22:DA:477:A:C2'	22:DA:478:A:H8	2.02	0.71
1:CA:1322:C:H2'	1:CA:1322:C:O2	1.90	0.71
2:CB:209:VAL:O	2:CB:213:LEU:HB2	1.90	0.71
2:AB:66:ILE:CB	2:AB:88:GLN:HB3	2.19	0.71
22:BA:1015:U:O2'	22:BA:1016:G:H5'	1.90	0.71
22:DA:242:G:C8	51:D3:3:ILE:O	2.43	0.71
1:CA:277:C:H2'	1:CA:278:G:C8	2.25	0.71
1:CA:14:U:C2	1:CA:16:A:H5''	2.24	0.71
29:DH:115:VAL:CG1	29:DH:132:PHE:HB2	2.20	0.71
1:AA:1348:U:O2'	1:AA:1349:A:C5'	2.38	0.71
8:CH:1:SER:CB	8:CH:3:GLN:HG3	2.19	0.71
20:AT:57:VAL:CG1	20:AT:71:ALA:HB1	2.20	0.71
17:CQ:45:VAL:HG11	17:CQ:60:ILE:HG22	1.70	0.71
24:DC:29:PHE:HD2	24:DC:32:LEU:HD12	1.55	0.71
1:AA:1167:A:C8	1:AA:1169:A:N6	2.58	0.71
22:BA:1150:C:C2'	22:BA:1151:A:O5'	2.37	0.71
9:CI:45:MET:HE2	9:CI:48:ARG:HG3	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1009:U:O2'	1:AA:1010:U:H5'	1.89	0.71
38:DQ:40:LYS:CD	38:DQ:44:TYR:HE2	2.02	0.71
34:BM:42:THR:OG1	34:BM:45:GLN:HG3	1.90	0.71
21:AU:32:ARG:O	21:AU:32:ARG:HG2	1.90	0.71
51:B3:44:ARG:N	51:B3:45:PRO:HD2	2.05	0.71
22:BA:346:A:C2	22:BA:347:A:H1'	2.24	0.71
22:DA:2330:G:H21	44:DW:38:ARG:HA	1.55	0.71
22:DA:1356:G:N2	22:DA:1357:C:H1'	2.05	0.71
1:CA:1103:C:H5"	2:CB:96:LEU:HD22	1.72	0.71
40:DS:33:LEU:HA	40:DS:36:LEU:HD23	1.71	0.71
12:AL:86:VAL:O	12:AL:86:VAL:HG12	1.88	0.71
26:BE:119:ILE:HD11	26:BE:187:VAL:HG22	1.72	0.71
22:DA:608:A:C5	22:DA:621:A:N7	2.58	0.71
4:CD:55:ARG:HH11	4:CD:55:ARG:CG	1.95	0.71
33:BL:109:LYS:CG	33:BL:126:ARG:HB3	2.15	0.71
23:DB:57:A:C6	27:DF:25:MET:HG2	2.25	0.71
22:DA:962:G:H21	22:DA:2250:G:H22	1.37	0.71
8:AH:105:THR:CG2	8:AH:120:LEU:HD13	2.17	0.71
20:CT:58:ASP:O	20:CT:61:ALA:HB3	1.90	0.71
1:CA:1299:A:O2'	1:CA:1300:G:H4'	1.90	0.71
22:DA:2407:A:O2'	22:DA:2408:U:H5'	1.90	0.71
28:DG:91:VAL:HG22	28:DG:93:TYR:HE2	1.56	0.71
13:AM:106:ARG:NH2	13:AM:112:ARG:HB3	2.05	0.71
24:BC:29:PHE:CE2	24:BC:31:PRO:HG2	2.24	0.71
22:BA:2480:C:H2'	22:BA:2481:G:H5'	1.72	0.71
7:AG:144:ALA:C	7:AG:146:ALA:H	1.92	0.71
34:BM:17:ASN:O	34:BM:38:ARG:HD3	1.90	0.71
22:BA:1427:A:H4'	22:BA:1428:C:O5'	1.90	0.71
3:CC:20:THR:O	3:CC:20:THR:HG23	1.89	0.71
22:BA:2396:G:O2'	22:BA:2397:G:H5'	1.90	0.71
34:DM:15:GLY:O	34:DM:16:ARG:HB3	1.89	0.71
22:DA:308:G:C6	22:DA:309:A:C6	2.79	0.71
3:CC:76:ILE:HA	3:CC:83:VAL:HG13	1.71	0.71
26:BE:61:ARG:NH1	26:BE:64:GLY:HA3	2.05	0.71
24:DC:149:LYS:HE2	24:DC:152:GLN:NE2	2.05	0.71
1:CA:484:G:H4'	1:CA:485:U:O5'	1.89	0.71
22:DA:321:U:C2	26:DE:159:LEU:HD21	2.25	0.71
22:DA:216:A:O2'	22:DA:217:A:H8	1.73	0.71
22:DA:2756:U:H4'	22:DA:2757:A:O5'	1.89	0.71
13:AM:95:PRO:CG	13:AM:101:THR:HG22	2.20	0.71
1:AA:204:G:C3'	1:AA:205:A:H5"	2.09	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:210:C:H4'	1:AA:211:G:N2	2.06	0.71
11:CK:124:LYS:HE3	21:CU:34:ARG:CZ	2.20	0.71
8:AH:58:LEU:HD22	8:AH:59:GLU:H	1.55	0.71
43:DV:77:VAL:HG23	43:DV:89:ILE:HG22	1.72	0.71
32:DK:11:ALA:HB2	32:DK:64:ARG:NH1	2.04	0.71
40:DS:24:ILE:HG22	40:DS:35:ILE:HD11	1.72	0.71
8:CH:54:THR:O	8:CH:56:PRO:HD3	1.89	0.71
19:CS:50:VAL:HG11	19:CS:70:LEU:HB3	1.71	0.71
22:DA:626:A:H2'	33:DL:78:ARG:NH2	2.05	0.71
3:AC:56:ILE:HG12	3:AC:65:VAL:CG2	2.17	0.71
1:AA:619:U:N1	4:AD:131:ILE:HD11	2.05	0.71
5:CE:55:VAL:N	5:CE:56:PRO:HD2	2.04	0.71
22:DA:491:G:C2'	22:DA:492:A:H8	2.02	0.71
22:BA:1462:C:H2'	22:BA:1463:C:H5'	1.72	0.71
1:CA:1003:G:N2	1:CA:1005:A:H5''	2.05	0.71
1:AA:1069:C:C2'	1:AA:1070:U:H5''	2.20	0.71
36:DO:4:LYS:HG3	36:DO:8:ILE:HD11	1.72	0.71
22:DA:2666:C:H2'	22:DA:2667:C:H5'	1.70	0.71
48:B0:33:SER:CB	48:B0:35:GLU:HG3	2.19	0.71
36:BO:31:THR:CG2	36:BO:34:HIS:H	2.02	0.71
22:DA:286:U:H2'	22:DA:287:G:C8	2.25	0.71
34:BM:8:LYS:HD2	34:BM:8:LYS:N	2.06	0.71
2:AB:22:TRP:O	2:AB:22:TRP:CG	2.43	0.71
22:DA:1002:G:C2	22:DA:1003:G:H1'	2.25	0.71
8:AH:21:LYS:HE2	8:AH:21:LYS:HA	1.72	0.71
22:BA:438:G:C2'	22:BA:439:A:H5'	2.19	0.71
40:BS:13:SER:O	40:BS:14:ALA:HB2	1.91	0.71
1:AA:1281:C:O2'	1:AA:1282:C:H5'	1.91	0.71
22:DA:67:U:H2'	22:DA:68:G:C8	2.24	0.71
3:CC:109:GLU:CG	3:CC:139:ASN:HB2	2.12	0.71
31:DJ:35:ARG:NH1	31:DJ:140:LEU:HD11	2.04	0.71
39:DR:39:LEU:CB	39:DR:49:ILE:HD13	2.18	0.71
22:DA:2615:U:C2	48:D0:3:GLN:HA	2.26	0.71
1:AA:488:C:O2'	1:AA:489:C:C5'	2.36	0.71
22:DA:1675:C:O2'	22:DA:1676:A:H5'	1.90	0.71
1:AA:842:U:HO2'	1:AA:846:G:H1	1.36	0.71
41:BT:39:THR:HG22	41:BT:41:ALA:HB3	1.71	0.71
1:CA:191:G:H2'	1:CA:192:A:C8	2.25	0.71
1:CA:193:C:H1'	20:CT:54:GLN:NE2	2.04	0.71
29:DH:80:ILE:HB	29:DH:101:ASP:CG	2.10	0.71
22:DA:374:A:H2'	22:DA:375:G:H8	1.53	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:740:U:O2'	1:CA:741:G:H5'	1.88	0.71
29:DH:41:LYS:O	29:DH:44:ILE:HG12	1.89	0.71
22:DA:1936:A:H4'	22:DA:1937:A:OP2	1.90	0.71
15:CO:24:THR:HG23	15:CO:65:LEU:HD22	1.72	0.71
1:CA:1463:U:H2'	1:CA:1464:U:H6	1.54	0.71
28:BG:10:VAL:HG23	28:BG:10:VAL:O	1.88	0.71
22:DA:1931:U:H2'	22:DA:1932:A:C8	2.25	0.71
30:BI:33:ASN:HD22	30:BI:64:ARG:HH22	1.36	0.71
4:CD:137:SER:HB2	4:CD:138:PRO:HD2	1.70	0.71
2:CB:26:MET:HA	2:CB:26:MET:HE2	1.70	0.71
51:D3:57:VAL:O	51:D3:60:CYS:HB2	1.90	0.71
40:DS:17:VAL:HG11	40:DS:103:ILE:HD11	1.72	0.71
22:DA:724:U:H2'	22:DA:725:G:O4'	1.90	0.71
22:BA:313:G:C2'	22:BA:314:C:H5'	2.20	0.71
4:CD:3:TYR:O	4:CD:4:LEU:HB2	1.89	0.71
46:BY:45:GLN:O	46:BY:46:VAL:HB	1.90	0.71
22:DA:2285:C:H5	49:D1:5:ARG:NH2	1.87	0.71
44:DW:17:ALA:HB1	44:DW:36:ILE:HG12	1.72	0.71
12:CL:62:VAL:HG21	12:CL:94:TYR:CD2	2.25	0.71
22:DA:61:C:H4'	46:DY:43:LEU:HD23	1.72	0.71
24:BC:141:HIS:HB2	24:BC:190:THR:HB	1.72	0.71
22:DA:2746:U:H5''	28:DG:137:LYS:HG2	1.70	0.71
6:CF:90:MET:HE1	18:CR:60:ARG:HD3	1.72	0.71
48:D0:5:ASN:HD22	48:D0:6:LYS:N	1.86	0.71
22:DA:191:A:O2'	22:DA:192:C:H5'	1.90	0.71
1:AA:1241:G:O2'	1:AA:1242:G:H8	1.70	0.71
22:DA:2503:A:H4'	22:DA:2504:U:OP1	1.89	0.71
22:DA:481:G:H1'	22:DA:506:G:H21	1.55	0.71
4:AD:60:VAL:O	4:AD:63:ILE:HG23	1.90	0.71
40:BS:2:GLU:O	40:BS:3:THR:CG2	2.39	0.71
22:DA:1992:G:H4'	22:DA:1993:U:OP1	1.89	0.71
1:AA:1143:G:H2'	1:AA:1144:G:C8	2.22	0.71
41:BT:39:THR:CB	41:BT:42:GLU:HB2	2.20	0.71
1:CA:142:G:N2	1:CA:143:A:H1'	2.06	0.71
22:DA:2091:C:H1'	45:DX:33:HIS:NE2	2.06	0.71
1:CA:1331:G:HO2'	1:CA:1332:A:H8	1.38	0.71
1:AA:1162:C:O2'	1:AA:1163:A:O4'	2.07	0.71
1:AA:452:A:H5''	1:AA:452:A:H8	1.55	0.71
22:BA:271:G:O2'	22:BA:272:A:H5''	1.91	0.71
24:DC:71:ASP:HA	24:DC:117:SER:O	1.91	0.71
22:BA:1707:G:H2'	22:BA:1708:C:H6	1.52	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:646:G:C2'	1:AA:647:C:H5'	2.20	0.71
28:DG:72:ASN:O	28:DG:76:ILE:HG12	1.91	0.71
6:AF:7:VAL:O	6:AF:7:VAL:HG22	1.90	0.71
22:BA:2667:C:H2'	22:BA:2668:G:H5'	1.73	0.71
34:DM:114:ARG:HA	34:DM:130:PHE:CE1	2.25	0.71
1:CA:1480:A:C4	1:CA:1481:U:C6	2.78	0.71
22:BA:679:C:O2'	22:BA:680:C:H5'	1.91	0.71
10:CJ:25:ILE:O	10:CJ:25:ILE:HG22	1.90	0.71
22:DA:950:G:O2'	22:DA:951:C:H5'	1.90	0.71
22:BA:1788:C:C2'	22:BA:1789:A:H5'	2.21	0.71
22:DA:1799:G:H8	24:DC:179:GLU:OE1	1.73	0.71
1:CA:386:C:C4	1:CA:387:U:C5	2.78	0.71
22:DA:1810:A:H3'	22:DA:1811:G:H8	1.54	0.71
52:D4:19:ARG:HH12	52:D4:26:ILE:HG13	1.55	0.71
45:DX:58:ILE:HG22	45:DX:58:ILE:O	1.91	0.71
25:BD:176:ASP:OD2	25:BD:176:ASP:N	2.23	0.71
33:DL:3:LEU:C	33:DL:3:LEU:HD12	2.10	0.71
11:AK:30:ILE:C	11:AK:30:ILE:HD12	2.11	0.71
22:DA:2734:A:H2'	22:DA:2735:G:H5'	1.71	0.71
22:DA:2688:G:H1'	22:DA:2721:A:N6	2.06	0.71
27:DF:104:THR:HG22	27:DF:105:ILE:HG13	1.71	0.71
1:CA:79:G:H2'	1:CA:80:A:H8	1.56	0.71
22:DA:1734:G:HO2'	22:DA:1735:A:H8	0.77	0.71
27:BF:3:LEU:CD2	27:BF:100:GLU:HG3	2.20	0.71
14:AN:44:VAL:HG23	14:AN:45:LEU:N	2.05	0.71
4:AD:117:VAL:HA	4:AD:122:ILE:CD1	2.18	0.71
1:AA:673:A:H2'	1:AA:674:G:C8	2.26	0.71
36:DO:34:HIS:HD2	36:DO:53:THR:OG1	1.73	0.71
22:BA:1963:U:H6	22:BA:1963:U:C3'	2.03	0.71
35:DN:73:ASN:CA	35:DN:76:VAL:HG22	2.20	0.71
1:AA:109:A:H2'	1:AA:326:G:H21	1.56	0.71
6:AF:3:HIS:N	6:AF:92:THR:HG23	2.05	0.71
40:DS:53:SER:O	40:DS:56:ALA:HB3	1.90	0.71
28:BG:6:ALA:HB1	28:BG:7:PRO:HD2	1.72	0.71
22:DA:2643:G:O2'	22:DA:2644:G:H5'	1.90	0.71
2:CB:30:ILE:HG23	2:CB:39:ILE:O	1.89	0.71
35:BN:109:PRO:O	35:BN:109:PRO:HG2	1.89	0.71
37:BP:13:LYS:CE	37:BP:76:HIS:HA	2.17	0.71
33:BL:132:ARG:HG3	33:BL:142:ILE:CD1	2.20	0.71
24:DC:35:LYS:HB3	24:DC:35:LYS:HZ3	1.52	0.71
22:DA:332:A:C4	22:DA:335:C:N4	2.59	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:80:LEU:CD1	24:BC:109:LEU:HG	2.20	0.71
37:DP:88:ARG:NE	37:DP:112:ARG:HH21	1.89	0.71
22:DA:206:U:O2'	22:DA:207:A:H8	1.72	0.71
14:CN:33:VAL:HG22	14:CN:40:ARG:NH2	2.03	0.71
22:DA:620:G:O2'	22:DA:622:G:N7	2.24	0.71
22:BA:1654:A:H1'	25:BD:118:PHE:CD1	2.26	0.71
1:AA:1124:G:H3'	1:AA:1145:A:N6	2.06	0.71
41:BT:39:THR:H	41:BT:43:ILE:HG22	1.53	0.71
22:DA:491:G:C2'	22:DA:492:A:C8	2.73	0.71
22:DA:242:G:H8	51:D3:3:ILE:O	1.72	0.71
22:DA:1438:U:C4	22:DA:1439:A:C2	2.79	0.71
22:DA:1628:G:O2'	22:DA:1629:U:H5'	1.91	0.71
22:DA:228:C:H5''	22:DA:229:C:C5	2.25	0.71
1:AA:1441:A:H62	1:AA:1461:G:N2	1.87	0.71
22:BA:1747:U:H2'	22:BA:1748:C:C6	2.26	0.71
28:BG:33:THR:HA	28:BG:34:ARG:NH1	2.06	0.71
15:AO:16:ARG:O	15:AO:17:ASP:HB3	1.90	0.71
1:AA:121:U:H5''	1:AA:121:U:H6	1.55	0.71
1:CA:1255:G:H21	1:CA:1258:G:N2	1.87	0.71
30:DI:77:VAL:HA	30:DI:80:LYS:HE3	1.73	0.71
24:BC:108:GLY:C	24:BC:109:LEU:HD22	2.11	0.71
22:DA:1809:A:C2	22:DA:1810:A:C4	2.78	0.71
22:DA:1809:A:O2'	22:DA:1810:A:H8	1.72	0.71
1:CA:1068:G:O2'	1:CA:1069:C:H5'	1.91	0.71
22:DA:2056:G:N2	48:D0:1:ALA:N	2.36	0.71
22:DA:2074:U:C2'	22:DA:2075:U:H5'	2.20	0.71
32:DK:71:ARG:HB3	32:DK:72:PRO:HD2	1.71	0.71
13:CM:100:ARG:CZ	13:CM:102:LYS:HD3	2.21	0.71
47:DZ:23:LEU:HD12	47:DZ:28:LEU:HD21	1.73	0.71
22:DA:1666:G:O3'	32:DK:6:THR:HG23	1.90	0.71
22:DA:2873:A:H2	35:DN:5:LYS:HG3	1.55	0.71
1:CA:79:G:H2'	1:CA:80:A:C8	2.26	0.71
18:AR:55:ALA:HA	18:AR:58:ILE:HD12	1.73	0.71
1:AA:1152:A:C2'	1:AA:1153:G:H8	2.03	0.71
27:DF:30:VAL:HG13	27:DF:168:LEU:HD23	1.73	0.71
1:AA:1196:A:O2'	1:AA:1197:A:OP2	2.08	0.71
31:DJ:57:LEU:HD11	31:DJ:129:GLU:H	1.54	0.71
25:BD:69:ALA:HA	25:BD:73:VAL:HG13	1.73	0.71
15:AO:2:LEU:HD22	15:AO:34:GLN:HG2	1.72	0.71
10:CJ:81:GLU:O	10:CJ:86:ALA:HB3	1.90	0.71
12:CL:42:LYS:CG	12:CL:43:LYS:HG2	2.21	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:77:ILE:HD11	33:BL:108:ALA:HB1	1.71	0.71
41:DT:34:VAL:O	41:DT:34:VAL:HG12	1.90	0.71
22:DA:1826:G:OP2	24:DC:220:ARG:HB3	1.91	0.71
22:DA:70:G:O2'	22:DA:71:A:C5'	2.38	0.71
42:DU:90:LYS:CE	42:DU:92:VAL:HG12	2.10	0.71
22:DA:167:A:H3'	22:DA:168:G:H8	1.56	0.71
22:DA:1051:G:H5''	22:DA:2752:C:H1'	1.72	0.71
43:DV:9:ARG:HD3	43:DV:39:ALA:HB1	1.72	0.71
11:CK:27:ASN:ND2	11:CK:27:ASN:N	2.38	0.71
21:CU:16:ARG:HG3	21:CU:19:LYS:HG3	1.70	0.71
33:DL:79:LEU:HB2	33:DL:113:ALA:H	1.55	0.71
25:BD:122:VAL:HG12	25:BD:123:LYS:N	2.06	0.71
22:DA:1662:U:O2'	22:DA:2687:U:H5''	1.91	0.71
22:DA:2094:A:HO2'	22:DA:2095:A:H8	1.38	0.71
1:CA:1035:A:H2	1:CA:1036:A:H62	1.37	0.71
1:AA:1152:A:HO2'	1:AA:1153:G:H8	1.39	0.71
35:DN:82:GLU:C	35:DN:85:PRO:HD2	2.10	0.71
9:AI:129:ARG:HA	9:AI:129:ARG:NH1	2.06	0.71
22:BA:1747:U:O2'	22:BA:1748:C:H5'	1.90	0.71
29:DH:41:LYS:H	29:DH:44:ILE:HG23	1.55	0.71
44:DW:8:SER:O	44:DW:9:THR:HB	1.90	0.71
4:AD:54:LEU:C	4:AD:54:LEU:CD2	2.59	0.71
4:CD:204:SER:CB	5:CE:105:ILE:HD11	2.20	0.71
2:CB:59:ILE:HG22	2:CB:62:ARG:HD3	1.71	0.71
5:CE:19:ARG:HG3	5:CE:32:PHE:CE1	2.25	0.71
35:BN:38:LEU:HB3	35:BN:39:PRO:HD3	1.73	0.71
22:BA:1857:G:H1'	22:BA:1884:G:N2	2.05	0.71
28:BG:120:ILE:HD13	28:BG:121:THR:H	1.56	0.71
41:DT:15:HIS:CD2	41:DT:17:SER:HB2	2.26	0.71
49:D1:33:LEU:H	49:D1:51:ALA:HB3	1.55	0.71
2:AB:40:ILE:CD1	2:AB:201:GLY:HA2	2.13	0.71
22:DA:2882:A:H5'	35:DN:96:ARG:HD3	1.73	0.71
22:BA:1798:U:OP1	24:BC:257:ARG:HB2	1.90	0.71
1:CA:1084:G:C5	1:CA:1085:U:C4	2.78	0.71
43:DV:38:LEU:HD23	43:DV:40:ILE:HD12	1.73	0.71
1:AA:1303:C:O2'	1:AA:1304:G:H5'	1.91	0.71
22:DA:2060:A:C2'	26:DE:63:LYS:HZ2	1.99	0.71
41:BT:15:HIS:HB3	41:BT:31:VAL:HG23	1.69	0.71
32:DK:16:ALA:HB3	32:DK:46:ALA:N	2.06	0.71
22:DA:1722:A:N6	22:DA:1738:G:H1'	2.06	0.71
1:AA:1324:A:H2'	1:AA:1325:C:C6	2.26	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:12:LYS:HE2	13:CM:16:ILE:HG22	1.71	0.71
36:DO:62:LEU:HD11	36:DO:65:THR:HG23	1.72	0.71
13:CM:78:ARG:NH2	13:CM:79:LEU:HD23	2.03	0.71
1:AA:818:G:O2'	1:AA:819:A:H5'	1.91	0.71
51:D3:56:LEU:CD1	51:D3:56:LEU:H	2.03	0.71
22:DA:999:U:H2'	22:DA:1000:A:H5'	1.71	0.71
44:BW:54:ARG:HB2	44:BW:54:ARG:NH1	2.06	0.71
3:CC:80:GLY:O	3:CC:83:VAL:HG22	1.90	0.71
30:DI:20:SER:OG	30:DI:25:PRO:HG2	1.91	0.71
1:AA:1492:A:H2'	1:AA:1493:A:H5''	1.73	0.71
39:DR:43:ASN:ND2	39:DR:44:GLY:H	1.89	0.71
43:DV:36:ALA:HB1	43:DV:37:PRO:HD2	1.73	0.71
37:BP:4:ILE:HG22	37:BP:5:LYS:N	2.04	0.70
37:BP:4:ILE:O	37:BP:5:LYS:HB3	1.91	0.70
22:DA:1079:C:O2'	22:DA:1080:A:C8	2.43	0.70
35:DN:87:PHE:CE1	35:DN:90:ARG:HD2	2.26	0.70
26:DE:134:LEU:HA	26:DE:137:LYS:CB	2.21	0.70
22:DA:2210:U:H4'	22:DA:2211:A:C5'	2.21	0.70
1:AA:76:G:H2'	1:AA:76:G:N3	2.06	0.70
32:DK:64:ARG:HD2	32:DK:102:PRO:O	1.91	0.70
22:DA:2720:U:H5''	37:DP:52:ARG:HH21	1.56	0.70
42:DU:43:LYS:HG2	42:DU:45:GLN:HG2	1.73	0.70
1:CA:93:U:O2'	1:CA:94:G:H5''	1.91	0.70
22:DA:373:U:HO2'	22:DA:374:A:H5'	1.55	0.70
28:DG:90:GLY:HA2	28:DG:159:LYS:HE3	1.73	0.70
15:AO:63:ARG:HD3	15:AO:87:ARG:NH2	2.06	0.70
20:AT:27:MET:HE1	20:AT:57:VAL:HA	1.72	0.70
22:DA:831:G:O2'	22:DA:832:U:H5'	1.91	0.70
22:BA:646:U:H3'	22:BA:647:G:C5'	2.21	0.70
1:AA:914:A:N3	1:AA:915:A:C8	2.59	0.70
37:DP:28:LYS:HB3	37:DP:39:LEU:CD2	2.20	0.70
19:CS:28:LYS:HB3	19:CS:29:PRO:HD2	1.72	0.70
19:AS:79:TYR:O	19:AS:80:ARG:HB3	1.91	0.70
22:BA:395:U:O2'	22:BA:396:G:N7	2.23	0.70
22:BA:675:A:OP1	26:BE:58:LYS:HE2	1.91	0.70
2:CB:112:ARG:O	2:CB:112:ARG:HG3	1.91	0.70
15:CO:32:THR:HG23	15:CO:62:ARG:NH1	2.05	0.70
1:CA:1051:C:O2'	1:CA:1052:U:O5'	2.07	0.70
22:DA:784:G:C2	24:DC:227:VAL:CG2	2.67	0.70
22:DA:1097:U:H2'	22:DA:1098:A:O4'	1.91	0.70
22:DA:1373:A:C5'	22:DA:2212:A:H1'	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:33:C:H2'	22:DA:446:G:N2	2.07	0.70
22:DA:141:G:H3'	22:DA:142:A:O4'	1.91	0.70
22:BA:2269:G:H4'	44:BW:18:LYS:HE2	1.71	0.70
44:BW:39:GLN:HG3	44:BW:42:THR:H	1.52	0.70
44:BW:51:GLY:HA3	44:BW:59:PHE:CZ	2.25	0.70
18:CR:71:ASP:OD1	21:CU:3:ILE:HD11	1.92	0.70
17:AQ:80:LYS:HB2	17:AQ:80:LYS:NZ	2.06	0.70
22:DA:475:C:H4'	22:DA:509:C:O2'	1.91	0.70
14:CN:20:PHE:HA	14:CN:24:ALA:HB2	1.73	0.70
21:AU:36:PHE:CD1	21:AU:39:LYS:HB3	2.23	0.70
27:DF:41:GLU:HG2	27:DF:42:ALA:H	1.57	0.70
1:CA:194:C:O2'	1:CA:195:A:H5'	1.91	0.70
22:BA:1459:G:O2'	22:BA:1460:U:H5''	1.91	0.70
22:DA:614:A:C4'	22:DA:616:A:H62	2.05	0.70
22:DA:2311:A:H5'	22:DA:2312:U:C6	2.25	0.70
1:AA:373:A:O2'	1:AA:374:A:H5'	1.91	0.70
1:CA:563:A:OP2	12:CL:11:ARG:HG3	1.91	0.70
46:BY:9:LYS:HZ2	46:BY:10:SER:H	1.39	0.70
28:DG:117:PRO:HD2	28:DG:120:ILE:HG22	1.73	0.70
22:DA:2425:A:H1'	22:DA:2427:C:C4	2.26	0.70
22:BA:1734:G:N3	22:BA:1735:A:C8	2.59	0.70
1:AA:536:C:H2'	1:AA:537:G:H8	1.56	0.70
22:DA:1844:C:O2'	22:DA:1845:G:H5'	1.91	0.70
35:DN:7:GLY:HA2	35:DN:46:ARG:HH22	1.55	0.70
22:BA:869:G:O2'	34:BM:8:LYS:HD3	1.90	0.70
22:BA:368:A:H2'	22:BA:369:U:H5'	1.74	0.70
11:CK:117:HIS:O	11:CK:118:ASN:HB2	1.90	0.70
22:DA:709:U:H2'	22:DA:710:U:C6	2.26	0.70
22:BA:2325:G:C6	22:BA:2326:C:N4	2.59	0.70
22:DA:1298:C:H42	22:DA:1642:G:H1	1.37	0.70
22:BA:2615:U:C2	48:B0:3:GLN:HA	2.25	0.70
42:BU:72:PHE:CE2	42:BU:74:ALA:HA	2.26	0.70
33:BL:29:LYS:HG3	33:BL:30:THR:HG23	1.73	0.70
22:DA:1816:C:H2'	24:DC:61:TYR:CZ	2.26	0.70
1:CA:371:A:C2'	1:CA:372:C:H5'	2.21	0.70
22:DA:2262:U:H5''	44:DW:38:ARG:NH2	2.06	0.70
44:DW:46:ALA:HA	44:DW:50:VAL:HG12	1.72	0.70
2:AB:15:PHE:O	2:AB:40:ILE:HG12	1.91	0.70
42:DU:17:ASP:HB2	42:DU:38:ILE:HA	1.72	0.70
22:DA:125:A:C5'	50:D2:19:ARG:HD3	2.21	0.70
38:BQ:85:ALA:O	38:BQ:86:SER:C	2.29	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2752:C:C2'	22:DA:2753:A:C8	2.74	0.70
1:AA:92:U:O2'	1:AA:93:U:H5'	1.92	0.70
6:CF:90:MET:CE	18:CR:60:ARG:HD3	2.22	0.70
2:AB:46:VAL:HB	2:AB:47:PRO:CD	2.17	0.70
14:CN:79:SER:HB2	14:CN:81:ILE:HD11	1.73	0.70
4:AD:116:LEU:C	4:AD:122:ILE:HD11	2.11	0.70
1:AA:480:U:H5''	1:AA:481:G:OP2	1.91	0.70
22:DA:1965:C:C5'	22:DA:1966:A:H5''	2.21	0.70
42:BU:71:ILE:HD11	42:BU:81:ARG:N	2.06	0.70
35:DN:73:ASN:HA	35:DN:76:VAL:CG2	2.21	0.70
22:DA:807:U:H2'	22:DA:807:U:O2	1.91	0.70
22:DA:1716:U:O2'	22:DA:1717:A:H8	1.68	0.70
16:CP:48:GLU:HG3	16:CP:51:ARG:NE	2.05	0.70
28:BG:34:ARG:HD3	28:BG:34:ARG:N	2.06	0.70
25:BD:108:ASP:OD2	25:BD:173:GLN:HA	1.92	0.70
51:B3:26:ALA:O	51:B3:27:ASN:CB	2.39	0.70
22:BA:1450:G:C6	22:BA:1451:C:N4	2.60	0.70
15:CO:2:LEU:HD13	15:CO:34:GLN:NE2	2.05	0.70
22:DA:1858:A:C2	22:DA:1859:U:C2	2.79	0.70
1:AA:1101:A:H4'	1:AA:1102:A:O5'	1.90	0.70
22:BA:196:A:H2'	22:BA:805:G:O6	1.92	0.70
26:DE:139:LYS:NZ	26:DE:139:LYS:HB2	2.07	0.70
33:BL:4:ASN:HD22	33:BL:4:ASN:H	1.39	0.70
17:AQ:69:THR:O	17:AQ:69:THR:HG22	1.90	0.70
22:DA:1794:A:H2'	22:DA:1795:C:C6	2.26	0.70
11:CK:126:ARG:O	21:CU:33:ARG:NH2	2.25	0.70
1:CA:814:A:H5'	1:CA:1511:G:H4'	1.72	0.70
22:DA:390:U:O2'	22:DA:391:A:C8	2.43	0.70
1:CA:198:G:C4	1:CA:199:A:C8	2.79	0.70
1:CA:252:U:H2'	1:CA:253:A:H8	1.56	0.70
19:AS:4:LEU:HD12	19:AS:4:LEU:H	1.55	0.70
23:BB:90:C:H6	23:BB:90:C:C5'	2.00	0.70
6:AF:52:ASN:O	6:AF:53:LYS:CB	2.39	0.70
12:CL:3:VAL:O	12:CL:7:VAL:HG23	1.91	0.70
1:CA:112:G:H2'	1:CA:113:G:H5'	1.73	0.70
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.27	0.70
1:AA:1171:A:H2'	1:AA:1172:C:C6	2.26	0.70
32:BK:76:VAL:HB	37:BP:72:VAL:HG22	1.72	0.70
1:AA:290:C:C2'	1:AA:291:U:H5'	2.21	0.70
9:CI:49:GLN:N	9:CI:50:PRO:HD2	2.06	0.70
22:BA:2667:C:C2'	22:BA:2668:G:H5'	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:79:VAL:HG12	7:AG:80:GLY:N	2.04	0.70
17:CQ:30:HIS:CD2	17:CQ:31:PRO:HD2	2.27	0.70
22:DA:673:C:O4'	26:DE:77:ILE:HD11	1.92	0.70
44:DW:77:LYS:O	44:DW:78:PHE:HB2	1.90	0.70
7:CG:64:ALA:HB2	7:CG:126:ALA:HB1	1.72	0.70
31:BJ:58:ASN:HD21	31:BJ:128:ASN:HB2	1.55	0.70
6:CF:25:TYR:O	6:CF:29:ILE:HD13	1.91	0.70
22:BA:2192:U:O2'	22:BA:2193:G:H5'	1.92	0.70
9:AI:6:TYR:O	9:AI:85:ALA:HA	1.92	0.70
3:CC:190:THR:HG22	3:CC:191:THR:N	2.07	0.70
12:CL:87:LYS:HG2	12:CL:87:LYS:O	1.92	0.70
25:BD:101:PHE:CZ	25:BD:203:VAL:HG22	2.27	0.70
22:BA:1188:U:C2'	22:BA:1189:A:C5'	2.68	0.70
14:CN:2:LYS:HD3	14:CN:5:MET:HG2	1.74	0.70
31:BJ:81:ILE:HG23	31:BJ:82:GLY:N	2.00	0.70
22:DA:1669:A:C2'	22:DA:1669:A:N3	2.55	0.70
4:AD:110:ARG:O	4:AD:113:ALA:HB3	1.91	0.70
16:AP:12:LYS:HG2	16:AP:13:LYS:HG2	1.74	0.70
22:DA:224:U:H5	22:DA:420:C:H4'	1.56	0.70
3:CC:148:ILE:HD13	3:CC:201:ILE:CG1	2.21	0.70
22:DA:2443:C:H2'	22:DA:2444:G:O4'	1.92	0.70
22:DA:873:C:H4'	34:DM:64:TRP:CD1	2.26	0.70
22:BA:1508:A:H4'	22:BA:1509:A:H5'	1.74	0.70
1:AA:934:C:H5	1:AA:1344:C:H2'	1.57	0.70
10:AJ:65:TYR:HB3	14:AN:95:LEU:HD11	1.71	0.70
22:BA:2211:A:OP2	22:BA:2211:A:H4'	1.89	0.70
31:DJ:92:MET:HA	31:DJ:92:MET:HE2	1.72	0.70
22:BA:21:A:O2'	22:BA:22:C:H5'	1.92	0.70
1:CA:613:C:H2'	1:CA:614:C:C6	2.27	0.70
15:CO:69:LEU:O	15:CO:69:LEU:HD13	1.92	0.70
26:BE:150:THR:HG21	26:BE:153:LEU:HA	1.73	0.70
22:BA:684:G:OP1	50:B2:21:ARG:NH1	2.24	0.70
22:BA:485:C:H2'	22:BA:486:C:H6	1.56	0.70
42:BU:78:LYS:HG2	42:BU:79:ALA:H	1.55	0.70
22:BA:1080:A:O2'	30:BI:126:ARG:CG	2.39	0.70
22:DA:2800:A:O2'	22:DA:2801:G:C4'	2.30	0.70
22:DA:1826:G:C6	22:DA:1827:U:C4	2.80	0.70
12:CL:49:ARG:HG2	12:CL:89:LEU:HD21	1.73	0.70
46:DY:56:LEU:O	46:DY:59:GLU:HG2	1.90	0.70
24:BC:90:ILE:CG2	24:BC:102:TYR:CD1	2.75	0.70
8:CH:102:VAL:CG2	8:CH:125:ILE:HB	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:2:GLU:O	40:BS:107:VAL:O	2.08	0.70
22:DA:976:G:H2'	22:DA:977:G:H8	1.57	0.70
23:DB:15:A:C8	23:DB:109:A:N6	2.59	0.70
1:AA:972:C:H4'	10:AJ:59:LYS:CG	2.21	0.70
1:CA:865:A:C2	1:CA:918:A:H4'	2.26	0.70
29:DH:68:ARG:HD2	29:DH:68:ARG:O	1.91	0.70
12:CL:3:VAL:HG23	12:CL:4:ASN:H	1.57	0.70
1:AA:820:U:H4'	1:AA:821:G:OP2	1.90	0.70
24:DC:127:ASN:O	24:DC:190:THR:HA	1.91	0.70
1:CA:989:U:C2'	1:CA:990:C:H5'	2.22	0.70
16:CP:44:SER:H	16:CP:46:LYS:NZ	1.89	0.70
41:BT:8:LEU:HD22	41:BT:8:LEU:N	2.05	0.70
22:DA:270:A:N1	22:DA:369:U:H1'	2.05	0.70
22:BA:1115:G:HO2'	22:BA:1116:G:H8	1.39	0.70
27:BF:66:ILE:O	27:BF:66:ILE:HG13	1.90	0.70
1:AA:731:G:OP1	1:AA:766:A:H1'	1.92	0.70
24:DC:255:LYS:C	24:DC:256:THR:HG23	2.10	0.70
22:DA:1060:U:H1'	22:DA:1062:G:OP2	1.91	0.70
22:DA:1536:C:H4'	22:DA:1537:G:C5'	2.21	0.70
51:D3:22:LYS:H	51:D3:48:MET:HB3	1.56	0.70
17:AQ:11:VAL:HG12	17:AQ:12:VAL:N	2.07	0.70
22:DA:475:C:O2'	22:DA:476:G:H5'	1.91	0.70
22:DA:659:G:H2'	22:DA:660:C:C6	2.27	0.70
22:BA:412:A:C2'	22:BA:413:C:H5'	2.21	0.70
1:CA:102:G:N2	1:CA:103:U:C2	2.60	0.70
27:BF:134:GLN:N	27:BF:134:GLN:NE2	2.39	0.70
2:CB:150:ILE:HD11	2:CB:153:MET:CE	2.21	0.70
3:CC:112:ALA:O	3:CC:199:VAL:HG21	1.91	0.70
28:DG:122:ALA:CB	28:DG:132:LEU:HG	2.21	0.70
9:AI:28:VAL:HB	9:AI:63:TYR:HD2	1.57	0.70
22:DA:783:A:H2	22:DA:1778:U:H4'	1.54	0.70
38:BQ:63:ARG:NH2	38:BQ:95:ALA:C	2.45	0.70
1:CA:1130:A:C5	1:CA:1146:A:C6	2.79	0.70
22:DA:1652:A:H62	35:DN:11:ASN:ND2	1.90	0.70
35:DN:24:MET:CG	35:DN:44:LEU:HD22	2.21	0.70
45:DX:6:VAL:HG12	45:DX:50:VAL:HG12	1.72	0.70
39:BR:49:ILE:HG22	39:BR:54:VAL:N	2.07	0.70
1:CA:1160:G:O6	1:CA:1181:G:C6	2.45	0.70
12:AL:43:LYS:HZ2	12:AL:44:PRO:HD3	1.54	0.70
44:BW:23:LYS:CG	44:BW:24:ARG:N	2.54	0.70
37:DP:88:ARG:NH1	37:DP:112:ARG:HH21	1.88	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2360:G:H1'	33:DL:60:ARG:NH2	2.02	0.70
1:CA:1225:A:H4'	19:CS:77:ARG:NH1	2.06	0.70
2:CB:74:ALA:HB1	2:CB:206:ILE:HD11	1.72	0.70
1:CA:197:A:N6	1:CA:221:C:H4'	2.07	0.70
2:AB:58:LYS:C	2:AB:58:LYS:HD3	2.12	0.70
10:AJ:21:ALA:HA	10:AJ:24:GLU:OE2	1.92	0.70
22:DA:2531:A:C5'	28:DG:156:TYR:CZ	2.75	0.70
22:BA:2480:C:C2'	22:BA:2481:G:H5'	2.22	0.70
31:DJ:20:ALA:HA	31:DJ:23:LYS:CG	2.21	0.70
38:DQ:10:ARG:HB2	38:DQ:10:ARG:NH1	2.06	0.70
22:BA:2180:U:H2'	22:BA:2181:U:C5	2.27	0.70
1:CA:1278:G:H5'	1:CA:1279:G:H5'	1.73	0.70
10:CJ:38:GLY:O	10:CJ:40:ILE:HD12	1.91	0.70
46:DY:19:LEU:HG	46:DY:22:LEU:HD22	1.74	0.70
26:DE:149:ILE:HG23	26:DE:188:MET:HA	1.74	0.70
26:DE:149:ILE:HG23	26:DE:188:MET:HB2	1.72	0.70
22:DA:2336:A:C8	44:DW:40:ARG:NH2	2.59	0.70
34:DM:33:LEU:CD2	34:DM:128:THR:HB	2.21	0.70
45:DX:53:LYS:CA	45:DX:56:ARG:HB3	2.17	0.70
34:DM:26:VAL:HG21	34:DM:132:THR:O	1.91	0.70
37:DP:52:ARG:CG	37:DP:52:ARG:NH1	2.45	0.70
17:AQ:49:ASN:O	17:AQ:51:GLU:N	2.25	0.70
22:DA:605:G:H1'	22:DA:657:U:O2'	1.91	0.70
33:DL:110:VAL:HB	33:DL:127:VAL:HA	1.74	0.70
33:DL:142:ILE:HG22	33:DL:144:GLU:H	1.57	0.70
22:DA:1430:G:O2'	22:DA:1431:A:C5'	2.39	0.70
7:CG:22:LEU:HA	7:CG:25:PHE:CB	2.17	0.70
29:BH:134:VAL:HG21	29:BH:139:PHE:CA	2.21	0.70
22:DA:489:G:H2'	22:DA:491:G:C8	2.26	0.70
1:CA:266:G:O2'	1:CA:267:C:H3'	1.92	0.70
23:DB:19:C:O2'	23:DB:20:G:H5'	1.92	0.70
22:DA:1441:G:H2'	22:DA:1442:U:C6	2.27	0.70
9:CI:78:ILE:O	9:CI:82:ILE:HG13	1.92	0.70
29:DH:68:ARG:CG	29:DH:71:LYS:HD3	2.22	0.70
29:BH:99:ILE:HG22	29:BH:99:ILE:O	1.92	0.70
1:AA:598:U:H4'	8:AH:85:TYR:CD1	2.27	0.70
22:BA:746:U:O2'	22:BA:747:U:OP2	2.10	0.70
49:D1:10:LEU:CD2	49:D1:20:TYR:HB3	2.21	0.70
24:BC:199:HIS:CE1	24:BC:202:ARG:NH2	2.60	0.70
5:CE:154:ALA:HB1	8:CH:65:PHE:CE2	2.27	0.70
22:DA:720:U:H2'	22:DA:721:A:C8	2.27	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:65:LEU:H	35:DN:65:LEU:HD12	1.57	0.70
1:CA:968:A:N3	1:CA:1062:U:H4'	2.07	0.70
1:AA:804:U:H5''	1:AA:805:C:OP2	1.92	0.70
22:DA:919:U:H2'	22:DA:920:A:O4'	1.92	0.70
22:DA:921:C:H2'	22:DA:922:C:C5'	2.18	0.70
22:DA:704:G:H1'	22:DA:727:A:N6	2.06	0.70
35:DN:34:ILE:CG2	35:DN:113:ILE:HG22	2.22	0.70
22:DA:1534:U:C6	22:DA:1538:G:N1	2.58	0.70
22:DA:1534:U:H2'	22:DA:1536:C:O2	1.91	0.70
44:BW:22:VAL:HG13	44:BW:25:PHE:CE2	2.26	0.70
1:AA:1240:U:H3	7:AG:29:LEU:HD21	1.57	0.70
43:BV:10:LYS:HZ1	43:BV:11:GLU:HG3	1.55	0.70
1:CA:1383:C:O2'	1:CA:1384:C:C5'	2.38	0.70
1:AA:994:A:O2'	1:AA:995:C:H5'	1.92	0.70
34:BM:72:PRO:O	34:BM:91:TYR:O	2.09	0.70
10:AJ:42:LEU:HB3	10:AJ:43:PRO:CD	2.21	0.70
7:CG:24:LYS:O	7:CG:28:ILE:HG12	1.91	0.70
22:BA:894:U:H2'	22:BA:895:U:H6	1.52	0.70
24:BC:33:LEU:CD2	24:BC:62:ARG:HD3	2.22	0.70
1:AA:352:C:C6	1:AA:352:C:H5''	2.25	0.70
30:DI:102:ARG:HH11	30:DI:105:LEU:HD13	1.55	0.70
34:DM:108:VAL:HG21	34:DM:112:LEU:HB3	1.74	0.70
19:CS:62:THR:HG22	19:CS:63:ASP:H	1.57	0.70
1:CA:828:U:H2'	1:CA:829:G:O5'	1.92	0.70
1:CA:659:U:H2'	1:CA:660:C:H6	1.55	0.70
31:BJ:95:ARG:O	31:BJ:95:ARG:HG3	1.91	0.70
22:BA:2728:U:O2'	22:BA:2729:G:O5'	2.09	0.70
22:BA:2454:G:H1'	56:BA:3533:HOH:O	1.92	0.70
31:BJ:4:PHE:O	31:BJ:44:TYR:CE1	2.45	0.69
39:BR:81:LYS:N	39:BR:81:LYS:HD3	2.03	0.69
39:BR:49:ILE:O	39:BR:49:ILE:HG13	1.91	0.69
44:BW:24:ARG:HD2	44:BW:25:PHE:N	2.06	0.69
44:BW:39:GLN:HG2	44:BW:41:GLY:N	2.05	0.69
48:D0:5:ASN:HD22	48:D0:6:LYS:H	1.39	0.69
29:BH:4:ILE:HG12	29:BH:18:GLN:NE2	2.06	0.69
1:CA:960:U:H4'	1:CA:961:U:O5'	1.91	0.69
26:DE:29:HIS:HB2	33:DL:6:LEU:CD2	2.22	0.69
11:AK:109:ILE:CG2	21:AU:16:ARG:HE	2.05	0.69
1:CA:254:G:HO2'	1:CA:255:G:H5'	1.56	0.69
22:DA:2201:G:H2'	22:DA:2202:U:C6	2.27	0.69
1:CA:17:U:C2	1:CA:18:C:C5	2.80	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:49:TYR:CE2	6:AF:51:ILE:HB	2.26	0.69
3:CC:133:MET:O	3:CC:137:VAL:HG23	1.92	0.69
1:CA:1455:G:H2'	1:CA:1456:A:C8	2.27	0.69
36:DO:30:ARG:HA	36:DO:35:ILE:CD1	2.22	0.69
22:DA:14:A:C6	22:DA:526:A:C2	2.79	0.69
37:DP:75:THR:HG23	37:DP:76:HIS:CD2	2.27	0.69
27:BF:127:TYR:O	27:BF:128:SER:CB	2.40	0.69
22:DA:156:A:H2'	22:DA:157:C:O4'	1.92	0.69
22:DA:1975:G:C4	22:DA:1976:U:C5	2.80	0.69
12:CL:14:LYS:HE2	12:CL:15:VAL:C	2.13	0.69
22:BA:63:A:O2'	22:BA:64:A:H5'	1.92	0.69
7:AG:92:PRO:O	7:AG:93:VAL:HG13	1.92	0.69
1:AA:1031:C:O2'	1:AA:1032:G:H5''	1.92	0.69
20:CT:34:VAL:HG12	20:CT:78:LEU:HD21	1.74	0.69
1:AA:771:G:H2'	1:AA:772:U:H6	1.56	0.69
22:DA:2523:G:C2'	22:DA:2524:G:H5'	2.22	0.69
22:BA:1063:G:H2'	22:BA:1064:C:C6	2.26	0.69
33:BL:77:ILE:HG12	33:BL:95:LEU:CD1	2.21	0.69
22:DA:921:C:C2'	22:DA:922:C:C5'	2.70	0.69
22:DA:1071:G:N7	22:DA:1089:A:C6	2.59	0.69
44:BW:19:ARG:NH1	44:BW:22:VAL:HG11	2.07	0.69
1:AA:923:A:O4'	1:AA:1398:A:C2	2.45	0.69
22:BA:1288:G:C4	22:BA:1327:A:C2	2.80	0.69
8:CH:1:SER:C	8:CH:3:GLN:H	1.95	0.69
34:DM:34:LYS:HD3	34:DM:131:VAL:HG21	1.73	0.69
22:BA:1430:G:C2'	22:BA:1431:A:H5'	2.22	0.69
29:DH:94:ILE:HG13	29:DH:98:ASP:CB	2.22	0.69
9:AI:83:THR:HG21	9:AI:102:PHE:HB3	1.72	0.69
1:AA:351:G:H4'	1:AA:352:C:OP1	1.91	0.69
24:DC:119:VAL:HG13	24:DC:133:ASN:HD21	1.56	0.69
34:BM:46:ILE:C	34:BM:46:ILE:HD12	2.11	0.69
13:CM:85:TYR:HE2	13:CM:96:VAL:CG1	2.06	0.69
30:DI:57:VAL:O	30:DI:58:ILE:HG13	1.92	0.69
22:DA:1249:U:H4'	38:DQ:3:VAL:HG11	1.74	0.69
13:AM:39:ALA:HB3	13:AM:42:VAL:CG2	2.21	0.69
22:DA:1379:U:H2'	22:DA:1379:U:O2	1.91	0.69
22:DA:1901:A:H4'	22:DA:1901:A:OP2	1.92	0.69
22:BA:1996:C:H4'	22:BA:1997:C:OP1	1.92	0.69
33:BL:91:ASP:CB	33:BL:94:THR:HB	2.21	0.69
33:BL:95:LEU:HD13	33:BL:100:ILE:HD11	1.73	0.69
1:CA:375:U:O3'	16:CP:6:LEU:HD12	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2344:U:H4'	22:DA:2345:G:OP1	1.91	0.69
22:DA:2353:G:H21	44:DW:30:VAL:HG22	1.58	0.69
2:AB:41:ASN:OD1	2:AB:44:LYS:HB2	1.93	0.69
43:DV:30:ILE:HG13	43:DV:40:ILE:HD11	1.74	0.69
28:BG:126:THR:CG2	28:BG:127:GLN:H	2.05	0.69
22:BA:1794:A:H2'	22:BA:1795:C:C6	2.28	0.69
22:DA:505:A:O2'	22:DA:506:G:H5'	1.92	0.69
14:CN:59:GLN:O	14:CN:60:ARG:HB2	1.92	0.69
22:DA:656:G:O2'	22:DA:657:U:H5'	1.93	0.69
7:CG:22:LEU:HD23	7:CG:22:LEU:O	1.91	0.69
27:BF:9:ASP:O	27:BF:10:GLU:HB2	1.92	0.69
8:AH:17:GLN:NE2	8:AH:71:VAL:HG23	2.05	0.69
22:DA:1555:G:O2'	22:DA:1556:C:H5'	1.92	0.69
1:CA:511:C:O2'	1:CA:512:U:C5'	2.40	0.69
29:DH:8:LYS:HD2	29:DH:8:LYS:C	2.13	0.69
1:CA:881:G:C6	1:CA:882:C:C4	2.80	0.69
22:DA:2848:G:OP2	37:DP:94:ALA:CB	2.40	0.69
22:BA:1032:A:H1'	52:B4:23:ILE:CD1	2.22	0.69
17:CQ:11:VAL:CG2	17:CQ:58:VAL:HG13	2.23	0.69
1:CA:885:G:H1'	1:CA:914:A:N1	2.06	0.69
42:BU:93:ARG:HH11	42:BU:102:ILE:HD11	1.56	0.69
30:BI:74:PRO:O	30:BI:77:VAL:HG22	1.93	0.69
22:BA:285:G:H2'	22:BA:285:G:N3	2.06	0.69
28:DG:48:THR:O	28:DG:49:LEU:HB2	1.91	0.69
11:CK:30:ILE:HA	11:CK:45:THR:HG22	1.74	0.69
22:BA:2478:A:H5'	52:B4:32:LYS:HD3	1.73	0.69
22:BA:2689:U:H4'	22:BA:2690:U:OP2	1.92	0.69
1:CA:302:G:O2'	1:CA:556:C:H5''	1.93	0.69
26:BE:12:LEU:HD13	26:BE:12:LEU:O	1.93	0.69
38:BQ:89:ILE:O	38:BQ:90:ASP:HB2	1.93	0.69
33:BL:92:LEU:HA	33:BL:125:LEU:HD21	1.75	0.69
22:BA:1364:G:OP2	45:BX:1:SER:N	2.23	0.69
30:BI:89:SER:HB3	30:BI:92:PRO:HG3	1.72	0.69
41:DT:34:VAL:CG2	41:DT:83:ALA:HB2	2.22	0.69
22:DA:2267:A:N6	22:DA:2272:U:N3	2.40	0.69
44:DW:28:GLU:N	44:DW:31:LEU:HD21	2.05	0.69
22:DA:2839:G:N2	22:DA:2880:C:C4	2.61	0.69
22:DA:310:A:HO2'	22:DA:311:A:H8	0.77	0.69
28:BG:137:LYS:C	28:BG:140:ILE:CD1	2.61	0.69
22:DA:1153:C:H2'	22:DA:1154:G:C8	2.27	0.69
8:CH:86:LYS:HB2	8:CH:124:ILE:HD11	1.72	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:960:U:O2'	1:CA:1223:C:H5''	1.90	0.69
47:DZ:16:LEU:HD23	47:DZ:19:HIS:CD2	2.27	0.69
1:AA:533:A:OP1	56:AA:1850:HOH:O	2.10	0.69
9:CI:74:GLN:O	9:CI:78:ILE:HG13	1.93	0.69
1:CA:865:A:H2	1:CA:918:A:H4'	1.56	0.69
3:CC:129:PHE:CE1	3:CC:156:LEU:HB3	2.28	0.69
1:CA:1454:G:O2'	1:CA:1455:G:H8	1.69	0.69
5:AE:14:LEU:HB2	5:AE:36:THR:HG22	1.75	0.69
22:BA:1510:G:H2'	22:BA:1511:G:C8	2.25	0.69
2:CB:122:ASP:HB3	2:CB:124:THR:HG22	1.74	0.69
32:BK:10:VAL:CG2	32:BK:16:ALA:HB1	2.22	0.69
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.27	0.69
11:CK:19:VAL:HB	11:CK:34:THR:HG23	1.73	0.69
31:BJ:21:THR:HG22	31:BJ:22:GLY:N	2.07	0.69
2:CB:111:LYS:C	2:CB:111:LYS:HD3	2.13	0.69
31:BJ:43:GLU:O	31:BJ:45:THR:HG22	1.91	0.69
30:BI:98:GLY:HA3	30:BI:137:LEU:HD23	1.75	0.69
24:DC:171:VAL:HG12	24:DC:173:LEU:HD13	1.74	0.69
22:DA:1394:U:H3'	22:DA:1394:U:C6	2.27	0.69
24:BC:159:THR:O	24:BC:194:VAL:HG12	1.92	0.69
22:DA:165:A:H2'	22:DA:166:U:H6	1.55	0.69
22:DA:2756:U:H5''	52:D4:19:ARG:HA	1.74	0.69
1:CA:1101:A:H1'	1:CA:1102:A:O4'	1.93	0.69
49:B1:34:GLU:O	49:B1:35:LEU:HB3	1.92	0.69
41:BT:29:THR:HA	41:BT:86:THR:H	1.57	0.69
44:BW:23:LYS:NZ	44:BW:24:ARG:HG3	2.06	0.69
4:CD:54:LEU:O	4:CD:58:GLN:HB2	1.92	0.69
22:DA:249:C:C5'	22:DA:2394:C:O2'	2.40	0.69
22:DA:1307:A:O2'	22:DA:1308:A:H5'	1.91	0.69
44:BW:72:GLY:N	44:BW:73:PRO:HD2	2.07	0.69
22:BA:143:C:O2'	22:BA:144:A:H8	1.76	0.69
22:DA:2680:U:OP2	25:DD:114:LYS:HD3	1.92	0.69
7:CG:4:ARG:HD2	7:CG:5:VAL:N	2.07	0.69
22:DA:774:G:HO2'	22:DA:775:G:H8	1.38	0.69
37:DP:56:SER:HB2	37:DP:75:THR:HG21	1.74	0.69
8:CH:93:LYS:H	8:CH:93:LYS:CD	2.00	0.69
6:AF:93:LYS:O	6:AF:94:HIS:HB2	1.93	0.69
13:AM:10:ASP:CG	13:AM:11:HIS:N	2.46	0.69
13:AM:47:LEU:CD2	13:AM:51:GLN:HB3	2.21	0.69
22:DA:1467:U:H2'	22:DA:1468:U:H5'	1.74	0.69
32:BK:70:ARG:HD3	32:BK:76:VAL:HG22	1.72	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2210:U:H4'	22:BA:2211:A:H5'	1.73	0.69
44:DW:23:LYS:CD	44:DW:24:ARG:H	2.04	0.69
22:DA:1054:A:C4	22:DA:1055:G:H1'	2.28	0.69
22:DA:2815:C:C2	22:DA:2816:G:C8	2.81	0.69
22:DA:1808:A:C3'	22:DA:1809:A:C8	2.75	0.69
25:BD:97:SER:O	25:BD:99:GLU:HG2	1.91	0.69
38:DQ:87:VAL:HG12	38:DQ:88:GLU:N	2.06	0.69
44:BW:18:LYS:CA	44:BW:36:ILE:CG1	2.70	0.69
31:BJ:74:TYR:HB2	31:BJ:87:ALA:O	1.93	0.69
22:DA:802:A:H2'	22:DA:803:U:H6	1.54	0.69
26:BE:187:VAL:HG12	26:BE:188:MET:N	2.08	0.69
25:DD:107:VAL:CG1	25:DD:109:VAL:HG23	2.23	0.69
2:CB:80:LYS:HD3	2:CB:90:PHE:CZ	2.27	0.69
22:DA:2663:G:H2'	22:DA:2664:G:H8	1.55	0.69
1:AA:363:A:O2'	1:AA:364:A:H5'	1.93	0.69
1:CA:1394:A:C5	1:CA:1501:C:H4'	2.28	0.69
1:AA:654:G:H2'	1:AA:655:A:C8	2.27	0.69
1:AA:115:G:H4'	1:AA:116:A:O5'	1.91	0.69
28:DG:116:LEU:HD13	28:DG:120:ILE:O	1.93	0.69
44:BW:9:THR:HG22	44:BW:10:ARG:HH11	1.57	0.69
22:DA:2142:A:N6	22:DA:2150:C:N4	2.41	0.69
22:BA:2221:G:O2'	22:BA:2222:C:H5'	1.92	0.69
6:AF:3:HIS:HB2	6:AF:92:THR:HG23	1.75	0.69
32:DK:88:ASN:CB	32:DK:91:SER:HB2	2.23	0.69
22:BA:2729:G:H8	22:BA:2729:G:H5''	1.57	0.69
26:DE:6:LYS:HG2	26:DE:7:ASP:CG	2.12	0.69
22:BA:1572:A:O2'	22:BA:1573:G:H5'	1.93	0.69
4:AD:88:ASN:HA	4:AD:91:ALA:HB3	1.74	0.69
22:BA:1256:G:C2'	26:BE:77:ILE:HD11	2.22	0.69
1:CA:369:G:H2'	1:CA:370:C:H6	1.57	0.69
22:DA:104:A:O2'	22:DA:105:C:C5'	2.41	0.69
22:DA:1051:G:C5'	22:DA:2752:C:H1'	2.23	0.69
34:DM:42:THR:O	34:DM:46:ILE:HG12	1.92	0.69
1:AA:1226:C:H4'	1:AA:1227:A:OP1	1.91	0.69
1:AA:468:A:C2'	1:AA:469:C:H5'	2.22	0.69
1:AA:92:U:H2'	1:AA:93:U:C5	2.28	0.69
39:DR:9:GLY:O	39:DR:10:LYS:HG3	1.92	0.69
22:DA:1265:A:H4'	22:DA:1266:G:O5'	1.93	0.69
22:DA:1255:U:H3'	22:DA:1256:G:C5'	2.21	0.69
22:DA:500:G:N2	22:DA:503:A:C8	2.60	0.69
40:DS:10:ALA:HB3	40:DS:101:SER:O	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DF:43:ILE:CD1	27:DF:77:LYS:HG2	2.22	0.69
52:B4:36:ARG:HG2	52:B4:37:GLN:N	2.02	0.69
25:DD:106:LYS:HB3	25:DD:206:ALA:HB2	1.71	0.69
1:AA:674:G:H4'	18:AR:69:TYR:HD1	1.54	0.69
1:CA:663:A:C2'	1:CA:664:G:H5'	2.23	0.69
34:BM:80:VAL:CG2	34:BM:81:ARG:N	2.55	0.69
1:CA:1391:U:O2'	1:CA:1392:G:H5'	1.93	0.69
44:DW:9:THR:HG23	44:DW:10:ARG:N	2.08	0.69
22:BA:527:C:H4'	22:BA:528:A:O5'	1.93	0.69
22:BA:1735:A:H2'	22:BA:1736:U:C6	2.28	0.69
25:DD:110:THR:HA	25:DD:171:THR:HA	1.75	0.69
22:BA:581:C:OP1	38:BQ:32:ARG:HB2	1.93	0.69
11:CK:30:ILE:HG12	11:CK:45:THR:HG21	1.73	0.69
35:DN:22:ARG:O	35:DN:22:ARG:HG2	1.93	0.69
22:BA:2574:G:OP1	56:BA:3710:HOH:O	2.09	0.69
7:AG:86:VAL:HG22	7:AG:150:PHE:HB3	1.74	0.69
22:DA:2466:C:O2'	22:DA:2467:C:H5'	1.93	0.69
22:BA:851:C:O2'	47:BZ:45:GLY:HA3	1.93	0.69
28:DG:19:ASN:N	28:DG:19:ASN:HD22	1.90	0.69
1:CA:1000:A:H1'	1:CA:1041:G:N2	2.07	0.69
31:DJ:1:MET:SD	31:DJ:2:LYS:HE3	2.32	0.69
13:CM:113:LYS:HD3	13:CM:114:PRO:N	2.08	0.69
5:AE:109:ALA:O	5:AE:110:MET:HB3	1.91	0.69
22:BA:573:U:H4'	22:BA:574:A:OP1	1.91	0.69
24:DC:173:LEU:HD22	24:DC:181:ARG:O	1.93	0.69
24:DC:36:ASN:HD21	24:DC:85:ASN:ND2	1.91	0.69
1:CA:1134:G:C6	1:CA:1135:U:H1'	2.27	0.69
1:AA:409:U:OP1	4:AD:23:GLY:HA3	1.93	0.69
1:AA:408:A:OP1	4:AD:109:THR:HG21	1.93	0.69
16:AP:4:ILE:HG12	16:AP:21:VAL:CG2	2.12	0.69
22:DA:2385:C:OP1	22:DA:2385:C:H3'	1.91	0.69
22:DA:2389:G:H5''	22:DA:2390:U:C5'	2.13	0.69
44:DW:30:VAL:HG23	44:DW:59:PHE:CD1	2.27	0.69
22:DA:2331:G:C1'	44:DW:40:ARG:HB3	2.21	0.69
22:DA:2815:C:H2'	22:DA:2816:G:C8	2.27	0.69
35:DN:87:PHE:CD1	35:DN:90:ARG:HD2	2.28	0.69
12:CL:82:ARG:CG	12:CL:82:ARG:HH11	1.91	0.69
46:DY:60:LYS:HG2	46:DY:60:LYS:O	1.93	0.69
22:DA:1207:C:O2'	22:DA:1208:C:H6	1.70	0.69
22:DA:1360:G:C2'	22:DA:1361:G:H5'	2.22	0.69
22:DA:1364:G:OP2	45:DX:1:SER:N	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DQ:87:VAL:HG11	39:DR:52:PRO:CG	2.23	0.69
29:DH:83:LYS:CE	29:DH:149:GLU:HB3	2.18	0.69
45:BX:40:GLU:O	45:BX:43:LYS:HD2	1.92	0.69
22:DA:2234:G:C6	22:DA:2235:G:N7	2.61	0.69
22:DA:1309:G:H4'	50:D2:7:PRO:HB2	1.73	0.69
17:AQ:54:ILE:C	17:AQ:54:ILE:HD13	2.12	0.69
26:BE:119:ILE:HD11	26:BE:187:VAL:HA	1.74	0.69
1:CA:960:U:O2'	1:CA:1223:C:C5'	2.41	0.69
4:AD:196:GLU:C	4:AD:198:LEU:H	1.97	0.69
33:DL:88:GLY:O	33:DL:89:VAL:HG12	1.93	0.69
22:DA:2135:A:H3'	22:DA:2136:G:C5'	2.11	0.69
9:CI:19:PHE:O	9:CI:63:TYR:HB3	1.93	0.69
27:DF:136:ILE:HG23	27:DF:142:TYR:CG	2.28	0.69
27:BF:37:MET:CG	27:BF:56:LEU:HG	2.23	0.69
14:AN:42:ASN:HD21	14:AN:46:LYS:NZ	1.91	0.69
9:CI:51:LEU:CG	9:CI:86:LEU:HD22	2.20	0.69
24:BC:77:VAL:HG22	24:BC:111:ALA:HA	1.74	0.69
22:DA:373:U:O2'	22:DA:374:A:C5'	2.38	0.69
1:CA:119:A:H5'	1:CA:120:A:C5'	2.22	0.69
22:BA:1585:C:H2'	22:BA:1586:A:H5'	1.74	0.69
22:DA:226:A:C2	22:DA:230:G:O6	2.46	0.69
1:CA:327:A:O2'	1:CA:329:A:H5''	1.93	0.69
28:DG:94:ARG:NE	28:DG:105:SER:HB2	2.07	0.69
2:CB:185:ILE:HG22	2:CB:199:ILE:CG1	2.21	0.69
27:DF:28:PRO:HB2	27:DF:168:LEU:CD2	2.20	0.69
23:DB:40:U:O2'	23:DB:45:A:N6	2.24	0.69
17:AQ:45:VAL:HG13	17:AQ:72:TRP:O	1.93	0.69
22:BA:417:C:H2'	22:BA:418:C:C6	2.25	0.69
26:BE:28:VAL:O	26:BE:32:VAL:HG13	1.93	0.69
24:DC:140:VAL:HG22	24:DC:161:VAL:O	1.91	0.69
28:DG:120:ILE:O	28:DG:120:ILE:HG23	1.92	0.69
44:BW:37:VAL:HG12	44:BW:38:ARG:H	1.58	0.69
36:BO:15:ARG:NH1	36:BO:15:ARG:HG3	2.03	0.69
44:BW:8:SER:O	44:BW:9:THR:HB	1.92	0.69
25:DD:177:VAL:CG1	25:DD:187:LEU:HD11	2.21	0.69
22:BA:2394:C:OP2	51:B3:29:ARG:HD3	1.92	0.69
1:CA:686:U:O4	1:CA:703:G:H1'	1.91	0.69
31:BJ:12:LYS:O	31:BJ:13:ARG:CB	2.40	0.69
13:CM:3:ILE:O	13:CM:4:ALA:HB2	1.93	0.69
22:BA:2886:A:H2'	22:BA:2887:A:O4'	1.93	0.69
28:BG:15:ASP:CG	28:BG:16:VAL:H	1.95	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1108:U:H2'	22:DA:1109:C:O4'	1.93	0.69
42:BU:87:GLU:HG3	42:BU:88:ASP:H	1.55	0.69
6:AF:46:GLN:NE2	6:AF:56:LYS:HG3	2.08	0.69
22:BA:914:G:H5''	22:BA:914:G:H8	1.58	0.69
22:BA:1559:U:H4'	22:BA:1560:G:OP2	1.92	0.69
22:BA:1250:G:OP2	33:BL:21:ARG:NH2	2.26	0.69
1:CA:1467:C:H2'	1:CA:1468:A:C8	2.27	0.69
22:BA:861:A:H5''	22:BA:862:G:OP2	1.93	0.69
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.28	0.69
22:BA:2019:A:H4'	38:BQ:33:VAL:HG21	1.75	0.69
1:CA:348:G:H2'	1:CA:349:A:H8	1.58	0.69
33:DL:133:ALA:O	33:DL:137:ALA:HB3	1.91	0.69
47:DZ:30:ARG:HH21	47:DZ:33:HIS:HB2	1.58	0.69
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.27	0.69
31:BJ:44:TYR:HA	38:BQ:59:LEU:HD21	1.73	0.69
28:BG:86:LEU:N	28:BG:86:LEU:CD1	2.56	0.69
4:AD:33:ILE:O	4:AD:33:ILE:HG23	1.92	0.69
22:DA:2339:C:HO2'	22:DA:2340:A:H8	1.39	0.69
22:DA:307:G:N2	22:DA:310:A:C8	2.60	0.69
28:BG:126:THR:CG2	28:BG:127:GLN:N	2.56	0.69
22:DA:1324:G:H5''	22:DA:1325:U:H5''	1.75	0.69
1:CA:1268:G:N2	1:CA:1327:C:H1'	2.07	0.69
1:CA:1319:A:H5''	19:CS:4:LEU:CD1	2.22	0.69
22:BA:2311:A:H1'	27:BF:78:ILE:HD13	1.74	0.69
25:DD:141:ARG:HH11	25:DD:141:ARG:CB	2.03	0.69
25:DD:116:LYS:HA	35:DN:1:MET:HE1	1.74	0.69
22:DA:1008:A:H4'	22:DA:1009:A:OP1	1.93	0.69
1:CA:119:A:H4'	1:CA:120:A:O5'	1.92	0.69
27:BF:71:LYS:HA	27:BF:80:GLN:CG	2.23	0.69
3:CC:179:ALA:O	3:CC:181:ILE:HG13	1.93	0.69
22:BA:1945:G:H2'	22:BA:1946:U:C6	2.26	0.69
22:DA:2443:C:O2'	22:DA:2444:G:H5'	1.93	0.69
28:BG:22:VAL:HG22	28:BG:36:LEU:HD13	1.73	0.69
6:AF:3:HIS:CA	6:AF:92:THR:HG23	2.23	0.69
1:AA:807:A:H2'	1:AA:808:C:C6	2.28	0.69
22:BA:1788:C:H2'	22:BA:1789:A:H5'	1.75	0.69
21:AU:18:PHE:O	21:AU:21:SER:HB3	1.93	0.69
22:DA:2464:G:H2'	22:DA:2465:C:O4'	1.92	0.69
6:AF:2:ARG:HH21	6:AF:68:GLN:NE2	1.91	0.69
36:DO:56:LYS:HD3	36:DO:56:LYS:O	1.93	0.69
51:B3:14:LYS:O	51:B3:21:PHE:O	2.10	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:50:ARG:NE	37:BP:56:SER:HB2	2.08	0.69
22:DA:2336:A:N7	44:DW:40:ARG:NH2	2.41	0.69
22:DA:118:A:C8	22:DA:119:A:C8	2.81	0.69
45:DX:2:ARG:CD	45:DX:32:LEU:HD23	2.22	0.69
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.28	0.69
22:BA:1795:C:H2'	22:BA:1796:U:H6	1.58	0.69
24:BC:16:VAL:CB	24:BC:203:VAL:HB	2.15	0.69
1:CA:1048:G:N2	1:CA:1214:C:H5	1.90	0.69
29:BH:90:LEU:HD22	29:BH:123:ARG:HA	1.75	0.69
22:DA:2591:C:P	24:DC:237:ARG:HD2	2.33	0.69
22:DA:1565:C:HO2'	22:DA:1566:A:H2'	1.57	0.69
6:AF:61:LEU:HD12	6:AF:62:MET:N	2.07	0.69
24:DC:131:MET:HA	24:DC:134:ILE:HG12	1.75	0.69
1:CA:252:U:H6	1:CA:252:U:H5'	1.58	0.69
9:AI:98:ARG:HG3	9:AI:103:VAL:HG21	1.75	0.69
35:BN:44:LEU:HD12	35:BN:44:LEU:O	1.93	0.69
22:DA:2653:U:C4	22:DA:2654:A:C6	2.80	0.69
22:BA:2661:G:H2'	22:BA:2662:A:C8	2.28	0.69
1:CA:223:A:C4	1:CA:224:U:C5	2.81	0.69
22:BA:2444:G:OP2	26:BE:63:LYS:CE	2.40	0.69
32:BK:93:GLN:HA	32:BK:93:GLN:OE1	1.91	0.69
29:BH:78:VAL:CG2	29:BH:145:ASN:HD22	2.06	0.69
42:BU:85:ARG:HA	42:BU:91:LYS:O	1.92	0.69
31:DJ:20:ALA:HA	31:DJ:23:LYS:HG3	1.75	0.69
8:CH:65:PHE:CD2	8:CH:66:GLN:HG2	2.28	0.69
1:AA:1248:A:C2	9:AI:71:ILE:HD11	2.28	0.69
8:CH:38:VAL:HA	8:CH:41:GLU:HG3	1.75	0.69
50:D2:23:ALA:O	50:D2:24:THR:HB	1.91	0.69
22:DA:1751:U:H2'	22:DA:1752:C:C6	2.27	0.69
33:BL:114:GLY:C	33:BL:115:GLU:HG3	2.11	0.69
24:BC:39:SER:C	24:BC:41:GLY:H	1.96	0.69
1:AA:1272:G:O2'	1:AA:1273:C:H5'	1.93	0.69
1:CA:1140:C:H2'	1:CA:1141:C:H5	1.58	0.68
1:AA:428:G:C1'	1:AA:430:A:C8	2.75	0.68
4:AD:35:GLN:O	4:AD:36:ALA:HB2	1.91	0.68
48:D0:38:LEU:HB2	48:D0:41:HIS:CE1	2.28	0.68
22:DA:2216:G:O2'	22:DA:2217:G:H8	1.70	0.68
38:DQ:91:ARG:HH11	39:DR:10:LYS:HB3	1.55	0.68
37:BP:113:LEU:O	37:BP:113:LEU:HG	1.91	0.68
22:BA:1794:A:H2'	22:BA:1795:C:H6	1.57	0.68
45:BX:40:GLU:HG3	45:BX:43:LYS:NZ	2.08	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:706:A:O2'	11:AK:30:ILE:HD11	1.93	0.68
22:BA:247:G:O6	51:B3:11:LYS:HE3	1.93	0.68
41:BT:32:LEU:H	41:BT:83:ALA:CB	2.05	0.68
23:DB:17:C:N4	23:DB:68:C:H42	1.90	0.68
5:AE:11:GLN:HA	5:AE:11:GLN:NE2	2.07	0.68
52:B4:9:LYS:N	52:B4:9:LYS:HD3	2.06	0.68
22:DA:1269:A:H2'	22:DA:1270:C:C6	2.27	0.68
25:BD:92:VAL:O	25:BD:93:GLY:C	2.31	0.68
9:AI:27:ILE:N	9:AI:27:ILE:HD12	2.08	0.68
22:DA:815:C:OP2	39:DR:85:LYS:HE2	1.93	0.68
22:BA:2800:A:O2'	22:BA:2801:G:OP1	2.12	0.68
25:DD:187:LEU:HD12	25:DD:188:LEU:N	2.08	0.68
22:DA:2902:C:C2'	22:DA:2903:U:H5'	2.22	0.68
19:CS:38:THR:HA	19:CS:69:LYS:HA	1.75	0.68
1:CA:628:G:O2'	1:CA:629:A:H5'	1.93	0.68
22:BA:454:A:H4'	22:BA:455:C:OP2	1.91	0.68
1:CA:306:A:H2'	1:CA:307:C:H6	1.58	0.68
7:CG:135:LYS:O	7:CG:139:ASP:HB2	1.94	0.68
1:AA:139:A:C5	1:AA:140:U:C5	2.81	0.68
19:CS:46:LEU:H	19:CS:46:LEU:HD23	1.57	0.68
41:DT:62:VAL:HG12	41:DT:63:VAL:N	2.08	0.68
1:CA:320:A:O2'	1:CA:1435:G:H1'	1.91	0.68
1:CA:423:G:H2'	1:CA:424:G:O4'	1.93	0.68
37:BP:51:ASN:O	37:BP:52:ARG:CG	2.41	0.68
5:AE:110:MET:HA	5:AE:113:VAL:HG13	1.75	0.68
10:CJ:7:ARG:HG3	10:CJ:75:ASP:OD1	1.93	0.68
22:DA:1347:A:O2'	22:DA:1348:C:H5'	1.94	0.68
41:DT:15:HIS:HD2	41:DT:17:SER:HB2	1.58	0.68
1:CA:370:C:C2'	1:CA:371:A:H5'	2.22	0.68
22:DA:311:A:H61	22:DA:330:A:H5'	1.58	0.68
46:DY:57:LEU:O	46:DY:60:LYS:HB3	1.93	0.68
24:BC:68:ARG:HD3	24:BC:103:ILE:CD1	2.17	0.68
22:DA:1353:A:C2'	22:DA:1354:A:H5'	2.23	0.68
22:DA:52:A:H2	22:DA:179:C:O4'	1.76	0.68
22:DA:455:C:C3'	22:DA:456:C:C5'	2.69	0.68
22:DA:2614:A:H4'	22:DA:2615:U:OP1	1.91	0.68
1:CA:962:C:HO2'	1:CA:963:G:H8	0.76	0.68
47:DZ:50:VAL:O	47:DZ:54:VAL:HG22	1.92	0.68
29:BH:89:LYS:O	29:BH:90:LEU:HD12	1.93	0.68
23:DB:19:C:H2'	23:DB:20:G:H8	1.59	0.68
22:DA:2199:A:N6	22:DA:2225:A:C8	2.61	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1196:C:H1'	22:DA:1226:A:C4	2.29	0.68
51:D3:56:LEU:HD13	51:D3:56:LEU:H	1.58	0.68
24:DC:211:ARG:HD3	24:DC:217:PRO:HD3	1.75	0.68
45:DX:31:ASN:HD22	45:DX:31:ASN:N	1.91	0.68
1:AA:508:U:H4'	1:AA:509:A:OP1	1.94	0.68
22:BA:995:C:O2'	22:BA:996:A:P	2.52	0.68
25:BD:114:LYS:HE3	25:BD:114:LYS:CA	2.23	0.68
22:DA:2420:C:OP1	51:D3:33:THR:HB	1.94	0.68
1:AA:208:U:H3	1:AA:212:G:N2	1.91	0.68
6:CF:18:VAL:HG21	6:CF:58:HIS:CD2	2.27	0.68
16:AP:28:ARG:HG2	16:AP:29:ASN:HD21	1.59	0.68
44:BW:31:LEU:CD2	44:BW:31:LEU:N	2.46	0.68
22:DA:2024:G:O2'	22:DA:2025:C:C5'	2.41	0.68
20:AT:79:THR:O	20:AT:82:ILE:HG13	1.92	0.68
22:DA:634:C:H2'	22:DA:635:C:C6	2.28	0.68
25:DD:11:MET:HE1	25:DD:192:ALA:HA	1.75	0.68
41:DT:50:LEU:HD11	46:DY:26:PHE:CE1	2.28	0.68
22:DA:574:A:H4'	22:DA:575:A:C5'	2.24	0.68
2:AB:67:LEU:HD13	2:AB:160:LEU:CD1	2.21	0.68
23:DB:58:A:C2'	23:DB:59:A:C8	2.76	0.68
29:DH:80:ILE:CB	29:DH:101:ASP:HB2	2.23	0.68
21:AU:13:VAL:HG13	21:AU:15:LEU:CG	2.21	0.68
22:DA:848:C:H2'	22:DA:849:A:H8	1.58	0.68
6:AF:86:ARG:NH1	18:AR:63:TYR:HB3	2.08	0.68
36:DO:8:ILE:HG22	36:DO:9:ARG:N	2.08	0.68
22:BA:358:U:H2'	22:BA:359:G:O4'	1.94	0.68
22:BA:407:G:O2'	22:BA:408:G:H5'	1.93	0.68
7:AG:30:MET:HG2	7:AG:31:VAL:H	1.56	0.68
22:BA:479:A:O2'	22:BA:481:G:H5'	1.93	0.68
22:BA:1901:A:H2'	22:BA:1902:C:C6	2.28	0.68
22:BA:1801:A:C5	24:BC:261:ARG:NH1	2.61	0.68
30:DI:21:PRO:N	30:DI:22:PRO:HD2	2.09	0.68
22:BA:2728:U:HO2'	22:BA:2729:G:P	2.16	0.68
18:CR:21:ASP:HB3	18:CR:23:LYS:CG	2.24	0.68
38:BQ:97:ILE:HD11	38:BQ:105:PHE:HB2	1.73	0.68
22:BA:80:G:C2'	22:BA:81:G:H5'	2.22	0.68
19:AS:6:LYS:HE2	19:AS:6:LYS:HA	1.75	0.68
1:AA:1358:U:H6	1:AA:1359:C:C5	2.11	0.68
24:DC:36:ASN:HD21	24:DC:85:ASN:HD21	1.41	0.68
22:DA:1402:U:O2'	22:DA:1403:A:O5'	2.11	0.68
1:AA:430:A:C2'	1:AA:431:A:H5'	2.22	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:15:PHE:HD1	2:AB:16:GLY:N	1.91	0.68
22:DA:1102:C:H2'	22:DA:1103:A:C8	2.28	0.68
22:DA:340:A:C2'	22:DA:341:C:H5'	2.23	0.68
22:DA:116:C:H5''	22:DA:128:C:N4	2.07	0.68
1:AA:213:G:H2'	1:AA:214:C:H5'	1.76	0.68
39:DR:40:MET:O	39:DR:41:ILE:HD13	1.93	0.68
43:DV:26:PHE:CE1	43:DV:86:LEU:HB3	2.28	0.68
37:DP:86:LYS:NZ	37:DP:86:LYS:CA	2.55	0.68
44:BW:30:VAL:C	44:BW:31:LEU:HD23	2.12	0.68
22:DA:1325:U:H4'	22:DA:1326:U:OP1	1.93	0.68
22:DA:391:A:O2'	22:DA:392:U:C5'	2.38	0.68
25:DD:50:VAL:HG21	25:DD:82:PHE:CE2	2.28	0.68
9:CI:35:GLU:HA	9:CI:39:GLY:HA3	1.74	0.68
9:CI:35:GLU:HA	9:CI:39:GLY:CA	2.23	0.68
36:BO:88:LYS:O	36:BO:89:ASP:HB2	1.91	0.68
27:DF:107:VAL:N	27:DF:108:PRO:CD	2.56	0.68
22:DA:838:C:O2'	22:DA:839:U:H5'	1.93	0.68
23:DB:11:C:H5'	44:DW:71:LYS:HD3	1.75	0.68
22:BA:2305:U:C4	27:BF:150:GLY:O	2.46	0.68
14:AN:40:ARG:HH12	14:AN:44:VAL:HG11	1.58	0.68
1:AA:1160:G:O6	1:AA:1181:G:C6	2.46	0.68
22:DA:2250:G:O5'	22:DA:2250:G:C8	2.47	0.68
22:BA:2440:C:C5'	22:BA:2440:C:H6	2.04	0.68
22:DA:1965:C:H2'	22:DA:1966:A:H8	1.55	0.68
1:CA:280:C:H4'	1:CA:281:G:OP2	1.92	0.68
22:DA:684:G:H5'	50:D2:16:HIS:NE2	2.07	0.68
1:CA:914:A:O2'	1:CA:915:A:H5'	1.92	0.68
16:CP:48:GLU:OE2	16:CP:51:ARG:HG2	1.93	0.68
1:CA:1513:A:H2'	1:CA:1514:G:H8	1.55	0.68
3:AC:154:GLY:O	3:AC:195:ILE:HG12	1.93	0.68
51:B3:22:LYS:HG2	51:B3:22:LYS:O	1.92	0.68
22:DA:1471:G:H2'	22:DA:1472:C:C6	2.29	0.68
30:BI:7:TYR:HA	30:BI:58:ILE:HB	1.75	0.68
2:CB:26:MET:HE2	2:CB:29:PHE:CD2	2.29	0.68
1:CA:1051:C:O2'	1:CA:1052:U:H6	1.76	0.68
22:BA:1116:G:O2'	22:BA:1117:C:H5'	1.93	0.68
22:BA:620:G:H4'	22:BA:621:A:O5'	1.93	0.68
39:DR:21:ARG:HB2	39:DR:93:PHE:HD1	1.59	0.68
12:CL:24:GLU:O	12:CL:25:ALA:HB3	1.94	0.68
1:AA:601:G:H2'	1:AA:602:A:H8	1.58	0.68
22:BA:1060:U:H5''	22:BA:1061:U:OP1	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DW:28:GLU:HG3	44:DW:29:SER:H	1.57	0.68
35:DN:96:ARG:NH1	35:DN:116:VAL:HG13	2.09	0.68
22:DA:2882:A:H4'	35:DN:97:ILE:HG12	1.76	0.68
9:AI:9:GLY:HA2	9:AI:80:HIS:HD2	1.55	0.68
46:DY:28:LEU:HG	46:DY:42:LEU:HD22	1.75	0.68
22:DA:128:C:H6	22:DA:128:C:H5''	1.57	0.68
2:CB:99:MET:O	2:CB:103:TRP:HB3	1.93	0.68
1:AA:500:G:H5'	12:AL:120:ARG:NH1	2.09	0.68
32:DK:19:VAL:HG12	32:DK:41:ILE:CG1	2.23	0.68
52:D4:7:VAL:HG22	52:D4:25:VAL:HG21	1.76	0.68
17:AQ:11:VAL:CG1	17:AQ:12:VAL:HG12	2.23	0.68
8:CH:17:GLN:NE2	8:CH:71:VAL:HG23	2.08	0.68
22:DA:2873:A:C2	35:DN:5:LYS:HG3	2.29	0.68
27:DF:113:PHE:CZ	27:DF:116:LEU:HD22	2.28	0.68
23:DB:58:A:H2'	23:DB:59:A:H8	1.57	0.68
22:DA:1731:G:N3	22:DA:1733:G:C8	2.62	0.68
27:BF:37:MET:CE	27:BF:151:LEU:HB3	2.24	0.68
22:DA:228:C:C5'	22:DA:229:C:H5	2.07	0.68
26:BE:95:LYS:O	26:BE:96:VAL:HB	1.93	0.68
30:BI:20:SER:HB3	30:BI:21:PRO:HD3	1.75	0.68
22:DA:1754:A:C6	22:DA:1755:A:C6	2.82	0.68
22:BA:243:U:OP1	51:B3:5:THR:CG2	2.42	0.68
12:CL:79:ILE:HD12	12:CL:96:THR:CG2	2.23	0.68
28:DG:131:VAL:C	28:DG:132:LEU:HD12	2.13	0.68
1:CA:1167:A:C8	1:CA:1169:A:N6	2.62	0.68
42:DU:85:ARG:NE	42:DU:85:ARG:HA	2.08	0.68
3:AC:15:LYS:HG3	3:AC:16:PRO:HD2	1.75	0.68
22:BA:2415:G:H4'	33:BL:65:GLY:O	1.94	0.68
3:CC:168:ARG:HG3	3:CC:169:GLU:H	1.57	0.68
23:BB:112:G:H2'	23:BB:113:C:H6	1.57	0.68
1:CA:461:A:N3	1:CA:461:A:H2'	2.06	0.68
22:DA:3:U:H2'	22:DA:4:U:H6	1.58	0.68
31:BJ:5:THR:HG22	31:BJ:6:ALA:O	1.94	0.68
38:BQ:63:ARG:NH2	38:BQ:96:ASP:CA	2.56	0.68
5:AE:132:PRO:O	5:AE:136:VAL:HG13	1.94	0.68
22:DA:2204:G:C2	22:DA:2205:A:C8	2.81	0.68
1:CA:1127:G:O2'	1:CA:1128:C:H5'	1.93	0.68
1:AA:430:A:H2'	1:AA:431:A:H8	1.59	0.68
4:AD:25:ARG:O	4:AD:26:ALA:CB	2.41	0.68
22:DA:784:G:N2	24:DC:227:VAL:HG21	2.08	0.68
1:CA:522:C:O4'	1:CA:536:C:H4'	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:138:U:H2'	22:DA:140:C:H1'	1.74	0.68
22:DA:538:A:O2'	31:DJ:8:PRO:HG3	1.92	0.68
1:CA:737:C:OP1	6:CF:91:ARG:HB3	1.94	0.68
32:DK:71:ARG:CB	32:DK:72:PRO:CD	2.52	0.68
8:CH:17:GLN:OE1	8:CH:62:LEU:HB3	1.94	0.68
38:DQ:8:ILE:O	38:DQ:8:ILE:HG12	1.91	0.68
22:DA:1032:A:C1'	52:D4:23:ILE:HD13	2.20	0.68
5:CE:79:THR:HA	5:CE:121:ASN:CG	2.14	0.68
5:CE:83:PRO:HB3	5:CE:96:GLN:HG2	1.75	0.68
36:BO:104:GLN:O	36:BO:107:ALA:HB3	1.93	0.68
14:AN:15:LEU:HD12	14:AN:53:ASP:HB2	1.76	0.68
22:DA:1722:A:H62	22:DA:1738:G:H1'	1.59	0.68
22:DA:1627:G:N2	22:DA:1628:G:C8	2.62	0.68
22:DA:962:G:H2'	22:DA:963:U:C6	2.29	0.68
22:BA:2154:A:H2'	22:BA:2155:U:O4'	1.92	0.68
29:DH:31:VAL:CB	29:DH:32:PRO:HD3	2.19	0.68
1:CA:751:U:H2'	1:CA:752:G:O4'	1.93	0.68
1:AA:1069:C:H4'	1:AA:1192:C:O2	1.94	0.68
12:AL:33:CYS:CA	12:AL:54:VAL:HA	2.24	0.68
3:CC:36:PHE:CE1	14:CN:91:GLU:HB3	2.29	0.68
35:DN:72:ASP:OD1	35:DN:75:ILE:HG23	1.94	0.68
29:DH:61:VAL:HG13	29:DH:62:LEU:N	2.08	0.68
47:BZ:26:LEU:O	47:BZ:37:ARG:NH1	2.26	0.68
26:DE:60:TRP:CE3	26:DE:62:GLN:HB2	2.29	0.68
2:AB:146:SER:C	2:AB:147:LEU:HD23	2.14	0.68
1:AA:125:U:H2'	1:AA:126:G:H5'	1.76	0.68
22:DA:1248:G:H2'	38:DQ:1:ALA:O	1.93	0.68
22:BA:2180:U:H2'	22:BA:2181:U:H5	1.57	0.68
1:AA:1247:U:O2'	1:AA:1248:A:H5'	1.94	0.68
38:BQ:97:ILE:HD11	38:BQ:105:PHE:CA	2.23	0.68
17:CQ:29:LYS:HE2	17:CQ:36:PHE:CE2	2.27	0.68
22:BA:2752:C:H2'	22:BA:2753:A:C8	2.29	0.68
25:DD:28:GLU:HA	25:DD:185:ASN:O	1.93	0.68
48:B0:27:LEU:HD23	48:B0:27:LEU:H	1.59	0.68
43:BV:44:HIS:HE1	43:BV:86:LEU:H	1.41	0.68
37:BP:13:LYS:HE3	37:BP:76:HIS:CA	2.18	0.68
22:DA:729:G:H3'	22:DA:730:A:H5''	1.75	0.68
22:DA:2215:C:HO2'	22:DA:2216:G:H8	1.42	0.68
22:DA:455:C:N3	22:DA:473:G:H4'	2.08	0.68
13:AM:79:LEU:CD2	13:AM:86:ARG:HB2	2.23	0.68
39:DR:39:LEU:HD23	39:DR:39:LEU:H	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BW:30:VAL:H	44:BW:31:LEU:HD23	1.59	0.68
22:DA:2242:G:N7	22:DA:2243:U:C5	2.62	0.68
22:DA:513:A:C2	22:DA:514:A:C5	2.82	0.68
25:DD:149:ASN:O	25:DD:151:THR:N	2.26	0.68
20:CT:26:MET:CE	20:CT:30:PHE:HD1	2.07	0.68
1:AA:872:A:C2	1:AA:874:G:C6	2.81	0.68
27:BF:37:MET:CE	27:BF:37:MET:HA	2.23	0.68
32:BK:7:MET:SD	32:BK:20:MET:HB2	2.34	0.68
35:BN:24:MET:HG2	35:BN:44:LEU:CD2	2.24	0.68
22:DA:228:C:H5'	22:DA:229:C:H5	1.58	0.68
44:DW:16:GLU:OE2	44:DW:16:GLU:HA	1.91	0.68
29:DH:59:ALA:HA	29:DH:63:ALA:HB3	1.75	0.68
28:DG:132:LEU:N	28:DG:132:LEU:HD12	2.07	0.68
16:CP:35:ARG:HH12	16:CP:38:PHE:HB3	1.58	0.68
22:DA:370:G:N1	22:DA:424:G:C5	2.62	0.68
1:AA:914:A:O2'	1:AA:915:A:C5'	2.42	0.68
1:AA:1001:C:H2'	1:AA:1002:G:H8	1.59	0.68
4:AD:55:ARG:HH12	4:AD:58:GLN:HG2	1.59	0.68
22:BA:308:G:O2'	22:BA:309:A:H5'	1.92	0.68
42:BU:42:LYS:N	42:BU:42:LYS:HD3	2.08	0.68
22:BA:62:U:H4'	22:BA:63:A:OP1	1.93	0.68
2:CB:9:LEU:H	2:CB:9:LEU:HD23	1.58	0.68
10:AJ:87:LEU:HD13	10:AJ:88:MET:N	2.07	0.68
22:BA:1402:U:H2'	22:BA:1403:A:O5'	1.94	0.68
28:BG:115:GLN:CD	28:BG:115:GLN:H	1.97	0.68
45:BX:5:GLN:HE21	45:BX:49:ARG:N	1.91	0.68
5:AE:154:ALA:HB1	8:AH:65:PHE:CE2	2.29	0.68
24:DC:79:ARG:HD3	24:DC:81:GLU:OE1	1.94	0.68
44:DW:18:LYS:HD3	44:DW:19:ARG:HG2	1.74	0.68
22:DA:101:A:HO2'	22:DA:102:U:P	2.16	0.68
46:DY:57:LEU:HD13	46:DY:60:LYS:HE3	1.74	0.68
22:DA:125:A:H5''	50:D2:19:ARG:HD3	1.76	0.68
22:DA:1535:A:H2'	22:DA:1535:A:N3	2.06	0.68
44:BW:42:THR:HG22	44:BW:43:LYS:HG2	1.74	0.68
22:BA:2353:G:O2'	44:BW:31:LEU:CD2	2.41	0.68
22:DA:528:A:N1	22:DA:2043:C:O5'	2.27	0.68
1:AA:258:G:O2'	1:AA:259:G:H5'	1.94	0.68
14:CN:60:ARG:NH2	14:CN:70:HIS:HB3	2.09	0.68
22:DA:623:C:H2'	22:DA:624:C:C6	2.28	0.68
10:AJ:10:LEU:CD1	10:AJ:98:VAL:HG12	2.23	0.68
22:DA:2699:C:H2'	22:DA:2700:A:H8	1.56	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BO:111:ARG:HD3	36:BO:112:GLU:N	2.08	0.68
1:CA:181:A:H4'	1:CA:182:A:OP1	1.93	0.68
1:CA:70:U:H4'	1:CA:71:A:OP1	1.94	0.68
25:DD:20:VAL:CG1	25:DD:22:ILE:HG12	2.24	0.68
10:AJ:52:LEU:CD2	10:AJ:62:ARG:HG3	2.23	0.68
4:AD:145:ARG:HD2	4:AD:147:LYS:CE	2.24	0.68
22:BA:1082:U:H5'	30:BI:117:THR:O	1.94	0.68
23:DB:42:C:H41	27:DF:87:LYS:NZ	1.91	0.68
35:BN:71:ARG:CG	35:BN:71:ARG:HH21	2.06	0.68
1:AA:121:U:OP2	1:AA:121:U:H4'	1.93	0.68
38:BQ:40:LYS:HA	38:BQ:43:GLN:CG	2.23	0.68
3:AC:112:ALA:HB2	3:AC:182:ASP:O	1.94	0.68
22:DA:24:G:C2'	22:DA:25:U:H5'	2.23	0.68
1:AA:238:A:H2'	1:AA:239:U:H5'	1.76	0.68
36:BO:49:VAL:HG21	36:BO:82:ALA:HA	1.74	0.68
12:CL:66:ILE:HD13	12:CL:73:LEU:HD12	1.76	0.68
8:AH:45:ILE:C	8:AH:63:LYS:HD2	2.14	0.68
33:BL:29:LYS:CG	33:BL:30:THR:HG23	2.24	0.68
22:DA:1817:G:C2'	22:DA:1818:U:H5'	2.24	0.68
24:DC:220:ARG:O	24:DC:223:ALA:HB3	1.94	0.68
9:AI:86:LEU:CD2	9:AI:93:LEU:HD22	2.23	0.68
12:CL:83:GLY:CA	12:CL:94:TYR:HA	2.17	0.68
39:BR:47:VAL:HG12	39:BR:47:VAL:O	1.93	0.68
10:AJ:35:GLN:HA	10:AJ:35:GLN:HE21	1.57	0.68
1:CA:1315:U:O4	19:CS:4:LEU:HG	1.94	0.68
1:CA:764:C:N4	1:CA:812:G:H1	1.91	0.68
5:CE:79:THR:HG23	5:CE:81:GLN:H	1.58	0.68
41:BT:39:THR:O	41:BT:39:THR:HG22	1.94	0.68
1:AA:1184:G:HO2'	1:AA:1185:G:H5'	1.59	0.68
22:DA:2804:U:O2'	22:DA:2805:C:H5'	1.94	0.68
13:CM:18:LEU:H	13:CM:18:LEU:HD12	1.58	0.68
13:CM:32:ILE:O	13:CM:32:ILE:HD13	1.93	0.68
19:AS:39:ILE:HD11	19:AS:70:LEU:HD23	1.76	0.68
12:CL:2:THR:O	12:CL:6:LEU:HD12	1.94	0.68
13:CM:2:ARG:NE	13:CM:8:ILE:HD11	2.08	0.68
22:BA:1253:A:H3'	22:BA:1254:A:C5'	2.24	0.68
22:DA:1471:G:H2'	22:DA:1472:C:H6	1.58	0.68
28:DG:43:LYS:O	28:DG:49:LEU:HD12	1.93	0.68
2:AB:202:ASN:ND2	2:AB:205:ALA:HB2	2.09	0.68
11:CK:82:GLU:HB2	11:CK:108:ASN:HB3	1.74	0.68
22:DA:983:A:O2'	22:DA:984:A:H5'	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:46:ILE:HD12	34:BM:47:GLU:N	2.09	0.68
1:CA:1162:C:O2'	1:CA:1163:A:H5'	1.94	0.68
31:BJ:31:GLU:OE2	31:BJ:35:ARG:HD2	1.94	0.68
1:AA:701:U:O2	1:AA:701:U:H2'	1.93	0.68
1:CA:369:G:OP2	1:CA:388:G:N2	2.27	0.68
22:DA:1775:U:H2'	22:DA:1776:G:O5'	1.94	0.68
12:CL:46:SER:O	12:CL:47:ALA:HB2	1.94	0.68
22:DA:36:G:N1	22:DA:445:C:N4	2.42	0.68
1:CA:429:U:C1'	1:CA:430:A:H5''	2.24	0.68
29:DH:93:SER:HB3	29:DH:121:VAL:CG2	2.18	0.68
9:AI:31:GLN:O	9:AI:32:ARG:HB2	1.94	0.68
9:AI:32:ARG:CG	9:AI:36:GLN:HB3	2.19	0.68
40:DS:32:ALA:HA	40:DS:35:ILE:CG1	2.22	0.68
20:AT:81:GLN:HA	20:AT:84:LYS:HB2	1.76	0.68
22:BA:2309:A:O2'	22:BA:2310:C:C5'	2.38	0.68
1:AA:684:U:H3	1:AA:706:A:H61	1.42	0.68
23:DB:83:G:OP1	47:DZ:16:LEU:HD21	1.94	0.68
11:AK:107:THR:HG22	11:AK:108:ASN:ND2	2.09	0.68
28:DG:126:THR:HG22	28:DG:127:GLN:N	2.03	0.68
27:DF:42:ALA:CB	27:DF:49:LEU:HD21	2.24	0.68
23:DB:115:A:H2'	23:DB:116:G:C8	2.28	0.68
27:BF:134:GLN:H	27:BF:134:GLN:NE2	1.92	0.68
1:CA:134:G:C2'	1:CA:135:C:H5'	2.24	0.68
7:CG:129:ASN:OD1	7:CG:134:VAL:HG11	1.94	0.68
22:DA:234:U:C5'	22:DA:234:U:H6	2.05	0.68
22:DA:364:C:H2'	22:DA:365:U:C6	2.28	0.68
22:BA:962:G:H2'	22:BA:963:U:C6	2.29	0.68
1:AA:176:C:H2'	1:AA:177:G:N3	2.09	0.68
3:AC:139:ASN:HA	3:AC:142:ARG:HB2	1.76	0.68
22:BA:242:G:OP2	51:B3:2:LYS:HE2	1.94	0.68
1:AA:107:G:C2'	1:AA:108:G:H5'	2.24	0.68
22:DA:1944:U:O4'	22:DA:1955:U:H1'	1.94	0.68
22:BA:438:G:O2'	22:BA:439:A:H5'	1.93	0.68
22:BA:22:C:H2'	22:BA:23:G:O5'	1.94	0.68
1:CA:775:G:C2'	1:CA:776:G:H5'	2.24	0.68
22:BA:2373:G:H2'	22:BA:2374:C:C6	2.28	0.68
5:AE:81:GLN:CG	5:AE:149:PRO:HG3	2.20	0.67
22:BA:587:C:N3	33:BL:33:ARG:NH2	2.42	0.67
22:DA:2205:A:O2'	22:DA:2206:C:H5'	1.94	0.67
22:DA:1345:C:H5''	22:DA:1396:U:O4	1.95	0.67
22:DA:1790:C:H4'	24:DC:207:ALA:HB1	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1062:G:OP1	22:DA:1070:A:H4'	1.94	0.67
30:DI:45:THR:CG2	30:DI:54:ILE:HD13	2.22	0.67
35:DN:98:LEU:CD2	48:D0:53:VAL:HG21	2.24	0.67
22:DA:1569:A:N1	22:DA:1570:A:C2	2.62	0.67
28:DG:139:VAL:HA	28:DG:142:GLN:CB	2.24	0.67
38:DQ:60:TRP:CH2	38:DQ:93:ILE:HB	2.29	0.67
38:DQ:79:ILE:C	38:DQ:79:ILE:HD13	2.14	0.67
22:BA:923:G:C2	44:BW:23:LYS:HE2	2.28	0.67
43:DV:72:VAL:HA	43:DV:92:VAL:O	1.93	0.67
37:BP:25:VAL:N	37:BP:85:VAL:O	2.25	0.67
37:BP:87:ARG:NH2	37:BP:111:GLU:HG3	2.09	0.67
6:CF:2:ARG:HG2	6:CF:4:TYR:OH	1.95	0.67
22:DA:579:G:C8	22:DA:2017:U:C4	2.81	0.67
22:BA:1793:C:O2'	22:BA:1794:A:H5'	1.94	0.67
22:DA:188:G:C2'	22:DA:189:G:H5'	2.23	0.67
22:BA:1654:A:C1'	25:BD:118:PHE:CE1	2.77	0.67
22:DA:275:C:H2'	22:DA:276:U:O4'	1.94	0.67
20:CT:22:SER:O	20:CT:26:MET:HB2	1.93	0.67
22:DA:839:U:H2'	22:DA:840:C:H6	1.59	0.67
24:DC:99:GLU:HG2	24:DC:100:ARG:H	1.57	0.67
24:DC:99:GLU:HG2	24:DC:100:ARG:N	2.09	0.67
25:DD:139:SER:HB3	25:DD:142:VAL:CG2	2.21	0.67
1:AA:32:A:C2'	1:AA:33:A:C8	2.75	0.67
22:BA:1056:G:HO2'	22:BA:1086:A:H1'	1.59	0.67
18:AR:62:ARG:HD3	18:AR:69:TYR:CD2	2.29	0.67
1:AA:982:U:H4'	1:AA:983:A:C5'	2.25	0.67
39:DR:2:TYR:CD2	39:DR:42:ALA:HB2	2.25	0.67
13:CM:68:LEU:O	13:CM:72:ILE:HG22	1.94	0.67
25:DD:105:LYS:HA	25:DD:177:VAL:CG2	2.24	0.67
1:AA:1470:U:O2'	1:AA:1471:U:H5'	1.94	0.67
1:CA:162:A:H2'	1:CA:163:C:O4'	1.94	0.67
13:AM:10:ASP:OD1	13:AM:44:ILE:HD13	1.94	0.67
22:DA:1525:A:H2'	22:DA:1526:C:O4'	1.93	0.67
1:AA:47:C:H4'	1:AA:48:C:O5'	1.93	0.67
29:BH:104:THR:O	29:BH:104:THR:HG23	1.93	0.67
7:CG:75:LYS:HG3	7:CG:76:SER:N	2.08	0.67
34:DM:96:ILE:HD13	34:DM:102:LEU:HD11	1.77	0.67
14:AN:59:GLN:HE21	14:AN:59:GLN:N	1.91	0.67
1:CA:239:U:C5'	1:CA:239:U:H6	2.07	0.67
26:DE:112:LEU:HD13	26:DE:112:LEU:O	1.94	0.67
42:DU:7:ASP:O	42:DU:8:ASP:HB2	1.92	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:82:PHE:CZ	28:BG:137:LYS:HB2	2.29	0.67
49:B1:8:ILE:HG22	49:B1:9:LYS:N	2.08	0.67
22:DA:2619:C:H4'	25:DD:156:PHE:O	1.95	0.67
1:AA:486:U:H6	1:AA:486:U:C5'	2.06	0.67
5:CE:104:ILE:HA	5:CE:122:VAL:CB	2.23	0.67
22:DA:1021:A:C2'	22:DA:1022:G:H4'	2.24	0.67
22:DA:1438:U:H5	22:DA:1552:A:N1	1.92	0.67
22:DA:1125:G:H4'	52:D4:37:GLN:NE2	2.09	0.67
1:CA:940:C:H5'	7:CG:101:ARG:HH22	1.58	0.67
22:DA:1268:A:H2'	22:DA:1269:A:O4'	1.95	0.67
22:BA:244:A:C2	22:BA:255:A:C4	2.82	0.67
12:CL:19:ASN:H	12:CL:19:ASN:ND2	1.90	0.67
22:DA:2192:U:H2'	22:DA:2192:U:O2	1.93	0.67
1:AA:1196:A:HO2'	1:AA:1197:A:P	2.17	0.67
23:BB:70:C:O2'	23:BB:71:C:H5'	1.93	0.67
1:CA:51:A:H4'	1:CA:52:C:C5'	2.24	0.67
1:CA:1484:C:H2'	1:CA:1485:U:O4'	1.94	0.67
1:CA:1337:G:H5''	1:CA:1338:G:OP1	1.93	0.67
1:CA:1410:A:H2'	1:CA:1411:C:C6	2.29	0.67
22:BA:1161:C:H1'	39:BR:8:GLY:O	1.94	0.67
22:BA:1079:C:C4	22:BA:1088:A:H2	2.12	0.67
24:DC:79:ARG:C	24:DC:80:LEU:HD12	2.15	0.67
1:CA:1140:C:H2'	1:CA:1141:C:C5	2.30	0.67
12:CL:62:VAL:HG21	12:CL:94:TYR:CE2	2.29	0.67
22:DA:2752:C:C2'	22:DA:2753:A:H8	2.07	0.67
1:AA:263:A:H2'	1:AA:264:C:C6	2.29	0.67
22:DA:2062:A:H2'	22:DA:2062:A:N3	2.09	0.67
21:AU:35:GLU:O	21:AU:36:PHE:HB2	1.94	0.67
5:CE:135:VAL:O	5:CE:138:ALA:HB3	1.92	0.67
22:DA:1738:G:O2'	22:DA:1739:A:H8	1.75	0.67
10:AJ:51:VAL:CB	14:AN:80:ARG:HB2	2.22	0.67
30:DI:96:LYS:CE	30:DI:138:VAL:HG11	2.22	0.67
37:BP:33:GLU:CG	37:BP:34:GLY:N	2.58	0.67
22:DA:832:U:OP1	33:DL:39:LYS:N	2.26	0.67
32:DK:27:GLY:HA3	32:DK:30:ARG:CG	2.24	0.67
28:BG:15:ASP:CG	28:BG:16:VAL:N	2.47	0.67
22:BA:1676:A:C2	22:BA:1993:U:H5'	2.30	0.67
22:BA:2085:U:O2'	22:BA:2086:U:H5'	1.94	0.67
2:AB:202:ASN:HD21	2:AB:205:ALA:HB2	1.60	0.67
27:DF:34:THR:O	27:DF:35:LEU:HB2	1.94	0.67
13:AM:39:ALA:HB3	13:AM:42:VAL:HG22	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1688:U:O2	22:BA:1700:A:H5''	1.94	0.67
2:AB:63:LYS:HD3	2:AB:63:LYS:C	2.15	0.67
22:BA:1152:C:H3'	56:BA:3360:HOH:O	1.95	0.67
22:DA:2331:G:O2'	44:DW:40:ARG:HB3	1.94	0.67
35:DN:44:LEU:O	35:DN:48:VAL:HG23	1.95	0.67
42:DU:92:VAL:HG21	42:DU:101:THR:HG21	1.75	0.67
22:DA:120:U:H1'	22:DA:149:A:C8	2.29	0.67
1:CA:597:G:C2'	1:CA:598:U:H5'	2.20	0.67
22:DA:1199:U:H2'	22:DA:1200:C:C6	2.30	0.67
24:BC:245:THR:OG1	24:BC:249:VAL:HB	1.95	0.67
46:BY:6:LEU:O	46:BY:7:ARG:HB3	1.95	0.67
22:DA:273:G:H2'	22:DA:274:C:C6	2.30	0.67
5:CE:55:VAL:O	5:CE:59:ILE:HG22	1.94	0.67
29:BH:67:ALA:HA	29:BH:138:VAL:CB	2.24	0.67
1:CA:1202:U:O2'	1:CA:1203:C:C5'	2.42	0.67
22:DA:2199:A:N3	22:DA:2200:C:C6	2.63	0.67
19:AS:30:LEU:O	19:AS:49:ALA:HB3	1.95	0.67
14:AN:2:LYS:HD3	14:AN:5:MET:CG	2.24	0.67
2:CB:110:ILE:HD13	2:CB:151:LYS:CA	2.21	0.67
4:AD:147:LYS:HE2	4:AD:147:LYS:H	1.58	0.67
18:AR:54:LEU:O	18:AR:58:ILE:HG13	1.94	0.67
22:BA:335:C:C5'	42:BU:81:ARG:HD3	2.24	0.67
3:CC:24:ASN:O	3:CC:28:PHE:HB2	1.94	0.67
35:DN:63:ARG:O	35:DN:67:PHE:HB2	1.94	0.67
22:BA:84:A:H62	22:BA:101:A:H2	1.42	0.67
2:CB:127:LYS:HE2	2:CB:136:ARG:NH2	2.09	0.67
24:BC:85:ASN:OD1	24:BC:85:ASN:N	2.28	0.67
28:DG:130:ILE:HG22	28:DG:132:LEU:HD11	1.75	0.67
3:AC:102:ILE:H	3:AC:102:ILE:HD12	1.60	0.67
14:AN:51:PRO:O	14:AN:52:ARG:CB	2.42	0.67
36:BO:57:ALA:O	36:BO:59:ALA:N	2.27	0.67
52:D4:10:LEU:HB2	52:D4:33:HIS:ND1	2.09	0.67
22:BA:1988:G:H2'	22:BA:1989:G:H5'	1.77	0.67
30:DI:37:PHE:CE1	30:DI:56:VAL:HG21	2.30	0.67
22:DA:2:G:C6	22:DA:3:U:C4	2.82	0.67
22:DA:2813:A:H2'	22:DA:2814:A:C8	2.30	0.67
22:BA:1159:U:O2'	22:BA:1160:G:H5'	1.93	0.67
5:AE:149:PRO:HA	5:AE:152:VAL:HG13	1.75	0.67
42:DU:14:THR:CG2	42:DU:15:GLY:H	2.07	0.67
21:CU:38:GLU:HA	21:CU:41:THR:OG1	1.95	0.67
43:DV:41:GLU:O	43:DV:42:LEU:HD23	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:62:LEU:HD22	8:CH:62:LEU:N	2.09	0.67
4:AD:196:GLU:HA	4:AD:199:ILE:HG23	1.76	0.67
32:BK:71:ARG:CB	32:BK:72:PRO:CD	2.72	0.67
3:AC:131:ARG:O	3:AC:135:ARG:HG2	1.93	0.67
27:DF:110:ILE:HD13	27:DF:110:ILE:H	1.58	0.67
40:BS:51:LEU:O	40:BS:55:ILE:HG13	1.94	0.67
1:AA:1320:C:H41	19:AS:36:ARG:HG2	1.59	0.67
22:BA:1107:G:H2'	22:BA:1108:U:C6	2.29	0.67
1:CA:282:A:H2'	1:CA:283:U:C6	2.30	0.67
27:DF:28:PRO:CB	27:DF:168:LEU:HD11	2.24	0.67
27:DF:28:PRO:HB2	27:DF:168:LEU:HD11	1.75	0.67
31:BJ:25:LEU:CD2	31:BJ:25:LEU:C	2.62	0.67
22:DA:127:A:C8	50:D2:46:LYS:HE3	2.29	0.67
1:AA:642:A:H2'	1:AA:643:C:H6	1.60	0.67
22:DA:2259:U:C4	22:DA:2427:C:N4	2.62	0.67
46:BY:18:LEU:HD13	46:BY:18:LEU:O	1.94	0.67
1:CA:345:C:H4'	1:CA:346:G:C5'	2.24	0.67
22:BA:1253:A:N7	56:BA:3332:HOH:O	2.26	0.67
22:DA:1906:G:C8	22:DA:1929:G:H2'	2.30	0.67
35:DN:22:ARG:HG3	35:DN:70:THR:HA	1.74	0.67
30:DI:132:ALA:CB	30:DI:137:LEU:HD12	2.25	0.67
1:CA:954:G:H1	1:CA:1228:C:N4	1.91	0.67
8:CH:37:ASN:HA	8:CH:48:PHE:HE1	1.58	0.67
1:AA:1064:G:H1'	1:AA:1066:C:C5	2.30	0.67
22:DA:1417:C:O2'	22:DA:1418:G:H5'	1.94	0.67
22:BA:836:G:H5''	22:BA:837:C:OP2	1.94	0.67
37:DP:105:LYS:HA	37:DP:108:ARG:NE	2.09	0.67
27:BF:121:PHE:HB3	27:BF:162:ASP:OD2	1.95	0.67
4:CD:170:LEU:HA	4:CD:182:LYS:HB2	1.77	0.67
22:DA:1029:A:H5''	22:DA:1030:C:OP2	1.94	0.67
36:BO:52:SER:OG	36:BO:54:VAL:HG12	1.95	0.67
31:DJ:86:GLN:O	31:DJ:87:ALA:CB	2.41	0.67
7:AG:114:SER:HB3	7:AG:117:LEU:HG	1.76	0.67
4:AD:7:LYS:HZ1	4:AD:21:LYS:HG3	1.58	0.67
22:DA:1695:G:H2'	22:DA:1696:G:O4'	1.95	0.67
22:DA:1055:G:C3'	22:DA:1056:G:H5'	2.25	0.67
22:DA:2886:A:H62	48:D0:39:ARG:HD3	1.58	0.67
35:DN:14:SER:C	35:DN:16:HIS:H	1.98	0.67
46:DY:17:GLU:OE1	46:DY:53:VAL:HB	1.94	0.67
22:DA:396:G:O2'	22:DA:397:U:C6	2.48	0.67
28:DG:138:GLN:HG2	28:DG:138:GLN:O	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:140:C:H5'	22:DA:141:G:N2	2.10	0.67
22:DA:995:C:H5''	38:DQ:53:LYS:HG2	1.77	0.67
22:DA:251:A:H4'	33:DL:47:ARG:HH22	1.59	0.67
1:AA:1239:A:N6	1:AA:1299:A:N6	2.32	0.67
22:DA:2503:A:OP2	22:DA:2503:A:H3'	1.95	0.67
16:CP:4:ILE:HG21	16:CP:57:ILE:CD1	2.23	0.67
46:BY:7:ARG:HG3	46:BY:7:ARG:O	1.94	0.67
22:DA:1156:A:P	38:DQ:54:ARG:HE	2.18	0.67
1:CA:1296:C:C4	1:CA:1297:G:N2	2.63	0.67
4:AD:2:ARG:HH21	4:AD:114:ARG:HD3	1.59	0.67
34:BM:78:LEU:HD23	34:BM:79:ALA:N	2.10	0.67
27:DF:64:PRO:HA	27:DF:88:VAL:CG2	2.24	0.67
27:DF:65:LEU:HD23	27:DF:65:LEU:H	1.60	0.67
37:BP:37:LYS:HG2	37:BP:37:LYS:O	1.94	0.67
32:BK:76:VAL:C	32:BK:77:ILE:HD12	2.15	0.67
33:BL:65:GLY:O	33:BL:66:PHE:HB3	1.94	0.67
2:CB:9:LEU:HD12	2:CB:11:ALA:C	2.15	0.67
26:DE:52:VAL:HG12	26:DE:74:LYS:HD3	1.76	0.67
38:DQ:64:ILE:HD11	38:DQ:95:ALA:HB3	1.77	0.67
22:BA:1970:A:H4'	22:BA:1971:U:O5'	1.94	0.67
27:BF:16:MET:O	27:BF:20:ASN:HA	1.95	0.67
22:BA:1515:A:H2'	22:BA:1516:G:O4'	1.95	0.67
1:AA:1427:C:C2'	1:AA:1428:A:H5'	2.25	0.67
27:DF:155:ILE:HD12	27:DF:155:ILE:N	2.09	0.67
38:BQ:94:LEU:HD23	39:BR:11:GLN:HB2	1.76	0.67
22:BA:1061:U:H3'	22:BA:1062:G:C5'	2.24	0.67
8:AH:48:PHE:O	8:AH:49:LYS:CB	2.42	0.67
4:AD:109:THR:HG23	4:AD:112:GLU:N	2.07	0.67
22:DA:915:C:O2	23:DB:100:G:H4'	1.95	0.67
22:DA:740:C:H5''	22:DA:1784:A:H3'	1.76	0.67
22:DA:1084:A:H2'	22:DA:1085:A:H5'	1.76	0.67
30:DI:11:GLN:OE1	30:DI:74:PRO:HG2	1.94	0.67
22:DA:216:A:HO2'	22:DA:217:A:H8	1.36	0.67
39:BR:49:ILE:CG1	39:BR:51:VAL:O	2.43	0.67
22:DA:2746:U:C2'	22:DA:2747:G:H5'	2.25	0.67
49:B1:8:ILE:HG23	49:B1:51:ALA:CA	2.17	0.67
38:DQ:26:ALA:HB1	38:DQ:30:VAL:HB	1.77	0.67
22:DA:2074:U:HO2'	22:DA:2075:U:H5'	1.60	0.67
33:DL:111:ILE:HA	33:DL:128:THR:OG1	1.94	0.67
29:DH:5:LEU:O	29:DH:6:LEU:HD12	1.95	0.67
1:CA:87:C:O2'	1:CA:88:U:C4'	2.43	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:994:A:N7	1:AA:1216:A:H4'	2.10	0.67
2:CB:150:ILE:HD11	2:CB:153:MET:HE1	1.77	0.67
1:AA:370:C:O2'	1:AA:371:A:H5'	1.95	0.67
22:DA:1014:A:O2'	22:DA:1015:U:H5'	1.94	0.67
9:CI:10:ARG:HG3	9:CI:14:SER:O	1.94	0.67
38:BQ:39:ILE:O	38:BQ:43:GLN:HG2	1.95	0.67
26:BE:127:GLU:H	26:BE:127:GLU:CD	1.97	0.67
3:AC:59:PRO:O	3:AC:62:SER:HB3	1.93	0.67
22:BA:1486:U:O2'	22:BA:1487:U:H5'	1.94	0.67
22:BA:2346:A:H3'	22:BA:2347:C:H5''	1.77	0.67
22:BA:1063:G:O2'	22:BA:1064:C:O4'	2.11	0.67
45:BX:5:GLN:NE2	45:BX:49:ARG:H	1.91	0.67
41:DT:40:LYS:O	41:DT:43:ILE:HG22	1.93	0.67
41:DT:43:ILE:CG2	41:DT:58:VAL:HG11	2.24	0.67
4:AD:33:ILE:O	4:AD:34:GLU:CB	2.42	0.67
1:CA:372:C:O2'	1:CA:373:A:P	2.52	0.67
2:AB:32:GLY:HA3	2:AB:39:ILE:N	2.09	0.67
22:DA:1080:A:H5'	30:DI:133:ARG:HH21	1.60	0.67
22:DA:300:A:H1'	22:DA:333:G:H21	1.58	0.67
22:DA:1360:G:H2'	22:DA:1361:G:C5'	2.23	0.67
22:DA:216:A:O2'	22:DA:217:A:C8	2.48	0.67
37:DP:86:LYS:N	37:DP:86:LYS:HZ3	1.93	0.67
45:BX:38:TRP:NE1	45:BX:40:GLU:HB2	2.10	0.67
22:BA:1490:A:H5'	22:BA:1491:G:OP2	1.93	0.67
14:CN:8:ARG:HD2	14:CN:12:ARG:CZ	2.24	0.67
25:DD:151:THR:HG22	25:DD:152:PRO:HD3	1.76	0.67
41:BT:39:THR:HB	41:BT:42:GLU:CB	2.24	0.67
2:AB:112:ARG:O	2:AB:116:LEU:HD23	1.95	0.67
6:AF:4:TYR:CE2	6:AF:71:ILE:HG12	2.29	0.67
1:CA:251:G:H21	1:CA:253:A:H62	1.41	0.67
22:DA:1739:A:H2'	22:DA:1740:G:H8	1.59	0.67
1:CA:14:U:H2'	1:CA:16:A:OP2	1.94	0.67
2:CB:159:ALA:HA	2:CB:180:ILE:HG22	1.77	0.67
22:BA:1585:C:O2'	22:BA:1586:A:H5'	1.94	0.67
1:CA:754:C:H2'	1:CA:754:C:O2	1.94	0.67
36:DO:7:ARG:HA	36:DO:10:ARG:NH2	2.10	0.67
28:DG:93:TYR:N	28:DG:93:TYR:CD2	2.63	0.67
14:CN:86:ALA:O	14:CN:91:GLU:HB2	1.95	0.67
29:DH:41:LYS:N	29:DH:44:ILE:HG23	2.10	0.67
22:DA:2531:A:H5''	28:DG:156:TYR:OH	1.94	0.67
31:DJ:58:ASN:OD1	31:DJ:127:GLY:HA2	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2348:U:O2'	22:DA:2349:G:O4'	2.12	0.67
19:CS:38:THR:CA	19:CS:69:LYS:HD3	2.24	0.67
27:BF:107:VAL:N	27:BF:108:PRO:CD	2.58	0.67
1:CA:305:G:H5'	1:CA:306:A:OP1	1.95	0.67
7:AG:69:ARG:CD	7:AG:95:ARG:HG2	2.25	0.67
1:CA:39:G:H2'	1:CA:40:C:H6	1.60	0.67
13:AM:40:GLU:HG3	13:AM:41:ASP:H	1.59	0.67
22:BA:132:G:O2'	22:BA:133:U:H5'	1.95	0.67
15:AO:68:TYR:O	15:AO:71:ARG:HG2	1.94	0.67
33:BL:132:ARG:HA	33:BL:142:ILE:HD11	1.77	0.67
22:DA:1342:A:N6	22:DA:1397:U:C5	2.63	0.67
22:DA:2384:U:H3'	22:DA:2386:A:OP2	1.95	0.67
22:DA:740:C:C5'	22:DA:1784:A:H3'	2.25	0.67
2:AB:40:ILE:HD13	2:AB:201:GLY:CA	2.13	0.67
22:DA:2744:G:N2	22:DA:2745:C:C2	2.63	0.67
34:DM:71:LYS:HB3	34:DM:93:VAL:O	1.95	0.67
41:BT:29:THR:HA	41:BT:86:THR:N	2.09	0.67
31:DJ:89:PHE:CE2	31:DJ:100:VAL:HG11	2.30	0.67
40:DS:84:ARG:HB3	40:DS:96:ILE:HG23	1.76	0.67
8:CH:76:ARG:HD3	8:CH:77:VAL:H	1.59	0.67
22:DA:578:G:H21	22:DA:1252:G:N2	1.92	0.67
1:CA:974:A:O2'	1:CA:975:A:P	2.52	0.67
1:AA:921:U:H2'	1:AA:922:G:O4'	1.95	0.67
1:CA:577:G:C4	1:CA:816:A:C2	2.83	0.67
10:AJ:10:LEU:HB3	10:AJ:18:ILE:HD11	1.76	0.67
47:DZ:6:ILE:O	47:DZ:34:THR:HA	1.95	0.67
22:BA:1941:C:H2'	22:BA:1942:C:C6	2.30	0.67
23:DB:41:G:H3'	23:DB:42:C:C5'	2.23	0.67
22:DA:804:A:H2'	22:DA:806:C:C4	2.30	0.67
28:DG:84:LYS:N	28:DG:84:LYS:HD3	2.09	0.67
42:DU:42:LYS:HD3	42:DU:57:ILE:CD1	2.25	0.67
35:DN:74:GLU:O	35:DN:77:ALA:HB3	1.94	0.67
22:DA:836:G:C6	22:DA:837:C:N3	2.63	0.67
29:DH:72:ILE:HD11	29:DH:141:LYS:N	2.08	0.67
2:CB:212:TYR:CD2	2:CB:215:ALA:HB3	2.30	0.67
9:AI:37:TYR:CD2	9:AI:38:PHE:HD2	2.12	0.67
2:CB:86:CYS:HB2	2:CB:88:GLN:OE1	1.94	0.67
12:CL:42:LYS:CD	12:CL:43:LYS:NZ	2.57	0.67
1:CA:1283:U:O2'	1:CA:1284:C:C5'	2.42	0.67
16:AP:5:ARG:HA	16:AP:68:SER:OG	1.95	0.67
30:DI:55:PRO:HG2	30:DI:70:THR:HG23	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2832:U:H5''	22:DA:2834:G:H5'	1.76	0.67
35:DN:34:ILE:HD12	35:DN:44:LEU:HD21	1.77	0.67
22:DA:2880:C:H1'	35:DN:93:GLY:N	2.09	0.67
41:DT:39:THR:HG21	41:DT:42:GLU:CB	2.19	0.67
2:AB:42:LEU:HG	2:AB:43:GLU:N	2.10	0.67
18:CR:32:ILE:HG13	18:CR:32:ILE:O	1.95	0.67
22:DA:2014:A:H5'	40:DS:94:ASP:OD2	1.95	0.67
22:DA:1308:A:H2'	22:DA:1309:G:O4'	1.95	0.67
22:DA:1255:U:H5'	22:DA:2502:G:N2	2.08	0.67
1:CA:1213:A:O2'	1:CA:1214:C:H5''	1.94	0.67
13:CM:100:ARG:NH2	13:CM:102:LYS:HD3	2.10	0.67
1:AA:1080:A:OP1	5:AE:51:LYS:HE3	1.95	0.67
1:AA:693:G:H2'	1:AA:694:A:H5'	1.75	0.67
1:CA:172:A:C5	1:CA:174:A:N7	2.63	0.67
22:DA:1654:A:HO2'	22:DA:1655:A:H8	0.76	0.67
42:DU:58:VAL:HG11	42:DU:60:LYS:HG2	1.76	0.67
7:CG:100:MET:O	7:CG:104:VAL:HG13	1.94	0.67
1:AA:439:U:O2'	1:AA:440:C:C5'	2.43	0.67
11:CK:18:GLY:O	11:CK:81:LEU:HA	1.95	0.67
20:AT:32:LYS:O	20:AT:35:TYR:CD2	2.48	0.67
25:BD:110:THR:CG2	25:BD:171:THR:HG22	2.24	0.67
22:BA:2188:U:H2'	22:BA:2189:U:C6	2.30	0.67
44:BW:9:THR:OG1	44:BW:10:ARG:N	2.25	0.67
22:DA:2141:G:H2'	22:DA:2142:A:C8	2.30	0.67
34:BM:53:MET:HE2	34:BM:120:ALA:CB	2.25	0.67
1:CA:513:C:H2'	1:CA:514:C:C6	2.30	0.67
52:D4:3:VAL:O	52:D4:4:ARG:HB2	1.95	0.67
38:DQ:64:ILE:CD1	38:DQ:95:ALA:HB3	2.25	0.67
22:BA:77:G:OP1	46:BY:52:ARG:HD3	1.95	0.67
12:AL:82:ARG:HG3	12:AL:82:ARG:O	1.94	0.67
51:D3:39:ARG:O	51:D3:43:LEU:HD13	1.95	0.67
22:BA:151:C:H5'	22:BA:1360:G:OP1	1.95	0.67
40:DS:80:PRO:HD2	40:DS:100:THR:OG1	1.95	0.67
49:B1:29:LYS:HD2	49:B1:31:GLU:OE1	1.94	0.67
46:BY:39:GLN:HG3	46:BY:42:LEU:HD22	1.76	0.67
24:BC:69:ASN:O	24:BC:70:LYS:HB2	1.94	0.67
38:BQ:91:ARG:HH21	38:BQ:93:ILE:HD13	1.58	0.66
5:AE:148:SER:O	5:AE:152:VAL:HG13	1.95	0.66
22:DA:1062:G:H2'	22:DA:1070:A:OP1	1.95	0.66
22:DA:1070:A:H61	30:DI:8:VAL:CG1	2.07	0.66
22:DA:1204:A:H4'	22:DA:1205:A:O5'	1.91	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:300:A:H1'	22:DA:333:G:H22	1.59	0.66
45:DX:13:THR:HA	45:DX:27:ARG:HA	1.77	0.66
39:BR:49:ILE:HG21	39:BR:53:PHE:N	2.10	0.66
1:CA:1096:C:O2'	1:CA:1097:C:H5'	1.95	0.66
8:AH:28:SER:HB2	8:AH:58:LEU:CB	2.19	0.66
44:BW:18:LYS:HA	44:BW:36:ILE:CD1	2.24	0.66
29:DH:92:GLY:O	29:DH:121:VAL:HG11	1.95	0.66
22:BA:1498:C:O2'	22:BA:1499:C:C5'	2.44	0.66
17:AQ:80:LYS:HZ2	17:AQ:80:LYS:HB2	1.59	0.66
1:CA:1361:G:H2'	1:CA:1362:A:C5'	2.25	0.66
1:AA:1398:A:H8	1:AA:1398:A:H5''	1.60	0.66
29:BH:137:GLU:HG3	29:BH:138:VAL:N	2.10	0.66
1:CA:182:A:O2'	1:CA:183:C:H2'	1.95	0.66
1:CA:104:G:C2	1:CA:105:G:C8	2.83	0.66
2:AB:13:VAL:CG2	2:AB:207:ARG:HH22	2.08	0.66
16:AP:54:LEU:HD22	16:AP:80:LYS:HG3	1.75	0.66
22:BA:1019:U:H3	22:BA:1142:A:H62	1.40	0.66
36:DO:62:LEU:CD1	36:DO:65:THR:HG23	2.26	0.66
22:DA:184:C:H2'	22:DA:185:G:H8	1.58	0.66
24:DC:106:PRO:HB3	24:DC:141:HIS:HE1	1.58	0.66
29:DH:143:ILE:O	29:DH:144:VAL:HG13	1.96	0.66
2:AB:99:MET:HA	2:AB:106:VAL:HG21	1.75	0.66
1:AA:1055:A:H1'	3:AC:155:ARG:NH2	2.10	0.66
22:BA:475:C:O2'	22:BA:476:G:H5'	1.95	0.66
11:CK:107:THR:HG22	11:CK:108:ASN:HB2	1.78	0.66
22:BA:1858:A:O2'	22:BA:1859:U:C5'	2.42	0.66
13:CM:106:ARG:HA	13:CM:110:GLY:O	1.95	0.66
13:AM:13:HIS:HB3	13:AM:41:ASP:HA	1.77	0.66
22:DA:2884:U:H2'	22:DA:2885:G:C8	2.30	0.66
1:CA:240:G:H5''	1:CA:240:G:H8	1.58	0.66
22:DA:1813:G:C2	24:DC:49:THR:HB	2.30	0.66
1:AA:1503:A:C8	1:AA:1531:A:H1'	2.29	0.66
46:DY:1:MET:H1	46:DY:1:MET:HE2	1.60	0.66
46:DY:49:ASP:HA	46:DY:52:ARG:HD2	1.76	0.66
22:DA:53:A:H2'	22:DA:54:G:H5'	1.77	0.66
1:CA:1159:U:H5	1:CA:1182:G:HO2'	1.42	0.66
1:CA:498:A:H5''	1:CA:499:A:OP1	1.96	0.66
22:DA:478:A:C2	22:DA:480:A:C4	2.84	0.66
27:DF:103:ILE:N	27:DF:103:ILE:HD12	2.10	0.66
1:CA:199:A:O2'	1:CA:200:G:C5'	2.44	0.66
22:DA:838:C:C2'	22:DA:839:U:H5'	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:107:LEU:HD23	32:DK:107:LEU:C	2.16	0.66
1:CA:15:G:H2'	1:CA:16:A:C8	2.31	0.66
6:AF:52:ASN:O	6:AF:53:LYS:HB3	1.94	0.66
22:DA:1965:C:H5''	22:DA:1965:C:H6	1.59	0.66
26:DE:119:ILE:HG13	26:DE:119:ILE:O	1.94	0.66
22:DA:2666:C:H2'	22:DA:2667:C:C5'	2.25	0.66
28:DG:112:VAL:HG13	28:DG:150:TYR:CE1	2.23	0.66
27:DF:28:PRO:HG2	27:DF:168:LEU:HD11	1.77	0.66
6:CF:11:HIS:CD2	6:CF:54:LEU:CD2	2.77	0.66
39:DR:82:HIS:O	39:DR:82:HIS:CG	2.47	0.66
37:DP:92:ARG:HG2	37:DP:92:ARG:O	1.93	0.66
24:DC:140:VAL:HG23	24:DC:141:HIS:H	1.58	0.66
22:BA:2579:C:H2'	22:BA:2580:U:H5'	1.77	0.66
44:BW:37:VAL:HG13	44:BW:55:ASP:C	2.15	0.66
30:DI:104:GLN:HA	30:DI:107:GLU:HB3	1.77	0.66
6:AF:11:HIS:CD2	6:AF:13:ASP:H	2.09	0.66
22:BA:1248:G:O2'	38:BQ:2:ARG:HA	1.95	0.66
40:DS:50:VAL:O	40:DS:53:SER:HB3	1.95	0.66
2:AB:22:TRP:HA	2:AB:188:THR:O	1.95	0.66
22:DA:1856:U:H3	22:DA:1886:U:H3	1.43	0.66
1:CA:629:A:H2'	1:CA:630:A:O4'	1.94	0.66
22:BA:1624:U:H2'	22:BA:1625:C:H6	1.59	0.66
22:BA:2038:G:H2'	22:BA:2039:U:O4'	1.95	0.66
22:BA:2402:U:H2'	22:BA:2403:C:OP2	1.95	0.66
1:CA:738:C:C4	1:CA:739:C:C5	2.83	0.66
15:AO:18:ALA:O	15:AO:19:ASN:HB2	1.95	0.66
22:BA:2473:U:O2	22:BA:2473:U:H2'	1.94	0.66
35:BN:8:ARG:HD2	35:BN:43:GLU:HG3	1.77	0.66
40:DS:86:MET:SD	40:DS:87:PRO:HD2	2.35	0.66
38:BQ:63:ARG:NH2	38:BQ:96:ASP:N	2.37	0.66
33:BL:94:THR:HG22	33:BL:95:LEU:N	2.10	0.66
41:DT:13:ALA:O	41:DT:32:LEU:HB2	1.95	0.66
46:DY:23:ARG:O	46:DY:27:ASN:HB2	1.96	0.66
26:DE:147:LEU:HB3	26:DE:186:VAL:HG23	1.76	0.66
22:DA:1081:U:OP1	30:DI:126:ARG:HD2	1.96	0.66
45:DX:2:ARG:NH2	45:DX:32:LEU:HD23	2.01	0.66
22:DA:2752:C:H2'	22:DA:2753:A:H8	1.53	0.66
3:CC:110:LEU:CD2	3:CC:203:LYS:HD2	2.13	0.66
38:DQ:91:ARG:HG3	39:DR:11:GLN:NE2	2.10	0.66
4:AD:89:LEU:HD21	4:AD:199:ILE:CD1	2.24	0.66
4:AD:86:GLY:O	4:AD:89:LEU:HB3	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2311:A:O3'	22:BA:2312:U:C6	2.48	0.66
11:AK:39:ASN:O	11:AK:40:ALA:HB3	1.95	0.66
32:DK:18:ARG:HB2	32:DK:45:GLU:HB2	1.77	0.66
1:CA:86:G:H1'	1:CA:87:C:O5'	1.96	0.66
20:CT:30:PHE:CE2	20:CT:52:GLU:HG2	2.29	0.66
22:DA:2202:U:H5''	22:DA:2203:U:OP1	1.95	0.66
22:DA:1655:A:H5'	25:DD:118:PHE:CD1	2.29	0.66
23:DB:91:C:H2'	23:DB:92:C:C6	2.30	0.66
1:CA:1453:G:N3	1:CA:1453:G:H2'	2.09	0.66
22:DA:2299:U:O2'	22:DA:2300:C:C6	2.46	0.66
7:CG:11:ILE:CD1	7:CG:24:LYS:HB2	2.24	0.66
22:BA:962:G:H2'	22:BA:963:U:H6	1.61	0.66
20:AT:53:MET:HE1	20:AT:57:VAL:HG21	1.76	0.66
22:DA:2104:C:O2	22:DA:2105:U:H5	1.79	0.66
1:AA:113:G:H2'	1:AA:114:U:C6	2.31	0.66
24:DC:72:GLY:O	24:DC:73:ILE:HD13	1.94	0.66
44:BW:37:VAL:C	44:BW:38:ARG:CG	2.61	0.66
22:DA:2020:A:H5'	48:D0:8:THR:HG22	1.76	0.66
22:DA:170:U:C6	22:DA:171:U:H5	2.13	0.66
15:AO:16:ARG:HD3	15:AO:20:ASP:OD2	1.95	0.66
14:AN:88:MET:HE3	14:AN:97:LYS:HD2	1.77	0.66
22:BA:789:A:OP1	22:BA:790:U:H5	1.77	0.66
4:AD:61:ARG:NH2	4:AD:67:LEU:HD23	2.10	0.66
19:CS:28:LYS:O	19:CS:30:LEU:HD12	1.93	0.66
26:BE:152:GLU:O	26:BE:153:LEU:HG	1.95	0.66
1:CA:1467:C:H2'	1:CA:1468:A:H8	1.59	0.66
48:B0:16:ARG:HG2	48:B0:19:ASP:OD1	1.95	0.66
22:BA:1842:G:H2'	22:BA:1843:C:C6	2.31	0.66
25:BD:182:ALA:C	25:BD:184:ARG:N	2.46	0.66
27:BF:169:LEU:HD12	27:BF:169:LEU:N	2.11	0.66
28:BG:163:TYR:O	28:BG:164:ALA:CB	2.42	0.66
5:AE:155:LYS:HD2	5:AE:156:ARG:N	2.10	0.66
22:DA:1815:A:H1'	22:DA:1817:G:N7	2.11	0.66
22:DA:2798:U:H5'	22:DA:2800:A:C5	2.30	0.66
22:DA:2346:A:C3'	22:DA:2347:C:H5''	2.12	0.66
48:D0:39:ARG:O	48:D0:40:HIS:HB2	1.94	0.66
22:DA:64:A:P	41:DT:77:ARG:HG2	2.35	0.66
46:DY:53:VAL:O	46:DY:57:LEU:HB2	1.95	0.66
24:BC:161:VAL:HG12	24:BC:161:VAL:O	1.94	0.66
51:B3:31:ILE:O	51:B3:35:LYS:HE3	1.95	0.66
39:BR:39:LEU:HA	39:BR:49:ILE:HG21	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DQ:93:ILE:O	38:DQ:96:ASP:HB3	1.95	0.66
21:CU:38:GLU:CA	21:CU:40:PRO:HD2	2.25	0.66
43:DV:69:GLU:OE1	43:DV:71:LYS:HG3	1.96	0.66
22:DA:529:A:C8	22:DA:2023:C:N4	2.63	0.66
10:CJ:52:LEU:HD21	10:CJ:59:LYS:HA	1.77	0.66
1:CA:543:U:O2'	1:CA:544:G:H5'	1.95	0.66
41:DT:50:LEU:CD2	41:DT:51:PHE:HD1	2.08	0.66
2:AB:116:LEU:HD12	2:AB:140:LEU:CD1	2.22	0.66
36:BO:105:ALA:O	36:BO:106:LEU:HB3	1.95	0.66
27:BF:7:TYR:HD2	27:BF:11:VAL:HG11	1.60	0.66
16:CP:1:MET:CA	16:CP:1:MET:CE	2.73	0.66
1:AA:1157:A:C5	1:AA:1180:A:C6	2.83	0.66
1:CA:120:A:O2'	1:CA:121:U:H4'	1.95	0.66
23:DB:38:C:H4'	36:DO:100:HIS:NE2	2.10	0.66
22:DA:158:U:H1'	22:DA:169:G:N2	2.10	0.66
22:DA:2900:A:C5	22:DA:2901:C:C5	2.84	0.66
1:AA:307:C:H5''	1:AA:308:C:OP2	1.95	0.66
42:BU:73:ASN:O	42:BU:75:ALA:N	2.27	0.66
1:CA:259:G:O2'	1:CA:260:G:H5'	1.95	0.66
26:BE:145:ASP:HB3	26:BE:184:ASP:HB2	1.76	0.66
22:DA:546:U:H5'	22:DA:547:A:OP1	1.95	0.66
19:CS:49:ALA:HB1	19:CS:56:HIS:HB3	1.75	0.66
37:BP:4:ILE:HG22	37:BP:5:LYS:H	1.59	0.66
5:AE:96:GLN:HE21	5:AE:97:PRO:HD2	1.60	0.66
33:BL:127:VAL:HG23	33:BL:131:ALA:CB	2.26	0.66
11:CK:40:ALA:O	11:CK:41:LEU:HD23	1.95	0.66
22:DA:2212:A:N7	22:DA:2214:C:N4	2.44	0.66
44:BW:19:ARG:HA	44:BW:34:SER:HA	1.78	0.66
18:CR:71:ASP:CB	21:CU:3:ILE:HD11	2.25	0.66
22:DA:2612:C:H5''	22:DA:2613:U:OP1	1.94	0.66
45:BX:38:TRP:HE1	45:BX:40:GLU:HB2	1.61	0.66
17:AQ:80:LYS:N	17:AQ:80:LYS:HD3	2.11	0.66
33:DL:116:VAL:HG13	33:DL:117:THR:H	1.60	0.66
22:BA:1603:A:OP1	56:BA:3411:HOH:O	2.13	0.66
41:BT:7:LEU:HD21	41:BT:42:GLU:OE2	1.95	0.66
27:DF:103:ILE:O	27:DF:103:ILE:HG22	1.95	0.66
27:DF:48:LEU:HG	27:DF:49:LEU:CD2	2.25	0.66
22:DA:1627:G:C2	22:DA:1628:G:N7	2.63	0.66
9:CI:59:LYS:HG2	9:CI:60:LEU:HG	1.76	0.66
1:CA:1295:U:H2'	1:CA:1296:C:H6	1.60	0.66
22:DA:672:C:H5'	22:DA:672:C:C6	2.28	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:120:ILE:CG1	28:DG:140:ILE:HG22	2.25	0.66
22:DA:2869:G:H2'	22:DA:2870:C:C6	2.30	0.66
24:BC:79:ARG:NH2	24:BC:92:LEU:CD2	2.58	0.66
3:AC:133:MET:HB3	3:AC:150:VAL:CG2	2.25	0.66
22:BA:26:G:H1'	22:BA:514:A:N6	2.10	0.66
45:DX:69:GLU:O	45:DX:70:LEU:HB2	1.95	0.66
22:BA:1820:U:C2	24:BC:200:MET:HG3	2.31	0.66
4:AD:160:LEU:HD22	4:AD:160:LEU:N	2.10	0.66
22:BA:2573:C:OP1	56:BA:3710:HOH:O	2.13	0.66
1:AA:1063:C:H2'	1:AA:1064:G:C8	2.31	0.66
22:DA:30:G:H2'	22:DA:31:C:O4'	1.95	0.66
22:BA:1681:G:O2'	22:BA:1762:A:H1'	1.96	0.66
13:CM:28:ARG:O	13:CM:28:ARG:HD2	1.94	0.66
22:BA:1045:C:C3'	22:BA:1046:A:H5'	2.25	0.66
22:DA:955:U:OP1	34:DM:86:LYS:HE3	1.95	0.66
1:AA:633:G:H2'	1:AA:634:C:H6	1.60	0.66
33:BL:99:ASN:OD1	56:BL:202:HOH:O	2.12	0.66
37:BP:50:ARG:HH21	37:BP:51:ASN:HA	1.59	0.66
22:BA:995:C:C6	22:BA:995:C:H5'	2.30	0.66
34:BM:36:VAL:HG12	34:BM:127:LYS:O	1.96	0.66
27:BF:35:LEU:HD23	27:BF:153:ILE:CG2	2.25	0.66
26:DE:109:LEU:O	26:DE:112:LEU:HB3	1.96	0.66
22:DA:1071:G:O2'	22:DA:1072:C:H5'	1.94	0.66
42:DU:96:LYS:O	42:DU:97:SER:HB3	1.95	0.66
17:AQ:18:LYS:C	17:AQ:47:ASP:OD2	2.34	0.66
17:AQ:55:GLY:HA3	17:AQ:82:VAL:HG11	1.76	0.66
4:AD:84:ASN:HD22	4:AD:87:GLU:HG2	1.60	0.66
11:AK:22:ILE:HG13	11:AK:22:ILE:O	1.93	0.66
29:BH:96:THR:HG23	29:BH:96:THR:O	1.95	0.66
1:CA:149:A:C2	1:CA:150:U:C2	2.84	0.66
22:DA:2199:A:C4	22:DA:2200:C:C6	2.84	0.66
40:BS:4:ILE:HG22	40:BS:106:VAL:HG13	1.76	0.66
22:DA:2414:G:H2'	22:DA:2415:G:H5'	1.78	0.66
22:DA:946:C:O2'	22:DA:947:A:H8	1.73	0.66
20:CT:60:GLN:CB	20:CT:65:LEU:HD12	2.23	0.66
23:DB:7:G:O2'	36:DO:27:VAL:HG11	1.95	0.66
22:BA:2540:C:H2'	22:BA:2541:A:C5'	2.25	0.66
35:DN:73:ASN:O	35:DN:76:VAL:HG22	1.95	0.66
33:DL:23:ILE:HD12	33:DL:23:ILE:N	2.10	0.66
17:AQ:45:VAL:HG21	17:AQ:60:ILE:HD11	1.77	0.66
20:AT:24:ARG:O	20:AT:28:ARG:HG2	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:224:U:H2'	22:BA:225:C:O5'	1.94	0.66
22:DA:424:G:O2'	22:DA:425:G:H5'	1.96	0.66
44:BW:9:THR:CG2	44:BW:10:ARG:HH11	2.09	0.66
32:BK:88:ASN:HD22	32:BK:90:ASN:H	1.44	0.66
22:BA:1416:G:O2'	22:BA:1417:C:O5'	2.14	0.66
1:CA:464:U:O4	1:CA:466:A:H4'	1.95	0.66
22:DA:1586:A:H2'	22:DA:1587:G:H8	1.60	0.66
22:DA:518:G:H2'	22:DA:519:U:C6	2.31	0.66
36:DO:94:ARG:HD2	36:DO:97:PHE:O	1.96	0.66
13:AM:88:LEU:HD23	13:AM:91:ARG:HH21	1.61	0.66
3:AC:144:GLY:O	3:AC:145:ALA:HB3	1.96	0.66
22:BA:706:A:OP1	24:BC:6:LYS:HE3	1.96	0.66
1:CA:1285:A:O2'	1:CA:1286:U:H5'	1.96	0.66
22:DA:781:A:C5'	22:DA:782:A:OP1	2.44	0.66
35:DN:97:ILE:HG13	35:DN:98:LEU:H	1.60	0.66
12:CL:89:LEU:O	12:CL:92:VAL:HG23	1.96	0.66
22:DA:108:G:H2'	22:DA:109:C:H6	1.59	0.66
41:DT:69:ARG:O	41:DT:74:ILE:HD12	1.95	0.66
22:DA:455:C:H42	22:DA:473:G:H5'	1.60	0.66
1:CA:1160:G:O6	1:CA:1181:G:O6	2.13	0.66
49:B1:35:LEU:O	49:B1:35:LEU:HD23	1.96	0.66
1:AA:203:G:HO2'	1:AA:466:A:H2	1.43	0.66
1:CA:1518:A:C2	1:CA:1519:A:C2	2.83	0.66
22:BA:1712:U:C2	22:BA:1713:A:N7	2.63	0.66
29:BH:32:PRO:CB	45:BX:38:TRP:HB3	2.17	0.66
1:CA:596:A:N6	1:CA:645:G:N1	2.43	0.66
4:AD:59:LYS:O	4:AD:63:ILE:HG22	1.96	0.66
22:DA:2714:G:H8	22:DA:2714:G:O5'	1.77	0.66
41:BT:48:GLN:NE2	41:BT:48:GLN:HA	2.08	0.66
5:CE:14:LEU:HD13	5:CE:36:THR:CG2	2.25	0.66
22:DA:2686:G:H2'	22:DA:2687:U:C6	2.31	0.66
29:BH:134:VAL:CG2	29:BH:139:PHE:HA	2.26	0.66
22:DA:2632:A:O2'	22:DA:2633:G:H5'	1.96	0.66
1:CA:15:G:H2'	1:CA:16:A:H8	1.60	0.66
1:CA:246:A:C2	1:CA:279:A:N6	2.64	0.66
22:DA:2296:U:H5	36:DO:9:ARG:NH2	1.94	0.66
17:AQ:7:LEU:HD23	17:AQ:24:ILE:HD11	1.78	0.66
9:AI:128:LYS:HD2	9:AI:129:ARG:N	2.09	0.66
22:DA:1716:U:O2'	22:DA:1717:A:C8	2.47	0.66
1:AA:243:A:H4'	1:AA:244:U:H5''	1.77	0.66
22:BA:2199:A:H3'	22:BA:2200:C:H6	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:181:ASP:CB	25:DD:183:GLU:OE2	2.44	0.66
3:CC:76:ILE:HD11	3:CC:102:ILE:HD11	1.77	0.66
22:DA:2466:C:C2'	22:DA:2467:C:H5'	2.25	0.66
1:CA:1430:A:H2'	1:CA:1431:A:O4'	1.94	0.66
31:BJ:36:LEU:HD21	31:BJ:122:LEU:HB2	1.78	0.66
29:DH:72:ILE:HD11	29:DH:141:LYS:H	1.61	0.66
22:BA:1636:U:P	56:BA:3647:HOH:O	2.53	0.66
18:CR:25:ILE:HA	18:CR:28:LEU:HB2	1.78	0.66
22:BA:364:C:H2'	22:BA:365:U:C6	2.30	0.66
22:BA:1474:U:H2'	22:BA:1475:G:H5'	1.77	0.66
27:BF:161:SER:OG	27:BF:164:GLU:HG3	1.96	0.66
4:AD:106:PHE:CD1	4:AD:144:ILE:HD11	2.31	0.66
22:DA:7:G:H2'	22:DA:8:C:O4'	1.95	0.66
14:CN:25:GLU:HA	14:CN:28:ALA:HB2	1.78	0.66
38:BQ:63:ARG:NH1	38:BQ:98:ALA:HB3	2.09	0.66
5:AE:120:HIS:O	5:AE:121:ASN:CB	2.44	0.66
5:AE:148:SER:HB2	5:AE:151:MET:HB2	1.78	0.66
5:AE:153:ALA:N	5:AE:156:ARG:HB2	2.10	0.66
33:BL:94:THR:CG2	33:BL:95:LEU:N	2.58	0.66
28:BG:155:PRO:O	28:BG:170:THR:HA	1.94	0.66
26:DE:105:LEU:HB3	26:DE:200:LEU:HD11	1.78	0.66
22:DA:727:A:C2'	22:DA:728:G:C8	2.79	0.66
22:DA:1071:G:N7	22:DA:1089:A:C5	2.64	0.66
22:DA:1210:G:C5'	22:DA:1211:C:H3'	2.26	0.66
46:DY:1:MET:HG2	46:DY:4:LYS:HZ1	1.61	0.66
28:BG:93:TYR:CD2	28:BG:106:LEU:HA	2.30	0.66
1:CA:951:G:O2'	1:CA:952:U:H5'	1.95	0.66
47:DZ:6:ILE:HD12	47:DZ:47:ILE:CD1	2.25	0.66
22:DA:2734:A:C2'	22:DA:2735:G:H5'	2.26	0.66
36:BO:28:VAL:HG23	36:BO:106:LEU:HD21	1.78	0.66
5:CE:59:ILE:O	5:CE:59:ILE:HG13	1.95	0.66
22:DA:2876:G:H4'	37:DP:2:ASN:HD21	1.60	0.66
1:CA:183:C:O2'	1:CA:184:G:C5'	2.43	0.66
1:CA:197:A:C6	1:CA:221:C:H4'	2.30	0.66
1:AA:1160:G:N2	1:AA:1161:C:C2	2.64	0.66
8:AH:88:LYS:HA	8:AH:91:LEU:CD1	2.26	0.66
1:AA:451:A:H1'	1:AA:452:A:N7	2.10	0.66
1:CA:729:A:C4	1:CA:730:G:C8	2.84	0.66
22:BA:2636:C:H2'	22:BA:2637:U:H6	1.57	0.66
22:DA:2259:U:O4'	22:DA:2427:C:H2'	1.95	0.66
22:DA:2552:U:C2	22:DA:2554:U:C5'	2.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2771:C:H2'	22:DA:2772:C:C6	2.30	0.66
22:BA:1734:G:C4	22:BA:1735:A:N7	2.64	0.66
22:DA:352:A:C4	22:DA:353:C:H1'	2.30	0.66
4:CD:101:VAL:HB	4:CD:113:ALA:HB1	1.78	0.66
22:DA:1516:G:C2'	22:DA:1517:G:H5'	2.25	0.66
22:DA:2519:U:H1'	22:DA:2520:C:H5	1.59	0.66
25:BD:69:ALA:HA	25:BD:73:VAL:CG1	2.26	0.66
15:AO:69:LEU:HD21	15:AO:76:ARG:HB2	1.78	0.66
22:BA:1386:C:H2'	22:BA:1387:A:C8	2.30	0.66
22:DA:836:G:C5	22:DA:837:C:C4	2.84	0.66
2:CB:212:TYR:HD2	2:CB:212:TYR:O	1.79	0.66
18:AR:56:ARG:O	18:AR:60:ARG:HB2	1.95	0.66
22:BA:2025:C:OP2	56:BA:3475:HOH:O	2.13	0.66
1:AA:105:G:H2'	1:AA:106:C:C6	2.31	0.66
1:CA:910:C:H2'	1:CA:911:U:C6	2.30	0.66
2:AB:74:ALA:O	2:AB:75:ALA:CB	2.44	0.66
22:DA:41:C:H2'	22:DA:42:A:C8	2.30	0.66
22:DA:1421:G:H8	22:DA:1421:G:OP2	1.78	0.66
36:DO:12:THR:HG23	36:DO:16:ARG:HH11	1.61	0.66
33:BL:87:GLY:O	33:BL:89:VAL:N	2.29	0.66
1:AA:443:C:O2'	1:AA:444:G:H5'	1.96	0.66
22:BA:1080:A:O2'	30:BI:126:ARG:HG2	1.96	0.66
22:DA:1055:G:H3'	22:DA:1056:G:H5'	1.77	0.66
35:DN:114:GLU:HG2	35:DN:115:LEU:N	2.11	0.66
22:DA:73:A:H8	22:DA:73:A:O5'	1.79	0.66
22:DA:84:A:OP2	22:DA:84:A:H8	1.79	0.66
22:DA:60:G:H1	22:DA:89:A:H62	1.44	0.66
22:DA:125:A:H5''	50:D2:19:ARG:HB2	1.78	0.66
22:DA:468:G:H5''	26:DE:55:SER:CB	2.25	0.66
52:D4:19:ARG:HH12	52:D4:26:ILE:CG1	2.09	0.66
45:DX:58:ILE:HG12	45:DX:66:VAL:HG11	1.78	0.66
22:DA:192:C:C2'	22:DA:193:U:H5'	2.26	0.66
22:DA:249:C:H4'	22:DA:250:G:O5'	1.95	0.66
22:DA:1288:G:N3	22:DA:1288:G:H2'	2.11	0.66
41:BT:39:THR:O	41:BT:40:LYS:HB2	1.95	0.66
1:CA:170:U:HO2'	1:CA:171:A:H5'	1.60	0.66
25:DD:137:SER:C	25:DD:138:LEU:HD22	2.16	0.66
22:DA:2788:C:H2'	22:DA:2789:C:C6	2.31	0.66
5:AE:55:VAL:N	5:AE:56:PRO:HD2	2.10	0.66
1:AA:1151:A:O2'	1:AA:1152:A:C5'	2.44	0.66
1:AA:452:A:H2'	1:AA:453:G:O4'	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:68:ARG:HH11	39:DR:90:ARG:HG2	1.59	0.66
22:DA:2849:U:O4	22:DA:2867:G:C8	2.48	0.66
1:AA:587:G:H4'	8:AH:3:GLN:HA	1.78	0.66
5:CE:24:VAL:HG23	5:CE:26:GLY:N	2.10	0.66
16:CP:48:GLU:CG	16:CP:51:ARG:HE	2.06	0.66
22:BA:726:G:O2'	22:BA:727:A:OP2	2.11	0.66
2:AB:65:LYS:HE2	2:AB:153:MET:HG2	1.77	0.66
1:CA:1329:A:H5''	13:CM:25:GLY:N	2.09	0.66
1:AA:338:A:N1	1:AA:351:G:O6	2.29	0.66
16:AP:44:SER:O	16:AP:46:LYS:HG3	1.96	0.66
36:BO:53:THR:HB	36:BO:65:THR:HG22	1.77	0.66
29:BH:78:VAL:HG11	29:BH:145:ASN:HB3	1.78	0.66
5:CE:105:ILE:O	5:CE:105:ILE:HG22	1.95	0.66
22:BA:869:G:O2'	34:BM:8:LYS:CD	2.44	0.66
21:AU:4:LYS:C	21:AU:4:LYS:HD2	2.17	0.66
50:D2:24:THR:CG2	50:D2:27:GLY:HA3	2.25	0.66
22:DA:24:G:C5	22:DA:25:U:C5	2.84	0.66
43:DV:59:GLU:HG2	43:DV:60:VAL:H	1.60	0.66
25:DD:208:LYS:O	25:DD:209:ALA:CB	2.43	0.66
2:AB:176:ASN:HD21	2:AB:194:GLY:HA3	1.60	0.66
22:DA:2107:G:H2'	22:DA:2108:A:C8	2.31	0.66
22:DA:2497:A:O2'	22:DA:2498:C:OP2	2.14	0.66
1:CA:585:G:O2'	1:CA:586:C:H5'	1.95	0.66
48:D0:28:SER:O	48:D0:36:LYS:HA	1.96	0.66
42:DU:94:PHE:HD2	42:DU:94:PHE:O	1.79	0.66
22:BA:2726:A:O2'	22:BA:2727:A:H5'	1.96	0.66
22:BA:1425:G:C2'	22:BA:1426:G:H5'	2.26	0.66
30:DI:83:ALA:HB2	30:DI:99:LYS:O	1.96	0.66
22:DA:1590:A:H2'	22:DA:1591:A:H8	1.61	0.66
22:BA:1073:A:C2'	22:BA:1074:G:C5'	2.61	0.66
5:AE:123:LEU:H	5:AE:123:LEU:HD12	1.61	0.66
1:CA:1127:G:O2'	1:CA:1128:C:C5'	2.44	0.66
22:DA:1387:A:C4	22:DA:1388:G:N7	2.63	0.66
22:DA:1652:A:H62	35:DN:11:ASN:HD21	1.44	0.66
35:DN:96:ARG:CG	35:DN:98:LEU:HD13	2.25	0.66
22:DA:457:A:N1	22:DA:470:A:H5''	2.11	0.66
1:CA:1087:G:O2'	1:CA:1088:G:H5'	1.96	0.66
34:DM:17:ASN:O	34:DM:18:ARG:HG2	1.96	0.66
1:CA:1405:G:H1'	1:CA:1518:A:O2'	1.95	0.66
1:CA:796:C:O2'	1:CA:797:C:H5'	1.96	0.66
31:DJ:74:TYR:OH	31:DJ:100:VAL:HG13	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2038:G:H2'	22:DA:2039:U:O4'	1.96	0.66
22:DA:2076:U:H5''	22:DA:2238:G:H22	1.59	0.66
26:BE:175:ILE:HG23	26:BE:175:ILE:O	1.96	0.66
38:BQ:4:LYS:CG	38:BQ:5:ARG:N	2.53	0.66
4:AD:57:LYS:HG2	4:AD:202:LEU:HD23	1.77	0.66
5:CE:76:ASN:O	5:CE:77:ASN:CB	2.44	0.66
27:DF:39:VAL:CG2	27:DF:49:LEU:HG	2.25	0.66
12:AL:81:ILE:HD11	12:AL:94:TYR:CG	2.30	0.66
22:DA:663:G:O6	22:DA:664:G:C6	2.48	0.66
23:DB:109:A:O2'	23:DB:110:C:H6	1.77	0.66
40:BS:21:ALA:HB1	40:BS:74:ILE:HD13	1.77	0.66
25:DD:107:VAL:H	25:DD:206:ALA:H	1.43	0.66
22:DA:618:G:N2	22:DA:619:G:C1'	2.59	0.66
22:DA:962:G:H2'	22:DA:963:U:H6	1.60	0.66
22:DA:2742:G:O2'	22:DA:2743:U:H5'	1.95	0.66
2:CB:184:ALA:HB3	2:CB:195:VAL:HG21	1.78	0.66
22:DA:1268:A:C2	22:DA:1269:A:H1'	2.30	0.66
23:DB:38:C:O2'	23:DB:39:A:H5'	1.96	0.66
22:DA:1455:G:HO2'	22:DA:1456:G:H8	1.44	0.66
14:AN:29:ILE:HG23	14:AN:34:ASN:HD21	1.59	0.66
22:DA:2458:G:H4'	22:DA:2459:A:OP1	1.96	0.66
44:BW:8:SER:O	44:BW:9:THR:HG22	1.96	0.66
15:CO:24:THR:HG23	15:CO:65:LEU:CD2	2.26	0.66
40:BS:24:ILE:HG12	40:BS:36:LEU:HD11	1.78	0.66
36:BO:62:LEU:HD23	36:BO:70:ALA:HA	1.78	0.66
3:AC:137:VAL:HG22	3:AC:148:ILE:HD13	1.78	0.66
1:AA:232:G:C2'	1:AA:233:C:H5'	2.26	0.66
22:BA:1435:G:O2'	22:BA:1436:G:H5'	1.95	0.66
38:BQ:26:ALA:HB1	38:BQ:30:VAL:HG23	1.77	0.66
6:AF:8:PHE:CE1	6:AF:21:MET:CE	2.78	0.66
16:AP:56:ARG:NH1	16:AP:59:HIS:CD2	2.64	0.66
30:BI:42:ASN:HA	30:BI:45:THR:HB	1.78	0.66
25:DD:12:THR:HG23	25:DD:13:ARG:H	1.61	0.66
33:BL:78:ARG:HB3	33:BL:113:ALA:HB3	1.77	0.66
22:BA:1267:U:O3'	56:BA:3380:HOH:O	2.13	0.66
1:CA:708:C:O2'	1:CA:709:U:H5'	1.95	0.66
22:DA:2638:G:O2'	22:DA:2639:A:H8	1.79	0.66
22:DA:662:G:H4'	33:DL:15:ALA:O	1.96	0.66
5:AE:81:GLN:OE1	5:AE:149:PRO:HD3	1.95	0.65
22:BA:2491:U:H5''	22:BA:2570:G:H5''	1.79	0.65
9:CI:17:ARG:NH1	9:CI:65:THR:HG21	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:518:C:H4'	1:CA:519:C:C5'	2.26	0.65
41:BT:29:THR:CA	41:BT:86:THR:HA	2.22	0.65
44:BW:17:ALA:O	44:BW:18:LYS:HB3	1.96	0.65
22:BA:856:G:H1'	44:BW:23:LYS:CB	2.26	0.65
32:DK:11:ALA:CB	32:DK:64:ARG:NH1	2.59	0.65
37:DP:20:ARG:HD2	37:DP:21:PRO:CD	2.11	0.65
1:AA:523:A:H61	12:AL:88:ASP:CG	1.99	0.65
2:AB:221:ARG:CZ	2:AB:221:ARG:HB3	2.25	0.65
23:DB:57:A:N6	27:DF:25:MET:HG2	2.10	0.65
1:AA:1316:G:H5''	1:AA:1317:C:OP2	1.96	0.65
1:CA:1288:A:O2'	1:CA:1289:A:C8	2.37	0.65
22:DA:963:U:O2'	22:DA:964:C:H5'	1.96	0.65
22:BA:2152:G:O2'	22:BA:2153:C:C5'	2.43	0.65
1:AA:826:C:H5'	8:AH:12:ARG:HH21	1.61	0.65
11:CK:81:LEU:O	11:CK:81:LEU:HD22	1.95	0.65
22:BA:215:G:C4'	22:BA:216:A:H4'	2.27	0.65
20:AT:54:GLN:N	20:AT:55:PRO:HD2	2.11	0.65
1:AA:345:C:H3'	37:BP:33:GLU:OE1	1.96	0.65
22:BA:2791:G:H8	22:BA:2791:G:H5''	1.61	0.65
34:DM:4:PRO:HD3	34:DM:68:PHE:HE2	1.62	0.65
22:BA:1738:G:HO2'	22:BA:1739:A:H8	1.44	0.65
22:DA:1545:A:C2'	22:DA:1546:G:H5'	2.26	0.65
34:BM:132:THR:HG22	34:BM:133:LYS:N	2.10	0.65
30:DI:102:ARG:HG2	30:DI:141:ASP:O	1.96	0.65
3:AC:122:GLN:HB3	3:AC:127:VAL:HG21	1.78	0.65
7:AG:90:VAL:HG23	7:AG:94:ARG:HD3	1.79	0.65
23:BB:7:G:O2'	36:BO:38:GLN:NE2	2.29	0.65
22:DA:2400:G:H2'	22:DA:2401:U:O4'	1.96	0.65
24:BC:166:ARG:CG	24:BC:166:ARG:O	2.44	0.65
22:BA:1079:C:C4	22:BA:1088:A:C2	2.84	0.65
22:BA:1071:G:H1'	22:BA:1089:A:C5	2.31	0.65
27:BF:129:MET:HE3	27:BF:153:ILE:HD11	1.77	0.65
22:DA:952:G:H21	22:DA:2267:A:H2	1.44	0.65
22:DA:302:C:HO2'	22:DA:303:G:H8	0.76	0.65
22:DA:329:G:H4'	22:DA:330:A:OP1	1.96	0.65
42:DU:81:ARG:HB3	42:DU:96:LYS:HZ3	1.59	0.65
42:DU:9:GLU:OE1	42:DU:23:LYS:HA	1.96	0.65
22:DA:2392:A:C8	22:DA:2429:G:C2	2.84	0.65
22:DA:511:U:H5''	22:DA:1235:G:H4'	1.78	0.65
1:CA:994:A:N6	1:CA:1216:A:H5'	2.11	0.65
33:DL:116:VAL:HG13	33:DL:117:THR:N	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1142:G:C2'	1:AA:1143:G:O4'	2.44	0.65
2:CB:206:ILE:CA	2:CB:209:VAL:HG22	2.20	0.65
41:DT:29:THR:CB	41:DT:87:LEU:H	2.05	0.65
14:AN:5:MET:HA	14:AN:8:ARG:HD2	1.79	0.65
1:CA:154:U:C2'	1:CA:155:A:H5'	2.23	0.65
34:BM:12:MET:CE	34:BM:71:LYS:HG3	2.26	0.65
22:DA:185:G:C6	22:DA:212:G:C2	2.84	0.65
1:AA:49:U:O4	1:AA:365:U:C5	2.43	0.65
9:AI:24:ASN:H	9:AI:61:ASP:HB2	1.61	0.65
22:BA:2801:G:O2'	22:BA:2802:G:H5'	1.96	0.65
11:CK:106:ILE:O	11:CK:106:ILE:HG12	1.95	0.65
36:BO:58:ILE:O	36:BO:59:ALA:CB	2.44	0.65
28:BG:148:ARG:HD2	28:BG:163:TYR:CE2	2.30	0.65
22:BA:2292:U:H2'	22:BA:2293:G:C8	2.31	0.65
22:DA:2537:U:H2'	22:DA:2538:C:C6	2.31	0.65
47:DZ:13:ILE:HG22	47:DZ:14:GLY:N	2.10	0.65
1:CA:1339:A:H2'	1:CA:1340:A:O4'	1.96	0.65
19:AS:48:ILE:HD12	19:AS:48:ILE:O	1.96	0.65
27:BF:13:LYS:O	27:BF:17:THR:HG23	1.95	0.65
22:BA:2704:C:H5''	22:BA:2705:A:OP2	1.96	0.65
22:BA:1059:G:O2'	30:BI:128:ILE:HD13	1.96	0.65
45:BX:30:PRO:O	45:BX:32:LEU:HD13	1.96	0.65
33:BL:100:ILE:HD12	33:BL:101:ILE:HD13	1.77	0.65
33:BL:93:ASN:HD22	33:BL:94:THR:H	1.43	0.65
43:BV:80:HIS:CD2	43:BV:82:TYR:H	2.15	0.65
41:DT:5:GLU:HA	41:DT:8:LEU:HD12	1.78	0.65
16:CP:52:LEU:HD21	16:CP:75:ILE:HG12	1.78	0.65
2:AB:40:ILE:O	2:AB:41:ASN:HB2	1.96	0.65
30:DI:74:PRO:O	30:DI:78:LEU:HG	1.95	0.65
1:CA:535:A:H4'	1:CA:536:C:OP1	1.90	0.65
1:CA:532:A:C8	3:CC:192:TYR:CE2	2.84	0.65
22:DA:321:U:O4'	26:DE:159:LEU:HG	1.96	0.65
22:DA:1205:A:N7	26:DE:165:HIS:CG	2.65	0.65
32:BK:18:ARG:NH1	32:BK:18:ARG:HG3	2.11	0.65
50:D2:34:ARG:HB3	50:D2:42:LEU:HD11	1.79	0.65
45:BX:58:ILE:HD12	45:BX:66:VAL:CG2	2.16	0.65
32:DK:118:LEU:O	32:DK:120:PRO:CD	2.44	0.65
44:BW:28:GLU:CA	44:BW:28:GLU:OE2	2.43	0.65
17:AQ:66:LEU:O	17:AQ:67:SER:HB3	1.96	0.65
22:DA:1255:U:H3'	22:DA:1256:G:H5''	1.79	0.65
2:AB:130:LYS:NZ	2:AB:133:ALA:HB2	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2686:G:H2'	22:DA:2687:U:H6	1.61	0.65
22:BA:1941:C:C5'	22:BA:1941:C:H6	2.06	0.65
23:DB:111:U:O2'	23:DB:112:G:C8	2.49	0.65
22:BA:990:A:H8	22:BA:990:A:C5'	2.02	0.65
22:DA:1304:A:O2'	22:DA:1305:C:C6	2.48	0.65
1:CA:1304:G:C1'	1:CA:1333:A:H61	2.09	0.65
51:D3:41:ARG:NH2	51:D3:41:ARG:HG3	2.07	0.65
14:CN:87:ALA:HB2	14:CN:92:ILE:HD12	1.79	0.65
1:CA:457:G:N3	1:CA:457:G:H2'	2.10	0.65
1:CA:1501:C:N4	1:CA:1504:G:C2	2.64	0.65
22:DA:1671:U:O2	22:DA:1673:G:C8	2.49	0.65
35:DN:7:GLY:H	35:DN:46:ARG:HH12	1.44	0.65
22:BA:475:C:C4	22:BA:481:G:O6	2.49	0.65
22:BA:289:G:H2'	22:BA:290:U:O4'	1.96	0.65
15:CO:42:PHE:HB3	15:CO:52:ARG:NH2	2.10	0.65
22:BA:1842:G:O4'	24:BC:242:HIS:CE1	2.49	0.65
22:BA:1680:U:H2'	22:BA:1681:G:O4'	1.96	0.65
22:BA:2476:A:C2'	22:BA:2477:U:H5'	2.26	0.65
22:BA:2671:G:C2'	22:BA:2672:U:H5'	2.26	0.65
22:BA:2080:A:H5'	45:BX:18:SER:CB	2.26	0.65
37:BP:28:LYS:HE3	37:BP:82:SER:OG	1.97	0.65
24:DC:156:SER:HB3	24:DC:159:THR:CG2	2.27	0.65
22:DA:1313:U:O2'	22:DA:1314:C:H5'	1.96	0.65
22:DA:2290:G:H4'	22:DA:2381:A:O2'	1.96	0.65
35:DN:94:TYR:N	35:DN:94:TYR:CD1	2.63	0.65
9:AI:56:MET:CE	9:AI:57:VAL:H	2.10	0.65
12:CL:64:SER:HB2	12:CL:81:ILE:HD11	1.77	0.65
22:DA:296:U:C2	22:DA:297:G:C8	2.84	0.65
22:DA:119:A:H5'	22:DA:120:U:OP1	1.97	0.65
22:DA:1425:G:H2'	22:DA:1426:G:O4'	1.96	0.65
22:DA:2217:G:O2'	22:DA:2218:G:O4'	2.15	0.65
1:AA:469:C:O2'	1:AA:470:C:H5'	1.97	0.65
44:BW:18:LYS:N	44:BW:36:ILE:HG12	2.12	0.65
43:DV:4:ILE:HB	43:DV:63:ILE:HG13	1.77	0.65
22:DA:1324:G:H1'	22:DA:1616:A:H61	1.59	0.65
22:DA:1327:A:H2'	22:DA:1328:A:H8	1.59	0.65
20:AT:34:VAL:CG1	20:AT:78:LEU:HD22	2.25	0.65
22:DA:620:G:H4'	22:DA:621:A:O5'	1.95	0.65
1:CA:763:G:H2'	1:CA:764:C:H6	1.60	0.65
2:CB:79:VAL:HA	2:CB:213:LEU:CD2	2.25	0.65
41:BT:54:GLU:OE1	41:BT:88:LYS:HG3	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:114:LYS:CD	25:DD:116:LYS:NZ	2.58	0.65
22:DA:594:U:H2'	22:DA:595:C:C6	2.32	0.65
1:CA:249:U:C2	1:CA:276:G:N1	2.64	0.65
1:AA:1069:C:H2'	1:AA:1070:U:C5'	2.25	0.65
22:BA:1644:C:C2'	22:BA:1645:G:H5'	2.26	0.65
26:BE:112:LEU:HD13	26:BE:186:VAL:CG1	2.26	0.65
13:CM:77:LYS:O	13:CM:77:LYS:HD3	1.96	0.65
47:BZ:40:THR:HG23	47:BZ:43:ILE:H	1.62	0.65
1:CA:1195:C:H5''	1:CA:1196:A:OP2	1.95	0.65
22:DA:2142:A:C3'	22:DA:2143:C:H4'	2.26	0.65
37:BP:92:ARG:HB2	37:BP:92:ARG:HH11	1.61	0.65
13:CM:2:ARG:HA	13:CM:7:ASN:O	1.95	0.65
29:BH:78:VAL:HG21	29:BH:145:ASN:HD22	1.61	0.65
49:D1:20:TYR:HE2	49:D1:37:LYS:HZ2	1.44	0.65
1:CA:130:A:O4'	17:CQ:64:ARG:HD3	1.96	0.65
22:BA:617:G:C2'	22:BA:618:G:H5'	2.27	0.65
29:BH:108:VAL:HG12	29:BH:109:GLU:H	1.62	0.65
3:AC:41:TYR:OH	3:AC:89:VAL:HG21	1.96	0.65
37:BP:13:LYS:HE3	37:BP:75:THR:O	1.97	0.65
22:BA:1071:G:H1'	22:BA:1089:A:C8	2.32	0.65
22:BA:1059:G:H1'	30:BI:127:SER:HB2	1.78	0.65
1:CA:482:A:H2'	1:CA:483:C:H6	1.59	0.65
51:D3:33:THR:CG2	51:D3:34:LYS:N	2.59	0.65
1:CA:518:C:H2'	1:CA:530:G:C8	2.31	0.65
45:DX:6:VAL:CG1	45:DX:50:VAL:HG12	2.26	0.65
44:BW:49:ASN:ND2	44:BW:49:ASN:C	2.49	0.65
6:CF:59:TYR:HE2	18:CR:66:LEU:HD21	1.59	0.65
44:BW:28:GLU:HG3	44:BW:29:SER:N	2.11	0.65
22:DA:1282:U:H2'	22:DA:1283:G:O4'	1.97	0.65
22:DA:1287:A:O2'	22:DA:1288:G:H5'	1.96	0.65
22:DA:506:G:H4'	22:DA:507:A:H5'	1.76	0.65
1:AA:486:U:H2'	1:AA:487:A:H5'	1.79	0.65
1:CA:1225:A:H5'	13:CM:101:THR:HG23	1.77	0.65
26:DE:34:ALA:HB1	26:DE:94:GLN:HB2	1.77	0.65
33:DL:85:VAL:O	33:DL:85:VAL:HG22	1.97	0.65
22:DA:2584:U:H2'	22:DA:2585:U:H5'	1.78	0.65
5:CE:95:MET:CE	5:CE:143:LEU:HD21	2.27	0.65
6:AF:38:ARG:HG3	6:AF:39:LEU:H	1.58	0.65
22:DA:489:G:C5	22:DA:491:G:C5	2.85	0.65
23:DB:18:G:C6	23:DB:67:G:O6	2.50	0.65
22:DA:1655:A:H2'	22:DA:1656:C:H6	1.58	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:389:G:C8	22:DA:2413:G:H4'	2.31	0.65
1:AA:1319:A:H2'	1:AA:1323:G:N7	2.12	0.65
1:CA:1349:A:H2'	1:CA:1350:A:C8	2.31	0.65
1:AA:1367:C:H5'	10:AJ:62:ARG:NH1	2.10	0.65
22:BA:548:G:H3'	22:BA:548:G:H8	1.61	0.65
29:DH:9:VAL:CG1	29:DH:10:ALA:N	2.59	0.65
1:AA:275:G:H2'	1:AA:276:G:C8	2.29	0.65
28:DG:112:VAL:CG1	28:DG:114:HIS:HB3	2.27	0.65
17:CQ:25:GLU:HG3	17:CQ:40:THR:CG2	2.25	0.65
1:AA:1025:U:C5'	1:AA:1026:G:H5'	2.26	0.65
1:AA:754:C:O2	1:AA:754:C:H5''	1.96	0.65
22:DA:1956:U:O2	22:DA:1985:C:H4'	1.96	0.65
7:AG:24:LYS:O	7:AG:28:ILE:HG12	1.96	0.65
22:BA:915:C:H5''	22:BA:915:C:C6	2.30	0.65
28:DG:8:VAL:HG22	28:DG:72:ASN:HB2	1.79	0.65
1:AA:322:C:O2'	20:AT:17:ARG:HG2	1.94	0.65
22:BA:63:A:H5'	22:BA:63:A:H8	1.60	0.65
7:AG:146:ALA:C	7:AG:148:LYS:H	1.99	0.65
15:CO:2:LEU:HD13	15:CO:34:GLN:HE21	1.60	0.65
37:DP:102:ARG:HD2	37:DP:106:ALA:C	2.16	0.65
22:DA:2620:C:O4'	25:DD:161:MET:HG3	1.97	0.65
22:DA:980:A:C4	22:DA:1136:G:O4'	2.50	0.65
30:DI:89:SER:HB3	30:DI:97:VAL:HG11	1.78	0.65
1:AA:1084:G:C5	1:AA:1085:U:C4	2.84	0.65
31:BJ:44:TYR:C	31:BJ:44:TYR:HD1	1.98	0.65
12:CL:42:LYS:HD2	12:CL:43:LYS:CG	2.25	0.65
22:DA:1798:U:C5	24:DC:270:ARG:NH1	2.65	0.65
24:DC:145:MET:CE	24:DC:181:ARG:HH22	2.08	0.65
22:DA:2800:A:H2'	22:DA:2801:G:O4'	1.97	0.65
1:CA:1125:U:C2	1:CA:1127:G:N7	2.64	0.65
1:CA:533:A:C2	1:CA:536:C:C5	2.84	0.65
22:DA:305:C:C2	22:DA:313:G:C2	2.84	0.65
1:CA:1072:G:H2'	1:CA:1073:U:H6	1.61	0.65
1:CA:429:U:H1'	1:CA:430:A:C5'	2.26	0.65
1:CA:1380:U:O4	7:CG:2:ARG:HB2	1.95	0.65
33:DL:103:ILE:H	33:DL:103:ILE:CD1	1.89	0.65
41:DT:29:THR:HA	41:DT:87:LEU:HB2	1.78	0.65
27:DF:101:ARG:O	27:DF:106:ALA:HB3	1.96	0.65
1:AA:1319:A:C8	1:AA:1323:G:C6	2.85	0.65
25:DD:106:LYS:O	25:DD:107:VAL:HB	1.97	0.65
2:CB:89:PHE:HE2	2:CB:152:ASP:CB	2.04	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BY:26:PHE:HD2	46:BY:29:ARG:HH11	1.45	0.65
35:BN:1:MET:O	35:BN:2:ARG:CB	2.45	0.65
15:CO:38:LEU:HD12	15:CO:41:HIS:HB3	1.77	0.65
27:DF:31:GLU:O	27:DF:95:MET:HE2	1.97	0.65
1:AA:160:A:H1'	1:AA:344:A:C2	2.32	0.65
2:AB:19:THR:HB	2:AB:37:VAL:HB	1.78	0.65
22:DA:532:A:H4'	22:DA:533:G:C8	2.32	0.65
1:AA:1087:G:O2'	1:AA:1088:G:H5'	1.97	0.65
36:DO:74:VAL:HB	36:DO:106:LEU:HD13	1.77	0.65
22:BA:580:U:H2'	22:BA:581:C:H6	1.61	0.65
22:DA:1317:G:C6	22:DA:1318:U:N3	2.65	0.65
22:BA:2492:U:H2'	22:BA:2493:U:H6	1.61	0.65
22:DA:443:A:N6	26:DE:36:ALA:HB1	2.11	0.65
50:D2:24:THR:HG23	50:D2:27:GLY:HA3	1.79	0.65
1:AA:9:G:O2'	1:AA:10:A:H5'	1.97	0.65
27:BF:142:TYR:O	27:BF:145:VAL:HG22	1.97	0.65
1:CA:861:G:O2'	1:CA:862:C:H5'	1.97	0.65
49:B1:16:THR:CG2	49:B1:41:VAL:CG2	2.75	0.65
1:AA:129:A:O2'	1:AA:130:A:H5''	1.97	0.65
1:AA:137:U:O2	1:AA:137:U:H2'	1.97	0.65
49:B1:3:GLY:O	49:B1:5:ARG:N	2.24	0.65
22:BA:404:A:H1'	22:BA:405:U:OP2	1.96	0.65
1:AA:1027:C:O5'	1:AA:1027:C:H6	1.79	0.65
39:DR:24:LYS:HA	39:DR:94:THR:HG23	1.77	0.65
45:BX:50:VAL:CG1	45:BX:51:SER:N	2.60	0.65
12:CL:42:LYS:HG2	12:CL:43:LYS:HG2	1.79	0.65
8:AH:45:ILE:HA	8:AH:63:LYS:HG3	1.79	0.65
41:DT:11:LEU:HD11	41:DT:46:ALA:HB1	1.77	0.65
27:BF:129:MET:CG	27:BF:153:ILE:CD1	2.74	0.65
22:DA:1826:G:P	24:DC:220:ARG:HB3	2.37	0.65
22:DA:1827:U:H2'	22:DA:1828:G:O4'	1.97	0.65
1:AA:1254:A:OP1	10:AJ:47:GLU:HG2	1.97	0.65
26:DE:126:VAL:HG22	26:DE:127:GLU:H	1.62	0.65
46:DY:25:GLN:HA	46:DY:28:LEU:HB3	1.79	0.65
22:DA:36:G:H4'	22:DA:451:U:C2	2.31	0.65
1:AA:204:G:C1'	1:AA:465:A:C2	2.80	0.65
32:DK:21:CYS:HA	32:DK:41:ILE:CD1	2.26	0.65
31:DJ:74:TYR:CE2	31:DJ:103:ILE:HD11	2.30	0.65
45:BX:38:TRP:CB	45:BX:45:PHE:HE2	2.05	0.65
22:DA:481:G:O2'	22:DA:482:A:OP2	2.13	0.65
1:CA:1343:G:H4'	9:CI:123:ARG:O	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:79:SER:HB2	14:CN:81:ILE:CD1	2.26	0.65
1:AA:619:U:C2	4:AD:131:ILE:HD11	2.32	0.65
9:CI:63:TYR:C	9:CI:64:ILE:HD12	2.17	0.65
1:CA:251:G:H21	1:CA:253:A:N6	1.95	0.65
38:DQ:50:ARG:N	38:DQ:50:ARG:HD2	2.10	0.65
1:CA:14:U:O2	1:CA:16:A:C8	2.49	0.65
1:CA:18:C:C2	1:CA:19:A:C8	2.85	0.65
18:AR:62:ARG:HB3	18:AR:69:TYR:CE2	2.31	0.65
1:AA:1095:U:O2'	1:AA:1096:C:H5'	1.96	0.65
22:DA:1754:A:N6	22:DA:1755:A:C6	2.65	0.65
34:BM:114:ARG:HA	34:BM:130:PHE:CE1	2.31	0.65
29:DH:41:LYS:HA	29:DH:44:ILE:CG2	2.27	0.65
41:BT:73:ARG:HB3	41:BT:73:ARG:CZ	2.25	0.65
1:AA:1517:G:N3	22:BA:1919:A:O2'	2.29	0.65
10:AJ:49:PHE:CE1	14:AN:76:PHE:HZ	2.14	0.65
22:DA:1417:C:H4'	22:DA:1587:G:H21	1.61	0.65
22:BA:2315:G:O2'	22:BA:2316:G:H5'	1.97	0.65
50:B2:18:PHE:O	50:B2:22:MET:HB2	1.96	0.65
3:AC:152:VAL:O	3:AC:152:VAL:HG23	1.95	0.65
22:DA:1854:A:O4'	22:DA:2233:U:H4'	1.97	0.65
22:BA:1153:C:OP2	56:BA:3358:HOH:O	2.13	0.65
22:BA:1059:G:H5''	22:BA:1060:U:H3'	1.79	0.65
1:CA:1147:C:H4'	9:CI:6:TYR:CE1	2.32	0.65
41:DT:10:VAL:HG23	41:DT:11:LEU:N	2.10	0.65
1:CA:537:G:C5'	12:CL:109:ARG:HH12	2.08	0.65
42:DU:6:ARG:HG2	42:DU:7:ASP:N	2.12	0.65
31:DJ:45:THR:HG23	31:DJ:45:THR:O	1.96	0.65
38:DQ:91:ARG:CD	39:DR:11:GLN:HG3	2.27	0.65
38:DQ:91:ARG:NH2	38:DQ:93:ILE:HD13	2.12	0.65
22:DA:2056:G:N2	22:DA:2057:G:C8	2.64	0.65
38:DQ:6:GLY:C	38:DQ:8:ILE:H	1.98	0.65
1:CA:1221:G:H4'	19:CS:35:ARG:HH21	1.60	0.65
23:DB:30:C:C2'	23:DB:31:C:H5'	2.25	0.65
1:CA:132:C:O2'	1:CA:133:U:C5'	2.44	0.65
1:AA:1367:C:C5'	10:AJ:62:ARG:NH1	2.60	0.65
41:BT:50:LEU:O	41:BT:51:PHE:HB2	1.96	0.65
18:AR:63:TYR:CD1	18:AR:69:TYR:OH	2.50	0.65
29:DH:12:LEU:O	29:DH:12:LEU:HD12	1.96	0.65
22:DA:2626:C:H2'	22:DA:2627:G:H5'	1.76	0.65
26:DE:73:ILE:HG12	26:DE:73:ILE:O	1.97	0.65
2:AB:132:GLU:HG3	2:AB:132:GLU:O	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:48:LYS:N	39:DR:48:LYS:HD2	2.10	0.65
22:BA:638:G:H2'	22:BA:639:U:C6	2.32	0.65
32:BK:76:VAL:HB	37:BP:72:VAL:CG2	2.26	0.65
1:CA:8:A:C6	4:CD:205:LYS:HG3	2.32	0.65
42:BU:48:VAL:O	42:BU:53:GLN:HB3	1.97	0.65
31:DJ:94:ALA:O	31:DJ:95:ARG:HB3	1.97	0.65
1:CA:801:U:O2'	1:CA:802:A:H5'	1.97	0.65
22:DA:1751:U:H2'	22:DA:1752:C:H6	1.61	0.65
24:BC:39:SER:O	24:BC:41:GLY:N	2.30	0.65
37:DP:113:LEU:HD23	37:DP:113:LEU:C	2.17	0.65
32:BK:35:VAL:HG12	32:BK:36:GLY:N	2.10	0.65
1:AA:39:G:H2'	1:AA:40:C:H6	1.60	0.65
22:BA:2654:A:H4'	22:BA:2655:G:OP1	1.97	0.65
33:BL:93:ASN:C	33:BL:93:ASN:HD22	2.00	0.65
28:BG:132:LEU:CD1	28:BG:143:VAL:HG12	2.27	0.65
22:DA:1401:G:C2'	22:DA:1402:U:H6	2.07	0.65
27:BF:129:MET:CG	27:BF:153:ILE:HD11	2.26	0.65
16:AP:20:VAL:CG2	16:AP:32:PHE:HB2	2.27	0.65
22:DA:1787:A:N3	22:DA:1787:A:H2'	2.11	0.65
22:DA:1087:G:H1'	22:DA:1089:A:H1'	1.79	0.65
22:DA:322:A:C2	22:DA:340:A:C6	2.84	0.65
1:CA:1090:U:H2'	1:CA:1091:U:H6	1.62	0.65
22:DA:527:C:C5	22:DA:2779:U:C5	2.85	0.65
45:BX:46:VAL:HG21	45:BX:67:LEU:HD11	1.77	0.65
22:DA:2079:U:C2	22:DA:2242:G:N2	2.65	0.65
44:BW:76:ARG:HG3	44:BW:76:ARG:NH2	1.92	0.65
22:BA:1498:C:O2'	22:BA:1499:C:H5'	1.97	0.65
22:DA:479:A:O2'	22:DA:481:G:H5'	1.97	0.65
38:BQ:4:LYS:CE	38:BQ:7:VAL:HG13	2.26	0.65
19:CS:54:ARG:HG2	19:CS:55:GLN:H	1.62	0.65
40:BS:1:MET:HE1	40:BS:2:GLU:H	1.62	0.65
11:AK:87:GLY:N	11:AK:113:THR:CG2	2.44	0.65
36:BO:106:LEU:O	36:BO:106:LEU:HD12	1.97	0.65
29:BH:131:SER:HB2	29:BH:139:PHE:HD2	1.61	0.65
27:BF:133:GLU:H	27:BF:150:GLY:HA3	1.62	0.65
27:BF:37:MET:HE3	27:BF:151:LEU:HB3	1.79	0.65
1:AA:437:U:H4'	4:AD:153:ARG:NH2	2.12	0.65
35:BN:33:ILE:HG12	35:BN:118:ARG:CZ	2.27	0.65
25:BD:94:GLN:O	25:BD:95:SER:HB2	1.96	0.65
22:BA:1510:G:H8	22:BA:1510:G:H5'	1.59	0.65
2:AB:110:ILE:HD12	2:AB:147:LEU:HD13	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:204:SER:HB2	5:CE:105:ILE:CD1	2.26	0.65
32:DK:80:ASP:HB2	37:DP:67:GLU:OE1	1.97	0.65
10:AJ:33:GLY:O	10:AJ:34:ALA:HB2	1.97	0.65
26:DE:6:LYS:HB2	26:DE:121:VAL:HG12	1.78	0.65
2:AB:63:LYS:HD3	2:AB:63:LYS:O	1.96	0.65
1:CA:176:C:H2'	1:CA:177:G:O5'	1.96	0.65
1:AA:1111:A:O2'	1:AA:1112:C:H5'	1.96	0.65
17:CQ:78:VAL:HG12	17:CQ:79:GLU:H	1.61	0.65
1:CA:1017:U:OP2	1:CA:1017:U:H6	1.80	0.65
25:BD:8:LYS:HB2	25:BD:201:LEU:HD21	1.79	0.65
31:BJ:44:TYR:CE2	38:BQ:63:ARG:HD3	2.30	0.65
1:CA:1254:A:H2'	1:CA:1255:G:H8	1.60	0.65
10:CJ:77:VAL:O	10:CJ:79:PRO:HD3	1.96	0.65
1:CA:374:A:H5''	1:CA:452:A:C2	2.32	0.65
22:DA:1827:U:O4'	22:DA:1970:A:O2'	2.14	0.65
22:DA:1079:C:O2'	22:DA:1080:A:H8	1.80	0.65
42:DU:81:ARG:HB2	42:DU:96:LYS:CG	2.27	0.65
45:DX:29:LEU:HB2	45:DX:30:PRO:CD	2.26	0.65
1:CA:1493:A:H3'	22:DA:1913:A:H62	1.62	0.65
22:BA:923:G:N2	44:BW:23:LYS:HZ3	1.93	0.65
10:AJ:26:VAL:HG12	10:AJ:30:LYS:HE2	1.78	0.65
22:DA:2393:U:C2'	22:DA:2394:C:H5'	2.26	0.65
22:DA:1290:C:C2	22:DA:1291:C:C5	2.84	0.65
1:CA:1319:A:H5''	19:CS:4:LEU:HD11	1.76	0.65
19:CS:68:HIS:HB3	19:CS:72:GLU:HG3	1.78	0.65
4:AD:47:LEU:HD23	4:AD:47:LEU:O	1.97	0.65
22:DA:600:G:H5''	26:DE:27:LEU:HD22	1.78	0.65
2:AB:134:LEU:HD12	2:AB:137:THR:OG1	1.96	0.65
1:CA:1346:A:C8	1:CA:1348:U:N3	2.65	0.65
29:DH:80:ILE:CB	29:DH:101:ASP:CB	2.72	0.65
1:AA:965:U:C4'	1:AA:969:A:C8	2.77	0.65
8:AH:9:MET:CE	8:AH:32:LYS:HG2	2.27	0.65
42:DU:60:LYS:N	42:DU:60:LYS:HD2	2.12	0.65
1:AA:1068:G:O2'	1:AA:1069:C:H5'	1.96	0.65
22:DA:813:U:H2'	22:DA:814:C:C6	2.31	0.65
12:AL:4:ASN:ND2	12:AL:8:ARG:HH12	1.94	0.65
22:BA:1414:C:C5	22:BA:1415:U:H5	2.14	0.65
12:AL:79:ILE:HD12	12:AL:96:THR:CG2	2.25	0.65
5:CE:65:LYS:HZ2	5:CE:68:ARG:HD3	1.60	0.65
7:CG:110:ARG:HG3	7:CG:111:GLY:N	2.12	0.65
3:AC:133:MET:HB3	3:AC:150:VAL:HG21	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:747:U:C4	22:BA:2613:U:C5	2.85	0.65
2:AB:20:ARG:O	2:AB:22:TRP:HB3	1.97	0.65
22:BA:686:U:H2'	22:BA:788:A:N1	2.12	0.65
40:BS:37:THR:HB	40:BS:38:TYR:CD1	2.32	0.65
6:CF:98:GLU:O	6:CF:99:ALA:CB	2.45	0.65
1:AA:327:A:O2'	1:AA:329:A:H5''	1.96	0.65
22:DA:1512:C:O2'	22:DA:1513:U:C5'	2.44	0.65
48:D0:4:GLN:HG2	48:D0:4:GLN:O	1.95	0.65
1:CA:1406:U:H2'	1:CA:1407:C:H5'	1.79	0.65
6:AF:66:ALA:HB1	6:AF:67:PRO:HD2	1.79	0.65
37:BP:52:ARG:H	37:BP:56:SER:HB3	1.62	0.64
25:BD:114:LYS:HE3	25:BD:114:LYS:H	1.52	0.64
5:AE:158:LYS:HE2	8:AH:63:LYS:NZ	2.12	0.64
22:DA:859:G:N2	22:DA:916:G:O2'	2.30	0.64
22:DA:860:U:O2'	22:DA:861:A:H8	1.71	0.64
22:DA:922:C:H1'	44:DW:22:VAL:CG2	2.21	0.64
44:DW:23:LYS:HD2	44:DW:24:ARG:HB2	1.79	0.64
48:D0:37:HIS:CB	48:D0:43:THR:HG22	2.25	0.64
22:DA:2837:A:H2'	22:DA:2838:G:C8	2.32	0.64
22:DA:91:A:O2'	22:DA:92:U:C5'	2.44	0.64
22:DA:397:U:HO2'	22:DA:398:C:H6	1.44	0.64
41:BT:28:ASN:HA	41:BT:91:GLN:NE2	2.12	0.64
38:DQ:96:ASP:O	38:DQ:99:VAL:HG23	1.97	0.64
22:BA:2331:G:O2'	22:BA:2336:A:N1	2.28	0.64
10:CJ:10:LEU:HD23	10:CJ:98:VAL:HG22	1.78	0.64
22:DA:1431:A:C2	22:DA:1432:G:C4	2.85	0.64
5:CE:131:ASN:HD22	5:CE:132:PRO:CD	2.10	0.64
6:AF:42:TRP:HZ2	6:AF:61:LEU:HD22	1.62	0.64
1:CA:198:G:O6	1:CA:220:G:C4	2.50	0.64
22:DA:492:A:N1	40:DS:49:LYS:HE2	2.11	0.64
23:DB:112:G:H2'	23:DB:113:C:C6	2.33	0.64
22:DA:1301:A:C4	22:DA:1303:G:N7	2.64	0.64
22:DA:1127:A:O2'	22:DA:1128:G:C5'	2.45	0.64
13:CM:13:HIS:CB	13:CM:16:ILE:HD13	2.23	0.64
13:CM:18:LEU:HA	13:CM:21:ILE:HD11	1.79	0.64
29:BH:27:ARG:NH1	29:BH:38:PRO:HG3	2.12	0.64
12:CL:6:LEU:C	12:CL:8:ARG:H	2.01	0.64
1:AA:1346:A:H61	1:AA:1374:A:H3'	1.62	0.64
15:CO:47:LYS:N	15:CO:47:LYS:HD2	2.11	0.64
24:BC:20:ASN:C	24:BC:20:ASN:ND2	2.50	0.64
44:BW:9:THR:HG23	44:BW:10:ARG:N	2.10	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2339:C:H2'	22:BA:2340:A:C8	2.32	0.64
22:BA:309:A:O3'	42:BU:15:GLY:HA2	1.98	0.64
31:DJ:51:GLY:C	31:DJ:121:LYS:HE3	2.17	0.64
22:BA:503:A:H4'	22:BA:504:A:O5'	1.98	0.64
26:BE:61:ARG:HH11	26:BE:64:GLY:HA3	1.62	0.64
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.32	0.64
2:AB:71:THR:HG21	2:AB:94:ARG:HD3	1.77	0.64
22:DA:1480:C:H2'	22:DA:1481:U:O4'	1.96	0.64
22:DA:2188:U:H2'	22:DA:2189:U:C6	2.32	0.64
45:DX:65:THR:O	45:DX:68:ALA:HB3	1.97	0.64
43:BV:39:ALA:C	43:BV:40:ILE:HD13	2.17	0.64
3:CC:111:ASP:HB3	3:CC:114:LEU:HB2	1.79	0.64
2:CB:221:ARG:HA	2:CB:224:ARG:CZ	2.28	0.64
31:BJ:44:TYR:CD2	38:BQ:63:ARG:HG2	2.33	0.64
22:DA:2800:A:H2'	22:DA:2801:G:C4'	2.28	0.64
10:CJ:37:ARG:HB3	10:CJ:74:VAL:O	1.97	0.64
46:DY:5:GLU:O	46:DY:6:LEU:HG	1.96	0.64
22:DA:117:G:N1	22:DA:119:A:N6	2.45	0.64
22:DA:1420:A:C4	22:DA:2211:A:N7	2.64	0.64
22:DA:2756:U:H1'	22:DA:2757:A:C5'	2.26	0.64
22:BA:1190:G:H5''	33:BL:32:GLY:HA2	1.79	0.64
22:DA:481:G:H1'	22:DA:506:G:N2	2.10	0.64
22:BA:1654:A:H1'	25:BD:118:PHE:CE1	2.31	0.64
51:D3:41:ARG:HD2	51:D3:41:ARG:O	1.97	0.64
2:CB:90:PHE:HE1	2:CB:92:ASN:ND2	1.95	0.64
29:BH:44:ILE:O	29:BH:48:GLU:HB2	1.97	0.64
22:DA:404:A:H4'	22:DA:405:U:H5'	1.79	0.64
28:DG:112:VAL:HG12	28:DG:114:HIS:HB3	1.77	0.64
1:AA:221:C:C2'	1:AA:222:C:H5'	2.26	0.64
47:BZ:6:ILE:O	47:BZ:35:VAL:HG12	1.97	0.64
22:BA:1510:G:O2'	22:BA:1511:G:H5'	1.96	0.64
28:DG:84:LYS:O	28:DG:85:LYS:HB3	1.96	0.64
22:DA:2261:C:H42	44:DW:10:ARG:HB3	1.60	0.64
1:CA:1168:U:C2'	1:CA:1168:U:O2	2.45	0.64
1:CA:106:C:O2	1:CA:379:C:H4'	1.97	0.64
9:AI:100:ALA:HB1	9:AI:102:PHE:CZ	2.32	0.64
22:DA:2566:A:O2'	22:DA:2567:G:OP2	2.14	0.64
1:CA:158:G:C5	1:CA:164:G:C6	2.86	0.64
22:DA:2508:G:N2	22:DA:2582:G:C6	2.66	0.64
26:DE:122:GLU:O	26:DE:123:LYS:HB3	1.97	0.64
1:CA:677:U:H3	1:CA:713:G:H22	1.44	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:662:U:H2'	1:AA:663:A:C8	2.31	0.64
43:BV:26:PHE:HB2	43:BV:27:PRO:CD	2.28	0.64
29:BH:75:LEU:HD23	29:BH:143:ILE:HG23	1.79	0.64
1:AA:421:U:H3'	1:AA:421:U:H6	1.61	0.64
1:CA:1230:C:H5''	1:CA:1230:C:H6	1.62	0.64
17:AQ:31:PRO:HB2	17:AQ:32:ILE:HD12	1.79	0.64
23:DB:71:C:C2'	23:DB:72:G:H5'	2.27	0.64
25:DD:100:LEU:HD13	25:DD:100:LEU:O	1.96	0.64
24:DC:86:ARG:HD2	24:DC:90:ILE:HD11	1.79	0.64
22:DA:1343:G:O2'	22:DA:1344:U:C6	2.49	0.64
46:DY:22:LEU:CD1	46:DY:23:ARG:NH1	2.60	0.64
1:CA:373:A:N3	1:CA:374:A:C8	2.65	0.64
22:DA:1090:A:C3'	22:DA:1091:G:H5''	2.27	0.64
9:AI:57:VAL:O	9:AI:58:GLU:HG2	1.97	0.64
42:DU:81:ARG:HB2	42:DU:96:LYS:CD	2.27	0.64
22:DA:1359:A:C2	22:DA:1360:G:C1'	2.79	0.64
22:DA:1537:G:H2'	22:DA:1538:G:C4'	2.24	0.64
31:DJ:103:ILE:HD12	31:DJ:103:ILE:O	1.97	0.64
24:BC:203:VAL:O	24:BC:204:LEU:HB2	1.96	0.64
40:DS:31:GLN:O	40:DS:35:ILE:HG12	1.97	0.64
1:CA:962:C:H42	1:CA:974:A:H61	1.41	0.64
1:CA:994:A:N3	1:CA:995:C:C6	2.65	0.64
31:DJ:27:ARG:O	31:DJ:30:THR:HG22	1.96	0.64
24:BC:245:THR:HB	24:BC:247:TRP:CE3	2.33	0.64
32:DK:2:ILE:O	32:DK:3:GLN:CB	2.45	0.64
8:AH:10:LEU:HD11	8:AH:126:CYS:CB	2.27	0.64
1:CA:268:U:H2'	1:CA:269:C:H6	1.57	0.64
9:AI:98:ARG:HG2	9:AI:103:VAL:CG2	2.23	0.64
22:DA:839:U:H2'	22:DA:840:C:C6	2.32	0.64
22:DA:973:A:H5'	22:DA:974:G:OP2	1.98	0.64
42:DU:47:PRO:CB	42:DU:54:PRO:HG3	2.22	0.64
1:AA:528:C:H5''	1:AA:528:C:H6	1.63	0.64
9:CI:53:LEU:O	9:CI:54:VAL:HG13	1.97	0.64
22:DA:2788:C:H2'	22:DA:2789:C:H6	1.61	0.64
43:DV:56:PHE:C	43:DV:58:SER:H	2.00	0.64
10:AJ:41:PRO:O	10:AJ:42:LEU:HB2	1.97	0.64
22:DA:404:A:H5'	22:DA:405:U:OP1	1.97	0.64
3:CC:133:MET:CE	3:CC:152:VAL:HG13	2.27	0.64
22:DA:2461:A:H1'	22:DA:2492:U:C2	2.32	0.64
2:AB:108:GLN:HE21	2:AB:108:GLN:N	1.95	0.64
2:CB:119:GLN:CG	2:CB:124:THR:HG21	2.28	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:16:PHE:CZ	16:CP:38:PHE:HD1	2.15	0.64
22:BA:646:U:C3'	22:BA:647:G:H5''	2.27	0.64
22:DA:2151:U:O2'	22:DA:2152:G:O4'	2.14	0.64
14:AN:88:MET:HE1	14:AN:97:LYS:HD2	1.79	0.64
21:AU:41:THR:O	21:AU:45:LYS:HB2	1.97	0.64
22:DA:716:A:C3'	22:DA:717:C:H5''	2.28	0.64
31:BJ:32:LEU:O	31:BJ:36:LEU:HB2	1.97	0.64
23:BB:24:G:N7	23:BB:56:G:H2'	2.13	0.64
20:CT:57:VAL:CG1	20:CT:71:ALA:CB	2.76	0.64
22:DA:1213:A:H2'	22:DA:1214:A:H8	1.63	0.64
1:CA:892:A:C5	1:CA:893:C:C5	2.86	0.64
25:BD:48:ILE:HG23	25:BD:84:LEU:HD21	1.78	0.64
1:AA:408:A:C2	1:AA:435:A:C2	2.85	0.64
1:AA:430:A:C4	1:AA:431:A:C8	2.85	0.64
16:CP:6:LEU:HB2	16:CP:17:TYR:HB3	1.78	0.64
1:AA:462:G:H3'	1:AA:463:U:C6	2.32	0.64
31:DJ:44:TYR:CD1	38:DQ:63:ARG:NH2	2.64	0.64
28:BG:8:VAL:HG12	28:BG:9:VAL:H	1.61	0.64
44:BW:23:LYS:HD2	44:BW:24:ARG:CB	2.27	0.64
21:CU:16:ARG:CD	21:CU:19:LYS:HG2	2.28	0.64
22:BA:2352:A:N1	44:BW:30:VAL:HG21	2.11	0.64
38:DQ:4:LYS:CD	38:DQ:7:VAL:HG22	2.27	0.64
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.33	0.64
33:DL:79:LEU:HD22	33:DL:115:GLU:O	1.98	0.64
33:DL:89:VAL:HG23	33:DL:121:THR:CG2	2.26	0.64
3:AC:54:ILE:HD12	3:AC:54:ILE:C	2.17	0.64
22:BA:1654:A:O2'	25:BD:118:PHE:CD1	2.48	0.64
9:CI:61:ASP:C	9:CI:62:LEU:HD22	2.18	0.64
22:DA:1663:G:C6	22:DA:1998:A:N6	2.65	0.64
29:BH:132:PHE:CG	29:BH:133:GLN:N	2.65	0.64
25:DD:119:ALA:CB	25:DD:163:GLY:H	2.09	0.64
7:CG:4:ARG:NE	7:CG:6:ILE:HG22	2.13	0.64
6:CF:70:VAL:O	6:CF:73:GLU:HB2	1.98	0.64
1:CA:121:U:H3'	1:CA:121:U:OP1	1.97	0.64
22:DA:231:A:O2'	22:DA:232:G:H5'	1.96	0.64
1:CA:282:A:H2'	1:CA:283:U:H6	1.61	0.64
27:DF:30:VAL:HA	27:DF:157:THR:HG22	1.79	0.64
10:CJ:30:LYS:CE	10:CJ:36:VAL:HG22	2.27	0.64
26:DE:61:ARG:HE	26:DE:65:THR:HB	1.61	0.64
28:BG:60:GLY:O	28:BG:61:TRP:CB	2.45	0.64
1:CA:440:C:H2'	1:CA:441:A:H5'	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2142:A:C2'	22:DA:2143:C:H4'	2.28	0.64
6:AF:3:HIS:CB	6:AF:92:THR:HG23	2.27	0.64
1:CA:1264:U:H2'	1:CA:1265:C:H6	1.63	0.64
38:BQ:81:GLY:CA	38:BQ:116:LEU:CD1	2.74	0.64
22:DA:716:A:C2'	22:DA:717:C:H5'	2.27	0.64
22:BA:1820:U:C2	24:BC:200:MET:CG	2.80	0.64
4:AD:61:ARG:HH21	4:AD:67:LEU:HA	1.62	0.64
26:BE:150:THR:HG23	26:BE:153:LEU:H	1.62	0.64
22:BA:485:C:H2'	22:BA:486:C:C6	2.32	0.64
28:BG:148:ARG:HA	28:BG:161:VAL:CG1	2.27	0.64
22:BA:1269:A:OP2	56:BA:3383:HOH:O	2.14	0.64
34:BM:21:ALA:CB	34:BM:100:LYS:N	2.60	0.64
1:AA:52:C:O2'	1:AA:53:A:H5'	1.97	0.64
22:BA:1556:C:C2'	22:BA:1557:C:H5'	2.28	0.64
1:CA:1190:G:O2'	1:CA:1191:A:P	2.56	0.64
1:AA:531:U:H4'	1:AA:532:A:O5'	1.98	0.64
25:BD:53:GLY:HA3	25:BD:77:ARG:HB2	1.79	0.64
22:DA:1680:U:H2'	22:DA:1681:G:O4'	1.97	0.64
41:DT:34:VAL:HG21	41:DT:83:ALA:HB2	1.77	0.64
22:DA:2331:G:N1	22:DA:2385:C:C4	2.66	0.64
22:DA:395:U:O2'	22:DA:396:G:H8	1.81	0.64
22:DA:46:G:N2	22:DA:47:C:C2	2.65	0.64
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.32	0.64
49:B1:49:LYS:HG2	49:B1:50:GLU:H	1.62	0.64
21:CU:33:ARG:HH12	21:CU:34:ARG:HD3	1.63	0.64
21:CU:38:GLU:H	21:CU:40:PRO:HD2	1.59	0.64
22:DA:2023:C:H4'	22:DA:2617:U:O3'	1.96	0.64
22:DA:193:U:C2'	22:DA:194:G:H5'	2.28	0.64
22:BA:1499:C:H2'	22:BA:1500:G:H8	1.62	0.64
35:DN:51:LEU:HD23	35:DN:54:LEU:CD2	2.25	0.64
22:DA:2502:G:H5'	22:DA:2503:A:C5'	2.27	0.64
26:BE:7:ASP:O	26:BE:9:GLN:N	2.30	0.64
38:BQ:4:LYS:HZ3	38:BQ:8:ILE:HG23	1.62	0.64
33:DL:111:ILE:N	33:DL:111:ILE:HD13	2.13	0.64
25:DD:148:GLN:HG2	25:DD:152:PRO:CG	2.18	0.64
22:BA:1338:G:O2'	22:BA:1339:G:H5'	1.97	0.64
41:BT:1:MET:HB2	41:BT:2:ILE:HD13	1.78	0.64
22:DA:1735:A:C2	22:DA:1736:U:C2	2.85	0.64
32:BK:19:VAL:HG22	32:BK:41:ILE:CG1	2.26	0.64
22:BA:2197:U:O2'	22:BA:2198:A:C2'	2.44	0.64
28:DG:93:TYR:OH	28:DG:159:LYS:HE2	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1935:G:H1	22:BA:1962:C:H2'	1.62	0.64
25:BD:5:VAL:H	25:BD:32:ASN:ND2	1.91	0.64
3:AC:143:LEU:HD22	3:AC:143:LEU:H	1.62	0.64
17:CQ:45:VAL:HG11	17:CQ:60:ILE:CG2	2.27	0.64
22:DA:2443:C:C2	22:DA:2444:G:C8	2.86	0.64
46:BY:32:ALA:HA	46:BY:37:LEU:HB3	1.78	0.64
1:AA:914:A:C4	1:AA:915:A:C8	2.86	0.64
1:CA:495:A:C2	1:CA:496:A:C6	2.86	0.64
1:AA:1505:G:H5''	56:AA:1802:HOH:O	1.96	0.64
7:AG:21:LEU:HD21	7:AG:96:ASN:HD22	1.62	0.64
40:BS:24:ILE:HG23	40:BS:71:VAL:HG11	1.80	0.64
1:AA:601:G:H2'	1:AA:602:A:C8	2.32	0.64
1:AA:238:A:C2'	1:AA:239:U:H5'	2.27	0.64
25:BD:182:ALA:O	25:BD:184:ARG:N	2.31	0.64
3:AC:41:TYR:CZ	3:AC:89:VAL:HG21	2.32	0.64
22:BA:1539:U:H2'	22:BA:1540:G:H8	1.62	0.64
22:BA:2408:U:H2'	22:BA:2409:G:C8	2.33	0.64
30:DI:30:GLN:HG3	30:DI:31:GLY:H	1.62	0.64
22:BA:2134:A:N6	22:BA:2157:G:C5	2.65	0.64
22:BA:1937:A:H5'	56:BA:3464:HOH:O	1.97	0.64
1:AA:688:G:H2'	1:AA:689:C:H6	1.62	0.64
1:AA:903:G:C5	1:AA:904:U:C5	2.86	0.64
24:DC:80:LEU:HD12	24:DC:80:LEU:N	2.13	0.64
22:DA:2798:U:H5''	22:DA:2799:A:OP1	1.97	0.64
10:CJ:44:THR:HG22	10:CJ:45:ARG:H	1.63	0.64
22:DA:2270:A:H5'	44:DW:18:LYS:HG2	1.80	0.64
44:DW:23:LYS:HD2	44:DW:24:ARG:CA	2.27	0.64
46:DY:2:LYS:CD	46:DY:4:LYS:HE3	2.27	0.64
22:DA:449:A:C2'	22:DA:450:G:H5'	2.27	0.64
39:BR:49:ILE:HG13	39:BR:51:VAL:O	1.97	0.64
41:BT:86:THR:O	41:BT:87:LEU:HD23	1.97	0.64
38:DQ:87:VAL:CG1	39:DR:52:PRO:HG3	2.27	0.64
22:BA:2352:A:C3'	22:BA:2353:G:H5'	2.26	0.64
22:DA:2237:G:H5''	22:DA:2238:G:OP1	1.97	0.64
22:DA:391:A:H2'	22:DA:392:U:C6	2.32	0.64
22:DA:2729:G:O2'	22:DA:2730:C:H5'	1.98	0.64
22:DA:575:A:O2'	22:DA:576:U:H5'	1.98	0.64
32:DK:17:ARG:HG2	32:DK:18:ARG:N	2.13	0.64
35:DN:1:MET:O	35:DN:2:ARG:HB2	1.96	0.64
24:DC:144:GLU:HB3	24:DC:187:CYS:CB	2.28	0.64
32:BK:21:CYS:CA	32:BK:41:ILE:CD1	2.75	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1005:A:C4	1:CA:1006:G:H1'	2.33	0.64
52:B4:9:LYS:N	52:B4:9:LYS:CD	2.55	0.64
22:DA:375:G:H8	22:DA:375:G:H5''	1.61	0.64
22:BA:544:C:N3	22:BA:548:G:OP1	2.30	0.64
19:AS:28:LYS:HB3	19:AS:29:PRO:CD	2.27	0.64
1:AA:1348:U:H2'	1:AA:1349:A:H8	1.63	0.64
22:DA:416:U:H2'	22:DA:417:C:C6	2.32	0.64
17:AQ:45:VAL:CG2	17:AQ:60:ILE:HD13	2.28	0.64
28:DG:117:PRO:CG	28:DG:143:VAL:HG11	2.28	0.64
28:DG:164:ALA:O	28:DG:165:ASP:CB	2.45	0.64
22:DA:794:A:O2'	22:DA:795:C:H5'	1.97	0.64
11:AK:47:GLY:HA3	11:AK:52:ARG:HH11	1.62	0.64
1:AA:1468:A:H2'	1:AA:1469:C:C5'	2.28	0.64
22:BA:1416:G:O2'	22:BA:1417:C:H6	1.81	0.64
22:BA:1735:A:O2'	22:BA:1736:U:C5'	2.45	0.64
1:CA:1399:C:O2	1:CA:1401:G:C5	2.49	0.64
1:CA:124:C:O2'	1:CA:125:U:H5'	1.97	0.64
22:DA:1366:A:H2'	22:DA:1367:A:C8	2.33	0.64
11:CK:17:ASP:OD2	11:CK:80:ASN:HB2	1.98	0.64
3:CC:35:ASP:OD1	3:CC:56:ILE:HD12	1.98	0.64
23:BB:12:C:H4'	23:BB:13:G:OP1	1.97	0.64
22:DA:2466:C:OP1	52:D4:4:ARG:HB3	1.97	0.64
9:AI:37:TYR:CD2	9:AI:38:PHE:CD2	2.85	0.64
43:BV:41:GLU:C	43:BV:42:LEU:HD23	2.18	0.64
5:CE:129:SER:HA	56:CE:202:HOH:O	1.96	0.64
6:CF:79:ARG:HG2	6:CF:79:ARG:HH11	1.62	0.64
52:B4:13:ASN:H	52:B4:13:ASN:ND2	1.95	0.64
16:AP:7:ALA:O	16:AP:9:HIS:HD2	1.80	0.64
7:AG:105:GLU:O	7:AG:109:LYS:HG2	1.97	0.64
5:AE:136:VAL:O	5:AE:136:VAL:CG2	2.45	0.64
28:BG:132:LEU:HD23	28:BG:132:LEU:N	2.13	0.64
1:CA:1146:A:O2'	1:CA:1147:C:H5'	1.97	0.64
22:DA:1338:G:H4'	41:DT:18:GLU:CD	2.18	0.64
22:DA:1388:G:O2'	22:DA:1389:G:H5'	1.98	0.64
41:DT:48:GLN:HA	41:DT:48:GLN:HE21	1.63	0.64
1:AA:429:U:C1'	1:AA:430:A:H5''	2.28	0.64
22:DA:2815:C:H2'	22:DA:2816:G:H8	1.62	0.64
22:DA:79:C:N4	22:DA:107:G:H1	1.96	0.64
42:DU:3:LYS:HG2	42:DU:84:PHE:HZ	1.61	0.64
24:BC:91:ALA:HB3	24:BC:103:ILE:HG22	1.79	0.64
22:DA:1358:G:H2'	22:DA:1372:U:O4	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:111:ALA:O	4:CD:114:ARG:HB3	1.96	0.64
4:CD:39:GLN:C	4:CD:41:GLY:H	2.00	0.64
45:DX:52:ALA:O	45:DX:53:LYS:HB3	1.98	0.64
21:CU:33:ARG:NH1	21:CU:34:ARG:HD3	2.12	0.64
44:BW:19:ARG:NH2	44:BW:22:VAL:HG21	2.12	0.64
43:DV:75:GLN:CG	43:DV:92:VAL:HG11	2.28	0.64
21:CU:18:PHE:HB3	21:CU:19:LYS:NZ	2.13	0.64
44:BW:70:VAL:HG13	44:BW:70:VAL:O	1.96	0.64
1:AA:1239:A:H62	1:AA:1299:A:H61	1.41	0.64
1:AA:1240:U:H3	7:AG:29:LEU:CD2	2.10	0.64
26:BE:1:MET:HG2	26:BE:14:VAL:HG23	1.78	0.64
14:CN:80:ARG:HG2	14:CN:80:ARG:HH11	1.63	0.64
31:DJ:64:VAL:CG2	31:DJ:68:LYS:HG3	2.28	0.64
1:AA:842:U:H2'	1:AA:844:G:P	2.37	0.64
1:CA:70:U:H2'	1:CA:94:G:N7	2.12	0.64
27:BF:131:VAL:CG2	27:BF:151:LEU:CD1	2.75	0.64
22:DA:1304:A:O2'	22:DA:1305:C:H6	1.79	0.64
7:CG:88:VAL:HG22	7:CG:89:GLU:N	2.09	0.64
26:DE:119:ILE:HD11	26:DE:143:LEU:HD21	1.78	0.64
26:DE:60:TRP:O	26:DE:61:ARG:HB2	1.98	0.64
22:DA:1745:A:C2	22:DA:1746:A:C8	2.85	0.64
13:AM:3:ILE:HA	13:AM:56:ARG:CZ	2.27	0.64
2:CB:147:LEU:N	2:CB:147:LEU:HD12	2.13	0.64
1:AA:1469:C:H6	1:AA:1469:C:H3'	1.63	0.64
4:AD:172:VAL:O	4:AD:173:ASP:HB2	1.95	0.64
33:BL:68:SER:O	33:BL:69:ARG:HB2	1.97	0.64
9:CI:49:GLN:N	9:CI:50:PRO:CD	2.61	0.64
1:AA:605:U:H2'	1:AA:606:G:H8	1.62	0.64
1:CA:555:U:H2'	1:CA:556:C:C6	2.32	0.64
47:DZ:30:ARG:NH2	47:DZ:33:HIS:HB2	2.12	0.64
1:AA:1064:G:H4'	1:AA:1065:U:O5'	1.97	0.64
2:CB:66:ILE:HB	2:CB:88:GLN:HG2	1.79	0.64
22:DA:518:G:H2'	22:DA:519:U:H6	1.63	0.64
1:AA:137:U:H1'	1:AA:227:G:N2	2.13	0.64
1:AA:1121:U:O2'	1:AA:1122:U:H5'	1.98	0.64
26:DE:30:GLN:HG2	26:DE:30:GLN:O	1.97	0.64
22:BA:12:U:H2'	22:BA:12:U:O2	1.97	0.64
1:CA:695:A:H2'	1:CA:696:A:C8	2.33	0.64
22:BA:2847:U:H2'	22:BA:2848:G:H5'	1.80	0.64
22:DA:1062:G:O4'	22:DA:1088:A:N7	2.30	0.64
35:DN:14:SER:O	35:DN:16:HIS:N	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:87:VAL:O	38:BQ:88:GLU:CB	2.46	0.64
44:BW:28:GLU:CD	44:BW:29:SER:H	2.01	0.64
44:BW:30:VAL:HG23	44:BW:60:ALA:O	1.98	0.64
33:DL:62:PRO:O	51:D3:12:ARG:HB3	1.98	0.64
22:DA:199:A:O2'	22:DA:200:U:H5'	1.98	0.64
1:CA:961:U:OP1	1:CA:961:U:H3'	1.97	0.64
4:AD:60:VAL:HA	4:AD:63:ILE:CG2	2.27	0.64
22:BA:1654:A:H2'	22:BA:1655:A:H8	1.63	0.64
25:BD:121:THR:O	25:BD:122:VAL:HB	1.98	0.64
22:DA:391:A:H2'	22:DA:392:U:H6	1.63	0.64
33:DL:100:ILE:O	33:DL:101:ILE:CB	2.46	0.64
33:DL:98:ALA:O	33:DL:100:ILE:HG22	1.97	0.64
22:DA:2030:A:C2	22:DA:2499:C:H5''	2.33	0.64
22:BA:974:G:C8	22:BA:989:G:C2	2.86	0.64
22:DA:492:A:O2'	22:DA:493:G:H5'	1.98	0.64
22:DA:992:C:H4'	39:DR:74:ILE:CD1	2.28	0.64
22:DA:616:A:H4'	26:DE:101:TYR:CZ	2.33	0.64
1:CA:1449:C:O2'	1:CA:1450:U:C5'	2.45	0.64
22:BA:659:G:H21	26:BE:30:GLN:HE22	1.43	0.64
22:DA:1673:G:H2'	22:DA:1674:G:C5'	2.27	0.64
22:DA:2102:G:C2'	22:DA:2103:C:H5'	2.25	0.64
1:AA:914:A:H2'	1:AA:915:A:H8	1.61	0.64
14:AN:92:ILE:HG21	14:AN:95:LEU:CD2	2.27	0.64
37:DP:28:LYS:HB2	37:DP:28:LYS:HZ3	1.62	0.64
1:AA:637:C:H2'	1:AA:638:U:H5'	1.80	0.64
22:BA:503:A:H5'	22:BA:505:A:OP1	1.98	0.64
22:DA:642:U:H4'	22:DA:2349:G:O2'	1.97	0.64
3:CC:91:ALA:HB2	3:CC:98:ALA:HB3	1.79	0.64
51:B3:21:PHE:H	51:B3:48:MET:CE	2.11	0.64
39:BR:58:VAL:HG12	39:BR:102:SER:HB2	1.78	0.64
52:D4:9:LYS:HD3	52:D4:9:LYS:O	1.97	0.64
24:BC:83:ASP:OD1	24:BC:84:PRO:HD2	1.98	0.64
1:AA:1405:G:O4'	1:AA:1519:A:H4'	1.97	0.64
31:BJ:140:LEU:HD13	31:BJ:140:LEU:C	2.18	0.64
5:AE:79:THR:HB	5:AE:121:ASN:HD21	1.63	0.64
22:DA:2798:U:H5'	22:DA:2800:A:N6	2.13	0.64
10:CJ:39:PRO:HA	10:CJ:74:VAL:H	1.63	0.64
1:CA:369:G:H2'	1:CA:370:C:C6	2.33	0.64
22:DA:2324:U:HO2'	22:DA:2385:C:H5	1.46	0.64
22:DA:1373:A:H2'	22:DA:1374:G:O4'	1.98	0.64
22:DA:1915:U:O2'	22:DA:1916:A:C5'	2.46	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:174:SER:O	25:BD:175:LEU:CB	2.43	0.64
31:DJ:43:GLU:O	31:DJ:45:THR:HG22	1.98	0.64
39:DR:39:LEU:HD23	39:DR:39:LEU:N	2.13	0.64
1:AA:501:C:O2'	1:AA:502:A:C5'	2.45	0.64
21:AU:7:GLU:CB	21:AU:11:PHE:CE1	2.81	0.64
22:DA:2015:A:C6	48:D0:2:VAL:HG11	2.33	0.64
22:DA:189:G:C2'	22:DA:190:A:O5'	2.44	0.64
22:DA:503:A:C4'	22:DA:504:A:O5'	2.46	0.64
19:CS:35:ARG:NH2	19:CS:51:HIS:HD2	1.96	0.64
33:DL:110:VAL:C	33:DL:111:ILE:HD13	2.18	0.64
25:DD:9:VAL:O	37:DP:4:ILE:HD11	1.98	0.64
1:AA:864:A:H3'	1:AA:865:A:C8	2.33	0.64
22:DA:1430:G:H2'	22:DA:1431:A:H8	1.63	0.64
29:BH:68:ARG:NH2	29:BH:72:ILE:CG2	2.58	0.64
22:BA:1775:U:H2'	22:BA:1776:G:O5'	1.98	0.64
22:DA:412:A:N7	22:DA:2412:A:H1'	2.12	0.64
22:DA:1181:U:H2'	22:DA:1182:G:H8	1.63	0.64
22:DA:375:G:H5''	22:DA:375:G:C8	2.33	0.64
22:DA:1125:G:H4'	52:D4:37:GLN:HE21	1.62	0.64
13:CM:13:HIS:HB3	13:CM:16:ILE:CB	2.28	0.64
22:BA:37:C:O2'	22:BA:38:A:H5'	1.98	0.64
27:DF:90:LEU:HB3	27:DF:95:MET:HG3	1.80	0.64
27:DF:1:ALA:HB2	27:DF:93:GLU:O	1.98	0.64
26:DE:79:ARG:HG2	26:DE:80:SER:N	2.12	0.64
29:DH:41:LYS:CA	29:DH:44:ILE:HG23	2.28	0.64
37:DP:50:ARG:CB	37:DP:57:ALA:H	2.11	0.64
28:DG:162:ARG:H	28:DG:162:ARG:HD2	1.63	0.64
22:DA:2869:G:H2'	22:DA:2870:C:O4'	1.97	0.64
22:DA:866:A:O2'	22:DA:867:C:H6	1.81	0.64
46:BY:18:LEU:O	46:BY:22:LEU:CB	2.46	0.64
22:DA:2549:G:N2	22:DA:2560:A:C4	2.66	0.64
1:CA:687:A:C2	1:CA:704:A:C5	2.86	0.64
36:DO:115:LEU:H	36:DO:115:LEU:CD1	2.10	0.64
33:DL:73:ILE:O	33:DL:105:ILE:HG23	1.98	0.64
33:BL:66:PHE:C	33:BL:66:PHE:CD1	2.70	0.64
19:CS:10:ILE:N	19:CS:10:ILE:HD12	2.12	0.64
1:CA:337:G:H2'	1:CA:338:A:C8	2.33	0.64
4:AD:158:LEU:O	4:AD:161:ALA:HB3	1.98	0.64
15:CO:28:VAL:HG13	15:CO:62:ARG:HG3	1.80	0.64
22:BA:2728:U:O2'	22:BA:2729:G:C5'	2.46	0.64
7:CG:49:LEU:HD13	7:CG:49:LEU:O	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:7:LYS:O	31:BJ:11:VAL:HG23	1.98	0.64
22:BA:2266:A:H4'	22:BA:2267:A:O5'	1.98	0.64
25:BD:35:THR:OG1	25:BD:49:GLN:HG2	1.98	0.64
22:DA:1044:C:O2	22:DA:1044:C:H2'	1.97	0.64
31:BJ:43:GLU:O	31:BJ:45:THR:N	2.30	0.64
24:DC:23:LEU:HD21	24:DC:89:ASN:OD1	1.98	0.64
22:DA:2264:C:H2'	22:DA:2265:U:C6	2.33	0.64
22:DA:2339:C:O2'	22:DA:2340:A:C8	2.49	0.64
9:AI:46:VAL:HA	9:AI:49:GLN:HG3	1.80	0.64
12:CL:85:ARG:HG2	12:CL:86:VAL:N	2.13	0.64
42:DU:81:ARG:CD	42:DU:81:ARG:N	2.61	0.64
45:DX:32:LEU:HD22	45:DX:32:LEU:N	2.13	0.64
38:DQ:89:ILE:HG22	38:DQ:91:ARG:H	1.62	0.64
10:CJ:48:ARG:HB2	10:CJ:48:ARG:CZ	2.26	0.64
10:CJ:48:ARG:HB3	14:CN:100:TRP:HZ2	1.63	0.64
44:BW:28:GLU:HB3	44:BW:31:LEU:CD1	2.28	0.64
17:AQ:48:GLU:OE1	17:AQ:48:GLU:HA	1.97	0.64
22:DA:564:C:C2'	22:DA:565:C:H5'	2.28	0.64
38:DQ:4:LYS:NZ	38:DQ:7:VAL:H	1.96	0.64
1:CA:995:C:H42	1:CA:1046:A:H1'	1.62	0.64
1:CA:994:A:HO2'	1:CA:995:C:H6	1.43	0.64
33:DL:79:LEU:HA	33:DL:82:LEU:CD1	2.28	0.64
33:DL:84:LYS:O	33:DL:85:VAL:HB	1.98	0.64
40:BS:1:MET:HA	40:BS:1:MET:CE	2.20	0.64
29:DH:5:LEU:C	29:DH:6:LEU:HD12	2.19	0.64
8:AH:6:ILE:HB	8:AH:76:ARG:HH12	1.62	0.64
22:DA:664:G:H4'	22:DA:941:A:OP1	1.97	0.64
38:DQ:50:ARG:O	38:DQ:54:ARG:HD3	1.98	0.64
1:CA:1239:A:H3'	7:CG:118:ARG:NH2	2.13	0.64
1:CA:867:G:C4	1:CA:868:C:C5	2.86	0.64
22:DA:830:G:C2	22:DA:2448:A:N7	2.66	0.64
14:CN:92:ILE:HG21	14:CN:95:LEU:HD22	1.80	0.64
1:CA:1520:C:H2'	1:CA:1521:C:H6	1.61	0.64
2:AB:107:ARG:O	2:AB:110:ILE:HB	1.97	0.64
25:DD:112:THR:O	25:DD:113:SER:CB	2.46	0.64
32:BK:10:VAL:HG21	32:BK:16:ALA:HB1	1.78	0.64
47:BZ:3:THR:HA	47:BZ:38:GLU:HA	1.80	0.64
22:BA:790:U:HO2'	22:BA:791:C:P	2.21	0.64
30:DI:20:SER:N	30:DI:21:PRO:CD	2.61	0.64
26:BE:153:LEU:HD12	26:BE:153:LEU:C	2.19	0.64
13:CM:106:ARG:CZ	13:CM:112:ARG:HB3	2.28	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:40:GLU:HG3	13:AM:41:ASP:N	2.12	0.64
22:BA:1475:G:O2'	22:BA:1476:U:P	2.56	0.64
13:AM:68:LEU:HD12	13:AM:72:ILE:HG13	1.79	0.64
34:DM:97:GLN:HB2	34:DM:98:PRO:HD2	1.80	0.64
12:CL:33:CYS:HB3	12:CL:77:SER:O	1.98	0.64
32:BK:63:VAL:HG22	32:BK:107:LEU:HD22	1.80	0.64
37:BP:52:ARG:HH11	37:BP:52:ARG:HG2	1.58	0.63
22:BA:1061:U:H1'	22:BA:1070:A:H1'	1.80	0.63
24:DC:80:LEU:HD21	24:DC:109:LEU:HB3	1.80	0.63
22:DA:2800:A:C2'	22:DA:2801:G:C4'	2.76	0.63
28:BG:168:VAL:O	28:BG:170:THR:HG23	1.98	0.63
22:DA:1469:A:C2	22:DA:1470:A:C5	2.85	0.63
49:D1:8:ILE:HG22	49:D1:9:LYS:N	2.13	0.63
22:DA:1773:A:N7	22:DA:1829:A:H1'	2.13	0.63
22:DA:1790:C:H4'	24:DC:207:ALA:CB	2.28	0.63
1:AA:1531:A:C8	1:AA:1531:A:C5'	2.67	0.63
22:DA:72:U:C5	22:DA:112:U:H4'	2.32	0.63
22:DA:1112:G:O2'	22:DA:1113:U:H5'	1.97	0.63
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.63	0.63
1:CA:1158:C:O2	1:CA:1158:C:C2'	2.45	0.63
1:AA:945:G:N3	1:AA:945:G:H2'	2.14	0.63
22:DA:477:A:O2'	22:DA:478:A:C5'	2.46	0.63
1:CA:1273:C:H2'	1:CA:1274:A:C8	2.32	0.63
1:CA:934:C:C5	1:CA:1344:C:C4	2.86	0.63
25:DD:149:ASN:CG	25:DD:150:GLN:N	2.50	0.63
1:AA:841:C:H3'	1:AA:843:U:OP2	1.97	0.63
25:DD:176:ASP:O	25:DD:189:VAL:HA	1.98	0.63
25:DD:4:LEU:HD23	25:DD:101:PHE:CE1	2.33	0.63
35:DN:1:MET:O	35:DN:2:ARG:CB	2.46	0.63
20:CT:26:MET:HE3	20:CT:30:PHE:CD1	2.30	0.63
1:CA:94:G:O2'	1:CA:95:C:H5'	1.98	0.63
1:AA:972:C:H4'	10:AJ:59:LYS:HG3	1.79	0.63
9:CI:56:MET:HG3	9:CI:57:VAL:HG23	1.79	0.63
16:AP:37:GLY:HA2	16:AP:51:ARG:HH12	1.62	0.63
36:DO:31:THR:HG23	36:DO:34:HIS:C	2.18	0.63
22:DA:1455:G:O2'	22:DA:1456:G:H8	1.80	0.63
22:BA:277:G:C8	22:BA:361:G:O6	2.51	0.63
22:BA:528:A:H2	22:BA:2043:C:C5'	2.10	0.63
4:AD:55:ARG:HA	4:AD:55:ARG:HH11	1.63	0.63
22:DA:153:U:O2'	22:DA:154:U:H5'	1.97	0.63
22:BA:1417:C:H2'	22:BA:1418:G:C8	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BU:42:LYS:HA	42:BU:58:VAL:O	1.98	0.63
42:BU:100:GLU:O	42:BU:101:THR:HB	1.99	0.63
37:DP:67:GLU:CD	37:DP:68:GLY:H	2.00	0.63
22:DA:1171:G:C2	22:DA:1179:G:N3	2.66	0.63
1:CA:954:G:H1	1:CA:1228:C:H42	1.44	0.63
34:BM:10:ARG:NH2	34:BM:89:VAL:HB	2.13	0.63
22:BA:2889:C:H2'	22:BA:2890:G:O5'	1.98	0.63
22:BA:2334:U:H4'	22:BA:2335:A:OP2	1.98	0.63
1:AA:358:U:O2'	1:AA:359:G:H5'	1.98	0.63
25:BD:13:ARG:NH1	37:BP:74:GLN:NE2	2.42	0.63
22:BA:996:A:C4'	38:BQ:91:ARG:HG2	2.26	0.63
16:CP:78:VAL:C	16:CP:80:LYS:H	2.01	0.63
22:DA:781:A:H2'	22:DA:1777:U:H1'	1.81	0.63
9:AI:51:LEU:HB3	9:AI:56:MET:HG3	1.77	0.63
22:DA:329:G:OP1	22:DA:329:G:H3'	1.98	0.63
28:BG:137:LYS:CA	28:BG:140:ILE:CD1	2.71	0.63
12:AL:42:LYS:HB3	12:AL:43:LYS:HD3	1.78	0.63
44:BW:39:GLN:O	44:BW:40:ARG:C	2.37	0.63
1:CA:674:G:H4'	18:CR:69:TYR:CE1	2.33	0.63
40:DS:84:ARG:HB3	40:DS:96:ILE:HG21	1.79	0.63
1:CA:643:C:H5''	8:CH:31:LEU:HD13	1.80	0.63
14:CN:60:ARG:CG	14:CN:61:ASN:H	2.12	0.63
4:AD:48:SER:O	4:AD:52:VAL:HG13	1.98	0.63
25:DD:10:GLY:HA3	25:DD:26:VAL:H	1.62	0.63
1:AA:844:G:H2'	1:AA:844:G:N3	2.12	0.63
22:DA:2700:A:C2	22:DA:2708:G:C2	2.86	0.63
23:DB:57:A:C5	27:DF:25:MET:HB2	2.34	0.63
32:DK:115:ILE:HG22	32:DK:116:ILE:N	2.11	0.63
19:AS:4:LEU:CD2	19:AS:8:PRO:HA	2.28	0.63
1:CA:1349:A:O2'	1:CA:1350:A:H5'	1.98	0.63
39:BR:41:ILE:O	39:BR:46:GLU:HB2	1.98	0.63
22:DA:771:G:C2'	22:DA:772:C:H5'	2.28	0.63
20:CT:34:VAL:HG21	20:CT:53:MET:HG2	1.80	0.63
34:BM:57:VAL:HA	34:BM:112:LEU:HD21	1.80	0.63
26:BE:48:THR:HG22	26:BE:86:ALA:HB3	1.79	0.63
50:B2:24:THR:HG23	50:B2:27:GLY:H	1.61	0.63
3:CC:161:ILE:CD1	3:CC:161:ILE:H	2.11	0.63
3:CC:161:ILE:HD13	3:CC:161:ILE:H	1.63	0.63
22:DA:1813:G:C2'	22:DA:1814:G:H5'	2.29	0.63
1:CA:1129:C:H1'	1:CA:1146:A:H61	1.64	0.63
34:BM:35:ALA:O	34:BM:36:VAL:CG1	2.44	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2289:G:O2'	22:DA:2290:G:H5'	1.97	0.63
22:DA:2746:U:H1'	28:DG:138:GLN:HE21	1.63	0.63
22:DA:2747:G:O2'	28:DG:66:THR:HG22	1.98	0.63
4:CD:2:ARG:NH2	4:CD:114:ARG:NH1	2.47	0.63
4:CD:30:LYS:CD	4:CD:30:LYS:N	2.52	0.63
31:DJ:35:ARG:HG2	31:DJ:40:HIS:CD2	2.32	0.63
38:DQ:59:LEU:O	38:DQ:63:ARG:HG2	1.98	0.63
44:BW:17:ALA:O	44:BW:18:LYS:CB	2.46	0.63
28:BG:104:LEU:O	28:BG:112:VAL:HG22	1.99	0.63
31:DJ:111:LYS:HE3	31:DJ:114:LEU:HD23	1.80	0.63
1:CA:1226:C:OP2	13:CM:94:LEU:HD22	1.98	0.63
1:AA:694:A:H2'	1:AA:695:A:O5'	1.99	0.63
36:BO:88:LYS:CE	36:BO:116:GLN:NE2	2.58	0.63
31:BJ:55:ILE:O	31:BJ:55:ILE:HG13	1.97	0.63
1:CA:253:A:N1	1:CA:274:A:C2	2.67	0.63
2:AB:69:VAL:CB	2:AB:162:VAL:HG12	2.19	0.63
23:DB:52:A:N6	36:DO:33:ARG:HE	1.96	0.63
1:CA:166:U:C2'	1:CA:167:A:H5'	2.28	0.63
2:CB:160:LEU:HD22	2:CB:175:ALA:CB	2.25	0.63
2:CB:160:LEU:HD13	2:CB:180:ILE:HG21	1.79	0.63
22:DA:2663:G:O2'	22:DA:2664:G:H5'	1.97	0.63
22:DA:2668:G:C4	22:DA:2669:G:C8	2.86	0.63
22:DA:1647:U:C5'	22:DA:1648:U:OP1	2.45	0.63
2:AB:108:GLN:H	2:AB:108:GLN:NE2	1.94	0.63
13:AM:10:ASP:CG	13:AM:44:ILE:HB	2.19	0.63
4:CD:97:LEU:O	4:CD:101:VAL:HG23	1.98	0.63
4:AD:172:VAL:HG13	4:AD:173:ASP:H	1.61	0.63
51:D3:32:LEU:HA	51:D3:35:LYS:CG	2.27	0.63
18:CR:21:ASP:HB3	18:CR:23:LYS:HG2	1.80	0.63
22:DA:524:G:H2'	22:DA:525:U:H6	1.62	0.63
24:BC:180:MET:HG3	24:BC:268:ARG:NH1	2.13	0.63
37:DP:47:ILE:HD11	37:DP:70:GLU:HG2	1.80	0.63
18:AR:40:PRO:HG2	18:AR:43:ILE:HG12	1.81	0.63
23:DB:100:G:H2'	23:DB:101:A:O4'	1.99	0.63
22:DA:1079:C:N4	22:DA:1088:A:N3	2.46	0.63
51:B3:33:THR:HG23	51:B3:34:LYS:N	2.12	0.63
22:DA:2229:U:H2'	22:DA:2230:G:H8	1.63	0.63
29:DH:27:ARG:HH21	29:DH:27:ARG:HB2	1.61	0.63
1:AA:255:G:C4	1:AA:256:U:C5	2.86	0.63
14:CN:13:VAL:HG22	14:CN:59:GLN:OE1	1.98	0.63
22:DA:239:C:HO2'	22:DA:621:A:H2	1.45	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:151:THR:HG22	25:DD:152:PRO:CD	2.29	0.63
5:CE:76:ASN:O	5:CE:77:ASN:HB2	1.97	0.63
22:DA:2695:U:H2'	22:DA:2695:U:O2	1.97	0.63
22:DA:1429:G:N3	22:DA:1430:G:N7	2.47	0.63
24:BC:229:HIS:CD2	24:BC:246:PRO:HA	2.33	0.63
22:BA:142:A:O2'	22:BA:143:C:C6	2.51	0.63
27:DF:39:VAL:HG22	27:DF:49:LEU:CB	2.29	0.63
31:BJ:124:VAL:O	31:BJ:125:TYR:CB	2.45	0.63
31:BJ:135:GLN:HE21	31:BJ:135:GLN:HA	1.64	0.63
28:DG:94:ARG:CZ	28:DG:105:SER:HB2	2.28	0.63
22:DA:57:C:O2'	41:DT:36:LYS:HE2	1.97	0.63
22:DA:2459:A:N3	22:DA:2459:A:H2'	2.14	0.63
13:AM:18:LEU:O	13:AM:24:VAL:HG21	1.98	0.63
1:CA:441:A:C2	1:CA:497:G:C6	2.86	0.63
22:BA:1110:G:O2'	22:BA:1111:A:C8	2.41	0.63
32:BK:61:VAL:HG22	32:BK:87:LEU:HD11	1.80	0.63
7:AG:3:ARG:HG3	7:AG:4:ARG:H	1.63	0.63
22:BA:2544:G:O2'	22:BA:2545:G:H5'	1.97	0.63
22:BA:898:C:C2'	22:BA:899:A:H5'	2.28	0.63
22:BA:320:A:H4'	22:BA:322:A:N7	2.13	0.63
22:DA:181:A:C2	22:DA:434:U:H1'	2.33	0.63
41:BT:8:LEU:CD2	41:BT:8:LEU:N	2.60	0.63
4:AD:166:LYS:HB3	4:AD:166:LYS:HZ2	1.62	0.63
22:BA:863:A:O2'	22:BA:864:G:H5'	1.99	0.63
6:AF:9:MET:CE	6:AF:59:TYR:CE2	2.82	0.63
2:CB:26:MET:HA	2:CB:26:MET:CE	2.27	0.63
22:DA:3:U:H2'	22:DA:4:U:C6	2.32	0.63
1:CA:240:G:H5''	1:CA:240:G:C8	2.33	0.63
2:AB:72:LYS:C	2:AB:74:ALA:H	2.02	0.63
13:CM:91:ARG:HD3	13:CM:91:ARG:O	1.99	0.63
28:BG:31:GLU:O	28:BG:31:GLU:HG3	1.97	0.63
22:DA:1297:C:O5'	22:DA:1297:C:H6	1.81	0.63
22:BA:574:A:H4'	22:BA:575:A:O5'	1.99	0.63
1:CA:1151:A:H2'	1:CA:1152:A:H8	1.64	0.63
1:CA:388:G:HO2'	1:CA:389:A:P	2.21	0.63
44:DW:23:LYS:HD2	44:DW:24:ARG:CB	2.29	0.63
42:DU:39:ASN:OD1	42:DU:64:ILE:HB	1.99	0.63
22:DA:143:C:H2'	22:DA:144:A:H8	1.54	0.63
39:DR:4:VAL:O	39:DR:38:VAL:HG23	1.99	0.63
22:BA:2356:U:C4'	44:BW:16:GLU:HG3	2.24	0.63
22:DA:192:C:H2'	22:DA:193:U:C5'	2.27	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:247:G:C8	22:DA:249:C:C6	2.87	0.63
22:DA:27:G:H1'	22:DA:513:A:N6	2.13	0.63
22:DA:2586:U:O2'	22:DA:2587:A:H5'	1.98	0.63
1:CA:764:C:N4	1:CA:812:G:N1	2.46	0.63
10:AJ:10:LEU:O	10:AJ:71:LEU:HD13	1.99	0.63
27:DF:43:ILE:HG12	27:DF:77:LYS:CD	2.29	0.63
31:BJ:130:HIS:CD2	31:BJ:132:HIS:H	2.16	0.63
1:CA:92:U:O2'	1:CA:93:U:H5'	1.98	0.63
22:DA:493:G:H2'	22:DA:494:G:O4'	1.98	0.63
27:BF:109:ARG:HB3	27:BF:136:ILE:HG22	1.79	0.63
12:AL:45:ASN:N	12:AL:45:ASN:HD22	1.95	0.63
22:DA:2093:G:O2'	22:DA:2094:A:H8	1.78	0.63
1:CA:1244:G:C6	1:CA:1245:C:N4	2.66	0.63
19:AS:17:LYS:HB3	19:AS:30:LEU:HD23	1.81	0.63
1:AA:1049:U:C5	14:AN:1:ALA:HA	2.33	0.63
22:DA:618:G:O2'	22:DA:619:G:H5'	1.98	0.63
7:CG:11:ILE:HD11	7:CG:24:LYS:HB2	1.80	0.63
22:DA:774:G:O2'	22:DA:775:G:H8	1.82	0.63
1:AA:185:U:HO2'	1:AA:186:C:H6	1.45	0.63
22:DA:675:A:OP1	26:DE:60:TRP:CZ2	2.50	0.63
22:DA:851:C:H2'	22:DA:852:U:C5	2.34	0.63
2:AB:157:PRO:O	2:AB:180:ILE:HD12	1.99	0.63
22:DA:170:U:H2'	22:DA:171:U:C6	2.31	0.63
4:CD:148:ALA:HB1	4:CD:151:GLN:NE2	2.13	0.63
22:BA:611:C:H2'	22:BA:612:G:C5'	2.28	0.63
1:CA:54:C:N4	1:CA:352:C:H2'	2.14	0.63
22:BA:1256:G:H2'	26:BE:77:ILE:HD11	1.81	0.63
1:AA:1358:U:C6	1:AA:1359:C:C5	2.87	0.63
1:CA:678:U:H1'	1:CA:777:A:O3'	1.97	0.63
37:DP:105:LYS:HA	37:DP:108:ARG:CZ	2.28	0.63
22:BA:93:G:O2'	22:BA:94:A:H5'	1.98	0.63
7:AG:71:THR:O	7:AG:90:VAL:HG12	1.98	0.63
22:BA:1906:G:H2'	22:BA:1907:G:O5'	1.97	0.63
1:AA:937:A:H2'	1:AA:938:A:H5'	1.80	0.63
20:AT:67:HIS:HB3	20:AT:68:LYS:NZ	2.14	0.63
1:AA:1310:G:H2'	1:AA:1311:A:O4'	1.98	0.63
1:AA:1136:C:H5''	1:AA:1137:C:OP2	1.99	0.63
1:CA:929:G:C5	1:CA:930:C:C5	2.86	0.63
22:DA:1839:G:O2'	22:DA:1840:G:H5'	1.99	0.63
22:DA:2602:A:H3'	22:DA:2602:A:OP1	1.99	0.63
25:BD:149:ASN:CG	25:BD:150:GLN:H	2.00	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1401:G:C2'	22:DA:1402:U:C6	2.69	0.63
22:DA:2269:G:O3'	44:DW:18:LYS:HE2	1.98	0.63
22:DA:1695:G:H8	24:DC:7:PRO:O	1.81	0.63
22:DA:1069:A:N6	22:DA:1073:A:C5'	2.61	0.63
22:DA:335:C:C2	22:DA:336:C:C5	2.87	0.63
22:BA:1799:G:N2	24:BC:153:LEU:HD23	2.13	0.63
22:DA:396:G:O2'	22:DA:397:U:C5'	2.41	0.63
44:BW:23:LYS:NZ	44:BW:24:ARG:CG	2.61	0.63
28:BG:104:LEU:HB2	28:BG:112:VAL:HG23	1.78	0.63
18:CR:71:ASP:HB3	21:CU:3:ILE:HD11	1.78	0.63
51:D3:21:PHE:HB2	51:D3:49:VAL:CG1	2.27	0.63
22:DA:1285:A:H2'	22:DA:1286:A:H5''	1.79	0.63
1:CA:577:G:O2'	1:CA:578:C:C5'	2.46	0.63
22:DA:1992:G:N2	22:DA:1995:U:C5	2.67	0.63
22:DA:2733:A:C2'	22:DA:2734:A:H5'	2.28	0.63
26:DE:157:LEU:HD12	26:DE:157:LEU:C	2.19	0.63
1:CA:1202:U:O2'	1:CA:1203:C:H5'	1.99	0.63
1:CA:91:U:C6	1:CA:92:U:C5	2.86	0.63
24:DC:131:MET:HA	24:DC:134:ILE:CG1	2.29	0.63
24:DC:184:GLU:HB2	24:DC:187:CYS:SG	2.39	0.63
33:DL:19:LEU:HD11	33:DL:31:GLY:HA3	1.81	0.63
27:BF:105:ILE:CD1	27:BF:138:PRO:HG2	2.28	0.63
1:CA:1332:A:HO2'	1:CA:1333:A:H5'	1.64	0.63
23:DB:90:C:H6	23:DB:90:C:C5'	2.10	0.63
25:BD:111:GLY:O	25:BD:169:ARG:O	2.16	0.63
1:AA:1002:G:H2'	1:AA:1003:G:O4'	1.98	0.63
49:D1:47:ILE:HD12	49:D1:47:ILE:N	2.14	0.63
36:BO:62:LEU:CD2	36:BO:70:ALA:HA	2.28	0.63
1:CA:1248:A:O2'	9:CI:37:TYR:HD1	1.82	0.63
31:BJ:114:LEU:HD22	31:BJ:118:MET:HE3	1.79	0.63
38:DQ:40:LYS:HD3	38:DQ:44:TYR:HE2	1.63	0.63
1:CA:1480:A:C5	1:CA:1481:U:C5	2.87	0.63
1:CA:1418:A:H2	22:DA:1948:G:N3	1.97	0.63
22:DA:1480:C:C4	22:DA:1481:U:C5	2.87	0.63
22:DA:1510:G:C2	22:DA:1511:G:C5	2.86	0.63
2:AB:84:LEU:HG	2:AB:84:LEU:O	1.98	0.63
24:DC:2:VAL:O	24:DC:3:VAL:HG23	1.99	0.63
24:DC:8:THR:O	24:DC:9:SER:CB	2.46	0.63
22:DA:1804:C:N4	22:DA:1814:G:N2	2.47	0.63
44:DW:37:VAL:HG23	44:DW:38:ARG:NH1	2.07	0.63
26:DE:133:LEU:C	26:DE:133:LEU:HD23	2.19	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:445:C:C2'	22:DA:446:G:C8	2.82	0.63
1:CA:214:C:H2'	1:CA:215:C:C6	2.34	0.63
1:AA:217:C:O2'	1:AA:218:U:H5'	1.98	0.63
28:BG:8:VAL:HG12	28:BG:49:LEU:N	2.13	0.63
21:CU:36:PHE:HB3	21:CU:40:PRO:HD3	1.81	0.63
43:DV:7:GLU:O	43:DV:40:ILE:HG22	1.98	0.63
29:DH:93:SER:HA	29:DH:121:VAL:HG11	1.80	0.63
7:AG:12:LEU:H	7:AG:12:LEU:CD2	1.88	0.63
24:BC:15:VAL:HG22	24:BC:204:LEU:O	1.98	0.63
8:CH:85:TYR:CD2	8:CH:123:GLU:HB2	2.34	0.63
1:CA:964:A:H2'	1:CA:965:U:H5'	1.81	0.63
14:CN:68:ARG:HG3	14:CN:69:PRO:HD2	1.81	0.63
10:AJ:17:LEU:HD23	10:AJ:18:ILE:N	2.13	0.63
31:BJ:56:VAL:CG1	31:BJ:57:LEU:N	2.59	0.63
22:DA:664:G:O2'	22:DA:665:U:H5'	1.99	0.63
1:AA:414:A:O2'	1:AA:415:A:C5'	2.47	0.63
23:DB:15:A:H1'	23:DB:109:A:N7	2.13	0.63
52:B4:15:LYS:O	52:B4:16:ILE:HB	1.98	0.63
21:AU:13:VAL:CG1	21:AU:15:LEU:HG	2.25	0.63
22:DA:848:C:H2'	22:DA:849:A:C8	2.32	0.63
1:AA:1152:A:O2'	1:AA:1153:G:H8	1.81	0.63
13:CM:95:PRO:HD3	13:CM:108:ARG:CG	2.26	0.63
22:DA:2298:A:H2'	22:DA:2299:U:C5	2.34	0.63
23:DB:42:C:N4	27:DF:87:LYS:HD2	2.13	0.63
26:DE:60:TRP:HZ3	26:DE:62:GLN:HG3	1.63	0.63
1:CA:444:G:C2'	1:CA:445:G:H5'	2.29	0.63
5:CE:38:VAL:HG12	5:CE:39:GLY:H	1.62	0.63
13:CM:103:THR:HG22	13:CM:104:ASN:N	2.14	0.63
32:DK:27:GLY:HA3	32:DK:30:ARG:HG3	1.81	0.63
28:BG:10:VAL:O	28:BG:10:VAL:CG2	2.46	0.63
25:BD:68:PHE:CD2	25:BD:75:ALA:HA	2.32	0.63
19:CS:62:THR:HG22	19:CS:63:ASP:N	2.13	0.63
1:CA:738:C:C4	1:CA:739:C:H5	2.15	0.63
17:CQ:77:VAL:HG12	17:CQ:78:VAL:O	1.99	0.63
25:BD:8:LYS:HB2	25:BD:201:LEU:CD2	2.28	0.63
22:DA:1481:U:H2'	22:DA:1481:U:O2	1.98	0.63
22:BA:588:U:H1'	26:BE:85:PHE:CD1	2.34	0.63
3:CC:14:VAL:HG12	3:CC:14:VAL:O	1.97	0.63
40:DS:70:LYS:H	40:DS:70:LYS:HE3	1.64	0.63
30:DI:36:GLU:HB2	30:DI:40:ALA:HB3	1.79	0.63
27:BF:167:ALA:O	27:BF:170:ALA:HB3	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1682:G:H2'	22:BA:1683:U:C6	2.32	0.63
19:CS:20:LYS:O	19:CS:20:LYS:HD3	1.98	0.63
22:BA:2071:A:H2'	22:BA:2072:C:C6	2.34	0.63
24:BC:144:GLU:HA	24:BC:151:GLY:HA2	1.80	0.63
24:DC:196:ASN:O	24:DC:197:ALA:HB3	1.99	0.63
26:DE:149:ILE:CG2	26:DE:188:MET:HB2	2.29	0.63
12:CL:41:PRO:HD2	12:CL:47:ALA:O	1.97	0.63
1:CA:407:U:O2'	4:CD:112:GLU:HG3	1.99	0.63
21:CU:36:PHE:CD2	21:CU:39:LYS:HE2	2.34	0.63
22:DA:1536:C:H4'	22:DA:1537:G:H5'	1.79	0.63
21:CU:16:ARG:NE	21:CU:16:ARG:HA	2.13	0.63
21:CU:3:ILE:HG22	21:CU:19:LYS:NZ	2.14	0.63
10:CJ:47:GLU:HB2	10:CJ:67:ILE:CG1	2.21	0.63
22:DA:502:A:N6	22:DA:505:A:C6	2.67	0.63
9:CI:114:LYS:HB2	9:CI:117:LEU:HD12	1.79	0.63
22:BA:2431:U:C5'	22:BA:2431:U:H6	2.03	0.63
22:DA:2689:U:C4'	22:DA:2690:U:OP2	2.42	0.63
17:CQ:17:GLU:O	17:CQ:18:LYS:HB2	1.97	0.63
25:DD:119:ALA:HB2	25:DD:163:GLY:C	2.20	0.63
7:CG:118:ARG:O	7:CG:122:GLU:HB2	1.99	0.63
24:BC:77:VAL:O	24:BC:77:VAL:HG22	1.98	0.63
13:CM:12:LYS:HB3	13:CM:17:ALA:HB2	1.80	0.63
22:BA:1105:U:H2'	22:BA:1106:G:H8	1.64	0.63
22:BA:1141:U:C6	31:BJ:65:THR:CG2	2.81	0.63
22:DA:230:G:C2	22:DA:231:A:N7	2.66	0.63
1:AA:996:A:H2	1:AA:1046:A:H5'	1.62	0.63
1:CA:322:C:H5	1:CA:328:C:C5	2.16	0.63
1:CA:328:C:H2'	1:CA:328:C:O2	1.97	0.63
12:AL:33:CYS:H	12:AL:54:VAL:HG13	1.63	0.63
22:DA:185:G:H2'	22:DA:186:G:H8	1.63	0.63
35:DN:75:ILE:O	35:DN:75:ILE:HD12	1.99	0.63
22:BA:84:A:H4'	22:BA:85:G:O5'	1.98	0.63
26:BE:24:ASN:C	26:BE:24:ASN:HD22	2.01	0.63
29:DH:96:THR:HA	29:DH:113:SER:OG	1.99	0.63
12:AL:109:ARG:NH2	12:AL:116:TYR:CE2	2.67	0.63
22:BA:1416:G:HO2'	22:BA:1417:C:H6	1.46	0.63
22:BA:2816:G:O2'	22:BA:2817:U:H5'	1.98	0.63
29:BH:78:VAL:CG1	29:BH:145:ASN:HB3	2.29	0.63
1:AA:517:G:O2'	1:AA:530:G:H4'	1.98	0.63
22:BA:613:A:H8	22:BA:616:A:N1	1.94	0.63
27:BF:169:LEU:CD1	27:BF:169:LEU:H	2.12	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:71:THR:O	2:AB:72:LYS:HG2	1.98	0.63
22:BA:1425:G:O2'	22:BA:1426:G:H5'	1.99	0.63
3:AC:67:ILE:O	3:AC:67:ILE:HG22	1.98	0.63
22:BA:2136:G:C2	22:BA:2137:U:C4	2.87	0.63
43:DV:8:VAL:HG13	43:DV:66:ASP:OD2	1.99	0.63
38:BQ:109:VAL:HG12	38:BQ:113:LYS:HD2	1.81	0.63
22:BA:825:A:O2'	22:BA:826:U:H5'	1.99	0.63
1:CA:46:G:O2'	1:CA:365:U:H1'	1.99	0.63
22:DA:1483:G:H2'	22:DA:1484:U:C6	2.34	0.63
22:BA:682:G:H5'	50:B2:26:ASN:OD1	1.98	0.63
22:BA:754:U:H2'	22:BA:755:U:C6	2.34	0.63
30:BI:71:LYS:HG2	30:BI:72:THR:H	1.63	0.63
12:CL:50:LYS:N	12:CL:50:LYS:HD2	2.14	0.63
22:BA:571:U:H4'	22:BA:572:A:OP1	1.98	0.63
26:DE:149:ILE:HG23	26:DE:188:MET:N	2.12	0.63
22:DA:2286:G:C8	49:D1:33:LEU:HD21	2.34	0.63
1:AA:1508:A:O2'	1:AA:1509:C:H5'	1.99	0.63
22:DA:78:U:O2'	22:DA:79:C:H5'	1.98	0.63
22:DA:83:A:H61	22:DA:101:A:H5'	1.60	0.63
22:DA:161:A:H5''	22:DA:162:U:H3'	1.81	0.63
31:DJ:45:THR:H	31:DJ:46:PRO:HD2	1.64	0.63
2:AB:9:LEU:CG	2:AB:42:LEU:HD13	2.28	0.63
22:DA:1540:G:HO2'	22:DA:1541:C:H6	1.42	0.63
37:BP:85:VAL:O	37:BP:86:LYS:HB2	1.99	0.63
31:DJ:84:ILE:HG23	31:DJ:84:ILE:O	1.99	0.63
45:BX:77:TYR:O	45:BX:77:TYR:CD1	2.52	0.63
22:BA:973:A:O4'	22:BA:1188:U:C6	2.52	0.63
1:AA:1239:A:N6	1:AA:1299:A:H62	1.92	0.63
1:CA:1221:G:C2	1:CA:1222:G:H1'	2.34	0.63
5:AE:23:THR:HA	5:AE:28:ARG:HA	1.79	0.63
5:CE:104:ILE:CA	5:CE:122:VAL:HB	2.28	0.63
22:DA:2734:A:H2'	22:DA:2735:G:C5'	2.28	0.63
41:BT:40:LYS:N	41:BT:43:ILE:CG2	2.60	0.63
7:CG:19:SER:O	7:CG:23:ALA:HB2	1.99	0.63
27:DF:43:ILE:HG23	27:DF:44:ALA:N	2.12	0.63
1:CA:184:G:N2	1:CA:185:U:C2	2.67	0.63
12:AL:23:LEU:CB	12:AL:58:ASN:HD22	2.11	0.63
27:BF:134:GLN:CG	27:BF:135:ILE:H	2.03	0.63
32:BK:1:MET:HE3	32:BK:32:TYR:CD1	2.34	0.63
14:AN:42:ASN:HD21	14:AN:46:LYS:HZ1	1.47	0.63
19:AS:51:HIS:HD2	19:AS:53:GLY:H	1.42	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:18:VAL:HG11	9:CI:82:ILE:HA	1.80	0.63
22:DA:1183:U:H2'	22:DA:1184:U:C6	2.33	0.63
1:AA:625:U:H4'	16:AP:16:PHE:CE2	2.33	0.63
22:BA:748:G:OP2	40:BS:88:ARG:HG3	1.99	0.63
22:BA:274:C:H2'	22:BA:275:C:H6	1.62	0.63
29:DH:96:THR:HG21	29:DH:112:LYS:NZ	2.13	0.63
1:AA:111:G:O6	1:AA:330:C:N4	2.31	0.63
24:BC:182:LYS:O	24:BC:183:VAL:HG23	1.98	0.63
1:AA:1469:C:H2'	1:AA:1470:U:C5'	2.29	0.63
1:AA:1473:G:O2'	1:AA:1474:U:H5'	1.99	0.63
22:BA:1734:G:C4	22:BA:1735:A:C8	2.86	0.63
39:BR:42:ALA:CA	39:BR:46:GLU:HB2	2.29	0.63
22:BA:287:G:H1	22:BA:353:C:N4	1.96	0.63
38:DQ:10:ARG:HB2	38:DQ:10:ARG:CZ	2.29	0.63
22:BA:1996:C:P	32:BK:31:ARG:HH21	2.22	0.63
8:CH:38:VAL:HA	8:CH:41:GLU:CG	2.29	0.63
1:AA:937:A:N6	1:AA:1345:U:O4	2.32	0.63
43:BV:93:ARG:O	43:BV:94:ALA:HB2	1.99	0.63
4:AD:168:THR:HG22	4:AD:183:ARG:HH21	1.64	0.63
1:CA:486:U:O2'	1:CA:487:A:H5'	1.98	0.63
22:BA:946:C:H2'	22:BA:947:A:H8	1.64	0.63
29:DH:75:LEU:O	29:DH:76:GLU:HB2	1.99	0.63
22:BA:712:G:H2'	22:BA:713:G:H5'	1.80	0.63
1:AA:1128:C:H4'	1:AA:1148:U:O2	1.99	0.62
1:AA:1508:A:H2'	1:AA:1509:C:H6	1.65	0.62
22:DA:48:G:H22	22:DA:177:G:N2	1.97	0.62
22:DA:444:C:HO2'	22:DA:445:C:P	2.22	0.62
1:AA:469:C:H2'	1:AA:470:C:H6	1.64	0.62
39:DR:9:GLY:H	39:DR:10:LYS:HD2	1.65	0.62
44:BW:18:LYS:HA	44:BW:36:ILE:HD11	1.81	0.62
44:BW:39:GLN:O	44:BW:41:GLY:N	2.31	0.62
29:BH:26:ALA:HA	29:BH:30:LEU:HB2	1.80	0.62
22:DA:203:A:H8	22:DA:203:A:O5'	1.82	0.62
1:AA:267:C:O2'	1:AA:268:U:C5'	2.45	0.62
1:CA:997:U:O2'	1:CA:998:C:C5'	2.46	0.62
4:AD:196:GLU:C	4:AD:198:LEU:N	2.50	0.62
4:AD:84:ASN:HD22	4:AD:87:GLU:H	1.47	0.62
40:BS:1:MET:HE2	40:BS:1:MET:CA	2.18	0.62
1:CA:810:C:H2'	1:CA:811:C:H5'	1.81	0.62
21:AU:16:ARG:HH11	21:AU:19:LYS:HG2	1.63	0.62
22:DA:1515:A:H4'	22:DA:1556:C:O2'	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1639:C:C2'	22:DA:1640:A:H5''	2.29	0.62
1:AA:1180:A:H5''	1:AA:1181:G:OP2	1.98	0.62
22:DA:845:A:N6	22:DA:932:U:N3	2.42	0.62
13:CM:11:HIS:HA	13:CM:44:ILE:HB	1.81	0.62
16:AP:80:LYS:NZ	16:AP:80:LYS:HB2	2.14	0.62
1:AA:1060:U:H4'	10:AJ:53:ILE:HG23	1.81	0.62
6:AF:36:ILE:HG22	6:AF:64:VAL:CG2	2.26	0.62
22:DA:1453:A:N7	35:DN:73:ASN:HB3	2.14	0.62
22:DA:831:G:O2'	22:DA:832:U:C5'	2.46	0.62
22:BA:1507:C:C2	22:BA:1508:A:C2	2.87	0.62
28:DG:82:PHE:HB3	28:DG:140:ILE:CD1	2.29	0.62
28:DG:163:TYR:N	28:DG:163:TYR:CD2	2.67	0.62
2:AB:89:PHE:CE1	2:AB:153:MET:HG3	2.34	0.62
11:AK:58:THR:HB	11:AK:59:PRO:HD2	1.81	0.62
3:AC:153:SER:CB	3:AC:164:THR:HA	2.28	0.62
22:DA:2823:A:C6	22:DA:2824:C:C5	2.87	0.62
29:DH:1:MET:HE3	29:DH:23:ALA:CB	2.29	0.62
22:DA:1929:G:C4'	22:DA:1930:G:OP1	2.47	0.62
5:AE:45:VAL:CG2	5:AE:117:ALA:HB2	2.29	0.62
7:AG:143:MET:CE	7:AG:143:MET:HA	2.29	0.62
38:BQ:27:ARG:HH11	38:BQ:27:ARG:HG3	1.64	0.62
1:CA:307:C:H5''	1:CA:308:C:OP2	1.99	0.62
22:BA:2134:A:O2'	22:BA:2135:A:H5''	1.99	0.62
25:BD:33:ARG:HH21	25:BD:51:THR:HG23	1.64	0.62
4:CD:131:ILE:N	4:CD:131:ILE:HD13	2.13	0.62
3:AC:21:TRP:HB3	3:AC:58:ARG:H	1.64	0.62
32:BK:98:ARG:O	32:BK:99:ILE:HD13	1.97	0.62
24:DC:156:SER:HB3	24:DC:159:THR:HG21	1.80	0.62
1:AA:433:G:C2'	1:AA:434:U:H5'	2.28	0.62
16:AP:20:VAL:HG21	16:AP:32:PHE:CG	2.34	0.62
22:DA:1090:A:C2'	22:DA:1091:G:H5''	2.29	0.62
35:DN:90:ARG:NH2	35:DN:116:VAL:HG11	2.14	0.62
22:DA:445:C:O2'	22:DA:446:G:C8	2.51	0.62
22:DA:455:C:C5	22:DA:472:A:C2	2.87	0.62
38:BQ:86:SER:HB2	39:BR:50:GLY:O	1.98	0.62
38:BQ:86:SER:HB3	39:BR:51:VAL:HG13	1.81	0.62
27:BF:39:VAL:HG13	27:BF:40:GLY:N	2.13	0.62
22:DA:2747:G:HO2'	28:DG:66:THR:HG22	1.63	0.62
1:CA:205:A:C6	1:CA:206:C:N4	2.67	0.62
49:B1:32:LYS:HG2	49:B1:52:LYS:OXT	1.99	0.62
22:DA:1912:A:N6	22:DA:1917:U:N3	2.46	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BW:22:VAL:HG13	44:BW:25:PHE:HE2	1.64	0.62
6:CF:3:HIS:HB2	6:CF:92:THR:HG23	1.80	0.62
18:CR:58:ILE:O	18:CR:62:ARG:HG3	1.99	0.62
45:BX:44:ARG:CG	45:BX:45:PHE:N	2.62	0.62
22:BA:1494:A:C2	22:BA:1495:A:C4	2.87	0.62
9:CI:119:LYS:O	9:CI:119:LYS:HG3	1.99	0.62
4:AD:75:TYR:O	4:AD:78:ALA:HB3	1.99	0.62
1:AA:1396:A:H4'	1:AA:1397:C:O5'	1.99	0.62
22:BA:1866:A:H2'	22:BA:1867:G:O4'	1.98	0.62
10:AJ:17:LEU:C	10:AJ:17:LEU:HD23	2.19	0.62
7:CG:22:LEU:C	7:CG:22:LEU:HD23	2.20	0.62
31:BJ:130:HIS:HD2	31:BJ:132:HIS:H	1.45	0.62
1:CA:72:A:C6	1:CA:73:C:C4	2.87	0.62
22:DA:818:G:N7	22:DA:1187:G:C6	2.67	0.62
22:DA:822:G:O6	22:DA:943:A:C2	2.43	0.62
1:AA:1049:U:H1'	1:AA:1201:A:N7	2.14	0.62
7:CG:68:VAL:O	7:CG:70:PRO:HD3	1.99	0.62
22:DA:1181:U:O2'	22:DA:1182:G:H5'	1.99	0.62
1:AA:1365:G:H2'	1:AA:1366:C:C6	2.34	0.62
22:DA:2742:G:OP1	52:D4:36:ARG:HD3	1.99	0.62
39:DR:68:ARG:NH1	39:DR:90:ARG:HG2	2.14	0.62
22:DA:1865:U:O4	22:DA:1875:G:C2	2.52	0.62
1:CA:1446:A:C2'	1:CA:1447:A:H5'	2.26	0.62
6:CF:54:LEU:CD1	6:CF:56:LYS:O	2.48	0.62
22:BA:2495:G:C2'	22:BA:2496:C:H5'	2.30	0.62
25:DD:124:ARG:HD3	25:DD:125:TRP:CD1	2.34	0.62
28:DG:18:ILE:HD12	28:DG:42:VAL:CG1	2.26	0.62
1:AA:642:A:H2'	1:AA:643:C:C6	2.33	0.62
29:DH:41:LYS:HA	29:DH:44:ILE:HG23	1.81	0.62
22:BA:1432:G:O2'	22:BA:1433:A:H5'	1.99	0.62
9:AI:60:LEU:H	9:AI:60:LEU:HD23	1.65	0.62
16:CP:44:SER:H	16:CP:46:LYS:HZ1	1.47	0.62
22:DA:1931:U:C2'	22:DA:1932:A:H8	2.12	0.62
4:AD:173:ASP:O	4:AD:174:ALA:CB	2.46	0.62
22:DA:2468:A:O2'	22:DA:2469:A:H8	1.81	0.62
22:DA:545:U:H2'	22:DA:547:A:OP1	1.97	0.62
22:DA:547:A:H8	22:DA:548:G:H5'	1.64	0.62
22:DA:42:A:C2	22:DA:438:G:C2	2.87	0.62
25:BD:142:VAL:HG23	25:BD:143:PRO:N	2.13	0.62
5:AE:64:GLU:OE1	5:AE:65:LYS:HG2	1.99	0.62
3:AC:22:PHE:CD2	3:AC:22:PHE:C	2.73	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BX:29:LEU:CD2	45:BX:29:LEU:N	2.62	0.62
5:AE:80:LEU:CD2	5:AE:122:VAL:HG11	2.29	0.62
22:DA:2798:U:H5'	22:DA:2800:A:H62	1.63	0.62
1:CA:1128:C:H4'	1:CA:1148:U:N3	2.14	0.62
1:CA:1129:C:O2'	1:CA:1130:A:C8	2.50	0.62
22:DA:1469:A:C2'	22:DA:1470:A:H8	2.09	0.62
46:DY:22:LEU:CD1	46:DY:23:ARG:HH12	2.12	0.62
1:AA:411:A:O2'	1:AA:413:G:H5''	1.99	0.62
1:AA:428:G:O4'	1:AA:430:A:C8	2.53	0.62
22:DA:2330:G:H2'	22:DA:2331:G:H5'	1.80	0.62
1:CA:517:G:H5'	1:CA:519:C:C2	2.34	0.62
22:DA:1208:C:C2	22:DA:1209:U:C6	2.87	0.62
22:DA:64:A:OP1	41:DT:77:ARG:HG2	1.97	0.62
42:DU:3:LYS:HG2	42:DU:84:PHE:CZ	2.35	0.62
25:BD:97:SER:OG	25:BD:99:GLU:HG2	1.99	0.62
38:BQ:85:ALA:O	38:BQ:88:GLU:HB2	1.98	0.62
28:DG:53:PRO:HB3	28:DG:61:TRP:N	2.13	0.62
1:CA:1092:A:H62	1:CA:1093:A:N6	1.97	0.62
24:BC:16:VAL:N	24:BC:203:VAL:HG11	2.14	0.62
17:AQ:20:ILE:H	17:AQ:47:ASP:CG	2.02	0.62
1:AA:683:G:H21	11:AK:39:ASN:HA	1.64	0.62
39:DR:27:ILE:CG2	39:DR:28:ALA:N	2.49	0.62
5:CE:56:PRO:O	5:CE:59:ILE:HG23	1.99	0.62
1:CA:93:U:C2'	1:CA:94:G:H5''	2.29	0.62
1:AA:872:A:C4	1:AA:874:G:N7	2.67	0.62
12:AL:28:GLN:HB2	12:AL:81:ILE:O	1.99	0.62
22:DA:616:A:O2'	22:DA:617:G:C8	2.34	0.62
2:CB:151:LYS:HG3	2:CB:152:ASP:N	2.14	0.62
22:BA:2150:C:O2'	22:BA:2151:U:C6	2.49	0.62
22:DA:850:U:O2'	47:DZ:22:THR:HA	1.99	0.62
12:CL:5:GLN:HG3	12:CL:9:LYS:NZ	2.14	0.62
22:DA:685:A:H4'	22:DA:686:U:O5'	1.98	0.62
22:DA:184:C:H2'	22:DA:185:G:C8	2.33	0.62
17:AQ:62:GLU:HB2	17:AQ:72:TRP:CZ2	2.34	0.62
22:BA:1747:U:H2'	22:BA:1748:C:H6	1.64	0.62
17:CQ:24:ILE:HD13	17:CQ:43:LEU:HD22	1.80	0.62
26:BE:24:ASN:O	26:BE:28:VAL:HG12	1.98	0.62
1:CA:989:U:H2'	1:CA:990:C:H5'	1.80	0.62
22:DA:851:C:C4'	47:DZ:46:MET:HG2	2.29	0.62
4:CD:197:HIS:O	4:CD:200:VAL:HG12	1.98	0.62
22:BA:2796:U:H3	22:BA:2799:A:H61	1.46	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1733:G:HO2'	22:BA:1734:G:H8	1.47	0.62
22:DA:2636:C:H2'	22:DA:2637:U:H6	1.64	0.62
32:BK:36:GLY:HA2	32:BK:62:VAL:O	2.00	0.62
20:AT:68:LYS:HB2	20:AT:68:LYS:NZ	2.14	0.62
22:DA:753:A:C2	22:DA:754:U:C2	2.86	0.62
22:DA:540:C:O2'	22:DA:541:A:H5'	1.99	0.62
26:BE:73:ILE:O	26:BE:73:ILE:HG12	1.98	0.62
1:AA:991:U:H4'	1:AA:992:U:OP1	1.98	0.62
22:DA:1394:U:C3'	22:DA:1394:U:C6	2.82	0.62
46:DY:22:LEU:HG	46:DY:23:ARG:NH1	2.15	0.62
1:CA:369:G:N3	1:CA:370:C:C6	2.67	0.62
49:D1:8:ILE:CG2	49:D1:9:LYS:N	2.61	0.62
22:DA:2336:A:N7	44:DW:40:ARG:CZ	2.63	0.62
22:DA:336:C:O2'	22:DA:337:C:C6	2.42	0.62
22:DA:76:C:OP1	46:DY:48:ARG:HG2	1.99	0.62
39:BR:49:ILE:C	39:BR:51:VAL:O	2.38	0.62
1:AA:205:A:OP1	1:AA:205:A:H4'	1.98	0.62
17:AQ:11:VAL:HG12	17:AQ:12:VAL:CG1	2.29	0.62
20:AT:43:LYS:NZ	20:AT:86:ALA:HA	2.13	0.62
3:AC:55:VAL:O	3:AC:65:VAL:HA	1.99	0.62
22:DA:1451:C:N4	22:DA:1461:C:H42	1.96	0.62
34:BM:2:LEU:HD23	34:BM:69:PRO:CD	2.21	0.62
11:AK:108:ASN:HB3	21:AU:5:VAL:O	1.98	0.62
27:BF:7:TYR:CD2	27:BF:11:VAL:CG1	2.78	0.62
1:CA:66:A:C6	1:CA:67:C:C5	2.87	0.62
8:AH:6:ILE:HB	8:AH:76:ARG:NH1	2.14	0.62
22:DA:1157:G:H2'	22:DA:1158:C:C6	2.33	0.62
23:DB:111:U:O2'	23:DB:112:G:H8	1.83	0.62
1:AA:32:A:H2'	1:AA:33:A:H8	1.61	0.62
20:CT:73:ARG:CG	20:CT:73:ARG:NH1	2.48	0.62
4:CD:77:GLU:CG	4:CD:81:LEU:HD11	2.27	0.62
13:CM:18:LEU:N	13:CM:18:LEU:HD12	2.14	0.62
2:CB:160:LEU:CD1	2:CB:180:ILE:HG21	2.29	0.62
22:DA:2667:C:O2'	22:DA:2668:G:H8	1.81	0.62
1:CA:562:U:H4'	1:CA:563:A:O5'	1.99	0.62
6:CF:54:LEU:CD1	6:CF:56:LYS:H	2.12	0.62
3:AC:110:LEU:CD2	3:AC:143:LEU:HD23	2.28	0.62
3:CC:39:ARG:CG	3:CC:54:ILE:HD13	2.28	0.62
1:CA:1520:C:H2'	1:CA:1521:C:C6	2.34	0.62
22:DA:674:G:H4'	26:DE:69:ARG:CG	2.29	0.62
26:DE:69:ARG:O	26:DE:70:SER:HB3	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:198:G:C2'	1:AA:199:A:H8	2.12	0.62
28:BG:63:GLN:OE1	28:BG:63:GLN:HA	1.98	0.62
1:CA:770:C:H1'	1:CA:899:C:H42	1.65	0.62
39:BR:29:THR:C	39:BR:63:VAL:HG22	2.20	0.62
22:DA:2542:A:H4'	22:DA:2543:G:H5''	1.80	0.62
30:DI:27:LEU:CD1	30:DI:32:VAL:HG11	2.30	0.62
38:BQ:97:ILE:HD11	38:BQ:105:PHE:CB	2.29	0.62
22:DA:1416:G:C2	22:DA:1417:C:C4	2.87	0.62
2:CB:66:ILE:H	2:CB:88:GLN:HB3	1.65	0.62
22:BA:2292:U:H2'	22:BA:2293:G:H8	1.65	0.62
22:BA:945:A:H5'	22:BA:946:C:OP2	1.99	0.62
28:BG:1:SER:HA	28:BG:5:LYS:HG3	1.81	0.62
1:AA:293:G:H2'	1:AA:294:U:H6	1.64	0.62
36:DO:105:ALA:O	36:DO:109:ALA:HB2	1.99	0.62
25:BD:16:THR:CG2	25:BD:20:VAL:HB	2.28	0.62
22:DA:2294:G:H2'	22:DA:2295:C:H6	1.62	0.62
22:BA:1579:A:O2'	22:BA:1580:A:H5'	1.99	0.62
17:AQ:3:LYS:O	17:AQ:3:LYS:HD2	1.99	0.62
1:AA:908:A:O2'	1:AA:909:A:H5'	1.99	0.62
22:BA:1074:G:O2'	22:BA:1075:C:H6	1.82	0.62
5:AE:100:GLU:HB2	5:AE:103:GLY:CA	2.29	0.62
1:CA:1283:U:H2'	1:CA:1284:C:C5	2.35	0.62
22:DA:1605:C:C4'	22:DA:1610:A:C6	2.82	0.62
44:DW:33:GLY:O	44:DW:34:SER:CB	2.48	0.62
44:DW:46:ALA:CA	44:DW:50:VAL:HG12	2.30	0.62
22:DA:1063:G:C6	22:DA:1064:C:N4	2.67	0.62
1:AA:1127:G:O2'	1:AA:1128:C:C5'	2.33	0.62
22:DA:1206:G:C6	22:DA:1207:C:N4	2.67	0.62
42:DU:3:LYS:HE2	42:DU:84:PHE:HE1	1.64	0.62
22:DA:126:A:P	50:D2:19:ARG:HG3	2.39	0.62
22:DA:47:C:H42	22:DA:178:G:H1	1.47	0.62
41:BT:27:SER:C	41:BT:28:ASN:CG	2.57	0.62
21:CU:29:ALA:O	21:CU:32:ARG:HB2	1.99	0.62
21:CU:16:ARG:HE	21:CU:16:ARG:HA	1.64	0.62
22:DA:510:C:H6	22:DA:510:C:O5'	1.82	0.62
19:CS:35:ARG:HA	19:CS:70:LEU:CB	2.28	0.62
25:DD:133:THR:CG2	25:DD:134:HIS:N	2.57	0.62
5:CE:29:ILE:CG2	5:CE:30:PHE:H	1.98	0.62
22:DA:1120:G:O2'	22:DA:1121:C:H5'	1.99	0.62
37:BP:102:ARG:O	37:BP:103:THR:CG2	2.48	0.62
9:CI:35:GLU:CB	9:CI:39:GLY:HA3	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:112:G:H21	36:DO:45:SER:HA	1.65	0.62
25:DD:137:SER:HB3	25:DD:138:LEU:CD2	2.29	0.62
32:DK:107:LEU:C	32:DK:109:SER:H	2.02	0.62
31:BJ:88:THR:HG22	31:BJ:91:GLU:HB2	1.79	0.62
22:BA:1023:U:H5'	22:BA:1023:U:C6	2.35	0.62
1:AA:373:A:H2'	1:AA:374:A:H8	1.64	0.62
24:BC:30:ALA:HB3	24:BC:31:PRO:CD	2.29	0.62
22:DA:834:G:H1'	22:DA:2358:A:C2	2.34	0.62
1:CA:913:A:H4'	1:CA:914:A:C5'	2.28	0.62
21:AU:48:LYS:HA	21:AU:51:ALA:HB3	1.82	0.62
7:AG:25:PHE:CE1	7:AG:104:VAL:HG22	2.35	0.62
25:BD:140:HIS:CE1	56:BD:302:HOH:O	2.50	0.62
14:AN:90:GLY:O	14:AN:92:ILE:N	2.32	0.62
22:DA:382:A:H2'	22:DA:383:C:C5'	2.30	0.62
1:AA:687:A:C8	1:AA:701:U:H5	2.18	0.62
22:BA:712:G:C2'	22:BA:713:G:H5'	2.29	0.62
1:AA:293:G:H2'	1:AA:294:U:C6	2.35	0.62
22:BA:859:G:H8	22:BA:859:G:OP2	1.82	0.62
1:CA:1024:G:H2'	1:CA:1025:U:O4'	2.00	0.62
33:DL:21:ARG:NH2	33:DL:21:ARG:HB3	2.14	0.62
25:DD:56:LYS:NZ	25:DD:56:LYS:HB3	2.14	0.62
22:DA:784:G:C6	24:DC:227:VAL:HG11	2.34	0.62
41:DT:69:ARG:HG3	41:DT:70:HIS:HD2	1.64	0.62
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.34	0.62
1:AA:93:U:O2'	1:AA:94:G:C5'	2.38	0.62
22:BA:855:G:H1'	44:BW:23:LYS:NZ	2.15	0.62
43:DV:26:PHE:HE1	43:DV:86:LEU:HB3	1.63	0.62
1:CA:1323:G:O2'	1:CA:1362:A:H1'	2.00	0.62
1:CA:978:A:OP1	1:CA:980:C:N4	2.32	0.62
7:CG:74:VAL:CG1	7:CG:143:MET:HB2	2.30	0.62
1:CA:542:G:O2'	1:CA:543:U:H5'	2.00	0.62
22:DA:2698:U:H2'	22:DA:2699:C:C6	2.34	0.62
16:CP:4:ILE:CD1	16:CP:4:ILE:H	2.10	0.62
34:BM:1:MET:O	34:BM:2:LEU:HB2	1.99	0.62
22:DA:242:G:C8	51:D3:4:LYS:HG3	2.33	0.62
5:AE:11:GLN:HG3	5:AE:116:VAL:HB	1.81	0.62
1:AA:978:A:H1'	1:AA:1322:C:H5	1.63	0.62
1:CA:1288:A:HO2'	1:CA:1289:A:H8	0.73	0.62
52:B4:36:ARG:CG	52:B4:37:GLN:H	2.04	0.62
2:CB:114:LYS:HE3	2:CB:151:LYS:HB2	1.81	0.62
2:CB:80:LYS:O	2:CB:84:LEU:N	2.27	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:54:LEU:HD12	16:AP:54:LEU:H	1.64	0.62
2:CB:160:LEU:CD2	2:CB:175:ALA:HB2	2.25	0.62
1:AA:1095:U:O2'	1:AA:1096:C:C5'	2.47	0.62
1:CA:756:C:H2'	1:CA:757:U:C5'	2.29	0.62
34:BM:77:PRO:HD2	34:BM:80:VAL:HG11	1.81	0.62
20:AT:32:LYS:O	20:AT:35:TYR:HD2	1.82	0.62
33:DL:124:GLY:H	33:DL:143:GLU:HG3	1.65	0.62
22:DA:1953:A:H2	22:DA:2549:G:N3	1.97	0.62
1:CA:1464:U:O2'	1:CA:1465:A:H5'	2.00	0.62
22:DA:1929:G:C5'	22:DA:1930:G:OP1	2.48	0.62
30:DI:105:LEU:O	30:DI:105:LEU:HD23	1.98	0.62
39:BR:15:SER:O	39:BR:18:GLN:HB3	2.00	0.62
19:CS:38:THR:OG1	19:CS:67:GLY:HA2	1.99	0.62
1:AA:1101:A:H1'	1:AA:1102:A:O4'	1.99	0.62
30:DI:57:VAL:HG12	30:DI:58:ILE:N	2.14	0.62
6:CF:99:ALA:O	6:CF:100:SER:HB2	2.00	0.62
25:BD:53:GLY:HA3	25:BD:77:ARG:H	1.64	0.62
25:BD:9:VAL:HG21	25:BD:26:VAL:CG1	2.30	0.62
3:CC:176:THR:HG22	3:CC:178:ARG:HG3	1.81	0.62
22:BA:2507:C:H2'	22:BA:2508:G:O5'	2.00	0.62
36:DO:24:THR:OG1	36:DO:90:VAL:HG11	2.00	0.62
1:CA:1111:A:O2'	1:CA:1112:C:H5'	2.00	0.62
3:CC:43:THR:O	3:CC:47:ALA:HB2	1.99	0.62
33:BL:101:ILE:HG22	33:BL:102:GLY:H	1.64	0.62
10:CJ:41:PRO:O	10:CJ:42:LEU:HB2	2.00	0.62
22:DA:2332:C:O2'	44:DW:40:ARG:NH2	2.32	0.62
22:DA:2339:C:O2'	22:DA:2340:A:H8	1.82	0.62
24:DC:14:HIS:O	24:DC:203:VAL:HG11	2.00	0.62
22:DA:1087:G:C5	22:DA:1089:A:C2	2.88	0.62
35:DN:90:ARG:NH2	35:DN:116:VAL:CG1	2.62	0.62
45:DX:10:ARG:HB3	45:DX:11:PRO:HD2	1.81	0.62
1:CA:1067:A:C4'	1:CA:1068:G:O5'	2.47	0.62
31:DJ:43:GLU:HG2	31:DJ:43:GLU:O	2.00	0.62
4:CD:89:LEU:HD21	4:CD:199:ILE:HD11	1.78	0.62
32:DK:21:CYS:SG	32:DK:39:ILE:HG21	2.39	0.62
44:BW:28:GLU:CG	44:BW:29:SER:N	2.57	0.62
22:BA:1713:A:H4'	22:BA:1714:U:OP1	1.99	0.62
33:DL:120:VAL:HG12	33:DL:121:THR:N	2.14	0.62
1:AA:619:U:C2	4:AD:131:ILE:CD1	2.82	0.62
11:AK:86:LYS:CA	11:AK:113:THR:HG22	2.29	0.62
31:DJ:25:LEU:C	31:DJ:27:ARG:H	2.03	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2695:U:O2'	22:DA:2696:U:H5'	2.00	0.62
18:AR:35:SER:HB3	21:AU:3:ILE:HG13	1.80	0.62
29:BH:134:VAL:HG21	29:BH:139:PHE:HA	1.82	0.62
8:AH:74:ILE:O	8:AH:74:ILE:HG23	2.00	0.62
22:DA:2093:G:C6	22:DA:2225:A:C8	2.88	0.62
25:DD:117:GLY:O	25:DD:119:ALA:N	2.33	0.62
22:DA:1439:A:C8	22:DA:1440:U:O4'	2.53	0.62
22:DA:2624:G:C2	22:DA:2625:G:C1'	2.77	0.62
8:AH:87:ARG:O	8:AH:121:GLY:HA3	1.99	0.62
8:AH:88:LYS:HA	8:AH:91:LEU:HG	1.81	0.62
29:BH:21:VAL:HG21	29:BH:25:TYR:HD2	1.63	0.62
22:DA:418:C:H2'	22:DA:419:U:H6	1.65	0.62
22:DA:2611:C:H5'	22:DA:2611:C:C6	2.23	0.62
27:DF:30:VAL:CG1	27:DF:168:LEU:HD23	2.29	0.62
1:AA:180:U:H2'	1:AA:181:A:O5'	1.99	0.62
2:AB:146:SER:O	2:AB:147:LEU:HD23	1.99	0.62
25:DD:112:THR:HG22	25:DD:113:SER:H	1.64	0.62
33:BL:19:LEU:HB2	33:BL:27:LEU:HD22	1.81	0.62
22:DA:1930:G:HO2'	22:DA:1968:G:H1	1.45	0.62
11:CK:30:ILE:HG12	11:CK:45:THR:HG22	1.82	0.62
27:DF:129:MET:HE1	27:DF:174:PHE:CZ	2.34	0.62
22:DA:2367:G:O2'	22:DA:2368:C:H5'	1.99	0.62
1:AA:771:G:H2'	1:AA:772:U:C6	2.33	0.62
30:DI:57:VAL:HG12	30:DI:58:ILE:H	1.63	0.62
22:BA:405:U:H3'	22:BA:406:G:H5'	1.82	0.62
1:AA:1379:G:N7	7:AG:1:PRO:HB2	2.14	0.62
22:BA:563:A:C2	22:BA:564:C:C2	2.87	0.62
22:DA:553:G:H2'	22:DA:554:U:O4'	1.99	0.62
11:CK:12:ARG:HD3	11:CK:12:ARG:N	2.15	0.62
22:DA:922:C:H2'	22:DA:923:G:C8	2.32	0.62
9:AI:6:TYR:CG	9:AI:7:GLY:N	2.68	0.62
28:BG:8:VAL:HG13	28:BG:9:VAL:N	2.14	0.62
44:BW:46:ALA:O	44:BW:47:GLY:O	2.16	0.62
37:DP:23:ASP:O	37:DP:24:THR:HG23	2.00	0.62
22:DA:1608:A:O3'	22:DA:1609:A:H3'	2.00	0.62
1:AA:1006:G:H2'	1:AA:1007:U:C6	2.35	0.62
27:DF:48:LEU:O	27:DF:52:ALA:HB2	2.00	0.62
36:DO:43:ASN:ND2	36:DO:45:SER:HB3	2.13	0.62
1:AA:1320:C:H42	19:AS:35:ARG:HB2	1.63	0.62
22:BA:1286:A:O2'	22:BA:1288:G:OP2	2.18	0.62
22:DA:830:G:N3	22:DA:2448:A:C6	2.68	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:53:GLU:O	29:BH:53:GLU:HG2	1.98	0.62
36:DO:71:ALA:HB1	36:DO:102:ARG:O	1.99	0.62
22:DA:2662:A:H2'	22:DA:2663:G:O4'	1.99	0.62
7:CG:28:ILE:HG21	7:CG:100:MET:CG	2.28	0.62
6:CF:54:LEU:CD1	6:CF:55:HIS:N	2.63	0.62
6:CF:54:LEU:CD1	6:CF:55:HIS:H	2.12	0.62
3:CC:36:PHE:HZ	14:CN:91:GLU:O	1.82	0.62
37:DP:56:SER:O	37:DP:75:THR:HG22	2.00	0.62
1:AA:596:A:H2'	1:AA:597:G:C8	2.32	0.62
1:CA:437:U:H4'	4:CD:151:GLN:OE1	1.99	0.62
30:DI:105:LEU:HD21	30:DI:129:GLU:OE2	2.00	0.62
37:DP:32:VAL:HB	37:DP:37:LYS:HG2	1.80	0.62
23:BB:17:C:O2'	23:BB:18:G:H5'	1.99	0.62
43:BV:51:GLN:HG2	43:BV:86:LEU:HD11	1.80	0.62
30:DI:118:GLY:O	30:DI:119:ALA:HB3	1.99	0.62
19:CS:79:TYR:O	19:CS:80:ARG:HB2	1.99	0.62
22:DA:827:U:H6	56:DA:3352:HOH:O	1.81	0.62
40:DS:1:MET:N	40:DS:1:MET:CE	2.62	0.62
22:DA:2511:U:C5	22:DA:2512:C:C5	2.88	0.62
11:AK:20:ALA:HA	11:AK:33:ILE:HD13	1.82	0.62
37:BP:28:LYS:HB2	37:BP:82:SER:HB3	1.82	0.62
22:BA:1062:G:C2'	22:BA:1063:G:C8	2.83	0.62
1:AA:411:A:N6	1:AA:413:G:N2	2.48	0.62
22:DA:2331:G:H4'	44:DW:41:GLY:N	2.15	0.62
22:DA:859:G:N2	22:DA:916:G:H2'	2.14	0.62
1:CA:32:A:C2'	1:CA:33:A:H8	2.11	0.62
22:BA:1797:G:O3'	24:BC:255:LYS:HA	2.00	0.62
22:DA:216:A:C4	22:DA:217:A:C8	2.88	0.62
34:DM:19:GLY:H	34:DM:38:ARG:HH21	1.47	0.62
1:AA:469:C:O2'	1:AA:470:C:C5'	2.47	0.62
22:DA:1912:A:N6	22:DA:1917:U:H3	1.98	0.62
22:DA:1541:C:O2'	22:DA:1542:U:O4'	2.10	0.62
1:AA:542:G:C2	1:AA:543:U:C5	2.88	0.62
22:DA:188:G:H2'	22:DA:189:G:C5'	2.30	0.62
22:DA:2242:G:C5	22:DA:2243:U:C5	2.88	0.62
22:DA:479:A:H4'	22:DA:480:A:O5'	2.00	0.62
33:DL:77:ILE:HD11	33:DL:108:ALA:HB1	1.80	0.62
2:CB:35:ASN:O	2:CB:36:LYS:HD2	2.00	0.62
32:DK:7:MET:HG3	32:DK:17:ARG:HH12	1.63	0.62
12:AL:29:LYS:O	12:AL:81:ILE:HG22	2.00	0.62
23:DB:12:C:H5''	23:DB:15:A:H62	1.63	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:98:PHE:O	27:BF:102:LEU:HB2	2.00	0.62
7:CG:45:ALA:HB1	7:CG:120:ALA:HB2	1.82	0.62
8:CH:11:THR:CG2	8:CH:14:ARG:HH12	2.12	0.62
35:BN:103:ARG:HB2	35:BN:110:MET:HE3	1.82	0.62
24:BC:12:ARG:HG3	24:BC:12:ARG:NH1	2.01	0.62
22:DA:960:A:C8	22:DA:962:G:C8	2.87	0.62
22:DA:1182:G:H2'	22:DA:1183:U:O4'	2.00	0.62
22:BA:2820:A:O2'	22:BA:2821:A:P	2.57	0.62
1:CA:881:G:C5	1:CA:882:C:C5	2.88	0.62
1:CA:113:G:H1'	1:CA:354:G:H5'	1.81	0.62
1:CA:666:G:C6	1:CA:741:G:C6	2.87	0.62
33:DL:29:LYS:C	33:DL:30:THR:HG23	2.19	0.62
35:DN:67:PHE:HE2	35:DN:73:ASN:CG	2.02	0.62
37:BP:33:GLU:N	37:BP:36:LYS:O	2.32	0.62
1:AA:824:G:H1'	8:AH:1:SER:HA	1.81	0.62
28:BG:61:TRP:CE3	28:BG:61:TRP:HA	2.34	0.62
13:AM:2:ARG:C	13:AM:3:ILE:HG23	2.19	0.62
11:AK:51:PHE:HZ	11:AK:64:VAL:HG11	1.65	0.62
1:CA:1011:C:N3	1:CA:1019:A:C2	2.68	0.62
37:DP:62:LYS:O	37:DP:63:ILE:HB	2.00	0.62
38:DQ:40:LYS:HD3	38:DQ:44:TYR:CE2	2.34	0.62
22:BA:2729:G:O2'	22:BA:2730:C:H5'	2.00	0.62
22:DA:1585:C:H2'	22:DA:1586:A:O5'	2.00	0.62
25:BD:47:ALA:HA	25:BD:84:LEU:HG	1.81	0.62
22:BA:2134:A:N6	22:BA:2135:A:N6	2.47	0.62
1:AA:1378:C:C5	1:AA:1379:G:C8	2.88	0.62
24:DC:8:THR:O	24:DC:9:SER:HB3	2.00	0.62
22:BA:2520:C:O2'	22:BA:2521:C:H5'	1.98	0.62
22:DA:2718:G:OP1	37:DP:97:TYR:HD1	1.82	0.62
22:DA:1823:G:H5'	56:DC:410:HOH:O	1.98	0.62
1:CA:1009:U:H2'	1:CA:1010:U:C6	2.35	0.62
38:DQ:71:ASN:ND2	38:DQ:106:THR:HA	2.15	0.62
1:AA:614:C:H2'	1:AA:615:G:O5'	1.99	0.62
44:DW:70:VAL:O	44:DW:70:VAL:HG22	2.00	0.62
22:DA:121:G:H1'	22:DA:148:U:N3	2.14	0.62
22:DA:728:G:C2	22:DA:730:A:C4	2.88	0.62
22:DA:1426:G:H5'	22:DA:1427:A:OP2	2.00	0.62
41:BT:19:LYS:O	41:BT:23:ALA:N	2.26	0.62
44:BW:22:VAL:O	44:BW:25:PHE:HD2	1.82	0.62
22:DA:2054:A:N7	22:DA:2056:G:H1'	2.15	0.62
22:DA:565:C:H2'	22:DA:566:U:O4'	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:627:A:N6	33:DL:111:ILE:HB	2.15	0.62
22:BA:1656:C:H5''	25:BD:141:ARG:HB2	1.82	0.62
31:DJ:64:VAL:HG13	31:DJ:65:THR:N	2.14	0.62
37:BP:104:GLY:O	37:BP:106:ALA:N	2.33	0.62
25:DD:114:LYS:HB2	25:DD:116:LYS:HE3	1.81	0.62
1:AA:1373:G:H5''	7:AG:35:LYS:HD2	1.82	0.62
24:DC:131:MET:HE1	24:DC:183:VAL:HG11	1.82	0.62
8:AH:78:SER:HA	8:AH:84:ILE:HG12	1.81	0.62
22:DA:593:U:C2	22:DA:594:U:C5	2.88	0.62
1:CA:265:G:H2'	1:CA:266:G:H5'	1.82	0.62
22:DA:1734:G:C2'	22:DA:1735:A:H8	2.13	0.62
14:AN:2:LYS:HD3	14:AN:5:MET:HG3	1.82	0.62
22:BA:2151:U:O2'	22:BA:2152:G:C5'	2.45	0.62
20:CT:73:ARG:NH1	20:CT:73:ARG:HG3	2.13	0.62
22:BA:1022:G:C6	22:BA:1141:U:C5	2.88	0.62
1:CA:508:U:C4'	1:CA:509:A:OP1	2.42	0.62
22:DA:2657:A:O2'	22:DA:2658:C:C5'	2.48	0.62
27:DF:94:ARG:HD3	27:DF:97:GLU:OE1	1.99	0.62
1:CA:209:U:C5'	1:CA:210:C:OP2	2.47	0.62
3:AC:143:LEU:N	3:AC:143:LEU:HD13	2.15	0.62
1:AA:819:A:H4'	1:AA:820:U:OP2	1.98	0.62
2:AB:18:GLN:O	2:AB:37:VAL:HG23	1.99	0.62
15:AO:9:LYS:NZ	15:AO:9:LYS:HB3	2.14	0.62
28:BG:33:THR:CA	28:BG:34:ARG:HH11	2.12	0.62
22:BA:2339:C:H2'	22:BA:2340:A:H8	1.63	0.62
27:DF:11:VAL:HG12	27:DF:15:LEU:HD12	1.81	0.62
1:AA:1352:C:H2'	1:AA:1353:G:H8	1.63	0.62
20:CT:81:GLN:C	20:CT:82:ILE:HG12	2.20	0.62
9:AI:28:VAL:HB	9:AI:63:TYR:CD2	2.35	0.62
1:AA:703:G:H4'	1:AA:704:A:H5'	1.81	0.62
22:BA:2408:U:H2'	22:BA:2409:G:H8	1.64	0.62
22:BA:1366:A:C2	22:BA:1367:A:H1'	2.34	0.62
22:BA:2405:G:H1'	22:BA:2412:A:N6	2.15	0.62
39:BR:48:LYS:O	39:BR:48:LYS:HD2	1.99	0.62
22:BA:2641:G:OP1	31:BJ:76:HIS:HE1	1.82	0.62
22:DA:1388:G:C2'	22:DA:1389:G:H8	2.13	0.61
46:DY:22:LEU:HD12	46:DY:23:ARG:HH12	1.64	0.61
22:DA:2290:G:O2'	22:DA:2381:A:H1'	1.99	0.61
44:DW:45:HIS:O	44:DW:46:ALA:HB2	2.00	0.61
22:DA:1063:G:O2'	22:DA:1064:C:C6	2.49	0.61
30:DI:45:THR:HG23	30:DI:54:ILE:CD1	2.27	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:34:C:H2'	1:CA:35:G:C8	2.34	0.61
12:CL:62:VAL:HG23	12:CL:63:THR:N	2.15	0.61
26:DE:135:ALA:C	26:DE:137:LYS:H	2.01	0.61
52:D4:19:ARG:O	52:D4:20:ASP:CB	2.47	0.61
44:BW:45:HIS:N	44:BW:45:HIS:ND1	2.48	0.61
43:DV:4:ILE:HD12	43:DV:63:ILE:CG1	2.29	0.61
8:CH:68:LYS:HA	8:CH:68:LYS:HE2	1.82	0.61
51:D3:18:LYS:CG	51:D3:19:GLY:N	2.63	0.61
25:BD:125:TRP:O	25:BD:126:ASN:HB2	1.99	0.61
32:DK:73:ASP:O	37:DP:74:GLN:HG3	2.00	0.61
34:BM:1:MET:HE3	34:BM:2:LEU:N	2.07	0.61
9:CI:35:GLU:CA	9:CI:39:GLY:HA3	2.30	0.61
23:DB:57:A:O2'	23:DB:58:A:C8	2.46	0.61
22:DA:2226:C:H2'	22:DA:2227:A:C8	2.35	0.61
14:AN:82:LYS:HE2	14:AN:85:GLU:HG3	1.82	0.61
22:DA:616:A:N3	22:DA:617:G:C8	2.68	0.61
13:CM:21:ILE:HG22	13:CM:22:TYR:N	2.15	0.61
12:CL:7:VAL:HG22	17:CQ:33:TYR:HD1	1.63	0.61
22:DA:234:U:H2'	22:DA:235:U:H6	1.65	0.61
25:BD:62:LYS:HB2	25:BD:63:PRO:HD3	1.82	0.61
1:CA:1378:C:H3'	1:CA:1379:G:C5'	2.27	0.61
35:DN:82:GLU:O	35:DN:85:PRO:HD2	2.00	0.61
1:CA:915:A:O2'	1:CA:916:U:H5'	2.00	0.61
28:DG:100:ASN:O	28:DG:115:GLN:HB2	2.00	0.61
22:BA:250:G:H2'	22:BA:251:A:H8	1.62	0.61
22:BA:1722:A:N6	22:BA:1738:G:H1'	2.15	0.61
4:AD:172:VAL:HG22	4:AD:173:ASP:N	2.15	0.61
13:AM:113:LYS:H	13:AM:114:PRO:HD2	1.61	0.61
22:BA:480:A:H2	22:BA:499:U:O2	1.83	0.61
7:AG:74:VAL:CG2	7:AG:85:GLN:HE21	2.12	0.61
17:CQ:29:LYS:HB2	17:CQ:36:PHE:CE1	2.35	0.61
18:CR:25:ILE:HD12	18:CR:67:LEU:CD2	2.29	0.61
22:BA:364:C:H2'	22:BA:365:U:H6	1.64	0.61
22:BA:2476:A:H2'	22:BA:2477:U:H5'	1.81	0.61
35:BN:116:VAL:HG22	35:BN:116:VAL:O	2.00	0.61
22:BA:2784:U:H2'	22:BA:2785:C:C6	2.35	0.61
22:BA:1845:G:O2'	22:BA:1846:G:H5'	2.00	0.61
11:AK:66:ALA:HB1	11:AK:99:LEU:HD13	1.81	0.61
2:CB:31:PHE:HB2	2:CB:41:ASN:HB2	1.82	0.61
28:BG:37:ASN:O	28:BG:38:ASP:HB3	2.00	0.61
22:BA:2720:U:OP1	37:BP:52:ARG:NH2	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:149:PRO:HG2	5:AE:150:GLU:H	1.65	0.61
8:AH:36:ALA:HB1	8:AH:60:LEU:HD21	1.80	0.61
22:BA:636:G:C5	33:BL:111:ILE:CD1	2.70	0.61
1:CA:1281:C:C5'	1:CA:1282:C:H5	2.11	0.61
9:CI:30:ASN:O	9:CI:32:ARG:HG2	2.01	0.61
22:DA:1385:A:H4'	22:DA:1386:C:OP1	2.01	0.61
22:DA:2324:U:H5'	22:DA:2325:G:C5'	2.29	0.61
22:DA:1829:A:O2'	24:DC:14:HIS:CE1	2.54	0.61
48:D0:38:LEU:N	48:D0:41:HIS:CE1	2.67	0.61
35:DN:34:ILE:HG22	35:DN:113:ILE:CG2	2.28	0.61
22:DA:1239:G:C5	22:DA:1240:U:C5	2.88	0.61
22:DA:324:A:N3	22:DA:325:G:H1'	2.14	0.61
22:DA:63:A:N6	22:DA:91:A:N6	2.48	0.61
41:DT:39:THR:HG21	41:DT:42:GLU:OE1	1.99	0.61
38:BQ:87:VAL:O	38:BQ:88:GLU:HB3	2.00	0.61
22:DA:2756:U:C1'	22:DA:2757:A:C5'	2.78	0.61
1:CA:1095:U:H2'	1:CA:1096:C:C6	2.35	0.61
1:AA:95:C:O2'	1:AA:96:U:H5'	2.01	0.61
22:BA:855:G:C1'	44:BW:23:LYS:HD3	2.29	0.61
44:BW:24:ARG:CB	44:BW:65:LYS:HD3	2.22	0.61
1:AA:542:G:O2'	1:AA:543:U:H5'	2.00	0.61
1:AA:946:A:C2	1:AA:1236:A:C2	2.88	0.61
1:CA:964:A:C2	1:CA:972:C:N3	2.69	0.61
22:DA:635:C:O2'	22:DA:639:U:H5''	2.00	0.61
35:DN:37:THR:HB	35:DN:40:LYS:CB	2.28	0.61
1:AA:797:C:O2'	1:AA:798:U:H5'	2.01	0.61
27:BF:4:HIS:O	27:BF:7:TYR:HB3	2.00	0.61
22:DA:1734:G:N3	22:DA:1735:A:C8	2.68	0.61
25:DD:118:PHE:O	25:DD:119:ALA:CB	2.48	0.61
22:DA:1476:U:O2'	22:DA:1477:A:H8	1.82	0.61
22:BA:2214:C:H2'	22:BA:2215:C:H6	1.65	0.61
24:BC:94:LEU:HD13	24:BC:100:ARG:HD3	1.82	0.61
23:DB:90:C:C6	23:DB:90:C:H5''	2.22	0.61
16:AP:12:LYS:O	16:AP:13:LYS:HB2	2.00	0.61
37:BP:33:GLU:HB3	37:BP:36:LYS:H	1.65	0.61
28:DG:82:PHE:HB3	28:DG:140:ILE:HD13	1.82	0.61
22:DA:589:U:H2'	22:DA:590:A:C8	2.34	0.61
14:CN:27:LYS:HD2	14:CN:27:LYS:C	2.21	0.61
1:AA:1469:C:C6	1:AA:1469:C:H3'	2.34	0.61
22:DA:1973:G:C6	22:DA:1974:C:C4	2.88	0.61
42:BU:17:ASP:O	42:BU:19:GLY:N	2.32	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:8:PHE:HE1	6:AF:21:MET:HE1	1.64	0.61
1:CA:802:A:H2'	1:CA:803:G:C5'	2.30	0.61
22:DA:1858:A:N6	22:DA:1885:A:C8	2.68	0.61
17:CQ:29:LYS:HE2	17:CQ:36:PHE:CZ	2.36	0.61
22:DA:1417:C:O2'	22:DA:1418:G:C5'	2.48	0.61
22:BA:2402:U:C2'	22:BA:2403:C:OP2	2.48	0.61
1:CA:739:C:H2'	1:CA:739:C:O2	1.99	0.61
1:AA:417:G:C6	1:AA:418:C:C4	2.88	0.61
1:AA:1108:G:OP1	3:AC:175:HIS:HB2	2.00	0.61
1:CA:1262:C:H2'	1:CA:1263:C:H5'	1.81	0.61
1:AA:1131:G:C2'	1:AA:1132:C:O5'	2.48	0.61
1:AA:697:U:C5	1:AA:698:G:C8	2.87	0.61
12:CL:36:VAL:HG23	12:CL:36:VAL:O	2.00	0.61
30:DI:86:LYS:O	30:DI:87:SER:HB2	2.00	0.61
24:DC:65:ASP:OD2	24:DC:68:ARG:HG2	2.00	0.61
45:BX:31:ASN:OD1	45:BX:33:HIS:NE2	2.34	0.61
33:BL:100:ILE:O	33:BL:100:ILE:HD12	1.99	0.61
1:AA:429:U:H1'	1:AA:430:A:C5'	2.30	0.61
9:AI:29:ILE:HA	9:AI:64:ILE:O	1.99	0.61
46:DY:1:MET:H2	46:DY:5:GLU:HG2	1.65	0.61
27:BF:40:GLY:CA	27:BF:84:ILE:CD1	2.69	0.61
1:CA:1073:U:C2	1:CA:1074:G:C8	2.89	0.61
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.01	0.61
31:DJ:44:TYR:HD1	38:DQ:63:ARG:NH2	1.90	0.61
22:DA:1537:G:N3	22:DA:1537:G:H2'	2.14	0.61
22:BA:2269:G:O2'	44:BW:18:LYS:HG2	2.01	0.61
44:BW:23:LYS:HD2	44:BW:24:ARG:CA	2.29	0.61
22:DA:1609:A:N6	22:DA:1616:A:C2	2.68	0.61
1:AA:265:G:C2'	1:AA:266:G:H5'	2.30	0.61
17:AQ:51:GLU:HG3	17:AQ:74:LEU:HD21	1.82	0.61
40:DS:8:ARG:HA	40:DS:102:HIS:ND1	2.15	0.61
26:BE:6:LYS:HG2	26:BE:7:ASP:N	2.15	0.61
22:DA:2515:C:OP1	31:DJ:81:ILE:HG22	2.00	0.61
31:BJ:124:VAL:CG2	31:BJ:125:TYR:N	2.63	0.61
23:DB:64:G:H3'	23:DB:65:U:H6	1.65	0.61
10:AJ:57:VAL:O	10:AJ:58:ASN:HB2	1.99	0.61
29:BH:3:VAL:HA	29:BH:37:VAL:O	2.00	0.61
4:CD:69:ARG:CG	4:CD:69:ARG:NH1	2.54	0.61
1:CA:1297:G:H1'	7:CG:113:LYS:HZ1	1.65	0.61
1:AA:821:G:H4'	56:AA:1742:HOH:O	1.99	0.61
25:DD:34:VAL:HG12	25:DD:48:ILE:CG1	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1746:A:H2'	22:BA:1747:U:H6	1.64	0.61
22:BA:2663:G:H2'	22:BA:2664:G:H8	1.65	0.61
35:BN:12:ARG:CG	35:BN:12:ARG:HH21	2.11	0.61
44:BW:9:THR:CG2	44:BW:10:ARG:NH1	2.64	0.61
22:DA:1943:U:O4'	22:DA:1945:G:H5'	1.99	0.61
1:AA:1083:U:H5''	1:AA:1086:U:C5	2.30	0.61
1:CA:337:G:H2'	1:CA:338:A:H8	1.65	0.61
22:DA:1249:U:H4'	38:DQ:3:VAL:CG1	2.30	0.61
22:BA:1171:G:C6	22:BA:1172:C:C4	2.89	0.61
29:BH:61:VAL:O	29:BH:61:VAL:HG12	2.00	0.61
22:BA:2846:G:OP2	37:BP:51:ASN:HB2	2.01	0.61
22:BA:572:A:C2	22:BA:2033:A:C2	2.88	0.61
22:DA:863:A:C2	22:DA:915:C:N4	2.68	0.61
44:DW:81:ILE:HD12	44:DW:82:GLU:N	2.15	0.61
22:DA:1060:U:H4'	22:DA:1061:U:C5'	2.28	0.61
22:DA:1103:A:OP2	22:DA:1104:C:H5	1.84	0.61
4:CD:57:LYS:HE2	4:CD:58:GLN:OE1	2.01	0.61
18:CR:33:THR:HG23	18:CR:39:VAL:HG22	1.82	0.61
22:DA:2052:A:N7	25:DD:146:ILE:HD11	2.16	0.61
22:DA:2612:C:C5'	22:DA:2613:U:OP1	2.48	0.61
40:DS:39:THR:O	40:DS:40:ASN:HB3	2.01	0.61
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.82	0.61
29:DH:84:ALA:HA	29:DH:89:LYS:O	1.99	0.61
7:CG:59:GLU:HG3	7:CG:60:ALA:H	1.64	0.61
41:DT:29:THR:HB	41:DT:86:THR:N	2.16	0.61
27:DF:59:ILE:HG23	27:DF:137:PHE:HE1	1.66	0.61
1:CA:68:G:H5'	1:CA:171:A:O2'	2.00	0.61
9:AI:103:VAL:HG23	9:AI:104:THR:N	2.15	0.61
2:AB:162:VAL:CG2	2:AB:184:ALA:HB2	2.30	0.61
1:AA:414:A:O2'	1:AA:415:A:H5'	2.00	0.61
25:DD:118:PHE:O	25:DD:119:ALA:HB3	1.99	0.61
25:DD:137:SER:HB3	25:DD:138:LEU:HD23	1.81	0.61
2:AB:26:MET:HE2	2:AB:29:PHE:CD2	2.36	0.61
7:CG:134:VAL:HB	7:CG:137:ARG:NH2	2.06	0.61
1:AA:33:A:H2'	1:AA:34:C:C6	2.35	0.61
5:AE:55:VAL:HG12	5:AE:56:PRO:N	2.15	0.61
17:AQ:28:VAL:O	17:AQ:37:ILE:HD12	2.01	0.61
22:DA:1023:U:H6	22:DA:1023:U:C5'	2.10	0.61
22:BA:1963:U:C6	22:BA:1963:U:C3'	2.78	0.61
1:AA:172:A:C5	1:AA:174:A:N7	2.69	0.61
22:DA:1698:A:H4'	22:DA:1699:G:O5'	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2015:A:N1	48:B0:2:VAL:HG23	2.15	0.61
28:BG:4:ALA:HB2	28:BG:65:GLY:HA2	1.82	0.61
1:AA:1004:A:H2'	1:AA:1005:A:O4'	1.99	0.61
24:DC:211:ARG:CD	24:DC:217:PRO:HD3	2.29	0.61
24:BC:132:ARG:HH12	24:BC:169:ALA:HA	1.65	0.61
22:DA:2825:G:H3'	22:DA:2826:A:H8	1.64	0.61
23:BB:49:C:OP1	36:BO:102:ARG:HG3	2.00	0.61
29:BH:78:VAL:HG11	29:BH:145:ASN:CB	2.30	0.61
1:AA:1015:G:O2'	1:AA:1016:A:H5'	1.99	0.61
22:BA:686:U:H2'	22:BA:788:A:C2	2.35	0.61
1:CA:1029:U:H4'	1:CA:1032:G:H1	1.65	0.61
1:CA:1531:A:O2'	1:CA:1532:U:H5'	2.01	0.61
51:B3:21:PHE:H	51:B3:48:MET:HE3	1.65	0.61
22:BA:617:G:O2'	22:BA:618:G:H5'	2.01	0.61
22:BA:623:C:H2'	22:BA:624:C:C6	2.36	0.61
22:DA:377:G:C6	22:DA:378:C:C4	2.88	0.61
22:DA:749:A:C4	22:DA:750:A:C8	2.88	0.61
31:BJ:2:LYS:CD	31:BJ:2:LYS:N	2.47	0.61
31:BJ:4:PHE:N	31:BJ:44:TYR:OH	2.33	0.61
1:CA:356:A:H2'	1:CA:357:G:O4'	2.01	0.61
35:DN:98:LEU:HD23	48:D0:53:VAL:HG21	1.82	0.61
22:DA:101:A:O2'	22:DA:102:U:P	2.57	0.61
22:DA:117:G:C6	22:DA:119:A:C6	2.89	0.61
22:DA:1361:G:H2'	22:DA:1362:C:C5'	2.30	0.61
22:DA:397:U:O2'	22:DA:398:C:H6	1.83	0.61
25:BD:4:LEU:HD13	25:BD:100:LEU:HD23	1.81	0.61
22:DA:455:C:C6	22:DA:472:A:C2	2.88	0.61
22:DA:1112:G:O2'	22:DA:1113:U:C5'	2.49	0.61
28:BG:9:VAL:HA	28:BG:48:THR:HA	1.82	0.61
37:DP:25:VAL:HA	37:DP:85:VAL:HA	1.82	0.61
52:D4:7:VAL:O	52:D4:8:LYS:HG2	2.01	0.61
22:DA:481:G:HO2'	22:DA:482:A:P	2.22	0.61
2:AB:185:ILE:O	2:AB:185:ILE:HG13	2.00	0.61
2:CB:78:ALA:O	2:CB:213:LEU:HD23	2.01	0.61
41:BT:43:ILE:O	41:BT:47:VAL:HG23	2.00	0.61
16:CP:20:VAL:HG22	16:CP:21:VAL:N	2.15	0.61
9:CI:35:GLU:HB3	9:CI:39:GLY:HA3	1.83	0.61
22:BA:142:A:H2'	22:BA:143:C:C5	2.36	0.61
1:CA:82:G:H2'	1:CA:83:C:C4'	2.31	0.61
1:CA:275:G:N2	1:CA:276:G:C4	2.69	0.61
22:DA:971:G:C2'	22:DA:972:A:H5'	2.29	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1320:C:N4	19:AS:35:ARG:HB2	2.15	0.61
9:CI:53:LEU:HG	9:CI:96:GLU:HB3	1.82	0.61
1:AA:628:G:H2'	1:AA:629:A:H8	1.64	0.61
22:DA:672:C:H42	22:DA:808:G:H1	1.47	0.61
11:CK:78:ILE:N	11:CK:78:ILE:HD13	2.14	0.61
22:DA:1967:C:C6	22:DA:1967:C:H5''	2.27	0.61
1:CA:729:A:H2'	1:CA:730:G:C8	2.31	0.61
29:DH:41:LYS:HG2	29:DH:44:ILE:HD13	1.83	0.61
13:AM:24:VAL:O	13:AM:24:VAL:HG23	2.00	0.61
22:DA:2260:C:H2'	22:DA:2261:C:H6	1.66	0.61
3:CC:166:TRP:CE3	3:CC:166:TRP:N	2.65	0.61
1:CA:346:G:N3	1:CA:346:G:H2'	2.14	0.61
28:DG:25:ILE:CG2	28:DG:78:VAL:HG21	2.29	0.61
14:AN:91:GLU:O	14:AN:93:PRO:HD3	2.00	0.61
22:BA:610:C:O2'	22:BA:611:C:H5'	2.00	0.61
22:DA:2096:C:H2'	22:DA:2097:A:C8	2.35	0.61
22:DA:1597:A:H5''	22:DA:1598:A:H5'	1.83	0.61
22:BA:1428:C:C5	22:BA:1569:A:H5''	2.35	0.61
1:CA:301:G:H2'	1:CA:302:G:H8	1.65	0.61
10:AJ:88:MET:HE2	10:AJ:89:ARG:HH12	1.65	0.61
1:AA:686:U:O4	1:AA:703:G:H1'	2.00	0.61
22:DA:2811:G:H2'	22:DA:2812:G:H8	1.65	0.61
1:AA:128:G:O2'	1:AA:129:A:H5'	2.00	0.61
43:BV:6:ALA:HB2	43:BV:42:LEU:HD22	1.82	0.61
25:BD:9:VAL:CG2	25:BD:26:VAL:CG1	2.78	0.61
22:BA:1303:G:H2'	22:BA:1304:A:H8	1.64	0.61
30:DI:109:ALA:HB1	30:DI:125:THR:HA	1.81	0.61
51:B3:56:LEU:HD22	51:B3:56:LEU:N	2.16	0.61
22:DA:1982:U:H6	22:DA:1982:U:O5'	1.82	0.61
27:BF:52:ALA:O	27:BF:55:ASP:HB2	2.01	0.61
37:BP:53:GLY:O	37:BP:55:HIS:N	2.34	0.61
4:AD:28:ASP:OD1	4:AD:33:ILE:HG12	2.01	0.61
26:DE:149:ILE:HG12	26:DE:149:ILE:O	2.00	0.61
46:DY:1:MET:N	46:DY:1:MET:CE	2.63	0.61
24:BC:142:ASN:O	24:BC:142:ASN:ND2	2.34	0.61
22:DA:1810:A:H2'	22:DA:1811:G:O4'	2.00	0.61
43:DV:82:TYR:CD1	43:DV:83:LYS:HG2	2.35	0.61
28:BG:104:LEU:CB	28:BG:112:VAL:HG21	2.26	0.61
37:DP:19:PHE:O	37:DP:20:ARG:HB3	2.00	0.61
22:BA:2353:G:H1'	44:BW:30:VAL:HG12	1.81	0.61
24:BC:14:HIS:O	24:BC:203:VAL:HG11	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1381:U:C4	7:CG:77:ARG:NH1	2.68	0.61
10:CJ:57:VAL:CG2	10:CJ:58:ASN:H	2.01	0.61
23:DB:58:A:O2'	23:DB:59:A:C5'	2.48	0.61
27:BF:97:GLU:O	27:BF:101:ARG:HG2	1.99	0.61
24:DC:94:LEU:HA	24:DC:100:ARG:CG	2.29	0.61
1:CA:865:A:H2	1:CA:918:A:C4'	2.14	0.61
15:CO:38:LEU:O	15:CO:41:HIS:HB3	1.99	0.61
22:BA:656:G:H2'	22:BA:657:U:C6	2.35	0.61
22:DA:1688:U:O2	22:DA:1700:A:H5'	2.01	0.61
40:BS:84:ARG:HB2	40:BS:96:ILE:HD11	1.80	0.61
1:AA:877:G:H21	8:AH:1:SER:HB2	1.65	0.61
12:AL:34:THR:HG22	12:AL:35:ARG:CZ	2.30	0.61
22:DA:265:A:N7	22:DA:427:U:O2'	2.33	0.61
13:AM:2:ARG:HA	13:AM:7:ASN:O	2.00	0.61
25:DD:108:ASP:N	25:DD:204:LYS:O	2.31	0.61
16:AP:59:HIS:CE1	16:AP:63:GLN:HE22	2.16	0.61
4:CD:66:VAL:HG22	4:CD:96:ARG:NH1	2.15	0.61
1:AA:1101:A:N7	2:AB:170:ILE:HG22	2.15	0.61
1:CA:659:U:H2'	1:CA:660:C:C6	2.36	0.61
1:CA:738:C:H2'	1:CA:739:C:H6	1.65	0.61
22:BA:2075:U:H2'	22:BA:2238:G:N2	2.16	0.61
22:DA:2086:U:H2'	22:DA:2087:G:O4'	1.99	0.61
43:DV:55:GLU:O	43:DV:57:TYR:N	2.34	0.61
34:DM:63:ILE:HD11	34:DM:105:MET:CE	2.31	0.61
39:DR:19:THR:HG22	39:DR:20:VAL:N	2.14	0.61
22:BA:42:A:C3'	22:BA:43:G:H5''	2.30	0.61
6:AF:18:VAL:N	6:AF:19:PRO:HD2	2.14	0.61
25:BD:45:TYR:CD1	25:BD:45:TYR:N	2.68	0.61
27:BF:35:LEU:HD23	27:BF:153:ILE:HG21	1.81	0.61
35:DN:41:ALA:O	35:DN:45:ARG:HG3	2.00	0.61
22:DA:304:U:O2'	22:DA:305:C:C6	2.40	0.61
22:DA:335:C:O2'	22:DA:336:C:C6	2.45	0.61
43:DV:38:LEU:HD23	43:DV:40:ILE:CD1	2.30	0.61
22:DA:2394:C:OP1	33:DL:63:LYS:HG2	2.01	0.61
17:AQ:46:HIS:HB2	17:AQ:66:LEU:CD1	2.23	0.61
8:CH:62:LEU:H	8:CH:62:LEU:CD2	2.12	0.61
22:DA:475:C:O2'	22:DA:476:G:C5'	2.49	0.61
20:AT:4:LYS:CE	20:AT:5:SER:HB3	2.30	0.61
22:DA:627:A:O2'	22:DA:628:G:C8	2.53	0.61
40:BS:2:GLU:O	40:BS:3:THR:HG22	2.01	0.61
22:DA:1998:A:O3'	22:DA:2724:U:H4'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:16:ALA:HB1	32:DK:45:GLU:CG	2.31	0.61
22:DA:1299:G:H2'	22:DA:1639:C:N4	2.15	0.61
22:BA:2140:G:OP2	22:BA:2140:G:H8	1.83	0.61
13:CM:13:HIS:HB3	13:CM:16:ILE:CG1	2.31	0.61
10:AJ:20:GLN:HA	10:AJ:20:GLN:NE2	2.16	0.61
22:BA:2197:U:P	4:CD:150:LYS:HD2	2.40	0.61
22:BA:1964:G:H4'	22:BA:1965:C:OP2	1.99	0.61
27:DF:122:ASP:HB3	27:DF:126:ASN:ND2	2.15	0.61
26:DE:23:PHE:HB2	26:DE:114:ARG:NH2	2.14	0.61
33:DL:123:ARG:HA	33:DL:143:GLU:HB3	1.80	0.61
22:DA:2069:G:N2	22:DA:2443:C:C2	2.69	0.61
22:DA:668:A:C5	22:DA:670:A:C8	2.88	0.61
31:DJ:106:LYS:HE2	31:DJ:106:LYS:CA	2.29	0.61
20:CT:9:ARG:HD2	20:CT:12:GLN:NE2	2.16	0.61
26:BE:150:THR:CG2	26:BE:153:LEU:HA	2.30	0.61
13:CM:85:TYR:HE2	13:CM:96:VAL:HG13	1.64	0.61
22:BA:634:C:H6	22:BA:634:C:O5'	1.83	0.61
35:DN:12:ARG:HG3	35:DN:13:ASN:H	1.66	0.61
22:BA:1405:U:H2'	22:BA:1406:U:C6	2.36	0.61
44:DW:20:LEU:CD1	44:DW:35:ILE:HG13	2.31	0.61
44:DW:18:LYS:N	44:DW:36:ILE:HG12	2.09	0.61
22:DA:1794:A:C4	22:DA:1795:C:C5	2.89	0.61
22:DA:2819:G:H5''	56:DA:3793:HOH:O	2.00	0.61
22:DA:2837:A:N6	22:DA:2882:A:C6	2.68	0.61
41:DT:4:GLU:HG3	41:DT:6:ARG:NH2	2.10	0.61
1:CA:1160:G:C6	1:CA:1181:G:O6	2.54	0.61
22:DA:1914:C:C5	22:DA:1915:U:C4	2.88	0.61
38:DQ:63:ARG:HH12	38:DQ:99:VAL:HG21	1.65	0.61
31:DJ:103:ILE:HD12	31:DJ:103:ILE:C	2.21	0.61
25:DD:29:VAL:CB	25:DD:98:VAL:HG12	2.21	0.61
22:DA:1024:G:H2'	22:DA:1025:G:C8	2.36	0.61
41:BT:39:THR:CG2	41:BT:41:ALA:HB3	2.30	0.61
11:AK:124:LYS:HE2	11:AK:124:LYS:C	2.21	0.61
33:DL:108:ALA:HB3	33:DL:125:LEU:CD2	2.30	0.61
41:DT:29:THR:CA	41:DT:87:LEU:HB2	2.31	0.61
24:DC:144:GLU:HG3	24:DC:151:GLY:H	1.65	0.61
23:DB:17:C:N3	23:DB:68:C:N3	2.48	0.61
22:DA:1655:A:O2'	22:DA:1656:C:H5'	2.01	0.61
1:CA:1250:A:N3	1:CA:1287:A:N6	2.49	0.61
22:DA:1766:G:C6	22:DA:1987:A:C6	2.88	0.61
22:DA:1935:G:N1	22:DA:1962:C:H2'	2.13	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:71:ALA:CB	36:DO:102:ARG:HB3	2.30	0.61
22:BA:483:A:C8	22:BA:484:C:C5	2.88	0.61
44:BW:37:VAL:HG12	44:BW:38:ARG:N	2.16	0.61
22:DA:2425:A:H1'	22:DA:2427:C:C5	2.36	0.61
1:CA:1234:C:C4'	1:CA:1364:U:O2'	2.48	0.61
32:BK:88:ASN:ND2	32:BK:90:ASN:H	1.99	0.61
45:DX:19:HIS:O	45:DX:20:ALA:HB3	2.00	0.61
3:AC:52:SER:HB3	3:AC:114:LEU:HD11	1.82	0.61
1:CA:1386:G:O2'	1:CA:1387:G:H5'	2.00	0.61
22:BA:1850:G:C6	22:BA:1851:U:C4	2.89	0.61
22:DA:910:A:H62	34:DM:12:MET:HA	1.66	0.61
3:CC:122:GLN:HB2	3:CC:127:VAL:HG21	1.83	0.61
39:BR:10:LYS:HD3	39:BR:10:LYS:N	2.16	0.61
22:BA:2678:C:C2'	22:BA:2679:A:H5'	2.30	0.61
22:BA:1060:U:C5'	22:BA:1061:U:H5'	2.30	0.61
22:DA:2341:G:C2'	22:DA:2342:C:H5'	2.30	0.61
22:DA:2837:A:C6	22:DA:2882:A:N1	2.69	0.61
22:DA:321:U:C1'	26:DE:159:LEU:HG	2.30	0.61
22:DA:1808:A:H62	45:DX:27:ARG:NH1	1.88	0.61
1:AA:203:G:O2'	1:AA:466:A:H2	1.84	0.61
37:BP:85:VAL:CG1	37:BP:86:LYS:N	2.64	0.61
1:CA:672:U:O2'	1:CA:673:A:H5'	2.00	0.61
37:DP:48:ALA:HB3	37:DP:59:THR:CB	2.31	0.61
22:DA:2236:U:H2'	22:DA:2237:G:O4'	2.01	0.61
22:BA:1340:U:H3'	41:BT:61:LEU:CD2	2.30	0.61
5:CE:36:THR:HB	5:CE:63:MET:HE1	1.83	0.61
40:BS:73:LYS:C	40:BS:73:LYS:HE3	2.19	0.61
22:BA:1026:G:O2'	22:BA:1027:A:H5'	2.00	0.61
1:AA:1203:C:O2'	1:AA:1204:A:H5'	2.00	0.61
22:BA:1287:A:OP2	35:BN:103:ARG:CG	2.48	0.61
47:DZ:29:ARG:H	47:DZ:29:ARG:NH2	1.99	0.61
1:AA:1070:U:O2	1:AA:1071:C:C6	2.54	0.61
4:AD:2:ARG:HB2	4:AD:4:LEU:HD11	1.83	0.61
35:DN:79:LEU:O	35:DN:81:ASN:N	2.34	0.61
17:AQ:10:ARG:O	17:AQ:22:VAL:HG13	2.01	0.61
1:AA:185:U:H2'	1:AA:186:C:C6	2.36	0.61
44:BW:8:SER:O	44:BW:9:THR:CG2	2.49	0.61
1:CA:949:A:H4'	1:CA:1364:U:O4	2.01	0.61
3:AC:156:LEU:N	3:AC:156:LEU:HD12	2.16	0.61
22:DA:1906:G:H8	22:DA:1929:G:H2'	1.65	0.61
22:BA:639:U:H2'	22:BA:640:C:C6	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:190:LEU:O	4:AD:191:SER:CB	2.48	0.61
1:CA:1050:G:N3	1:CA:1051:C:C5	2.68	0.61
22:DA:40:U:C4	22:DA:41:C:C4	2.89	0.61
1:AA:420:U:O2'	1:AA:421:U:H5''	2.01	0.61
1:CA:1009:U:H2'	1:CA:1010:U:H6	1.64	0.61
22:BA:1845:G:C2'	22:BA:1846:G:H5'	2.31	0.61
22:BA:1534:U:H5'	22:BA:1535:A:OP1	2.00	0.61
8:CH:5:PRO:O	8:CH:8:ASP:HB3	2.01	0.61
22:DA:1173:U:H1'	22:DA:1177:G:H22	1.64	0.61
12:AL:32:VAL:HG23	12:AL:55:ARG:O	2.01	0.61
22:BA:1673:G:C2'	22:BA:1674:G:H5'	2.31	0.61
22:DA:1651:G:N2	22:DA:2007:U:C2	2.69	0.61
9:CI:127:SER:C	9:CI:129:ARG:H	2.04	0.61
5:CE:17:VAL:HG13	5:CE:17:VAL:O	2.00	0.61
22:BA:1159:U:H2'	22:BA:1160:G:H5'	1.83	0.61
22:DA:1826:G:C4	22:DA:1827:U:C5	2.89	0.61
22:DA:1062:G:H8	22:DA:1070:A:OP2	1.84	0.61
22:DA:323:C:H2'	26:DE:163:ASN:CG	2.21	0.61
41:DT:9:LYS:HG3	46:DY:21:LEU:HD13	1.82	0.61
22:DA:217:A:H2'	22:DA:218:A:N7	2.16	0.61
44:BW:24:ARG:HD3	44:BW:25:PHE:N	2.16	0.61
28:BG:93:TYR:CE2	28:BG:106:LEU:HA	2.35	0.61
22:DA:1262:A:N6	22:DA:2017:U:H3	1.99	0.61
22:BA:1501:G:C2'	22:BA:1502:A:H5'	2.31	0.61
1:CA:642:A:O2'	1:CA:643:C:C5'	2.48	0.61
22:DA:628:G:O2'	22:DA:629:G:H8	1.84	0.61
22:DA:659:G:C4'	26:DE:95:LYS:HD3	2.28	0.61
5:CE:79:THR:HA	5:CE:121:ASN:ND2	2.16	0.61
7:CG:42:VAL:O	7:CG:43:TYR:HB2	2.00	0.61
26:DE:153:LEU:HD12	26:DE:170:ARG:O	2.00	0.61
1:CA:1201:A:H1'	1:CA:1202:U:OP2	2.01	0.61
23:DB:16:G:O6	23:DB:69:G:C5	2.54	0.61
22:DA:1441:G:C4	22:DA:1551:A:C2	2.89	0.61
22:DA:1554:U:C5'	22:DA:1555:G:OP2	2.49	0.61
16:CP:1:MET:HA	16:CP:1:MET:HE2	1.83	0.61
43:DV:56:PHE:CE1	43:DV:61:LEU:HD13	2.36	0.61
22:DA:1026:G:H2'	22:DA:1027:A:C8	2.36	0.61
1:AA:1238:A:H5'	1:AA:1336:C:N4	2.12	0.61
25:BD:62:LYS:N	25:BD:63:PRO:CD	2.64	0.61
1:CA:743:A:C5	1:CA:744:C:C5	2.88	0.61
22:BA:1963:U:H6	22:BA:1963:U:H3'	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:4:ILE:HD11	40:DS:6:LYS:HE2	1.83	0.61
1:AA:180:U:C2'	1:AA:181:A:O5'	2.49	0.61
1:AA:199:A:H2'	1:AA:200:G:H8	1.66	0.61
22:BA:528:A:H8	22:BA:528:A:H3'	1.65	0.61
13:AM:2:ARG:O	13:AM:3:ILE:CG1	2.49	0.61
1:AA:1468:A:C2'	1:AA:1469:C:C5'	2.79	0.61
1:CA:158:G:H2'	1:CA:159:G:C8	2.34	0.61
39:DR:97:LYS:O	39:DR:97:LYS:HG2	2.00	0.61
22:DA:2432:A:N1	45:DX:20:ALA:CB	2.63	0.61
1:AA:1527:U:OP2	21:AU:38:GLU:HG2	2.00	0.61
22:BA:1911:U:C2	22:BA:1918:A:C2	2.89	0.61
22:BA:610:C:C2'	22:BA:611:C:H5'	2.31	0.61
22:DA:2529:G:H4'	28:DG:174:LYS:HD3	1.83	0.61
33:BL:78:ARG:HB3	33:BL:113:ALA:CB	2.31	0.61
39:DR:21:ARG:HB2	39:DR:93:PHE:CD1	2.35	0.61
2:CB:86:CYS:SG	2:CB:220:VAL:HB	2.41	0.61
22:DA:2362:C:OP2	51:D3:43:LEU:HD21	2.01	0.61
1:AA:195:A:O2'	1:AA:196:A:H5'	2.01	0.61
22:DA:1082:U:H4'	30:DI:117:THR:O	2.00	0.61
22:BA:1836:C:H2'	22:BA:1837:C:H5'	1.82	0.61
50:B2:29:GLN:O	50:B2:33:ARG:HG3	2.00	0.61
2:AB:49:PHE:CG	2:AB:212:TYR:OH	2.53	0.61
27:BF:114:ARG:N	27:BF:114:ARG:HD2	2.16	0.61
22:BA:1061:U:H1'	22:BA:1070:A:C1'	2.31	0.60
44:DW:18:LYS:CD	44:DW:19:ARG:N	2.55	0.60
30:DI:48:ILE:HG13	30:DI:49:GLU:N	2.16	0.60
1:CA:33:A:H1'	12:CL:28:GLN:OE1	2.01	0.60
22:DA:459:U:C5	22:DA:469:G:N2	2.69	0.60
32:DK:19:VAL:HG12	32:DK:41:ILE:HG12	1.82	0.60
31:DJ:82:GLY:O	31:DJ:84:ILE:N	2.34	0.60
29:BH:14:SER:OG	29:BH:17:ASP:HB2	2.01	0.60
14:CN:64:ARG:HD3	14:CN:77:GLY:O	1.99	0.60
26:DE:29:HIS:CD2	33:DL:8:PRO:HB3	2.36	0.60
22:DA:2730:C:H2'	22:DA:2731:G:O4'	2.00	0.60
21:AU:39:LYS:N	21:AU:40:PRO:CD	2.64	0.60
8:AH:124:ILE:O	8:AH:124:ILE:CG1	2.49	0.60
23:DB:13:G:N2	23:DB:16:G:C4	2.69	0.60
27:BF:147:ARG:HG3	27:BF:148:VAL:N	2.16	0.60
22:DA:413:C:H4'	22:DA:1880:U:H4'	1.81	0.60
25:DD:106:LYS:CB	25:DD:206:ALA:HB3	2.29	0.60
26:BE:143:LEU:HD13	26:BE:146:VAL:HG11	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:25:LEU:HB2	31:BJ:62:VAL:HG21	1.83	0.60
1:CA:300:A:H2	1:CA:566:G:O6	1.84	0.60
22:BA:242:G:O2'	51:B3:5:THR:HG23	2.01	0.60
34:DM:8:LYS:HA	34:DM:8:LYS:CE	2.30	0.60
3:AC:147:GLY:HA3	3:AC:171:ARG:O	2.02	0.60
6:AF:8:PHE:HA	6:AF:87:SER:HB2	1.83	0.60
22:BA:2199:A:H3'	22:BA:2200:C:C6	2.36	0.60
1:AA:605:U:C2'	1:AA:606:G:H5'	2.31	0.60
18:CR:44:THR:OG1	18:CR:46:THR:HG22	2.00	0.60
1:CA:176:C:C2'	1:CA:177:G:O5'	2.49	0.60
22:DA:1651:G:C2	22:DA:2007:U:C2	2.89	0.60
15:AO:45:HIS:C	15:AO:46:LYS:HG3	2.21	0.60
30:DI:71:LYS:HG3	30:DI:72:THR:H	1.66	0.60
3:AC:125:ARG:O	3:AC:126:ARG:CB	2.49	0.60
38:BQ:49:ARG:HH11	38:BQ:49:ARG:HG3	1.65	0.60
43:BV:65:VAL:O	43:BV:65:VAL:CG2	2.49	0.60
22:BA:1698:A:H4'	22:BA:1699:G:O5'	2.00	0.60
10:CJ:42:LEU:HD22	10:CJ:71:LEU:HD23	1.83	0.60
26:DE:178:VAL:O	26:DE:182:ALA:HB2	2.01	0.60
16:CP:52:LEU:HD23	16:CP:80:LYS:HZ1	1.66	0.60
22:DA:2283:C:N4	22:DA:2389:G:C5	2.69	0.60
22:DA:2345:G:C8	22:DA:2347:C:C5	2.89	0.60
22:DA:1775:U:C2'	22:DA:1776:G:O5'	2.49	0.60
1:CA:503:C:O5'	1:CA:503:C:H6	1.83	0.60
26:DE:131:THR:HG22	26:DE:161:ALA:H	1.65	0.60
24:BC:80:LEU:HD11	24:BC:109:LEU:CG	2.27	0.60
25:BD:98:VAL:O	25:BD:99:GLU:C	2.38	0.60
38:DQ:57:ARG:CZ	38:DQ:92:LYS:HE2	2.30	0.60
22:DA:648:G:H1'	22:DA:2351:G:OP1	2.02	0.60
1:AA:266:G:O3'	17:AQ:68:LYS:HB2	2.01	0.60
1:AA:1303:C:C2'	1:AA:1304:G:C8	2.83	0.60
1:CA:994:A:C5	1:CA:1216:A:H4'	2.35	0.60
14:CN:80:ARG:NH1	14:CN:81:ILE:HG13	2.17	0.60
1:CA:577:G:H1	1:CA:764:C:H42	1.49	0.60
25:DD:176:ASP:HB3	25:DD:190:LYS:HB3	1.82	0.60
22:BA:137:U:H3	22:BA:142:A:N6	1.98	0.60
22:DA:2843:G:C2	22:DA:2875:C:N3	2.68	0.60
23:DB:59:A:H2'	23:DB:60:C:C6	2.36	0.60
23:DB:17:C:H42	23:DB:68:C:N4	1.98	0.60
1:CA:866:C:C4	1:CA:867:G:H1'	2.35	0.60
5:AE:59:ILE:HD12	5:AE:59:ILE:O	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:415:A:C2	22:DA:2409:G:C6	2.89	0.60
1:CA:566:G:H4'	1:CA:567:G:OP1	2.00	0.60
3:CC:21:TRP:HZ3	3:CC:28:PHE:CE1	2.20	0.60
1:CA:1172:C:H2'	1:CA:1173:U:H6	1.66	0.60
22:BA:565:C:H4'	56:BA:3332:HOH:O	2.02	0.60
39:DR:98:ILE:HG22	39:DR:98:ILE:O	2.01	0.60
12:CL:34:THR:HB	12:CL:53:ARG:HG3	1.83	0.60
22:DA:283:G:H3'	22:DA:284:U:C6	2.36	0.60
10:AJ:65:TYR:HB2	14:AN:95:LEU:HD11	1.81	0.60
37:DP:28:LYS:CB	37:DP:39:LEU:HD23	2.29	0.60
11:CK:23:HIS:HB3	11:CK:30:ILE:HB	1.83	0.60
22:BA:322:A:C5	22:BA:340:A:C2	2.89	0.60
22:BA:478:A:N6	22:BA:480:A:N6	2.49	0.60
28:BG:23:ILE:HG21	28:BG:71:LEU:HD11	1.82	0.60
1:CA:1050:G:C2	1:CA:1051:C:C4	2.88	0.60
1:CA:613:C:H2'	1:CA:614:C:H6	1.65	0.60
1:AA:937:A:C2'	1:AA:938:A:H5'	2.31	0.60
51:B3:56:LEU:N	51:B3:56:LEU:CD2	2.64	0.60
24:DC:120:ASP:CG	24:DC:121:ALA:H	2.04	0.60
22:BA:1098:A:H5'	22:BA:1099:G:OP2	2.00	0.60
22:DA:516:C:H2'	22:DA:517:C:H6	1.65	0.60
22:BA:666:A:H4'	33:BL:48:ARG:HE	1.65	0.60
29:DH:54:LEU:HA	29:DH:57:LYS:CG	2.31	0.60
1:AA:1451:U:O2'	1:AA:1452:C:OP1	2.19	0.60
22:BA:13:A:O2'	22:BA:15:G:N7	2.33	0.60
22:BA:2599:G:N7	24:BC:234:GLY:HA2	2.16	0.60
22:BA:2591:C:OP1	24:BC:237:ARG:HG3	2.01	0.60
31:BJ:44:TYR:O	31:BJ:45:THR:CG2	2.49	0.60
22:BA:1062:G:H2'	22:BA:1063:G:C8	2.36	0.60
45:BX:34:SER:HA	45:BX:48:LEU:O	2.01	0.60
4:CD:187:ARG:C	4:CD:189:ASP:H	2.04	0.60
1:CA:1124:G:O2'	1:CA:1127:G:O6	2.18	0.60
22:DA:1401:G:C4	22:DA:1402:U:C5	2.89	0.60
41:DT:14:PRO:HG2	41:DT:15:HIS:H	1.64	0.60
26:DE:147:LEU:HD21	26:DE:179:SER:HB2	1.82	0.60
26:DE:179:SER:HA	26:DE:182:ALA:HB3	1.82	0.60
22:DA:2264:C:H2'	22:DA:2265:U:H6	1.66	0.60
2:AB:40:ILE:HG13	2:AB:41:ASN:N	2.13	0.60
22:DA:1064:C:HO2'	22:DA:1065:U:H5'	1.63	0.60
30:DI:49:GLU:OE2	30:DI:54:ILE:HG13	2.01	0.60
24:BC:143:VAL:HG21	24:BC:161:VAL:HG11	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DQ:73:ILE:HG13	38:DQ:74:SER:N	2.16	0.60
22:DA:1361:G:C5	22:DA:1362:C:C5	2.89	0.60
26:DE:45:ALA:O	26:DE:46:GLN:HB2	2.01	0.60
34:DM:71:LYS:HG3	34:DM:72:PRO:HD2	1.82	0.60
45:DX:56:ARG:O	45:DX:59:ASP:HB2	2.02	0.60
21:AU:10:PRO:O	21:AU:11:PHE:CB	2.49	0.60
1:CA:596:A:N6	1:CA:645:G:C6	2.70	0.60
1:CA:1324:A:H4'	1:CA:1362:A:O2'	2.01	0.60
46:BY:47:ARG:CG	46:BY:47:ARG:HH21	2.01	0.60
34:BM:1:MET:O	34:BM:2:LEU:CB	2.49	0.60
22:BA:141:G:H1	41:BT:2:ILE:HG23	1.65	0.60
38:DQ:46:TYR:CZ	38:DQ:50:ARG:NH1	2.69	0.60
25:DD:137:SER:CA	25:DD:138:LEU:HD22	2.31	0.60
25:DD:119:ALA:HB3	25:DD:163:GLY:H	1.66	0.60
1:AA:1322:C:O2'	1:AA:1323:G:H5'	2.01	0.60
7:CG:7:GLY:O	7:CG:8:GLN:HB2	2.01	0.60
30:BI:15:GLY:CA	30:BI:50:LYS:HB3	2.28	0.60
15:AO:63:ARG:HH11	15:AO:87:ARG:NH2	1.99	0.60
20:AT:28:ARG:HA	20:AT:31:ILE:HG13	1.83	0.60
17:CQ:23:ALA:C	17:CQ:24:ILE:HD12	2.22	0.60
22:BA:2531:A:OP1	28:BG:174:LYS:HG3	2.01	0.60
36:BO:59:ALA:C	36:BO:61:GLN:H	2.04	0.60
22:BA:512:G:N7	56:BA:3766:HOH:O	2.32	0.60
22:DA:2829:A:C2'	22:DA:2830:C:H5'	2.31	0.60
1:CA:1011:C:H2'	1:CA:1012:A:C8	2.34	0.60
22:DA:2523:G:O2'	22:DA:2524:G:H5'	2.01	0.60
38:DQ:64:ILE:CD1	38:DQ:95:ALA:CB	2.80	0.60
26:BE:126:VAL:HG22	26:BE:127:GLU:H	1.67	0.60
29:DH:140:ALA:O	29:DH:141:LYS:HG3	2.01	0.60
22:DA:2047:C:C2'	22:DA:2048:G:H5'	2.31	0.60
1:CA:1406:U:C2'	1:CA:1407:C:H5'	2.31	0.60
22:DA:16:C:O3'	48:D0:10:SER:HB2	2.02	0.60
22:BA:2258:C:C2	22:BA:2426:A:H4'	2.36	0.60
22:DA:1835:G:C5	22:DA:1836:C:C5	2.90	0.60
22:BA:1059:G:C6	22:BA:1060:U:C4	2.90	0.60
4:AD:7:LYS:HZ1	4:AD:21:LYS:CG	2.14	0.60
1:CA:373:A:C2	1:CA:482:A:C6	2.90	0.60
22:DA:2324:U:C5'	22:DA:2325:G:C5'	2.79	0.60
22:DA:2818:U:H2'	22:DA:2819:G:C8	2.36	0.60
22:DA:301:G:C2	22:DA:302:C:N4	2.69	0.60
22:DA:310:A:H1'	22:DA:311:A:C8	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:300:A:C5	22:DA:334:C:H4'	2.36	0.60
22:DA:96:C:H4'	46:DY:41:HIS:HD2	1.66	0.60
24:BC:257:ARG:HG3	24:BC:269:ARG:NH2	2.15	0.60
49:B1:9:LYS:N	49:B1:9:LYS:HD3	2.17	0.60
1:AA:500:G:C6	1:AA:501:C:N4	2.69	0.60
29:DH:120:GLY:O	29:DH:121:VAL:HB	2.01	0.60
31:BJ:72:LYS:HD3	31:BJ:74:TYR:CE1	2.36	0.60
25:DD:146:ILE:CD1	25:DD:155:VAL:CG2	2.79	0.60
12:AL:85:ARG:NE	12:AL:87:LYS:HB3	2.16	0.60
20:AT:7:LYS:O	20:AT:11:ILE:HG22	1.99	0.60
22:DA:2136:G:O2'	22:DA:2137:U:C6	2.45	0.60
11:AK:35:ASP:OD2	11:AK:39:ASN:HB2	2.01	0.60
22:DA:2572:A:C8	25:DD:149:ASN:ND2	2.58	0.60
25:DD:151:THR:HG22	25:DD:152:PRO:N	2.16	0.60
1:AA:1124:G:H2'	1:AA:1145:A:N6	2.17	0.60
5:CE:73:VAL:HG11	5:CE:143:LEU:HB3	1.83	0.60
22:DA:2735:G:H2'	22:DA:2736:A:H8	1.65	0.60
41:DT:50:LEU:HD22	41:DT:51:PHE:HD1	1.66	0.60
25:DD:50:VAL:HG21	25:DD:82:PHE:HE2	1.66	0.60
41:BT:2:ILE:N	41:BT:2:ILE:HD13	2.16	0.60
8:AH:79:ARG:HB2	8:AH:80:PRO:HD2	1.84	0.60
33:DL:18:ARG:O	33:DL:19:LEU:HB3	2.01	0.60
1:AA:1223:C:OP1	1:AA:1224:U:H3'	2.00	0.60
1:AA:1363:A:O2'	1:AA:1365:G:N7	2.29	0.60
35:BN:44:LEU:HD11	35:BN:48:VAL:CG2	2.31	0.60
22:BA:1057:A:C2	22:BA:1082:U:C2	2.88	0.60
29:BH:50:ARG:O	29:BH:54:LEU:HB2	2.01	0.60
1:AA:86:G:N2	1:AA:87:C:N4	2.50	0.60
22:BA:34:U:H1'	22:BA:35:G:OP1	2.00	0.60
22:BA:960:A:H5"	22:BA:961:C:OP2	2.02	0.60
27:DF:60:SER:C	27:DF:62:GLN:H	2.03	0.60
17:AQ:60:ILE:CG2	17:AQ:72:TRP:HE3	2.13	0.60
22:BA:2636:C:H4'	25:BD:81:GLU:OE2	2.02	0.60
16:CP:38:PHE:CE2	16:CP:51:ARG:CB	2.83	0.60
32:BK:77:ILE:N	32:BK:77:ILE:CD1	2.64	0.60
1:CA:1399:C:O2	1:CA:1401:G:C6	2.53	0.60
22:DA:1335:C:H2'	22:DA:1336:A:C1'	2.32	0.60
25:DD:40:LEU:HD12	25:DD:40:LEU:N	2.17	0.60
22:BA:687:C:H2'	22:BA:688:U:C6	2.36	0.60
11:CK:82:GLU:HB3	11:CK:108:ASN:HB3	1.82	0.60
3:CC:76:ILE:HA	3:CC:83:VAL:CG1	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1402:U:C2'	22:BA:1403:A:O5'	2.49	0.60
22:DA:1590:A:H2'	22:DA:1591:A:C8	2.36	0.60
22:BA:1556:C:O2'	22:BA:1557:C:H5'	2.00	0.60
22:BA:2134:A:C6	22:BA:2135:A:C6	2.89	0.60
1:AA:194:C:O2'	1:AA:195:A:H5'	2.02	0.60
1:AA:943:U:H2'	1:AA:944:G:H5'	1.83	0.60
22:BA:1394:U:P	56:BA:3409:HOH:O	2.58	0.60
22:BA:981:A:OP1	56:BA:3591:HOH:O	2.16	0.60
22:DA:2784:U:H2'	22:DA:2785:C:H6	1.67	0.60
22:BA:2458:G:O2'	22:BA:2460:U:O4	2.17	0.60
43:DV:49:ASN:O	43:DV:52:ALA:HB3	2.01	0.60
22:BA:2679:A:C2'	22:BA:2680:U:O5'	2.49	0.60
22:BA:1062:G:HO2'	22:BA:1063:G:H8	1.44	0.60
22:DA:2344:U:O2'	22:DA:2345:G:H5''	2.01	0.60
22:DA:1773:A:N3	22:DA:1978:A:C2	2.69	0.60
22:DA:310:A:C2	22:DA:330:A:C5	2.88	0.60
24:BC:139:THR:O	24:BC:161:VAL:O	2.20	0.60
24:BC:90:ILE:HA	24:BC:104:LEU:O	2.01	0.60
22:DA:1426:G:H5''	22:DA:1427:A:H3'	1.83	0.60
4:CD:29:THR:HB	4:CD:30:LYS:CE	2.30	0.60
22:DA:1539:U:O2'	22:DA:1540:G:C8	2.46	0.60
44:BW:47:GLY:C	44:BW:49:ASN:H	2.05	0.60
1:CA:665:A:H1'	1:CA:733:G:O4'	2.02	0.60
29:BH:31:VAL:HG13	29:BH:36:ALA:O	2.01	0.60
1:CA:961:U:O4	1:CA:983:A:N6	2.34	0.60
10:CJ:53:ILE:HG13	14:CN:84:ARG:CD	2.31	0.60
4:AD:90:LEU:HD11	4:AD:196:GLU:OE2	2.01	0.60
22:DA:388:G:N7	22:DA:390:U:H2'	2.16	0.60
5:CE:104:ILE:HA	5:CE:122:VAL:HG23	1.82	0.60
25:DD:24:VAL:HG23	25:DD:190:LYS:N	2.16	0.60
5:CE:14:LEU:CD1	5:CE:36:THR:HG22	2.30	0.60
22:BA:1011:G:H5''	38:BQ:76:SER:OG	2.01	0.60
17:CQ:46:HIS:CE1	17:CQ:48:GLU:HG2	2.37	0.60
19:AS:51:HIS:CD2	19:AS:53:GLY:N	2.69	0.60
1:AA:1162:C:H2'	1:AA:1163:A:H8	1.66	0.60
22:BA:548:G:H3'	22:BA:548:G:C8	2.37	0.60
1:CA:751:U:H4'	15:CO:23:SER:HA	1.83	0.60
1:AA:1336:C:H4'	1:AA:1337:G:H5'	1.84	0.60
3:CC:137:VAL:O	3:CC:140:ALA:HB3	2.01	0.60
2:CB:162:VAL:HG13	2:CB:184:ALA:CB	2.32	0.60
34:BM:80:VAL:HG23	34:BM:81:ARG:N	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:7:LEU:HD22	17:AQ:72:TRP:CH2	2.36	0.60
38:DQ:101:ASP:HB2	39:DR:2:TYR:OH	2.01	0.60
22:DA:828:U:C5	22:DA:829:A:N6	2.70	0.60
2:CB:115:ASP:O	2:CB:119:GLN:HB3	2.01	0.60
22:DA:1744:A:H3'	22:DA:1745:A:H8	1.65	0.60
22:DA:2899:A:H5'	31:DJ:136:GLN:NE2	2.17	0.60
1:CA:163:C:H2'	1:CA:164:G:O5'	2.01	0.60
28:BG:10:VAL:HG11	28:BG:16:VAL:HG21	1.82	0.60
29:BH:81:ALA:HB2	29:BH:145:ASN:O	2.02	0.60
39:BR:1:MET:HG3	39:BR:1:MET:O	1.99	0.60
22:DA:2371:G:C2	22:DA:2372:U:C6	2.89	0.60
22:DA:1512:C:H2'	22:DA:1513:U:H6	1.65	0.60
2:AB:60:ALA:HB2	2:AB:220:VAL:CG1	2.31	0.60
22:BA:2711:A:P	56:BA:3546:HOH:O	2.59	0.60
22:DA:20:C:H2'	22:DA:21:A:H8	1.66	0.60
1:CA:382:A:N7	1:CA:383:A:C6	2.69	0.60
22:BA:2524:G:H2'	22:BA:2525:G:O5'	2.01	0.60
9:AI:12:LYS:HG2	9:AI:12:LYS:O	2.00	0.60
34:BM:34:LYS:HE3	34:BM:131:VAL:HG11	1.83	0.60
38:BQ:91:ARG:HB3	38:BQ:93:ILE:CG2	2.29	0.60
38:BQ:91:ARG:NH2	38:BQ:93:ILE:CD1	2.65	0.60
22:DA:1802:A:C2	22:DA:1803:A:C6	2.90	0.60
16:CP:75:ILE:HA	16:CP:78:VAL:HG23	1.83	0.60
48:D0:42:ILE:CD1	48:D0:48:TYR:HB2	2.30	0.60
22:DA:108:G:H2'	22:DA:109:C:C6	2.37	0.60
46:DY:1:MET:H1	46:DY:1:MET:CE	2.15	0.60
46:DY:28:LEU:HD11	46:DY:43:LEU:HD13	1.84	0.60
46:DY:31:GLN:OE1	46:DY:37:LEU:HB2	2.01	0.60
22:DA:54:G:N2	22:DA:117:G:H1'	2.16	0.60
22:DA:152:A:C2	22:DA:175:G:C2	2.89	0.60
41:BT:27:SER:C	41:BT:28:ASN:ND2	2.55	0.60
44:BW:24:ARG:CD	44:BW:24:ARG:C	2.70	0.60
22:DA:527:C:N3	22:DA:2779:U:H2'	2.16	0.60
22:DA:648:G:O2'	22:DA:649:G:H5'	2.02	0.60
22:BA:1494:A:O2'	22:BA:1495:A:C5'	2.50	0.60
22:DA:1215:G:OP1	38:DQ:7:VAL:HG11	2.01	0.60
26:BE:121:VAL:O	26:BE:189:THR:HA	2.01	0.60
2:CB:73:ARG:HG3	2:CB:74:ALA:N	2.16	0.60
22:DA:2714:G:H2'	22:DA:2715:C:C6	2.36	0.60
5:CE:131:ASN:C	5:CE:135:VAL:HG23	2.22	0.60
27:DF:113:PHE:O	27:DF:114:ARG:CB	2.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:68:LYS:O	17:CQ:69:THR:CG2	2.50	0.60
31:DJ:99:ARG:HG2	31:DJ:102:GLU:OE2	2.01	0.60
1:CA:1287:A:O2'	1:CA:1288:A:C8	2.51	0.60
22:BA:1277:G:C4'	35:BN:20:MET:HE2	2.30	0.60
13:CM:16:ILE:HD12	13:CM:16:ILE:N	2.15	0.60
22:BA:1081:U:OP2	22:BA:1081:U:H6	1.85	0.60
29:BH:43:ASN:HD22	29:BH:43:ASN:N	1.99	0.60
1:CA:654:G:H2'	1:CA:655:A:C8	2.37	0.60
23:DB:45:A:C2'	23:DB:46:A:C8	2.83	0.60
15:AO:63:ARG:NH1	15:AO:67:ASP:OD1	2.34	0.60
3:CC:84:GLU:C	3:CC:86:LEU:H	2.05	0.60
22:BA:2773:C:OP1	25:BD:171:THR:CG2	2.49	0.60
28:DG:162:ARG:HB2	28:DG:166:GLU:HB3	1.84	0.60
22:DA:1713:A:OP1	22:DA:1713:A:H8	1.84	0.60
22:DA:2191:A:C5	22:DA:2192:U:C5	2.89	0.60
22:BA:1735:A:H2'	22:BA:1736:U:H6	1.66	0.60
40:BS:24:ILE:HG12	40:BS:36:LEU:CD1	2.32	0.60
22:DA:289:G:C2	22:DA:352:A:C2	2.90	0.60
22:DA:187:G:C2	22:DA:210:C:C2	2.90	0.60
10:AJ:84:VAL:CG1	10:AJ:85:ASP:N	2.64	0.60
1:AA:1464:U:H2'	1:AA:1465:A:C8	2.36	0.60
22:BA:2485:G:H5''	34:BM:45:GLN:HE22	1.67	0.60
1:AA:120:A:C5	1:AA:122:G:C6	2.90	0.60
1:AA:1064:G:N2	1:AA:1190:G:O2'	2.35	0.60
22:BA:1476:U:HO2'	22:BA:1477:A:C5'	2.14	0.60
1:AA:1136:C:O2	1:AA:1136:C:H3'	2.02	0.60
22:BA:2520:C:C6	22:BA:2567:G:H1'	2.36	0.60
22:BA:1809:A:H2'	22:BA:1810:A:C8	2.36	0.60
51:D3:9:ALA:O	51:D3:13:PHE:HD2	1.83	0.60
22:BA:976:G:OP2	56:BA:3587:HOH:O	2.17	0.60
1:CA:564:C:H6	1:CA:564:C:H5'	1.67	0.60
22:DA:745:G:C5'	22:DA:746:U:OP2	2.50	0.60
22:BA:2076:U:O2	22:BA:2076:U:O5'	2.20	0.60
34:BM:68:PHE:C	34:BM:68:PHE:CD2	2.74	0.60
31:BJ:44:TYR:CD2	38:BQ:63:ARG:CG	2.84	0.60
22:BA:1061:U:C5	30:BI:9:LYS:HG3	2.36	0.60
5:AE:153:ALA:HA	5:AE:156:ARG:N	2.15	0.60
24:DC:145:MET:HB2	24:DC:152:GLN:HE22	1.66	0.60
24:DC:77:VAL:HG23	24:DC:112:GLY:N	2.08	0.60
43:BV:80:HIS:CD2	43:BV:83:LYS:N	2.42	0.60
41:DT:45:ALA:HA	41:DT:48:GLN:HG2	1.81	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2286:G:O6	49:D1:22:THR:HG21	2.02	0.60
22:DA:782:A:N7	24:DC:219:VAL:HG21	2.16	0.60
22:DA:103:A:H2'	22:DA:104:A:C8	2.36	0.60
26:DE:126:VAL:HG22	26:DE:127:GLU:OE2	2.01	0.60
22:DA:1359:A:N1	22:DA:1360:G:H1'	2.15	0.60
1:AA:1307:U:H2'	1:AA:1308:U:H6	1.65	0.60
4:CD:2:ARG:HH11	4:CD:2:ARG:CB	2.03	0.60
22:DA:1529:G:H2'	22:DA:1530:G:C8	2.36	0.60
22:DA:2015:A:C2	48:D0:2:VAL:HG11	2.35	0.60
45:BX:38:TRP:HE3	45:BX:45:PHE:CE2	2.18	0.60
22:DA:1329:U:HO2'	22:DA:1330:C:P	2.24	0.60
1:AA:946:A:H2'	1:AA:947:G:C8	2.37	0.60
3:AC:35:ASP:O	3:AC:38:VAL:HG22	2.01	0.60
22:BA:1392:A:H61	41:BT:18:GLU:CD	2.04	0.60
5:CE:52:ALA:HB2	5:CE:61:LYS:HE3	1.82	0.60
5:CE:36:THR:HG21	5:CE:63:MET:HE2	1.83	0.60
22:DA:1664:A:O2'	22:DA:1665:A:H5'	2.01	0.60
22:DA:2199:A:C4	22:DA:2200:C:C5	2.89	0.60
32:DK:38:ILE:HG23	32:DK:60:ALA:O	2.01	0.60
25:DD:17:GLU:H	25:DD:17:GLU:CD	2.05	0.60
7:CG:35:LYS:HB3	7:CG:35:LYS:NZ	2.17	0.60
29:DH:15:LEU:HD22	29:DH:15:LEU:N	2.17	0.60
1:AA:61:G:H2'	1:AA:62:U:H6	1.64	0.60
43:DV:29:ILE:HD12	43:DV:29:ILE:C	2.22	0.60
2:AB:95:TRP:HZ2	2:AB:100:LEU:HD23	1.67	0.60
30:BI:10:LEU:HD13	30:BI:27:LEU:HA	1.84	0.60
23:DB:44:G:H5''	27:DF:91:ARG:NE	2.17	0.60
1:CA:728:A:H2'	1:CA:729:A:C8	2.36	0.60
2:CB:122:ASP:CB	2:CB:124:THR:HG22	2.30	0.60
28:DG:117:PRO:HG2	28:DG:143:VAL:HG11	1.83	0.60
1:AA:198:G:O2'	1:AA:199:A:C5'	2.49	0.60
22:BA:2543:G:H2'	22:BA:2544:G:C8	2.37	0.60
3:AC:202:PHE:CZ	3:AC:204:GLY:HA2	2.37	0.60
27:DF:5:ASP:C	27:DF:7:TYR:H	2.04	0.60
29:BH:62:LEU:C	29:BH:62:LEU:CD1	2.68	0.60
22:BA:1476:U:C6	22:BA:1476:U:OP2	2.54	0.60
1:CA:1191:A:H8	1:CA:1191:A:OP2	1.85	0.60
22:BA:2405:G:O2'	22:BA:2411:A:N6	2.35	0.60
22:BA:42:A:H3'	22:BA:43:G:H5''	1.82	0.60
7:CG:105:GLU:O	7:CG:109:LYS:HD3	2.01	0.60
40:BS:8:ARG:HB3	40:BS:102:HIS:ND1	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2023:C:O2	22:BA:2023:C:H2'	1.99	0.60
22:DA:2099:U:H2'	22:DA:2099:U:O2	2.01	0.60
1:AA:19:A:O2'	1:AA:20:U:H5'	2.02	0.60
22:DA:1310:G:H2'	22:DA:1311:G:O4'	2.01	0.60
22:BA:995:C:HO2'	22:BA:996:A:P	2.25	0.60
28:BG:83:THR:C	28:BG:84:LYS:HE2	2.20	0.60
1:AA:429:U:H4'	1:AA:430:A:O5'	2.02	0.60
22:DA:2353:G:H21	44:DW:30:VAL:CG2	2.15	0.60
22:DA:1771:C:H42	22:DA:1980:G:H1	1.48	0.60
22:DA:1351:C:H4'	22:DA:1572:A:O4'	2.01	0.60
22:DA:379:G:C6	22:DA:396:G:C6	2.90	0.60
1:AA:92:U:O2'	1:AA:93:U:C5'	2.50	0.60
22:DA:1532:A:N1	22:DA:1540:G:C6	2.70	0.60
40:DS:96:ILE:CG2	40:DS:96:ILE:O	2.50	0.60
29:BH:32:PRO:HA	45:BX:38:TRP:HD1	1.65	0.60
29:BH:32:PRO:HA	45:BX:38:TRP:CD1	2.37	0.60
22:BA:1495:A:O2'	22:BA:1496:A:H5'	2.01	0.60
1:CA:1319:A:N6	1:CA:1323:G:C2	2.70	0.60
1:CA:1342:C:O2'	9:CI:125:GLN:HG3	2.02	0.60
1:CA:934:C:N3	1:CA:1345:U:C5	2.69	0.60
1:CA:976:G:O5'	1:CA:1358:U:O2'	2.19	0.60
19:CS:54:ARG:CG	19:CS:55:GLN:H	2.15	0.60
22:DA:637:A:N6	22:DA:652:U:H4'	2.16	0.60
22:BA:2310:C:C5	27:BF:76:PHE:CZ	2.90	0.60
22:DA:1665:A:C2'	22:DA:1666:G:H5'	2.31	0.60
22:DA:2873:A:H5''	22:DA:2874:C:OP2	2.00	0.60
12:AL:62:VAL:HG21	12:AL:94:TYR:HE2	1.61	0.60
22:DA:819:A:OP2	22:DA:1187:G:N2	2.35	0.60
42:DU:52:ASN:CG	42:DU:54:PRO:HD3	2.21	0.60
4:AD:147:LYS:HD3	4:AD:147:LYS:N	2.17	0.60
22:BA:1104:C:H2'	22:BA:1105:U:C6	2.37	0.60
22:BA:1106:G:C2	22:BA:1107:G:C8	2.89	0.60
16:AP:10:GLY:O	16:AP:11:ALA:CB	2.49	0.60
1:AA:1060:U:H5	3:AC:1:GLY:HA3	1.65	0.60
3:CC:179:ALA:HB1	3:CC:202:PHE:CE1	2.37	0.60
50:D2:15:SER:C	50:D2:16:HIS:ND1	2.55	0.60
22:DA:365:U:H2'	22:DA:366:C:C6	2.37	0.60
33:DL:23:ILE:HG13	39:DR:82:HIS:HE1	1.66	0.60
1:CA:209:U:H2'	1:CA:209:U:O2	2.01	0.60
32:BK:113:MET:CG	32:BK:116:ILE:HD11	2.32	0.60
2:AB:153:MET:CE	2:AB:157:PRO:HG3	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1087:G:O2'	1:AA:1088:G:H8	1.84	0.60
3:AC:153:SER:HB3	3:AC:164:THR:HA	1.83	0.60
22:DA:1951:U:H2'	22:DA:1953:A:OP2	2.02	0.60
38:BQ:26:ALA:HB1	38:BQ:30:VAL:HG21	1.84	0.60
22:BA:877:A:C6	22:BA:899:A:C6	2.90	0.60
22:BA:2200:C:O2'	22:BA:2201:G:H5'	2.02	0.60
25:BD:73:VAL:HG23	25:BD:74:GLU:H	1.67	0.60
1:CA:1051:C:O2'	1:CA:1052:U:C6	2.54	0.60
20:CT:57:VAL:HG12	20:CT:71:ALA:HB1	1.84	0.60
1:CA:1064:G:O2'	1:CA:1190:G:N2	2.34	0.60
22:DA:121:G:H1'	22:DA:148:U:H3	1.65	0.60
2:AB:59:ILE:C	2:AB:59:ILE:HD12	2.22	0.60
32:DK:57:VAL:HG13	32:DK:57:VAL:O	2.01	0.60
7:AG:53:SER:C	7:AG:55:LYS:H	2.04	0.60
1:CA:414:A:H2'	1:CA:415:A:H5''	1.83	0.60
22:BA:2231:U:OP1	45:BX:29:LEU:CD2	2.50	0.60
28:BG:84:LYS:HG3	28:BG:131:VAL:C	2.19	0.60
22:DA:1394:U:H4'	22:DA:1603:A:H4'	1.84	0.60
22:DA:861:A:O2'	22:DA:862:G:C5'	2.50	0.60
30:DI:4:VAL:HG22	30:DI:6:ALA:H	1.66	0.60
1:AA:1138:G:O2'	1:AA:1139:G:H4'	2.01	0.60
12:CL:80:LEU:HB3	12:CL:97:VAL:CG2	2.25	0.60
12:CL:83:GLY:H	12:CL:95:HIS:H	1.50	0.60
22:DA:1237:A:N3	22:DA:1238:G:H1'	2.17	0.60
22:DA:319:G:C6	22:DA:333:G:C6	2.89	0.60
22:DA:61:C:H2'	22:DA:62:U:H5'	1.82	0.60
24:BC:140:VAL:HA	24:BC:190:THR:O	2.01	0.60
22:DA:397:U:OP1	45:DX:30:PRO:HA	2.01	0.60
1:AA:468:A:C2	1:AA:469:C:N4	2.70	0.60
37:BP:87:ARG:CZ	37:BP:111:GLU:HG3	2.32	0.60
37:DP:88:ARG:HE	37:DP:112:ARG:NH2	2.00	0.60
22:DA:197:A:H62	22:DA:2430:A:C2'	1.96	0.60
42:DU:43:LYS:HE3	42:DU:45:GLN:OE1	2.02	0.60
1:CA:1225:A:H5'	13:CM:101:THR:CG2	2.32	0.60
33:DL:142:ILE:CG2	33:DL:144:GLU:H	2.15	0.60
5:CE:95:MET:HB3	5:CE:124:ALA:CB	2.24	0.60
22:BA:1392:A:C6	22:BA:1393:A:C6	2.90	0.60
24:DC:56:GLY:HA3	24:DC:213:ARG:O	2.02	0.60
22:BA:910:A:C4	34:BM:13:HIS:CE1	2.89	0.60
22:DA:2723:C:C5	22:DA:2724:U:C5	2.90	0.60
23:DB:16:G:O6	23:DB:69:G:C6	2.55	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:931:U:H2'	22:DA:931:U:O2	2.00	0.60
29:DH:68:ARG:HD3	29:DH:71:LYS:HB2	1.82	0.60
22:DA:1873:G:O2'	22:DA:1874:C:H5'	2.02	0.60
1:CA:1446:A:H2'	1:CA:1447:A:C5'	2.28	0.60
27:DF:31:GLU:C	27:DF:95:MET:HE2	2.22	0.60
35:DN:55:ALA:HA	35:DN:80:PHE:CE1	2.37	0.60
22:BA:893:C:O2'	22:BA:894:U:H5'	2.02	0.60
3:CC:54:ILE:O	3:CC:54:ILE:HG23	2.02	0.60
22:BA:2014:A:H2'	22:BA:2015:A:C8	2.36	0.60
22:BA:2103:C:C2'	22:BA:2104:C:H5'	2.30	0.60
4:CD:84:ASN:ND2	4:CD:86:GLY:N	2.50	0.60
22:DA:2853:C:H6	22:DA:2853:C:O5'	1.84	0.60
22:DA:266:G:H2'	22:DA:267:C:O5'	2.01	0.60
17:CQ:59:GLU:HG3	17:CQ:59:GLU:O	2.02	0.60
9:AI:100:ALA:CB	9:AI:102:PHE:CE2	2.84	0.60
31:BJ:13:ARG:O	31:BJ:14:ASP:HB2	2.02	0.60
1:AA:290:C:H2'	1:AA:291:U:H5'	1.82	0.60
1:AA:702:A:C4	22:BA:1847:A:H2	2.20	0.60
2:AB:74:ALA:O	2:AB:75:ALA:HB2	2.02	0.60
2:AB:59:ILE:HD12	2:AB:60:ALA:N	2.17	0.60
22:BA:1464:G:O2'	22:BA:1465:G:H5'	2.01	0.60
22:DA:262:A:H2	22:DA:430:A:H1'	1.66	0.60
32:BK:5:GLN:O	32:BK:6:THR:HB	2.01	0.60
50:D2:10:LEU:O	50:D2:14:ARG:HB2	2.02	0.60
22:BA:422:A:H2'	22:BA:423:A:C8	2.37	0.60
22:BA:1315:C:O2'	22:BA:1316:U:H5'	2.00	0.60
22:BA:1609:A:O2'	22:BA:1610:A:H5''	2.02	0.60
14:CN:6:LYS:O	14:CN:10:VAL:HG23	2.02	0.60
22:DA:1387:A:H5''	22:DA:1469:A:H1'	1.83	0.60
41:DT:13:ALA:HB1	41:DT:14:PRO:CD	2.30	0.60
4:AD:24:VAL:HG12	4:AD:25:ARG:N	2.16	0.60
22:DA:311:A:C2	22:DA:328:U:O4	2.55	0.60
26:DE:126:VAL:HG22	26:DE:127:GLU:CD	2.23	0.60
22:DA:95:A:H4'	46:DY:38:GLN:O	2.01	0.60
22:DA:2748:A:C1'	28:DG:66:THR:HG22	2.29	0.60
1:CA:735:C:H2'	1:CA:736:C:C6	2.37	0.60
11:CK:91:GLY:O	11:CK:94:SER:HB3	2.02	0.60
18:CR:31:TYR:CG	18:CR:54:LEU:HD21	2.37	0.60
22:DA:1287:A:O2'	22:DA:1288:G:C5'	2.50	0.60
22:DA:1140:C:OP2	31:DJ:68:LYS:HE3	2.02	0.60
22:DA:1142:A:C8	22:DA:1144:A:N7	2.70	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2694:G:C5	22:DA:2695:U:C5	2.90	0.60
41:BT:32:LEU:O	41:BT:34:VAL:HG13	2.02	0.60
37:DP:91:VAL:HG21	37:DP:96:LEU:HD21	1.83	0.60
22:BA:138:U:C3'	22:BA:139:U:H5'	2.32	0.60
22:DA:2093:G:C6	22:DA:2225:A:N7	2.69	0.60
51:D3:41:ARG:CG	51:D3:41:ARG:NH2	2.56	0.60
1:AA:1317:C:H2'	1:AA:1318:A:H5'	1.84	0.60
1:CA:1349:A:O2'	1:CA:1350:A:C5'	2.50	0.60
1:CA:1370:G:H5''	9:CI:110:VAL:HG21	1.83	0.60
52:B4:25:VAL:C	52:B4:26:ILE:HD13	2.23	0.60
1:AA:454:G:C2'	1:AA:455:G:H5'	2.31	0.60
1:AA:623:C:O2'	1:AA:624:C:H5'	2.02	0.60
22:DA:223:A:C4	22:DA:408:G:H1'	2.37	0.60
22:DA:2298:A:H5'	22:DA:2322:A:O2'	2.01	0.60
26:BE:41:GLN:HB2	26:BE:43:THR:HG23	1.84	0.60
22:DA:1634:A:H4'	22:DA:1635:A:OP1	2.02	0.60
47:BZ:35:VAL:HG21	47:BZ:37:ARG:NH1	2.16	0.60
22:DA:804:A:H5''	22:DA:805:G:OP1	2.01	0.60
2:AB:80:LYS:HB2	2:AB:90:PHE:HE1	1.67	0.60
22:DA:2149:U:C2	22:DA:2150:C:C5	2.90	0.60
4:AD:137:SER:HB3	4:AD:138:PRO:HD2	1.84	0.60
1:CA:1431:A:OP2	1:CA:1431:A:H8	1.83	0.60
24:BC:136:VAL:HG23	24:BC:166:ARG:NH1	2.17	0.60
22:DA:1839:G:O2'	22:DA:1840:G:C5'	2.50	0.60
3:AC:21:TRP:CG	3:AC:58:ARG:HG2	2.37	0.60
34:DM:136:MET:HE2	43:DV:57:TYR:HD2	1.67	0.60
1:CA:631:C:H3'	1:CA:632:U:H5'	1.84	0.60
1:AA:657:U:O2'	1:AA:658:C:H5'	2.02	0.60
1:CA:9:G:H2'	1:CA:10:A:H8	1.67	0.60
22:BA:1033:U:H4'	22:BA:1034:G:OP1	2.01	0.60
13:AM:65:GLU:O	13:AM:69:ARG:HG3	2.02	0.60
22:DA:568:U:H2'	22:DA:570:G:OP2	2.02	0.60
22:BA:1204:A:H4'	22:BA:1205:A:O5'	2.01	0.60
1:CA:1490:U:H5'	1:CA:1491:G:OP2	2.01	0.60
17:AQ:58:VAL:CG2	17:AQ:59:GLU:N	2.65	0.60
5:AE:110:MET:O	5:AE:114:LEU:HB2	2.02	0.59
8:AH:45:ILE:CA	8:AH:63:LYS:HD2	2.32	0.59
1:CA:1256:A:C4	1:CA:1278:G:C6	2.89	0.59
22:DA:2287:A:N7	22:DA:2289:G:C8	2.69	0.59
22:DA:1826:G:C5	22:DA:1827:U:C5	2.90	0.59
35:DN:98:LEU:HD21	48:D0:53:VAL:HG11	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:6:TYR:HE2	9:AI:17:ARG:HB2	1.67	0.59
9:AI:65:THR:HG22	9:AI:66:VAL:N	2.17	0.59
1:CA:505:G:C6	1:CA:535:A:C2	2.90	0.59
42:DU:90:LYS:HB3	42:DU:92:VAL:HG13	1.84	0.59
46:DY:28:LEU:HD23	46:DY:42:LEU:HD13	1.84	0.59
22:BA:1818:U:O2'	22:BA:1819:A:OP2	2.18	0.59
28:BG:137:LYS:C	28:BG:140:ILE:HD11	2.20	0.59
1:AA:214:C:O2'	1:AA:215:C:H5'	2.02	0.59
31:DJ:45:THR:HG21	31:DJ:50:THR:CG2	2.27	0.59
38:DQ:57:ARG:O	38:DQ:61:ILE:HD13	2.02	0.59
37:DP:88:ARG:CZ	37:DP:112:ARG:HH21	2.14	0.59
22:DA:200:U:O4	22:DA:248:G:C2	2.55	0.59
22:DA:1255:U:O2'	22:DA:1256:G:OP1	2.20	0.59
22:DA:2515:C:OP1	31:DJ:81:ILE:CG2	2.49	0.59
5:CE:143:LEU:O	5:CE:144:GLU:CB	2.50	0.59
5:CE:96:GLN:HG2	5:CE:97:PRO:HD2	1.84	0.59
46:BY:43:LEU:O	46:BY:47:ARG:HB2	2.02	0.59
22:BA:387:U:H4'	22:BA:388:G:O5'	2.01	0.59
41:BT:32:LEU:N	41:BT:32:LEU:HD23	2.16	0.59
24:BC:246:PRO:CG	24:BC:247:TRP:CH2	2.85	0.59
22:DA:1991:U:H6	22:DA:1991:U:H5''	1.67	0.59
31:BJ:54:ILE:HD12	31:BJ:54:ILE:C	2.23	0.59
1:CA:182:A:HO2'	1:CA:183:C:H2'	1.67	0.59
1:CA:91:U:C4	1:CA:92:U:C4	2.90	0.59
22:BA:1461:C:O2'	22:BA:1462:C:C5'	2.49	0.59
1:CA:1305:G:H22	1:CA:1331:G:H2'	1.67	0.59
7:CG:116:ALA:C	7:CG:120:ALA:HB3	2.23	0.59
8:AH:25:THR:O	8:AH:26:MET:HB3	2.02	0.59
13:CM:13:HIS:CB	13:CM:16:ILE:HB	2.30	0.59
22:BA:303:G:C5	22:BA:304:U:C5	2.90	0.59
1:CA:824:G:O2'	1:CA:825:A:H5'	2.01	0.59
22:DA:526:A:C6	22:DA:2626:C:H4'	2.37	0.59
2:AB:100:LEU:HB3	2:AB:174:GLU:CG	2.28	0.59
7:AG:110:ARG:HH12	7:AG:122:GLU:HG2	1.65	0.59
29:DH:78:VAL:CG1	29:DH:144:VAL:HG12	2.29	0.59
1:CA:223:A:H2'	1:CA:224:U:C6	2.31	0.59
22:BA:2778:A:H4'	22:BA:2779:U:OP2	2.02	0.59
1:CA:440:C:C2'	1:CA:441:A:H5'	2.31	0.59
14:AN:50:LEU:O	14:AN:52:ARG:N	2.35	0.59
36:DO:115:LEU:HD13	36:DO:115:LEU:N	2.16	0.59
22:BA:1252:G:C2	38:BQ:32:ARG:HG2	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:14:ALA:HB1	40:DS:18:ARG:NH2	2.16	0.59
22:DA:642:U:H2'	22:DA:644:A:OP2	2.02	0.59
22:BA:1801:A:C6	24:BC:261:ARG:NH1	2.70	0.59
1:AA:1065:U:H5''	1:AA:1190:G:N2	2.16	0.59
1:CA:929:G:H2'	1:CA:930:C:H6	1.66	0.59
22:BA:751:A:H5'	40:BS:90:LYS:HA	1.83	0.59
22:DA:560:C:H1'	38:DQ:47:ARG:NH1	2.17	0.59
22:DA:195:A:C6	22:DA:198:C:C5	2.90	0.59
30:DI:69:VAL:O	30:DI:69:VAL:HG13	2.02	0.59
22:DA:1767:G:N1	22:DA:1986:C:C4	2.70	0.59
31:BJ:44:TYR:HA	38:BQ:59:LEU:HD22	1.83	0.59
5:AE:156:ARG:C	5:AE:158:LYS:H	2.05	0.59
5:AE:96:GLN:NE2	5:AE:97:PRO:HD2	2.17	0.59
1:CA:1137:C:H4'	1:CA:1138:G:C2	2.37	0.59
1:CA:1152:A:C2'	1:CA:1153:G:C8	2.68	0.59
1:AA:427:U:C4	1:AA:428:G:C6	2.89	0.59
49:D1:5:ARG:HD2	49:D1:25:ASN:HB2	1.84	0.59
44:DW:18:LYS:CD	44:DW:19:ARG:HG2	2.33	0.59
22:DA:785:G:O2'	22:DA:1779:U:C5'	2.50	0.59
7:CG:91:ARG:NH2	7:CG:92:PRO:HB2	2.17	0.59
30:DI:77:VAL:CA	30:DI:80:LYS:HE3	2.32	0.59
48:D0:46:GLY:CA	48:D0:54:ILE:HD11	2.30	0.59
41:DT:68:LYS:O	41:DT:74:ILE:HG13	2.02	0.59
24:BC:255:LYS:O	24:BC:256:THR:HG23	2.02	0.59
22:DA:1362:C:C4	22:DA:1363:C:C5	2.91	0.59
22:DA:455:C:N3	22:DA:473:G:C4'	2.65	0.59
1:AA:201:G:H5''	1:AA:202:G:OP2	2.01	0.59
31:DJ:4:PHE:HB3	38:DQ:63:ARG:HH22	1.67	0.59
12:AL:43:LYS:HB2	12:AL:43:LYS:NZ	2.16	0.59
22:DA:2016:U:C2'	22:DA:2017:U:H5'	2.31	0.59
22:BA:1714:U:C2'	22:BA:1714:U:O2	2.33	0.59
22:DA:479:A:C2	22:DA:480:A:C6	2.91	0.59
1:AA:489:C:C2'	1:AA:490:C:C5'	2.80	0.59
26:BE:7:ASP:CG	26:BE:8:ALA:H	2.06	0.59
1:CA:960:U:H4'	1:CA:961:U:H5''	1.84	0.59
1:AA:721:G:C4'	1:AA:722:G:O5'	2.37	0.59
22:DA:2572:A:H8	25:DD:149:ASN:HD21	1.46	0.59
22:DA:1462:C:H1'	22:DA:2702:G:H21	1.67	0.59
21:AU:3:ILE:HA	21:AU:19:LYS:HZ1	1.64	0.59
22:BA:141:G:N1	41:BT:2:ILE:CG2	2.65	0.59
1:CA:182:A:H2	1:CA:194:C:H42	1.47	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:268:U:H2'	1:CA:269:C:C5	2.37	0.59
27:BF:134:GLN:O	27:BF:136:ILE:N	2.28	0.59
22:DA:1299:G:H22	22:DA:1640:A:H5'	1.68	0.59
22:DA:414:C:H5''	22:DA:1879:C:O2'	2.02	0.59
25:DD:20:VAL:HG12	25:DD:22:ILE:HG12	1.82	0.59
14:AN:40:ARG:HH12	14:AN:44:VAL:CG1	2.14	0.59
1:AA:994:A:C8	1:AA:1216:A:H4'	2.37	0.59
22:BA:2439:A:H4'	22:BA:2440:C:O5'	2.02	0.59
1:AA:1234:C:H2'	1:AA:1235:U:H5'	1.85	0.59
22:DA:2741:A:C2'	22:DA:2742:G:H5'	2.32	0.59
8:AH:87:ARG:O	8:AH:88:LYS:HB3	2.00	0.59
22:BA:1419:A:H2'	22:BA:1421:G:N7	2.17	0.59
22:DA:993:G:C2'	22:DA:994:C:H5'	2.33	0.59
28:DG:90:GLY:CA	28:DG:159:LYS:HE3	2.32	0.59
2:CB:163:ILE:HG22	2:CB:164:ASP:N	2.17	0.59
22:DA:1507:C:H3'	22:DA:1508:A:O4'	2.02	0.59
35:BN:10:LEU:O	35:BN:12:ARG:HG3	2.01	0.59
4:CD:52:VAL:HG12	4:CD:53:GLN:N	2.17	0.59
1:CA:441:A:H61	1:CA:493:A:N6	2.00	0.59
28:BG:22:VAL:HG22	28:BG:36:LEU:HD11	1.82	0.59
22:DA:173:A:H2'	22:DA:174:U:C6	2.36	0.59
43:BV:17:SER:O	43:BV:20:LEU:HB2	2.02	0.59
1:AA:1469:C:C3'	1:AA:1469:C:C6	2.85	0.59
5:CE:157:GLY:HA3	8:CH:63:LYS:CE	2.32	0.59
1:AA:933:G:OP2	7:AG:2:ARG:HB3	2.02	0.59
42:BU:17:ASP:HB3	42:BU:20:LYS:HD2	1.82	0.59
22:BA:325:G:O2'	22:BA:326:G:H5'	2.02	0.59
13:CM:82:LEU:HD12	13:CM:82:LEU:N	2.18	0.59
1:CA:301:G:O2'	1:CA:302:G:H5'	2.02	0.59
12:CL:24:GLU:O	12:CL:25:ALA:CB	2.50	0.59
2:CB:8:MET:SD	2:CB:9:LEU:HD23	2.42	0.59
1:AA:1427:C:O2'	1:AA:1428:A:H5'	2.01	0.59
22:BA:1673:G:H2'	22:BA:1674:G:H5'	1.84	0.59
22:DA:1498:C:O2'	22:DA:1499:C:H5'	2.02	0.59
5:CE:37:VAL:HG11	5:CE:113:VAL:HA	1.84	0.59
50:D2:25:LYS:HA	50:D2:28:ARG:HE	1.65	0.59
24:BC:24:HIS:CE1	24:BC:25:LYS:O	2.55	0.59
27:DF:71:LYS:O	27:DF:72:SER:HB3	2.02	0.59
22:BA:1505:A:C2'	22:BA:1506:U:H5'	2.32	0.59
22:DA:2773:C:H2'	22:DA:2774:C:H6	1.67	0.59
33:DL:76:GLU:O	33:DL:76:GLU:HG3	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2133:G:P	22:BA:2133:G:H21	2.26	0.59
52:D4:22:VAL:O	52:D4:24:ARG:HG3	2.02	0.59
41:DT:17:SER:C	41:DT:18:GLU:HG2	2.22	0.59
1:CA:377:G:P	16:CP:5:ARG:HH11	2.25	0.59
44:DW:17:ALA:HB1	44:DW:36:ILE:HA	1.84	0.59
35:DN:34:ILE:CG2	35:DN:113:ILE:CG2	2.80	0.59
1:CA:532:A:C8	3:CC:192:TYR:HE2	2.20	0.59
22:DA:321:U:O2	26:DE:159:LEU:HD11	2.01	0.59
27:BF:43:ILE:HA	27:BF:82:TYR:CE1	2.37	0.59
22:DA:1914:C:H2'	22:DA:1915:U:C6	2.37	0.59
32:DK:19:VAL:CG1	32:DK:41:ILE:HG12	2.32	0.59
10:CJ:66:GLU:HG3	14:CN:100:TRP:CZ3	2.38	0.59
40:DS:24:ILE:HG22	40:DS:32:ALA:HB1	1.84	0.59
22:DA:1290:C:HO2'	22:DA:1291:C:H6	1.49	0.59
8:CH:85:TYR:CE2	8:CH:123:GLU:HB2	2.37	0.59
38:BQ:8:ILE:C	38:BQ:8:ILE:HD12	2.21	0.59
1:CA:958:A:H62	19:CS:54:ARG:NH1	2.00	0.59
20:AT:43:LYS:HD3	20:AT:86:ALA:HB1	1.84	0.59
22:DA:2440:C:H2'	22:DA:2441:U:O4'	2.02	0.59
5:CE:136:VAL:O	5:CE:140:ILE:HG13	2.02	0.59
22:DA:2686:G:C5	22:DA:2687:U:C5	2.90	0.59
22:BA:1463:C:H6	22:BA:1463:C:H5'	1.67	0.59
22:BA:2214:C:H2'	22:BA:2215:C:C6	2.37	0.59
9:AI:39:GLY:O	9:AI:40:ARG:HB2	2.03	0.59
22:DA:2741:A:H2'	22:DA:2742:G:H5'	1.84	0.59
13:CM:13:HIS:CG	13:CM:16:ILE:HD13	2.37	0.59
22:DA:1965:C:C3'	22:DA:1966:A:H5''	2.30	0.59
1:AA:1349:A:O2'	1:AA:1350:A:H5'	2.01	0.59
39:DR:89:HIS:NE2	39:DR:91:GLN:HB2	2.17	0.59
1:CA:825:A:H2'	1:CA:826:C:H6	1.66	0.59
3:CC:21:TRP:CZ3	14:CN:93:PRO:HG2	2.37	0.59
1:CA:1471:U:O2'	1:CA:1472:U:H5'	2.02	0.59
7:AG:112:ASP:HB2	7:AG:118:ARG:HG3	1.84	0.59
1:AA:641:U:H4'	8:AH:106:SER:O	2.01	0.59
29:DH:41:LYS:HA	29:DH:44:ILE:CD1	2.32	0.59
22:BA:1510:G:O2'	22:BA:1511:G:C5'	2.50	0.59
1:AA:538:G:OP1	12:AL:109:ARG:HD3	2.02	0.59
22:DA:1000:A:N6	22:DA:1001:A:N1	2.50	0.59
1:CA:1171:A:O2'	1:CA:1172:C:H5'	2.02	0.59
42:BU:102:ILE:HG13	42:BU:102:ILE:O	2.01	0.59
37:BP:92:ARG:O	37:BP:92:ARG:CG	2.51	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:701:U:H4'	1:CA:702:A:H5'	1.84	0.59
1:AA:1468:A:C2'	1:AA:1469:C:H5'	2.29	0.59
3:CC:120:THR:CG2	3:CC:120:THR:O	2.49	0.59
22:DA:2508:G:C2	22:DA:2582:G:C6	2.90	0.59
22:BA:90:U:H2'	22:BA:91:A:C8	2.38	0.59
22:BA:2109:U:H2'	22:BA:2110:G:H5'	1.84	0.59
29:DH:73:ASN:O	29:DH:75:LEU:HD12	2.02	0.59
51:B3:56:LEU:H	51:B3:56:LEU:CD2	2.16	0.59
35:DN:49:GLU:N	35:DN:50:PRO:CD	2.65	0.59
56:BA:3242:HOH:O	26:BE:81:GLY:HA2	2.02	0.59
23:BB:40:U:O2	23:BB:43:C:H3'	2.01	0.59
22:BA:1471:G:H2'	22:BA:1472:C:H6	1.67	0.59
48:D0:12:ARG:O	48:D0:16:ARG:HG3	2.01	0.59
2:AB:64:GLY:HA3	2:AB:158:ASP:OD2	2.02	0.59
33:BL:2:ARG:HA	33:BL:5:THR:OG1	2.02	0.59
9:CI:115:VAL:HG21	10:CJ:61:ALA:O	2.03	0.59
1:AA:711:G:C2'	1:AA:712:A:H5'	2.32	0.59
31:BJ:3:THR:HG22	31:BJ:44:TYR:OH	2.02	0.59
10:CJ:37:ARG:HG2	10:CJ:75:ASP:HB3	1.84	0.59
22:DA:1393:A:N6	41:DT:19:LYS:HB2	2.16	0.59
35:DN:44:LEU:HD23	35:DN:113:ILE:HG21	1.84	0.59
12:CL:48:LEU:N	12:CL:48:LEU:HD23	2.16	0.59
22:DA:320:A:H5''	22:DA:321:U:OP1	2.03	0.59
22:DA:128:C:C6	22:DA:128:C:H5''	2.37	0.59
22:DA:49:A:N6	22:DA:177:G:C5	2.70	0.59
49:B1:33:LEU:HB3	49:B1:51:ALA:HB1	1.81	0.59
43:DV:81:PRO:HB2	43:DV:82:TYR:HD2	1.66	0.59
37:DP:24:THR:O	37:DP:44:GLY:O	2.21	0.59
2:CB:46:VAL:CG1	2:CB:47:PRO:HD3	2.19	0.59
29:BH:8:LYS:O	29:BH:9:VAL:HB	2.00	0.59
45:BX:69:GLU:HA	45:BX:72:ALA:HB3	1.84	0.59
22:DA:1614:A:H8	22:DA:1614:A:O5'	1.86	0.59
12:AL:87:LYS:O	12:AL:88:ASP:CB	2.46	0.59
10:CJ:63:ASP:OD2	14:CN:84:ARG:NH1	2.35	0.59
19:CS:50:VAL:CG1	19:CS:70:LEU:HB3	2.32	0.59
1:AA:15:G:C5	1:AA:1396:A:C2	2.90	0.59
1:AA:707:U:OP1	11:AK:86:LYS:HE3	2.01	0.59
22:DA:2701:U:H3'	22:DA:2702:G:H5''	1.83	0.59
25:DD:114:LYS:HD2	25:DD:116:LYS:CE	2.31	0.59
27:BF:30:VAL:CG1	27:BF:96:TRP:CH2	2.85	0.59
1:CA:91:U:C4	1:CA:92:U:O4	2.55	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:74:ILE:HD12	8:AH:128:VAL:HG13	1.85	0.59
22:DA:988:A:C2	22:DA:989:G:C2	2.90	0.59
32:BK:39:ILE:HG22	32:BK:60:ALA:O	2.02	0.59
1:AA:977:A:C8	1:AA:1223:C:C2	2.90	0.59
1:AA:961:U:O5'	1:AA:961:U:H6	1.85	0.59
22:BA:1885:A:C2	22:BA:1886:U:H1'	2.37	0.59
27:BF:72:SER:H	27:BF:80:GLN:HB2	1.68	0.59
22:DA:227:A:HO2'	22:DA:228:C:P	2.25	0.59
28:DG:91:VAL:HG23	28:DG:92:GLY:N	2.18	0.59
6:CF:54:LEU:HD12	6:CF:56:LYS:H	1.68	0.59
23:DB:34:A:N6	23:DB:44:G:H1'	2.18	0.59
35:DN:67:PHE:HE2	35:DN:73:ASN:OD1	1.86	0.59
40:BS:85:ILE:HG22	40:BS:86:MET:N	2.17	0.59
26:DE:61:ARG:HD2	26:DE:61:ARG:O	2.02	0.59
25:BD:169:ARG:O	25:BD:170:VAL:CG1	2.48	0.59
1:AA:330:C:C5'	1:AA:330:C:H6	2.15	0.59
40:DS:75:PHE:CE2	40:DS:104:THR:HG21	2.37	0.59
1:AA:1001:C:H2'	1:AA:1002:G:C8	2.36	0.59
28:BG:36:LEU:N	28:BG:36:LEU:HD22	2.17	0.59
13:AM:4:ALA:H	13:AM:56:ARG:HG3	1.68	0.59
22:DA:1831:G:O2'	22:DA:1832:C:H5'	2.02	0.59
31:DJ:94:ALA:O	31:DJ:95:ARG:CB	2.50	0.59
38:DQ:40:LYS:HA	38:DQ:43:GLN:HG3	1.85	0.59
22:DA:9:G:C6	22:DA:2629:U:C5	2.91	0.59
22:BA:2080:A:H5'	45:BX:18:SER:HB2	1.85	0.59
20:AT:67:HIS:HB3	20:AT:68:LYS:HZ2	1.67	0.59
22:DA:2601:C:H5''	22:DA:2602:A:OP2	2.02	0.59
1:AA:649:A:H2'	1:AA:650:G:O4'	2.03	0.59
49:B1:27:ARG:O	49:B1:30:PRO:HD3	2.02	0.59
22:DA:1099:G:H5''	22:DA:1100:C:OP2	2.02	0.59
22:DA:1383:A:C2	22:DA:1384:A:C4	2.90	0.59
22:BA:996:A:H4'	38:BQ:91:ARG:CG	2.30	0.59
22:BA:1068:G:C2'	22:BA:1069:A:H5'	2.31	0.59
22:BA:1073:A:P	22:BA:1073:A:C8	2.93	0.59
33:BL:76:GLU:C	33:BL:77:ILE:HD12	2.22	0.59
4:CD:186:GLU:O	4:CD:187:ARG:CB	2.50	0.59
22:DA:1060:U:C5'	22:DA:1061:U:H2'	2.32	0.59
22:DA:1056:G:N2	22:DA:1102:C:H5	2.00	0.59
30:DI:75:ALA:HA	30:DI:78:LEU:HD12	1.84	0.59
22:DA:111:A:C2	22:DA:112:U:C2	2.91	0.59
26:DE:134:LEU:O	26:DE:138:LEU:HG	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:74:ILE:HG23	41:DT:75:GLY:N	2.16	0.59
49:B1:22:THR:OG1	49:B1:23:THR:N	2.34	0.59
22:DA:2216:G:C4	22:DA:2217:G:N7	2.71	0.59
1:AA:466:A:H5'	1:AA:467:U:OP2	2.03	0.59
44:BW:25:PHE:O	44:BW:65:LYS:HA	2.02	0.59
43:DV:75:GLN:HG3	43:DV:92:VAL:HG11	1.84	0.59
37:DP:45:VAL:HG12	37:DP:46:VAL:N	2.16	0.59
40:DS:20:VAL:CG2	40:DS:23:LEU:HD12	2.32	0.59
35:BN:79:LEU:O	35:BN:80:PHE:CB	2.42	0.59
1:CA:996:A:N1	1:CA:1046:A:H5'	2.16	0.59
1:CA:1219:A:C6	1:CA:1220:G:C5	2.91	0.59
4:AD:84:ASN:ND2	4:AD:87:GLU:HG2	2.17	0.59
33:DL:111:ILE:O	33:DL:131:ALA:HB1	2.01	0.59
33:DL:128:THR:HB	33:DL:131:ALA:H	1.67	0.59
22:DA:1462:C:C1'	22:DA:2702:G:H21	2.16	0.59
32:DK:16:ALA:HB1	32:DK:45:GLU:HG3	1.84	0.59
42:BU:38:ILE:O	42:BU:40:LEU:HG	2.02	0.59
27:BF:131:VAL:HG22	27:BF:151:LEU:H	1.68	0.59
22:DA:1304:A:HO2'	22:DA:1305:C:H6	1.43	0.59
22:DA:413:C:O2'	22:DA:414:C:O4'	2.16	0.59
24:DC:94:LEU:HB2	24:DC:100:ARG:CD	2.31	0.59
1:AA:969:A:H2'	1:AA:970:C:C6	2.38	0.59
8:AH:29:SER:HB3	8:AH:32:LYS:HG3	1.85	0.59
1:CA:455:G:N2	1:CA:478:A:C2	2.71	0.59
37:DP:50:ARG:CA	37:DP:57:ALA:O	2.49	0.59
22:DA:851:C:O4'	47:DZ:46:MET:HG2	2.02	0.59
1:AA:1082:A:H2'	1:AA:1083:U:O4'	2.01	0.59
22:BA:1378:A:H2'	56:BA:3750:HOH:O	2.02	0.59
13:AM:10:ASP:OD1	13:AM:44:ILE:HB	2.03	0.59
1:CA:264:C:H1'	17:CQ:65:PRO:HG2	1.85	0.59
22:BA:368:A:C2'	22:BA:369:U:H5'	2.32	0.59
1:CA:292:G:N7	1:CA:293:G:H1'	2.17	0.59
22:DA:7:G:HO2'	31:DJ:15:TRP:HZ2	1.50	0.59
20:CT:57:VAL:HG12	20:CT:71:ALA:CB	2.33	0.59
1:AA:357:G:C2'	1:AA:358:U:H5'	2.33	0.59
22:BA:2524:G:N2	22:BA:2539:C:O2	2.34	0.59
22:BA:1113:U:C2	22:BA:1114:C:C5	2.89	0.59
22:BA:1309:G:OP1	50:B2:9:VAL:HG13	2.03	0.59
1:CA:60:A:H4'	1:CA:61:G:O5'	2.02	0.59
30:DI:79:LEU:HD22	30:DI:100:ILE:HD12	1.83	0.59
25:DD:169:ARG:O	25:DD:170:VAL:HG22	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1113:C:H2'	1:CA:1114:C:C6	2.37	0.59
22:BA:1238:G:O2'	22:BA:1239:G:H5'	2.03	0.59
4:CD:18:LEU:O	4:CD:19:PHE:HB2	2.01	0.59
24:DC:173:LEU:H	24:DC:173:LEU:CD2	2.11	0.59
24:DC:24:HIS:CG	24:DC:25:LYS:H	2.21	0.59
27:BF:35:LEU:CB	27:BF:153:ILE:HG22	2.31	0.59
22:DA:104:A:O2'	22:DA:105:C:O4'	2.17	0.59
22:DA:323:C:C6	26:DE:165:HIS:CE1	2.89	0.59
22:DA:1381:G:H2'	22:DA:1382:G:H5''	1.84	0.59
22:DA:120:U:O4	22:DA:177:G:C8	2.56	0.59
22:DA:538:A:H5''	31:DJ:7:LYS:NZ	2.18	0.59
22:DA:538:A:HO2'	31:DJ:8:PRO:HG3	1.67	0.59
29:BH:29:PHE:O	29:BH:33:GLN:HB3	2.02	0.59
1:AA:267:C:H2'	1:AA:268:U:C6	2.38	0.59
17:AQ:14:ASP:O	17:AQ:16:MET:HG2	2.03	0.59
1:CA:643:C:O2'	1:CA:644:U:H5'	2.03	0.59
1:CA:935:A:O2'	1:CA:936:C:C6	2.53	0.59
1:CA:814:A:C5'	1:CA:1511:G:H4'	2.33	0.59
47:DZ:28:LEU:HD23	47:DZ:28:LEU:N	2.17	0.59
47:DZ:23:LEU:HD21	47:DZ:53:MET:CE	2.32	0.59
22:BA:1338:G:O2'	41:BT:18:GLU:HG2	2.02	0.59
1:AA:797:C:OP2	11:AK:125:LYS:HG3	2.02	0.59
22:DA:1665:A:H2'	22:DA:1666:G:O4'	2.02	0.59
27:DF:39:VAL:HG13	27:DF:49:LEU:HD23	1.85	0.59
1:CA:143:A:N3	1:CA:143:A:H2'	2.16	0.59
22:DA:411:G:H4'	22:DA:412:A:OP1	2.01	0.59
27:DF:74:ALA:HB1	27:DF:76:PHE:CD2	2.38	0.59
22:DA:1935:G:H1'	22:DA:1964:G:C2	2.38	0.59
22:DA:1865:U:C4	22:DA:1875:G:C2	2.90	0.59
22:BA:962:G:O2'	22:BA:963:U:H5'	2.01	0.59
23:DB:45:A:C2'	23:DB:46:A:H8	2.14	0.59
23:DB:46:A:H2'	23:DB:47:C:C5	2.38	0.59
35:DN:62:ASN:O	35:DN:63:ARG:CB	2.50	0.59
44:BW:37:VAL:O	44:BW:38:ARG:CG	2.51	0.59
11:AK:51:PHE:N	11:AK:51:PHE:CD2	2.69	0.59
5:CE:157:GLY:HA3	8:CH:63:LYS:HE3	1.85	0.59
32:BK:61:VAL:CG2	32:BK:87:LEU:HD11	2.33	0.59
1:AA:125:U:O2'	1:AA:126:G:H5'	2.02	0.59
15:AO:55:LEU:HD12	15:AO:55:LEU:C	2.22	0.59
22:DA:1527:G:N2	22:DA:1546:G:C6	2.70	0.59
22:BA:1199:U:H5''	56:BA:3702:HOH:O	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:369:U:HO2'	22:BA:370:G:P	2.25	0.59
22:BA:622:G:H2'	22:BA:623:C:C6	2.37	0.59
22:BA:363:G:O2'	22:BA:364:C:H5'	2.02	0.59
1:CA:910:C:H2'	1:CA:911:U:H6	1.66	0.59
22:DA:1512:C:H2'	22:DA:1513:U:C6	2.38	0.59
1:AA:903:G:H2'	1:AA:904:U:H6	1.68	0.59
26:BE:48:THR:OG1	26:BE:50:ALA:HB3	2.01	0.59
40:DS:27:LYS:O	40:DS:71:VAL:HG12	2.03	0.59
22:BA:2507:C:C2'	22:BA:2508:G:O5'	2.51	0.59
22:DA:1760:C:C6	22:DA:1761:C:C5	2.91	0.59
1:CA:552:U:H2'	1:CA:553:A:H8	1.67	0.59
3:CC:59:PRO:HG2	3:CC:62:SER:HB3	1.84	0.59
33:DL:48:ARG:HG3	33:DL:48:ARG:HH11	1.66	0.59
22:BA:348:A:H2'	22:BA:349:U:O4'	2.03	0.59
24:DC:61:TYR:CE1	24:DC:62:ARG:O	2.56	0.59
22:DA:1603:A:C2	22:DA:1604:C:C2	2.91	0.59
22:DA:1274:A:O2'	22:DA:1275:A:H5''	2.03	0.59
12:CL:97:VAL:HG23	12:CL:100:ALA:HB3	1.85	0.59
22:DA:104:A:O2'	22:DA:105:C:H5'	2.01	0.59
51:B3:30:HIS:CE1	51:B3:31:ILE:CG2	2.85	0.59
22:DA:2748:A:C4	22:DA:2757:A:N6	2.70	0.59
22:DA:1542:U:C2'	22:DA:1543:G:H5'	2.32	0.59
45:BX:39:VAL:O	45:BX:40:GLU:HB3	2.02	0.59
22:DA:1252:G:C2	22:DA:1253:A:C2	2.90	0.59
1:CA:979:C:H2'	1:CA:980:C:O4'	2.03	0.59
14:CN:79:SER:CB	14:CN:81:ILE:HD11	2.31	0.59
1:AA:864:A:H2'	1:AA:865:A:C8	2.36	0.59
32:BK:71:ARG:HG3	32:BK:106:GLU:OE2	2.03	0.59
22:DA:571:U:C5	22:DA:575:A:C6	2.91	0.59
37:BP:102:ARG:HB3	37:BP:107:ALA:CB	2.25	0.59
22:DA:271:G:O2'	22:DA:272:A:C5'	2.51	0.59
22:DA:2689:U:H5''	22:DA:2690:U:O5'	2.03	0.59
31:BJ:124:VAL:CG2	31:BJ:125:TYR:H	2.07	0.59
31:BJ:125:TYR:OH	31:BJ:132:HIS:NE2	2.35	0.59
27:BF:147:ARG:HG3	27:BF:148:VAL:H	1.67	0.59
22:DA:2195:U:H2'	22:DA:2196:C:H6	1.67	0.59
22:DA:1476:U:HO2'	22:DA:1477:A:H8	1.49	0.59
1:AA:1049:U:H5	14:AN:1:ALA:HA	1.65	0.59
1:AA:1158:C:C2'	1:AA:1158:C:O2	2.51	0.59
1:AA:968:A:C4'	1:AA:969:A:OP2	2.50	0.59
29:DH:68:ARG:HD3	29:DH:71:LYS:CD	2.28	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:689:A:H2'	22:DA:690:G:C8	2.38	0.59
6:CF:54:LEU:HD13	6:CF:55:HIS:N	2.16	0.59
23:DB:42:C:C5	27:DF:65:LEU:HD13	2.38	0.59
27:DF:67:THR:O	27:DF:84:ILE:HG22	2.03	0.59
1:AA:175:C:O2'	1:AA:176:C:H5'	2.03	0.59
1:CA:477:C:H5'	1:CA:478:A:OP1	2.03	0.59
24:DC:32:LEU:HD23	24:DC:63:ILE:CG1	2.32	0.59
22:BA:705:A:H62	22:BA:726:G:H1'	1.66	0.59
1:CA:222:C:O2'	1:CA:223:A:H5'	2.02	0.59
17:CQ:75:VAL:O	17:CQ:76:ARG:HB3	2.03	0.59
13:AM:4:ALA:HB2	13:AM:59:VAL:HG13	1.85	0.59
22:BA:309:A:H4'	42:BU:15:GLY:HA2	1.84	0.59
28:DG:23:ILE:HG21	28:DG:71:LEU:HD21	1.84	0.59
22:BA:2415:G:H2'	22:BA:2416:C:H6	1.66	0.59
28:BG:23:ILE:HD12	28:BG:23:ILE:N	2.17	0.59
22:DA:2520:C:H2'	22:DA:2521:C:H6	1.67	0.59
22:BA:286:U:H2'	22:BA:287:G:O4'	2.02	0.59
27:BF:172:PHE:O	27:BF:173:ASP:C	2.41	0.59
22:DA:1171:G:N2	22:DA:1179:G:H1'	2.16	0.59
22:BA:65:U:H2'	22:BA:66:C:C6	2.36	0.59
37:DP:102:ARG:O	37:DP:103:THR:HB	2.03	0.59
20:CT:57:VAL:CG1	20:CT:71:ALA:HB1	2.32	0.59
31:BJ:18:VAL:HG22	31:BJ:140:LEU:CD1	2.31	0.59
22:BA:588:U:H2'	22:BA:589:U:C6	2.38	0.59
1:AA:675:A:H1'	11:AK:117:HIS:CD2	2.37	0.59
8:AH:95:MET:HB2	8:AH:98:LEU:O	2.02	0.59
37:BP:98:TYR:CE2	37:BP:99:LEU:HD13	2.37	0.59
18:CR:52:ARG:O	18:CR:56:ARG:HG2	2.03	0.59
1:CA:296:U:C2	1:CA:297:G:C8	2.91	0.59
22:BA:1882:U:O2'	22:BA:1883:U:H5'	2.03	0.59
15:CO:83:ARG:O	15:CO:83:ARG:HG2	2.03	0.59
22:BA:1257:C:H5'	26:BE:78:TRP:CZ3	2.38	0.59
22:BA:1165:A:O2'	22:BA:1166:G:H5'	2.03	0.59
26:DE:150:THR:O	26:DE:192:ALA:HB2	2.03	0.59
22:BA:572:A:H8	56:BA:3567:HOH:O	1.86	0.59
22:BA:574:A:H2	25:BD:150:GLN:HE22	1.48	0.59
22:DA:1345:C:C2	22:DA:1346:G:N7	2.70	0.59
1:AA:433:G:H2'	1:AA:434:U:H5'	1.84	0.59
22:DA:2337:G:N3	22:DA:2337:G:H2'	2.17	0.59
22:DA:2345:G:H4'	22:DA:2346:A:O5'	2.02	0.59
22:DA:857:G:H1'	44:DW:19:ARG:NE	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:93:GLY:O	35:DN:116:VAL:HG21	2.02	0.59
11:CK:33:ILE:HD11	11:CK:69:CYS:O	2.02	0.59
22:DA:295:G:C2	22:DA:296:U:C5	2.90	0.59
24:BC:114:GLN:O	24:BC:115:ILE:HD12	2.03	0.59
45:DX:6:VAL:HG22	45:DX:7:THR:HG23	1.85	0.59
27:BF:39:VAL:HG13	27:BF:84:ILE:HD12	1.83	0.59
43:DV:38:LEU:CD2	43:DV:40:ILE:HD12	2.33	0.59
22:DA:206:U:H2'	22:DA:207:A:C8	2.38	0.59
25:DD:19:GLY:O	32:DK:72:PRO:HB3	2.03	0.59
22:DA:1329:U:O2'	22:DA:1330:C:OP1	2.20	0.59
1:CA:933:G:P	7:CG:3:ARG:HD3	2.43	0.59
9:CI:114:LYS:HD2	9:CI:117:LEU:HD12	1.84	0.59
14:CN:72:PHE:HB2	14:CN:78:LEU:O	2.03	0.59
4:AD:84:ASN:ND2	4:AD:87:GLU:H	2.00	0.59
1:AA:919:A:O2'	1:AA:920:U:H5'	2.02	0.59
22:DA:2716:C:H2'	22:DA:2717:C:C6	2.38	0.59
41:DT:21:SER:C	41:DT:25:GLU:HB3	2.23	0.59
23:DB:12:C:H5''	23:DB:15:A:N6	2.17	0.59
22:DA:1555:G:N2	22:DA:1556:C:C2	2.70	0.59
19:AS:55:GLN:NE2	19:AS:56:HIS:H	2.01	0.59
40:BS:59:GLU:HA	40:BS:64:ALA:CA	2.32	0.59
26:BE:147:LEU:HB2	26:BE:186:VAL:HB	1.84	0.59
17:CQ:9:GLY:HA3	17:CQ:23:ALA:O	2.03	0.59
40:BS:85:ILE:CG2	40:BS:86:MET:N	2.66	0.59
1:AA:114:U:H2'	1:AA:115:G:C8	2.38	0.59
22:DA:1717:A:C2'	22:DA:1718:G:O4'	2.51	0.59
22:DA:851:C:H2'	22:DA:852:U:H6	1.65	0.59
24:BC:64:VAL:HG11	24:BC:66:PHE:CZ	2.38	0.59
22:DA:2852:G:H2'	22:DA:2853:C:O4'	2.02	0.59
5:CE:68:ARG:O	5:CE:70:MET:HG2	2.02	0.59
22:BA:2544:G:C2'	22:BA:2545:G:H5'	2.33	0.59
11:CK:19:VAL:HB	11:CK:34:THR:CG2	2.32	0.59
31:DJ:70:THR:HG22	31:DJ:90:GLU:CD	2.23	0.59
1:CA:1105:A:O2'	1:CA:1106:G:H5'	2.03	0.59
22:DA:2478:A:C8	22:DA:2529:G:C5	2.90	0.59
26:DE:6:LYS:HE3	26:DE:7:ASP:OD2	2.03	0.59
28:BG:37:ASN:HB3	28:BG:40:VAL:CG1	2.32	0.59
22:BA:1300:G:H5''	22:BA:1301:A:H5'	1.85	0.59
15:AO:81:ILE:HG13	15:AO:82:GLU:N	2.18	0.59
22:BA:2849:U:H4'	22:BA:2868:A:C2	2.37	0.59
22:BA:1408:G:O2'	22:BA:1409:U:H5'	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:17:LYS:H	12:CL:17:LYS:HD3	1.68	0.59
2:CB:186:VAL:O	2:CB:186:VAL:HG23	2.03	0.59
20:CT:69:ASN:O	20:CT:72:ALA:HB3	2.02	0.59
22:BA:319:G:C4	22:BA:333:G:N2	2.71	0.59
8:AH:54:THR:O	8:AH:56:PRO:HD3	2.02	0.59
22:BA:1132:U:H5'	31:BJ:84:ILE:HD13	1.84	0.59
37:BP:4:ILE:HA	37:BP:7:LEU:HB2	1.85	0.59
31:BJ:4:PHE:O	31:BJ:44:TYR:HE1	1.84	0.59
22:BA:1076:C:H2'	22:BA:1077:A:C8	2.33	0.59
45:BX:50:VAL:HG12	45:BX:51:SER:N	2.16	0.59
22:DA:1387:A:O2'	22:DA:1388:G:H8	1.86	0.59
22:DA:2286:G:H4'	22:DA:2287:A:C1'	2.33	0.59
44:DW:30:VAL:CG2	44:DW:59:PHE:CE1	2.86	0.59
22:DA:1060:U:C4'	22:DA:1061:U:O5'	2.43	0.59
9:AI:89:TYR:O	9:AI:90:ASP:HB3	2.03	0.59
22:DA:303:G:O2'	22:DA:304:U:C6	2.48	0.59
22:DA:59:U:O2'	22:DA:73:A:H2'	2.02	0.59
41:DT:7:LEU:O	41:DT:7:LEU:HD23	2.02	0.59
22:DA:144:A:H2'	22:DA:145:C:H6	1.67	0.59
11:CK:126:ARG:HB2	21:CU:33:ARG:CD	2.32	0.59
43:DV:82:TYR:CE1	43:DV:83:LYS:HG2	2.38	0.59
1:CA:734:G:N2	1:CA:735:C:C2	2.71	0.59
22:DA:2235:G:H2'	22:DA:2236:U:C6	2.38	0.59
32:DK:71:ARG:HG3	32:DK:72:PRO:HD3	1.83	0.59
22:DA:477:A:C4	22:DA:478:A:N7	2.71	0.59
22:DA:1200:C:H6	22:DA:1200:C:O5'	1.86	0.59
22:DA:2584:U:H5	56:DA:3690:HOH:O	1.86	0.59
5:CE:80:LEU:N	5:CE:121:ASN:HD21	2.01	0.59
1:AA:1007:U:H2'	1:AA:1008:U:C5'	2.23	0.59
7:CG:55:LYS:H	7:CG:55:LYS:HD2	1.68	0.59
37:BP:102:ARG:O	37:BP:103:THR:HG22	2.02	0.59
5:CE:110:MET:HG2	5:CE:139:THR:HG21	1.83	0.59
1:CA:185:U:H2'	1:CA:186:C:H6	1.68	0.59
8:AH:17:GLN:OE1	8:AH:69:ALA:HB1	2.03	0.59
22:DA:1188:U:O2'	22:DA:1189:A:H5'	2.03	0.59
1:AA:972:C:H4'	10:AJ:59:LYS:HG2	1.83	0.59
1:CA:134:G:H2'	1:CA:135:C:O4'	2.02	0.59
18:AR:54:LEU:HG	18:AR:58:ILE:HD11	1.85	0.59
10:AJ:44:THR:HG23	10:AJ:70:HIS:CA	2.33	0.59
1:CA:321:A:H61	1:CA:332:G:H1	1.51	0.59
1:AA:1460:C:O2'	1:AA:1461:G:H5'	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2015:A:C6	48:B0:2:VAL:HG23	2.37	0.59
22:DA:676:A:H2	22:DA:2069:G:N3	2.01	0.59
22:DA:1956:U:O2'	22:DA:1957:C:C5'	2.48	0.59
1:AA:1003:G:H22	1:AA:1005:A:H5'	1.65	0.59
4:CD:116:LEU:HD21	4:CD:153:ARG:HD3	1.84	0.59
1:AA:935:A:H2'	1:AA:936:C:H6	1.68	0.59
30:BI:105:LEU:HA	30:BI:108:ILE:HB	1.84	0.59
37:DP:49:ILE:HG22	37:DP:95:LYS:NZ	2.18	0.59
2:CB:30:ILE:HD11	2:CB:188:THR:CG2	2.33	0.59
50:D2:24:THR:HG23	50:D2:27:GLY:CA	2.33	0.59
1:AA:701:U:O2'	1:AA:702:A:OP2	2.19	0.59
1:CA:1417:G:C6	1:CA:1482:G:C6	2.91	0.59
49:B1:16:THR:CG2	49:B1:41:VAL:HG21	2.33	0.59
13:AM:68:LEU:CD1	13:AM:72:ILE:HG13	2.32	0.59
48:D0:12:ARG:HG3	48:D0:15:ARG:HH11	1.68	0.59
2:CB:93:HIS:CE1	2:CB:145:ASN:HD22	2.21	0.59
1:CA:1120:C:H2'	1:CA:1121:U:H6	1.68	0.59
39:DR:31:GLU:HG2	39:DR:32:THR:H	1.67	0.59
31:DJ:21:THR:HG23	31:DJ:61:LYS:HB3	1.85	0.59
22:BA:1575:C:H2'	22:BA:1576:U:O4'	2.02	0.59
1:CA:1126:U:O4	10:CJ:73:LEU:HD11	2.02	0.59
47:DZ:8:GLN:C	47:DZ:9:THR:HG23	2.23	0.59
22:BA:2897:U:H2'	22:BA:2898:U:C6	2.38	0.59
29:DH:110:VAL:HG23	29:DH:110:VAL:O	2.01	0.59
22:BA:2466:C:OP1	52:B4:4:ARG:HB2	2.03	0.59
30:BI:120:ASP:HB3	30:BI:123:ALA:HB3	1.83	0.59
1:CA:1134:G:N1	1:CA:1141:C:C4	2.71	0.59
10:CJ:101:SER:O	10:CJ:102:LEU:HB2	2.03	0.59
22:DA:1388:G:O2'	22:DA:1389:G:C5'	2.51	0.59
26:DE:196:VAL:HG12	26:DE:196:VAL:O	2.02	0.59
22:DA:2328:A:H2'	22:DA:2329:U:C6	2.37	0.59
22:DA:2353:G:H1'	44:DW:30:VAL:CG1	2.31	0.59
22:DA:729:G:O2'	22:DA:1775:U:H1'	2.03	0.59
35:DN:33:ILE:HG12	35:DN:118:ARG:HD2	1.85	0.59
22:DA:100:U:C6	22:DA:100:U:OP1	2.56	0.59
22:DA:151:C:O2'	22:DA:152:A:H5'	2.03	0.59
22:DA:2229:U:H2'	22:DA:2230:G:C8	2.38	0.59
49:B1:10:LEU:HD21	49:B1:33:LEU:CD2	2.32	0.59
4:CD:2:ARG:HH21	4:CD:114:ARG:NH1	1.99	0.59
31:DJ:3:THR:CG2	38:DQ:60:TRP:HE1	2.15	0.59
44:BW:18:LYS:CG	44:BW:19:ARG:H	2.09	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BW:24:ARG:CZ	44:BW:65:LYS:HE2	2.33	0.59
37:BP:112:ARG:O	37:BP:113:LEU:HD23	2.02	0.59
22:DA:2615:U:O2'	22:DA:2616:C:C5'	2.50	0.59
22:DA:1286:A:C6	22:DA:1289:C:N3	2.71	0.59
22:DA:604:G:C2	22:DA:605:G:C5	2.91	0.59
22:DA:627:A:O2'	22:DA:628:G:O5'	2.21	0.59
11:AK:30:ILE:HD12	11:AK:31:VAL:N	2.17	0.59
10:AJ:18:ILE:O	10:AJ:22:THR:N	2.35	0.59
22:DA:1135:C:N4	22:DA:1139:G:C6	2.71	0.59
11:AK:126:ARG:N	21:AU:33:ARG:HH12	1.99	0.59
25:DD:53:GLY:CA	25:DD:77:ARG:HG3	2.30	0.59
37:DP:22:GLY:HA3	37:DP:91:VAL:CG2	2.32	0.59
27:DF:43:ILE:HD13	27:DF:82:TYR:CE2	2.35	0.59
22:DA:242:G:C5'	51:D3:63:TYR:CE1	2.85	0.59
22:DA:2415:G:H2'	22:DA:2416:C:H6	1.68	0.59
19:AS:55:GLN:HA	19:AS:55:GLN:NE2	2.17	0.59
22:BA:1716:U:H2'	22:BA:1717:A:C8	2.37	0.59
1:AA:616:G:C2	1:AA:625:U:O2	2.56	0.59
1:CA:882:C:H41	12:CL:5:GLN:NE2	2.01	0.59
36:DO:31:THR:HG23	36:DO:34:HIS:O	2.02	0.59
1:AA:579:A:H2'	1:AA:580:C:C6	2.38	0.59
23:DB:39:A:C2	23:DB:44:G:C2	2.91	0.59
3:AC:106:ARG:HG2	3:AC:106:ARG:O	2.03	0.59
24:DC:63:ILE:HG22	24:DC:64:VAL:N	2.17	0.59
16:CP:16:PHE:HZ	16:CP:38:PHE:HD1	1.51	0.59
1:AA:1053:G:O2'	1:AA:1054:C:OP2	2.20	0.59
22:DA:2893:A:H1'	22:DA:2894:G:C6	2.38	0.59
11:CK:55:ARG:N	11:CK:55:ARG:HD2	2.16	0.59
23:BB:28:C:H2'	23:BB:29:A:O4'	2.03	0.59
13:CM:96:VAL:HG12	13:CM:96:VAL:O	2.02	0.59
26:BE:72:SER:C	26:BE:74:LYS:H	2.06	0.59
2:AB:60:ALA:HB2	2:AB:220:VAL:HG13	1.83	0.59
17:AQ:35:LYS:HG2	17:AQ:36:PHE:N	2.18	0.59
20:AT:60:GLN:HA	20:AT:60:GLN:NE2	2.18	0.59
22:BA:2260:C:O2'	22:BA:2261:C:H5'	2.03	0.59
39:BR:90:ARG:O	39:BR:91:GLN:CB	2.50	0.59
42:BU:94:PHE:O	42:BU:94:PHE:CD1	2.56	0.59
10:CJ:90:LEU:O	10:CJ:90:LEU:HD23	2.03	0.59
22:BA:2552:U:H2'	22:BA:2554:U:OP2	2.03	0.59
4:AD:125:ASN:OD1	4:AD:141:VAL:HG22	2.03	0.59
33:BL:101:ILE:HG23	33:BL:102:GLY:N	2.17	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1802:A:O2'	22:DA:1803:A:C8	2.55	0.58
1:CA:373:A:H2'	1:CA:374:A:C8	2.35	0.58
22:DA:1785:A:H2'	22:DA:1787:A:N7	2.18	0.58
22:DA:129:C:O2'	22:DA:130:C:O4'	2.20	0.58
3:CC:136:ALA:HA	3:CC:139:ASN:HD21	1.67	0.58
22:DA:455:C:N4	22:DA:473:G:H5'	2.18	0.58
39:BR:49:ILE:HG22	39:BR:53:PHE:C	2.23	0.58
4:CD:109:THR:HG22	4:CD:111:ALA:H	1.67	0.58
4:CD:25:ARG:HH12	4:CD:30:LYS:CG	1.97	0.58
38:BQ:65:ASN:ND2	38:BQ:69:ARG:NH2	2.38	0.58
12:AL:43:LYS:CB	12:AL:44:PRO:HD3	2.16	0.58
22:DA:2234:G:C5	22:DA:2235:G:N7	2.70	0.58
22:BA:1179:G:C2	22:BA:1180:U:O2'	2.56	0.58
22:BA:584:C:OP1	38:BQ:5:ARG:HB3	2.03	0.58
14:CN:52:ARG:HA	14:CN:52:ARG:CZ	2.33	0.58
19:CS:5:LYS:HE2	19:CS:6:LYS:O	2.03	0.58
25:DD:9:VAL:CG2	37:DP:4:ILE:HD11	2.23	0.58
7:CG:73:GLU:HA	7:CG:140:VAL:HG11	1.84	0.58
22:DA:1141:U:H4'	22:DA:1142:A:O5'	2.02	0.58
36:BO:4:LYS:O	36:BO:8:ILE:HG13	2.02	0.58
23:DB:67:G:O2'	23:DB:68:C:H6	1.85	0.58
24:BC:93:VAL:HG13	24:BC:94:LEU:N	2.17	0.58
6:CF:66:ALA:CB	6:CF:71:ILE:HD13	2.26	0.58
22:DA:1127:A:O2'	22:DA:1128:G:H5''	2.03	0.58
13:CM:12:LYS:CE	13:CM:12:LYS:HA	2.28	0.58
22:DA:2408:U:H5	56:DA:3596:HOH:O	1.85	0.58
4:AD:114:ARG:HG2	4:AD:132:ALA:HB1	1.85	0.58
3:CC:32:LEU:HD12	14:CN:76:PHE:HA	1.84	0.58
35:DN:75:ILE:HD12	35:DN:79:LEU:HD12	1.84	0.58
22:BA:783:A:C8	22:BA:784:G:H4'	2.38	0.58
2:AB:89:PHE:HB3	2:AB:149:GLY:CA	2.31	0.58
32:DK:27:GLY:CA	32:DK:30:ARG:HD3	2.31	0.58
8:CH:39:LEU:HB2	8:CH:45:ILE:HD11	1.84	0.58
22:DA:1545:A:H2'	22:DA:1546:G:H5'	1.84	0.58
28:DG:44:HIS:HA	28:DG:49:LEU:HA	1.85	0.58
22:BA:869:G:H4'	34:BM:8:LYS:HD3	1.85	0.58
49:D1:10:LEU:HD23	49:D1:20:TYR:CB	2.33	0.58
22:BA:790:U:O2'	22:BA:791:C:O5'	2.20	0.58
5:CE:154:ALA:HB1	8:CH:65:PHE:HE2	1.67	0.58
22:BA:851:C:H2'	22:BA:852:U:C6	2.38	0.58
24:BC:39:SER:C	24:BC:41:GLY:N	2.56	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1416:G:N2	1:CA:1485:U:H1'	2.17	0.58
22:BA:1761:C:C2'	22:BA:1762:A:H5'	2.34	0.58
6:CF:99:ALA:O	6:CF:100:SER:CB	2.50	0.58
22:DA:2187:U:O2'	22:DA:2188:U:H5'	2.03	0.58
20:AT:61:ALA:HA	20:AT:66:ILE:HG22	1.83	0.58
22:BA:1836:C:C2'	22:BA:1837:C:H5'	2.33	0.58
22:BA:1241:A:C2'	22:BA:1242:U:H5'	2.33	0.58
4:CD:18:LEU:HD22	4:CD:63:ILE:HG12	1.85	0.58
1:CA:992:U:O2'	1:CA:993:G:OP2	2.21	0.58
22:BA:373:U:O2'	22:BA:374:A:H5'	2.03	0.58
5:CE:89:THR:OG1	5:CE:90:GLY:N	2.33	0.58
1:CA:309:A:H1'	1:CA:608:A:C2	2.38	0.58
22:BA:2732:G:H8	22:BA:2732:G:OP2	1.86	0.58
26:BE:154:ASP:C	26:BE:154:ASP:OD2	2.42	0.58
22:BA:2681:C:C5	22:BA:2724:U:C5	2.91	0.58
22:BA:2648:G:H2'	22:BA:2649:C:C6	2.38	0.58
22:BA:1060:U:O4'	22:BA:1062:G:H5''	2.03	0.58
5:AE:149:PRO:CA	5:AE:152:VAL:HG13	2.33	0.58
22:DA:1387:A:C4	22:DA:1388:G:C8	2.90	0.58
4:AD:109:THR:CG2	4:AD:112:GLU:HB2	2.33	0.58
1:CA:366:A:H1'	1:CA:395:C:O2	2.03	0.58
22:DA:1792:G:O2'	22:DA:1793:C:H5'	2.03	0.58
22:DA:762:U:O2'	22:DA:763:G:H5''	2.03	0.58
22:DA:784:G:N2	24:DC:227:VAL:CG2	2.66	0.58
35:DN:16:HIS:O	35:DN:20:MET:N	2.35	0.58
35:DN:16:HIS:CE1	35:DN:20:MET:HE2	2.38	0.58
35:DN:31:HIS:O	35:DN:33:ILE:HG13	2.03	0.58
22:DA:303:G:C6	22:DA:315:G:O6	2.56	0.58
24:BC:254:LYS:O	24:BC:255:LYS:HB2	2.02	0.58
22:DA:150:U:H2'	22:DA:151:C:C6	2.38	0.58
26:DE:47:LYS:HB3	26:DE:51:GLU:CB	2.18	0.58
22:DA:142:A:H2'	22:DA:143:C:C6	2.38	0.58
25:BD:106:LYS:HB2	25:BD:206:ALA:H	1.68	0.58
1:AA:94:G:H4'	1:AA:95:C:H5''	1.83	0.58
22:BA:855:G:H1'	44:BW:23:LYS:CD	2.31	0.58
32:DK:19:VAL:HG12	32:DK:41:ILE:HG13	1.84	0.58
52:D4:16:ILE:HG22	52:D4:16:ILE:O	2.03	0.58
1:CA:599:C:H4'	8:CH:121:GLY:CA	2.33	0.58
1:AA:923:A:H2'	1:AA:924:C:C6	2.38	0.58
22:DA:1993:U:O2'	22:DA:1994:C:C5'	2.51	0.58
22:BA:988:A:C2'	22:BA:989:G:O5'	2.51	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:1:MET:CB	41:BT:2:ILE:HD13	2.33	0.58
32:BK:108:ARG:NH1	32:BK:108:ARG:CG	2.56	0.58
1:CA:183:C:H2'	1:CA:183:C:O2	2.02	0.58
24:DC:183:VAL:HG13	24:DC:184:GLU:N	2.16	0.58
22:DA:2092:U:H4'	22:DA:2093:G:OP1	2.02	0.58
32:DK:105:ARG:O	32:DK:108:ARG:HG2	2.03	0.58
22:DA:845:A:H61	22:DA:932:U:H3	1.49	0.58
13:CM:18:LEU:HD22	13:CM:32:ILE:HG21	1.84	0.58
29:BH:38:PRO:HB2	29:BH:40:THR:HG23	1.85	0.58
26:DE:119:ILE:CD1	26:DE:143:LEU:CD2	2.79	0.58
3:CC:137:VAL:HG13	3:CC:148:ILE:CG2	2.34	0.58
26:BE:45:ALA:C	26:BE:46:GLN:HG2	2.22	0.58
23:DB:46:A:C2'	23:DB:47:C:H6	2.16	0.58
13:AM:15:VAL:HA	13:AM:33:LEU:HD11	1.85	0.58
22:BA:1507:C:C6	22:BA:1508:A:H2	2.21	0.58
48:B0:33:SER:HB2	48:B0:35:GLU:HG3	1.84	0.58
1:AA:723:U:H5'	1:AA:724:G:OP1	2.03	0.58
1:CA:702:A:H8	1:CA:702:A:OP1	1.86	0.58
11:AK:100:ASN:HB2	11:AK:106:ILE:HG21	1.84	0.58
22:DA:1973:G:C6	22:DA:1974:C:N4	2.71	0.58
22:DA:1975:G:C5	22:DA:1976:U:H5	2.15	0.58
22:DA:1832:C:H2'	22:DA:1833:C:O5'	2.03	0.58
39:DR:1:MET:HG3	39:DR:101:ILE:HD12	1.84	0.58
1:CA:1077:G:C2	1:CA:1081:A:C2	2.92	0.58
30:DI:132:ALA:HB1	30:DI:137:LEU:CD1	2.32	0.58
39:BR:21:ARG:NH2	39:BR:93:PHE:CE1	2.71	0.58
22:BA:1858:A:H2'	22:BA:1859:U:C6	2.39	0.58
14:AN:13:VAL:HA	14:AN:59:GLN:OE1	2.03	0.58
22:BA:2291:U:H2'	22:BA:2292:U:C6	2.37	0.58
3:AC:119:ILE:O	3:AC:123:LEU:HG	2.02	0.58
39:DR:22:LEU:HD21	39:DR:96:VAL:HG22	1.84	0.58
29:DH:57:LYS:HD2	29:DH:57:LYS:O	2.03	0.58
20:CT:69:ASN:HD22	20:CT:69:ASN:C	2.06	0.58
22:DA:1813:G:N2	24:DC:49:THR:HB	2.18	0.58
24:DC:173:LEU:N	24:DC:173:LEU:CD2	2.67	0.58
22:DA:1969:A:H2'	22:DA:1972:G:H21	1.68	0.58
22:DA:764:A:C2	22:DA:781:A:C2	2.91	0.58
35:DN:90:ARG:HH21	35:DN:116:VAL:HG11	1.67	0.58
12:CL:82:ARG:HB2	12:CL:97:VAL:HG12	1.85	0.58
42:DU:14:THR:HB	42:DU:68:ASN:HB3	1.85	0.58
22:DA:53:A:N7	22:DA:54:G:C4	2.72	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:96:U:O2'	1:AA:97:G:H8	1.86	0.58
28:BG:8:VAL:HG12	28:BG:9:VAL:N	2.17	0.58
22:DA:2016:U:C4	22:DA:2017:U:C4	2.91	0.58
1:AA:1303:C:O2'	1:AA:1304:G:C5'	2.52	0.58
22:DA:1252:G:H5''	56:DA:3285:HOH:O	2.02	0.58
22:DA:584:C:OP1	38:DQ:5:ARG:HD3	2.03	0.58
1:AA:15:G:N7	1:AA:1396:A:C2	2.71	0.58
1:AA:923:A:OP1	5:AE:25:LYS:HG2	2.03	0.58
43:DV:16:ALA:HB2	43:DV:19:ARG:NH2	2.18	0.58
22:DA:2697:G:C5	22:DA:2698:U:C5	2.91	0.58
22:BA:1131:G:C8	31:BJ:77:HIS:CE1	2.91	0.58
22:DA:2001:C:H4'	22:DA:2689:U:H2'	1.85	0.58
22:DA:592:A:O2'	51:D3:3:ILE:HG13	2.02	0.58
2:AB:69:VAL:HG23	2:AB:160:LEU:HD11	1.84	0.58
23:DB:59:A:H2'	23:DB:60:C:O4'	2.03	0.58
22:DA:1552:A:N3	22:DA:1552:A:C2'	2.64	0.58
22:DA:1551:A:C6	22:DA:1552:A:N7	2.71	0.58
32:DK:113:MET:HG3	32:DK:116:ILE:HD11	1.85	0.58
14:AN:25:GLU:HG3	14:AN:26:LEU:HD12	1.84	0.58
1:CA:243:A:H4'	1:CA:244:U:OP2	2.02	0.58
3:CC:149:LYS:O	3:CC:149:LYS:HD2	2.04	0.58
31:BJ:25:LEU:HB2	31:BJ:62:VAL:CG2	2.34	0.58
1:AA:186:C:O4'	20:AT:75:LYS:HD2	2.02	0.58
20:AT:57:VAL:HG12	20:AT:58:ASP:N	2.17	0.58
1:AA:877:G:H21	8:AH:1:SER:H3	1.51	0.58
22:DA:2103:C:H2'	22:DA:2104:C:O4'	2.03	0.58
1:CA:1169:A:H2'	1:CA:1170:A:H8	1.67	0.58
22:BA:2747:G:O6	22:BA:2755:C:H5''	2.03	0.58
22:DA:2822:G:H2'	22:DA:2823:A:H5''	1.86	0.58
22:BA:1254:A:H8	22:BA:1254:A:H5'	1.67	0.58
15:AO:16:ARG:O	15:AO:17:ASP:CB	2.51	0.58
28:DG:22:VAL:HG12	28:DG:23:ILE:N	2.16	0.58
22:BA:22:C:C2'	22:BA:23:G:O5'	2.51	0.58
38:BQ:40:LYS:HA	38:BQ:43:GLN:HG3	1.83	0.58
22:BA:2599:G:C2'	22:BA:2600:A:H5'	2.33	0.58
48:B0:24:VAL:C	48:B0:25:THR:HG23	2.23	0.58
26:BE:160:ALA:O	26:BE:161:ALA:HB3	2.03	0.58
1:CA:747:A:H2'	1:CA:748:G:O4'	2.03	0.58
28:DG:148:ARG:HB2	28:DG:152:ARG:HH21	1.68	0.58
28:DG:152:ARG:HG3	28:DG:153:PRO:HD2	1.84	0.58
1:AA:342:C:C2'	1:AA:343:U:H5'	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1797:G:O3'	24:DC:255:LYS:O	2.20	0.58
28:BG:83:THR:CA	28:BG:84:LYS:CE	2.81	0.58
1:CA:58:C:O2'	1:CA:59:A:H5'	2.03	0.58
35:DN:14:SER:C	35:DN:16:HIS:N	2.53	0.58
50:D2:31:LEU:HA	50:D2:34:ARG:HB2	1.85	0.58
1:CA:1069:C:H4'	1:CA:1192:C:O2	2.03	0.58
1:CA:205:A:C5	1:CA:206:C:N4	2.70	0.58
1:AA:1225:A:H2'	1:AA:1226:C:C6	2.35	0.58
1:AA:214:C:H2'	1:AA:215:C:C6	2.33	0.58
39:DR:4:VAL:HG23	39:DR:39:LEU:HG	1.85	0.58
12:AL:43:LYS:NZ	12:AL:44:PRO:CD	2.61	0.58
18:CR:72:ARG:H	18:CR:72:ARG:NE	1.96	0.58
32:DK:5:GLN:HA	32:DK:20:MET:SD	2.43	0.58
22:DA:206:U:C2'	22:DA:207:A:H8	2.15	0.58
51:D3:22:LYS:H	51:D3:48:MET:HB2	1.67	0.58
22:BA:1495:A:H2'	22:BA:1496:A:C8	2.38	0.58
29:DH:147:VAL:O	29:DH:148:ALA:HB3	2.03	0.58
33:DL:128:THR:HB	33:DL:131:ALA:HB3	1.85	0.58
33:DL:79:LEU:CD2	33:DL:115:GLU:O	2.51	0.58
22:DA:1638:C:H1'	22:DA:2698:U:O2'	2.03	0.58
34:BM:1:MET:CE	34:BM:2:LEU:N	2.64	0.58
22:BA:1016:G:H2'	22:BA:1017:G:O5'	2.03	0.58
1:CA:251:G:H4'	1:CA:252:U:H5''	1.84	0.58
22:DA:991:C:C4	22:DA:1185:G:C6	2.91	0.58
1:AA:1319:A:N7	1:AA:1323:G:C6	2.71	0.58
5:AE:59:ILE:HD12	5:AE:59:ILE:C	2.23	0.58
22:BA:1058:U:O2'	30:BI:117:THR:HG23	2.03	0.58
16:AP:6:LEU:HG	16:AP:17:TYR:HB3	1.85	0.58
3:CC:181:ILE:HG12	3:CC:202:PHE:HB2	1.85	0.58
36:DO:27:VAL:HB	36:DO:38:GLN:CG	2.31	0.58
28:DG:93:TYR:N	28:DG:93:TYR:HD2	2.00	0.58
27:DF:28:PRO:HB2	27:DF:168:LEU:CG	2.33	0.58
22:DA:777:G:N7	22:DA:793:A:H2	2.01	0.58
44:DW:8:SER:O	44:DW:9:THR:CB	2.50	0.58
22:BA:528:A:C8	22:BA:528:A:C3'	2.87	0.58
28:DG:175:LYS:HD3	28:DG:175:LYS:C	2.24	0.58
1:AA:1055:A:N6	1:AA:1206:G:C5	2.72	0.58
1:CA:719:C:H3'	1:CA:720:C:C5	2.37	0.58
34:BM:108:VAL:HG13	34:BM:109:PRO:HD2	1.85	0.58
22:BA:287:G:H2'	22:BA:288:U:C6	2.37	0.58
1:CA:855:U:H2'	1:CA:856:C:C6	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1115:G:O2'	22:BA:1116:G:H8	1.84	0.58
2:CB:9:LEU:C	2:CB:11:ALA:H	2.05	0.58
10:AJ:88:MET:CE	10:AJ:89:ARG:HH12	2.16	0.58
1:AA:1065:U:H5''	1:AA:1190:G:H21	1.68	0.58
24:BC:166:ARG:HG2	24:BC:166:ARG:O	2.04	0.58
22:BA:2466:C:H5'	52:B4:5:ALA:HB3	1.85	0.58
43:DV:1:MET:HA	43:DV:1:MET:CE	2.34	0.58
1:CA:1528:U:O2'	1:CA:1529:G:H3'	2.02	0.58
25:DD:38:LYS:HD2	25:DD:45:TYR:CZ	2.38	0.58
7:AG:7:GLY:O	7:AG:8:GLN:HB3	2.03	0.58
22:BA:18:U:O3'	38:BQ:22:GLY:HA2	2.03	0.58
2:AB:27:LYS:HB3	2:AB:28:PRO:HD3	1.86	0.58
33:BL:77:ILE:HD13	33:BL:108:ALA:HB1	1.84	0.58
44:DW:81:ILE:HD12	44:DW:81:ILE:C	2.23	0.58
1:CA:518:C:H2'	1:CA:530:G:N7	2.17	0.58
1:AA:462:G:C5'	1:AA:463:U:OP2	2.51	0.58
4:CD:26:ALA:O	4:CD:31:CYS:SG	2.60	0.58
1:AA:91:U:O2'	1:AA:92:U:O4'	2.21	0.58
39:DR:10:LYS:N	39:DR:10:LYS:HD2	2.17	0.58
1:AA:500:G:H2'	1:AA:501:C:C5	2.37	0.58
4:CD:57:LYS:HG3	4:CD:58:GLN:N	2.17	0.58
21:CU:19:LYS:C	21:CU:21:SER:H	2.06	0.58
22:DA:799:G:P	22:DA:800:A:H3'	2.42	0.58
1:AA:523:A:H61	12:AL:88:ASP:CB	2.17	0.58
26:BE:148:ILE:HA	26:BE:187:VAL:HB	1.85	0.58
1:AA:920:U:O4'	1:AA:1080:A:C2	2.57	0.58
11:AK:23:HIS:HB3	11:AK:30:ILE:HG13	1.85	0.58
5:CE:71:ILE:HG23	5:CE:73:VAL:HG22	1.86	0.58
22:DA:271:G:O2'	22:DA:272:A:O5'	2.21	0.58
32:DK:9:ASN:HD22	32:DK:9:ASN:N	2.00	0.58
27:DF:74:ALA:HB1	27:DF:76:PHE:HD2	1.67	0.58
1:CA:119:A:C4'	1:CA:120:A:O5'	2.51	0.58
1:CA:261:U:C5	20:CT:73:ARG:NE	2.72	0.58
10:AJ:15:HIS:CG	10:AJ:16:ARG:N	2.71	0.58
10:AJ:44:THR:HG23	10:AJ:70:HIS:HA	1.84	0.58
22:DA:811:U:H5''	22:DA:812:C:OP2	2.03	0.58
22:DA:2297:A:O2'	22:DA:2298:A:H8	1.85	0.58
36:DO:35:ILE:HG13	36:DO:102:ARG:HD2	1.83	0.58
35:DN:80:PHE:O	35:DN:85:PRO:HD3	2.04	0.58
1:CA:1470:U:O2'	1:CA:1471:U:H5'	2.03	0.58
32:BK:113:MET:SD	32:BK:116:ILE:CD1	2.89	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:89:PHE:CE1	2:AB:153:MET:HB2	2.39	0.58
38:DQ:27:ARG:HA	38:DQ:33:VAL:HG12	1.86	0.58
1:CA:441:A:H61	1:CA:493:A:H62	1.51	0.58
22:DA:1844:C:O2	22:DA:1844:C:H2'	2.02	0.58
28:DG:24:THR:O	28:DG:25:ILE:HD12	2.03	0.58
42:BU:43:LYS:O	42:BU:57:ILE:HA	2.03	0.58
28:BG:30:GLY:HA3	28:BG:78:VAL:CG1	2.33	0.58
22:BA:1858:A:H2'	22:BA:1859:U:C5	2.38	0.58
22:BA:455:C:N3	22:BA:472:A:H2'	2.18	0.58
33:BL:89:VAL:HA	33:BL:121:THR:HG23	1.86	0.58
1:AA:40:C:O2	1:AA:40:C:H2'	2.03	0.58
1:AA:613:C:O2'	1:AA:614:C:H5'	2.03	0.58
5:AE:82:HIS:HB2	5:AE:83:PRO:CD	2.34	0.58
1:CA:309:A:H1'	1:CA:608:A:H2	1.67	0.58
1:CA:688:G:H5''	1:CA:688:G:H8	1.66	0.58
22:BA:1456:G:C5	22:BA:1457:U:C5	2.91	0.58
28:DG:38:ASP:O	28:DG:39:ALA:HB2	2.04	0.58
22:DA:1708:C:H2'	22:DA:1709:U:C6	2.38	0.58
14:CN:26:LEU:O	14:CN:26:LEU:HD23	2.03	0.58
12:CL:61:GLU:HG3	12:CL:61:GLU:O	2.04	0.58
22:BA:693:A:H2'	22:BA:694:U:O4'	2.04	0.58
45:BX:53:LYS:O	45:BX:57:VAL:HG23	2.03	0.58
4:CD:186:GLU:O	4:CD:187:ARG:HB2	2.02	0.58
22:DA:1385:A:O2'	22:DA:1386:C:C5'	2.52	0.58
4:AD:33:ILE:O	4:AD:34:GLU:HB3	2.02	0.58
22:DA:2352:A:H2'	22:DA:2353:G:H5'	1.85	0.58
44:DW:51:GLY:HA3	44:DW:59:PHE:H	1.68	0.58
1:AA:1284:C:H2'	1:AA:1285:A:H8	1.61	0.58
22:DA:1208:C:O2'	22:DA:1209:U:C6	2.56	0.58
22:DA:311:A:H1'	22:DA:332:A:C8	2.38	0.58
26:DE:134:LEU:HA	26:DE:137:LYS:HB2	1.84	0.58
39:BR:49:ILE:CG2	39:BR:53:PHE:N	2.67	0.58
1:CA:1101:A:C4'	1:CA:1102:A:O5'	2.52	0.58
1:AA:1228:C:H2'	1:AA:1229:A:C8	2.39	0.58
25:BD:107:VAL:H	25:BD:206:ALA:N	2.02	0.58
1:AA:89:U:O2'	1:AA:90:C:C5'	2.52	0.58
21:CU:24:LYS:HZ2	21:CU:25:ALA:HB2	1.69	0.58
31:BJ:74:TYR:CD2	31:BJ:92:MET:HE1	2.38	0.58
6:CF:41:ASP:OD2	6:CF:58:HIS:HE1	1.86	0.58
6:CF:38:ARG:HG3	6:CF:63:ASN:HB2	1.85	0.58
22:DA:2051:A:H4'	25:DD:146:ILE:HG23	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1324:G:H3'	22:DA:1325:U:H5''	1.84	0.58
22:DA:1607:C:H4'	22:DA:1608:A:H8	1.68	0.58
20:AT:2:ASN:O	20:AT:3:ILE:C	2.41	0.58
22:BA:412:A:O2'	22:BA:413:C:C5'	2.44	0.58
41:BT:59:ASN:O	41:BT:83:ALA:O	2.21	0.58
6:AF:4:TYR:CD2	6:AF:71:ILE:HG12	2.38	0.58
25:DD:94:GLN:HG2	25:DD:94:GLN:O	2.03	0.58
22:DA:1441:G:H2'	22:DA:1442:U:H6	1.66	0.58
14:AN:4:SER:O	14:AN:8:ARG:HG3	2.04	0.58
1:AA:1160:G:O6	1:AA:1181:G:O6	2.22	0.58
1:AA:1381:U:O2'	1:AA:1382:C:H6	1.76	0.58
1:CA:330:C:O2'	1:CA:331:G:C5'	2.51	0.58
27:DF:65:LEU:CG	27:DF:67:THR:HG23	2.32	0.58
1:AA:575:G:C6	1:AA:821:G:N7	2.72	0.58
25:DD:124:ARG:NH1	25:DD:125:TRP:CZ2	2.72	0.58
22:BA:1945:G:H2'	22:BA:1946:U:H6	1.68	0.58
2:CB:128:LEU:HD22	2:CB:132:GLU:HG2	1.85	0.58
22:BA:273:G:O2'	22:BA:274:C:C5'	2.52	0.58
22:BA:1508:A:O2'	22:BA:1509:A:O5'	2.22	0.58
2:AB:148:GLY:CA	2:AB:151:LYS:HE3	2.33	0.58
14:CN:31:SER:HA	14:CN:45:LEU:HD11	1.85	0.58
1:CA:47:C:H4'	1:CA:48:C:O5'	2.04	0.58
1:AA:6:G:HO2'	1:AA:7:A:H8	1.50	0.58
32:BK:61:VAL:HG21	32:BK:112:PHE:CE2	2.38	0.58
35:BN:65:LEU:HD11	35:BN:69:ARG:HH21	1.66	0.58
22:DA:876:C:H3'	22:DA:877:A:C8	2.35	0.58
38:BQ:81:GLY:HA2	38:BQ:116:LEU:HD12	1.84	0.58
1:CA:647:C:H2'	1:CA:648:A:C8	2.38	0.58
28:BG:23:ILE:HG21	28:BG:71:LEU:CD1	2.33	0.58
11:AK:80:ASN:HB3	11:AK:105:ARG:HB3	1.85	0.58
45:DX:77:TYR:CD1	45:DX:77:TYR:C	2.77	0.58
1:CA:313:A:H2'	1:CA:314:C:H6	1.67	0.58
3:CC:76:ILE:HG12	3:CC:83:VAL:HG11	1.86	0.58
28:BG:148:ARG:HA	28:BG:161:VAL:HG11	1.86	0.58
22:BA:1476:U:OP2	22:BA:1476:U:H6	1.86	0.58
2:AB:71:THR:HG23	2:AB:93:HIS:C	2.24	0.58
22:DA:2401:U:H5''	22:DA:2402:U:OP2	2.04	0.58
22:DA:2087:G:C2	22:DA:2233:U:O2	2.57	0.58
29:DH:54:LEU:HA	29:DH:57:LYS:HG2	1.86	0.58
9:CI:12:LYS:HG2	9:CI:12:LYS:O	2.04	0.58
27:DF:100:GLU:O	27:DF:100:GLU:HG2	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:139:GLU:O	2:CB:143:LEU:HG	2.03	0.58
5:AE:109:ALA:O	5:AE:110:MET:CB	2.52	0.58
1:CA:1151:A:O3'	10:CJ:70:HIS:CE1	2.56	0.58
22:DA:860:U:O4'	22:DA:2268:A:H5'	2.03	0.58
36:DO:17:LYS:HE3	36:DO:17:LYS:C	2.23	0.58
44:DW:17:ALA:CB	44:DW:36:ILE:HA	2.34	0.58
44:DW:49:ASN:HD21	44:DW:80:SER:HA	1.68	0.58
22:DA:1827:U:H2'	22:DA:1828:G:C8	2.38	0.58
1:AA:1285:A:H5'	1:AA:1286:U:O4	2.03	0.58
9:AI:86:LEU:HD23	9:AI:93:LEU:HD22	1.84	0.58
1:CA:519:C:O2'	1:CA:520:A:O4'	2.20	0.58
42:DU:95:PHE:N	42:DU:95:PHE:HD1	1.92	0.58
42:DU:81:ARG:CG	42:DU:96:LYS:HD2	2.33	0.58
22:DA:1426:G:C8	22:DA:1427:A:H2'	2.38	0.58
22:DA:2230:G:H2'	22:DA:2231:U:C6	2.38	0.58
22:DA:1051:G:H2'	22:DA:1052:C:C6	2.39	0.58
13:AM:89:ARG:HH11	13:AM:94:LEU:HB3	1.69	0.58
1:CA:1493:A:H3'	22:DA:1913:A:N6	2.18	0.58
34:DM:36:VAL:CG2	34:DM:129:THR:HG22	2.27	0.58
22:DA:2013:A:OP1	40:DS:96:ILE:HA	2.04	0.58
22:DA:1291:C:O2'	22:DA:1292:G:O4'	2.21	0.58
22:DA:1613:G:N1	22:DA:1617:C:C2	2.72	0.58
17:AQ:48:GLU:O	17:AQ:49:ASN:ND2	2.37	0.58
1:CA:642:A:O2'	1:CA:643:C:H5'	2.03	0.58
1:CA:976:G:OP1	1:CA:976:G:H4'	2.02	0.58
1:AA:1078:U:O4'	5:AE:88:HIS:HE1	1.86	0.58
22:BA:1875:G:HO2'	22:BA:1876:A:H8	1.52	0.58
5:CE:95:MET:CB	5:CE:124:ALA:HB2	2.22	0.58
22:DA:2874:C:O2'	22:DA:2875:C:C6	2.53	0.58
22:BA:1941:C:C5'	22:BA:1941:C:C6	2.83	0.58
27:DF:111:ARG:HG3	27:DF:135:ILE:HG12	1.86	0.58
27:DF:45:ASP:HB3	27:DF:48:LEU:CD2	2.34	0.58
22:DA:2091:C:N4	22:DA:2092:U:C4	2.72	0.58
35:DN:71:ARG:CB	35:DN:71:ARG:HH21	2.08	0.58
13:CM:16:ILE:H	13:CM:16:ILE:HD12	1.69	0.58
16:AP:77:GLU:C	16:AP:79:ASN:H	2.06	0.58
1:AA:450:G:N7	1:AA:481:G:O6	2.37	0.58
25:BD:92:VAL:HG12	25:BD:92:VAL:O	2.02	0.58
27:DF:97:GLU:HG2	27:DF:97:GLU:O	2.01	0.58
23:BB:46:A:C5	23:BB:47:C:C4	2.92	0.58
24:DC:66:PHE:HB3	24:DC:150:GLY:O	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:115:G:H1'	1:AA:116:A:N7	2.18	0.58
22:BA:2104:C:H2'	22:BA:2105:U:O4'	2.03	0.58
16:AP:46:LYS:NZ	16:AP:48:GLU:HB3	2.17	0.58
22:DA:1975:G:C6	22:DA:1976:U:C5	2.92	0.58
28:BG:142:GLN:HA	28:BG:142:GLN:HE21	1.68	0.58
1:AA:126:G:C2'	1:AA:127:G:O5'	2.51	0.58
22:BA:1993:U:H4'	25:BD:133:THR:CG2	2.33	0.58
1:CA:679:C:O2	1:CA:712:A:C2	2.56	0.58
45:DX:63:ILE:CD1	45:DX:64:ASP:H	2.16	0.58
37:DP:37:LYS:O	37:DP:38:ARG:HB3	2.03	0.58
22:DA:709:U:H2'	22:DA:710:U:H6	1.68	0.58
44:DW:77:LYS:O	44:DW:78:PHE:CB	2.51	0.58
49:B1:29:LYS:HB3	49:B1:29:LYS:NZ	2.19	0.58
22:BA:754:U:H2'	22:BA:755:U:H6	1.67	0.58
1:CA:1111:A:C2'	1:CA:1112:C:H5'	2.34	0.58
1:CA:383:A:C8	1:CA:384:G:H1'	2.39	0.58
48:B0:14:MET:O	48:B0:17:SER:HB3	2.04	0.58
37:BP:105:LYS:HA	37:BP:108:ARG:HH21	1.68	0.58
10:CJ:17:LEU:CD2	10:CJ:96:VAL:HG13	2.33	0.58
30:DI:12:VAL:HG12	30:DI:13:ALA:N	2.18	0.58
22:DA:653:U:H4'	22:DA:653:U:OP1	2.03	0.58
18:AR:21:ASP:OD2	18:AR:23:LYS:HD2	2.04	0.58
3:AC:36:PHE:HZ	14:AN:89:ARG:HH12	1.51	0.58
28:DG:169:ARG:O	28:DG:170:THR:HB	2.02	0.58
1:AA:335:C:H2'	1:AA:336:A:C8	2.38	0.58
22:BA:636:G:C4	33:BL:111:ILE:HD11	2.35	0.58
1:CA:57:G:N1	1:CA:356:A:C2	2.72	0.58
22:DA:1055:G:N3	22:DA:1055:G:H2'	2.19	0.58
35:DN:52:ILE:HG21	35:DN:94:TYR:CD2	2.38	0.58
22:DA:797:G:OP1	26:DE:57:LYS:HG2	2.03	0.58
27:BF:84:ILE:CG1	27:BF:84:ILE:O	2.52	0.58
4:CD:24:VAL:O	4:CD:25:ARG:HB2	2.04	0.58
41:BT:20:ALA:O	41:BT:22:THR:N	2.37	0.58
22:BA:2365:G:H2'	22:BA:2366:A:C8	2.39	0.58
37:BP:85:VAL:HG12	37:BP:86:LYS:N	2.19	0.58
18:CR:32:ILE:HD12	18:CR:33:THR:O	2.04	0.58
17:AQ:18:LYS:HA	17:AQ:47:ASP:HB3	1.81	0.58
22:DA:481:G:HO2'	22:DA:507:A:H61	1.51	0.58
1:CA:935:A:N6	7:CG:2:ARG:CZ	2.67	0.58
14:CN:30:ILE:O	14:CN:40:ARG:HA	2.04	0.58
20:AT:8:LYS:HA	20:AT:11:ILE:CG2	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:608:A:C6	22:DA:621:A:C8	2.92	0.58
5:CE:103:GLY:O	5:CE:104:ILE:CG2	2.41	0.58
18:AR:35:SER:HB3	21:AU:3:ILE:CG1	2.34	0.58
1:CA:192:A:C2	20:CT:54:GLN:NE2	2.71	0.58
1:CA:91:U:O2'	1:CA:92:U:H6	1.86	0.58
23:DB:27:C:O2'	23:DB:28:C:H5'	2.04	0.58
23:DB:18:G:C2	23:DB:19:C:C2	2.91	0.58
1:CA:1333:A:H2'	1:CA:1334:G:O4'	2.03	0.58
7:CG:119:LEU:HD23	7:CG:120:ALA:N	2.18	0.58
24:BC:252:LYS:CB	24:BC:252:LYS:NZ	2.67	0.58
7:CG:4:ARG:CZ	7:CG:6:ILE:HG22	2.33	0.58
22:BA:1327:A:H2'	22:BA:1328:A:O4'	2.04	0.58
24:BC:49:THR:HG22	24:BC:50:THR:N	2.17	0.58
22:BA:1106:G:N2	22:BA:1107:G:H1'	2.18	0.58
29:BH:53:GLU:O	29:BH:54:LEU:HD22	2.03	0.58
1:AA:1449:C:O2'	1:AA:1450:U:H5'	2.04	0.58
27:BF:72:SER:OG	27:BF:79:ARG:HA	2.04	0.58
36:DO:30:ARG:HG2	36:DO:31:THR:H	1.66	0.58
1:CA:664:G:N2	1:CA:741:G:H1	1.95	0.58
22:DA:2611:C:C5'	22:DA:2611:C:H6	2.11	0.58
22:DA:183:C:H6	22:DA:183:C:O5'	1.86	0.58
44:BW:13:ARG:O	44:BW:14:ASP:C	2.41	0.58
12:AL:98:ARG:HB2	12:AL:116:TYR:HA	1.85	0.58
4:CD:84:ASN:ND2	4:CD:86:GLY:H	2.02	0.58
28:BG:59:ASP:O	28:BG:60:GLY:C	2.42	0.58
22:BA:2747:G:O2'	28:BG:66:THR:HG22	2.04	0.58
24:DC:52:HIS:HA	24:DC:216:ARG:HB2	1.85	0.58
1:AA:556:C:H2'	1:AA:557:G:H5'	1.84	0.58
15:AO:20:ASP:OD1	15:AO:23:SER:HB2	2.03	0.58
22:DA:1845:G:C6	22:DA:1846:G:C5	2.92	0.58
33:BL:68:SER:CB	33:BL:71:ALA:HB2	2.34	0.58
35:DN:7:GLY:CA	35:DN:46:ARG:HH22	2.17	0.58
22:BA:1853:A:N1	22:BA:2087:G:H1'	2.18	0.58
19:CS:11:ASP:H	19:CS:14:LEU:HD21	1.68	0.58
19:CS:10:ILE:HG22	19:CS:14:LEU:HD21	1.86	0.58
22:BA:60:G:C8	22:BA:62:U:C6	2.92	0.58
13:AM:68:LEU:O	13:AM:72:ILE:HG13	2.04	0.58
2:AB:212:TYR:O	2:AB:216:VAL:HG23	2.04	0.58
43:BV:2:PHE:CB	43:BV:61:LEU:HD22	2.33	0.58
22:DA:1887:C:C2'	22:DA:1888:G:H5'	2.33	0.58
6:CF:81:ASN:C	6:CF:81:ASN:HD22	2.07	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2:G:N1	23:BB:119:A:C2	2.72	0.58
7:CG:34:LYS:NZ	7:CG:34:LYS:HB2	2.19	0.58
22:BA:806:C:O5'	22:BA:806:C:H6	1.87	0.58
33:BL:110:VAL:CG1	33:BL:131:ALA:CB	2.80	0.58
10:CJ:40:ILE:HG22	10:CJ:42:LEU:HD11	1.84	0.58
16:AP:20:VAL:HG21	16:AP:32:PHE:CB	2.33	0.58
22:DA:1060:U:C4'	22:DA:1061:U:C2'	2.81	0.58
22:DA:1063:G:HO2'	22:DA:1064:C:H6	1.47	0.58
22:DA:1092:C:H2'	22:DA:1093:G:C5'	2.32	0.58
1:AA:1507:A:O2'	1:AA:1508:A:H5'	2.04	0.58
22:DA:303:G:C2	22:DA:304:U:C2	2.92	0.58
42:DU:82:VAL:HB	42:DU:93:ARG:HB3	1.85	0.58
24:BC:80:LEU:HD11	24:BC:109:LEU:HB2	1.86	0.58
22:DA:165:A:C4	22:DA:166:U:C5	2.91	0.58
22:DA:1808:A:O3'	22:DA:1809:A:C8	2.57	0.58
25:BD:97:SER:O	25:BD:99:GLU:CG	2.51	0.58
1:CA:5:U:H4'	1:CA:6:G:H5''	1.85	0.58
6:CF:42:TRP:CB	6:CF:59:TYR:HB2	2.33	0.58
33:DL:55:MET:SD	33:DL:59:ARG:NE	2.76	0.58
40:DS:33:LEU:CA	40:DS:36:LEU:HD23	2.34	0.58
17:AQ:74:LEU:HD12	17:AQ:74:LEU:N	2.13	0.58
22:DA:27:G:H1'	22:DA:513:A:H62	1.67	0.58
22:DA:477:A:C2'	22:DA:478:A:C8	2.86	0.58
4:AD:62:ARG:HA	4:AD:62:ARG:NE	2.17	0.58
4:AD:75:TYR:CD1	4:AD:75:TYR:C	2.77	0.58
26:DE:29:HIS:HA	26:DE:32:VAL:CG2	2.33	0.58
11:AK:124:LYS:HE3	21:AU:34:ARG:CD	2.33	0.58
32:DK:15:GLY:O	32:DK:16:ALA:O	2.22	0.58
22:BA:1016:G:C2'	22:BA:1017:G:O5'	2.52	0.58
27:DF:59:ILE:HD13	27:DF:137:PHE:HZ	1.68	0.58
29:DH:31:VAL:HB	29:DH:32:PRO:CD	2.27	0.58
22:BA:1084:A:C6	22:BA:1085:A:C6	2.92	0.58
2:CB:160:LEU:HB2	2:CB:182:VAL:HG12	1.84	0.58
22:DA:1195:G:N3	22:DA:1226:A:C2	2.72	0.58
22:DA:233:A:O2'	22:DA:234:U:C6	2.54	0.58
1:CA:745:G:H2'	1:CA:746:A:C8	2.38	0.58
2:CB:185:ILE:CG2	2:CB:199:ILE:HG13	2.28	0.58
1:AA:438:U:O2'	1:AA:439:U:OP2	2.19	0.58
27:DF:32:LYS:NZ	27:DF:32:LYS:HB2	2.19	0.58
22:DA:2848:G:OP2	37:DP:94:ALA:HB2	2.04	0.58
22:DA:1635:A:H2'	22:DA:1636:U:H6	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:652:U:O2'	1:AA:653:U:O5'	2.22	0.58
22:DA:632:A:O3'	33:DL:68:SER:HB3	2.04	0.58
28:DG:162:ARG:C	28:DG:163:TYR:HD2	2.07	0.58
44:BW:37:VAL:O	44:BW:38:ARG:CB	2.52	0.58
1:CA:106:C:HO2'	1:CA:107:G:H5'	1.67	0.58
22:BA:511:U:C5	22:BA:512:G:C5	2.92	0.58
1:CA:348:G:H2'	1:CA:349:A:C8	2.37	0.58
22:BA:1759:A:C8	22:BA:2696:U:H1'	2.39	0.58
25:BD:16:THR:HG23	25:BD:20:VAL:HB	1.85	0.58
34:DM:31:PHE:HB2	34:DM:105:MET:HB3	1.86	0.58
22:BA:1786:A:H1'	22:BA:1938:A:N6	2.19	0.58
13:CM:76:ILE:O	13:CM:76:ILE:HG22	2.04	0.58
46:DY:9:LYS:HB3	46:DY:12:GLU:HG3	1.84	0.58
22:BA:568:U:O2	22:BA:570:G:C8	2.56	0.58
22:DA:856:G:H1	22:DA:921:C:H42	1.52	0.58
44:DW:37:VAL:HA	44:DW:55:ASP:O	2.03	0.58
11:CK:70:ALA:CA	11:CK:73:VAL:HG22	2.16	0.58
31:DJ:43:GLU:O	31:DJ:45:THR:N	2.37	0.58
39:DR:49:ILE:HD12	39:DR:51:VAL:O	2.02	0.58
37:DP:42:PHE:CE2	37:DP:71:ARG:HD3	2.39	0.58
40:DS:24:ILE:HG21	40:DS:36:LEU:HD21	1.86	0.58
1:AA:1239:A:H4'	1:AA:1240:U:C5'	2.34	0.58
9:CI:114:LYS:HD2	9:CI:120:ALA:O	2.03	0.58
4:AD:89:LEU:CD2	4:AD:199:ILE:HD11	2.28	0.58
11:AK:21:HIS:CD2	11:AK:34:THR:CG2	2.86	0.58
22:DA:2446:G:C2	22:DA:2501:C:C5	2.92	0.58
1:AA:1123:U:H5''	1:AA:1124:G:OP2	2.04	0.58
10:AJ:48:ARG:NH1	10:AJ:48:ARG:CG	2.50	0.58
22:BA:142:A:O2'	22:BA:143:C:O5'	2.22	0.58
27:DF:43:ILE:CG1	27:DF:77:LYS:HG2	2.34	0.58
1:CA:98:A:C2	1:CA:99:C:C2	2.91	0.58
22:DA:1555:G:C2	22:DA:1556:C:C2	2.91	0.58
22:DA:2415:G:H2'	22:DA:2416:C:C6	2.39	0.58
52:B4:9:LYS:H	52:B4:9:LYS:CE	2.17	0.58
22:DA:371:A:C4	22:DA:373:U:O4	2.56	0.58
13:CM:64:VAL:CG1	13:CM:65:GLU:H	2.09	0.58
22:BA:1141:U:H6	31:BJ:65:THR:HG21	1.69	0.58
27:BF:71:LYS:HA	27:BF:80:GLN:HG2	1.86	0.58
22:DA:234:U:H2'	22:DA:235:U:C6	2.39	0.58
17:AQ:27:PHE:O	17:AQ:28:VAL:HG12	2.03	0.58
22:DA:464:U:H2'	22:DA:465:G:O4'	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DF:122:ASP:HB3	27:DF:126:ASN:HD22	1.69	0.58
22:BA:2531:A:P	28:BG:174:LYS:HG3	2.44	0.58
37:DP:50:ARG:CA	37:DP:57:ALA:H	2.17	0.58
29:DH:94:ILE:CG1	29:DH:98:ASP:OD1	2.51	0.58
24:DC:29:PHE:C	24:DC:31:PRO:HD2	2.24	0.58
22:DA:266:G:C2'	22:DA:267:C:O5'	2.51	0.58
11:AK:27:ASN:O	11:AK:56:LYS:HE3	2.03	0.58
40:BS:36:LEU:HD23	40:BS:48:LYS:CA	2.32	0.58
22:DA:1227:G:C2'	22:DA:1228:G:H5'	2.34	0.58
22:BA:2547:A:H2'	22:BA:2548:U:H6	1.66	0.58
22:DA:1544:A:C6	22:DA:1545:A:C6	2.92	0.58
1:AA:154:U:C2'	1:AA:155:A:H5'	2.34	0.58
51:D3:35:LYS:HB2	51:D3:40:LYS:HD3	1.86	0.58
22:DA:1413:A:C6	22:DA:1414:C:N4	2.72	0.58
22:DA:2478:A:C8	22:DA:2529:G:C6	2.91	0.58
1:AA:1492:A:H2'	1:AA:1493:A:C5'	2.33	0.58
1:AA:507:C:OP2	1:AA:508:U:H3'	2.03	0.58
26:DE:52:VAL:HG12	26:DE:74:LYS:HG2	1.86	0.58
22:DA:953:G:O2'	22:DA:954:G:H5'	2.04	0.58
22:DA:1512:C:O2'	22:DA:1513:U:H5'	2.04	0.58
22:BA:947:A:HO2'	22:BA:984:A:H2	1.52	0.58
22:DA:20:C:H2'	22:DA:21:A:C8	2.38	0.58
22:BA:1452:G:H2'	22:BA:1457:U:O4	2.04	0.58
23:DB:78:A:C2	23:DB:99:A:C4	2.92	0.58
38:DQ:48:ASP:HA	38:DQ:51:GLN:HB2	1.86	0.58
28:BG:97:VAL:HG23	28:BG:124:CYS:SG	2.44	0.58
22:BA:145:C:O2'	22:BA:146:A:H5'	2.04	0.58
34:BM:83:GLY:O	34:BM:85:GLY:N	2.37	0.58
19:AS:14:LEU:HD13	19:AS:32:THR:HG21	1.85	0.58
22:BA:1070:A:C6	22:BA:1097:U:H4'	2.38	0.57
1:CA:452:A:H5''	1:CA:452:A:H8	1.69	0.57
16:CP:52:LEU:O	16:CP:53:ASP:HB2	2.04	0.57
44:DW:24:ARG:HH21	44:DW:65:LYS:HG2	1.69	0.57
22:DA:742:A:H2'	22:DA:743:A:C8	2.39	0.57
22:DA:2886:A:N7	48:D0:39:ARG:NE	2.52	0.57
22:DA:1205:A:N7	26:DE:165:HIS:ND1	2.52	0.57
22:DA:332:A:C5	22:DA:335:C:N4	2.72	0.57
22:DA:70:G:H5'	22:DA:112:U:O2	2.04	0.57
25:BD:3:GLY:O	25:BD:4:LEU:HD12	2.04	0.57
1:CA:1518:A:N1	1:CA:1519:A:C6	2.72	0.57
44:BW:24:ARG:O	44:BW:25:PHE:HB2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BW:47:GLY:N	44:BW:80:SER:HB3	2.18	0.57
6:CF:15:SER:OG	6:CF:58:HIS:CD2	2.50	0.57
44:BW:30:VAL:O	44:BW:30:VAL:HG22	2.04	0.57
1:AA:1239:A:H1'	1:AA:1241:G:C4	2.40	0.57
1:AA:1240:U:N3	7:AG:29:LEU:HD21	2.18	0.57
7:AG:29:LEU:C	7:AG:29:LEU:HD23	2.24	0.57
22:DA:604:G:C6	22:DA:625:G:N1	2.72	0.57
33:DL:83:ALA:HB1	33:DL:118:THR:HG22	1.86	0.57
33:DL:79:LEU:HD12	33:DL:112:LEU:HA	1.85	0.57
2:CB:209:VAL:HG23	2:CB:210:THR:N	2.18	0.57
31:DJ:64:VAL:CG1	31:DJ:65:THR:N	2.67	0.57
27:BF:7:TYR:O	27:BF:11:VAL:HG12	2.04	0.57
5:AE:11:GLN:HE21	5:AE:11:GLN:CA	2.08	0.57
1:AA:563:A:C8	1:AA:567:G:O4'	2.56	0.57
22:DA:2805:C:H2'	22:DA:2806:C:H6	1.69	0.57
1:AA:1153:G:O2'	1:AA:1154:G:O5'	2.22	0.57
22:DA:408:G:N2	22:DA:420:C:H1'	2.18	0.57
1:CA:245:U:O2'	1:CA:246:A:C5'	2.49	0.57
27:DF:28:PRO:CG	27:DF:168:LEU:HD11	2.34	0.57
1:CA:723:U:O4'	21:CU:48:LYS:HD2	2.04	0.57
20:AT:27:MET:O	20:AT:31:ILE:HG13	2.04	0.57
20:AT:53:MET:HE1	20:AT:57:VAL:CG2	2.34	0.57
1:CA:728:A:N7	15:CO:53:ARG:NE	2.52	0.57
1:CA:1394:A:H2'	1:CA:1501:C:O2'	2.04	0.57
1:AA:345:C:C3'	37:BP:33:GLU:OE1	2.51	0.57
28:DG:130:ILE:HG22	28:DG:132:LEU:CD1	2.33	0.57
2:AB:80:LYS:HB2	2:AB:90:PHE:CE1	2.39	0.57
22:DA:1984:G:C6	22:DA:1985:C:C4	2.92	0.57
14:CN:27:LYS:HD2	14:CN:27:LYS:O	2.04	0.57
25:DD:179:ARG:H	25:DD:188:LEU:HB2	1.69	0.57
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.03	0.57
24:BC:196:ASN:O	24:BC:197:ALA:HB3	2.03	0.57
30:DI:58:ILE:HG23	30:DI:66:PHE:CD2	2.39	0.57
22:DA:2811:G:H2'	22:DA:2812:G:C8	2.39	0.57
22:DA:1585:C:C2'	22:DA:1586:A:O5'	2.51	0.57
22:BA:1565:C:O2'	22:BA:1566:A:H2'	2.04	0.57
2:AB:49:PHE:O	2:AB:52:ALA:HB3	2.04	0.57
2:AB:56:LEU:HD13	2:AB:220:VAL:HG22	1.85	0.57
22:BA:1165:A:H2'	22:BA:1166:G:C8	2.39	0.57
22:DA:2184:A:H2'	22:DA:2185:U:O4'	2.04	0.57
25:BD:155:VAL:CG1	25:BD:159:LYS:HG3	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:588:G:N2	1:AA:589:U:H1'	2.19	0.57
16:CP:73:ALA:HA	16:CP:76:LYS:HB2	1.86	0.57
1:AA:788:U:H2'	1:AA:789:U:H6	1.68	0.57
1:CA:38:G:C2	1:CA:397:A:C2	2.92	0.57
16:AP:78:VAL:O	16:AP:78:VAL:HG13	2.03	0.57
22:DA:1813:G:H2'	22:DA:1814:G:H5'	1.85	0.57
24:DC:36:ASN:ND2	24:DC:85:ASN:HD21	2.01	0.57
24:DC:28:PRO:HG3	24:DC:62:ARG:NH1	2.18	0.57
1:CA:1135:U:H5'	1:CA:1136:C:OP2	2.04	0.57
1:CA:1151:A:C4	1:CA:1152:A:N7	2.72	0.57
22:DA:740:C:O2'	22:DA:741:U:H5'	2.03	0.57
1:CA:501:C:O2'	1:CA:502:A:H5'	2.03	0.57
22:DA:120:U:H1'	22:DA:149:A:N7	2.17	0.57
22:DA:35:G:O2'	22:DA:36:G:O4'	2.22	0.57
13:AM:89:ARG:HB3	13:AM:96:VAL:CG2	2.30	0.57
1:CA:499:A:C6	1:CA:547:A:C8	2.91	0.57
17:AQ:80:LYS:HZ2	17:AQ:80:LYS:H	1.52	0.57
22:DA:239:C:O2'	22:DA:621:A:H2	1.86	0.57
33:DL:83:ALA:HA	33:DL:118:THR:HG23	1.86	0.57
25:DD:148:GLN:CD	25:DD:148:GLN:N	2.57	0.57
1:CA:181:A:H1'	1:CA:182:A:C2	2.39	0.57
1:CA:171:A:C6	1:CA:172:A:C6	2.93	0.57
22:DA:489:G:C4	22:DA:491:G:C8	2.92	0.57
1:CA:273:U:C2'	1:CA:274:A:H5'	2.33	0.57
22:DA:2315:G:H2'	22:DA:2316:G:O4'	2.04	0.57
1:CA:867:G:C2	1:CA:868:C:C5	2.92	0.57
4:AD:121:ALA:HA	4:AD:145:ARG:HG3	1.84	0.57
35:BN:28:LEU:HD23	35:BN:48:VAL:HG11	1.86	0.57
1:AA:372:C:H4'	1:AA:373:A:OP1	2.03	0.57
22:DA:224:U:C5	22:DA:420:C:H4'	2.38	0.57
22:DA:416:U:C4	22:DA:417:C:N4	2.73	0.57
22:DA:2297:A:O2'	22:DA:2298:A:C8	2.57	0.57
1:AA:274:A:H4'	1:AA:275:G:OP1	2.02	0.57
22:DA:2657:A:O2'	22:DA:2658:C:H5'	2.03	0.57
22:BA:272:A:O2'	22:BA:273:G:O5'	2.21	0.57
2:AB:89:PHE:CZ	2:AB:153:MET:HB2	2.39	0.57
1:AA:1343:G:H1'	9:AI:122:ARG:NH1	2.19	0.57
22:DA:1107:G:H2'	22:DA:1108:U:C5'	2.34	0.57
35:BN:75:ILE:O	35:BN:75:ILE:HD12	2.03	0.57
20:AT:14:GLU:HA	20:AT:17:ARG:HB2	1.86	0.57
42:BU:48:VAL:O	42:BU:48:VAL:HG13	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:17:HIS:CD2	2:AB:202:ASN:ND2	2.72	0.57
27:DF:36:ASN:O	27:DF:37:MET:HB3	2.04	0.57
25:BD:69:ALA:N	25:BD:73:VAL:HG12	2.19	0.57
1:CA:352:C:H5''	1:CA:352:C:H6	1.69	0.57
1:AA:1033:G:H2'	1:AA:1034:G:H5''	1.86	0.57
13:AM:39:ALA:HB3	13:AM:42:VAL:CG1	2.34	0.57
31:BJ:31:GLU:HG3	31:BJ:142:ILE:HD12	1.86	0.57
22:DA:661:A:O2'	33:DL:13:LYS:HA	2.04	0.57
22:BA:2674:G:H4'	32:BK:30:ARG:HG3	1.84	0.57
1:AA:419:C:O2'	1:AA:420:U:H5'	2.04	0.57
24:DC:2:VAL:C	24:DC:3:VAL:HG23	2.25	0.57
22:BA:2555:U:C5	22:BA:2556:C:C6	2.92	0.57
22:DA:1709:U:O2'	22:DA:1710:G:H5'	2.03	0.57
1:CA:526:C:H6	1:CA:526:C:H3'	1.69	0.57
1:CA:1276:G:C2'	1:CA:1277:C:H5'	2.33	0.57
9:CI:9:GLY:HA3	9:CI:16:ALA:HB3	1.85	0.57
22:DA:736:C:O5'	22:DA:736:C:H6	1.86	0.57
3:CC:119:ILE:O	3:CC:123:LEU:HB2	2.03	0.57
22:BA:2275:C:O2	34:BM:84:LYS:HG2	2.04	0.57
1:AA:834:U:OP1	18:AR:48:ALA:HB2	2.03	0.57
1:CA:1423:G:O2'	1:CA:1424:U:H5'	2.03	0.57
22:DA:1814:G:C6	22:DA:1815:A:N6	2.71	0.57
1:AA:411:A:H62	1:AA:413:G:N2	2.02	0.57
46:DY:37:LEU:HD13	46:DY:42:LEU:HD12	1.83	0.57
22:DA:166:U:O2	22:DA:166:U:H2'	2.04	0.57
22:DA:447:A:H5'	22:DA:449:A:C6	2.38	0.57
22:DA:455:C:C3'	22:DA:456:C:H5'	2.16	0.57
22:DA:137:U:C4	22:DA:138:U:C2	2.92	0.57
38:DQ:63:ARG:HH12	38:DQ:99:VAL:CG2	2.18	0.57
10:AJ:29:ALA:HB1	10:AJ:36:VAL:CG2	2.34	0.57
22:BA:2362:C:C2'	22:BA:2363:G:H5'	2.34	0.57
22:DA:2234:G:C5	22:DA:2235:G:C8	2.91	0.57
22:DA:2360:G:C1'	33:DL:60:ARG:NH2	2.62	0.57
22:DA:600:G:H5'	26:DE:27:LEU:HD22	1.87	0.57
1:AA:620:C:C2	4:AD:131:ILE:HG21	2.38	0.57
1:AA:924:C:O2'	1:AA:925:G:H5'	2.03	0.57
25:DD:151:THR:CG2	25:DD:152:PRO:HD3	2.34	0.57
8:AH:82:LEU:O	8:AH:82:LEU:HD13	2.04	0.57
22:DA:1656:C:H2'	22:DA:1657:U:H5'	1.87	0.57
22:DA:1551:A:C5	22:DA:1552:A:N7	2.72	0.57
1:CA:1346:A:N1	7:CG:9:ARG:NH2	2.51	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:30:MET:CE	7:CG:33:GLY:HA2	2.35	0.57
22:DA:946:C:O2'	22:DA:947:A:O5'	2.22	0.57
4:AD:151:GLN:H	4:AD:154:VAL:CG1	2.17	0.57
13:CM:95:PRO:HG3	13:CM:99:GLN:OE1	2.04	0.57
22:DA:404:A:C2	22:DA:421:C:N3	2.72	0.57
1:AA:274:A:O2'	1:AA:275:G:C5'	2.52	0.57
25:DD:48:ILE:HG12	25:DD:48:ILE:O	2.02	0.57
2:CB:128:LEU:HD23	2:CB:131:LYS:CD	2.35	0.57
51:D3:56:LEU:CD1	51:D3:56:LEU:N	2.65	0.57
28:BG:154:GLU:OE1	28:BG:157:LYS:N	2.38	0.57
1:CA:438:U:H2'	1:CA:494:G:O6	2.04	0.57
22:DA:2823:A:H2'	22:DA:2824:C:H5'	1.85	0.57
22:DA:1845:G:C6	22:DA:1846:G:N7	2.72	0.57
22:BA:1927:A:C6	22:BA:1928:A:C6	2.92	0.57
10:AJ:80:THR:H	10:AJ:83:THR:HG22	1.68	0.57
30:DI:23:VAL:HG11	30:DI:37:PHE:HZ	1.70	0.57
22:DA:24:G:H2'	22:DA:25:U:H5'	1.84	0.57
22:BA:1161:C:C2'	22:BA:1162:G:O5'	2.52	0.57
1:CA:738:C:C5	1:CA:739:C:H5	2.22	0.57
22:DA:9:G:C6	22:DA:2629:U:C6	2.92	0.57
22:DA:1510:G:N2	22:DA:1511:G:C4	2.71	0.57
25:BD:51:THR:OG1	25:BD:76:GLY:HA3	2.04	0.57
22:BA:1113:U:H2'	22:BA:1114:C:H6	1.68	0.57
28:BG:39:ALA:HB1	28:BG:57:TYR:CG	2.40	0.57
41:BT:74:ILE:CG2	41:BT:75:GLY:N	2.66	0.57
20:CT:11:ILE:C	20:CT:13:SER:H	2.08	0.57
2:CB:20:ARG:HH21	2:CB:38:HIS:CD2	2.23	0.57
39:DR:78:ARG:HB3	39:DR:83:TYR:CD1	2.40	0.57
5:AE:148:SER:O	5:AE:152:VAL:N	2.37	0.57
1:CA:1124:G:O2'	1:CA:1125:U:C6	2.58	0.57
1:CA:1146:A:C6	1:CA:1147:C:N4	2.72	0.57
1:AA:429:U:H1'	1:AA:430:A:H5''	1.84	0.57
22:DA:2287:A:C8	22:DA:2289:G:C8	2.93	0.57
22:DA:859:G:N2	22:DA:916:G:C2'	2.68	0.57
22:DA:1808:A:O3'	22:DA:1809:A:H8	1.86	0.57
22:DA:447:A:H5'	22:DA:449:A:N7	2.18	0.57
34:DM:17:ASN:OD1	34:DM:95:LEU:HB3	2.05	0.57
44:BW:40:ARG:N	44:BW:56:HIS:HB3	2.17	0.57
6:CF:37:HIS:O	6:CF:38:ARG:HB3	2.04	0.57
22:BA:2353:G:O2'	44:BW:31:LEU:HD22	2.04	0.57
22:DA:2075:U:N3	22:DA:2077:A:N7	2.44	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:259:G:H2'	1:AA:260:G:H8	1.70	0.57
22:DA:475:C:O2	22:DA:479:A:N6	2.37	0.57
22:DA:510:C:H2'	22:DA:511:U:C6	2.39	0.57
1:CA:937:A:O2'	1:CA:938:A:C5'	2.52	0.57
1:CA:932:C:H5''	7:CG:2:ARG:HD3	1.86	0.57
9:CI:117:LEU:CD2	9:CI:123:ARG:HD3	2.33	0.57
13:CM:89:ARG:HH22	19:CS:77:ARG:HD2	1.69	0.57
22:DA:657:U:O2'	22:DA:658:U:H5'	2.04	0.57
33:DL:128:THR:HG22	33:DL:129:LYS:N	2.18	0.57
22:DA:387:U:H4'	22:DA:388:G:C5'	2.34	0.57
22:DA:1139:G:N2	22:DA:1140:C:C2	2.72	0.57
22:DA:274:C:O2'	22:DA:275:C:H5'	2.04	0.57
1:CA:254:G:H21	17:CQ:17:GLU:CG	2.06	0.57
1:CA:253:A:C6	1:CA:274:A:C2	2.91	0.57
23:DB:6:G:H4'	23:DB:28:C:H4'	1.86	0.57
22:DA:2413:G:H2'	22:DA:2414:G:H8	1.68	0.57
2:AB:207:ARG:O	2:AB:211:LEU:HB2	2.05	0.57
22:DA:2624:G:H1'	48:D0:18:HIS:CE1	2.39	0.57
1:CA:120:A:C3'	1:CA:121:U:C5'	2.78	0.57
16:AP:75:ILE:C	16:AP:77:GLU:H	2.07	0.57
22:BA:1585:C:H2'	22:BA:1586:A:C5'	2.34	0.57
1:AA:981:U:C2	1:AA:982:U:C5	2.92	0.57
4:AD:2:ARG:NH2	4:AD:114:ARG:CD	2.65	0.57
46:BY:18:LEU:O	46:BY:22:LEU:HB2	2.03	0.57
5:CE:48:GLY:CA	5:CE:66:ALA:HB2	2.33	0.57
22:DA:2151:U:H2'	22:DA:2152:G:H8	1.68	0.57
22:BA:2543:G:H5'	22:BA:2543:G:C8	2.36	0.57
1:AA:126:G:H2'	1:AA:127:G:O5'	2.05	0.57
1:AA:1015:G:H1'	1:AA:1218:C:O2'	2.05	0.57
22:DA:2595:G:N1	22:DA:2599:G:C6	2.72	0.57
22:BA:1919:A:H8	22:BA:1919:A:H5'	1.66	0.57
9:CI:48:ARG:C	9:CI:50:PRO:HD2	2.25	0.57
23:BB:16:G:O2'	23:BB:17:C:C5'	2.52	0.57
1:CA:828:U:C2'	1:CA:829:G:O5'	2.51	0.57
22:DA:1249:U:H4'	38:DQ:3:VAL:CB	2.35	0.57
22:BA:403:U:O2'	22:BA:404:A:OP2	2.22	0.57
15:AO:81:ILE:HG13	15:AO:82:GLU:H	1.67	0.57
7:AG:73:GLU:HA	7:AG:140:VAL:HG12	1.85	0.57
2:CB:67:LEU:HG	2:CB:157:PRO:HB3	1.85	0.57
32:DK:23:LYS:O	32:DK:25:LEU:HD23	2.04	0.57
22:BA:1148:U:C6	22:BA:1148:U:H3'	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1045:C:H2'	1:AA:1045:C:O2	2.03	0.57
12:CL:78:VAL:HG23	12:CL:101:LEU:HD12	1.87	0.57
22:DA:1805:A:C2	22:DA:1813:G:C6	2.91	0.57
4:CD:191:SER:O	4:CD:192:ALA:HB3	2.04	0.57
22:DA:1069:A:H4'	22:DA:1070:A:C5'	2.34	0.57
35:DN:9:GLN:O	35:DN:17:ARG:CD	2.52	0.57
1:AA:1138:G:C2'	1:AA:1138:G:N3	2.61	0.57
22:DA:95:A:H2'	22:DA:96:C:C4'	2.34	0.57
45:DX:11:PRO:HB3	45:DX:27:ARG:HH21	1.69	0.57
28:BG:82:PHE:CE2	28:BG:137:LYS:HB2	2.39	0.57
38:BQ:78:PHE:CZ	38:BQ:82:LEU:HD11	2.40	0.57
39:BR:51:VAL:HB	39:BR:52:PRO:HD3	1.82	0.57
4:CD:25:ARG:O	4:CD:26:ALA:O	2.23	0.57
44:BW:23:LYS:HZ2	44:BW:24:ARG:CG	2.17	0.57
6:CF:18:VAL:HB	6:CF:19:PRO:HD2	1.84	0.57
32:DK:19:VAL:CG1	32:DK:41:ILE:CG1	2.83	0.57
31:DJ:114:LEU:O	31:DJ:117:ALA:HB3	2.05	0.57
1:AA:1242:G:C5	1:AA:1243:C:C5	2.92	0.57
1:CA:643:C:H5''	8:CH:31:LEU:HD22	1.86	0.57
1:CA:977:A:H8	1:CA:1223:C:C4	2.22	0.57
10:CJ:52:LEU:HD23	10:CJ:62:ARG:HG2	1.86	0.57
4:AD:52:VAL:CG2	4:AD:53:GLN:N	2.66	0.57
1:AA:619:U:C6	4:AD:131:ILE:HD11	2.39	0.57
10:AJ:73:LEU:O	10:AJ:74:VAL:HB	2.04	0.57
5:CE:96:GLN:CG	5:CE:97:PRO:HD2	2.34	0.57
1:CA:543:U:C2'	1:CA:544:G:H5'	2.35	0.57
41:DT:29:THR:CB	41:DT:86:THR:N	2.68	0.57
36:BO:111:ARG:C	36:BO:113:ALA:H	2.06	0.57
27:DF:42:ALA:CA	27:DF:48:LEU:HD11	2.34	0.57
42:BU:6:ARG:O	42:BU:24:VAL:HB	2.04	0.57
22:DA:2415:G:O2'	22:DA:2416:C:H5'	2.05	0.57
19:AS:49:ALA:HB1	19:AS:56:HIS:HB3	1.84	0.57
13:CM:13:HIS:HE2	13:CM:41:ASP:HA	1.69	0.57
22:BA:1108:U:H2'	22:BA:1109:C:O4'	2.05	0.57
1:AA:1348:U:H4'	9:AI:121:ARG:HG3	1.86	0.57
22:DA:236:C:O2'	22:DA:237:C:H5'	2.04	0.57
30:BI:48:ILE:HG13	30:BI:49:GLU:H	1.68	0.57
2:CB:184:ALA:HB3	2:CB:195:VAL:CG2	2.34	0.57
48:B0:9:ARG:NH2	48:B0:9:ARG:CG	2.65	0.57
1:AA:110:C:O2'	1:AA:111:G:O4'	2.21	0.57
22:BA:2637:U:C2'	22:BA:2638:G:H5'	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:25:LYS:HB2	5:CE:25:LYS:NZ	2.20	0.57
1:AA:144:G:C4	1:AA:179:A:C2	2.92	0.57
22:BA:2800:A:HO2'	22:BA:2801:G:P	2.27	0.57
1:CA:110:C:O2'	1:CA:111:G:H5'	2.05	0.57
22:DA:2582:G:O2'	22:DA:2583:G:H5'	2.04	0.57
3:AC:147:GLY:HA2	3:AC:171:ARG:H	1.68	0.57
22:BA:313:G:H2'	22:BA:314:C:H5'	1.85	0.57
22:DA:1858:A:O2'	22:DA:1859:U:H5'	2.03	0.57
1:CA:39:G:H2'	1:CA:40:C:C6	2.40	0.57
22:BA:1842:G:H2'	22:BA:1843:C:H6	1.67	0.57
22:DA:545:U:H3'	22:DA:545:U:H6	1.70	0.57
34:DM:13:HIS:O	34:DM:14:LYS:HB2	2.05	0.57
3:CC:155:ARG:NE	3:CC:159:ALA:O	2.38	0.57
31:BJ:117:ALA:HA	31:BJ:120:ARG:NH2	2.19	0.57
22:BA:1065:U:H3'	22:BA:1065:U:P	2.44	0.57
7:CG:103:ILE:HG22	7:CG:103:ILE:O	2.03	0.57
22:DA:1115:G:HO2'	22:DA:1116:G:H8	1.52	0.57
16:AP:18:GLN:HE21	16:AP:35:ARG:HD2	1.69	0.57
31:DJ:55:ILE:HG22	31:DJ:123:LYS:HB2	1.87	0.57
22:BA:582:A:C2	22:BA:1259:G:C2	2.92	0.57
22:BA:996:A:C2	22:BA:997:G:C8	2.92	0.57
33:BL:101:ILE:HG22	33:BL:102:GLY:N	2.19	0.57
41:DT:18:GLU:HA	41:DT:22:THR:HG21	1.85	0.57
22:DA:921:C:O2'	22:DA:922:C:H5''	2.05	0.57
22:DA:2836:U:O2'	22:DA:2837:A:O5'	2.15	0.57
1:AA:1507:A:H8	1:AA:1507:A:H5''	1.69	0.57
46:DY:48:ARG:O	46:DY:51:ALA:HB3	2.04	0.57
51:B3:30:HIS:CE1	51:B3:31:ILE:HG22	2.40	0.57
45:DX:2:ARG:HD3	45:DX:32:LEU:HD23	1.87	0.57
45:DX:3:VAL:O	45:DX:3:VAL:HG23	2.05	0.57
1:CA:1495:U:C2'	1:CA:1496:C:H5'	2.34	0.57
45:DX:57:VAL:CG1	45:DX:58:ILE:N	2.68	0.57
21:CU:28:LEU:O	21:CU:28:LEU:HD23	2.05	0.57
10:CJ:66:GLU:HG3	14:CN:100:TRP:HZ3	1.70	0.57
8:CH:54:THR:HG23	8:CH:55:LYS:N	2.19	0.57
22:DA:477:A:C4	22:DA:478:A:C8	2.93	0.57
20:AT:43:LYS:CD	20:AT:86:ALA:HB1	2.35	0.57
2:CB:130:LYS:O	2:CB:134:LEU:HG	2.04	0.57
5:CE:118:GLY:O	5:CE:119:VAL:HG13	2.03	0.57
25:DD:186:LEU:CD2	37:DP:3:ILE:HD11	2.26	0.57
41:BT:7:LEU:C	41:BT:9:LYS:H	2.08	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:692:U:H2'	1:AA:694:A:OP2	2.04	0.57
27:DF:45:ASP:C	27:DF:47:LYS:H	2.07	0.57
22:DA:663:G:C6	22:DA:664:G:C5	2.92	0.57
23:DB:11:C:C5	23:DB:12:C:H5	2.23	0.57
22:DA:2199:A:N6	22:DA:2225:A:N9	2.53	0.57
24:BC:252:LYS:CB	24:BC:252:LYS:HZ3	2.18	0.57
24:DC:95:TYR:C	24:DC:97:ASP:H	2.07	0.57
22:DA:373:U:C2	22:DA:374:A:N7	2.72	0.57
22:DA:1127:A:O2'	22:DA:1128:G:H5'	2.03	0.57
34:BM:41:LEU:O	34:BM:93:VAL:HG23	2.04	0.57
34:BM:71:LYS:HB3	34:BM:93:VAL:O	2.04	0.57
42:BU:71:ILE:N	42:BU:71:ILE:HD12	2.18	0.57
1:CA:1447:A:O2'	1:CA:1448:C:OP1	2.22	0.57
35:DN:84:GLY:O	35:DN:88:ALA:HB2	2.05	0.57
22:BA:216:A:H2'	22:BA:217:A:H8	1.68	0.57
9:AI:128:LYS:CD	9:AI:129:ARG:H	2.13	0.57
29:DH:41:LYS:HA	29:DH:44:ILE:HD13	1.87	0.57
29:BH:83:LYS:HE3	29:BH:98:ASP:OD2	2.04	0.57
1:AA:330:C:C5'	1:AA:330:C:C6	2.87	0.57
4:AD:54:LEU:O	4:AD:54:LEU:HD23	2.04	0.57
22:BA:2758:A:H2'	22:BA:2759:G:C5'	2.34	0.57
22:DA:2531:A:C4	22:DA:2532:G:C8	2.92	0.57
22:DA:2563:U:H1'	22:DA:2566:A:C6	2.40	0.57
11:CK:64:VAL:HG23	11:CK:65:ALA:N	2.20	0.57
25:BD:172:VAL:O	25:BD:173:GLN:CB	2.49	0.57
22:BA:1738:G:O2'	22:BA:1739:A:H8	1.88	0.57
30:BI:53:PRO:O	30:BI:74:PRO:HD2	2.04	0.57
22:DA:1525:A:C2'	22:DA:1526:C:H5'	2.35	0.57
1:AA:1386:G:H2'	1:AA:1387:G:C8	2.36	0.57
4:AD:173:ASP:O	4:AD:174:ALA:HB2	2.04	0.57
3:CC:126:ARG:HA	3:CC:126:ARG:NE	2.18	0.57
22:DA:2348:U:OP1	51:D3:37:THR:HG21	2.04	0.57
1:CA:1531:A:H8	1:CA:1531:A:C5'	2.18	0.57
50:D2:24:THR:HG23	50:D2:24:THR:O	2.04	0.57
12:CL:66:ILE:CD1	12:CL:73:LEU:HD12	2.34	0.57
14:AN:59:GLN:HE21	14:AN:59:GLN:H	1.52	0.57
46:BY:39:GLN:HB2	46:BY:41:HIS:CD2	2.40	0.57
1:CA:708:C:H2'	1:CA:709:U:H6	1.70	0.57
22:BA:2784:U:H2'	22:BA:2785:C:H6	1.70	0.57
22:DA:1651:G:C2	22:DA:2007:U:N3	2.72	0.57
27:BF:64:PRO:HA	27:BF:88:VAL:HG23	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:25:THR:HG23	14:CN:75:LYS:HD2	1.86	0.57
24:DC:38:LYS:HE2	24:DC:55:GLY:H	1.69	0.57
1:AA:1012:A:N6	1:AA:1013:G:C6	2.73	0.57
22:BA:944:C:OP2	56:BA:3265:HOH:O	2.17	0.57
33:DL:50:PHE:CZ	33:DL:53:GLY:N	2.73	0.57
1:CA:1021:A:C2	1:CA:1022:A:H1'	2.38	0.57
6:CF:53:LYS:O	6:CF:53:LYS:HD3	2.03	0.57
22:BA:654:A:H3'	22:BA:654:A:N3	2.19	0.57
4:AD:16:THR:HG22	4:AD:17:ASP:N	2.20	0.57
16:CP:75:ILE:CG2	16:CP:80:LYS:HD2	2.34	0.57
22:DA:2262:U:O2'	22:DA:2263:C:H5'	2.05	0.57
22:DA:1064:C:H2'	22:DA:1065:U:C6	2.40	0.57
1:CA:503:C:O2'	1:CA:504:C:H5'	2.04	0.57
12:CL:97:VAL:CG2	12:CL:100:ALA:HB3	2.35	0.57
22:DA:323:C:H5'	26:DE:163:ASN:OD1	2.04	0.57
24:BC:255:LYS:C	24:BC:256:THR:HG23	2.25	0.57
1:CA:409:U:H2'	1:CA:410:G:O4'	2.04	0.57
4:CD:31:CYS:O	4:CD:32:LYS:HB2	2.05	0.57
44:BW:41:GLY:O	44:BW:42:THR:C	2.41	0.57
44:BW:47:GLY:H	44:BW:80:SER:HB3	1.69	0.57
10:CJ:10:LEU:O	10:CJ:18:ILE:HD11	2.04	0.57
6:CF:38:ARG:HD3	6:CF:39:LEU:N	2.20	0.57
1:CA:1272:G:H2'	1:CA:1273:C:H5'	1.86	0.57
19:CS:52:ASN:C	19:CS:52:ASN:HD22	2.07	0.57
29:DH:6:LEU:CD1	29:DH:36:ALA:HA	2.20	0.57
2:AB:165:ALA:CB	2:AB:186:VAL:HG12	2.28	0.57
1:CA:544:G:OP1	4:CD:55:ARG:NH2	2.38	0.57
22:DA:2682:A:C2	22:DA:2683:C:C2	2.92	0.57
7:CG:25:PHE:CE2	7:CG:61:PHE:HZ	2.22	0.57
22:DA:272:A:N3	22:DA:273:G:N7	2.53	0.57
31:BJ:132:HIS:HB3	31:BJ:135:GLN:HG2	1.86	0.57
1:CA:182:A:C4	1:CA:184:G:N7	2.72	0.57
22:DA:976:G:HO2'	22:DA:977:G:H8	1.52	0.57
40:BS:73:LYS:CE	40:BS:74:ILE:H	2.15	0.57
22:BA:545:U:H2'	22:BA:546:U:C5'	2.35	0.57
22:DA:405:U:H3'	22:DA:406:G:H5'	1.86	0.57
28:DG:94:ARG:HG2	28:DG:105:SER:N	2.19	0.57
22:DA:464:U:O4'	22:DA:686:U:H5	1.87	0.57
26:BE:147:LEU:O	26:BE:168:ASP:O	2.23	0.57
35:DN:75:ILE:C	35:DN:75:ILE:HD12	2.24	0.57
20:AT:29:THR:HA	20:AT:32:LYS:HG2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:55:PRO:HG2	20:AT:56:ILE:H	1.69	0.57
40:BS:96:ILE:HD12	40:BS:96:ILE:O	2.04	0.57
1:AA:1055:A:N6	1:AA:1206:G:C6	2.73	0.57
24:BC:121:ALA:HB3	24:BC:129:LEU:HD21	1.87	0.57
9:AI:119:LYS:O	9:AI:120:ALA:HB3	2.05	0.57
18:CR:19:GLU:CG	18:CR:20:ILE:N	2.68	0.57
22:BA:2211:A:C4'	22:BA:2211:A:OP2	2.52	0.57
1:AA:1494:G:H1'	22:BA:1912:A:O2'	2.04	0.57
1:AA:1261:A:H2'	1:AA:1262:C:H5'	1.86	0.57
22:BA:1361:G:C5	22:BA:1371:G:N2	2.73	0.57
1:AA:1111:A:N1	3:AC:176:THR:HG23	2.20	0.57
43:BV:6:ALA:HB1	43:BV:40:ILE:HG22	1.85	0.57
1:CA:619:U:N3	4:CD:131:ILE:HD11	2.19	0.57
45:DX:39:VAL:HG22	45:DX:44:ARG:O	2.05	0.57
3:AC:116:ALA:HB2	3:AC:199:VAL:CG1	2.35	0.57
40:BS:6:LYS:HB2	40:BS:103:ILE:O	2.04	0.57
9:CI:116:GLY:HA2	10:CJ:60:ASP:OD2	2.04	0.57
1:CA:835:U:H2'	1:CA:836:G:O5'	2.05	0.57
19:CS:12:LEU:O	19:CS:12:LEU:HD13	2.04	0.57
22:BA:1980:G:HO2'	22:BA:1982:U:H5	1.50	0.57
7:AG:49:LEU:HD12	7:AG:60:ALA:HB1	1.86	0.57
22:BA:2203:U:H5''	22:BA:2204:G:OP1	2.05	0.57
22:BA:1153:C:H2'	22:BA:1154:G:O5'	2.04	0.57
33:BL:110:VAL:HG12	33:BL:131:ALA:CB	2.35	0.57
9:CI:28:VAL:HA	9:CI:32:ARG:O	2.05	0.57
22:DA:2288:A:H4'	22:DA:2289:G:OP1	2.01	0.57
22:DA:1087:G:N2	22:DA:1103:A:H1'	2.19	0.57
1:AA:1256:A:C1'	1:AA:1258:G:C5	2.79	0.57
1:CA:516:U:H2'	1:CA:519:C:H42	1.69	0.57
22:DA:217:A:O2'	22:DA:218:A:C5'	2.53	0.57
39:BR:38:VAL:HG23	39:BR:40:MET:H	1.70	0.57
25:BD:105:LYS:HD2	25:BD:105:LYS:O	2.05	0.57
25:BD:107:VAL:O	25:BD:174:SER:O	2.22	0.57
1:CA:791:G:C2'	1:CA:792:A:H5'	2.35	0.57
1:AA:542:G:C2	1:AA:543:U:C4	2.93	0.57
32:DK:77:ILE:HG23	37:DP:71:ARG:HD2	1.87	0.57
22:BA:2352:A:C2	44:BW:30:VAL:CG1	2.87	0.57
22:DA:2234:G:C6	22:DA:2235:G:C5	2.92	0.57
22:DA:1613:G:C2	22:DA:1617:C:C2	2.92	0.57
22:DA:28:A:C6	22:DA:513:A:C8	2.93	0.57
22:DA:602:A:H1'	22:DA:656:G:N2	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DZ:7:THR:O	47:DZ:54:VAL:HA	2.05	0.57
11:AK:109:ILE:HB	21:AU:5:VAL:HG23	1.86	0.57
36:BO:111:ARG:HD3	36:BO:111:ARG:C	2.24	0.57
5:CE:14:LEU:HD12	5:CE:15:ILE:N	2.19	0.57
27:DF:135:ILE:HD12	27:DF:135:ILE:H	1.69	0.57
1:AA:875:U:H1'	8:AH:15:ASN:HD21	1.70	0.57
1:CA:277:C:O2'	1:CA:278:G:C5'	2.51	0.57
1:AA:972:C:O2'	1:AA:973:G:O5'	2.22	0.57
22:DA:1627:G:N2	22:DA:1628:G:N7	2.52	0.57
32:DK:105:ARG:HB2	32:DK:108:ARG:HD2	1.87	0.57
7:CG:72:VAL:CG1	7:CG:144:ALA:HB1	2.34	0.57
22:BA:2196:C:O2'	22:BA:2197:U:H5'	2.03	0.57
19:AS:57:VAL:HG21	19:AS:74:ALA:HA	1.85	0.57
22:BA:33:C:O2'	22:BA:34:U:H5'	2.04	0.57
1:CA:756:C:C2'	1:CA:757:U:H5'	2.34	0.57
6:CF:54:LEU:HD12	6:CF:56:LYS:O	2.05	0.57
25:DD:125:TRP:O	25:DD:126:ASN:HB2	2.05	0.57
11:AK:60:PHE:O	11:AK:63:GLN:HB3	2.04	0.57
1:CA:160:A:H2'	1:CA:161:A:O4'	2.05	0.57
25:DD:40:LEU:CD1	25:DD:40:LEU:H	2.18	0.57
4:AD:190:LEU:O	4:AD:191:SER:HB3	2.04	0.57
22:DA:982:C:C5'	22:DA:983:A:OP1	2.52	0.57
34:DM:57:VAL:O	34:DM:58:LYS:HB2	2.02	0.57
2:CB:30:ILE:HD11	2:CB:188:THR:HB	1.86	0.57
1:CA:1050:G:O2'	1:CA:1051:C:H6	1.87	0.57
3:AC:75:VAL:O	3:AC:82:ASP:HB3	2.04	0.57
43:BV:6:ALA:CB	43:BV:42:LEU:HD22	2.34	0.57
28:BG:37:ASN:HB3	28:BG:40:VAL:HG11	1.86	0.57
1:CA:415:A:H3'	1:CA:416:G:H8	1.70	0.57
28:BG:96:ALA:O	28:BG:97:VAL:HB	2.03	0.57
22:BA:1592:C:O2'	22:BA:1593:A:H5'	2.04	0.57
4:CD:56:GLU:HA	4:CD:56:GLU:OE1	2.05	0.57
22:BA:1249:U:H5'	22:BA:1249:U:C6	2.40	0.57
22:DA:2800:A:N3	22:DA:2801:G:H1'	2.20	0.57
30:DI:48:ILE:HG13	30:DI:49:GLU:HG2	1.85	0.57
1:AA:1284:C:H2'	1:AA:1285:A:N7	2.20	0.57
9:AI:49:GLN:O	9:AI:52:GLU:HG3	2.04	0.57
22:DA:36:G:H5'	22:DA:451:U:C2	2.40	0.57
1:AA:76:G:N1	1:AA:95:C:N4	2.52	0.57
38:DQ:60:TRP:CZ2	38:DQ:93:ILE:HB	2.39	0.57
10:AJ:26:VAL:O	10:AJ:30:LYS:HG2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:64:VAL:HG23	6:CF:65:GLU:N	2.18	0.57
40:DS:9:HIS:H	40:DS:102:HIS:CE1	2.23	0.57
26:BE:1:MET:HB3	26:BE:14:VAL:O	2.05	0.57
19:CS:39:ILE:HG12	19:CS:68:HIS:O	2.05	0.57
33:DL:128:THR:HB	33:DL:131:ALA:CB	2.35	0.57
22:BA:221:A:H4'	22:BA:222:A:O5'	2.03	0.57
22:DA:2701:U:H3'	22:DA:2702:G:C5'	2.35	0.57
33:DL:90:VAL:HG13	33:DL:95:LEU:HD21	1.87	0.57
7:CG:42:VAL:HG12	7:CG:43:TYR:CD2	2.35	0.57
41:DT:29:THR:OG1	41:DT:85:VAL:HB	2.05	0.57
36:BO:79:ALA:HB1	36:BO:113:ALA:HB3	1.86	0.57
27:DF:103:ILE:HG12	27:DF:175:PRO:HD3	1.86	0.57
27:DF:49:LEU:N	27:DF:49:LEU:HD22	2.17	0.57
22:DA:492:A:O2'	22:DA:493:G:C5'	2.53	0.57
22:DA:942:G:H4'	22:DA:1190:G:H5'	1.86	0.57
22:DA:975:A:N3	22:DA:976:G:C8	2.72	0.57
42:BU:35:VAL:HG12	42:BU:38:ILE:CG1	2.32	0.57
1:AA:973:G:H5'	10:AJ:57:VAL:HA	1.87	0.57
1:AA:528:C:C6	1:AA:528:C:H5''	2.40	0.57
1:AA:1181:G:O2'	1:AA:1182:G:C4	2.58	0.57
1:CA:1308:U:OP1	13:CM:95:PRO:HB3	2.04	0.57
16:AP:16:PHE:HD1	16:AP:16:PHE:O	1.88	0.57
12:CL:2:THR:HG22	12:CL:4:ASN:N	2.20	0.57
1:AA:1091:U:C2	1:AA:1095:U:N3	2.72	0.57
1:AA:1348:U:H4'	9:AI:121:ARG:CG	2.34	0.57
22:DA:2626:C:C2'	22:DA:2627:G:C5'	2.79	0.57
22:DA:2626:C:H2'	22:DA:2627:G:C5'	2.34	0.57
1:CA:668:G:O2'	15:CO:45:HIS:CB	2.49	0.57
22:DA:1650:A:H5'	35:DN:106:ASP:OD2	2.05	0.57
33:DL:29:LYS:O	33:DL:30:THR:HG23	2.04	0.57
22:DA:1700:A:O2'	22:DA:1701:A:H5'	2.05	0.57
20:AT:33:LYS:HE2	20:AT:33:LYS:H	1.66	0.57
37:DP:75:THR:CG2	37:DP:76:HIS:CD2	2.88	0.57
29:DH:96:THR:HG22	29:DH:113:SER:OG	2.03	0.57
22:DA:1490:A:H8	24:DC:73:ILE:HD12	1.70	0.57
38:BQ:29:ARG:HG3	38:BQ:29:ARG:NH1	2.11	0.57
1:AA:198:G:C4	1:AA:199:A:N7	2.72	0.57
1:CA:1167:A:C5	1:CA:1169:A:N6	2.72	0.57
22:DA:533:G:OP1	38:DQ:23:TYR:HB3	2.04	0.57
22:DA:2892:G:H5''	22:DA:2894:G:N2	2.20	0.57
36:BO:34:HIS:CD2	36:BO:53:THR:OG1	2.58	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1218:C:H2'	1:AA:1219:A:C8	2.39	0.57
27:DF:169:LEU:HB3	27:DF:174:PHE:HB2	1.87	0.57
1:CA:289:G:N2	1:CA:290:C:C2	2.73	0.57
22:DA:2418:A:C6	22:DA:2419:U:N3	2.73	0.57
9:CI:45:MET:O	9:CI:49:GLN:HG3	2.04	0.57
27:BF:106:ALA:C	27:BF:108:PRO:HD2	2.25	0.57
38:DQ:40:LYS:HD2	38:DQ:44:TYR:HE2	1.69	0.57
22:BA:1115:G:O2'	22:BA:1116:G:O5'	2.22	0.57
8:CH:37:ASN:O	8:CH:41:GLU:HG2	2.04	0.57
43:BV:44:HIS:CE1	43:BV:86:LEU:H	2.22	0.57
1:AA:443:C:C2'	1:AA:444:G:H5'	2.34	0.57
29:DH:73:ASN:C	29:DH:75:LEU:H	2.07	0.57
24:DC:38:LYS:CE	24:DC:55:GLY:H	2.17	0.57
4:AD:176:LYS:N	4:AD:176:LYS:HD3	2.19	0.57
1:AA:941:G:H2'	1:AA:942:G:O5'	2.04	0.57
22:BA:112:U:H5'	46:BY:58:ASN:HD21	1.70	0.57
26:DE:16:GLU:O	26:DE:16:GLU:HG3	2.03	0.57
22:BA:1606:C:HO2'	22:BA:1607:C:P	2.27	0.57
8:CH:97:GLY:O	8:CH:98:LEU:HB2	2.03	0.57
5:AE:152:VAL:O	5:AE:154:ALA:N	2.37	0.57
25:BD:151:THR:HG23	25:BD:152:PRO:N	2.18	0.57
4:AD:16:THR:CG2	4:AD:17:ASP:N	2.67	0.57
1:CA:377:G:H5'	16:CP:5:ARG:HH12	1.69	0.57
22:DA:2344:U:HO2'	22:DA:2345:G:C5'	2.17	0.57
1:CA:517:G:H5'	1:CA:519:C:N3	2.19	0.57
42:DU:7:ASP:O	42:DU:8:ASP:CB	2.52	0.57
32:BK:18:ARG:HB2	32:BK:45:GLU:HG3	1.80	0.57
22:DA:125:A:H5''	50:D2:19:ARG:CB	2.35	0.57
22:DA:2746:U:H2'	22:DA:2747:G:C5'	2.30	0.57
34:DM:126:ILE:O	34:DM:128:THR:HG23	2.05	0.57
1:CA:796:C:C2'	1:CA:797:C:H5'	2.35	0.57
22:BA:2332:C:OP1	44:BW:44:PHE:HZ	1.88	0.57
43:DV:70:ILE:O	43:DV:71:LYS:HB2	2.03	0.57
22:DA:2014:A:H2	22:DA:2613:U:O2	1.88	0.57
22:DA:2015:A:H2'	22:DA:2016:U:H5'	1.87	0.57
22:DA:189:G:H2'	22:DA:190:A:O5'	2.05	0.57
22:DA:2430:A:H5'	22:DA:2431:U:OP2	2.05	0.57
22:DA:1327:A:O2'	22:DA:1328:A:O4'	2.19	0.57
22:DA:480:A:OP2	42:DU:43:LYS:HD2	2.05	0.57
22:DA:507:A:OP2	22:DA:507:A:H2'	2.05	0.57
1:CA:960:U:O2'	1:CA:1223:C:C4'	2.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:983:A:O2'	1:CA:984:C:C5'	2.52	0.57
1:CA:1317:C:H1'	14:CN:52:ARG:NH1	2.20	0.57
33:DL:83:ALA:HA	33:DL:118:THR:CG2	2.34	0.57
40:BS:1:MET:CE	40:BS:2:GLU:H	2.18	0.57
22:DA:2513:A:C6	22:DA:2514:U:C4	2.93	0.57
5:CE:71:ILE:HD11	5:CE:144:GLU:OE2	2.05	0.57
21:AU:33:ARG:HE	21:AU:34:ARG:CG	2.14	0.57
22:DA:242:G:H5''	51:D3:63:TYR:CE1	2.39	0.57
33:DL:19:LEU:HD11	33:DL:31:GLY:CA	2.35	0.57
22:DA:973:A:OP1	22:DA:973:A:H8	1.87	0.57
13:CM:97:ARG:O	13:CM:97:ARG:HG2	2.05	0.57
22:DA:2657:A:H2'	22:DA:2658:C:H6	1.70	0.57
28:DG:91:VAL:N	28:DG:93:TYR:CD2	2.73	0.57
1:AA:574:A:H5''	1:AA:575:G:OP2	2.04	0.57
1:CA:477:C:H3'	1:CA:478:A:C8	2.40	0.57
29:DH:100:ALA:HB2	29:DH:142:VAL:HG21	1.85	0.57
28:DG:84:LYS:O	28:DG:85:LYS:CB	2.53	0.57
22:DA:1714:U:H3'	22:DA:1715:G:C5'	2.35	0.57
16:CP:48:GLU:HG3	16:CP:51:ARG:HH21	1.69	0.57
22:DA:2622:U:O2'	22:DA:2825:G:N7	2.38	0.57
19:AS:64:GLU:H	19:AS:64:GLU:CD	2.08	0.57
1:AA:473:U:H2'	1:AA:474:G:C8	2.37	0.57
1:AA:747:A:H2'	1:AA:748:G:C1'	2.34	0.57
22:BA:2808:G:C2	22:BA:2891:U:C5	2.93	0.57
39:BR:74:ILE:N	39:BR:74:ILE:CD1	2.68	0.57
15:AO:74:VAL:HG12	15:AO:75:ALA:N	2.19	0.57
1:CA:583:A:H3'	1:CA:584:G:H8	1.69	0.57
1:CA:1190:G:H5'	3:CC:175:HIS:NE2	2.20	0.57
22:BA:1205:A:H3'	22:BA:1206:G:H5'	1.87	0.57
22:BA:181:A:C2	22:BA:182:A:C4	2.92	0.57
1:AA:57:G:C5	1:AA:58:C:C4	2.93	0.57
52:D4:5:ALA:O	52:D4:38:GLY:HA2	2.04	0.57
31:BJ:41:LYS:N	38:BQ:66:ALA:HB1	2.20	0.57
22:DA:1623:G:C5	22:DA:1624:U:C5	2.92	0.57
22:BA:832:U:H2'	22:BA:833:A:C8	2.40	0.57
22:BA:2233:U:H2'	22:BA:2234:G:C8	2.40	0.57
22:BA:1952:A:C5	32:BK:22:ILE:HG21	2.39	0.57
37:BP:39:LEU:HD12	37:BP:39:LEU:H	1.70	0.57
37:BP:52:ARG:CG	37:BP:52:ARG:NH1	2.42	0.56
22:DA:1338:G:H2'	22:DA:1339:G:H5'	1.86	0.56
16:CP:67:ILE:HD11	16:CP:75:ILE:HD11	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2264:C:H41	44:DW:11:ASN:ND2	2.02	0.56
1:CA:527:G:C2	1:CA:528:C:C6	2.93	0.56
1:CA:520:A:OP1	12:CL:48:LEU:HG	2.05	0.56
22:DA:333:G:N3	22:DA:334:C:C6	2.72	0.56
22:DA:163:C:O2'	22:DA:164:C:H5''	2.05	0.56
49:B1:8:ILE:HG22	49:B1:9:LYS:H	1.69	0.56
22:BA:855:G:N3	44:BW:23:LYS:CG	2.68	0.56
37:BP:87:ARG:NH1	37:BP:87:ARG:CG	2.68	0.56
1:AA:1303:C:H2'	1:AA:1304:G:H8	1.67	0.56
19:CS:35:ARG:CA	19:CS:70:LEU:HB2	2.32	0.56
51:D3:18:LYS:HG3	51:D3:19:GLY:N	2.19	0.56
22:DA:605:G:O2'	22:DA:606:U:C5'	2.53	0.56
22:BA:1876:A:C2'	22:BA:1877:A:H5'	2.34	0.56
7:CG:136:LYS:O	7:CG:140:VAL:HG23	2.04	0.56
2:AB:70:GLY:HA2	2:AB:163:ILE:HG22	1.87	0.56
36:BO:116:GLN:CA	36:BO:116:GLN:OE1	2.53	0.56
8:AH:124:ILE:O	8:AH:124:ILE:HG13	2.05	0.56
23:DB:11:C:H3'	23:DB:12:C:C5'	2.35	0.56
52:B4:16:ILE:HD13	52:B4:25:VAL:HG22	1.86	0.56
35:BN:101:GLY:HA3	35:BN:102:PHE:CD2	2.39	0.56
1:CA:119:A:C5'	1:CA:120:A:O5'	2.53	0.56
22:BA:92:U:H6	22:BA:92:U:C5'	2.09	0.56
1:AA:63:C:P	1:AA:384:G:H21	2.28	0.56
1:CA:1299:A:C2'	1:CA:1299:A:N3	2.64	0.56
22:BA:1422:G:C4	22:BA:1423:G:C8	2.92	0.56
22:DA:689:A:N3	22:DA:779:U:H1'	2.20	0.56
25:DD:125:TRP:CG	25:DD:160:LYS:HB3	2.40	0.56
20:AT:57:VAL:HG13	20:AT:71:ALA:CB	2.35	0.56
22:BA:224:U:C2'	22:BA:225:C:O5'	2.50	0.56
28:DG:122:ALA:HB2	28:DG:132:LEU:HG	1.87	0.56
8:AH:110:MET:HE2	8:AH:114:ALA:CB	2.35	0.56
3:CC:117:ASP:HA	3:CC:120:THR:HB	1.87	0.56
22:DA:1930:G:O2'	22:DA:1931:U:P	2.63	0.56
22:DA:1525:A:C6	22:DA:1526:C:C2	2.93	0.56
22:DA:1248:G:OP1	38:DQ:1:ALA:HB3	2.04	0.56
22:BA:2471:A:H2'	22:BA:2472:G:H5'	1.86	0.56
3:CC:168:ARG:CG	3:CC:169:GLU:N	2.68	0.56
2:CB:29:PHE:O	2:CB:40:ILE:HG23	2.05	0.56
42:BU:78:LYS:HG2	42:BU:79:ALA:N	2.20	0.56
9:AI:19:PHE:HD2	9:AI:63:TYR:HD1	1.53	0.56
1:CA:1062:U:H2'	1:CA:1063:C:C5	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:101:ASP:C	29:BH:104:THR:HB	2.25	0.56
32:BK:24:VAL:HG12	32:BK:30:ARG:HD2	1.86	0.56
1:AA:688:G:H2'	1:AA:689:C:C6	2.40	0.56
25:BD:136:ASN:ND2	25:BD:139:SER:O	2.36	0.56
22:BA:2276:G:OP2	34:BM:83:GLY:O	2.23	0.56
22:DA:1115:G:O2'	22:DA:1116:G:H8	1.87	0.56
22:BA:2228:G:H2'	22:BA:2229:U:C6	2.39	0.56
26:DE:175:ILE:O	26:DE:175:ILE:HG23	2.04	0.56
22:BA:1080:A:O2'	30:BI:126:ARG:HG3	2.06	0.56
22:DA:1819:A:C4'	22:DA:1820:U:H5'	2.34	0.56
28:BG:84:LYS:O	28:BG:85:LYS:HB2	2.05	0.56
1:CA:1128:C:O2'	1:CA:1129:C:O4'	2.23	0.56
22:DA:1389:G:O2'	22:DA:1390:U:C5'	2.53	0.56
16:CP:52:LEU:HD23	16:CP:80:LYS:HZ2	1.69	0.56
22:DA:739:A:O2'	22:DA:740:C:H5	1.86	0.56
22:DA:100:U:H1'	22:DA:101:A:N7	2.20	0.56
22:DA:70:G:O2'	22:DA:71:A:H5''	2.05	0.56
22:DA:78:U:O2'	22:DA:79:C:OP2	2.23	0.56
41:DT:69:ARG:NE	41:DT:70:HIS:CD2	2.73	0.56
42:DU:92:VAL:HB	42:DU:101:THR:CG2	2.35	0.56
22:BA:2421:G:N7	51:B3:30:HIS:HD2	2.02	0.56
22:DA:1361:G:C2'	22:DA:1362:C:C5'	2.83	0.56
22:DA:178:G:C6	22:DA:179:C:C5	2.94	0.56
22:DA:2209:G:C5	22:DA:2210:U:C4	2.92	0.56
45:DX:26:ARG:HD3	45:DX:28:PHE:CE2	2.40	0.56
22:DA:38:A:H2'	22:DA:39:G:O4'	2.05	0.56
43:DV:30:ILE:HG12	43:DV:91:PHE:HB2	1.87	0.56
11:CK:27:ASN:ND2	11:CK:27:ASN:H	2.02	0.56
22:DA:193:U:O2'	22:DA:194:G:H5'	2.05	0.56
22:DA:1307:A:N6	22:DA:1606:C:C6	2.54	0.56
29:DH:90:LEU:HB3	29:DH:123:ARG:HD2	1.86	0.56
1:CA:961:U:H5	1:CA:1223:C:H1'	1.69	0.56
4:AD:131:ILE:C	4:AD:133:SER:H	2.08	0.56
22:DA:1783:A:C5'	22:DA:2608:G:H4'	2.29	0.56
22:DA:1669:A:H2'	22:DA:1670:C:H5'	1.87	0.56
29:BH:72:ILE:O	29:BH:72:ILE:HG23	2.05	0.56
1:CA:182:A:C2	1:CA:194:C:N4	2.71	0.56
22:DA:1721:G:HO2'	22:DA:1722:A:H8	1.52	0.56
22:DA:2413:G:O2'	22:DA:2414:G:H5'	2.04	0.56
32:DK:59:LYS:HE3	32:DK:89:ASN:OD1	2.05	0.56
35:BN:24:MET:CE	35:BN:44:LEU:HB2	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:111:LYS:N	32:DK:111:LYS:HE3	2.12	0.56
22:DA:2487:G:H2'	22:DA:2488:G:C8	2.40	0.56
3:CC:5:HIS:CD2	3:CC:183:TYR:HE2	2.23	0.56
22:DA:2297:A:N3	22:DA:2298:A:C8	2.73	0.56
22:DA:279:A:N6	22:DA:361:G:O2'	2.37	0.56
1:CA:722:G:O3'	1:CA:723:U:C5	2.58	0.56
3:CC:100:ILE:HD12	3:CC:101:ASN:N	2.20	0.56
37:BP:33:GLU:HG3	37:BP:34:GLY:N	2.15	0.56
22:BA:780:G:H21	22:BA:783:A:H62	1.53	0.56
22:BA:359:G:H3'	22:BA:360:U:H6	1.70	0.56
32:BK:95:ILE:HG13	32:BK:96:GLY:N	2.19	0.56
2:AB:102:ASN:O	2:AB:106:VAL:HG23	2.04	0.56
22:DA:2850:A:O2'	22:DA:2851:A:H5'	2.06	0.56
22:DA:2823:A:C4	22:DA:2824:C:C6	2.93	0.56
29:DH:21:VAL:HG22	29:DH:22:LYS:N	2.19	0.56
1:AA:807:A:C5	1:AA:808:C:C5	2.93	0.56
22:BA:901:C:H2'	22:BA:902:C:H6	1.71	0.56
16:AP:59:HIS:HE1	16:AP:63:GLN:NE2	2.02	0.56
22:BA:482:A:N6	22:BA:506:G:O2'	2.35	0.56
22:BA:789:A:OP1	22:BA:790:U:C5	2.58	0.56
26:BE:153:LEU:HD12	26:BE:153:LEU:O	2.05	0.56
22:BA:619:G:H5''	22:BA:620:G:OP2	2.05	0.56
2:CB:9:LEU:HG	2:CB:10:LYS:N	2.20	0.56
1:CA:1416:G:H22	1:CA:1485:U:H1'	1.68	0.56
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.41	0.56
25:BD:53:GLY:HA3	25:BD:77:ARG:CB	2.35	0.56
22:BA:1465:G:C6	22:BA:1466:U:N3	2.73	0.56
30:DI:79:LEU:HD13	30:DI:100:ILE:HG13	1.87	0.56
22:BA:2555:U:C5	22:BA:2556:C:C2	2.92	0.56
10:CJ:17:LEU:HD23	10:CJ:96:VAL:HG13	1.87	0.56
11:AK:24:ALA:HB2	11:AK:29:THR:HG23	1.86	0.56
6:AF:17:GLN:HG2	4:CD:188:SER:HB2	1.87	0.56
16:AP:42:ILE:O	16:AP:43:ALA:HB3	2.05	0.56
4:CD:106:PHE:CD1	4:CD:106:PHE:N	2.72	0.56
25:DD:202:ILE:HD12	25:DD:202:ILE:N	2.19	0.56
5:AE:100:GLU:HB3	5:AE:121:ASN:HA	1.86	0.56
1:CA:1134:G:C5	1:CA:1135:U:H1'	2.40	0.56
34:BM:36:VAL:O	34:BM:36:VAL:HG13	2.04	0.56
22:DA:856:G:N2	22:DA:922:C:C2	2.73	0.56
22:DA:1830:C:C5'	24:DC:14:HIS:HE1	2.18	0.56
22:DA:1062:G:N2	22:DA:1077:A:H2	1.98	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:77:VAL:CB	30:DI:80:LYS:HE3	2.35	0.56
48:D0:38:LEU:N	48:D0:41:HIS:HE1	2.03	0.56
22:DA:98:G:O2'	22:DA:103:A:C8	2.57	0.56
41:DT:3:ARG:NH1	41:DT:42:GLU:HG2	2.21	0.56
22:BA:1819:A:OP1	24:BC:154:ALA:HA	2.05	0.56
50:D2:35:ARG:HG3	50:D2:42:LEU:HD21	1.86	0.56
45:DX:1:SER:O	45:DX:3:VAL:HG13	2.05	0.56
27:BF:40:GLY:C	27:BF:84:ILE:HD11	2.26	0.56
22:DA:2751:G:H4'	28:DG:3:VAL:CG1	2.36	0.56
1:CA:1071:C:H4'	5:CE:53:ARG:HH12	1.70	0.56
2:CB:156:LEU:HD23	2:CB:156:LEU:H	1.69	0.56
1:CA:413:G:C2	4:CD:32:LYS:HE3	2.40	0.56
22:DA:1152:C:C5'	38:DQ:79:ILE:HD12	2.30	0.56
22:DA:1536:C:C2	22:DA:1536:C:OP2	2.58	0.56
43:DV:44:HIS:CD2	43:DV:85:LYS:HB2	2.39	0.56
1:AA:500:G:H2'	1:AA:501:C:H6	1.66	0.56
16:AP:29:ASN:N	16:AP:29:ASN:ND2	2.53	0.56
22:DA:2617:U:H5''	22:DA:2618:G:OP2	2.05	0.56
22:DA:2052:A:OP1	25:DD:146:ILE:HG23	2.04	0.56
24:BC:203:VAL:CG1	24:BC:204:LEU:N	2.68	0.56
22:BA:819:A:C4	22:BA:1189:A:C2	2.93	0.56
17:AQ:16:MET:HE2	17:AQ:20:ILE:HD12	1.86	0.56
1:CA:960:U:C4'	1:CA:961:U:H5''	2.34	0.56
26:DE:31:VAL:HG11	26:DE:100:MET:O	2.03	0.56
22:BA:1872:A:O2'	22:BA:1873:G:O4'	2.23	0.56
10:AJ:8:ILE:HG23	10:AJ:100:ILE:HG23	1.87	0.56
36:BO:2:ASP:O	36:BO:3:LYS:HG2	2.05	0.56
41:BT:40:LYS:O	41:BT:44:LYS:N	2.38	0.56
41:BT:32:LEU:O	41:BT:83:ALA:HB2	2.06	0.56
33:DL:90:VAL:HG12	33:DL:90:VAL:O	2.04	0.56
27:DF:46:LYS:O	27:DF:50:ASP:HB2	2.04	0.56
8:AH:74:ILE:CD1	8:AH:128:VAL:HG22	2.32	0.56
8:AH:17:GLN:HE21	8:AH:71:VAL:CG2	2.15	0.56
23:DB:59:A:O2'	23:DB:60:C:H5'	2.04	0.56
23:DB:58:A:O2'	23:DB:59:A:O4'	2.22	0.56
23:DB:67:G:C4	23:DB:68:C:C5	2.93	0.56
32:BK:43:ILE:CD1	32:BK:52:VAL:CG2	2.83	0.56
1:CA:1239:A:H3'	7:CG:118:ARG:HH22	1.69	0.56
1:AA:1319:A:OP1	19:AS:4:LEU:HD11	2.05	0.56
1:AA:977:A:H8	1:AA:1223:C:C2	2.23	0.56
19:AS:51:HIS:HD2	19:AS:53:GLY:N	2.02	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1202:U:H2'	1:AA:1203:C:H6	1.70	0.56
22:DA:617:G:N3	22:DA:618:G:C8	2.73	0.56
43:DV:61:LEU:N	43:DV:61:LEU:HD23	2.07	0.56
22:DA:1181:U:H2'	22:DA:1182:G:C8	2.39	0.56
22:DA:2624:G:H1'	48:D0:18:HIS:HE1	1.69	0.56
35:BN:32:GLU:CB	35:BN:115:LEU:HD12	2.36	0.56
22:BA:1056:G:H4'	22:BA:1086:A:H8	1.71	0.56
16:AP:19:VAL:HG13	16:AP:37:GLY:CA	2.34	0.56
29:DH:9:VAL:HG13	29:DH:10:ALA:H	1.69	0.56
26:BE:141:MET:HB2	26:BE:143:LEU:HG	1.86	0.56
22:BA:303:G:C4	22:BA:304:U:C5	2.93	0.56
24:DC:128:THR:HG22	24:DC:188:ARG:CB	2.32	0.56
22:DA:417:C:O2'	22:DA:418:C:H5'	2.04	0.56
3:CC:181:ILE:HA	3:CC:201:ILE:O	2.06	0.56
1:CA:1456:A:H2'	1:CA:1457:G:O4'	2.06	0.56
28:DG:91:VAL:HG23	28:DG:92:GLY:H	1.68	0.56
22:BA:659:G:H4'	26:BE:95:LYS:HD2	1.86	0.56
23:DB:43:C:C2	23:DB:45:A:N7	2.74	0.56
3:CC:36:PHE:HE1	14:CN:91:GLU:HB3	1.69	0.56
1:AA:642:A:O2'	1:AA:643:C:C5'	2.50	0.56
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.05	0.56
1:AA:1024:G:H2'	1:AA:1025:U:H6	1.69	0.56
22:BA:276:U:O2	22:BA:276:U:H2'	2.03	0.56
22:BA:277:G:H8	22:BA:361:G:O6	1.87	0.56
22:BA:2661:G:O2'	22:BA:2662:A:C5'	2.50	0.56
25:BD:169:ARG:C	25:BD:170:VAL:CG1	2.74	0.56
24:DC:64:VAL:HG11	24:DC:66:PHE:CE1	2.40	0.56
22:DA:1716:U:O2'	22:DA:1717:A:H5'	2.05	0.56
22:BA:528:A:H2	22:BA:2043:C:H5'	1.69	0.56
1:CA:1169:A:HO2'	1:CA:1170:A:H8	1.47	0.56
11:AK:51:PHE:CZ	11:AK:64:VAL:HG11	2.41	0.56
1:AA:1167:A:N7	1:AA:1169:A:N6	2.52	0.56
22:DA:2893:A:O4'	22:DA:2894:G:C2	2.58	0.56
22:BA:1735:A:C2	22:BA:1736:U:C2	2.94	0.56
1:AA:932:C:OP1	7:AG:3:ARG:HB3	2.05	0.56
29:DH:1:MET:HB3	29:DH:21:VAL:O	2.06	0.56
1:AA:751:U:H4'	15:AO:23:SER:HA	1.86	0.56
22:DA:2582:G:C2'	22:DA:2582:G:N3	2.68	0.56
1:CA:719:C:H5''	1:CA:720:C:OP2	2.05	0.56
22:DA:1847:A:O2'	22:DA:1848:A:H8	1.88	0.56
22:BA:627:A:C6	22:BA:637:A:C8	2.93	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:3:LYS:CD	30:BI:4:VAL:HG23	2.35	0.56
3:CC:8:GLY:HA2	3:CC:11:LEU:HG	1.86	0.56
22:BA:481:G:C4	22:BA:507:A:C2	2.94	0.56
27:DF:36:ASN:O	27:DF:37:MET:CB	2.52	0.56
27:DF:129:MET:O	27:DF:129:MET:HG3	2.04	0.56
1:CA:802:A:C2'	1:CA:803:G:H5'	2.34	0.56
22:DA:1597:A:O3'	22:DA:1598:A:C8	2.56	0.56
22:BA:1857:G:O2'	22:BA:1858:A:P	2.64	0.56
22:DA:1856:U:H2'	22:DA:1857:G:H5'	1.87	0.56
1:AA:1103:C:H2'	1:AA:1104:G:O4'	2.05	0.56
22:BA:1997:C:OP1	22:BA:1997:C:C4'	2.52	0.56
1:AA:687:A:C2	1:AA:704:A:C5	2.94	0.56
1:AA:1064:G:O2'	1:AA:1190:G:N2	2.38	0.56
26:BE:145:ASP:HB2	26:BE:184:ASP:OD2	2.05	0.56
22:DA:597:G:C2	22:DA:661:A:C2	2.94	0.56
49:B1:16:THR:HG22	49:B1:41:VAL:CG2	2.35	0.56
31:BJ:140:LEU:CD1	31:BJ:140:LEU:C	2.73	0.56
5:CE:18:ASN:OD1	5:CE:33:THR:HG22	2.05	0.56
22:DA:560:C:H1'	38:DQ:47:ARG:HH11	1.70	0.56
22:BA:1505:A:C6	22:BA:1506:U:N3	2.74	0.56
52:B4:3:VAL:O	52:B4:4:ARG:O	2.24	0.56
22:BA:2554:U:C4	22:BA:2555:U:O4	2.59	0.56
27:DF:3:LEU:HG	27:DF:100:GLU:OE2	2.05	0.56
22:BA:2575:C:H5''	22:BA:2576:G:OP2	2.05	0.56
34:DM:116:ALA:C	34:DM:118:LYS:H	2.08	0.56
1:AA:400:C:C2'	1:AA:401:C:H5'	2.35	0.56
22:BA:1216:G:C5	22:BA:1217:U:C5	2.93	0.56
27:BF:46:LYS:HD2	27:BF:46:LYS:N	2.21	0.56
24:DC:44:ASN:O	24:DC:46:GLY:N	2.38	0.56
22:DA:961:C:H5	22:DA:2456:C:C4'	2.18	0.56
22:DA:2787:C:H1'	25:DD:63:PRO:HG3	1.87	0.56
22:BA:1728:C:O2'	22:BA:1729:U:H6	1.87	0.56
22:DA:2561:U:H2'	22:DA:2562:U:O5'	2.04	0.56
32:DK:54:LYS:HG2	32:DK:54:LYS:O	2.05	0.56
24:BC:18:VAL:O	24:BC:18:VAL:HG22	2.04	0.56
22:DA:1798:U:H5	24:DC:270:ARG:NH1	2.04	0.56
10:CJ:44:THR:OG1	10:CJ:70:HIS:CE1	2.58	0.56
22:DA:1338:G:H4'	41:DT:18:GLU:HG3	1.86	0.56
22:DA:324:A:N6	22:DA:338:G:O2'	2.39	0.56
41:DT:69:ARG:CG	41:DT:70:HIS:HD2	2.19	0.56
46:DY:49:ASP:O	46:DY:52:ARG:HB2	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1808:A:H5''	22:DA:1809:A:N7	2.19	0.56
49:B1:50:GLU:OE1	49:B1:50:GLU:HA	2.05	0.56
1:CA:790:A:N6	1:CA:791:G:C6	2.74	0.56
12:AL:43:LYS:HZ2	12:AL:44:PRO:CD	2.19	0.56
43:DV:79:ARG:HB3	43:DV:79:ARG:NH1	2.20	0.56
37:BP:25:VAL:HG11	37:BP:46:VAL:HG23	1.87	0.56
6:CF:3:HIS:HD2	6:CF:65:GLU:HG2	1.71	0.56
22:DA:478:A:C2	22:DA:480:A:C5	2.93	0.56
4:AD:198:LEU:O	4:AD:201:GLU:HB3	2.05	0.56
22:DA:621:A:O2'	22:DA:622:G:O5'	2.24	0.56
22:DA:1675:C:N3	25:DD:133:THR:HG21	2.20	0.56
22:DA:388:G:H2'	22:DA:390:U:OP2	2.06	0.56
36:BO:2:ASP:O	36:BO:3:LYS:CB	2.52	0.56
41:DT:29:THR:H	41:DT:87:LEU:HB3	1.67	0.56
5:CE:15:ILE:HB	5:CE:35:LEU:HD13	1.88	0.56
31:BJ:135:GLN:HE21	31:BJ:135:GLN:CA	2.18	0.56
22:DA:254:G:N7	51:D3:4:LYS:HE2	2.20	0.56
32:BK:43:ILE:HD12	32:BK:52:VAL:CG2	2.35	0.56
22:DA:1300:G:H5''	22:DA:1301:A:H5'	1.87	0.56
14:AN:42:ASN:C	14:AN:44:VAL:H	2.09	0.56
9:CI:51:LEU:O	9:CI:53:LEU:N	2.38	0.56
6:CF:66:ALA:HB1	6:CF:70:VAL:CG2	2.36	0.56
22:BA:1054:A:H2'	22:BA:1055:G:C8	2.40	0.56
1:AA:1152:A:C4	1:AA:1153:G:N7	2.73	0.56
1:CA:1454:G:O2'	1:CA:1455:G:C5'	2.49	0.56
1:AA:579:A:H2'	1:AA:580:C:H6	1.70	0.56
28:BG:59:ASP:CB	28:BG:63:GLN:HG2	2.35	0.56
22:DA:2531:A:H5'	28:DG:156:TYR:CE2	2.41	0.56
9:AI:117:LEU:HD12	9:AI:120:ALA:O	2.06	0.56
40:DS:50:VAL:O	40:DS:53:SER:N	2.38	0.56
22:DA:2478:A:N7	22:DA:2529:G:C6	2.73	0.56
49:B1:31:GLU:O	49:B1:31:GLU:HG2	2.04	0.56
18:CR:25:ILE:O	18:CR:25:ILE:HG13	2.05	0.56
22:BA:2080:A:C5'	45:BX:18:SER:CB	2.83	0.56
49:B1:16:THR:HG22	49:B1:41:VAL:HG21	1.87	0.56
22:DA:2718:G:OP1	37:DP:97:TYR:CD1	2.58	0.56
22:BA:134:G:H2'	22:BA:135:U:O4'	2.06	0.56
22:BA:2862:G:H2'	22:BA:2863:C:H6	1.71	0.56
1:CA:363:A:H2'	1:CA:364:A:O4'	2.04	0.56
22:BA:2593:U:H2'	22:BA:2594:C:H6	1.69	0.56
22:BA:1289:C:H2'	22:BA:1290:C:H6	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:58:G:N2	22:BA:70:G:C4	2.74	0.56
42:BU:27:VAL:HA	42:BU:33:VAL:HG12	1.87	0.56
13:AM:45:SER:O	13:AM:46:GLU:CB	2.53	0.56
36:DO:79:ALA:HB1	36:DO:114:GLY:HA3	1.87	0.56
23:DB:21:G:N2	23:DB:22:U:H1'	2.20	0.56
22:DA:1939:U:H6	22:DA:1939:U:H5'	1.70	0.56
22:DA:1683:U:O2'	22:DA:1684:G:H5'	2.06	0.56
8:CH:9:MET:HG3	8:CH:26:MET:SD	2.45	0.56
5:AE:113:VAL:HG21	5:AE:140:ILE:HD12	1.87	0.56
22:BA:2051:A:H4'	22:BA:2052:A:OP1	2.05	0.56
25:BD:151:THR:O	25:BD:152:PRO:C	2.42	0.56
34:BM:35:ALA:O	34:BM:36:VAL:CB	2.52	0.56
1:CA:372:C:HO2'	1:CA:373:A:P	2.28	0.56
36:DO:17:LYS:CE	36:DO:21:LEU:HD11	2.21	0.56
22:DA:103:A:O2'	22:DA:104:A:C5'	2.54	0.56
22:DA:103:A:O2'	22:DA:104:A:H5'	2.06	0.56
22:DA:36:G:H1	22:DA:445:C:N4	2.02	0.56
22:DA:467:G:H4'	22:DA:796:C:O2'	2.06	0.56
49:B1:9:LYS:NZ	49:B1:50:GLU:OE2	2.33	0.56
32:DK:11:ALA:CB	32:DK:64:ARG:HH12	2.18	0.56
17:AQ:20:ILE:CB	17:AQ:47:ASP:OD1	2.51	0.56
17:AQ:54:ILE:O	17:AQ:54:ILE:HD13	2.06	0.56
22:DA:510:C:O2'	22:DA:511:U:H5'	2.05	0.56
22:BA:1179:G:N1	22:BA:1180:U:O2'	2.38	0.56
1:AA:489:C:H2'	1:AA:490:C:C5'	2.36	0.56
1:CA:969:A:O2'	1:CA:970:C:C5'	2.54	0.56
31:BJ:81:ILE:CG2	31:BJ:82:GLY:H	1.95	0.56
47:BZ:9:THR:CG2	47:BZ:10:ARG:HB2	2.34	0.56
1:CA:253:A:C2	1:CA:254:G:C5	2.93	0.56
1:AA:414:A:C4	1:AA:415:A:C8	2.94	0.56
33:DL:65:GLY:O	33:DL:66:PHE:CB	2.53	0.56
32:DK:92:GLU:O	32:DK:93:GLN:C	2.44	0.56
25:DD:15:PHE:HA	25:DD:20:VAL:O	2.04	0.56
1:CA:1348:U:O2'	1:CA:1349:A:H8	1.88	0.56
1:AA:375:U:H4'	16:AP:17:TYR:CE2	2.41	0.56
1:CA:1450:U:C4'	1:CA:1451:U:C5	2.87	0.56
22:BA:933:A:C2'	22:BA:933:A:N3	2.63	0.56
1:CA:23:C:H5	1:CA:561:U:O4	1.88	0.56
11:CK:74:LYS:O	11:CK:74:LYS:HG2	2.06	0.56
1:AA:815:A:H4'	1:AA:817:C:C4	2.41	0.56
1:CA:704:A:O2'	1:CA:705:G:H8	1.89	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:146:LYS:CB	3:AC:202:PHE:CD2	2.87	0.56
27:DF:129:MET:CE	27:DF:174:PHE:CZ	2.89	0.56
3:CC:126:ARG:HE	3:CC:126:ARG:CA	2.17	0.56
10:AJ:28:THR:HG22	10:AJ:28:THR:O	2.03	0.56
22:BA:64:A:H2'	22:BA:65:U:C6	2.40	0.56
22:DA:308:G:N1	22:DA:309:A:C2	2.74	0.56
19:AS:79:TYR:CG	19:AS:80:ARG:N	2.73	0.56
20:CT:34:VAL:CG1	20:CT:78:LEU:HD21	2.36	0.56
1:CA:460:A:H5''	1:CA:461:A:OP1	2.06	0.56
1:CA:945:G:H1'	1:CA:1337:G:H1'	1.87	0.56
27:BF:169:LEU:HD12	27:BF:169:LEU:H	1.71	0.56
22:DA:2638:G:HO2'	22:DA:2639:A:H8	1.47	0.56
32:BK:107:LEU:O	32:BK:109:SER:N	2.32	0.56
22:BA:1300:G:C5'	22:BA:1301:A:H5'	2.36	0.56
23:BB:2:G:C2	23:BB:119:A:C2	2.94	0.56
1:CA:473:U:OP1	16:CP:76:LYS:CE	2.54	0.56
49:D1:38:PHE:CD2	49:D1:39:ASP:N	2.74	0.56
1:AA:55:A:C4	1:AA:56:U:C6	2.93	0.56
22:DA:1726:C:O2'	22:DA:1727:C:H5'	2.05	0.56
31:BJ:99:ARG:O	31:BJ:103:ILE:HG23	2.04	0.56
21:CU:5:VAL:HG12	21:CU:6:ARG:H	1.71	0.56
3:AC:79:LYS:H	3:AC:79:LYS:HE3	1.71	0.56
37:BP:5:LYS:O	37:BP:9:GLN:HG2	2.05	0.56
4:AD:29:THR:O	4:AD:30:LYS:HD3	2.06	0.56
49:D1:29:LYS:HE2	49:D1:31:GLU:OE2	2.06	0.56
22:DA:923:G:H1'	44:DW:23:LYS:HZ1	1.70	0.56
44:DW:37:VAL:CG2	44:DW:38:ARG:NH1	2.64	0.56
1:AA:1278:G:O5'	1:AA:1279:G:H5'	2.06	0.56
22:DA:1203:U:C4	22:DA:1204:A:N7	2.73	0.56
22:DA:53:A:C2'	22:DA:54:G:H5'	2.36	0.56
22:DA:35:G:C5	22:DA:454:A:C2	2.94	0.56
29:DH:25:TYR:CE1	29:DH:30:LEU:HD21	2.40	0.56
39:DR:4:VAL:HG22	39:DR:40:MET:HB3	1.86	0.56
1:AA:503:C:O5'	1:AA:503:C:H6	1.88	0.56
4:AD:69:ARG:HE	4:AD:69:ARG:HA	1.70	0.56
11:CK:92:ARG:CG	11:CK:92:ARG:NH1	2.48	0.56
32:DK:63:VAL:HG12	32:DK:64:ARG:HD3	1.86	0.56
22:DA:1263:U:C4'	48:D0:6:LYS:HE3	2.36	0.56
22:DA:191:A:C2	22:DA:192:C:C2	2.94	0.56
17:AQ:18:LYS:CB	17:AQ:47:ASP:HB2	2.35	0.56
8:CH:102:VAL:HG22	8:CH:126:CYS:SG	2.45	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1256:G:O2'	22:DA:1257:C:H5'	2.05	0.56
1:CA:1046:A:H2'	1:CA:1047:G:H8	1.70	0.56
1:CA:1318:A:O2'	19:CS:36:ARG:HD3	2.05	0.56
22:DA:629:G:OP1	51:D3:16:THR:HB	2.06	0.56
22:DA:2135:A:C3'	22:DA:2136:G:C5'	2.78	0.56
22:BA:1867:G:HO2'	22:BA:1868:C:H5'	1.68	0.56
25:DD:149:ASN:ND2	25:DD:150:GLN:HB3	2.20	0.56
2:AB:186:VAL:N	2:AB:199:ILE:O	2.39	0.56
5:CE:95:MET:HE1	5:CE:143:LEU:CD2	2.35	0.56
25:DD:4:LEU:HD12	25:DD:32:ASN:OD1	2.05	0.56
22:DA:1997:C:HO2'	22:DA:1998:A:C5'	2.18	0.56
1:CA:181:A:H2	1:CA:195:A:C2	2.24	0.56
1:CA:80:A:C6	1:CA:81:A:O2'	2.56	0.56
1:CA:89:U:O2'	1:CA:90:C:O4'	2.23	0.56
24:DC:184:GLU:O	24:DC:185:ALA:HB3	2.05	0.56
22:DA:989:G:C4'	22:DA:990:A:OP1	2.53	0.56
22:DA:2200:C:N4	22:DA:2224:G:N2	2.53	0.56
1:AA:1319:A:C5	1:AA:1323:G:C4	2.94	0.56
35:BN:103:ARG:HD3	35:BN:110:MET:CE	2.29	0.56
5:CE:13:LYS:HB2	5:CE:116:VAL:HG11	1.88	0.56
25:DD:73:VAL:HG22	25:DD:74:GLU:N	2.19	0.56
42:BU:25:LYS:HB2	42:BU:34:ILE:O	2.05	0.56
20:CT:61:ALA:HA	20:CT:67:HIS:HA	1.88	0.56
29:BH:27:ARG:HH12	29:BH:38:PRO:HG3	1.70	0.56
1:AA:667:G:C4'	15:AO:50:HIS:ND1	2.66	0.56
5:AE:14:LEU:C	5:AE:14:LEU:HD13	2.24	0.56
50:D2:45:SER:C	50:D2:46:LYS:HD2	2.25	0.56
22:BA:1508:A:O2'	22:BA:1509:A:C5'	2.53	0.56
37:DP:50:ARG:O	37:DP:51:ASN:HB2	2.06	0.56
1:AA:1410:A:C2'	1:AA:1411:C:O5'	2.53	0.56
3:CC:85:LYS:O	3:CC:89:VAL:HG21	2.05	0.56
1:CA:345:C:H4'	1:CA:346:G:O5'	2.06	0.56
7:AG:25:PHE:O	7:AG:28:ILE:HB	2.06	0.56
36:BO:59:ALA:CA	36:BO:62:LEU:HD13	2.35	0.56
22:DA:2508:G:H2'	22:DA:2509:G:H8	1.70	0.56
1:AA:188:C:O2	1:AA:188:C:H2'	2.05	0.56
22:DA:2636:C:H2'	22:DA:2637:U:C6	2.40	0.56
2:AB:20:ARG:O	2:AB:21:TYR:C	2.44	0.56
50:B2:12:ARG:HB2	50:B2:12:ARG:HH21	1.69	0.56
7:AG:130:LYS:N	7:AG:134:VAL:HG21	2.20	0.56
2:CB:25:LYS:O	2:CB:26:MET:HE3	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:13:SER:O	40:BS:14:ALA:CB	2.53	0.56
17:CQ:30:HIS:CG	17:CQ:31:PRO:HD2	2.40	0.56
33:BL:92:LEU:HD23	33:BL:125:LEU:HD23	1.87	0.56
1:CA:347:G:H2'	1:CA:348:G:H8	1.70	0.56
38:BQ:97:ILE:HD13	38:BQ:104:ALA:HB3	1.88	0.56
22:BA:1474:U:C2'	22:BA:1475:G:H5'	2.35	0.56
22:DA:2107:G:H2'	22:DA:2108:A:H8	1.68	0.56
1:CA:178:C:C4	1:CA:179:A:N7	2.74	0.56
1:AA:339:C:H2'	1:AA:340:U:H6	1.71	0.56
7:AG:72:VAL:HG12	7:AG:89:GLU:HA	1.87	0.56
22:DA:936:A:C6	22:DA:937:C:C4	2.94	0.56
31:DJ:16:TYR:O	31:DJ:54:ILE:HD12	2.06	0.56
31:BJ:53:TYR:CD1	31:BJ:121:LYS:HG2	2.41	0.56
22:BA:645:C:N4	22:BA:2350:C:H4'	2.20	0.56
35:DN:18:GLN:HG2	35:DN:18:GLN:O	2.04	0.56
22:BA:1334:G:C6	22:BA:1335:C:C4	2.93	0.56
1:AA:900:A:N1	1:AA:901:A:C2	2.74	0.56
24:DC:145:MET:HE2	24:DC:181:ARG:NH2	2.17	0.56
28:BG:83:THR:CA	28:BG:84:LYS:HE2	2.35	0.56
10:CJ:102:LEU:HD13	10:CJ:102:LEU:OXT	2.04	0.56
1:CA:1151:A:H4'	10:CJ:70:HIS:HE1	1.71	0.56
22:DA:2327:A:H2'	22:DA:2328:A:C8	2.41	0.56
22:DA:2345:G:C5	22:DA:2347:C:N4	2.73	0.56
24:DC:16:VAL:HG12	24:DC:202:ARG:HA	1.87	0.56
30:DI:52:LEU:O	30:DI:54:ILE:HD12	2.05	0.56
22:DA:111:A:N1	22:DA:112:U:C2	2.74	0.56
22:DA:149:A:C2'	22:DA:150:U:H5'	2.36	0.56
22:DA:1373:A:H5'	22:DA:2212:A:H1'	1.86	0.56
22:DA:2215:C:O2'	22:DA:2216:G:H8	1.89	0.56
22:DA:140:C:H5'	22:DA:141:G:H21	1.70	0.56
1:AA:80:A:C2	1:AA:81:A:H1'	2.40	0.56
11:CK:126:ARG:N	21:CU:33:ARG:HE	2.03	0.56
43:DV:75:GLN:HB2	43:DV:90:ASP:O	2.05	0.56
43:DV:88:HIS:O	43:DV:89:ILE:HG23	2.04	0.56
22:DA:2051:A:C4'	22:DA:2052:A:OP1	2.33	0.56
22:BA:1501:G:O2'	22:BA:1502:A:H5'	2.05	0.56
1:CA:977:A:H1'	1:CA:1223:C:H42	1.70	0.56
3:AC:34:SER:O	3:AC:38:VAL:HG13	2.05	0.56
5:CE:79:THR:HA	5:CE:121:ASN:OD1	2.06	0.56
22:DA:1429:G:C2	22:DA:1430:G:C5	2.93	0.56
7:CG:22:LEU:CA	7:CG:25:PHE:HB3	2.22	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:66:A:C5	1:CA:67:C:C5	2.94	0.56
17:CQ:67:SER:O	17:CQ:69:THR:N	2.39	0.56
22:DA:1492:G:C3'	22:DA:1493:C:C5'	2.75	0.56
23:DB:63:C:H2'	23:DB:63:C:O2	2.05	0.56
22:DA:2093:G:O2'	22:DA:2094:A:P	2.63	0.56
1:CA:18:C:H4'	1:CA:1078:U:O2	2.05	0.56
22:BA:1056:G:H4'	22:BA:1086:A:C8	2.41	0.56
16:AP:79:ASN:O	16:AP:80:LYS:CB	2.51	0.56
6:AF:86:ARG:HH12	6:AF:88:MET:HE3	1.70	0.56
12:AL:33:CYS:N	12:AL:54:VAL:HG13	2.21	0.56
3:CC:172:VAL:HG12	3:CC:181:ILE:HD13	1.88	0.56
3:CC:181:ILE:O	3:CC:181:ILE:HG22	2.04	0.56
30:BI:23:VAL:HG23	30:BI:24:GLY:H	1.71	0.56
27:DF:57:ALA:HB2	27:DF:64:PRO:HG2	1.88	0.56
10:CJ:30:LYS:HE2	10:CJ:36:VAL:CG2	2.36	0.56
1:AA:652:U:HO2'	1:AA:653:U:P	2.28	0.56
28:DG:122:ALA:HB2	28:DG:132:LEU:HA	1.88	0.56
40:DS:6:LYS:NZ	40:DS:104:THR:HG23	2.20	0.56
22:DA:2259:U:C5	22:DA:2427:C:C4	2.93	0.56
1:AA:199:A:H2'	1:AA:200:G:C8	2.41	0.56
1:CA:1169:A:C2'	1:CA:1170:A:H8	2.18	0.56
1:AA:723:U:O2'	1:AA:855:U:H4'	2.05	0.56
22:BA:2279:G:N7	44:BW:10:ARG:NH2	2.53	0.56
13:AM:2:ARG:HG3	13:AM:56:ARG:HH12	1.69	0.56
5:CE:68:ARG:O	5:CE:69:ASN:C	2.44	0.56
22:BA:2793:C:H2'	22:BA:2794:C:H6	1.70	0.56
6:AF:93:LYS:O	6:AF:94:HIS:CB	2.53	0.56
22:BA:1736:U:H2'	22:BA:1737:G:O4'	2.06	0.56
45:DX:19:HIS:C	45:DX:21:LEU:H	2.09	0.56
22:DA:354:A:H2'	22:DA:355:U:O4'	2.06	0.56
22:DA:1519:G:C6	22:DA:1520:U:N3	2.73	0.56
4:CD:104:MET:SD	4:CD:142:VAL:CG1	2.94	0.56
23:DB:50:A:OP1	36:DO:68:LYS:HB2	2.06	0.56
40:DS:68:ASP:N	40:DS:68:ASP:OD1	2.38	0.56
22:BA:289:G:H2'	22:BA:290:U:C6	2.40	0.56
4:CD:138:PRO:O	4:CD:139:ASN:HB2	2.05	0.56
27:DF:127:TYR:O	27:DF:155:ILE:HD11	2.06	0.56
1:AA:550:G:C2'	1:AA:551:U:H5'	2.36	0.56
11:CK:12:ARG:N	11:CK:12:ARG:CD	2.68	0.56
8:AH:54:THR:C	8:AH:56:PRO:HD3	2.26	0.56
1:AA:192:A:C5	1:AA:193:C:C5	2.93	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1231:G:C6	1:AA:1232:U:C4	2.94	0.56
22:DA:1843:C:H6	22:DA:1843:C:O5'	1.89	0.56
19:AS:19:GLU:HA	19:AS:19:GLU:OE2	2.06	0.56
1:AA:812:G:HO2'	1:AA:813:U:P	2.28	0.56
31:BJ:44:TYR:O	31:BJ:45:THR:CB	2.54	0.56
33:BL:93:ASN:O	33:BL:95:LEU:N	2.38	0.56
28:BG:86:LEU:HB3	28:BG:162:ARG:O	2.05	0.56
41:DT:34:VAL:HG21	41:DT:43:ILE:HD12	1.88	0.56
1:AA:433:G:O2'	1:AA:434:U:H5'	2.06	0.56
44:DW:36:ILE:HG22	44:DW:37:VAL:O	2.05	0.56
22:DA:1827:U:H2'	22:DA:1828:G:H8	1.70	0.56
35:DN:35:LYS:NZ	35:DN:112:TYR:CE1	2.74	0.56
1:CA:1206:G:C6	1:CA:1207:G:C5	2.94	0.56
22:DA:338:G:C2'	22:DA:339:U:C5'	2.76	0.56
42:DU:20:LYS:HD2	42:DU:38:ILE:HD11	1.86	0.56
24:BC:106:PRO:CB	24:BC:141:HIS:CE1	2.74	0.56
22:DA:116:C:HO2'	22:DA:117:G:H5'	1.71	0.56
39:BR:53:PHE:CD1	39:BR:53:PHE:N	2.73	0.56
31:DJ:4:PHE:HB3	38:DQ:63:ARG:NH2	2.21	0.56
11:CK:124:LYS:O	21:CU:33:ARG:CZ	2.54	0.56
6:CF:18:VAL:CB	6:CF:19:PRO:CD	2.83	0.56
22:DA:1323:C:C4	22:DA:1324:G:N7	2.74	0.56
17:AQ:80:LYS:CB	17:AQ:80:LYS:HZ2	2.17	0.56
26:BE:5:LEU:HD22	26:BE:121:VAL:HA	1.87	0.56
1:CA:934:C:C5	1:CA:1344:C:N3	2.74	0.56
20:AT:43:LYS:HD3	20:AT:86:ALA:O	2.06	0.56
25:DD:10:GLY:CA	25:DD:26:VAL:HB	2.36	0.56
1:AA:923:A:H2'	1:AA:924:C:H6	1.71	0.56
29:BH:111:ALA:O	29:BH:112:LYS:CD	2.54	0.56
48:B0:39:ARG:CB	48:B0:39:ARG:HH11	2.05	0.56
22:BA:138:U:H3'	22:BA:139:U:H5'	1.87	0.56
1:CA:104:G:H4'	1:CA:174:A:O4'	2.05	0.56
40:DS:49:LYS:HB3	40:DS:49:LYS:HZ2	1.70	0.56
14:AN:2:LYS:HD3	14:AN:5:MET:HG2	1.88	0.56
1:AA:1157:A:H1'	1:AA:1181:G:N1	2.20	0.56
4:CD:40:HIS:O	4:CD:43:ARG:HB2	2.06	0.56
1:AA:483:C:O2	16:AP:13:LYS:NZ	2.39	0.56
22:BA:301:G:OP2	42:BU:81:ARG:NH1	2.39	0.56
1:CA:1452:C:H5'	1:CA:1453:G:C5	2.40	0.56
34:BM:78:LEU:CD2	34:BM:79:ALA:N	2.69	0.56
1:CA:722:G:H2'	1:CA:722:G:N3	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:128:LEU:HD23	2:CB:131:LYS:HD3	1.88	0.56
22:DA:674:G:N2	22:DA:2445:G:OP1	2.37	0.56
22:DA:196:A:H2'	22:DA:805:G:O6	2.06	0.56
40:DS:4:ILE:HD12	40:DS:5:ALA:H	1.71	0.56
1:AA:197:A:O2'	1:AA:198:G:C8	2.58	0.56
1:CA:1195:C:H2'	1:CA:1197:A:O4'	2.05	0.56
38:DQ:35:PHE:HE1	38:DQ:39:ILE:HD11	1.71	0.56
11:AK:51:PHE:HB2	11:AK:55:ARG:HB3	1.88	0.56
22:DA:2143:C:C5'	22:DA:2144:G:OP2	2.52	0.56
1:AA:556:C:C3'	1:AA:557:G:H5'	2.35	0.56
13:CM:47:LEU:HD23	13:CM:48:SER:N	2.21	0.56
22:DA:2432:A:N1	45:DX:20:ALA:HA	2.21	0.56
28:DG:71:LEU:HD22	28:DG:74:MET:CE	2.35	0.56
22:BA:1266:G:OP1	48:B0:15:ARG:NE	2.38	0.56
30:DI:23:VAL:HG11	30:DI:37:PHE:CZ	2.41	0.56
26:DE:136:GLN:HA	26:DE:139:LYS:HG2	1.88	0.56
1:AA:687:A:N7	1:AA:701:U:H5	2.04	0.56
1:CA:1416:G:C2'	1:CA:1417:G:H5'	2.35	0.56
1:AA:420:U:C2'	1:AA:421:U:H5''	2.36	0.56
1:CA:1189:U:O2'	3:CC:175:HIS:HD2	1.87	0.56
15:AO:45:HIS:C	15:AO:47:LYS:H	2.09	0.56
22:BA:2524:G:C2'	22:BA:2525:G:O5'	2.53	0.56
13:AM:22:TYR:CE2	13:AM:69:ARG:HG2	2.41	0.56
7:CG:32:ASP:HB3	7:CG:34:LYS:HD3	1.87	0.56
25:BD:158:GLY:O	25:BD:159:LYS:C	2.44	0.56
32:DK:47:ILE:HG22	32:DK:49:ARG:HG3	1.88	0.56
22:BA:2682:A:C8	25:BD:11:MET:HG2	2.39	0.56
22:BA:2400:G:O2'	22:BA:2401:U:H5'	2.06	0.56
22:BA:1052:C:C2'	22:BA:1053:C:H5'	2.36	0.56
30:DI:44:LYS:HD3	30:DI:44:LYS:O	2.06	0.56
25:DD:37:VAL:CG2	25:DD:91:THR:HA	2.36	0.56
1:CA:229:U:H2'	1:CA:230:G:O4'	2.05	0.56
22:DA:2526:G:C5	22:DA:2527:C:C5	2.94	0.56
37:BP:50:ARG:HD3	37:BP:56:SER:CA	2.33	0.56
22:BA:1160:G:N2	39:BR:10:LYS:HD2	2.21	0.56
22:BA:1061:U:H6	22:BA:1070:A:C1'	2.19	0.56
24:DC:61:TYR:HD2	24:DC:85:ASN:ND2	2.04	0.56
1:CA:1151:A:C4'	10:CJ:70:HIS:HE1	2.19	0.56
22:DA:1313:U:C6	22:DA:1610:A:C8	2.94	0.56
26:DE:149:ILE:HG12	26:DE:188:MET:HG3	1.87	0.56
22:DA:1826:G:C5	22:DA:1827:U:C4	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1062:G:C8	22:DA:1088:A:C8	2.93	0.56
1:AA:1508:A:H2'	1:AA:1509:C:O5'	2.06	0.56
22:DA:297:G:H4'	42:DU:84:PHE:O	2.05	0.56
22:DA:58:G:N2	22:DA:59:U:C1'	2.68	0.56
22:DA:1568:G:H21	24:DC:57:HIS:CE1	2.24	0.56
39:DR:49:ILE:HG13	39:DR:49:ILE:O	2.04	0.56
32:DK:76:VAL:O	37:DP:71:ARG:HG3	2.06	0.56
24:BC:15:VAL:C	24:BC:203:VAL:HG11	2.26	0.56
1:AA:1303:C:C2'	1:AA:1304:G:H8	2.19	0.56
12:AL:89:LEU:HB3	12:AL:92:VAL:CG2	2.36	0.56
22:BA:197:A:H62	22:BA:2430:A:H2'	1.67	0.56
22:DA:624:C:O2'	22:DA:657:U:H5''	2.05	0.56
1:CA:577:G:N9	1:CA:816:A:C2	2.74	0.56
22:DA:1139:G:N3	22:DA:1143:A:C2	2.71	0.56
1:AA:841:C:H2'	1:AA:843:U:H5'	1.87	0.56
27:DF:103:ILE:H	27:DF:107:VAL:HG13	1.71	0.56
27:DF:136:ILE:CG2	27:DF:142:TYR:CG	2.88	0.56
22:DA:976:G:C2'	22:DA:977:G:H8	2.17	0.56
27:BF:133:GLU:H	27:BF:150:GLY:CA	2.18	0.56
32:BK:1:MET:HE3	32:BK:32:TYR:CG	2.40	0.56
22:DA:1438:U:C5	22:DA:1552:A:N1	2.73	0.56
1:CA:1005:A:C8	1:CA:1006:G:H1'	2.41	0.56
1:AA:1157:A:C6	1:AA:1180:A:C5	2.94	0.56
22:DA:847:U:H5'	22:DA:848:C:OP2	2.06	0.56
1:CA:120:A:H3'	1:CA:121:U:C5'	2.34	0.56
1:CA:881:G:H2'	1:CA:882:C:O4'	2.05	0.56
3:CC:137:VAL:HG13	3:CC:148:ILE:HG23	1.88	0.56
22:DA:672:C:H6	22:DA:672:C:C5'	2.16	0.56
3:CC:39:ARG:HG2	3:CC:54:ILE:CD1	2.32	0.56
29:DH:62:LEU:HD12	29:DH:63:ALA:N	2.21	0.56
22:DA:1673:G:O2'	22:DA:1674:G:H5'	2.06	0.56
15:AO:5:GLU:O	15:AO:9:LYS:HG3	2.06	0.56
1:AA:495:A:C2	1:AA:496:A:N6	2.74	0.56
28:DG:143:VAL:O	28:DG:147:LEU:HG	2.05	0.56
12:AL:106:VAL:CG2	12:AL:116:TYR:HB3	2.36	0.56
22:BA:68:G:N2	22:BA:74:A:OP2	2.36	0.56
22:DA:1278:C:H1'	35:DN:27:SER:OG	2.06	0.56
22:DA:1936:A:H2	22:DA:1943:U:C5	2.23	0.56
22:DA:1954:G:O2'	22:DA:1955:U:P	2.64	0.56
1:AA:1061:G:C6	1:AA:1197:A:C2	2.94	0.56
31:DJ:106:LYS:HB2	31:DJ:119:PHE:HE2	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1734:G:O2'	22:BA:1735:A:C8	2.48	0.56
29:DH:21:VAL:HG22	29:DH:22:LYS:H	1.71	0.56
22:DA:2348:U:HO2'	22:DA:2349:G:H8	1.52	0.56
22:DA:2766:A:H2'	22:DA:2766:A:N3	2.20	0.56
22:BA:611:C:H2'	22:BA:612:G:O5'	2.05	0.56
37:DP:95:LYS:HE3	37:DP:95:LYS:HA	1.88	0.56
1:CA:1050:G:C2	1:CA:1051:C:C5	2.94	0.56
15:CO:69:LEU:HD13	15:CO:77:TYR:HB2	1.88	0.56
1:AA:771:G:C4	1:AA:809:G:N2	2.74	0.56
22:BA:2750:A:O2'	22:BA:2752:C:N4	2.35	0.56
22:BA:1761:C:H2'	22:BA:1762:A:H5'	1.88	0.56
22:BA:2080:A:H5'	45:BX:18:SER:HB3	1.86	0.56
23:DB:71:C:H2'	23:DB:72:G:H5'	1.87	0.56
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.87	0.56
24:BC:250:GLN:H	24:BC:250:GLN:CD	2.09	0.56
49:D1:12:SER:HB2	49:D1:48:TYR:CZ	2.40	0.56
22:DA:2255:G:H2'	22:DA:2256:G:O4'	2.06	0.56
1:CA:1477:U:H2'	1:CA:1478:U:C6	2.41	0.56
24:DC:158:GLY:HA2	24:DC:194:VAL:O	2.06	0.56
27:BF:35:LEU:CB	27:BF:153:ILE:HG23	2.20	0.56
22:DA:2339:C:O2'	22:DA:2340:A:OP2	2.24	0.56
22:DA:2385:C:C2	22:DA:2386:A:N7	2.73	0.56
35:DN:31:HIS:C	35:DN:33:ILE:H	2.09	0.56
9:AI:51:LEU:HD13	9:AI:56:MET:HG2	1.87	0.56
22:DA:92:U:O2'	22:DA:93:G:C5'	2.54	0.56
42:DU:82:VAL:O	42:DU:96:LYS:HG3	2.05	0.56
26:DE:57:LYS:NZ	26:DE:58:LYS:H	2.03	0.56
34:DM:41:LEU:O	34:DM:93:VAL:HG23	2.05	0.56
34:DM:40:ARG:HB2	34:DM:93:VAL:HG21	1.88	0.56
43:DV:80:HIS:CG	43:DV:81:PRO:HD2	2.40	0.56
1:AA:545:C:C3'	1:AA:546:A:H5'	2.36	0.56
6:CF:6:ILE:HD12	6:CF:6:ILE:H	1.71	0.56
22:DA:249:C:C2'	22:DA:249:C:O2	2.53	0.56
51:D3:22:LYS:HA	51:D3:47:ALA:O	2.06	0.56
22:BA:2430:A:H5'	22:BA:2431:U:OP2	2.06	0.56
11:AK:39:ASN:O	11:AK:40:ALA:CB	2.54	0.56
33:DL:122:VAL:O	33:DL:122:VAL:HG23	2.06	0.56
16:CP:21:VAL:HG23	16:CP:36:VAL:HG21	1.87	0.56
22:BA:141:G:N1	41:BT:2:ILE:HG23	2.21	0.56
22:DA:271:G:C2	22:DA:367:G:C2	2.94	0.56
22:DA:1668:A:H4'	22:DA:1669:A:C5'	2.25	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:92:U:O2'	1:CA:93:U:C6	2.50	0.56
23:DB:15:A:C4	23:DB:109:A:C6	2.94	0.56
22:DA:2092:U:C5	22:DA:2226:C:OP2	2.59	0.56
1:AA:1355:G:C2'	1:AA:1356:G:H5'	2.36	0.56
1:AA:674:G:OP1	6:AF:51:ILE:HG13	2.06	0.56
22:BA:1020:A:N1	22:BA:1141:U:O2'	2.37	0.56
22:DA:183:C:O2'	22:DA:432:A:H1'	2.04	0.56
33:DL:123:ARG:HG2	33:DL:143:GLU:CB	2.35	0.56
32:BK:113:MET:HA	32:BK:116:ILE:HG13	1.87	0.56
22:BA:784:G:O2'	22:BA:785:G:H5''	2.06	0.56
22:BA:271:G:O2'	22:BA:272:A:C5'	2.54	0.56
22:BA:226:A:N6	22:BA:227:A:C6	2.74	0.56
1:AA:109:A:H4'	1:AA:110:C:OP2	2.07	0.56
34:DM:76:LYS:HG2	34:DM:80:VAL:HG11	1.88	0.56
1:AA:1409:C:C2'	1:AA:1410:A:H5'	2.36	0.56
3:CC:18:ASN:HD21	3:CC:53:ARG:NH1	2.03	0.56
1:AA:1167:A:N7	1:AA:1169:A:C6	2.73	0.56
1:AA:243:A:C2	1:AA:246:A:C8	2.94	0.56
1:AA:932:C:H2'	1:AA:932:C:O2	2.04	0.56
34:BM:5:LYS:HZ2	34:BM:5:LYS:HB3	1.71	0.56
28:BG:30:GLY:CA	28:BG:78:VAL:HG12	2.36	0.56
22:BA:1224:U:H4'	39:BR:88:GLY:O	2.06	0.56
22:DA:308:G:C8	22:DA:501:A:H1'	2.40	0.56
22:DA:1298:C:N4	22:DA:1642:G:H1	2.05	0.56
13:CM:82:LEU:HD21	19:CS:60:PHE:HB3	1.88	0.56
1:AA:1358:U:C5	1:AA:1359:C:C4	2.94	0.56
1:AA:238:A:H2'	1:AA:239:U:C5'	2.36	0.56
1:CA:947:G:OP1	13:CM:106:ARG:HG3	2.05	0.56
1:AA:552:U:H5'	12:AL:82:ARG:HD2	1.87	0.56
2:AB:71:THR:HG22	2:AB:72:LYS:H	1.70	0.56
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.06	0.56
31:BJ:40:HIS:C	31:BJ:41:LYS:CG	2.75	0.56
15:CO:3:SER:OG	15:CO:6:ALA:HB2	2.05	0.56
7:CG:46:LEU:HD11	7:CG:57:GLU:OE2	2.06	0.56
1:CA:908:A:O2'	1:CA:909:A:H5'	2.06	0.56
22:BA:2865:U:C4	22:BA:2866:U:C4	2.93	0.56
6:AF:32:ALA:O	6:AF:33:GLU:HB2	2.06	0.56
41:DT:55:VAL:HG22	41:DT:56:GLU:N	2.21	0.56
14:AN:78:LEU:HB2	14:AN:83:VAL:HG23	1.87	0.56
22:BA:996:A:P	38:BQ:91:ARG:HH12	2.28	0.55
22:BA:1080:A:H4'	30:BI:126:ARG:HG3	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:34:GLU:HG3	24:DC:35:LYS:N	2.19	0.55
22:DA:2262:U:H1'	22:DA:2328:A:H1'	1.88	0.55
22:DA:1787:A:H2	22:DA:1788:C:C2	2.25	0.55
22:DA:109:C:H4'	22:DA:348:A:H4'	1.86	0.55
41:DT:69:ARG:HG3	41:DT:70:HIS:CD2	2.41	0.55
22:DA:164:C:C2'	22:DA:165:A:H5'	2.35	0.55
22:DA:46:G:C2	22:DA:47:C:C5	2.93	0.55
2:CB:95:TRP:CZ3	2:CB:171:ALA:HA	2.41	0.55
22:DA:144:A:O2'	22:DA:145:C:H5'	2.06	0.55
13:AM:86:ARG:O	13:AM:89:ARG:HB2	2.06	0.55
44:BW:49:ASN:CA	44:BW:61:LYS:HB2	2.36	0.55
1:AA:523:A:C2	1:AA:527:G:O6	2.59	0.55
26:BE:120:VAL:HA	26:BE:188:MET:O	2.06	0.55
1:CA:1366:C:H2'	1:CA:1367:C:H6	1.70	0.55
10:CJ:53:ILE:HG13	14:CN:84:ARG:HD2	1.89	0.55
33:DL:110:VAL:HG11	33:DL:127:VAL:HG23	1.88	0.55
2:AB:116:LEU:HG	2:AB:140:LEU:HG	1.88	0.55
36:BO:111:ARG:O	36:BO:113:ALA:N	2.39	0.55
1:CA:185:U:H2'	1:CA:186:C:C6	2.40	0.55
1:CA:195:A:N7	1:CA:196:A:C6	2.74	0.55
1:CA:64:G:C8	1:CA:99:C:N4	2.74	0.55
22:BA:2144:G:N2	22:BA:2148:G:C8	2.75	0.55
1:CA:16:A:H2'	1:CA:17:U:H5'	1.88	0.55
1:CA:120:A:O2'	1:CA:121:U:C4'	2.54	0.55
1:CA:1298:U:O2'	1:CA:1299:A:OP2	2.24	0.55
1:AA:1046:A:H2'	1:AA:1047:G:O5'	2.05	0.55
23:DB:42:C:H5	27:DF:65:LEU:HD13	1.72	0.55
1:AA:185:U:H2'	1:AA:186:C:H6	1.70	0.55
1:CA:728:A:H2'	1:CA:729:A:H8	1.70	0.55
1:AA:585:G:H21	1:AA:879:C:C4'	2.19	0.55
29:DH:98:ASP:O	29:DH:99:ILE:HG12	2.07	0.55
1:AA:313:A:O2'	1:AA:314:C:H5'	2.06	0.55
2:CB:122:ASP:HB3	2:CB:124:THR:CG2	2.35	0.55
1:CA:990:C:C2'	1:CA:991:U:O4'	2.52	0.55
24:DC:211:ARG:HD2	24:DC:215:VAL:O	2.07	0.55
22:DA:2145:C:H3'	22:DA:2147:A:OP2	2.07	0.55
23:BB:110:C:O2'	23:BB:111:U:H5'	2.07	0.55
22:DA:2550:G:O6	22:DA:2551:C:N4	2.39	0.55
24:BC:119:VAL:HG12	24:BC:133:ASN:ND2	2.21	0.55
11:CK:60:PHE:HA	11:CK:63:GLN:HG2	1.88	0.55
21:CU:53:LYS:HB2	21:CU:53:LYS:HZ3	1.69	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:875:G:C2'	22:BA:876:C:H5'	2.36	0.55
22:BA:747:U:C4	22:BA:2613:U:C4	2.94	0.55
22:BA:2383:G:H2'	22:BA:2384:U:C6	2.40	0.55
2:CB:26:MET:HE3	2:CB:192:PRO:HG3	1.87	0.55
35:BN:38:LEU:O	35:BN:38:LEU:HD12	2.06	0.55
40:DS:79:GLY:HA3	40:DS:100:THR:OG1	2.06	0.55
23:BB:5:U:O2'	23:BB:6:G:H5'	2.05	0.55
20:AT:61:ALA:CA	20:AT:66:ILE:HG22	2.36	0.55
28:DG:145:ALA:HA	28:DG:148:ARG:NE	2.22	0.55
43:BV:61:LEU:O	43:BV:71:LYS:HA	2.06	0.55
1:CA:526:C:C6	1:CA:526:C:H3'	2.41	0.55
39:DR:78:ARG:CB	39:DR:83:TYR:CD1	2.88	0.55
1:AA:191:G:H8	1:AA:191:G:H5''	1.70	0.55
1:AA:475:C:O2'	1:AA:476:U:H5'	2.06	0.55
9:CI:5:TYR:HD1	9:CI:88:GLU:HB2	1.71	0.55
1:CA:42:G:C2'	1:CA:43:C:H5'	2.36	0.55
22:BA:232:G:H4'	22:BA:233:A:OP1	2.06	0.55
22:BA:1067:A:H8	22:BA:1067:A:OP2	1.90	0.55
12:AL:6:LEU:HD23	17:AQ:33:TYR:CE2	2.41	0.55
3:AC:149:LYS:HG3	3:AC:200:TRP:CE3	2.40	0.55
24:DC:20:ASN:CB	24:DC:23:LEU:HD22	2.33	0.55
1:CA:57:G:C6	1:CA:356:A:N1	2.74	0.55
22:DA:2343:U:H2'	22:DA:2344:U:C6	2.42	0.55
22:DA:1792:G:H5''	24:DC:203:VAL:HG22	1.88	0.55
22:DA:729:G:N7	24:DC:206:LYS:HE3	2.20	0.55
22:DA:740:C:O2'	22:DA:741:U:C5'	2.53	0.55
9:AI:93:LEU:HD12	9:AI:94:ARG:N	2.20	0.55
1:CA:517:G:H4'	1:CA:519:C:C4	2.41	0.55
12:CL:109:ARG:NH2	12:CL:116:TYR:HE2	2.04	0.55
22:DA:1204:A:N6	22:DA:1241:A:C2	2.74	0.55
22:DA:65:U:H6	22:DA:65:U:O5'	1.89	0.55
1:CA:1067:A:H1'	1:CA:1068:G:H8	1.62	0.55
1:AA:1305:G:H22	1:AA:1331:G:H2'	1.70	0.55
1:CA:1494:G:O2'	1:CA:1495:U:H5'	2.07	0.55
38:DQ:79:ILE:O	38:DQ:82:LEU:HB2	2.07	0.55
1:CA:735:C:O2'	1:CA:736:C:H5'	2.06	0.55
29:DH:84:ALA:CB	29:DH:148:ALA:HA	2.36	0.55
1:AA:487:A:O2'	1:AA:488:C:C5'	2.47	0.55
1:CA:995:C:HO2'	1:CA:996:A:H8	1.54	0.55
33:DL:118:THR:HG23	33:DL:120:VAL:HG23	1.87	0.55
10:AJ:10:LEU:O	10:AJ:71:LEU:HA	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1461:C:H2'	22:DA:1462:C:C6	2.40	0.55
34:BM:2:LEU:O	34:BM:3:GLN:HB3	2.06	0.55
11:AK:109:ILE:HG21	21:AU:16:ARG:NE	2.08	0.55
1:CA:1200:C:O2'	1:CA:1201:A:P	2.64	0.55
8:AH:74:ILE:CD1	8:AH:128:VAL:HG13	2.36	0.55
14:AN:62:ARG:HB3	14:AN:67:GLY:O	2.06	0.55
35:BN:108:ALA:O	35:BN:110:MET:HG2	2.07	0.55
1:AA:453:G:C6	1:AA:454:G:C5	2.94	0.55
1:AA:1095:U:O2'	1:AA:1096:C:O4'	2.20	0.55
4:AD:2:ARG:CB	4:AD:4:LEU:HD11	2.37	0.55
23:DB:7:G:O2'	23:DB:8:C:H5'	2.06	0.55
22:DA:1267:U:O2'	22:DA:1268:A:H5'	2.06	0.55
46:BY:9:LYS:HZ2	46:BY:10:SER:N	2.04	0.55
29:DH:94:ILE:HB	29:DH:98:ASP:HB2	1.88	0.55
24:DC:30:ALA:HB3	24:DC:31:PRO:HD3	1.87	0.55
2:CB:119:GLN:CG	2:CB:124:THR:CG2	2.84	0.55
44:BW:37:VAL:CG1	44:BW:55:ASP:HB2	2.33	0.55
34:DM:76:LYS:HG2	34:DM:80:VAL:CG1	2.37	0.55
22:DA:157:C:C4	22:DA:158:U:C5	2.93	0.55
24:BC:170:TYR:CD2	24:BC:184:GLU:HA	2.41	0.55
1:CA:160:A:N1	1:CA:343:U:H1'	2.20	0.55
22:BA:1435:G:H5''	22:BA:1435:G:H8	1.71	0.55
22:BA:1197:G:O2'	22:BA:1198:U:H5'	2.06	0.55
30:BI:104:GLN:O	30:BI:105:LEU:CB	2.54	0.55
22:BA:339:U:C2'	22:BA:340:A:H5'	2.36	0.55
4:AD:190:LEU:HD12	4:AD:190:LEU:O	2.06	0.55
22:DA:644:A:H2'	22:DA:645:C:H5'	1.86	0.55
34:DM:61:GLY:HA2	34:DM:107:GLY:HA3	1.89	0.55
1:CA:1480:A:H2'	1:CA:1481:U:O4'	2.06	0.55
22:BA:1203:U:H1'	33:BL:4:ASN:HB3	1.88	0.55
22:BA:1360:G:O6	22:BA:1372:U:C2	2.60	0.55
22:DA:1512:C:O2'	22:DA:1513:U:O4'	2.20	0.55
51:D3:6:VAL:HB	51:D3:9:ALA:HB3	1.88	0.55
22:DA:745:G:H5''	22:DA:746:U:OP2	2.05	0.55
22:BA:31:C:O3'	22:BA:1238:G:C5'	2.54	0.55
22:DA:961:C:C5	22:DA:2456:C:C4'	2.89	0.55
22:DA:2449:U:H3'	56:DA:3666:HOH:O	2.06	0.55
25:DD:131:ASP:N	25:DD:131:ASP:OD2	2.39	0.55
26:DE:151:GLY:HA3	26:DE:191:ASP:OD1	2.06	0.55
30:DI:121:ILE:HG22	30:DI:121:ILE:O	2.06	0.55
2:AB:57:ASN:HD22	2:AB:57:ASN:C	2.08	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:63:ARG:HH11	38:BQ:99:VAL:HG23	1.72	0.55
49:D1:24:LYS:HE2	49:D1:52:LYS:NZ	2.21	0.55
44:DW:54:ARG:C	44:DW:56:HIS:H	2.10	0.55
22:DA:1693:U:H5''	22:DA:1694:C:H5	1.72	0.55
22:DA:1060:U:H5'	22:DA:1061:U:H2'	1.87	0.55
22:DA:1060:U:O4'	22:DA:1061:U:C2'	2.52	0.55
22:DA:1207:C:C2	22:DA:1208:C:C5	2.95	0.55
22:BA:1799:G:N2	22:BA:1818:U:O2'	2.32	0.55
45:DX:32:LEU:HD13	45:DX:50:VAL:O	2.06	0.55
28:BG:137:LYS:O	28:BG:140:ILE:CD1	2.53	0.55
4:CD:58:GLN:HG3	4:CD:62:ARG:NH1	2.22	0.55
11:CK:27:ASN:HA	11:CK:57:SER:HB3	1.89	0.55
22:DA:579:G:C2	22:DA:1262:A:C5	2.93	0.55
22:DA:2025:C:H2'	22:DA:2026:U:C6	2.41	0.55
22:DA:1133:A:C8	22:DA:2026:U:H4'	2.41	0.55
22:DA:558:U:P	31:DJ:113:PRO:HB2	2.46	0.55
22:DA:2429:G:OP2	22:DA:2430:A:OP2	2.24	0.55
44:BW:76:ARG:HH21	44:BW:76:ARG:CG	2.02	0.55
22:DA:1255:U:HO2'	22:DA:1256:G:P	2.29	0.55
1:CA:1218:C:C2'	1:CA:1219:A:H8	2.19	0.55
1:CA:971:G:H2'	1:CA:1365:G:HO2'	1.69	0.55
19:CS:50:VAL:HG21	19:CS:74:ALA:HB2	1.89	0.55
22:DA:622:G:H2'	22:DA:623:C:C5	2.41	0.55
22:DA:2137:U:C2'	22:DA:2138:G:OP2	2.53	0.55
22:BA:2310:C:C4	27:BF:76:PHE:CZ	2.94	0.55
22:DA:1675:C:H2'	22:DA:1676:A:C8	2.40	0.55
39:DR:27:ILE:HG13	39:DR:33:VAL:CG1	2.37	0.55
22:DA:1006:C:C2	22:DA:1138:G:N2	2.74	0.55
32:BK:108:ARG:NH1	32:BK:108:ARG:HG2	1.98	0.55
27:DF:66:ILE:HG13	27:DF:83:PRO:HB3	1.88	0.55
27:BF:7:TYR:O	27:BF:11:VAL:CG1	2.55	0.55
1:CA:249:U:H5'	1:CA:250:A:P	2.46	0.55
22:DA:2414:G:C2'	22:DA:2415:G:H5'	2.36	0.55
22:DA:2415:G:C4'	33:DL:66:PHE:HB2	2.36	0.55
1:AA:1320:C:O2'	1:AA:1321:U:O4'	2.25	0.55
25:DD:109:VAL:O	25:DD:172:VAL:HG23	2.06	0.55
2:CB:84:LEU:O	2:CB:84:LEU:HG	2.06	0.55
1:AA:949:A:H2'	1:AA:950:U:C5'	2.36	0.55
22:BA:1056:G:H5''	22:BA:1057:A:C5'	2.30	0.55
10:AJ:15:HIS:HB3	10:AJ:70:HIS:CE1	2.41	0.55
16:AP:12:LYS:CG	16:AP:13:LYS:HG2	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:106:ARG:HE	13:AM:112:ARG:HB3	1.72	0.55
25:DD:127:PHE:HZ	25:DD:160:LYS:HD2	1.72	0.55
17:CQ:11:VAL:HG22	17:CQ:58:VAL:HG13	1.87	0.55
22:DA:2443:C:H2'	22:DA:2444:G:H8	1.69	0.55
24:BC:64:VAL:HG11	24:BC:66:PHE:CE2	2.41	0.55
1:AA:198:G:C6	1:AA:220:G:C2	2.94	0.55
22:BA:435:C:O2'	22:BA:436:C:H5'	2.06	0.55
1:CA:1169:A:C2'	1:CA:1170:A:C8	2.89	0.55
22:DA:17:G:H4'	38:DQ:24:TYR:CE1	2.42	0.55
22:DA:2148:G:N2	22:DA:2149:U:O4	2.40	0.55
22:BA:1733:G:O2'	22:BA:1734:G:O5'	2.25	0.55
22:BA:2602:A:H4'	22:BA:2603:G:H5'	1.87	0.55
15:AO:15:GLY:C	15:AO:17:ASP:H	2.09	0.55
1:AA:322:C:H41	1:AA:328:C:H6	1.55	0.55
1:AA:862:C:C2'	1:AA:863:U:H5'	2.36	0.55
2:AB:202:ASN:ND2	2:AB:205:ALA:CB	2.69	0.55
22:BA:287:G:N3	22:BA:354:A:C2	2.75	0.55
13:CM:82:LEU:HB2	19:CS:73:PHE:HE2	1.70	0.55
22:DA:2522:U:C2'	22:DA:2523:G:H5'	2.36	0.55
1:AA:1358:U:H5	1:AA:1359:C:C4	2.24	0.55
22:BA:1360:G:C2'	22:BA:1361:G:H5'	2.37	0.55
25:BD:9:VAL:HG21	25:BD:26:VAL:HG11	1.86	0.55
22:BA:300:A:N1	22:BA:333:G:O2'	2.34	0.55
22:BA:1259:G:H2'	22:BA:1260:A:C8	2.41	0.55
22:DA:1684:G:C2	22:DA:1705:A:C2	2.94	0.55
22:BA:812:C:O2'	22:BA:813:U:H5'	2.05	0.55
22:BA:813:U:H2'	22:BA:814:C:C6	2.42	0.55
43:DV:64:VAL:HG13	43:DV:68:LYS:O	2.07	0.55
22:BA:734:A:C4	22:BA:735:A:C8	2.94	0.55
48:B0:37:HIS:HB3	48:B0:43:THR:HG22	1.87	0.55
48:B0:53:VAL:O	48:B0:54:ILE:C	2.44	0.55
2:CB:54:ALA:HA	2:CB:57:ASN:HB3	1.89	0.55
16:CP:22:ALA:HA	16:CP:33:ILE:CD1	2.36	0.55
22:BA:1075:C:C4	22:BA:1076:C:N4	2.75	0.55
5:AE:121:ASN:ND2	5:AE:122:VAL:N	2.54	0.55
22:DA:1312:U:C2	22:DA:1603:A:C6	2.95	0.55
4:AD:12:ARG:NH1	4:AD:36:ALA:O	2.38	0.55
51:D3:33:THR:HG22	51:D3:34:LYS:N	2.21	0.55
44:DW:20:LEU:HD11	44:DW:35:ILE:HG13	1.87	0.55
22:DA:730:A:C2	22:DA:731:C:C6	2.94	0.55
22:DA:1090:A:H3'	22:DA:1091:G:H5''	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:100:CYS:O	48:D0:41:HIS:HD2	1.89	0.55
22:DA:300:A:H2'	22:DA:301:G:H5'	1.89	0.55
42:DU:81:ARG:HG2	42:DU:96:LYS:HD2	1.86	0.55
46:DY:4:LYS:HB2	46:DY:4:LYS:NZ	2.21	0.55
22:DA:2751:G:H5'	28:DG:2:ARG:HD2	1.88	0.55
1:CA:203:G:N2	1:CA:215:C:C2	2.75	0.55
49:B1:18:HIS:ND1	49:B1:19:PHE:N	2.54	0.55
1:AA:80:A:C2	1:AA:90:C:N3	2.74	0.55
16:AP:28:ARG:C	16:AP:29:ASN:HD22	2.09	0.55
22:DA:1261:C:C2'	22:DA:1262:A:H5''	2.37	0.55
22:DA:528:A:C2	22:DA:2043:C:H4'	2.40	0.55
22:DA:1252:G:N3	22:DA:1253:A:C2	2.75	0.55
22:BA:1340:U:C5	22:BA:1603:A:C8	2.94	0.55
36:BO:75:GLY:HA3	36:BO:106:LEU:HA	1.88	0.55
29:BH:131:SER:HB2	29:BH:139:PHE:CD2	2.40	0.55
1:CA:274:A:HO2'	1:CA:275:G:H8	1.52	0.55
22:DA:1439:A:N7	22:DA:1440:U:C1'	2.70	0.55
37:DP:78:PRO:HG2	37:DP:79:VAL:H	1.71	0.55
14:AN:25:GLU:CG	14:AN:26:LEU:HD12	2.37	0.55
9:CI:109:GLN:HG2	9:CI:110:VAL:H	1.71	0.55
1:AA:455:G:C2	1:AA:478:A:C2	2.94	0.55
39:DR:87:GLN:HG2	39:DR:88:GLY:N	2.21	0.55
22:DA:1867:G:O2'	22:DA:1868:C:H5'	2.07	0.55
1:AA:996:A:C2	1:AA:1046:A:C5'	2.88	0.55
1:AA:184:G:H4'	1:AA:224:U:O3'	2.06	0.55
22:DA:2458:G:H2'	22:DA:2490:G:H1	1.71	0.55
23:BB:11:C:O2	23:BB:109:A:N1	2.39	0.55
16:AP:48:GLU:CD	16:AP:49:GLY:H	2.09	0.55
11:CK:51:PHE:CE2	11:CK:64:VAL:HG21	2.41	0.55
1:CA:160:A:H1'	1:CA:344:A:C5	2.41	0.55
28:BG:70:LEU:O	28:BG:74:MET:HG3	2.06	0.55
22:BA:1693:U:O2'	24:BC:13:ARG:NH2	2.40	0.55
22:BA:2784:U:H4'	25:BD:42:ASN:HD21	1.71	0.55
22:BA:1300:G:H5''	22:BA:1301:A:C5'	2.35	0.55
3:AC:121:SER:O	3:AC:125:ARG:HB2	2.07	0.55
11:AK:28:ASN:OD1	11:AK:46:ALA:HB3	2.06	0.55
22:DA:1146:C:N4	22:DA:1147:A:H62	2.04	0.55
26:DE:5:LEU:HA	26:DE:120:VAL:HG13	1.88	0.55
1:AA:582:C:H2'	1:AA:583:A:H8	1.71	0.55
1:AA:778:G:C2'	1:AA:779:C:H5'	2.37	0.55
22:BA:2243:U:H2'	22:BA:2244:U:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:D2:22:MET:HG2	50:D2:22:MET:O	2.07	0.55
41:DT:24:MET:CE	41:DT:24:MET:HA	2.36	0.55
22:DA:2221:G:O2'	22:DA:2222:C:H5'	2.06	0.55
22:DA:694:U:C2'	22:DA:695:G:O5'	2.55	0.55
22:BA:2678:C:O2'	22:BA:2679:A:H5'	2.07	0.55
22:BA:1071:G:H4'	22:BA:1088:A:O2'	2.06	0.55
22:BA:1059:G:C6	22:BA:1080:A:C6	2.94	0.55
22:DA:1797:G:N2	22:DA:1803:A:C2	2.74	0.55
22:DA:1387:A:C5	22:DA:1388:G:N7	2.75	0.55
1:CA:369:G:C4	1:CA:370:C:C5	2.95	0.55
22:DA:1794:A:H1'	22:DA:1900:A:C2	2.41	0.55
48:D0:53:VAL:HG23	48:D0:54:ILE:HG12	1.88	0.55
22:DA:2882:A:H5''	35:DN:96:ARG:HD3	1.88	0.55
22:DA:1204:A:O4'	22:DA:1206:G:N7	2.40	0.55
22:DA:1208:C:O2'	22:DA:1209:U:H6	1.89	0.55
22:DA:299:A:C2	22:DA:319:G:N3	2.75	0.55
22:DA:2209:G:C6	22:DA:2216:G:C6	2.94	0.55
27:BF:39:VAL:CG1	27:BF:84:ILE:HD12	2.35	0.55
2:CB:101:THR:O	2:CB:102:ASN:HB2	2.06	0.55
1:AA:206:C:C2'	1:AA:207:C:O4'	2.46	0.55
21:CU:28:LEU:C	21:CU:28:LEU:CD2	2.75	0.55
22:BA:2332:C:H5''	22:BA:2333:A:OP1	2.06	0.55
1:AA:500:G:O2'	1:AA:501:C:H5'	2.05	0.55
18:CR:71:ASP:CG	21:CU:3:ILE:HD11	2.26	0.55
22:DA:1130:U:O2'	22:DA:1131:G:C8	2.58	0.55
22:DA:508:A:H62	40:DS:9:HIS:CE1	2.24	0.55
38:DQ:9:ALA:O	38:DQ:12:ARG:HG2	2.06	0.55
1:AA:486:U:O2'	1:AA:487:A:C5'	2.54	0.55
1:CA:960:U:C4'	1:CA:961:U:C5'	2.82	0.55
3:AC:39:ARG:HD3	3:AC:54:ILE:CG1	2.37	0.55
24:BC:229:HIS:HD2	24:BC:246:PRO:HA	1.71	0.55
46:BY:56:LEU:HA	46:BY:59:GLU:CG	2.35	0.55
36:BO:78:VAL:HG23	36:BO:79:ALA:N	2.21	0.55
22:DA:271:G:O2'	22:DA:272:A:P	2.65	0.55
27:DF:39:VAL:CA	27:DF:49:LEU:HG	2.36	0.55
22:DA:1492:G:C3'	22:DA:1493:C:H5'	2.34	0.55
22:DA:1303:G:O2'	22:DA:1304:A:H5'	2.06	0.55
1:AA:1269:A:H2	1:AA:1312:G:N3	2.05	0.55
1:AA:1201:A:H1'	1:AA:1202:U:OP2	2.07	0.55
22:DA:607:U:H5	22:DA:619:G:C4	2.25	0.55
22:DA:956:G:C2	22:DA:962:G:O6	2.60	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:946:C:O2'	22:DA:947:A:C5'	2.54	0.55
4:AD:97:LEU:CD2	4:AD:117:VAL:HG21	2.37	0.55
1:CA:261:U:OP1	20:CT:70:LYS:HE2	2.05	0.55
8:AH:9:MET:HE2	8:AH:32:LYS:CB	2.37	0.55
16:AP:80:LYS:HZ2	16:AP:80:LYS:HB2	1.71	0.55
1:AA:629:A:H2'	1:AA:630:A:O4'	2.07	0.55
29:BH:49:ALA:CB	29:BH:50:ARG:NH2	2.63	0.55
1:CA:653:U:HO2'	1:CA:654:G:H8	1.54	0.55
22:DA:484:C:N4	22:DA:497:A:C2	2.75	0.55
23:DB:41:G:H3'	23:DB:42:C:H5''	1.87	0.55
46:BY:8:GLU:O	46:BY:9:LYS:CB	2.55	0.55
22:DA:828:U:H4'	22:DA:831:G:N1	2.21	0.55
22:DA:1490:A:C8	24:DC:73:ILE:CD1	2.90	0.55
1:CA:1167:A:C2'	1:CA:1168:U:OP1	2.55	0.55
9:AI:83:THR:HG21	9:AI:102:PHE:HB2	1.86	0.55
22:BA:2800:A:H5''	22:BA:2800:A:H8	1.71	0.55
22:BA:2068:U:C5'	22:BA:2068:U:H6	2.18	0.55
32:BK:10:VAL:HG11	32:BK:16:ALA:HB2	1.89	0.55
22:DA:352:A:H5''	22:DA:353:C:OP2	2.06	0.55
36:DO:74:VAL:HB	36:DO:106:LEU:CD1	2.37	0.55
39:BR:62:GLU:O	39:BR:64:VAL:HG23	2.07	0.55
25:DD:181:ASP:C	25:DD:183:GLU:H	2.10	0.55
22:BA:2492:U:H2'	22:BA:2493:U:C6	2.40	0.55
1:CA:216:U:H4'	1:CA:464:U:H4'	1.87	0.55
17:AQ:44:HIS:HD2	17:AQ:69:THR:HG22	1.71	0.55
1:AA:1263:C:O2'	1:AA:1264:U:H5'	2.06	0.55
10:AJ:87:LEU:HD13	10:AJ:87:LEU:C	2.26	0.55
28:BG:163:TYR:O	28:BG:164:ALA:HB3	2.06	0.55
22:DA:438:G:C6	22:DA:439:A:C6	2.95	0.55
22:DA:1710:G:O2'	22:DA:1711:A:H5'	2.06	0.55
41:BT:74:ILE:HG23	41:BT:75:GLY:N	2.21	0.55
22:BA:181:A:H2'	22:BA:182:A:C8	2.42	0.55
22:BA:1641:A:H2'	22:BA:1642:G:O4'	2.06	0.55
22:DA:2641:G:H5''	31:DJ:78:THR:HB	1.88	0.55
8:CH:111:THR:HG22	8:CH:113:ARG:H	1.70	0.55
25:DD:60:VAL:O	25:DD:60:VAL:HG13	2.06	0.55
33:DL:33:ARG:HD3	33:DL:40:SER:HA	1.87	0.55
22:BA:1612:C:H2'	22:BA:1613:G:O5'	2.07	0.55
1:AA:725:G:H2'	1:AA:726:C:H6	1.71	0.55
35:BN:30:ARG:NH1	35:BN:74:GLU:OE2	2.39	0.55
31:BJ:44:TYR:HD2	38:BQ:63:ARG:CD	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1060:U:O4'	22:BA:1062:G:C5'	2.55	0.55
1:CA:1256:A:H2'	1:CA:1257:A:OP2	2.07	0.55
22:DA:1400:U:O2'	22:DA:1401:G:O4'	2.21	0.55
1:CA:373:A:O2'	1:CA:374:A:C5'	2.31	0.55
22:DA:2331:G:H2'	22:DA:2332:C:O4'	2.06	0.55
9:AI:53:LEU:N	9:AI:53:LEU:HD12	2.21	0.55
46:DY:28:LEU:CD2	46:DY:42:LEU:HD13	2.36	0.55
22:DA:55:G:C2	22:DA:116:C:C2	2.94	0.55
22:DA:120:U:C2	22:DA:149:A:C6	2.95	0.55
22:DA:1428:C:C5	22:DA:1569:A:C5'	2.89	0.55
21:CU:33:ARG:HG2	21:CU:34:ARG:N	2.21	0.55
1:AA:502:A:C2	1:AA:544:G:C2	2.94	0.55
37:BP:25:VAL:CG1	37:BP:46:VAL:HG23	2.36	0.55
4:CD:89:LEU:CD2	4:CD:199:ILE:CD1	2.74	0.55
34:DM:66:ARG:NH1	34:DM:101:VAL:HG11	2.22	0.55
6:CF:85:ILE:O	6:CF:86:ARG:C	2.45	0.55
18:CR:55:ALA:HA	18:CR:58:ILE:HG13	1.88	0.55
45:BX:40:GLU:HG3	45:BX:43:LYS:HZ3	1.70	0.55
33:DL:62:PRO:HG2	51:D3:24:LYS:CB	2.36	0.55
22:DA:2393:U:H2'	22:DA:2394:C:H5'	1.88	0.55
40:DS:24:ILE:HG22	40:DS:32:ALA:CB	2.36	0.55
1:AA:251:G:N1	1:AA:266:G:C6	2.75	0.55
14:CN:2:LYS:HD3	14:CN:5:MET:HG3	1.86	0.55
19:CS:52:ASN:HD21	19:CS:55:GLN:N	2.04	0.55
4:AD:195:ASN:O	4:AD:196:GLU:CG	2.51	0.55
1:AA:844:G:N2	1:AA:845:A:H62	2.05	0.55
2:AB:130:LYS:HA	2:AB:130:LYS:HZ3	1.72	0.55
1:CA:137:U:C1'	1:CA:227:G:N2	2.60	0.55
22:DA:413:C:H2'	22:DA:414:C:H6	1.66	0.55
32:DK:60:ALA:HB2	32:DK:86:LEU:HA	1.88	0.55
14:AN:44:VAL:CG2	14:AN:45:LEU:H	2.08	0.55
1:CA:1350:A:O2'	1:CA:1351:U:H5'	2.06	0.55
7:CG:71:THR:HG23	7:CG:72:VAL:CG2	2.30	0.55
24:BC:78:GLU:OE1	24:BC:100:ARG:NE	2.36	0.55
4:AD:117:VAL:HA	4:AD:122:ILE:CG1	2.36	0.55
1:AA:1151:A:H5''	10:AJ:44:THR:OG1	2.07	0.55
31:BJ:65:THR:CG2	31:BJ:66:GLY:N	2.69	0.55
1:AA:626:G:H2'	1:AA:627:G:H8	1.71	0.55
1:AA:1094:G:HO2'	1:AA:1095:U:P	2.28	0.55
22:BA:1935:G:H1'	22:BA:1964:G:H21	1.70	0.55
22:DA:465:G:H4'	50:D2:16:HIS:HD2	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:36:G:O2'	22:BA:37:C:H5'	2.07	0.55
22:BA:2250:G:O5'	22:BA:2250:G:H8	1.89	0.55
11:CK:74:LYS:HG3	11:CK:78:ILE:CD1	2.37	0.55
25:DD:34:VAL:HG21	25:DD:90:PHE:O	2.07	0.55
25:DD:121:THR:CG2	25:DD:127:PHE:HB2	2.36	0.55
25:DD:124:ARG:HD3	25:DD:125:TRP:HE1	1.68	0.55
1:CA:1470:U:H2'	1:CA:1471:U:O5'	2.07	0.55
38:DQ:101:ASP:CB	39:DR:2:TYR:OH	2.53	0.55
40:BS:45:VAL:HG22	40:BS:46:LEU:N	2.22	0.55
22:DA:1717:A:N6	22:DA:1744:A:C8	2.74	0.55
2:AB:110:ILE:CD1	2:AB:147:LEU:HD13	2.36	0.55
1:CA:1168:U:O2'	1:CA:1169:A:C5'	2.55	0.55
1:AA:723:U:OP1	21:AU:48:LYS:HB2	2.07	0.55
3:CC:53:ARG:HB2	3:CC:53:ARG:HH11	1.71	0.55
22:DA:2151:U:C2'	22:DA:2152:G:H8	2.20	0.55
1:AA:1343:G:H1'	9:AI:122:ARG:HH12	1.71	0.55
29:BH:78:VAL:HG21	29:BH:145:ASN:ND2	2.20	0.55
1:AA:234:C:O2'	1:AA:235:C:H5'	2.07	0.55
34:BM:6:ARG:CZ	34:BM:6:ARG:HB2	2.37	0.55
1:CA:716:A:C2'	1:CA:717:U:O5'	2.54	0.55
22:BA:2615:U:O2'	22:BA:2616:C:H5'	2.06	0.55
22:DA:30:G:H2'	22:DA:31:C:C6	2.42	0.55
6:CF:98:GLU:O	6:CF:99:ALA:HB2	2.07	0.55
1:CA:1190:G:H3'	3:CC:2:GLN:O	2.07	0.55
22:BA:1579:A:C2'	22:BA:1580:A:H5'	2.36	0.55
25:BD:9:VAL:HG22	25:BD:26:VAL:HB	1.89	0.55
40:DS:1:MET:N	40:DS:1:MET:HE3	2.20	0.55
5:CE:17:VAL:HA	5:CE:33:THR:O	2.06	0.55
22:BA:979:A:H2'	22:BA:982:C:H42	1.71	0.55
23:BB:2:G:C2	23:BB:119:A:N3	2.74	0.55
1:CA:473:U:OP1	16:CP:76:LYS:HE3	2.07	0.55
13:CM:36:ALA:HB3	13:CM:55:LEU:HD11	1.89	0.55
21:CU:52:VAL:O	21:CU:52:VAL:HG22	2.07	0.55
8:AH:50:VAL:O	8:AH:50:VAL:HG22	2.06	0.55
6:CF:26:THR:HA	6:CF:36:ILE:HD11	1.89	0.55
37:BP:50:ARG:HD2	37:BP:51:ASN:CA	2.25	0.55
37:BP:50:ARG:CG	37:BP:57:ALA:O	2.42	0.55
1:CA:1138:G:N2	1:CA:1140:C:C4	2.74	0.55
1:CA:1150:A:H62	1:CA:1151:A:N6	2.05	0.55
22:DA:2385:C:P	22:DA:2385:C:H3'	2.46	0.55
35:DN:35:LYS:NZ	35:DN:112:TYR:HE1	2.04	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:57:VAL:C	9:AI:58:GLU:HG2	2.27	0.55
22:DA:301:G:C8	22:DA:334:C:C2	2.95	0.55
41:DT:69:ARG:HD2	41:DT:70:HIS:H	1.71	0.55
34:DM:36:VAL:HG22	43:DV:82:TYR:CB	2.34	0.55
32:DK:24:VAL:HA	32:DK:39:ILE:HG22	1.88	0.55
37:DP:16:VAL:HG13	37:DP:19:PHE:HE2	1.72	0.55
29:BH:34:GLY:O	29:BH:35:LYS:HG3	2.06	0.55
29:BH:6:LEU:HD22	29:BH:36:ALA:N	2.21	0.55
22:DA:2392:A:N1	33:DL:55:MET:CE	2.70	0.55
22:DA:1291:C:O2'	22:DA:1292:G:C5'	2.55	0.55
1:CA:1268:G:H21	1:CA:1327:C:C1'	2.13	0.55
1:CA:977:A:N3	1:CA:977:A:H5''	2.21	0.55
33:DL:81:ASP:O	33:DL:83:ALA:N	2.39	0.55
1:CA:764:C:C3'	1:CA:765:G:H5'	2.37	0.55
22:DA:2714:G:H2'	22:DA:2715:C:H6	1.69	0.55
9:CI:70:GLY:O	9:CI:71:ILE:HD12	2.07	0.55
22:DA:489:G:H4'	22:DA:490:C:OP1	2.04	0.55
1:CA:250:A:H1'	1:CA:252:U:C4	2.41	0.55
22:DA:973:A:H1'	22:DA:1188:U:C6	2.42	0.55
23:DB:16:G:C6	23:DB:17:C:N4	2.75	0.55
1:AA:529:G:O6	12:AL:45:ASN:HA	2.06	0.55
22:DA:2225:A:H4'	22:DA:2226:C:O5'	2.06	0.55
1:CA:1036:A:C2'	1:CA:1037:C:H5'	2.36	0.55
14:AN:63:CYS:HB3	14:AN:67:GLY:H	1.72	0.55
16:AP:37:GLY:HA2	16:AP:51:ARG:HH11	1.71	0.55
42:DU:60:LYS:HA	42:DU:60:LYS:HE2	1.88	0.55
28:DG:91:VAL:HG22	28:DG:93:TYR:CE2	2.39	0.55
22:BA:1935:G:N1	22:BA:1962:C:H2'	2.21	0.55
8:CH:1:SER:C	8:CH:3:GLN:N	2.60	0.55
22:DA:1648:U:O2'	22:DA:1649:G:O4'	2.19	0.55
32:BK:113:MET:O	32:BK:116:ILE:HG13	2.06	0.55
22:DA:2069:G:C2	22:DA:2443:C:C2	2.94	0.55
24:DC:127:ASN:O	24:DC:191:LEU:HD22	2.07	0.55
1:AA:495:A:C2	1:AA:496:A:C6	2.94	0.55
22:DA:533:G:OP1	38:DQ:27:ARG:HD3	2.06	0.55
47:DZ:4:ILE:CG2	47:DZ:56:VAL:CG1	2.84	0.55
1:AA:1432:G:O2'	1:AA:1433:A:OP2	2.22	0.55
13:CM:3:ILE:O	13:CM:4:ALA:CB	2.55	0.55
1:CA:158:G:C4	1:CA:159:G:C8	2.95	0.55
22:DA:1974:C:H2'	22:DA:1975:G:H8	1.72	0.55
3:AC:72:PRO:HG3	3:AC:104:GLU:HG3	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2508:G:C2	22:DA:2582:G:O6	2.60	0.55
33:DL:75:ALA:HB2	33:DL:105:ILE:HG13	1.88	0.55
31:DJ:51:GLY:O	31:DJ:121:LYS:HE3	2.06	0.55
1:AA:1494:G:C2	1:AA:1495:U:C5	2.94	0.55
28:BG:25:ILE:HD11	28:BG:71:LEU:HD12	1.88	0.55
25:DD:12:THR:HG22	25:DD:13:ARG:N	2.21	0.55
1:CA:1049:U:H4'	1:CA:1050:G:OP2	2.04	0.55
1:CA:1052:U:H3'	1:CA:1053:G:H5''	1.87	0.55
1:AA:551:U:H2'	1:AA:552:U:O5'	2.07	0.55
1:CA:676:A:H2'	1:CA:677:U:H6	1.72	0.55
22:BA:2136:G:O2'	22:BA:2137:U:C6	2.58	0.55
52:B4:13:ASN:H	52:B4:13:ASN:HD22	1.55	0.55
40:DS:1:MET:H3	40:DS:1:MET:HE3	1.70	0.55
22:BA:1098:A:C6	22:BA:1099:G:N1	2.74	0.55
22:BA:1001:A:C2'	22:BA:1002:G:H5'	2.37	0.55
7:AG:49:LEU:CD1	7:AG:60:ALA:HB1	2.37	0.55
33:BL:39:LYS:C	33:BL:40:SER:O	2.38	0.55
24:BC:250:GLN:N	24:BC:250:GLN:NE2	2.55	0.55
1:AA:577:G:H2'	1:AA:578:C:C6	2.41	0.55
22:BA:2319:G:O2'	22:BA:2320:U:H5	1.90	0.55
9:AI:67:LYS:N	9:AI:67:LYS:HD3	2.21	0.55
43:BV:72:VAL:HG23	43:BV:73:LYS:N	2.22	0.55
43:BV:75:GLN:HB2	43:BV:92:VAL:HG23	1.89	0.55
25:BD:85:ALA:O	25:BD:86:GLU:CB	2.55	0.55
25:BD:85:ALA:O	25:BD:86:GLU:HB2	2.07	0.55
37:BP:50:ARG:HG2	37:BP:56:SER:CA	2.36	0.55
5:AE:153:ALA:O	5:AE:156:ARG:O	2.25	0.55
22:DA:1779:U:H5	22:DA:1784:A:N7	2.05	0.55
22:DA:100:U:H3'	22:DA:100:U:OP1	2.07	0.55
22:DA:2214:C:HO2'	22:DA:2215:C:H5'	1.68	0.55
25:BD:4:LEU:HD23	25:BD:29:VAL:HG11	1.88	0.55
31:DJ:4:PHE:O	31:DJ:44:TYR:CZ	2.59	0.55
1:CA:5:U:H4'	1:CA:6:G:C5'	2.37	0.55
44:BW:30:VAL:H	44:BW:31:LEU:CD2	2.20	0.55
22:DA:1263:U:O4'	48:D0:6:LYS:HE3	2.07	0.55
22:DA:2238:G:C5'	22:DA:2239:G:OP1	2.54	0.55
22:DA:1327:A:C2	22:DA:1328:A:C4	2.94	0.55
1:CA:969:A:O2'	1:CA:970:C:H5'	2.06	0.55
51:D3:18:LYS:CD	51:D3:19:GLY:N	2.67	0.55
22:DA:1992:G:C4'	22:DA:1993:U:OP1	2.55	0.55
21:AU:24:LYS:CG	21:AU:25:ALA:H	2.19	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2715:C:C4	22:DA:2716:C:C5	2.94	0.55
22:DA:2677:G:H2'	22:DA:2678:C:C6	2.42	0.55
25:DD:53:GLY:HA3	25:DD:77:ARG:CG	2.32	0.55
1:CA:220:G:C2	1:CA:221:C:C6	2.95	0.55
23:DB:18:G:C2	23:DB:67:G:O6	2.60	0.55
22:BA:1462:C:O2'	22:BA:1463:C:H5''	2.07	0.55
22:DA:1300:G:H5'	22:DA:1301:A:C2	2.42	0.55
22:BA:2742:G:O2'	22:BA:2743:U:H5'	2.07	0.55
22:BA:1287:A:O2'	22:BA:1288:G:H5'	2.07	0.55
1:AA:567:G:H1'	56:AA:1819:HOH:O	2.07	0.55
22:BA:1626:A:HO2'	22:BA:1627:G:P	2.29	0.55
16:AP:19:VAL:CG1	16:AP:37:GLY:C	2.75	0.55
1:AA:625:U:O2'	1:AA:626:G:H5'	2.07	0.55
22:DA:2298:A:C5'	22:DA:2322:A:O2'	2.54	0.55
2:CB:185:ILE:O	2:CB:185:ILE:HG13	2.07	0.55
47:BZ:34:THR:HG22	47:BZ:35:VAL:N	2.21	0.55
1:AA:116:A:H8	1:AA:116:A:O5'	1.89	0.55
22:DA:632:A:H4'	33:DL:68:SER:HA	1.89	0.55
28:DG:167:VAL:CG2	28:DG:168:VAL:H	2.17	0.55
48:B0:35:GLU:OE1	48:B0:45:ASP:HB2	2.07	0.55
39:BR:66:HIS:ND1	39:BR:94:THR:HB	2.22	0.55
11:AK:52:ARG:NH1	11:AK:56:LYS:HZ2	2.05	0.55
1:CA:704:A:O2'	1:CA:705:G:C8	2.60	0.55
8:CH:36:ALA:O	8:CH:45:ILE:HD11	2.06	0.55
1:AA:155:A:H2'	1:AA:156:C:C6	2.42	0.55
7:AG:68:VAL:HG21	7:AG:103:ILE:CD1	2.37	0.55
22:BA:1676:A:H2	22:BA:1993:U:H5'	1.68	0.55
22:BA:1821:A:H2'	22:BA:1822:C:C6	2.42	0.55
51:D3:23:HIS:O	51:D3:46:LYS:HE3	2.07	0.55
9:CI:100:ALA:CB	9:CI:102:PHE:CE2	2.90	0.55
22:DA:2522:U:H6	22:DA:2522:U:H3'	1.71	0.55
23:BB:78:A:C2	23:BB:99:A:C4	2.94	0.55
25:BD:182:ALA:C	25:BD:184:ARG:H	2.08	0.55
22:DA:2107:G:C2	22:DA:2183:A:C2	2.95	0.55
24:BC:234:GLY:O	24:BC:236:GLY:N	2.38	0.55
1:CA:631:C:H5''	1:CA:632:U:O4'	2.07	0.55
7:CG:32:ASP:CB	7:CG:34:LYS:HD3	2.36	0.55
48:B0:54:ILE:HG22	48:B0:54:ILE:O	2.06	0.55
22:BA:2665:A:O2'	22:BA:2666:C:H5'	2.06	0.55
5:AE:15:ILE:HG22	5:AE:16:ALA:N	2.20	0.55
22:BA:2386:A:H2'	22:BA:2387:U:C6	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BY:16:THR:O	46:BY:20:ASN:N	2.32	0.55
43:BV:68:LYS:HG2	43:BV:68:LYS:O	2.07	0.55
22:BA:1614:A:C2	40:BS:93:ALA:HB2	2.42	0.55
22:BA:163:C:C6	22:BA:163:C:OP1	2.60	0.55
8:AH:63:LYS:CB	8:AH:70:VAL:HG21	2.34	0.55
1:CA:1146:A:O2'	1:CA:1147:C:C5'	2.55	0.55
41:DT:14:PRO:HG2	41:DT:15:HIS:N	2.21	0.55
22:DA:2390:U:OP2	51:D3:34:LYS:CE	2.55	0.55
1:AA:1284:C:C6	1:AA:1285:A:N7	2.75	0.55
9:AI:49:GLN:N	9:AI:50:PRO:HD2	2.22	0.55
32:BK:18:ARG:N	32:BK:45:GLU:CB	2.69	0.55
22:DA:1420:A:N3	22:DA:2211:A:N7	2.54	0.55
28:DG:1:SER:O	28:DG:3:VAL:HG22	2.07	0.55
1:CA:1494:G:H2'	1:CA:1495:U:O5'	2.07	0.55
25:BD:106:LYS:H	25:BD:106:LYS:CD	1.97	0.55
6:CF:59:TYR:HE2	18:CR:66:LEU:CD2	2.19	0.55
22:DA:2062:A:C2'	22:DA:2062:A:N3	2.70	0.55
1:CA:933:G:OP2	7:CG:2:ARG:HD2	2.07	0.55
1:CA:982:U:H4'	1:CA:983:A:C5'	2.36	0.55
1:CA:1320:C:O2'	19:CS:72:GLU:HA	2.07	0.55
20:AT:78:LEU:O	20:AT:82:ILE:HG23	2.07	0.55
33:DL:110:VAL:CG1	33:DL:127:VAL:HG23	2.37	0.55
1:AA:841:C:H2'	1:AA:841:C:O2	2.06	0.55
22:DA:1450:G:N2	22:DA:1462:C:C2	2.75	0.55
22:DA:575:A:C2	22:DA:576:U:C6	2.94	0.55
12:AL:29:LYS:O	12:AL:80:LEU:HD12	2.07	0.55
22:DA:1740:G:C2'	22:DA:1741:C:H5'	2.37	0.55
22:BA:1459:G:O2'	22:BA:1460:U:H3'	2.07	0.55
22:DA:1300:G:H4'	22:DA:1301:A:O5'	2.06	0.55
31:BJ:88:THR:CG2	31:BJ:91:GLU:H	2.19	0.55
7:CG:134:VAL:CB	7:CG:137:ARG:HH21	2.10	0.55
13:CM:23:GLY:O	13:CM:24:VAL:HG13	2.07	0.55
16:AP:57:ILE:HG21	16:AP:75:ILE:HD11	1.88	0.55
1:AA:454:G:H2'	1:AA:455:G:H5'	1.89	0.55
1:CA:113:G:N2	1:CA:353:A:C8	2.58	0.55
4:AD:2:ARG:CB	4:AD:4:LEU:CD1	2.84	0.55
1:CA:1448:C:O2'	1:CA:1449:C:C6	2.58	0.55
36:DO:31:THR:CG2	36:DO:36:TYR:HE2	2.13	0.55
2:CB:164:ASP:HB3	2:CB:167:HIS:CB	2.33	0.55
1:AA:642:A:C5	8:AH:106:SER:HA	2.42	0.55
23:BB:45:A:HO2'	23:BB:46:A:H5'	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:275:C:H3'	22:BA:276:U:H5''	1.88	0.55
29:DH:78:VAL:HG21	29:DH:144:VAL:CG1	2.36	0.55
1:AA:173:U:C2	1:AA:197:A:C2	2.95	0.55
1:CA:1169:A:O2'	1:CA:1170:A:H8	1.89	0.55
1:AA:1399:C:O2	1:AA:1401:G:C5	2.60	0.55
22:DA:2676:C:OP1	32:DK:31:ARG:NH2	2.40	0.55
22:DA:2900:A:C6	22:DA:2901:C:C4	2.95	0.55
22:BA:1731:G:C5	22:BA:1733:G:N7	2.75	0.55
28:DG:24:THR:C	28:DG:25:ILE:HD12	2.27	0.55
37:DP:28:LYS:CG	37:DP:39:LEU:HD23	2.36	0.55
42:BU:100:GLU:O	42:BU:101:THR:CB	2.54	0.55
5:AE:45:VAL:CG2	5:AE:117:ALA:CB	2.85	0.55
1:CA:716:A:H2'	1:CA:717:U:O5'	2.06	0.55
22:DA:2468:A:O2'	22:DA:2469:A:C8	2.55	0.55
2:AB:71:THR:HG22	2:AB:72:LYS:N	2.22	0.55
1:AA:418:C:H2'	1:AA:419:C:H6	1.72	0.55
34:DM:21:ALA:HA	34:DM:97:GLN:HG2	1.88	0.55
43:DV:1:MET:HA	43:DV:1:MET:HE2	1.89	0.55
28:BG:54:ARG:C	28:BG:54:ARG:HD3	2.28	0.55
1:CA:624:C:H2'	1:CA:625:U:O4'	2.07	0.55
1:CA:658:C:H1'	15:CO:21:THR:HG21	1.89	0.55
11:AK:42:GLY:HA3	11:AK:73:VAL:HG12	1.87	0.55
16:AP:23:ASP:O	16:AP:25:ARG:N	2.40	0.55
45:BX:16:ASN:HB2	45:BX:24:THR:OG1	2.06	0.55
4:AD:19:PHE:CD1	4:AD:19:PHE:N	2.75	0.55
40:BS:18:ARG:HG2	40:BS:76:VAL:HG13	1.89	0.55
38:BQ:48:ASP:HA	38:BQ:51:GLN:HB2	1.89	0.55
22:BA:1079:C:N4	22:BA:1088:A:C2	2.74	0.55
24:DC:33:LEU:O	24:DC:34:GLU:HB3	2.06	0.55
22:DA:2798:U:H5'	22:DA:2800:A:C6	2.42	0.55
1:CA:1139:G:H4'	1:CA:1140:C:O5'	2.07	0.55
4:AD:36:ALA:CA	4:AD:41:GLY:HA3	2.07	0.55
26:DE:147:LEU:O	26:DE:148:ILE:CB	2.55	0.55
22:DA:2284:A:OP1	49:D1:5:ARG:HG3	2.07	0.55
22:DA:1087:G:H2'	22:DA:1089:A:C8	2.42	0.55
1:AA:1283:U:O2'	1:AA:1284:C:C6	2.55	0.55
25:BD:97:SER:H	25:BD:99:GLU:CD	2.11	0.55
1:CA:1117:A:O2'	9:CI:107:ALA:HB2	2.07	0.55
1:AA:464:U:H2'	1:AA:466:A:OP2	2.07	0.55
41:BT:19:LYS:HA	41:BT:22:THR:OG1	2.07	0.55
1:CA:795:C:C5'	11:CK:127:ARG:HH21	2.18	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:92:THR:O	6:CF:93:LYS:CG	2.49	0.55
22:BA:1498:C:HO2'	22:BA:1499:C:H6	0.72	0.55
22:DA:581:C:OP1	38:DQ:32:ARG:HB2	2.07	0.55
1:CA:1218:C:C2'	1:CA:1219:A:C8	2.89	0.55
1:CA:994:A:O2'	1:CA:995:C:H6	1.89	0.55
22:BA:1654:A:C4'	25:BD:118:PHE:CZ	2.89	0.55
11:AK:21:HIS:HD2	11:AK:34:THR:HG22	1.69	0.55
10:AJ:11:LYS:HG3	10:AJ:97:ASP:CB	2.37	0.55
22:DA:1036:G:C6	22:DA:1120:G:C6	2.95	0.55
22:DA:1430:G:H2'	22:DA:1431:A:C8	2.41	0.55
22:DA:571:U:H4'	22:DA:573:U:C5	2.40	0.55
5:CE:56:PRO:HG2	5:CE:57:ALA:H	1.72	0.55
22:DA:2842:G:H2'	22:DA:2843:G:O4'	2.07	0.55
27:DF:41:GLU:O	27:DF:43:ILE:N	2.40	0.55
1:CA:86:G:C2	1:CA:87:C:C5	2.95	0.55
24:DC:170:TYR:HD2	24:DC:183:VAL:O	1.90	0.55
22:DA:1299:G:N2	22:DA:1640:A:H5'	2.20	0.55
22:BA:1026:G:C8	22:BA:1134:A:C4	2.95	0.55
22:DA:2250:G:O5'	22:DA:2250:G:H8	1.88	0.55
2:CB:110:ILE:CD1	2:CB:150:ILE:HG23	2.37	0.55
22:DA:227:A:C4'	22:DA:229:C:H41	2.20	0.55
1:CA:109:A:C8	1:CA:327:A:O4'	2.60	0.55
1:CA:557:G:C6	1:CA:558:G:N1	2.75	0.55
30:BI:19:PRO:HG2	30:BI:23:VAL:CG2	2.37	0.55
1:AA:223:A:H2'	1:AA:224:U:C6	2.42	0.55
29:DH:136:SER:O	29:DH:137:GLU:HG3	2.07	0.55
47:BZ:4:ILE:HD11	47:BZ:43:ILE:HD11	1.89	0.55
38:DQ:15:LYS:CE	38:DQ:19:GLN:HE21	2.18	0.55
1:CA:687:A:N1	1:CA:704:A:N7	2.55	0.55
1:CA:705:G:O2'	1:CA:706:A:H5'	2.07	0.55
13:CM:47:LEU:C	13:CM:47:LEU:HD23	2.27	0.55
28:DG:70:LEU:C	28:DG:70:LEU:HD12	2.27	0.55
30:BI:58:ILE:O	30:BI:60:VAL:HG23	2.06	0.55
25:DD:12:THR:HG22	25:DD:13:ARG:O	2.07	0.55
22:BA:851:C:C2'	22:BA:852:U:O5'	2.55	0.55
18:CR:21:ASP:HB3	18:CR:23:LYS:HG3	1.89	0.55
22:BA:80:G:H2'	22:BA:81:G:H5'	1.88	0.55
3:AC:141:MET:HA	3:AC:145:ALA:HB3	1.89	0.55
22:BA:405:U:C3'	22:BA:406:G:H5'	2.36	0.55
22:BA:1539:U:C2	22:BA:1540:G:C8	2.95	0.55
22:BA:2134:A:C6	22:BA:2135:A:N6	2.75	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:71:VAL:O	40:DS:71:VAL:HG13	2.07	0.55
27:DF:73:VAL:HG12	27:DF:73:VAL:O	2.07	0.55
1:AA:1293:C:H2'	1:AA:1294:G:C8	2.42	0.55
32:BK:47:ILE:HG13	32:BK:48:PRO:HD2	1.87	0.55
1:CA:287:U:O2'	1:CA:288:A:H5'	2.06	0.55
6:AF:37:HIS:ND1	6:AF:95:ALA:CB	2.70	0.55
22:DA:1907:G:C2	22:DA:1924:C:C2	2.95	0.55
1:CA:1115:U:O2'	1:CA:1116:U:H5'	2.07	0.55
22:BA:1321:A:H5''	22:BA:1321:A:H8	1.71	0.55
1:AA:708:C:O2'	1:AA:709:U:H5'	2.07	0.55
22:BA:156:A:O2'	22:BA:157:C:H5'	2.07	0.55
1:AA:1098:C:H6	1:AA:1098:C:O5'	1.89	0.55
38:BQ:94:LEU:C	38:BQ:96:ASP:H	2.09	0.54
45:BX:29:LEU:HB2	45:BX:30:PRO:CD	2.37	0.54
5:AE:37:VAL:HG11	5:AE:113:VAL:HA	1.88	0.54
5:AE:81:GLN:HG2	5:AE:149:PRO:CB	2.36	0.54
1:CA:1124:G:O2'	1:CA:1125:U:C5	2.59	0.54
22:DA:1339:G:H5'	22:DA:1393:A:C2	2.42	0.54
22:DA:1391:U:H4'	41:DT:19:LYS:NZ	2.22	0.54
4:AD:36:ALA:HA	4:AD:41:GLY:CA	2.07	0.54
1:CA:452:A:H62	1:CA:480:U:H3	1.55	0.54
22:DA:739:A:H8	22:DA:739:A:OP2	1.90	0.54
1:AA:1508:A:H2'	1:AA:1509:C:C6	2.42	0.54
1:CA:32:A:C2'	1:CA:33:A:C8	2.78	0.54
12:CL:46:SER:O	12:CL:47:ALA:CB	2.54	0.54
22:DA:1204:A:O4'	22:DA:1206:G:C5	2.60	0.54
42:DU:39:ASN:HD21	42:DU:64:ILE:HG22	1.72	0.54
28:BG:140:ILE:H	28:BG:140:ILE:HD12	1.70	0.54
22:DA:38:A:C2	22:DA:442:G:C6	2.96	0.54
39:BR:39:LEU:CD2	39:BR:39:LEU:N	2.69	0.54
1:AA:1306:A:C6	1:AA:1307:U:C2	2.95	0.54
1:CA:404:G:OP2	4:CD:2:ARG:NH1	2.40	0.54
41:BT:27:SER:O	41:BT:28:ASN:CG	2.46	0.54
38:DQ:65:ASN:HA	38:DQ:75:TYR:HB2	1.88	0.54
22:BA:923:G:H21	44:BW:23:LYS:CE	2.21	0.54
44:BW:18:LYS:N	44:BW:36:ILE:CG1	2.70	0.54
43:DV:3:THR:HA	43:DV:62:THR:O	2.06	0.54
22:DA:1331:G:N2	22:DA:1616:A:N6	2.55	0.54
22:DA:477:A:O2'	22:DA:478:A:H5'	2.08	0.54
22:DA:503:A:H5''	22:DA:504:A:O5'	2.07	0.54
38:DQ:4:LYS:HE3	38:DQ:7:VAL:H	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:985:C:HO2'	1:CA:986:U:H6	1.50	0.54
13:CM:94:LEU:HD23	13:CM:101:THR:HG22	1.88	0.54
33:DL:127:VAL:CG1	33:DL:132:ARG:HB2	2.37	0.54
5:CE:74:ALA:O	5:CE:75:LEU:CB	2.46	0.54
22:DA:1991:U:C5'	22:DA:1991:U:H6	2.20	0.54
27:DF:59:ILE:CD1	27:DF:137:PHE:HZ	2.19	0.54
27:DF:48:LEU:O	27:DF:52:ALA:CB	2.54	0.54
22:DA:972:A:H3'	22:DA:973:A:H5''	1.89	0.54
1:CA:1369:C:H2'	1:CA:1370:G:O4'	2.07	0.54
22:BA:2742:G:H2'	22:BA:2743:U:H5'	1.88	0.54
22:DA:2303:G:N1	22:DA:2314:A:C5	2.76	0.54
1:CA:16:A:O4'	5:CE:21:SER:HB3	2.07	0.54
22:DA:1125:G:C6	22:DA:1126:A:N6	2.75	0.54
22:BA:545:U:C6	22:BA:546:U:H4'	2.43	0.54
8:AH:12:ARG:HH11	8:AH:26:MET:CB	2.20	0.54
22:BA:2093:G:H1'	22:BA:2198:A:C2	2.42	0.54
1:AA:449:G:O2'	1:AA:450:G:H5'	2.06	0.54
22:BA:606:U:H4'	22:BA:658:U:HO2'	1.71	0.54
22:BA:659:G:H21	26:BE:30:GLN:NE2	2.04	0.54
3:AC:106:ARG:CG	3:AC:106:ARG:O	2.54	0.54
22:DA:806:C:H2'	22:DA:807:U:H6	1.71	0.54
2:AB:139:GLU:O	2:AB:143:LEU:CD2	2.52	0.54
22:BA:526:A:H5''	22:BA:527:C:OP1	2.06	0.54
47:DZ:15:ARG:N	47:DZ:15:ARG:CD	2.67	0.54
8:CH:46:GLU:H	8:CH:63:LYS:HG3	1.72	0.54
33:BL:27:LEU:N	33:BL:27:LEU:CD1	2.69	0.54
47:BZ:2:LYS:O	47:BZ:3:THR:HG23	2.07	0.54
22:BA:871:U:H2'	22:BA:872:U:C6	2.42	0.54
1:CA:50:A:C2	1:CA:360:G:N3	2.72	0.54
22:BA:1695:G:H2'	22:BA:1696:G:O4'	2.07	0.54
22:BA:2808:G:C2	22:BA:2891:U:C6	2.96	0.54
4:AD:160:LEU:HD22	4:AD:161:ALA:H	1.72	0.54
11:AK:13:LYS:O	11:AK:14:GLN:CB	2.55	0.54
22:BA:1858:A:O2'	22:BA:1859:U:O5'	2.26	0.54
33:BL:4:ASN:N	33:BL:4:ASN:HD22	1.99	0.54
1:AA:1032:G:N2	1:AA:1033:G:C8	2.75	0.54
38:BQ:35:PHE:CE1	38:BQ:39:ILE:HD11	2.42	0.54
27:BF:165:GLY:O	27:BF:168:LEU:HB3	2.07	0.54
32:BK:34:GLY:O	32:BK:35:VAL:C	2.45	0.54
12:AL:7:VAL:HG22	17:AQ:30:HIS:CD2	2.41	0.54
22:DA:1982:U:O5'	22:DA:1982:U:C6	2.60	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1154:G:H2'	1:CA:1155:A:H8	1.72	0.54
4:CD:123:MET:CE	4:CD:126:GLY:O	2.55	0.54
37:BP:64:SER:O	37:BP:65:ASN:C	2.45	0.54
27:DF:4:HIS:CE1	27:DF:96:TRP:CH2	2.95	0.54
26:DE:88:ARG:HB3	26:DE:89:PRO:HD2	1.88	0.54
11:CK:21:HIS:O	11:CK:22:ILE:HD12	2.07	0.54
22:BA:717:C:O2	22:BA:717:C:H2'	2.06	0.54
9:CI:90:ASP:HB3	9:CI:93:LEU:HD23	1.89	0.54
32:BK:74:GLY:HA3	37:BP:74:GLN:HE21	1.72	0.54
30:BI:126:ARG:HA	30:BI:129:GLU:CB	2.36	0.54
22:DA:1342:A:C5	22:DA:1345:C:N4	2.75	0.54
22:DA:1390:U:C2'	22:DA:1391:U:H5'	2.37	0.54
41:DT:32:LEU:HD23	41:DT:32:LEU:N	2.22	0.54
22:DA:1771:C:O2'	22:DA:1772:A:H5'	2.07	0.54
22:DA:1788:C:H2'	22:DA:1789:A:H5'	1.90	0.54
48:D0:42:ILE:CD1	48:D0:48:TYR:CB	2.85	0.54
3:CC:190:THR:CG2	3:CC:191:THR:H	2.15	0.54
22:DA:1206:G:O2'	22:DA:1207:C:C6	2.60	0.54
42:DU:14:THR:CG2	42:DU:64:ILE:HD11	2.35	0.54
22:DA:116:C:H2'	22:DA:117:G:O5'	2.07	0.54
1:CA:1066:C:H2'	1:CA:1067:A:C8	2.42	0.54
37:DP:24:THR:O	37:DP:25:VAL:O	2.26	0.54
26:BE:79:ARG:O	26:BE:80:SER:C	2.46	0.54
1:AA:267:C:H2'	1:AA:268:U:H6	1.72	0.54
1:CA:995:C:N3	1:CA:1046:A:O2'	2.37	0.54
14:CN:52:ARG:HH21	14:CN:58:ARG:CD	2.21	0.54
22:DA:599:A:C5	22:DA:600:G:N7	2.75	0.54
22:DA:628:G:O2'	22:DA:629:G:C8	2.58	0.54
11:AK:22:ILE:CD1	11:AK:85:VAL:HG13	2.26	0.54
5:CE:104:ILE:CD1	5:CE:122:VAL:HG21	2.35	0.54
25:DD:5:VAL:HG23	25:DD:82:PHE:CZ	2.42	0.54
11:AK:109:ILE:CG2	11:AK:110:THR:N	2.70	0.54
22:DA:2291:U:H2'	22:DA:2292:U:C5	2.39	0.54
5:CE:131:ASN:HD22	5:CE:132:PRO:HD2	1.72	0.54
6:AF:40:GLU:HB2	6:AF:42:TRP:HE1	1.71	0.54
23:DB:58:A:C2'	23:DB:59:A:H8	2.17	0.54
22:DA:1126:A:H4'	22:DA:1127:A:C5'	2.36	0.54
6:AF:51:ILE:HD13	6:AF:86:ARG:HG3	1.88	0.54
1:CA:329:A:C8	1:CA:332:G:C6	2.95	0.54
22:DA:362:A:C5	22:DA:363:G:C8	2.95	0.54
17:AQ:60:ILE:CG2	17:AQ:72:TRP:CE3	2.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:183:C:O2'	1:AA:184:G:H5'	2.07	0.54
24:BC:29:PHE:CD2	24:BC:31:PRO:HG2	2.42	0.54
22:DA:832:U:P	33:DL:38:GLN:H	2.29	0.54
26:DE:60:TRP:HZ3	26:DE:62:GLN:CG	2.20	0.54
22:BA:274:C:C5	22:BA:275:C:C5	2.95	0.54
1:CA:845:A:N3	1:CA:845:A:H2'	2.21	0.54
28:DG:82:PHE:CB	28:DG:140:ILE:HD13	2.37	0.54
1:AA:1167:A:C8	1:AA:1169:A:C6	2.96	0.54
1:CA:704:A:O2'	1:CA:705:G:O5'	2.25	0.54
7:CG:148:LYS:HZ2	7:CG:148:LYS:HB2	1.72	0.54
30:BI:64:ARG:HG3	30:BI:65:SER:N	2.22	0.54
5:AE:45:VAL:HG21	5:AE:117:ALA:CB	2.38	0.54
22:BA:78:U:H2'	22:BA:79:C:C6	2.42	0.54
22:DA:308:G:N1	22:DA:309:A:N1	2.55	0.54
22:BA:1858:A:O2'	22:BA:1859:U:H5'	2.06	0.54
1:AA:1075:U:H4'	1:AA:1101:A:N6	2.23	0.54
1:CA:461:A:P	1:CA:462:G:OP2	2.65	0.54
38:BQ:40:LYS:HG2	38:BQ:44:TYR:CE1	2.42	0.54
31:BJ:31:GLU:O	31:BJ:32:LEU:C	2.42	0.54
26:DE:52:VAL:HG12	26:DE:74:LYS:CD	2.36	0.54
35:BN:8:ARG:HD2	35:BN:43:GLU:CG	2.37	0.54
1:AA:1112:C:H1'	3:AC:178:ARG:HH11	1.72	0.54
22:DA:18:U:O2	22:DA:554:U:H5''	2.07	0.54
34:DM:63:ILE:HD11	34:DM:105:MET:HE1	1.90	0.54
22:BA:1394:U:H3'	22:BA:1394:U:C6	2.42	0.54
22:DA:262:A:C2	22:DA:430:A:H1'	2.41	0.54
1:AA:657:U:O2	15:AO:21:THR:CG2	2.54	0.54
25:DD:38:LYS:HD2	25:DD:45:TYR:OH	2.07	0.54
3:CC:25:THR:HG22	3:CC:25:THR:O	2.07	0.54
32:BK:13:ASN:N	32:BK:13:ASN:OD1	2.41	0.54
22:DA:2650:U:C2	22:DA:2671:G:N2	2.76	0.54
36:DO:81:ARG:HA	36:DO:84:GLU:HB2	1.89	0.54
35:BN:117:ASP:O	35:BN:119:SER:N	2.37	0.54
22:DA:1786:A:O2'	22:DA:1938:A:N6	2.41	0.54
22:DA:1803:A:O2'	22:DA:1804:C:C5'	2.55	0.54
1:CA:1127:G:H5'	1:CA:1280:A:O2'	2.07	0.54
22:DA:1393:A:H62	41:DT:19:LYS:HG2	1.72	0.54
22:DA:2263:C:H5	44:DW:11:ASN:OD1	1.90	0.54
2:AB:40:ILE:HG21	2:AB:201:GLY:HA2	1.88	0.54
1:AA:1253:G:N1	1:AA:1285:A:N6	2.55	0.54
46:DY:28:LEU:HD13	46:DY:28:LEU:C	2.27	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2217:G:H2'	22:DA:2218:G:H8	1.72	0.54
25:BD:101:PHE:CE2	25:BD:203:VAL:HG22	2.42	0.54
1:CA:1102:A:H5'	1:CA:1102:A:H8	1.71	0.54
1:CA:1184:G:HO2'	1:CA:1185:G:C5'	2.20	0.54
1:AA:204:G:C3'	1:AA:205:A:C5'	2.72	0.54
45:DX:57:VAL:C	45:DX:59:ASP:H	2.10	0.54
38:DQ:96:ASP:C	38:DQ:98:ALA:H	2.11	0.54
37:DP:24:THR:HA	37:DP:44:GLY:O	2.06	0.54
21:AU:8:ASN:O	21:AU:11:PHE:HE2	1.90	0.54
22:DA:579:G:H2'	22:DA:580:U:C6	2.41	0.54
17:AQ:15:LYS:HD2	17:AQ:15:LYS:C	2.27	0.54
1:CA:969:A:O2'	1:CA:970:C:O4'	2.22	0.54
22:DA:1244:A:C2'	22:DA:1245:G:H5'	2.38	0.54
2:AB:113:LEU:O	2:AB:117:GLU:HG3	2.07	0.54
22:DA:1120:G:C6	22:DA:1121:C:C4	2.96	0.54
33:DL:96:LYS:HE2	33:DL:102:GLY:O	2.07	0.54
11:AK:107:THR:HG22	11:AK:108:ASN:HD21	1.73	0.54
22:BA:740:C:H5'	22:BA:1784:A:H3'	1.88	0.54
5:CE:36:THR:HB	5:CE:63:MET:CE	2.37	0.54
31:BJ:16:TYR:HA	31:BJ:138:GLN:O	2.06	0.54
1:CA:142:G:N3	1:CA:196:A:H2	2.04	0.54
22:DA:2226:C:O2'	22:DA:2227:A:O4'	2.20	0.54
1:CA:1004:A:H2'	1:CA:1005:A:O4'	2.07	0.54
6:CF:66:ALA:HB1	6:CF:70:VAL:HG22	1.88	0.54
22:BA:2197:U:OP1	4:CD:150:LYS:NZ	2.40	0.54
26:DE:119:ILE:HD11	26:DE:143:LEU:CD2	2.36	0.54
1:CA:826:C:H2'	1:CA:826:C:O2	2.07	0.54
44:DW:13:ARG:HG3	44:DW:14:ASP:N	2.15	0.54
1:AA:184:G:O2'	1:AA:185:U:O5'	2.25	0.54
1:AA:642:A:HO2'	1:AA:643:C:H5'	1.67	0.54
1:CA:1175:G:H2'	1:CA:1176:A:H8	1.73	0.54
22:BA:361:G:H8	22:BA:361:G:OP2	1.91	0.54
22:BA:528:A:H2	22:BA:2043:C:H4'	1.67	0.54
20:CT:3:ILE:O	20:CT:3:ILE:HG22	2.07	0.54
1:AA:1088:G:H21	1:AA:1167:A:N6	2.02	0.54
8:CH:46:GLU:N	8:CH:63:LYS:HD2	2.21	0.54
39:DR:97:LYS:O	39:DR:98:ILE:C	2.45	0.54
9:CI:47:VAL:C	9:CI:50:PRO:HD2	2.27	0.54
22:BA:2109:U:N3	22:BA:2181:U:C4	2.76	0.54
2:CB:11:ALA:C	2:CB:13:VAL:H	2.09	0.54
26:BE:145:ASP:CB	26:BE:184:ASP:OD2	2.56	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:74:ILE:HG12	40:DS:74:ILE:O	2.07	0.54
22:DA:1510:G:N2	22:DA:1511:G:C5	2.75	0.54
22:BA:792:A:N3	22:BA:2072:C:O2'	2.30	0.54
22:BA:2567:G:H2'	22:BA:2568:U:C6	2.43	0.54
22:BA:1098:A:C5	22:BA:1099:G:C6	2.95	0.54
1:AA:1451:U:HO2'	1:AA:1452:C:P	2.31	0.54
22:DA:1759:A:H2'	22:DA:1760:C:C6	2.42	0.54
22:BA:2555:U:C5	22:BA:2556:C:N1	2.75	0.54
13:AM:45:SER:O	13:AM:46:GLU:HB2	2.07	0.54
11:CK:22:ILE:HG22	11:CK:22:ILE:O	2.05	0.54
22:DA:2533:U:H2'	22:DA:2534:A:O4'	2.07	0.54
4:CD:94:GLU:HA	4:CD:99:ASN:ND2	2.22	0.54
45:DX:51:SER:OG	45:DX:54:GLY:HA3	2.07	0.54
26:BE:18:THR:HA	26:BE:106:LYS:HG2	1.88	0.54
16:AP:22:ALA:HA	16:AP:33:ILE:HG13	1.88	0.54
24:DC:260:LYS:HB2	24:DC:260:LYS:NZ	2.23	0.54
5:AE:106:ALA:CB	5:AE:124:ALA:HB3	2.36	0.54
22:DA:2353:G:N3	44:DW:30:VAL:CG1	2.70	0.54
22:DA:1068:G:C8	22:DA:1069:A:N7	2.76	0.54
22:DA:1077:A:OP1	30:DI:94:LYS:HG2	2.08	0.54
9:AI:10:ARG:HB2	9:AI:14:SER:O	2.08	0.54
42:DU:22:GLY:HA3	42:DU:36:GLU:HB3	1.89	0.54
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.72	0.54
1:CA:1092:A:C2	1:CA:1183:U:N3	2.74	0.54
34:DM:17:ASN:HB3	34:DM:38:ARG:HH22	1.72	0.54
1:AA:466:A:H4'	1:AA:467:U:OP2	2.06	0.54
6:CF:91:ARG:O	6:CF:93:LYS:HE3	2.08	0.54
32:DK:104:THR:C	32:DK:106:GLU:H	2.10	0.54
37:DP:19:PHE:CE1	37:DP:58:PHE:CD2	2.96	0.54
31:DJ:73:VAL:HG23	31:DJ:74:TYR:H	1.73	0.54
22:BA:1795:C:H2'	22:BA:1796:U:C6	2.42	0.54
22:DA:247:G:H4'	22:DA:386:G:C4	2.42	0.54
51:D3:21:PHE:H	51:D3:48:MET:HB2	1.72	0.54
1:CA:1216:A:C2	1:CA:1217:C:N3	2.76	0.54
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.43	0.54
1:CA:975:A:H2	1:CA:1366:C:H1'	1.71	0.54
22:DA:2136:G:C2	22:DA:2137:U:C5	2.96	0.54
16:CP:62:GLY:O	16:CP:63:GLN:HB2	2.07	0.54
29:BH:133:GLN:HA	29:BH:133:GLN:OE1	2.08	0.54
27:BF:30:VAL:HG11	27:BF:96:TRP:CH2	2.42	0.54
1:CA:198:G:H1'	1:CA:199:A:H5'	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:414:A:N3	1:AA:415:A:C8	2.75	0.54
32:DK:38:ILE:CG1	32:DK:61:VAL:HG12	2.29	0.54
32:DK:92:GLU:OE1	32:DK:92:GLU:HA	2.07	0.54
35:BN:103:ARG:CD	35:BN:110:MET:CE	2.85	0.54
22:DA:1963:U:O2'	22:DA:1964:G:C5'	2.56	0.54
32:DK:13:ASN:ND2	32:DK:13:ASN:N	2.45	0.54
1:CA:120:A:O2'	1:CA:121:U:C5'	2.56	0.54
22:BA:1104:C:H2'	22:BA:1105:U:H6	1.71	0.54
1:AA:672:U:H2'	1:AA:673:A:C8	2.43	0.54
36:DO:29:HIS:O	36:DO:36:TYR:HD2	1.90	0.54
22:DA:779:U:OP1	24:DC:48:ILE:CG1	2.51	0.54
13:CM:77:LYS:C	13:CM:77:LYS:HD3	2.27	0.54
22:DA:672:C:C2	22:DA:809:G:N2	2.75	0.54
30:BI:24:GLY:O	30:BI:27:LEU:HG	2.07	0.54
17:AQ:7:LEU:HD22	17:AQ:72:TRP:CZ3	2.42	0.54
37:BP:3:ILE:C	37:BP:3:ILE:HD13	2.27	0.54
22:DA:2426:A:H3'	22:DA:2427:C:H5'	1.90	0.54
22:DA:428:A:H2'	22:DA:429:A:O4'	2.08	0.54
22:DA:532:A:N1	22:DA:2020:A:H1'	2.22	0.54
1:CA:440:C:H2'	1:CA:441:A:C5'	2.37	0.54
22:BA:1378:A:H2'	22:BA:1380:G:N7	2.22	0.54
22:DA:1227:G:O2'	22:DA:1228:G:H5'	2.08	0.54
35:BN:71:ARG:NH2	35:BN:71:ARG:HG3	2.23	0.54
28:DG:70:LEU:HD12	28:DG:71:LEU:N	2.23	0.54
52:D4:30:GLU:HB2	52:D4:33:HIS:HD2	1.72	0.54
30:BI:60:VAL:HG22	30:BI:66:PHE:HB2	1.90	0.54
22:BA:2199:A:C5'	22:BA:2200:C:H5	2.19	0.54
22:BA:288:U:O2'	22:BA:289:G:H5'	2.08	0.54
30:DI:112:LYS:HZ3	30:DI:128:ILE:HD12	1.68	0.54
15:AO:72:LYS:HA	15:AO:72:LYS:HE2	1.88	0.54
22:DA:1854:A:H2'	22:DA:1855:U:H5'	1.88	0.54
50:B2:30:VAL:O	50:B2:34:ARG:HG3	2.07	0.54
22:DA:524:G:H2'	22:DA:525:U:C6	2.41	0.54
22:BA:189:G:H2'	22:BA:205:G:N2	2.21	0.54
5:AE:121:ASN:N	5:AE:121:ASN:HD22	2.04	0.54
1:CA:1255:G:N1	1:CA:1279:G:N7	2.56	0.54
10:CJ:5:ARG:HG2	10:CJ:79:PRO:CG	2.19	0.54
10:CJ:80:THR:C	10:CJ:84:VAL:HG22	2.28	0.54
22:DA:1346:G:O2'	22:DA:1347:A:C5'	2.55	0.54
16:CP:7:ALA:O	16:CP:17:TYR:HA	2.06	0.54
22:DA:919:U:C2	22:DA:920:A:C8	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:D0:38:LEU:H	48:D0:41:HIS:CE1	2.24	0.54
1:AA:1279:G:C1'	1:AA:1282:C:N4	2.56	0.54
9:AI:20:ILE:HD12	9:AI:85:ALA:O	2.08	0.54
9:AI:8:THR:HG22	9:AI:9:GLY:N	2.22	0.54
40:BS:69:LEU:HA	40:BS:108:SER:O	2.08	0.54
22:DA:75:G:HO2'	22:DA:76:C:P	2.31	0.54
26:DE:134:LEU:HA	26:DE:137:LYS:HB3	1.88	0.54
42:DU:39:ASN:HB2	42:DU:62:ALA:H	1.71	0.54
46:DY:47:ARG:O	46:DY:50:VAL:N	2.39	0.54
22:DA:796:C:H2'	22:DA:797:G:C8	2.42	0.54
1:CA:1070:U:C2	1:CA:1071:C:C5	2.96	0.54
2:CB:100:LEU:HB2	2:CB:174:GLU:OE1	2.07	0.54
1:AA:211:G:C6	1:AA:212:G:H1'	2.43	0.54
1:AA:74:A:C6	1:AA:97:G:O6	2.60	0.54
32:DK:34:GLY:O	32:DK:35:VAL:HG23	2.06	0.54
22:BA:1794:A:O2'	22:BA:1795:C:H5'	2.07	0.54
22:DA:677:A:C6	22:DA:678:C:N4	2.75	0.54
22:DA:679:C:H2'	22:DA:680:C:C6	2.39	0.54
22:DA:1307:A:H2'	22:DA:1308:A:O5'	2.07	0.54
1:AA:1240:U:H3'	1:AA:1241:G:H5'	1.89	0.54
1:CA:596:A:C6	1:CA:645:G:C2	2.96	0.54
8:CH:33:VAL:O	8:CH:35:ILE:N	2.41	0.54
1:CA:994:A:C2	1:CA:995:C:C6	2.95	0.54
19:CS:52:ASN:HD22	19:CS:54:ARG:H	1.54	0.54
25:BD:124:ARG:HG2	25:BD:125:TRP:NE1	2.23	0.54
22:BA:1871:A:H8	22:BA:1872:A:C5	2.25	0.54
22:DA:1021:A:O2'	22:DA:1022:G:C4'	2.42	0.54
22:DA:1662:U:C2'	22:DA:1663:G:H5''	2.37	0.54
25:DD:138:LEU:N	25:DD:138:LEU:HD22	2.23	0.54
22:DA:1303:G:O2'	22:DA:1304:A:C5'	2.55	0.54
25:DD:20:VAL:HG11	25:DD:22:ILE:HG12	1.90	0.54
1:CA:15:G:H5'	1:CA:1396:A:O2'	2.07	0.54
4:AD:97:LEU:HD22	4:AD:117:VAL:HG11	1.90	0.54
22:BA:1141:U:H6	31:BJ:65:THR:CG2	2.20	0.54
42:BU:71:ILE:HD12	42:BU:71:ILE:O	2.08	0.54
27:BF:71:LYS:HA	27:BF:80:GLN:HG3	1.89	0.54
22:DA:1269:A:H2'	22:DA:1270:C:H6	1.70	0.54
1:AA:817:C:H4'	1:AA:818:G:OP1	2.07	0.54
3:CC:115:VAL:HG13	3:CC:199:VAL:HG11	1.90	0.54
1:CA:821:G:H4'	56:CA:1740:HOH:O	2.05	0.54
29:BH:82:SER:O	29:BH:83:LYS:CB	2.54	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BW:37:VAL:CG1	44:BW:55:ASP:O	2.56	0.54
1:AA:197:A:H4'	1:AA:198:G:O5'	2.07	0.54
22:BA:528:A:C2	22:BA:2043:C:C5'	2.90	0.54
22:DA:2100:G:C6	22:DA:2101:A:C6	2.96	0.54
1:AA:1429:A:C2	1:AA:1472:U:C2	2.96	0.54
31:DJ:57:LEU:HG	31:DJ:128:ASN:N	2.21	0.54
1:AA:6:G:H22	5:AE:101:GLY:HA3	1.73	0.54
1:AA:935:A:O2'	1:AA:936:C:O4'	2.25	0.54
22:BA:284:U:H2'	22:BA:285:G:C8	2.35	0.54
33:BL:68:SER:O	33:BL:69:ARG:CB	2.56	0.54
35:DN:7:GLY:HA2	35:DN:46:ARG:CZ	2.37	0.54
22:DA:2738:A:H2	22:DA:2766:A:N6	2.03	0.54
25:BD:66:GLY:O	25:BD:69:ALA:HB3	2.07	0.54
22:BA:611:C:H2'	22:BA:612:G:H5'	1.90	0.54
2:CB:191:ASP:C	2:CB:193:ASP:H	2.11	0.54
15:CO:32:THR:HG23	15:CO:62:ARG:HH11	1.72	0.54
13:CM:82:LEU:HB2	19:CS:73:PHE:CE2	2.43	0.54
45:DX:65:THR:O	45:DX:68:ALA:CB	2.56	0.54
17:AQ:58:VAL:HG22	17:AQ:59:GLU:N	2.22	0.54
22:BA:1471:G:H2'	22:BA:1472:C:C6	2.43	0.54
15:AO:81:ILE:O	15:AO:85:GLY:N	2.40	0.54
22:BA:1452:G:H3'	56:BA:3415:HOH:O	2.06	0.54
25:BD:155:VAL:HG13	25:BD:159:LYS:HG3	1.88	0.54
46:BY:16:THR:O	46:BY:19:LEU:N	2.41	0.54
9:AI:116:GLY:HA2	10:AJ:60:ASP:OD2	2.08	0.54
23:BB:81:G:C2'	23:BB:82:U:H5'	2.38	0.54
2:AB:118:THR:O	2:AB:119:GLN:HB2	2.08	0.54
12:CL:37:TYR:O	12:CL:38:THR:HG22	2.07	0.54
24:DC:176:ARG:C	24:DC:178:GLY:H	2.10	0.54
22:BA:674:G:O2'	26:BE:69:ARG:HD2	2.08	0.54
19:AS:22:VAL:HG12	19:AS:23:GLU:N	2.23	0.54
1:CA:1509:C:H2'	1:CA:1510:C:C6	2.43	0.54
31:BJ:43:GLU:O	31:BJ:44:TYR:C	2.46	0.54
10:CJ:45:ARG:O	10:CJ:46:LYS:C	2.46	0.54
26:DE:148:ILE:HA	26:DE:187:VAL:CB	2.35	0.54
1:CA:369:G:O2'	1:CA:370:C:C5'	2.48	0.54
22:BA:2585:U:O2'	22:BA:2586:U:C5'	2.36	0.54
48:D0:27:LEU:HB3	48:D0:37:HIS:O	2.08	0.54
22:DA:2817:U:H2'	22:DA:2818:U:O5'	2.07	0.54
22:DA:2879:A:O2'	22:DA:2880:C:P	2.66	0.54
1:AA:1257:A:H4'	1:AA:1258:G:OP2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:18:VAL:HA	9:AI:64:ILE:HG23	1.89	0.54
22:DA:1237:A:O2'	22:DA:1238:G:O4'	2.26	0.54
22:DA:163:C:O2'	22:DA:164:C:C5'	2.55	0.54
22:DA:1913:A:C4'	22:DA:1914:C:OP1	2.49	0.54
1:AA:94:G:C4'	1:AA:95:C:C5'	2.81	0.54
21:CU:35:GLU:OE1	21:CU:37:TYR:CD1	2.61	0.54
43:DV:4:ILE:HD12	43:DV:63:ILE:HG13	1.90	0.54
43:DV:21:ARG:HE	43:DV:87:GLN:HG2	1.73	0.54
1:CA:733:G:O2'	1:CA:734:G:H5''	2.08	0.54
17:AQ:13:SER:O	17:AQ:20:ILE:CD1	2.56	0.54
1:CA:986:U:N3	1:CA:1220:G:C2	2.76	0.54
1:CA:977:A:H1'	1:CA:1223:C:N4	2.22	0.54
1:CA:932:C:C6	7:CG:2:ARG:NH1	2.75	0.54
33:DL:141:LYS:HD2	33:DL:142:ILE:N	2.22	0.54
25:BD:117:GLY:C	25:BD:118:PHE:CG	2.81	0.54
1:CA:491:G:HO2'	1:CA:492:C:H5'	1.67	0.54
22:DA:2607:G:H2'	22:DA:2608:G:O4'	2.06	0.54
9:CI:27:ILE:HD13	9:CI:62:LEU:CB	2.33	0.54
22:BA:137:U:N3	22:BA:142:A:N6	2.55	0.54
22:DA:1669:A:OP2	56:DA:3706:HOH:O	2.18	0.54
22:DA:2687:U:H3	22:DA:2722:G:H1	1.56	0.54
32:DK:2:ILE:CG2	32:DK:3:GLN:N	2.44	0.54
29:BH:67:ALA:C	29:BH:69:ALA:H	2.11	0.54
6:AF:38:ARG:HH12	6:AF:61:LEU:HD21	1.71	0.54
6:AF:42:TRP:CZ2	6:AF:61:LEU:HD22	2.42	0.54
22:DA:2093:G:N3	22:DA:2094:A:C8	2.75	0.54
14:AN:20:PHE:HA	14:AN:24:ALA:HB3	1.88	0.54
1:AA:558:G:O5'	1:AA:558:G:H8	1.90	0.54
22:DA:945:A:H5'	22:DA:946:C:OP2	2.08	0.54
1:AA:949:A:O2'	1:AA:950:U:H5'	2.07	0.54
4:AD:151:GLN:O	4:AD:152:SER:C	2.45	0.54
39:DR:81:LYS:O	39:DR:82:HIS:C	2.44	0.54
1:AA:574:A:H1'	1:AA:883:C:O4'	2.08	0.54
1:CA:1393:U:C6	1:CA:1393:U:C3'	2.91	0.54
1:AA:110:C:H2'	1:AA:111:G:C8	2.43	0.54
24:BC:165:ALA:HB3	24:BC:172:THR:CG2	2.35	0.54
1:AA:1380:U:C5	7:AG:2:ARG:HA	2.43	0.54
1:CA:163:C:C2'	1:CA:164:G:O5'	2.56	0.54
36:BO:59:ALA:C	36:BO:61:GLN:N	2.60	0.54
3:AC:179:ALA:HB1	3:AC:202:PHE:HE1	1.72	0.54
35:BN:70:THR:HG21	35:BN:75:ILE:HD11	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1399:C:C2	1:CA:1401:G:C5	2.96	0.54
15:CO:31:LEU:O	15:CO:35:ILE:HG13	2.07	0.54
22:DA:1179:G:N2	22:DA:1180:U:C2	2.76	0.54
22:DA:1179:G:C2	22:DA:1180:U:C2	2.96	0.54
4:AD:160:LEU:HD22	4:AD:161:ALA:N	2.22	0.54
1:AA:665:A:C1'	1:AA:733:G:H1'	2.38	0.54
13:CM:111:PRO:HG2	13:CM:113:LYS:HG3	1.89	0.54
1:AA:1248:A:H2	9:AI:71:ILE:HD11	1.69	0.54
19:AS:6:LYS:CE	19:AS:6:LYS:HA	2.37	0.54
22:DA:1479:G:N2	22:DA:1513:U:H1'	2.23	0.54
22:DA:1213:A:H2'	22:DA:1214:A:C8	2.42	0.54
1:AA:1453:G:H2'	1:AA:1454:G:O4'	2.07	0.54
22:BA:2564:A:C2	22:BA:2647:U:H4'	2.42	0.54
32:BK:13:ASN:O	32:BK:15:GLY:N	2.40	0.54
22:DA:2691:C:O2'	22:DA:2692:G:H5'	2.06	0.54
3:CC:72:PRO:HG3	3:CC:104:GLU:CD	2.28	0.54
33:BL:85:VAL:CG2	33:BL:94:THR:HG23	2.38	0.54
4:CD:190:LEU:O	4:CD:191:SER:O	2.26	0.54
49:D1:22:THR:HG23	49:D1:23:THR:N	2.22	0.54
9:AI:52:GLU:HB3	9:AI:53:LEU:HD12	1.89	0.54
9:AI:90:ASP:CG	9:AI:92:SER:HB3	2.28	0.54
46:DY:17:GLU:HG2	46:DY:50:VAL:HG13	1.90	0.54
22:DA:460:A:C2	22:DA:470:A:C4	2.96	0.54
27:BF:40:GLY:N	27:BF:84:ILE:HD11	2.23	0.54
1:CA:1117:A:C6	1:CA:1184:G:O6	2.61	0.54
1:AA:214:C:C6	1:AA:215:C:H5	2.26	0.54
4:CD:26:ALA:O	4:CD:28:ASP:O	2.26	0.54
4:CD:29:THR:C	4:CD:30:LYS:CD	2.65	0.54
4:CD:2:ARG:CB	4:CD:2:ARG:NH1	2.67	0.54
22:DA:538:A:H5''	31:DJ:7:LYS:HZ2	1.71	0.54
44:BW:16:GLU:O	44:BW:17:ALA:HB3	2.07	0.54
44:BW:44:PHE:O	44:BW:78:PHE:HA	2.08	0.54
44:BW:40:ARG:NH1	44:BW:45:HIS:CE1	2.76	0.54
44:BW:46:ALA:CB	44:BW:79:ILE:O	2.52	0.54
43:DV:77:VAL:HA	43:DV:89:ILE:HG22	1.89	0.54
6:CF:35:LYS:HB2	6:CF:37:HIS:CE1	2.42	0.54
22:DA:2024:G:N2	22:DA:2040:G:H1'	2.23	0.54
22:DA:1131:G:N7	22:DA:2025:C:H4'	2.22	0.54
22:BA:866:A:C4'	22:BA:866:A:C8	2.91	0.54
38:DQ:4:LYS:HG2	38:DQ:5:ARG:N	2.23	0.54
1:CA:934:C:H5	1:CA:1344:C:C2	2.26	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:639:U:H2'	22:DA:640:C:C6	2.32	0.54
22:DA:1033:U:H4'	22:DA:1034:G:OP1	2.06	0.54
22:DA:1139:G:O3'	31:DJ:26:GLY:HA3	2.08	0.54
47:BZ:15:ARG:HH11	47:BZ:15:ARG:CG	2.05	0.54
42:BU:13:LEU:HD12	42:BU:69:VAL:CA	2.38	0.54
22:DA:2093:G:N2	22:DA:2094:A:C4	2.76	0.54
22:DA:2197:U:C6	22:DA:2224:G:C6	2.96	0.54
32:DK:40:LYS:NZ	32:DK:89:ASN:HD21	2.05	0.54
1:CA:1331:G:O2'	1:CA:1332:A:H8	1.90	0.54
1:AA:1361:G:H3'	1:AA:1362:A:H5''	1.88	0.54
9:CI:56:MET:O	9:CI:58:GLU:HG2	2.08	0.54
1:AA:1159:U:N3	1:AA:1182:G:C5	2.75	0.54
7:CG:128:GLU:HG3	7:CG:130:LYS:H	1.73	0.54
22:DA:2312:U:H5'	27:DF:70:ARG:NH1	2.23	0.54
4:AD:117:VAL:HG22	4:AD:122:ILE:HG13	1.88	0.54
1:AA:32:A:C2'	1:AA:33:A:H8	2.17	0.54
29:DH:68:ARG:CG	29:DH:68:ARG:NH1	2.59	0.54
4:AD:31:CYS:O	4:AD:32:LYS:CB	2.46	0.54
42:DU:58:VAL:HG12	42:DU:60:LYS:HG2	1.83	0.54
1:CA:880:C:C2'	1:CA:881:G:H5'	2.37	0.54
1:CA:246:A:N3	1:CA:279:A:N6	2.55	0.54
1:CA:663:A:C2	1:CA:743:A:C2	2.96	0.54
7:CG:100:MET:H	7:CG:100:MET:HE2	1.69	0.54
11:CK:81:LEU:HD11	11:CK:104:PHE:CG	2.41	0.54
22:BA:2772:C:H2'	22:BA:2773:C:C6	2.42	0.54
1:CA:1175:G:C2'	1:CA:1176:A:H5'	2.38	0.54
32:BK:113:MET:HG3	32:BK:116:ILE:HD11	1.89	0.54
22:BA:2063:C:O2'	22:BA:2064:C:H5'	2.08	0.54
22:BA:725:G:C6	22:BA:726:G:N1	2.76	0.54
1:CA:1309:G:H1'	13:CM:72:ILE:CD1	2.38	0.54
2:AB:128:LEU:O	2:AB:129:THR:HG23	2.08	0.54
22:DA:2674:G:H4'	32:DK:30:ARG:CG	2.37	0.54
22:BA:1733:G:O2'	22:BA:1734:G:H8	1.91	0.54
34:BM:54:THR:O	34:BM:56:ALA:N	2.40	0.54
3:AC:147:GLY:N	3:AC:202:PHE:HB3	2.22	0.54
10:AJ:65:TYR:HB3	14:AN:95:LEU:CD1	2.38	0.54
1:AA:188:C:H2'	1:AA:189:A:O4'	2.08	0.54
22:BA:1912:A:O2'	22:BA:1913:A:H5''	2.08	0.54
22:BA:687:C:O2'	22:BA:1780:A:N1	2.40	0.54
11:CK:35:ASP:C	11:CK:37:GLN:H	2.11	0.54
28:BG:26:LYS:HB3	28:BG:32:LEU:HG	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2096:C:H2'	22:DA:2097:A:H8	1.73	0.54
22:BA:852:U:H2'	22:BA:853:C:C6	2.43	0.54
1:AA:1261:A:N1	1:AA:1274:A:C2	2.75	0.54
13:CM:106:ARG:HH21	13:CM:112:ARG:NE	2.05	0.54
1:CA:1442:G:H2'	1:CA:1443:C:H6	1.73	0.54
29:BH:74:ALA:C	29:BH:75:LEU:HD12	2.28	0.54
1:CA:1108:G:OP1	3:CC:175:HIS:ND1	2.34	0.54
1:AA:991:U:C4'	1:AA:992:U:OP1	2.56	0.54
24:DC:68:ARG:HH12	24:DC:115:ILE:HD12	1.72	0.54
22:DA:1759:A:H2'	22:DA:1760:C:H6	1.72	0.54
39:DR:78:ARG:CB	39:DR:83:TYR:HD1	2.20	0.54
1:CA:834:U:O2'	1:CA:835:U:H5'	2.07	0.54
4:AD:19:PHE:HD1	4:AD:19:PHE:N	2.06	0.54
6:CF:67:PRO:O	6:CF:69:GLU:N	2.41	0.54
24:DC:231:HIS:O	24:DC:232:GLY:C	2.46	0.54
28:DG:51:PHE:HE2	28:DG:68:ARG:HA	1.72	0.54
25:DD:97:SER:HB2	25:DD:99:GLU:HG2	1.90	0.54
25:BD:46:ARG:HG2	25:BD:46:ARG:NH1	2.22	0.54
49:D1:42:VAL:HG12	49:D1:42:VAL:O	2.06	0.54
22:BA:2459:A:H2'	22:BA:2459:A:N3	2.23	0.54
22:BA:2810:A:H2'	22:BA:2811:G:O4'	2.08	0.54
17:AQ:4:ILE:HD12	17:AQ:4:ILE:N	2.23	0.54
22:BA:1073:A:H2'	22:BA:1074:G:C5'	2.23	0.54
30:BI:123:ALA:C	30:BI:125:THR:H	2.10	0.54
31:BJ:110:PRO:O	31:BJ:111:LYS:HD2	2.08	0.54
24:DC:177:SER:O	24:DC:270:ARG:HG3	2.08	0.54
1:CA:1145:A:O2'	1:CA:1146:A:C5'	2.56	0.54
1:AA:430:A:O2'	1:AA:431:A:C5'	2.29	0.54
22:DA:2337:G:O2'	22:DA:2338:C:H5'	2.08	0.54
30:DI:52:LEU:HD11	30:DI:78:LEU:HD21	1.88	0.54
22:DA:2816:G:O3'	35:DN:99:LYS:HE3	2.08	0.54
1:AA:1285:A:H4'	1:AA:1286:U:C4	2.43	0.54
1:CA:502:A:H4'	1:CA:550:G:H4'	1.89	0.54
22:DA:99:U:H5'	22:DA:100:U:OP1	2.07	0.54
24:BC:68:ARG:CD	24:BC:103:ILE:HD11	2.20	0.54
22:BA:2286:G:O6	49:B1:22:THR:HG21	2.08	0.54
22:DA:2232:C:P	45:DX:26:ARG:NH1	2.81	0.54
1:AA:1227:A:HO2'	1:AA:1228:C:P	2.31	0.54
1:AA:466:A:C5'	1:AA:467:U:OP2	2.56	0.54
43:DV:69:GLU:HG2	43:DV:70:ILE:N	2.23	0.54
1:CA:674:G:H4'	18:CR:69:TYR:HD1	1.66	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1132:U:H3'	22:DA:1133:A:H5''	1.89	0.54
45:BX:77:TYR:O	45:BX:77:TYR:CG	2.61	0.54
22:DA:1619:G:H2'	22:DA:1620:G:H8	1.72	0.54
44:BW:72:GLY:N	44:BW:73:PRO:CD	2.71	0.54
22:BA:1179:G:O5'	22:BA:1180:U:O5'	2.25	0.54
14:CN:12:ARG:HB3	14:CN:59:GLN:HG2	1.89	0.54
14:CN:20:PHE:CB	14:CN:24:ALA:HB2	2.38	0.54
1:CA:1316:G:H1	19:CS:4:LEU:HD21	1.73	0.54
19:CS:50:VAL:CG2	19:CS:74:ALA:HB2	2.38	0.54
11:AK:22:ILE:CG1	11:AK:85:VAL:HA	2.38	0.54
47:DZ:16:LEU:HD23	47:DZ:19:HIS:CG	2.43	0.54
22:DA:2716:C:O2'	22:DA:2717:C:H5'	2.08	0.54
1:AA:694:A:C2'	1:AA:695:A:O5'	2.55	0.54
22:DA:2591:C:OP1	24:DC:237:ARG:HD2	2.07	0.54
9:CI:39:GLY:O	9:CI:40:ARG:HB2	2.07	0.54
22:DA:1566:A:C2	24:DC:212:TRP:CD2	2.96	0.54
22:DA:1667:G:C2'	22:DA:1991:U:O4	2.56	0.54
22:DA:1991:U:H5''	22:DA:1991:U:C6	2.43	0.54
1:CA:66:A:N6	1:CA:67:C:N4	2.56	0.54
1:CA:97:G:C5	1:CA:98:A:H1'	2.43	0.54
23:DB:5:U:H2'	23:DB:6:G:H8	1.72	0.54
23:DB:11:C:H2'	23:DB:15:A:N6	2.23	0.54
14:AN:22:LYS:CG	14:AN:23:ARG:H	2.17	0.54
24:BC:93:VAL:HG12	24:BC:94:LEU:H	1.72	0.54
1:AA:1152:A:C2'	1:AA:1153:G:C8	2.85	0.54
29:BH:27:ARG:HG3	45:BX:59:ASP:OD1	2.08	0.54
22:BA:301:G:O2'	22:BA:302:C:P	2.66	0.54
36:DO:35:ILE:O	36:DO:53:THR:HG23	2.07	0.54
2:CB:162:VAL:CG1	2:CB:184:ALA:HB2	2.38	0.54
22:DA:1649:G:N1	22:DA:2009:A:C6	2.75	0.54
27:DF:32:LYS:HZ2	27:DF:32:LYS:HB2	1.72	0.54
27:DF:56:LEU:HD13	27:DF:56:LEU:O	2.08	0.54
7:AG:112:ASP:O	7:AG:113:LYS:HD3	2.08	0.54
24:DC:64:VAL:HG11	24:DC:66:PHE:CE2	2.43	0.54
2:AB:148:GLY:O	2:AB:151:LYS:HG2	2.08	0.54
22:BA:74:A:H5''	22:BA:74:A:N3	2.22	0.54
1:CA:1460:C:H6	1:CA:1460:C:O5'	1.91	0.54
18:CR:19:GLU:CD	18:CR:20:ILE:N	2.57	0.54
3:AC:13:ILE:O	3:AC:15:LYS:N	2.40	0.54
28:DG:74:MET:O	28:DG:78:VAL:HG13	2.08	0.54
22:BA:1439:A:C2	22:BA:1553:A:C5	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:21:SER:O	25:DD:23:PRO:CD	2.55	0.54
6:AF:46:GLN:HE22	6:AF:56:LYS:HG3	1.71	0.54
16:AP:59:HIS:CE1	16:AP:63:GLN:NE2	2.76	0.54
30:DI:21:PRO:CD	30:DI:22:PRO:HD2	2.38	0.54
13:CM:81:ASP:HB3	13:CM:82:LEU:HD12	1.89	0.54
22:BA:618:G:C6	22:BA:619:G:C4	2.95	0.54
22:DA:2812:G:C2	22:DA:2813:A:C4	2.96	0.54
22:DA:1415:U:O3'	22:DA:1416:G:H4'	2.08	0.54
22:DA:1416:G:C4	22:DA:1417:C:C5	2.96	0.54
27:BF:169:LEU:N	27:BF:169:LEU:CD1	2.69	0.54
4:AD:168:THR:HG22	4:AD:183:ARG:NH2	2.23	0.54
28:BG:37:ASN:O	28:BG:38:ASP:CB	2.56	0.54
22:BA:1090:A:O2'	22:BA:1091:G:H5'	2.08	0.54
22:BA:1092:C:H2'	22:BA:1093:G:O4'	2.08	0.54
27:BF:53:ALA:O	27:BF:64:PRO:HG2	2.07	0.54
22:BA:1165:A:H2'	22:BA:1166:G:H8	1.73	0.54
1:CA:908:A:H2'	1:CA:909:A:H8	1.72	0.54
22:BA:1909:C:C2	22:BA:1922:G:N2	2.75	0.54
22:BA:2760:C:C2'	22:BA:2761:A:H5'	2.38	0.54
11:AK:71:ASP:OD1	11:AK:72:ALA:N	2.41	0.54
32:BK:73:ASP:C	32:BK:73:ASP:OD1	2.46	0.54
22:BA:1782:U:C6	22:BA:2609:U:C5	2.96	0.54
5:AE:87:VAL:HG12	5:AE:92:ARG:HA	1.88	0.54
22:DA:2252:G:H2'	22:DA:2253:G:O4'	2.08	0.54
5:AE:148:SER:O	5:AE:152:VAL:CG1	2.56	0.54
22:DA:1391:U:H4'	41:DT:19:LYS:HZ1	1.73	0.54
26:DE:147:LEU:HB2	26:DE:186:VAL:HA	1.90	0.54
1:CA:389:A:O2'	1:CA:390:U:H5'	2.08	0.54
1:CA:62:U:H4'	1:CA:378:G:N2	2.22	0.54
22:DA:1771:C:C2'	22:DA:1772:A:H5'	2.38	0.54
35:DN:16:HIS:CE1	35:DN:20:MET:CE	2.91	0.54
1:CA:538:G:H5''	12:CL:110:LYS:HB2	1.89	0.54
22:DA:87:U:O2'	22:DA:88:G:P	2.65	0.54
42:DU:64:ILE:HG23	42:DU:64:ILE:O	2.08	0.54
38:BQ:85:ALA:O	38:BQ:87:VAL:C	2.46	0.54
22:DA:1050:A:C4	22:DA:2751:G:N2	2.76	0.54
1:AA:214:C:C5	1:AA:215:C:H5	2.25	0.54
31:DJ:38:GLY:O	31:DJ:43:GLU:HB2	2.07	0.54
34:DM:36:VAL:HG13	43:DV:82:TYR:CD1	2.43	0.54
1:AA:501:C:H1'	1:AA:549:C:O2'	2.08	0.54
22:DA:1283:G:N2	22:DA:1286:A:C8	2.76	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:73:THR:HG22	17:AQ:74:LEU:N	2.22	0.54
22:DA:566:U:C5	22:DA:567:U:C5	2.96	0.54
1:CA:994:A:N7	1:CA:1216:A:H4'	2.23	0.54
9:CI:119:LYS:HG2	9:CI:122:ARG:HB3	1.88	0.54
1:CA:764:C:N4	1:CA:812:G:C6	2.75	0.54
22:BA:765:C:H2'	22:BA:766:U:C6	2.43	0.54
22:DA:1734:G:C4	22:DA:1735:A:N7	2.76	0.54
22:DA:1737:G:N7	22:DA:1738:G:C6	2.76	0.54
13:CM:18:LEU:HA	13:CM:21:ILE:CD1	2.38	0.54
1:CA:754:C:C2'	1:CA:754:C:O2	2.56	0.54
22:DA:227:A:O2'	22:DA:228:C:O5'	2.23	0.54
25:BD:62:LYS:N	25:BD:63:PRO:HD3	2.23	0.54
1:CA:667:G:C2	1:CA:740:U:O2	2.60	0.54
1:CA:756:C:H2'	1:CA:757:U:O5'	2.08	0.54
22:DA:2009:A:C2'	22:DA:2010:G:H5'	2.38	0.54
22:DA:279:A:H61	22:DA:361:G:C1'	2.16	0.54
26:DE:60:TRP:O	26:DE:61:ARG:CB	2.56	0.54
22:BA:2063:C:O2	22:BA:2450:A:N1	2.41	0.54
1:CA:1514:G:H2'	1:CA:1515:G:H8	1.72	0.54
1:CA:444:G:O2'	1:CA:445:G:H5'	2.08	0.54
1:AA:1473:G:C2'	1:AA:1474:U:H5'	2.38	0.54
1:CA:342:C:H2'	1:CA:343:U:H5'	1.90	0.54
7:AG:25:PHE:HA	7:AG:100:MET:HE3	1.89	0.54
22:BA:2602:A:H5''	22:BA:2603:G:H5''	1.89	0.54
22:DA:1520:U:O4	22:DA:1521:G:C6	2.61	0.54
26:DE:40:ARG:CZ	26:DE:92:HIS:CD2	2.91	0.54
11:AK:14:GLN:HA	11:AK:76:TYR:O	2.07	0.54
22:BA:2485:G:H5''	34:BM:45:GLN:NE2	2.22	0.54
31:BJ:20:ALA:O	31:BJ:21:THR:C	2.46	0.54
22:BA:1371:G:O2'	22:BA:1372:U:H5'	2.07	0.54
22:BA:2672:U:C2'	22:BA:2673:G:O5'	2.56	0.54
22:BA:2314:A:O2'	22:BA:2315:G:H5'	2.07	0.54
1:CA:177:G:H2'	1:CA:178:C:H5'	1.90	0.54
22:DA:372:G:P	45:DX:61:LYS:NZ	2.81	0.54
24:DC:9:SER:O	24:DC:12:ARG:HB2	2.07	0.54
22:DA:754:U:O2'	22:DA:755:U:H5'	2.07	0.54
1:AA:614:C:C2'	1:AA:615:G:O5'	2.55	0.54
1:AA:668:G:O2'	15:AO:45:HIS:CD2	2.61	0.54
37:BP:98:TYR:CD2	37:BP:99:LEU:HD13	2.43	0.54
39:DR:78:ARG:HB3	39:DR:83:TYR:HD1	1.73	0.54
22:BA:2318:G:C6	22:BA:2319:G:N1	2.76	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1441:G:O2'	22:BA:1442:U:H5'	2.08	0.54
23:BB:30:C:H2'	23:BB:31:C:H5'	1.90	0.54
22:BA:1678:A:C2'	22:BA:1679:A:H5'	2.37	0.54
26:BE:124:PHE:C	26:BE:124:PHE:CD1	2.82	0.54
1:CA:799:G:C2	1:CA:800:G:H1'	2.43	0.54
22:DA:2404:U:H2'	22:DA:2405:G:O4'	2.08	0.54
37:BP:80:VAL:HG12	37:BP:81:ASP:H	1.73	0.54
1:CA:238:A:C3'	1:CA:239:U:C5'	2.83	0.54
31:BJ:111:LYS:HD3	31:BJ:111:LYS:C	2.22	0.54
22:DA:1820:U:H3	24:DC:197:ALA:HA	1.73	0.54
24:DC:173:LEU:CD2	24:DC:181:ARG:O	2.55	0.54
1:CA:1133:G:C6	1:CA:1134:G:N7	2.75	0.54
1:CA:375:U:O3'	16:CP:6:LEU:CD1	2.56	0.54
22:DA:2352:A:C2'	22:DA:2353:G:H5'	2.38	0.54
44:DW:22:VAL:O	44:DW:23:LYS:HG3	2.08	0.54
22:DA:762:U:O2'	22:DA:763:G:C5'	2.56	0.54
22:DA:1055:G:C5	22:DA:1056:G:C8	2.96	0.54
22:DA:1071:G:O2'	22:DA:1072:C:C5'	2.54	0.54
12:CL:82:ARG:CG	12:CL:82:ARG:NH1	2.58	0.54
26:DE:127:GLU:OE2	26:DE:133:LEU:HD21	2.08	0.54
42:DU:90:LYS:HB3	42:DU:92:VAL:CG1	2.38	0.54
22:DA:462:C:O2'	22:DA:463:G:H5'	2.08	0.54
45:DX:11:PRO:CB	45:DX:27:ARG:HH21	2.21	0.54
28:BG:136:ASP:O	28:BG:140:ILE:HD11	2.08	0.54
22:DA:457:A:C2	22:DA:459:U:O4	2.61	0.54
1:CA:1084:G:C8	1:CA:1085:U:C5	2.96	0.54
22:DA:136:G:H1	22:DA:143:C:H42	1.56	0.54
31:DJ:43:GLU:CG	31:DJ:43:GLU:O	2.56	0.54
22:DA:538:A:O2'	31:DJ:8:PRO:CG	2.56	0.54
39:DR:51:VAL:HG23	39:DR:53:PHE:O	2.08	0.54
43:DV:3:THR:HG22	43:DV:62:THR:OG1	2.08	0.54
18:CR:35:SER:HA	18:CR:71:ASP:OD1	2.08	0.54
32:DK:4:GLU:O	32:DK:5:GLN:HG2	2.07	0.54
40:DS:24:ILE:CG2	40:DS:32:ALA:HB1	2.38	0.54
17:AQ:14:ASP:O	17:AQ:16:MET:SD	2.66	0.54
17:AQ:79:GLU:C	17:AQ:80:LYS:HD3	2.28	0.54
22:DA:627:A:O2'	22:DA:628:G:P	2.66	0.54
22:DA:602:A:C2	22:DA:656:G:C6	2.96	0.54
3:AC:39:ARG:HD3	3:AC:54:ILE:HG13	1.88	0.54
1:AA:620:C:C6	4:AD:131:ILE:HG12	2.43	0.54
1:AA:922:G:H2'	1:AA:923:A:C8	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1866:A:O2'	22:BA:1867:G:H5'	2.08	0.54
11:AK:86:LYS:C	11:AK:113:THR:HG22	2.27	0.54
2:AB:70:GLY:HA2	2:AB:163:ILE:CG2	2.38	0.54
35:DN:37:THR:HA	35:DN:110:MET:HE2	1.89	0.54
46:BY:47:ARG:NH2	46:BY:47:ARG:CG	2.66	0.54
37:DP:74:GLN:HA	37:DP:74:GLN:OE1	2.06	0.54
22:BA:247:G:H4'	22:BA:386:G:C5	2.43	0.54
22:BA:1392:A:N6	22:BA:1393:A:N6	2.56	0.54
31:DJ:56:VAL:HG21	31:DJ:101:ILE:HG21	1.90	0.54
24:BC:245:THR:HB	24:BC:247:TRP:HE3	1.69	0.54
22:BA:1131:G:OP1	31:BJ:82:GLY:HA2	2.08	0.54
22:DA:2517:C:O2'	22:DA:2518:A:C3'	2.45	0.54
1:CA:80:A:N6	1:CA:90:C:N3	2.55	0.54
22:DA:492:A:N1	40:DS:49:LYS:CE	2.71	0.54
22:DA:972:A:C2	22:DA:973:A:N6	2.76	0.54
1:CA:1249:C:H4'	9:CI:74:GLN:HE22	1.71	0.54
22:DA:2305:U:H4'	27:DF:132:ARG:HG2	1.90	0.54
27:DF:131:VAL:C	27:DF:133:GLU:H	2.11	0.54
22:DA:2808:G:O2'	22:DA:2809:A:C8	2.61	0.54
22:DA:2487:G:H2'	22:DA:2488:G:H8	1.73	0.54
42:DU:41:VAL:O	42:DU:59:GLU:HA	2.08	0.54
1:AA:624:C:H4'	16:AP:10:GLY:O	2.07	0.54
1:CA:880:C:H2'	1:CA:881:G:H5'	1.89	0.54
22:BA:303:G:C4	22:BA:304:U:C6	2.96	0.54
22:DA:1455:G:O6	22:DA:2705:A:C2	2.61	0.54
3:CC:112:ALA:HB2	3:CC:182:ASP:CB	2.33	0.54
3:CC:100:ILE:HD12	3:CC:101:ASN:H	1.73	0.54
29:DH:58:LEU:O	29:DH:61:VAL:HG12	2.08	0.54
40:BS:84:ARG:O	40:BS:95:ARG:O	2.26	0.54
2:CB:128:LEU:CD2	2:CB:131:LYS:HD3	2.38	0.54
22:DA:852:U:H5'	47:DZ:45:GLY:HA3	1.89	0.54
22:DA:2261:C:C2	22:DA:2280:G:N2	2.76	0.54
1:AA:66:A:O4'	1:AA:173:U:C4	2.61	0.54
1:AA:198:G:O2'	1:AA:199:A:H5'	2.08	0.54
5:CE:39:GLY:HA2	5:CE:44:ARG:O	2.08	0.54
22:DA:2143:C:H2'	22:DA:2148:G:N1	2.23	0.54
22:DA:2550:G:C2	22:DA:2559:C:O2	2.61	0.54
15:AO:23:SER:O	15:AO:24:THR:C	2.45	0.54
3:AC:147:GLY:H	3:AC:202:PHE:HB3	1.73	0.54
39:BR:64:VAL:O	39:BR:64:VAL:CG1	2.54	0.54
28:DG:71:LEU:HD22	28:DG:74:MET:HE2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:68:PHE:C	25:BD:73:VAL:HG12	2.28	0.54
4:CD:127:ARG:HG2	4:CD:127:ARG:NH1	2.21	0.54
51:B3:44:ARG:N	51:B3:45:PRO:CD	2.71	0.54
44:DW:77:LYS:N	44:DW:77:LYS:HZ2	2.06	0.54
38:BQ:40:LYS:HG2	38:BQ:44:TYR:CD1	2.43	0.54
22:BA:1360:G:H2'	22:BA:1361:G:H5'	1.89	0.54
1:CA:583:A:H2'	1:CA:584:G:O4'	2.08	0.54
22:DA:2047:C:O2'	22:DA:2048:G:H5'	2.07	0.54
1:CA:1190:G:HO2'	1:CA:1191:A:P	2.31	0.54
22:BA:983:A:C6	22:BA:984:A:C2	2.96	0.54
39:DR:19:THR:HG23	39:DR:96:VAL:O	2.08	0.54
33:BL:7:SER:HB2	33:BL:8:PRO:HD2	1.90	0.54
1:AA:342:C:H2'	1:AA:343:U:H5'	1.90	0.54
22:BA:2345:G:C5	22:BA:2381:A:C2	2.96	0.54
1:AA:270:A:H2'	1:AA:271:C:O4'	2.08	0.54
22:BA:2847:U:O2'	22:BA:2848:G:H5'	2.08	0.53
22:BA:1154:G:OP2	38:BQ:57:ARG:NH1	2.40	0.53
45:BX:29:LEU:HD23	45:BX:29:LEU:H	1.72	0.53
4:AD:35:GLN:O	4:AD:36:ALA:CB	2.55	0.53
48:D0:38:LEU:HB2	48:D0:41:HIS:NE2	2.24	0.53
22:DA:1652:A:H2'	22:DA:1653:G:O4'	2.09	0.53
22:DA:2879:A:HO2'	22:DA:2880:C:P	2.31	0.53
22:DA:86:G:O2'	22:DA:87:U:C5'	2.57	0.53
22:DA:90:U:C4	22:DA:91:A:C5	2.96	0.53
22:DA:2757:A:OP1	52:D4:20:ASP:HA	2.07	0.53
1:CA:1183:U:O2'	1:CA:1184:G:OP1	2.23	0.53
38:DQ:61:ILE:HD12	38:DQ:61:ILE:N	2.24	0.53
39:DR:39:LEU:CB	39:DR:49:ILE:CD1	2.85	0.53
22:DA:1531:C:H2'	22:DA:1532:A:O4'	2.08	0.53
37:BP:25:VAL:HA	37:BP:84:SER:O	2.08	0.53
31:DJ:73:VAL:HG23	31:DJ:74:TYR:N	2.23	0.53
22:DA:580:U:O2'	38:DQ:30:VAL:HG22	2.07	0.53
40:DS:8:ARG:O	40:DS:9:HIS:CB	2.54	0.53
19:CS:35:ARG:NH1	19:CS:76:THR:HG22	2.23	0.53
3:AC:54:ILE:HD12	3:AC:55:VAL:N	2.23	0.53
22:DA:390:U:O2'	22:DA:391:A:N7	2.41	0.53
2:AB:185:ILE:HG22	2:AB:199:ILE:HG21	1.91	0.53
22:DA:1431:A:O2'	22:DA:1432:G:H5'	2.08	0.53
11:AK:126:ARG:N	21:AU:33:ARG:NH2	2.51	0.53
36:BO:75:GLY:HA2	36:BO:106:LEU:CD1	2.39	0.53
20:CT:54:GLN:N	20:CT:55:PRO:CD	2.70	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:663:G:H5'	22:DA:664:G:OP2	2.09	0.53
23:DB:60:C:C2	23:DB:61:G:N7	2.77	0.53
42:BU:10:VAL:HG23	42:BU:11:ILE:N	2.23	0.53
14:AN:20:PHE:HA	14:AN:24:ALA:CB	2.38	0.53
1:CA:1005:A:N7	1:CA:1006:G:H1'	2.22	0.53
25:DD:172:VAL:HG21	25:DD:194:PRO:HD2	1.90	0.53
13:CM:16:ILE:O	13:CM:16:ILE:HG22	2.08	0.53
15:AO:50:HIS:O	15:AO:53:ARG:HB3	2.08	0.53
27:DF:33:ILE:HG13	27:DF:95:MET:CE	2.38	0.53
22:BA:1947:C:C2	22:BA:1960:A:C2	2.96	0.53
22:BA:1568:G:H4'	24:BC:58:LYS:HB3	1.90	0.53
1:CA:840:C:N3	1:CA:842:U:H4'	2.22	0.53
16:CP:16:PHE:CD2	16:CP:40:ASN:HB2	2.44	0.53
4:CD:141:VAL:HG12	4:CD:141:VAL:O	2.07	0.53
25:DD:112:THR:CG2	25:DD:113:SER:N	2.66	0.53
1:AA:1196:A:O2'	1:AA:1197:A:P	2.66	0.53
24:DC:216:ARG:HH11	24:DC:216:ARG:HG3	1.72	0.53
36:BO:35:ILE:HG21	36:BO:71:ALA:HA	1.88	0.53
49:B1:47:ILE:H	49:B1:47:ILE:HD12	1.73	0.53
31:DJ:88:THR:CG2	31:DJ:91:GLU:HG3	2.37	0.53
25:BD:68:PHE:CE2	25:BD:75:ALA:HA	2.42	0.53
1:CA:312:C:H2'	1:CA:313:A:O4'	2.07	0.53
22:BA:63:A:H5'	22:BA:63:A:C8	2.40	0.53
22:BA:1857:G:N2	22:BA:1884:G:O2'	2.41	0.53
4:AD:106:PHE:CG	4:AD:144:ILE:HD11	2.43	0.53
22:BA:2725:A:O2'	22:BA:2726:A:H2'	2.07	0.53
29:BH:75:LEU:HD23	29:BH:143:ILE:CG2	2.38	0.53
34:BM:21:ALA:HB2	34:BM:97:GLN:O	2.08	0.53
22:BA:2136:G:O6	22:BA:2156:G:C2	2.62	0.53
4:AD:125:ASN:HA	4:AD:141:VAL:HG23	1.90	0.53
31:BJ:40:HIS:H	31:BJ:40:HIS:CD2	2.25	0.53
1:CA:615:G:H2'	1:CA:616:G:H8	1.73	0.53
24:DC:124:LYS:NZ	24:DC:124:LYS:HB3	2.22	0.53
22:DA:2660:A:C2	22:DA:2661:G:N7	2.76	0.53
1:AA:783:C:C2'	1:AA:784:A:H5'	2.38	0.53
22:DA:588:U:O5'	22:DA:588:U:H6	1.90	0.53
22:BA:2765:A:H2'	22:BA:2765:A:N3	2.23	0.53
41:DT:16:VAL:O	41:DT:16:VAL:HG12	2.07	0.53
22:DA:2395:C:H42	22:DA:2421:G:H1	1.56	0.53
26:BE:115:GLN:OE1	26:BE:115:GLN:HA	2.08	0.53
22:BA:994:C:O3'	22:BA:995:C:H3'	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:158:GLY:N	24:DC:194:VAL:HG13	2.24	0.53
28:BG:162:ARG:CZ	28:BG:168:VAL:HG21	2.38	0.53
1:CA:392:C:H2'	1:CA:393:A:H8	1.73	0.53
22:DA:705:A:N6	22:DA:726:G:H1'	2.24	0.53
22:DA:1352:U:C5	22:DA:1377:G:O6	2.61	0.53
1:CA:1072:G:H2'	1:CA:1073:U:O4'	2.09	0.53
1:CA:213:G:C2'	1:CA:214:C:H6	2.04	0.53
22:DA:144:A:O2'	22:DA:145:C:C5'	2.56	0.53
1:AA:206:C:C2	1:AA:207:C:H1'	2.44	0.53
22:DA:1915:U:C2'	22:DA:1916:A:C8	2.72	0.53
1:CA:411:A:C6	1:CA:429:U:C5	2.96	0.53
22:BA:2365:G:H4'	44:BW:59:PHE:CZ	2.44	0.53
43:DV:26:PHE:CD2	43:DV:26:PHE:O	2.61	0.53
10:AJ:35:GLN:HE21	10:AJ:35:GLN:CA	2.20	0.53
37:DP:25:VAL:HG23	37:DP:25:VAL:O	2.08	0.53
31:DJ:114:LEU:HA	31:DJ:117:ALA:HB3	1.89	0.53
22:DA:2394:C:H41	51:D3:30:HIS:CE1	2.26	0.53
1:CA:598:U:H4'	8:CH:85:TYR:CD1	2.43	0.53
38:DQ:4:LYS:HZ2	38:DQ:6:GLY:CA	2.17	0.53
1:CA:1014:A:H4'	19:CS:13:HIS:CD2	2.43	0.53
1:CA:974:A:H8	14:CN:70:HIS:CE1	2.25	0.53
1:CA:982:U:C5	1:CA:983:A:N6	2.76	0.53
20:AT:2:ASN:O	20:AT:4:LYS:N	2.41	0.53
33:DL:3:LEU:O	33:DL:4:ASN:C	2.46	0.53
22:BA:2310:C:C5	27:BF:76:PHE:HZ	2.26	0.53
22:DA:2645:G:H4'	22:DA:2732:G:H2'	1.89	0.53
41:BT:54:GLU:HB3	41:BT:88:LYS:CG	2.38	0.53
11:AK:109:ILE:CB	21:AU:5:VAL:HG23	2.38	0.53
22:DA:1997:C:O2'	22:DA:1998:A:H5'	2.08	0.53
1:CA:193:C:C1'	20:CT:54:GLN:NE2	2.71	0.53
1:CA:251:G:N2	1:CA:253:A:N6	2.56	0.53
1:CA:276:G:O2'	1:CA:277:C:C6	2.59	0.53
22:DA:1155:A:H5''	38:DQ:54:ARG:CZ	2.38	0.53
22:DA:2093:G:C5	22:DA:2225:A:C5	2.97	0.53
22:DA:1627:G:C2	22:DA:1628:G:C8	2.96	0.53
1:CA:1352:C:H2'	1:CA:1353:G:O4'	2.08	0.53
10:AJ:51:VAL:O	10:AJ:62:ARG:HA	2.08	0.53
22:DA:373:U:C2	22:DA:374:A:C8	2.96	0.53
13:CM:41:ASP:O	13:CM:42:VAL:HB	2.08	0.53
22:BA:2197:U:HO2'	22:BA:2198:A:P	2.32	0.53
4:AD:2:ARG:CZ	4:AD:114:ARG:HD3	2.37	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:179:ALA:O	3:CC:180:ASP:C	2.46	0.53
28:DG:94:ARG:HG2	28:DG:105:SER:H	1.72	0.53
34:BM:81:ARG:HG3	34:BM:82:MET:H	1.73	0.53
1:CA:1394:A:C6	1:CA:1501:C:H5'	2.43	0.53
22:BA:271:G:H4'	22:BA:272:A:OP1	2.06	0.53
22:BA:409:G:C2'	22:BA:410:G:H5'	2.38	0.53
29:BH:125:THR:HG23	29:BH:126:GLY:N	2.17	0.53
1:CA:899:C:OP1	1:CA:899:C:H6	1.91	0.53
42:BU:93:ARG:NH1	42:BU:102:ILE:CD1	2.70	0.53
22:DA:2893:A:C4'	22:DA:2894:G:O5'	2.52	0.53
7:AG:20:GLU:O	7:AG:24:LYS:HG3	2.07	0.53
34:BM:109:PRO:O	34:BM:110:GLU:C	2.47	0.53
22:DA:1317:G:C2	22:DA:1336:A:C2	2.96	0.53
1:AA:830:G:H2'	1:AA:831:A:H8	1.72	0.53
1:AA:1039:G:C2'	1:AA:1040:U:H5'	2.38	0.53
27:BF:175:PRO:O	27:BF:176:PHE:HB2	2.07	0.53
22:BA:2109:U:C4	22:BA:2181:U:O4	2.61	0.53
17:CQ:29:LYS:HB2	17:CQ:36:PHE:CZ	2.44	0.53
22:BA:1385:A:C2	22:BA:1386:C:C2	2.95	0.53
37:DP:102:ARG:HB3	37:DP:107:ALA:HB2	1.89	0.53
17:CQ:78:VAL:O	17:CQ:79:GLU:C	2.47	0.53
22:DA:1840:G:O2'	22:DA:1841:U:H5'	2.08	0.53
22:DA:1835:G:C4	22:DA:1836:C:C6	2.96	0.53
22:BA:1001:A:H2'	22:BA:1002:G:C5'	2.37	0.53
22:BA:31:C:O3'	22:BA:1238:G:H5''	2.07	0.53
21:CU:5:VAL:HG12	21:CU:6:ARG:N	2.22	0.53
26:BE:196:VAL:HG13	26:BE:200:LEU:CD2	2.38	0.53
22:BA:1669:A:OP2	56:BA:3720:HOH:O	2.18	0.53
22:BA:2083:G:C2'	22:BA:2084:C:H5'	2.38	0.53
10:CJ:8:ILE:HG13	10:CJ:8:ILE:O	2.07	0.53
24:BC:124:LYS:HB3	24:BC:127:ASN:ND2	2.23	0.53
9:AI:33:SER:OG	9:AI:35:GLU:HG2	2.09	0.53
22:BA:1522:A:O2'	22:BA:1523:U:P	2.66	0.53
5:AE:114:LEU:HD21	5:AE:122:VAL:HG21	1.89	0.53
5:AE:153:ALA:O	5:AE:154:ALA:C	2.46	0.53
5:AE:156:ARG:NH2	8:AH:113:ARG:HH12	2.06	0.53
1:CA:1253:G:N1	1:CA:1285:A:N6	2.56	0.53
10:CJ:74:VAL:HG12	10:CJ:75:ASP:N	2.22	0.53
41:DT:8:LEU:HD22	41:DT:46:ALA:HA	1.89	0.53
1:AA:410:G:OP2	4:AD:21:LYS:HE2	2.08	0.53
4:AD:25:ARG:HD3	4:AD:30:LYS:HE3	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:481:G:C4'	1:CA:482:A:OP1	2.53	0.53
16:CP:74:LEU:O	16:CP:78:VAL:CG2	2.54	0.53
22:DA:1970:A:H1'	22:DA:1972:G:C8	2.43	0.53
48:D0:42:ILE:CD1	48:D0:47:TYR:O	2.55	0.53
9:AI:56:MET:SD	9:AI:57:VAL:N	2.81	0.53
12:CL:85:ARG:NH1	12:CL:87:LYS:HA	2.24	0.53
46:DY:28:LEU:CG	46:DY:42:LEU:HD22	2.39	0.53
22:DA:75:G:H4'	46:DY:48:ARG:NH2	2.23	0.53
51:B3:31:ILE:C	51:B3:31:ILE:HD12	2.29	0.53
22:DA:163:C:O2'	22:DA:164:C:O4'	2.27	0.53
45:DX:28:PHE:O	45:DX:29:LEU:HB3	2.08	0.53
22:DA:445:C:O2'	22:DA:446:G:O4'	2.26	0.53
34:DM:19:GLY:O	34:DM:20:LEU:HB2	2.08	0.53
1:AA:204:G:H1'	1:AA:465:A:H2	1.71	0.53
44:BW:22:VAL:O	44:BW:23:LYS:O	2.26	0.53
22:DA:192:C:H5'	22:DA:678:C:H1'	1.89	0.53
40:DS:36:LEU:C	40:DS:38:TYR:H	2.11	0.53
22:BA:1178:C:N4	22:BA:1180:U:C4	2.76	0.53
1:CA:1210:C:H2'	1:CA:1211:U:O5'	2.09	0.53
1:CA:932:C:C5	7:CG:2:ARG:NH1	2.77	0.53
1:CA:1226:C:C4	13:CM:102:LYS:HA	2.43	0.53
14:CN:81:ILE:N	14:CN:81:ILE:HD12	2.24	0.53
4:AD:89:LEU:HD12	4:AD:89:LEU:C	2.28	0.53
8:AH:10:LEU:HD22	8:AH:74:ILE:CG1	2.38	0.53
1:CA:276:G:O2'	1:CA:277:C:P	2.67	0.53
22:DA:818:G:C2'	22:DA:819:A:H5''	2.38	0.53
42:BU:10:VAL:HB	42:BU:70:ALA:O	2.09	0.53
32:BK:58:LEU:N	32:BK:58:LEU:HD23	2.23	0.53
1:CA:1239:A:O2'	1:CA:1241:G:C5	2.51	0.53
14:AN:27:LYS:N	14:AN:30:ILE:HB	2.23	0.53
7:CG:30:MET:O	7:CG:31:VAL:CB	2.54	0.53
22:DA:2309:A:C6	22:DA:2310:C:H1'	2.42	0.53
6:AF:86:ARG:HH12	6:AF:88:MET:CE	2.21	0.53
24:DC:128:THR:HG22	24:DC:188:ARG:CG	2.38	0.53
22:DA:993:G:H2'	22:DA:994:C:H5'	1.91	0.53
3:CC:21:TRP:CZ3	3:CC:28:PHE:CE1	2.97	0.53
20:AT:57:VAL:HG13	20:AT:71:ALA:HB1	1.90	0.53
29:DH:37:VAL:CG2	29:DH:38:PRO:HD2	2.37	0.53
22:DA:833:A:H2'	22:DA:834:G:C8	2.43	0.53
1:AA:108:G:C2'	1:AA:109:A:OP1	2.50	0.53
27:DF:147:ARG:H	27:DF:147:ARG:HD2	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1087:G:O2'	1:AA:1088:G:C5'	2.56	0.53
22:DA:870:U:C2'	22:DA:871:U:H5'	2.34	0.53
22:DA:284:U:H2'	22:DA:285:G:H8	1.73	0.53
34:BM:8:LYS:HD2	34:BM:8:LYS:H	1.74	0.53
39:BR:61:ALA:HB1	39:BR:98:ILE:H	1.72	0.53
23:BB:35:C:C2'	23:BB:36:C:O5'	2.56	0.53
22:BA:2297:A:H8	22:BA:2297:A:H5''	1.73	0.53
19:CS:38:THR:HA	19:CS:69:LYS:HD3	1.90	0.53
29:BH:101:ASP:O	29:BH:104:THR:HB	2.08	0.53
27:BF:114:ARG:H	27:BF:114:ARG:HD2	1.72	0.53
27:BF:90:LEU:C	27:BF:95:MET:HB2	2.28	0.53
20:AT:60:GLN:HE21	20:AT:65:LEU:HD21	1.74	0.53
22:BA:2804:U:H2'	22:BA:2805:C:H6	1.73	0.53
22:BA:2850:A:H2'	22:BA:2851:A:C8	2.44	0.53
23:BB:74:U:O2	43:BV:29:ILE:CD1	2.55	0.53
28:DG:141:GLY:O	28:DG:144:ALA:HB3	2.09	0.53
22:BA:1773:A:C2'	22:BA:1774:C:H5'	2.38	0.53
6:CF:21:MET:HA	6:CF:24:ARG:CZ	2.38	0.53
22:BA:1006:C:C2	22:BA:1138:G:N2	2.77	0.53
1:CA:238:A:H2'	1:CA:239:U:C4'	2.36	0.53
38:BQ:75:TYR:CE2	38:BQ:79:ILE:HG13	2.42	0.53
22:BA:1059:G:C6	22:BA:1060:U:N3	2.76	0.53
45:BX:29:LEU:HD23	45:BX:29:LEU:N	2.24	0.53
5:AE:155:LYS:HD2	5:AE:155:LYS:N	2.16	0.53
1:CA:1125:U:C5	10:CJ:40:ILE:CG1	2.89	0.53
1:CA:1278:G:C5'	1:CA:1279:G:H5'	2.38	0.53
44:DW:18:LYS:HZ3	44:DW:18:LYS:HB2	1.74	0.53
44:DW:30:VAL:HG23	44:DW:59:PHE:HD1	1.73	0.53
44:DW:40:ARG:NH1	44:DW:40:ARG:CG	2.50	0.53
22:DA:2331:G:H4'	44:DW:41:GLY:H	1.73	0.53
44:DW:65:LYS:O	44:DW:81:ILE:HA	2.09	0.53
22:DA:1069:A:O2'	22:DA:1070:A:C5'	2.49	0.53
22:DA:333:G:C4	22:DA:334:C:C5	2.96	0.53
22:DA:77:G:O2'	22:DA:78:U:C6	2.51	0.53
24:BC:141:HIS:N	24:BC:190:THR:O	2.29	0.53
49:B1:22:THR:HG23	49:B1:23:THR:N	2.22	0.53
22:DA:142:A:C2'	22:DA:143:C:H6	2.21	0.53
13:AM:86:ARG:O	13:AM:90:HIS:HD2	1.91	0.53
21:CU:38:GLU:C	21:CU:40:PRO:HD2	2.28	0.53
43:DV:63:ILE:O	43:DV:63:ILE:HG22	2.08	0.53
22:DA:2618:G:H21	25:DD:155:VAL:HG21	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:31:VAL:O	29:BH:32:PRO:C	2.43	0.53
33:DL:62:PRO:CG	51:D3:24:LYS:HB3	2.38	0.53
22:DA:188:G:O2'	22:DA:189:G:H5'	2.08	0.53
22:DA:2077:A:C5	22:DA:2435:A:C6	2.97	0.53
22:DA:584:C:P	38:DQ:5:ARG:HD3	2.49	0.53
7:CG:2:ARG:HG2	7:CG:3:ARG:N	2.23	0.53
20:AT:43:LYS:HD3	20:AT:86:ALA:CA	2.38	0.53
1:CA:764:C:H42	1:CA:812:G:H1	1.55	0.53
5:CE:114:LEU:HD13	5:CE:122:VAL:HG11	1.91	0.53
22:BA:987:C:C2'	22:BA:988:A:H5'	2.39	0.53
5:CE:132:PRO:O	5:CE:135:VAL:N	2.42	0.53
22:DA:1661:G:C5	22:DA:1662:U:C5	2.96	0.53
27:DF:107:VAL:N	27:DF:108:PRO:HD2	2.23	0.53
23:DB:5:U:H2'	23:DB:6:G:C8	2.44	0.53
22:DA:1303:G:HO2'	22:DA:1304:A:C5'	2.21	0.53
1:AA:1157:A:C2	1:AA:1181:G:C4	2.96	0.53
22:BA:2152:G:O2'	22:BA:2153:C:O4'	2.25	0.53
13:CM:57:ASP:O	13:CM:61:LYS:HG3	2.08	0.53
22:BA:1275:A:N1	22:BA:1295:C:O2'	2.36	0.53
1:CA:1453:G:C2'	1:CA:1453:G:N3	2.69	0.53
1:AA:275:G:N3	1:AA:276:G:C8	2.76	0.53
22:BA:605:G:H1'	22:BA:657:U:H1'	1.90	0.53
22:DA:56:A:C2	22:DA:115:C:O2	2.61	0.53
29:DH:41:LYS:CA	29:DH:44:ILE:HG12	2.36	0.53
1:AA:585:G:N3	1:AA:879:C:H4'	2.24	0.53
28:DG:149:ALA:O	28:DG:151:ARG:N	2.40	0.53
28:DG:162:ARG:HB2	28:DG:166:GLU:CB	2.38	0.53
24:BC:63:ILE:O	24:BC:64:VAL:HB	2.08	0.53
2:AB:89:PHE:CD1	2:AB:153:MET:HG3	2.43	0.53
22:DA:591:U:H1'	51:D3:1:PRO:HD2	1.90	0.53
1:CA:1309:G:H2'	1:CA:1310:G:H8	1.73	0.53
4:CD:116:LEU:HB3	4:CD:122:ILE:HD11	1.90	0.53
22:DA:2892:G:H5''	22:DA:2894:G:H22	1.73	0.53
22:DA:2898:U:H2'	22:DA:2899:A:C8	2.43	0.53
1:AA:235:C:O2'	1:AA:236:A:H5'	2.08	0.53
3:AC:5:HIS:HD2	3:AC:7:ASN:H	1.56	0.53
22:BA:721:A:H2'	22:BA:722:A:C8	2.44	0.53
30:DI:105:LEU:HD21	30:DI:129:GLU:CD	2.28	0.53
42:BU:51:LEU:HA	42:BU:53:GLN:OE1	2.08	0.53
1:CA:115:G:H4'	1:CA:116:A:OP1	2.08	0.53
7:AG:144:ALA:C	7:AG:146:ALA:N	2.61	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:716:A:H1'	11:CK:118:ASN:O	2.08	0.53
22:BA:1256:G:O2'	26:BE:77:ILE:HD11	2.07	0.53
1:AA:139:A:C2'	1:AA:140:U:H5'	2.39	0.53
13:AM:70:ARG:O	13:AM:74:MET:HB2	2.09	0.53
22:DA:1681:G:H3'	22:DA:1757:A:N1	2.24	0.53
22:BA:826:U:O2'	33:BL:53:GLY:HA3	2.07	0.53
2:AB:61:SER:HA	2:AB:223:GLY:C	2.28	0.53
22:BA:1394:U:H3'	22:BA:1394:U:H6	1.73	0.53
31:DJ:55:ILE:HG13	31:DJ:55:ILE:O	2.07	0.53
22:BA:1259:G:H2'	22:BA:1260:A:H8	1.74	0.53
22:BA:163:C:O2'	22:BA:164:C:P	2.67	0.53
16:CP:2:VAL:HG13	16:CP:65:ALA:HA	1.90	0.53
1:AA:82:G:N2	1:AA:84:U:C4	2.77	0.53
24:BC:43:ASN:HB3	24:BC:45:ASN:H	1.74	0.53
7:CG:12:LEU:O	7:CG:12:LEU:HD22	2.09	0.53
38:BQ:91:ARG:NE	39:BR:11:GLN:H	2.06	0.53
8:AH:63:LYS:HB2	8:AH:70:VAL:CG2	2.36	0.53
22:BA:2515:C:O2'	22:BA:2516:A:H5'	2.08	0.53
24:DC:171:VAL:O	24:DC:171:VAL:HG12	2.07	0.53
28:BG:83:THR:C	28:BG:84:LYS:CE	2.76	0.53
1:CA:1151:A:H4'	10:CJ:70:HIS:CE1	2.43	0.53
1:CA:1281:C:H3'	1:CA:1282:C:H6	1.73	0.53
22:DA:1312:U:O2'	22:DA:1313:U:OP2	2.26	0.53
1:CA:373:A:C2	1:CA:374:A:C8	2.96	0.53
16:CP:71:VAL:CG2	16:CP:72:ALA:N	2.71	0.53
22:DA:1772:A:H2'	22:DA:1773:A:O5'	2.08	0.53
22:DA:1087:G:C6	22:DA:1089:A:C2	2.96	0.53
1:CA:501:C:H1'	1:CA:549:C:H1'	1.90	0.53
22:DA:118:A:H1'	22:DA:178:G:O4'	2.08	0.53
22:DA:46:G:N1	22:DA:47:C:C4	2.76	0.53
22:DA:447:A:O4'	22:DA:449:A:N6	2.42	0.53
38:BQ:88:GLU:C	38:BQ:88:GLU:OE1	2.47	0.53
2:CB:174:GLU:O	2:CB:178:LEU:HB2	2.07	0.53
22:DA:142:A:H2'	22:DA:143:C:C5	2.43	0.53
1:AA:71:A:H3'	1:AA:71:A:OP2	2.09	0.53
44:BW:22:VAL:CG1	44:BW:25:PHE:HE2	2.20	0.53
43:DV:80:HIS:CD2	43:DV:82:TYR:H	2.26	0.53
26:BE:79:ARG:CG	26:BE:80:SER:N	2.51	0.53
22:BA:2352:A:N1	44:BW:30:VAL:CG1	2.66	0.53
22:DA:2359:C:O2	33:DL:60:ARG:NH2	2.41	0.53
19:CS:51:HIS:CD2	19:CS:53:GLY:H	2.26	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2311:A:O3'	22:BA:2312:U:H6	1.92	0.53
22:BA:1870:C:H3'	22:BA:1871:A:C2	2.43	0.53
25:DD:148:GLN:CD	25:DD:148:GLN:H	2.12	0.53
1:AA:1134:G:O6	1:AA:1141:C:N4	2.41	0.53
22:DA:1034:G:O6	22:DA:1122:G:C6	2.62	0.53
22:DA:2695:U:O2	22:DA:2696:U:C5	2.60	0.53
11:AK:124:LYS:CE	21:AU:33:ARG:HH21	2.21	0.53
7:CG:40:SER:O	7:CG:44:SER:HB3	2.07	0.53
46:BY:57:LEU:CA	46:BY:60:LYS:HB3	2.24	0.53
31:BJ:16:TYR:O	31:BJ:55:ILE:HG23	2.08	0.53
20:CT:30:PHE:CD1	20:CT:56:ILE:CD1	2.91	0.53
14:AN:15:LEU:CD1	14:AN:53:ASP:HB2	2.38	0.53
27:BF:133:GLU:O	27:BF:136:ILE:HD11	2.07	0.53
22:DA:1475:G:H2'	22:DA:1475:G:N3	2.24	0.53
1:AA:1161:C:O2'	1:AA:1162:C:H5'	2.08	0.53
25:DD:109:VAL:HB	25:DD:175:LEU:HD12	1.90	0.53
22:BA:1277:G:C4'	35:BN:20:MET:CE	2.86	0.53
1:CA:882:C:H41	12:CL:5:GLN:HE21	1.55	0.53
27:DF:28:PRO:HB2	27:DF:168:LEU:CD1	2.38	0.53
21:CU:13:VAL:HG21	21:CU:15:LEU:HD23	1.91	0.53
37:BP:37:LYS:O	37:BP:37:LYS:CG	2.55	0.53
1:AA:330:C:H5''	1:AA:330:C:C6	2.42	0.53
22:DA:1000:A:N6	22:DA:1001:A:C6	2.77	0.53
25:DD:110:THR:HG23	25:DD:171:THR:CG2	2.38	0.53
22:DA:2579:C:H2'	22:DA:2579:C:O2	2.08	0.53
22:BA:1675:C:H2'	22:BA:1676:A:C8	2.43	0.53
41:BT:4:GLU:O	41:BT:8:LEU:HD23	2.08	0.53
11:CK:15:VAL:HG12	11:CK:17:ASP:H	1.73	0.53
22:BA:1912:A:C2	22:BA:1919:A:C6	2.96	0.53
1:CA:117:G:C2'	1:CA:118:U:H5'	2.38	0.53
22:BA:286:U:O2'	22:BA:287:G:H5'	2.09	0.53
13:CM:85:TYR:CE2	13:CM:96:VAL:HG13	2.43	0.53
3:AC:61:LYS:O	3:AC:62:SER:HB2	2.09	0.53
22:BA:95:A:O2'	46:BY:41:HIS:HD2	1.91	0.53
22:DA:953:G:C2'	22:DA:954:G:H5'	2.38	0.53
1:AA:1112:C:O2	3:AC:178:ARG:HG2	2.07	0.53
1:AA:1136:C:H4'	1:AA:1137:C:OP1	2.08	0.53
22:BA:1864:U:OP1	22:BA:2411:A:H5'	2.09	0.53
23:BB:2:G:C6	23:BB:119:A:C2	2.96	0.53
22:BA:2511:U:O4	22:BA:2575:C:N3	2.42	0.53
22:DA:961:C:H5	22:DA:2456:C:H5'	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:476:U:O2'	1:AA:477:C:H5'	2.08	0.53
22:BA:814:C:O2'	22:BA:815:C:H5'	2.09	0.53
11:AK:69:CYS:O	11:AK:73:VAL:CG2	2.56	0.53
45:DX:37:PHE:O	45:DX:45:PHE:HA	2.09	0.53
11:AK:43:TRP:CE3	11:AK:44:ALA:HA	2.44	0.53
24:DC:236:GLY:O	24:DC:238:ASN:N	2.41	0.53
9:CI:80:HIS:CD2	9:CI:84:ARG:HG3	2.44	0.53
2:AB:123:GLY:O	2:AB:125:PHE:HD2	1.92	0.53
32:BK:86:LEU:N	32:BK:86:LEU:HD23	2.24	0.53
17:CQ:12:VAL:HG22	17:CQ:12:VAL:O	2.07	0.53
14:CN:65:GLN:HA	14:CN:65:GLN:HE21	1.73	0.53
29:DH:104:THR:CG2	29:DH:104:THR:O	2.56	0.53
40:DS:51:LEU:HD12	40:DS:54:ALA:HB3	1.90	0.53
45:BX:32:LEU:O	45:BX:33:HIS:CG	2.62	0.53
12:CL:42:LYS:CD	12:CL:43:LYS:HZ3	2.21	0.53
5:AE:100:GLU:HB3	5:AE:121:ASN:CB	2.39	0.53
24:DC:244:VAL:HG12	24:DC:250:GLN:HA	1.90	0.53
22:DA:1399:C:H2'	22:DA:1400:U:C5	2.43	0.53
49:D1:24:LYS:HE2	49:D1:52:LYS:HZ1	1.74	0.53
22:DA:1787:A:C2	22:DA:1788:C:C2	2.96	0.53
22:DA:1826:G:C2'	22:DA:1827:U:O5'	2.57	0.53
22:DA:782:A:OP1	22:DA:782:A:H8	1.92	0.53
24:DC:229:HIS:ND1	24:DC:230:PRO:HD2	2.23	0.53
22:DA:1240:U:O2'	22:DA:1241:A:H5'	2.09	0.53
51:B3:33:THR:CG2	51:B3:34:LYS:N	2.71	0.53
22:DA:128:C:O2'	22:DA:129:C:C6	2.60	0.53
22:DA:379:G:C6	22:DA:380:G:C5	2.96	0.53
22:DA:52:A:C5	22:DA:118:A:C2	2.96	0.53
22:DA:460:A:C2	22:DA:470:A:C5	2.97	0.53
3:CC:110:LEU:C	3:CC:110:LEU:HD23	2.29	0.53
29:DH:26:ALA:O	29:DH:27:ARG:CB	2.55	0.53
37:DP:20:ARG:CD	37:DP:21:PRO:HD2	2.15	0.53
37:DP:60:VAL:O	37:DP:60:VAL:HG12	2.07	0.53
22:DA:2239:G:OP2	56:DA:3528:HOH:O	2.18	0.53
22:DA:647:G:O2'	22:DA:648:G:C5'	2.55	0.53
1:AA:1301:U:H2'	1:AA:1303:C:H5	1.73	0.53
7:AG:29:LEU:HD23	7:AG:29:LEU:O	2.09	0.53
12:AL:89:LEU:HB3	12:AL:92:VAL:HG21	1.91	0.53
38:BQ:4:LYS:HZ2	38:BQ:5:ARG:HA	1.72	0.53
1:CA:935:A:H61	7:CG:2:ARG:NE	2.05	0.53
1:CA:961:U:O2'	1:CA:962:C:C6	2.40	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:8:ARG:HH11	14:CN:12:ARG:NH2	2.07	0.53
22:DA:655:A:O2'	22:DA:656:G:N7	2.40	0.53
22:DA:1993:U:H4'	25:DD:133:THR:CG2	2.39	0.53
2:CB:130:LYS:HD3	2:CB:133:ALA:HB3	1.90	0.53
33:BL:109:LYS:HD2	33:BL:126:ARG:HE	1.73	0.53
22:DA:2683:C:O2'	37:DP:74:GLN:NE2	2.41	0.53
29:BH:72:ILE:HD11	29:BH:142:VAL:HG11	1.91	0.53
27:DF:101:ARG:HH11	27:DF:138:PRO:CG	2.21	0.53
1:CA:273:U:H2'	1:CA:274:A:H5'	1.90	0.53
22:DA:1004:U:O4'	22:DA:1010:A:C2	2.62	0.53
32:DK:107:LEU:HD11	32:DK:115:ILE:HG21	1.89	0.53
1:CA:1332:A:C2'	1:CA:1333:A:H5'	2.38	0.53
29:BH:49:ALA:HB3	29:BH:50:ARG:HH22	1.72	0.53
1:AA:87:C:O2'	1:AA:88:U:O4'	2.24	0.53
22:DA:228:C:N3	22:DA:418:C:C4'	2.71	0.53
3:CC:137:VAL:O	3:CC:138:GLN:C	2.47	0.53
22:BA:934:U:H2'	22:BA:935:C:C6	2.44	0.53
50:B2:3:ARG:HH21	50:B2:3:ARG:CG	2.12	0.53
22:BA:783:A:H8	22:BA:784:G:H4'	1.73	0.53
22:BA:1508:A:C4'	22:BA:1509:A:H5'	2.37	0.53
24:DC:30:ALA:N	24:DC:31:PRO:CD	2.71	0.53
44:DW:43:LYS:CD	44:DW:79:ILE:HD11	2.35	0.53
12:AL:34:THR:HG22	12:AL:35:ARG:NH2	2.24	0.53
22:BA:2776:A:H4'	22:BA:2778:A:OP1	2.08	0.53
32:BK:93:GLN:CA	32:BK:93:GLN:OE1	2.57	0.53
22:DA:1833:C:C5	22:DA:1834:U:C5	2.96	0.53
22:DA:1929:G:H5''	22:DA:1930:G:OP1	2.08	0.53
22:DA:2738:A:C2	22:DA:2766:A:N6	2.77	0.53
34:DM:15:GLY:O	34:DM:16:ARG:CB	2.57	0.53
38:BQ:97:ILE:HD11	38:BQ:105:PHE:N	2.22	0.53
22:DA:523:C:C2'	22:DA:524:G:H5'	2.37	0.53
22:DA:2294:G:C4	22:DA:2295:C:C5	2.97	0.53
2:AB:53:LEU:HA	2:AB:56:LEU:HB3	1.89	0.53
22:BA:1001:A:H2'	22:BA:1002:G:H5'	1.89	0.53
22:BA:1667:G:OP1	32:BK:6:THR:HA	2.08	0.53
42:BU:82:VAL:O	42:BU:94:PHE:O	2.27	0.53
22:BA:2804:U:H2'	22:BA:2805:C:C6	2.43	0.53
20:AT:42:ASP:HB3	20:AT:45:ALA:HB3	1.90	0.53
23:BB:85:G:O2'	23:BB:86:G:H5'	2.08	0.53
3:CC:71:ARG:HB3	3:CC:71:ARG:NH1	2.22	0.53
22:DA:2473:U:P	22:DA:2473:U:H6	2.32	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1231:G:C5	1:CA:1232:U:C5	2.97	0.53
31:BJ:44:TYR:CG	38:BQ:63:ARG:HG2	2.44	0.53
22:BA:2679:A:H2'	22:BA:2680:U:O5'	2.08	0.53
22:BA:1073:A:OP1	22:BA:1073:A:C8	2.62	0.53
22:BA:1064:C:H4'	30:BI:90:GLY:H	1.72	0.53
4:CD:187:ARG:NH2	4:CD:191:SER:CA	2.62	0.53
26:DE:147:LEU:CB	26:DE:186:VAL:HA	2.38	0.53
16:AP:20:VAL:HG22	16:AP:21:VAL:N	2.23	0.53
22:DA:2324:U:O2	22:DA:2385:C:C5	2.62	0.53
44:DW:37:VAL:O	44:DW:38:ARG:HB2	2.08	0.53
48:D0:24:VAL:HG11	48:D0:27:LEU:HD11	1.89	0.53
1:AA:1258:G:N3	1:AA:1259:C:C5	2.76	0.53
1:AA:1531:A:O2'	1:AA:1532:U:H5'	2.09	0.53
1:CA:505:G:H5'	1:CA:534:U:C2	2.44	0.53
22:DA:299:A:C6	22:DA:300:A:C2	2.96	0.53
22:DA:85:G:OP2	42:DU:27:VAL:HG11	2.08	0.53
26:DE:128:ALA:O	26:DE:130:LYS:HG2	2.08	0.53
22:DA:117:G:O4'	22:DA:126:A:H2	1.92	0.53
43:DV:87:GLN:O	43:DV:88:HIS:HB2	2.09	0.53
37:BP:20:ARG:HG2	37:BP:20:ARG:O	2.08	0.53
1:CA:736:C:H2'	1:CA:737:C:C6	2.43	0.53
31:DJ:82:GLY:O	31:DJ:84:ILE:HG22	2.08	0.53
44:BW:30:VAL:N	44:BW:31:LEU:HD23	2.23	0.53
22:DA:2056:G:H2'	22:DA:2056:G:N3	2.22	0.53
22:DA:508:A:H3'	22:DA:509:C:H5'	1.91	0.53
1:CA:964:A:H5''	1:CA:1198:G:O3'	2.08	0.53
13:CM:100:ARG:HH12	13:CM:102:LYS:HE3	1.74	0.53
4:AD:75:TYR:HE2	4:AD:200:VAL:HA	1.72	0.53
25:BD:121:THR:HG22	25:BD:125:TRP:CD1	2.41	0.53
1:CA:765:G:C8	1:CA:812:G:C2	2.97	0.53
2:AB:165:ALA:HB3	2:AB:190:SER:HB3	1.91	0.53
1:CA:543:U:H2'	1:CA:544:G:C5'	2.39	0.53
22:BA:1778:U:H2'	22:BA:1784:A:H62	1.69	0.53
36:BO:89:ASP:H	36:BO:116:GLN:HB2	1.73	0.53
22:DA:271:G:C6	22:DA:272:A:N6	2.76	0.53
22:DA:1998:A:H4'	22:DA:2724:U:O2'	2.09	0.53
22:BA:1775:U:C2'	22:BA:1776:G:O5'	2.55	0.53
22:DA:975:A:C8	22:DA:990:A:N6	2.74	0.53
32:BK:20:MET:C	32:BK:41:ILE:HD11	2.28	0.53
22:DA:1304:A:O2'	22:DA:1305:C:O5'	2.26	0.53
24:BC:252:LYS:NZ	24:BC:252:LYS:CA	2.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1186:G:H4'	9:CI:111:GLU:CD	2.29	0.53
1:AA:1203:C:O2'	1:AA:1204:A:C5'	2.56	0.53
1:CA:154:U:C2'	1:CA:155:A:C5'	2.84	0.53
4:AD:99:ASN:OD1	4:AD:110:ARG:NH1	2.41	0.53
4:AD:170:LEU:N	4:AD:170:LEU:CD1	2.70	0.53
1:CA:1296:C:H1'	1:CA:1302:C:C2	2.43	0.53
22:DA:229:C:HO2'	22:DA:230:G:P	2.32	0.53
3:CC:183:TYR:CD1	3:CC:200:TRP:NE1	2.77	0.53
1:AA:1443:C:H2'	1:AA:1444:U:H6	1.74	0.53
43:DV:29:ILE:HD12	43:DV:29:ILE:O	2.07	0.53
22:DA:2009:A:N6	56:DA:3384:HOH:O	2.41	0.53
27:DF:56:LEU:O	27:DF:60:SER:HB3	2.09	0.53
14:CN:92:ILE:HD12	14:CN:95:LEU:CD2	2.39	0.53
1:AA:184:G:O4'	1:AA:224:U:H4'	2.08	0.53
1:AA:594:U:H2'	1:AA:595:A:O4'	2.08	0.53
1:AA:345:C:O2	32:BK:117:SER:HA	2.09	0.53
22:BA:359:G:C2	22:BA:360:U:H1'	2.43	0.53
22:BA:361:G:HO2'	22:BA:362:A:C5'	2.21	0.53
29:DH:96:THR:O	29:DH:97:ARG:HG3	2.08	0.53
2:CB:119:GLN:HG3	2:CB:124:THR:CG2	2.33	0.53
33:DL:68:SER:O	33:DL:69:ARG:CB	2.52	0.53
1:CA:1514:G:O2'	1:CA:1515:G:H5'	2.09	0.53
1:CA:106:C:H2'	1:CA:107:G:C5'	2.38	0.53
22:DA:533:G:H5''	22:DA:533:G:H8	1.74	0.53
22:BA:2021:C:OP1	48:B0:8:THR:HG21	2.08	0.53
3:AC:137:VAL:HA	3:AC:148:ILE:HD13	1.91	0.53
13:AM:113:LYS:N	13:AM:114:PRO:CD	2.66	0.53
22:BA:1901:A:C4	22:BA:1902:C:C5	2.96	0.53
23:BB:12:C:C4'	23:BB:13:G:OP1	2.56	0.53
15:CO:28:VAL:O	15:CO:29:ALA:C	2.47	0.53
2:CB:9:LEU:O	2:CB:10:LYS:HB3	2.09	0.53
22:DA:1587:G:N2	22:DA:1588:G:H1'	2.24	0.53
1:AA:903:G:C4	1:AA:904:U:C5	2.96	0.53
1:AA:1136:C:H5''	1:AA:1137:C:P	2.49	0.53
1:AA:991:U:H5''	1:AA:992:U:OP1	2.09	0.53
20:AT:60:GLN:NE2	20:AT:65:LEU:HD21	2.24	0.53
22:BA:1728:C:O2'	22:BA:1729:U:C6	2.61	0.53
31:BJ:97:PRO:O	31:BJ:98:GLU:C	2.46	0.53
22:DA:2578:G:H4'	22:DA:2578:G:OP2	2.09	0.53
26:DE:145:ASP:HB3	26:DE:184:ASP:H	1.72	0.53
3:CC:163:ARG:C	3:CC:164:THR:HG22	2.28	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:495:G:H1'	40:BS:57:ASN:ND2	2.24	0.53
48:D0:50:GLY:O	48:D0:51:ARG:HG3	2.09	0.53
52:D4:15:LYS:HA	52:D4:15:LYS:HE3	1.90	0.53
11:CK:115:ILE:O	11:CK:115:ILE:HG23	2.08	0.53
16:CP:12:LYS:HG2	16:CP:13:LYS:HG2	1.89	0.53
22:DA:761:A:H8	56:DA:3301:HOH:O	1.91	0.53
22:BA:259:G:O2'	22:BA:260:G:H5'	2.09	0.53
5:AE:105:ILE:O	5:AE:105:ILE:HG13	2.09	0.53
5:AE:76:ASN:HB3	5:AE:81:GLN:HG3	1.89	0.53
22:DA:1817:G:O2'	22:DA:1818:U:C5'	2.31	0.53
24:DC:145:MET:CE	24:DC:181:ARG:NH2	2.72	0.53
22:DA:1314:C:OP1	22:DA:1332:G:OP1	2.27	0.53
22:DA:782:A:C8	22:DA:782:A:OP1	2.62	0.53
22:DA:1056:G:N2	22:DA:1102:C:C5	2.77	0.53
22:DA:1237:A:O2'	22:DA:1238:G:O5'	2.27	0.53
50:D2:30:VAL:HG12	50:D2:30:VAL:O	2.09	0.53
25:BD:29:VAL:HB	25:BD:98:VAL:HG13	1.91	0.53
22:DA:460:A:N3	22:DA:470:A:C6	2.77	0.53
1:CA:1159:U:C4	1:CA:1182:G:C4	2.97	0.53
1:CA:1157:A:C6	1:CA:1180:A:C5	2.97	0.53
1:CA:1182:G:C5'	1:CA:1183:U:H5'	2.38	0.53
1:AA:953:G:H2'	1:AA:954:G:O4'	2.09	0.53
22:DA:1914:C:H2'	22:DA:1915:U:C5	2.43	0.53
44:BW:22:VAL:CG1	44:BW:25:PHE:CE2	2.92	0.53
32:DK:103:VAL:C	32:DK:104:THR:HG22	2.28	0.53
44:BW:70:VAL:HG23	44:BW:75:ASN:OD1	2.08	0.53
1:AA:259:G:C4	1:AA:260:G:C8	2.97	0.53
1:CA:643:C:O2'	1:CA:644:U:C5'	2.57	0.53
1:CA:644:U:H2'	1:CA:645:G:C8	2.44	0.53
1:CA:1014:A:C2	1:CA:1219:A:H1'	2.44	0.53
1:CA:1046:A:O2'	1:CA:1047:G:H5'	2.08	0.53
22:DA:2446:G:H3'	22:DA:2447:G:H5''	1.90	0.53
22:DA:2711:A:N6	22:DA:2714:G:C5	2.76	0.53
22:DA:2544:G:H2'	22:DA:2545:G:C8	2.44	0.53
31:DJ:101:ILE:O	31:DJ:101:ILE:HG22	2.09	0.53
28:DG:95:ALA:HB3	28:DG:127:GLN:HA	1.91	0.53
1:CA:192:A:N3	20:CT:54:GLN:NE2	2.54	0.53
1:CA:174:A:HO2'	1:CA:175:C:H5'	1.69	0.53
1:CA:92:U:O2'	1:CA:93:U:C5'	2.56	0.53
8:AH:10:LEU:HD11	8:AH:126:CYS:HB3	1.89	0.53
22:DA:244:A:H2'	22:DA:245:G:O4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:74:ILE:HG13	40:BS:105:VAL:HG22	1.91	0.53
22:DA:1629:U:H2'	22:DA:1630:A:O4'	2.08	0.53
22:BA:1028:A:H61	22:BA:1125:G:H2'	1.73	0.53
22:DA:617:G:O2'	22:DA:618:G:O5'	2.27	0.53
22:DA:616:A:H4'	26:DE:101:TYR:CE1	2.43	0.53
4:AD:149:LYS:O	4:AD:151:GLN:OE1	2.27	0.53
34:BM:73:ILE:HG21	34:BM:91:TYR:CE2	2.44	0.53
1:AA:1153:G:C2	1:AA:1154:G:C8	2.97	0.53
29:BH:43:ASN:HA	29:BH:46:PHE:HB3	1.91	0.53
22:DA:415:A:O2'	22:DA:1865:U:H5''	2.08	0.53
22:DA:1862:G:C2	22:DA:1881:C:C2	2.96	0.53
1:AA:1046:A:C2'	1:AA:1047:G:O5'	2.57	0.53
2:CB:199:ILE:O	2:CB:199:ILE:HG13	2.09	0.53
1:AA:439:U:HO2'	1:AA:440:C:H5'	1.71	0.53
22:DA:672:C:N4	22:DA:808:G:H1	2.07	0.53
47:BZ:6:ILE:O	47:BZ:34:THR:HA	2.09	0.53
22:DA:2443:C:C2'	22:DA:2444:G:H5'	2.39	0.53
22:DA:674:G:O2'	26:DE:69:ARG:CG	2.56	0.53
28:DG:117:PRO:HG2	28:DG:143:VAL:CG1	2.39	0.53
22:DA:1714:U:H3'	22:DA:1715:G:H5'	1.90	0.53
48:B0:33:SER:O	48:B0:34:GLY:O	2.26	0.53
11:AK:52:ARG:HD2	11:AK:56:LYS:HD3	1.91	0.53
22:DA:2791:G:C5	22:DA:2892:G:N2	2.77	0.53
22:BA:27:G:O2'	22:BA:28:A:P	2.66	0.53
22:BA:514:A:H1'	22:BA:581:C:O2'	2.09	0.53
22:BA:2414:G:C2'	22:BA:2415:G:H5'	2.39	0.53
1:CA:301:G:H2'	1:CA:302:G:C8	2.42	0.53
38:BQ:27:ARG:HA	38:BQ:33:VAL:HG12	1.90	0.53
24:BC:70:LYS:HE2	24:BC:73:ILE:HG13	1.91	0.53
22:DA:548:G:H5''	22:DA:549:G:H5'	1.91	0.53
22:BA:706:A:H2'	22:BA:707:G:O4'	2.08	0.53
1:AA:736:C:H2'	1:AA:737:C:C6	2.44	0.53
6:CF:97:THR:O	6:CF:98:GLU:HG3	2.09	0.53
25:BD:35:THR:HG1	25:BD:49:GLN:HG2	1.73	0.53
30:DI:106:GLN:O	30:DI:106:GLN:HG3	2.09	0.53
3:AC:120:THR:HG22	3:AC:121:SER:N	2.23	0.53
1:CA:524:G:H2'	1:CA:525:C:H6	1.73	0.53
22:BA:2682:A:H8	25:BD:11:MET:HG2	1.73	0.53
1:AA:82:G:N2	1:AA:84:U:N3	2.57	0.53
34:BM:96:ILE:C	34:BM:96:ILE:HD12	2.29	0.53
22:BA:1833:C:H2'	22:BA:1834:U:H6	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:52:A:O2'	22:BA:53:A:H5'	2.09	0.53
1:AA:72:A:H2'	1:AA:73:C:H6	1.73	0.53
17:CQ:7:LEU:CD2	17:CQ:7:LEU:N	2.71	0.53
28:BG:165:ASP:N	28:BG:165:ASP:OD1	2.41	0.53
18:AR:24:ASP:HB3	18:AR:27:THR:HB	1.91	0.53
24:DC:53:ILE:HD12	24:DC:54:GLY:N	2.24	0.53
22:BA:1063:G:H5'	30:BI:76:ALA:CB	2.39	0.53
31:BJ:111:LYS:CE	31:BJ:115:GLY:H	2.20	0.53
5:AE:148:SER:O	5:AE:152:VAL:CA	2.57	0.53
1:CA:1129:C:C5	1:CA:1139:G:C8	2.96	0.53
22:DA:1343:G:C2	22:DA:1344:U:C4	2.97	0.53
22:DA:2324:U:H5'	22:DA:2325:G:H5'	1.89	0.53
22:DA:858:G:N2	22:DA:920:A:C2	2.77	0.53
24:DC:245:THR:C	24:DC:247:TRP:H	2.13	0.53
22:DA:1070:A:C5	22:DA:1097:U:H4'	2.43	0.53
22:DA:1075:C:HO2'	22:DA:1076:C:H6	1.49	0.53
12:CL:110:LYS:O	12:CL:113:ARG:HD3	2.08	0.53
22:DA:1204:A:C4	22:DA:1206:G:C6	2.97	0.53
22:DA:303:G:C6	22:DA:315:G:C6	2.96	0.53
41:DT:39:THR:HG23	41:DT:42:GLU:HB2	1.87	0.53
22:DA:469:G:OP2	26:DE:55:SER:HB3	2.08	0.53
41:BT:86:THR:C	41:BT:87:LEU:HD23	2.28	0.53
1:AA:545:C:O2	1:AA:545:C:H2'	2.07	0.53
22:DA:191:A:C2	22:DA:192:C:N3	2.77	0.53
44:BW:76:ARG:CG	44:BW:76:ARG:NH2	2.68	0.53
8:CH:29:SER:O	8:CH:32:LYS:N	2.42	0.53
1:CA:1365:G:O2'	1:CA:1366:C:H5'	2.09	0.53
33:DL:121:THR:OG1	33:DL:141:LYS:HE3	2.08	0.53
10:AJ:18:ILE:HG23	10:AJ:19:ASP:N	2.24	0.53
25:DD:24:VAL:HG23	25:DD:190:LYS:HA	1.91	0.53
33:DL:77:ILE:HD12	33:DL:125:LEU:HD13	1.91	0.53
16:CP:4:ILE:CD1	16:CP:4:ILE:N	2.63	0.53
47:BZ:8:GLN:O	47:BZ:9:THR:HG22	2.08	0.53
5:CE:132:PRO:O	5:CE:136:VAL:HG12	2.09	0.53
22:DA:1998:A:H2'	22:DA:1999:C:H6	1.74	0.53
22:DA:612:G:N2	22:DA:614:A:O2'	2.42	0.53
22:DA:2312:U:H2'	22:DA:2313:C:C6	2.44	0.53
22:DA:1765:U:C2'	22:DA:1766:G:C5'	2.86	0.53
52:D4:36:ARG:HG2	52:D4:37:GLN:N	2.24	0.53
1:AA:1070:U:C2	1:AA:1071:C:C5	2.97	0.53
22:DA:2663:G:H2'	22:DA:2664:G:C8	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:465:G:C4'	50:D2:16:HIS:HD2	2.22	0.53
22:DA:14:A:C5	22:DA:526:A:C2	2.96	0.53
17:AQ:60:ILE:HG22	17:AQ:72:TRP:CE3	2.43	0.53
24:DC:106:PRO:CB	24:DC:141:HIS:HE1	2.21	0.53
36:BO:31:THR:CG2	36:BO:34:HIS:N	2.72	0.53
22:BA:2706:A:C2	22:BA:2707:U:C2	2.97	0.53
35:BN:71:ARG:NH2	35:BN:71:ARG:CG	2.68	0.53
22:BA:627:A:C5	22:BA:637:A:C8	2.97	0.53
16:AP:56:ARG:NH1	16:AP:59:HIS:HD2	2.06	0.53
20:CT:82:ILE:C	20:CT:84:LYS:H	2.12	0.53
11:CK:19:VAL:HG22	11:CK:82:GLU:HG2	1.89	0.53
22:DA:2520:C:H2'	22:DA:2521:C:C6	2.43	0.53
22:BA:289:G:H2'	22:BA:290:U:H6	1.73	0.53
3:CC:96:VAL:HB	3:CC:97:PRO:HD2	1.90	0.53
22:BA:1788:C:H2'	22:BA:1789:A:C5'	2.39	0.53
22:BA:684:G:OP1	50:B2:16:HIS:HD2	1.91	0.53
7:AG:86:VAL:HG13	7:AG:87:PRO:HD2	1.91	0.53
31:DJ:2:LYS:NZ	31:DJ:2:LYS:HB2	2.24	0.53
22:BA:860:U:C6	22:BA:860:U:H5'	2.43	0.53
22:BA:2314:A:C2'	22:BA:2315:G:H5'	2.39	0.53
23:DB:70:C:O2'	23:DB:71:C:H5'	2.09	0.53
13:CM:87:GLY:O	13:CM:91:ARG:HD2	2.09	0.53
22:BA:946:C:O2'	22:BA:947:A:H5'	2.09	0.53
1:CA:618:C:H3'	1:CA:619:U:H5''	1.91	0.53
22:BA:112:U:H5'	46:BY:58:ASN:ND2	2.24	0.53
22:BA:1094:U:H2'	22:BA:1096:A:OP2	2.08	0.53
31:DJ:11:VAL:HG21	31:DJ:13:ARG:CZ	2.39	0.53
3:AC:2:GLN:N	3:AC:2:GLN:OE1	2.41	0.53
23:BB:73:A:H4'	23:BB:73:A:OP1	2.08	0.53
1:CA:1042:A:H2'	1:CA:1043:G:O4'	2.08	0.53
6:CF:27:ALA:O	6:CF:31:GLY:HA3	2.07	0.53
30:BI:126:ARG:HA	30:BI:129:GLU:CG	2.39	0.53
22:DA:1813:G:H21	24:DC:49:THR:HB	1.73	0.53
22:DA:1805:A:C2	22:DA:1813:G:N1	2.76	0.53
22:DA:1388:G:H2'	22:DA:1389:G:C8	2.44	0.53
22:DA:1338:G:O2'	22:DA:1393:A:N1	2.41	0.53
22:DA:2330:G:C2'	22:DA:2331:G:H5'	2.39	0.53
22:DA:1206:G:C5	22:DA:1207:C:N4	2.77	0.53
42:DU:26:ASN:OD1	42:DU:34:ILE:HD12	2.07	0.53
42:DU:3:LYS:HD3	42:DU:82:VAL:HG21	1.90	0.53
25:BD:97:SER:CA	25:BD:99:GLU:HG2	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2761:A:H1'	28:DG:142:GLN:HE22	1.72	0.53
1:CA:1100:C:O2'	1:CA:1101:A:H5'	2.09	0.53
41:BT:22:THR:O	41:BT:25:GLU:N	2.36	0.53
31:DJ:4:PHE:CD1	31:DJ:5:THR:N	2.77	0.53
11:CK:124:LYS:O	21:CU:33:ARG:NE	2.42	0.53
22:BA:2331:G:H2'	22:BA:2332:C:C6	2.43	0.53
31:DJ:73:VAL:HB	31:DJ:75:TYR:HE2	1.66	0.53
40:DS:39:THR:O	40:DS:40:ASN:CB	2.58	0.53
22:DA:647:G:C8	22:DA:648:G:N7	2.77	0.53
22:DA:1616:A:OP1	22:DA:1616:A:C8	2.49	0.53
17:AQ:46:HIS:CD2	17:AQ:48:GLU:H	2.27	0.53
1:AA:1303:C:HO2'	1:AA:1304:G:H8	1.54	0.53
26:BE:148:ILE:H	26:BE:187:VAL:H	1.56	0.53
1:CA:982:U:C6	1:CA:983:A:C6	2.97	0.53
25:DD:9:VAL:O	25:DD:9:VAL:HG22	2.08	0.53
11:AK:34:THR:OG1	11:AK:40:ALA:N	2.40	0.53
22:DA:2571:U:C4	22:DA:2574:G:C8	2.97	0.53
36:BO:3:LYS:CG	36:BO:4:LYS:H	2.21	0.53
41:BT:38:ALA:HB1	41:BT:43:ILE:CG2	2.39	0.53
7:CG:63:VAL:HG11	7:CG:127:ALA:CB	2.34	0.53
46:BY:56:LEU:HA	46:BY:59:GLU:HG2	1.90	0.53
1:CA:71:A:C6	1:CA:100:G:C5	2.97	0.53
8:AH:100:ILE:CD1	8:AH:128:VAL:HB	2.38	0.53
1:CA:257:G:C2	1:CA:270:A:N1	2.77	0.53
1:CA:255:G:H5'	17:CQ:17:GLU:O	2.09	0.53
14:AN:15:LEU:N	14:AN:18:LYS:HE2	2.24	0.53
23:DB:109:A:C4	23:DB:110:C:C5	2.96	0.53
23:DB:19:C:H2'	23:DB:20:G:C8	2.43	0.53
22:BA:2503:A:O2'	22:BA:2505:G:OP2	2.26	0.53
14:AN:79:SER:O	14:AN:81:ILE:N	2.42	0.53
29:DH:80:ILE:HD12	29:DH:81:ALA:H	1.73	0.53
18:AR:58:ILE:O	18:AR:62:ARG:HG3	2.08	0.53
1:AA:1151:A:HO2'	1:AA:1152:A:H5''	1.73	0.53
22:DA:1193:G:N2	22:DA:1194:A:N3	2.57	0.53
22:DA:223:A:C5	22:DA:422:A:C8	2.97	0.53
1:AA:1046:A:O2'	1:AA:1047:G:C5'	2.52	0.53
3:CC:172:VAL:CG1	3:CC:181:ILE:HD13	2.39	0.53
22:BA:658:U:O2'	26:BE:95:LYS:NZ	2.40	0.53
34:BM:80:VAL:HG23	34:BM:81:ARG:H	1.74	0.53
25:BD:34:VAL:HG23	25:BD:34:VAL:O	2.09	0.53
3:AC:139:ASN:C	3:AC:139:ASN:HD22	2.10	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:159:LYS:HE2	25:DD:160:LYS:H	1.72	0.53
24:DC:141:HIS:HB3	24:DC:190:THR:HB	1.90	0.53
22:BA:271:G:C6	22:BA:272:A:N6	2.77	0.53
2:CB:119:GLN:O	2:CB:119:GLN:HG2	2.08	0.53
22:BA:408:G:O2'	22:BA:409:G:H5'	2.09	0.53
22:DA:2426:A:H3'	22:DA:2427:C:C5'	2.37	0.53
22:DA:17:G:H4'	38:DQ:24:TYR:HE1	1.74	0.53
22:BA:2793:C:H2'	22:BA:2794:C:C6	2.44	0.53
22:DA:2899:A:O2'	22:DA:2900:A:H5'	2.09	0.53
4:AD:164:ARG:O	4:AD:166:LYS:N	2.41	0.53
22:BA:1911:U:O4	22:BA:1918:A:H2'	2.09	0.53
51:D3:44:ARG:N	51:D3:45:PRO:HD2	2.25	0.53
7:AG:145:GLU:CA	7:AG:148:LYS:HB2	2.39	0.53
51:D3:57:VAL:HA	51:D3:60:CYS:HB2	1.91	0.53
19:CS:28:LYS:HB3	19:CS:29:PRO:CD	2.39	0.53
22:DA:1885:A:C6	22:DA:1886:U:C2	2.97	0.53
22:DA:2523:G:H2'	22:DA:2524:G:H5'	1.91	0.53
1:AA:600:A:H2'	1:AA:601:G:H8	1.74	0.53
22:BA:1761:C:O5'	22:BA:1761:C:H6	1.91	0.53
49:B1:3:GLY:O	49:B1:4:ILE:HG12	2.10	0.53
22:BA:2135:A:O2'	22:BA:2136:G:H8	1.91	0.53
22:BA:1637:A:H4'	22:BA:2711:A:O2'	2.09	0.53
1:CA:414:A:C2'	1:CA:415:A:H5''	2.38	0.53
1:AA:679:C:O2	1:AA:712:A:C2	2.61	0.53
1:AA:341:C:H2'	1:AA:342:C:H6	1.72	0.53
31:BJ:40:HIS:C	31:BJ:41:LYS:HG2	2.29	0.53
22:BA:833:A:OP2	33:BL:39:LYS:HE3	2.08	0.53
16:CP:2:VAL:HG13	16:CP:65:ALA:CB	2.39	0.53
9:AI:107:ALA:O	9:AI:109:GLN:HG2	2.09	0.53
6:AF:97:THR:O	6:AF:98:GLU:HG2	2.07	0.53
22:DA:1842:G:O4'	24:DC:242:HIS:CE1	2.62	0.53
26:BE:21:ARG:HG2	26:BE:22:ASP:O	2.09	0.53
15:AO:3:SER:O	15:AO:6:ALA:N	2.42	0.53
11:CK:86:LYS:HB2	11:CK:113:THR:HA	1.90	0.53
1:AA:1250:A:O3'	9:AI:68:GLY:HA2	2.08	0.53
24:BC:216:ARG:HB2	24:BC:217:PRO:HD2	1.91	0.53
22:DA:1690:A:H2'	22:DA:1691:C:O4'	2.08	0.53
6:AF:16:GLU:CB	4:CD:191:SER:HB2	2.35	0.52
41:DT:45:ALA:C	41:DT:47:VAL:H	2.12	0.52
4:AD:17:ASP:OD1	4:AD:27:ILE:HA	2.08	0.52
1:CA:452:A:H5''	1:CA:452:A:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1240:U:O2'	22:DA:1241:A:C5'	2.57	0.52
22:DA:310:A:O2'	22:DA:311:A:H5''	2.09	0.52
22:DA:323:C:H3'	26:DE:163:ASN:ND2	2.24	0.52
46:DY:1:MET:HE3	46:DY:1:MET:H3	1.73	0.52
22:BA:1799:G:C2	24:BC:153:LEU:HD23	2.44	0.52
22:DA:466:A:P	50:D2:34:ARG:HH21	2.31	0.52
22:DA:48:G:N2	22:DA:177:G:N2	2.57	0.52
22:DA:142:A:C2'	22:DA:143:C:C6	2.92	0.52
1:AA:213:G:H2'	1:AA:214:C:C5'	2.38	0.52
1:AA:469:C:H2'	1:AA:470:C:C5	2.45	0.52
1:CA:1408:A:C2	1:CA:1494:G:C4	2.97	0.52
43:DV:48:MET:CE	43:DV:85:LYS:HA	2.38	0.52
11:CK:92:ARG:NH2	11:CK:111:ASP:OD1	2.42	0.52
32:DK:20:MET:O	32:DK:41:ILE:HG13	2.07	0.52
22:DA:2376:A:H2'	22:DA:2377:A:O4'	2.09	0.52
1:AA:1298:U:H1'	1:AA:1299:A:C2	2.44	0.52
1:AA:1299:A:C8	1:AA:1301:U:C1'	2.91	0.52
8:CH:125:ILE:HG22	8:CH:126:CYS:SG	2.49	0.52
1:AA:490:C:H2'	1:AA:491:G:H8	1.74	0.52
1:CA:1225:A:H3'	13:CM:101:THR:HG21	1.89	0.52
25:BD:118:PHE:HD2	25:BD:119:ALA:N	2.03	0.52
22:DA:1140:C:O4'	22:DA:1143:A:C2	2.62	0.52
31:DJ:30:THR:CG2	31:DJ:31:GLU:N	2.72	0.52
37:DP:3:ILE:O	37:DP:3:ILE:HG13	2.09	0.52
22:DA:2729:G:C5'	25:DD:190:LYS:HZ3	2.16	0.52
36:BO:2:ASP:C	36:BO:2:ASP:OD1	2.47	0.52
7:CG:19:SER:HB3	7:CG:22:LEU:HB3	1.91	0.52
22:DA:273:G:O2'	22:DA:274:C:O4'	2.17	0.52
32:DK:17:ARG:CG	32:DK:18:ARG:N	2.71	0.52
28:DG:126:THR:CG2	28:DG:127:GLN:H	2.07	0.52
27:DF:49:LEU:N	27:DF:49:LEU:HD13	2.24	0.52
1:CA:183:C:HO2'	1:CA:184:G:H5'	1.70	0.52
23:DB:30:C:H1'	23:DB:58:A:N1	2.24	0.52
14:AN:40:ARG:HH22	14:AN:44:VAL:HG21	1.73	0.52
1:AA:994:A:C5	1:AA:1216:A:H4'	2.45	0.52
2:AB:58:LYS:O	2:AB:58:LYS:HD3	2.08	0.52
1:AA:1363:A:N3	1:AA:1363:A:H2'	2.23	0.52
22:DA:1494:A:C2	22:DA:1495:A:C4	2.97	0.52
1:CA:279:A:H4'	1:CA:280:C:OP2	2.09	0.52
4:CD:176:LYS:HE2	4:CD:178:GLU:OE1	2.09	0.52
1:CA:327:A:O2'	1:CA:328:C:OP1	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:133:MET:HE3	3:CC:152:VAL:HG13	1.91	0.52
40:BS:63:GLY:O	40:BS:64:ALA:CB	2.56	0.52
7:CG:11:ILE:HG21	7:CG:24:LYS:NZ	2.23	0.52
25:BD:34:VAL:CG2	25:BD:94:GLN:H	2.16	0.52
27:DF:33:ILE:HG13	27:DF:95:MET:HE3	1.92	0.52
46:BY:9:LYS:HZ2	46:BY:9:LYS:CA	2.17	0.52
25:DD:34:VAL:HG12	25:DD:48:ILE:HG13	1.89	0.52
22:BA:784:G:C5'	24:BC:225:ASN:OD1	2.58	0.52
24:DC:140:VAL:HG23	24:DC:141:HIS:N	2.24	0.52
22:BA:2663:G:H2'	22:BA:2664:G:C8	2.44	0.52
28:DG:120:ILE:HD13	28:DG:120:ILE:O	2.08	0.52
28:DG:146:ASP:O	28:DG:149:ALA:HB3	2.10	0.52
38:DQ:31:TYR:O	38:DQ:33:VAL:N	2.42	0.52
22:DA:172:A:O2'	22:DA:173:A:C5'	2.57	0.52
1:AA:1387:G:H2'	1:AA:1388:C:H6	1.70	0.52
22:BA:580:U:C2'	22:BA:581:C:H5'	2.39	0.52
30:DI:105:LEU:HD21	30:DI:129:GLU:CG	2.39	0.52
39:BR:97:LYS:O	39:BR:98:ILE:CB	2.58	0.52
22:BA:2383:G:H2'	22:BA:2384:U:H6	1.73	0.52
1:CA:216:U:H2'	1:CA:217:C:C6	2.44	0.52
19:AS:79:TYR:CE2	19:AS:80:ARG:HB2	2.44	0.52
9:CI:128:LYS:O	9:CI:129:ARG:HB2	2.10	0.52
2:AB:56:LEU:HD13	2:AB:220:VAL:CG2	2.39	0.52
22:BA:1609:A:H5''	56:BA:3644:HOH:O	2.07	0.52
22:BA:1148:U:C6	22:BA:1148:U:C3'	2.93	0.52
7:AG:49:LEU:O	7:AG:49:LEU:HD13	2.09	0.52
22:DA:2691:C:N4	22:DA:2719:G:N2	2.58	0.52
22:BA:559:G:H1'	38:BQ:55:GLN:NE2	2.25	0.52
22:DA:938:G:C2	22:DA:939:G:N7	2.77	0.52
22:DA:930:G:C2	22:DA:933:A:C2	2.97	0.52
22:BA:1562:U:H2'	22:BA:1563:U:O4'	2.09	0.52
22:DA:563:A:C4	22:DA:2018:G:C2	2.97	0.52
19:CS:44:ILE:HA	19:CS:61:VAL:CG1	2.39	0.52
51:B3:40:LYS:HA	51:B3:43:LEU:HD12	1.91	0.52
13:AM:52:ILE:O	13:AM:55:LEU:HB2	2.09	0.52
9:CI:44:ARG:NH1	9:CI:44:ARG:HB3	2.23	0.52
4:CD:171:GLU:HG3	4:CD:171:GLU:O	2.08	0.52
1:AA:11:G:C5	1:AA:12:U:C5	2.96	0.52
33:BL:100:ILE:C	33:BL:100:ILE:HD12	2.29	0.52
28:BG:171:LYS:HD3	28:BG:172:GLU:H	1.72	0.52
22:DA:1341:G:O2'	22:DA:1398:C:C5'	2.50	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1339:G:C5'	22:DA:1393:A:N1	2.71	0.52
22:DA:1600:C:O2	22:DA:1600:C:H2'	2.09	0.52
27:BF:129:MET:HG2	27:BF:153:ILE:HD12	1.89	0.52
4:AD:36:ALA:H	4:AD:37:PRO:HD3	1.74	0.52
22:DA:740:C:HO2'	22:DA:741:U:C5'	2.23	0.52
35:DN:96:ARG:HH12	35:DN:116:VAL:HG13	1.74	0.52
22:DA:1914:C:C6	22:DA:1915:U:C5	2.97	0.52
4:CD:35:GLN:O	4:CD:36:ALA:HB2	2.09	0.52
11:CK:123:PRO:HB2	11:CK:125:LYS:HG3	1.91	0.52
22:BA:923:G:N2	44:BW:23:LYS:NZ	2.46	0.52
34:DM:26:VAL:HA	34:DM:66:ARG:NH2	2.23	0.52
6:CF:61:LEU:CD1	6:CF:62:MET:N	2.70	0.52
31:DJ:114:LEU:HA	31:DJ:117:ALA:CB	2.39	0.52
22:DA:2360:G:O2'	33:DL:60:ARG:HD2	2.10	0.52
44:BW:75:ASN:O	44:BW:76:ARG:HB2	2.09	0.52
22:DA:28:A:C2	22:DA:29:U:H1'	2.45	0.52
22:DA:503:A:C4	22:DA:506:G:N7	2.77	0.52
22:DA:564:C:H2'	22:DA:565:C:H5'	1.91	0.52
1:CA:1271:A:H2'	1:CA:1272:G:H8	1.73	0.52
1:CA:1361:G:C2'	1:CA:1362:A:C5'	2.87	0.52
22:DA:654:A:C2'	22:DA:655:A:O5'	2.57	0.52
11:AK:86:LYS:HA	11:AK:113:THR:CG2	2.35	0.52
1:AA:790:A:C6	1:AA:791:G:C6	2.97	0.52
1:CA:227:G:H21	16:CP:64:GLY:HA3	1.73	0.52
22:BA:142:A:C5	22:BA:143:C:N4	2.76	0.52
1:CA:1372:U:H5'	9:CI:71:ILE:HD11	1.88	0.52
27:DF:42:ALA:HB2	27:DF:48:LEU:HD11	1.90	0.52
1:CA:86:G:O2'	1:CA:87:C:OP2	2.27	0.52
23:DB:108:A:HO2'	23:DB:109:A:P	2.32	0.52
22:BA:2305:U:O2'	22:BA:2306:C:H5'	2.09	0.52
27:BF:134:GLN:O	27:BF:135:ILE:HB	2.08	0.52
22:DA:1007:C:OP1	31:DJ:39:LYS:HE3	2.10	0.52
1:CA:1289:A:H3'	1:CA:1290:G:H8	1.73	0.52
16:CP:1:MET:HG3	16:CP:1:MET:O	2.09	0.52
22:DA:612:G:C2	22:DA:617:G:O6	2.62	0.52
22:DA:616:A:C2'	22:DA:617:G:H8	2.21	0.52
22:BA:2149:U:O2'	22:BA:2150:C:O4'	2.26	0.52
8:AH:9:MET:HG3	8:AH:26:MET:SD	2.49	0.52
13:CM:13:HIS:HA	13:CM:43:LYS:HG2	1.91	0.52
16:AP:52:LEU:O	16:AP:54:LEU:HD12	2.10	0.52
1:CA:244:U:OP2	1:CA:244:U:H4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:185:ILE:HG22	2:CB:199:ILE:CD1	2.39	0.52
10:CJ:30:LYS:HE2	10:CJ:36:VAL:HG22	1.90	0.52
1:CA:729:A:C2'	1:CA:730:G:H8	2.20	0.52
24:DC:140:VAL:O	24:DC:141:HIS:HB2	2.08	0.52
22:BA:1568:G:H4'	24:BC:58:LYS:HG2	1.90	0.52
1:AA:181:A:H3'	1:AA:181:A:OP2	2.09	0.52
22:BA:646:U:H5'	22:BA:647:G:H5''	1.91	0.52
2:AB:153:MET:SD	2:AB:157:PRO:HD3	2.49	0.52
1:AA:1087:G:O2'	1:AA:1088:G:C8	2.61	0.52
37:DP:9:GLN:HA	37:DP:12:MET:HG3	1.92	0.52
22:BA:2885:G:H3'	22:BA:2886:A:H5''	1.90	0.52
29:DH:1:MET:CE	29:DH:23:ALA:HB2	2.36	0.52
22:DA:352:A:N3	22:DA:353:C:H1'	2.24	0.52
28:DG:8:VAL:HG22	28:DG:72:ASN:CB	2.39	0.52
20:AT:16:ALA:O	20:AT:17:ARG:C	2.48	0.52
3:CC:63:ILE:CG1	3:CC:65:VAL:HG23	2.39	0.52
22:DA:913:U:C4'	22:DA:914:G:OP1	2.56	0.52
4:AD:160:LEU:CD2	4:AD:161:ALA:N	2.73	0.52
22:DA:1857:G:O2'	22:DA:1884:G:N2	2.39	0.52
1:AA:1102:A:O2'	1:AA:1103:C:H5'	2.09	0.52
22:DA:2469:A:C2'	22:DA:2470:G:O5'	2.58	0.52
1:CA:51:A:H4'	1:CA:52:C:H5'	1.90	0.52
22:DA:518:G:C4	22:DA:519:U:C5	2.97	0.52
22:BA:2673:G:H2'	22:BA:2674:G:H8	1.75	0.52
22:BA:1172:C:N3	22:BA:1173:U:H1'	2.24	0.52
35:DN:49:GLU:H	35:DN:50:PRO:HD3	1.74	0.52
22:BA:1223:G:OP2	39:BR:68:ARG:NH1	2.42	0.52
31:DJ:16:TYR:HB2	31:DJ:54:ILE:HD13	1.91	0.52
22:BA:1773:A:H2'	22:BA:1774:C:H5'	1.91	0.52
7:AG:135:LYS:HE2	7:AG:138:GLU:HB2	1.91	0.52
36:DO:39:VAL:HB	36:DO:49:VAL:H	1.74	0.52
22:DA:1161:C:H4'	39:DR:8:GLY:O	2.09	0.52
31:BJ:101:ILE:O	31:BJ:104:ALA:HB3	2.09	0.52
22:BA:310:A:O2'	22:BA:311:A:P	2.67	0.52
1:CA:767:A:H2'	1:CA:768:A:C8	2.44	0.52
52:B4:7:VAL:HG23	52:B4:8:LYS:H	1.74	0.52
22:BA:9:G:C6	22:BA:2629:U:C6	2.98	0.52
38:BQ:75:TYR:C	38:BQ:75:TYR:CD2	2.82	0.52
5:AE:81:GLN:NE2	5:AE:146:MET:SD	2.79	0.52
28:BG:131:VAL:CG2	28:BG:131:VAL:O	2.58	0.52
34:BM:36:VAL:HG23	43:BV:82:TYR:CD1	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1084:A:C2'	22:DA:1085:A:H5'	2.40	0.52
35:DN:98:LEU:HD21	48:D0:53:VAL:HG21	1.92	0.52
35:DN:98:LEU:O	35:DN:112:TYR:HB2	2.10	0.52
1:CA:1206:G:H4'	3:CC:191:THR:O	2.09	0.52
22:DA:1203:U:H2'	22:DA:1204:A:C2	2.44	0.52
46:DY:57:LEU:CD1	46:DY:60:LYS:HE3	2.39	0.52
22:DA:2209:G:C2	22:DA:2216:G:C2	2.97	0.52
2:CB:176:ASN:C	2:CB:178:LEU:H	2.12	0.52
4:CD:26:ALA:O	4:CD:27:ILE:C	2.48	0.52
11:CK:125:LYS:O	11:CK:126:ARG:O	2.27	0.52
44:BW:35:ILE:CG2	44:BW:35:ILE:O	2.51	0.52
31:BJ:89:PHE:CE1	31:BJ:93:ILE:HG13	2.44	0.52
1:CA:1226:C:C5	13:CM:102:LYS:HA	2.45	0.52
14:CN:8:ARG:HH11	14:CN:12:ARG:HH22	1.57	0.52
1:CA:1217:C:OP1	14:CN:8:ARG:HB2	2.10	0.52
33:DL:135:ILE:HG23	33:DL:136:GLU:N	2.25	0.52
22:DA:2061:G:C2	22:DA:2063:C:C4	2.97	0.52
22:DA:2513:A:C5	22:DA:2514:U:C4	2.97	0.52
2:CB:75:ALA:O	2:CB:79:VAL:HB	2.09	0.52
22:DA:575:A:N3	22:DA:576:U:C5	2.77	0.52
9:CI:29:ILE:CD1	9:CI:38:PHE:HE1	2.23	0.52
22:DA:2199:A:C2	22:DA:2200:C:N1	2.78	0.52
40:BS:25:ARG:HD3	40:BS:73:LYS:HZ2	1.73	0.52
1:AA:977:A:C2'	1:AA:977:A:N3	2.62	0.52
9:CI:59:LYS:HE3	9:CI:60:LEU:CD2	2.38	0.52
1:AA:1202:U:C1'	14:AN:68:ARG:HD2	2.38	0.52
22:DA:613:A:OP2	22:DA:614:A:C2	2.62	0.52
1:CA:18:C:N3	1:CA:19:A:C8	2.77	0.52
1:AA:975:A:H8	1:AA:1357:A:HO2'	1.54	0.52
9:AI:40:ARG:HA	9:AI:44:ARG:CB	2.28	0.52
35:BN:25:ALA:HA	35:BN:48:VAL:CG2	2.40	0.52
22:DA:374:A:C6	22:DA:401:A:C8	2.97	0.52
22:BA:1054:A:C4	22:BA:1055:G:C8	2.96	0.52
22:BA:1056:G:HO2'	22:BA:1086:A:H8	1.54	0.52
1:AA:616:G:H2'	1:AA:617:G:H5'	1.91	0.52
12:CL:7:VAL:HG22	17:CQ:33:TYR:CD1	2.43	0.52
22:DA:226:A:H2'	22:DA:227:A:C8	2.45	0.52
22:DA:2627:G:O2'	22:DA:2781:A:N1	2.36	0.52
22:DA:185:G:N1	22:DA:212:G:C2	2.77	0.52
17:CQ:58:VAL:HG11	17:CQ:74:LEU:HD11	1.88	0.52
22:BA:242:G:P	51:B3:2:LYS:HE2	2.50	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1348:C:H2'	22:BA:1349:C:C5'	2.32	0.52
22:DA:831:G:H5''	33:DL:37:GLY:HA2	1.90	0.52
28:DG:163:TYR:N	28:DG:163:TYR:HD2	2.05	0.52
22:DA:852:U:O2'	22:DA:853:C:H5'	2.10	0.52
1:AA:1002:G:C2	1:AA:1003:G:H1'	2.45	0.52
25:DD:179:ARG:HH22	37:DP:11:GLN:HE21	1.57	0.52
24:BC:129:LEU:HB2	24:BC:134:ILE:HD11	1.91	0.52
1:CA:1439:G:C2	1:CA:1463:U:O2	2.63	0.52
22:BA:2816:G:H1'	22:BA:2883:A:O2'	2.08	0.52
40:DS:66:ILE:H	40:DS:66:ILE:HD13	1.74	0.52
6:AF:7:VAL:HA	6:AF:60:VAL:O	2.09	0.52
22:DA:1366:A:C4	22:DA:1367:A:C8	2.98	0.52
22:BA:687:C:H2'	22:BA:688:U:H6	1.72	0.52
1:AA:458:U:H3	1:AA:474:G:H1	1.57	0.52
22:DA:2418:A:C6	22:DA:2419:U:C4	2.98	0.52
38:DQ:40:LYS:O	38:DQ:44:TYR:HD2	1.91	0.52
35:BN:109:PRO:O	35:BN:109:PRO:CG	2.58	0.52
1:AA:1084:G:C6	1:AA:1085:U:O4	2.62	0.52
43:BV:26:PHE:HD1	43:BV:27:PRO:O	1.93	0.52
22:BA:1301:A:N3	22:BA:1301:A:H2'	2.25	0.52
40:BS:8:ARG:O	40:BS:9:HIS:HB2	2.10	0.52
22:BA:2564:A:OP1	22:BA:2648:G:H4'	2.09	0.52
6:CF:81:ASN:O	6:CF:83:ALA:N	2.42	0.52
16:CP:22:ALA:HA	16:CP:33:ILE:HD12	1.89	0.52
1:CA:262:A:O2'	1:CA:263:A:H5'	2.09	0.52
14:CN:96:LYS:HD2	14:CN:96:LYS:H	1.74	0.52
30:BI:86:LYS:HD2	30:BI:86:LYS:H	1.74	0.52
3:CC:106:ARG:C	3:CC:107:LYS:HG3	2.30	0.52
41:DT:64:LYS:HA	41:DT:79:ASP:OD1	2.10	0.52
5:AE:76:ASN:O	5:AE:77:ASN:HB3	2.09	0.52
28:BG:166:GLU:OE2	28:BG:168:VAL:HG22	2.08	0.52
22:DA:1343:G:H2'	22:DA:1344:U:C6	2.45	0.52
1:CA:373:A:C2'	1:CA:374:A:H5'	2.34	0.52
22:DA:2283:C:C5'	22:DA:2283:C:H6	2.22	0.52
2:AB:15:PHE:HD1	2:AB:16:GLY:H	1.57	0.52
22:DA:1208:C:O2	22:DA:1209:U:C6	2.62	0.52
22:DA:2755:C:HO2'	22:DA:2756:U:H6	1.56	0.52
28:DG:1:SER:C	28:DG:3:VAL:H	2.12	0.52
1:AA:74:A:C2	1:AA:75:G:C4	2.98	0.52
1:CA:734:G:N2	18:CR:63:TYR:CE2	2.77	0.52
31:DJ:69:ARG:NH2	31:DJ:89:PHE:HE1	2.06	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:18:GLN:NE2	29:BH:18:GLN:HA	2.24	0.52
1:CA:1216:A:C2	1:CA:1217:C:C4	2.97	0.52
1:CA:935:A:H61	7:CG:2:ARG:CZ	2.22	0.52
22:DA:2440:C:C2'	22:DA:2441:U:O5'	2.56	0.52
48:B0:39:ARG:O	48:B0:40:HIS:HB2	2.09	0.52
41:BT:40:LYS:HA	41:BT:43:ILE:HG23	1.90	0.52
22:BA:1017:G:O2'	22:BA:1018:U:H5'	2.08	0.52
27:DF:41:GLU:CG	27:DF:42:ALA:H	2.20	0.52
22:DA:1157:G:H2'	22:DA:1158:C:C5	2.44	0.52
10:AJ:56:HIS:CD2	10:AJ:57:VAL:HG12	2.37	0.52
22:DA:1801:A:C5	22:DA:2203:U:C5	2.96	0.52
22:DA:2093:G:O2'	22:DA:2094:A:O5'	2.27	0.52
22:DA:1551:A:C4	22:DA:1552:A:C8	2.97	0.52
1:CA:1240:U:O2'	7:CG:37:THR:HB	2.09	0.52
9:CI:66:VAL:HG21	9:CI:74:GLN:HB3	1.91	0.52
29:DH:68:ARG:CD	29:DH:68:ARG:O	2.58	0.52
18:AR:50:TYR:O	18:AR:54:LEU:N	2.39	0.52
42:DU:40:LEU:O	42:DU:41:VAL:HG13	2.09	0.52
2:CB:163:ILE:HG23	2:CB:185:ILE:HD11	1.90	0.52
22:DA:779:U:H2'	22:DA:780:G:O4'	2.09	0.52
29:DH:58:LEU:HA	29:DH:61:VAL:CG1	2.38	0.52
22:BA:2579:C:C3'	22:BA:2580:U:H5'	2.39	0.52
28:DG:167:VAL:CG2	28:DG:168:VAL:N	2.73	0.52
4:CD:84:ASN:CG	5:CE:101:GLY:HA3	2.29	0.52
46:BY:21:LEU:HA	46:BY:25:GLN:HB3	1.92	0.52
11:AK:59:PRO:HG2	11:AK:60:PHE:H	1.73	0.52
13:CM:2:ARG:HD2	13:CM:2:ARG:N	2.25	0.52
9:AI:113:LYS:HG3	9:AI:119:LYS:HA	1.90	0.52
30:DI:50:LYS:HA	30:DI:50:LYS:CE	2.37	0.52
22:BA:1537:G:H2'	22:BA:1538:G:O4'	2.08	0.52
22:DA:1366:A:C2'	22:DA:1367:A:H5'	2.40	0.52
1:AA:1014:A:H5''	19:AS:13:HIS:HB2	1.91	0.52
22:DA:1258:U:H2'	22:DA:1259:G:C8	2.44	0.52
22:DA:716:A:H3'	22:DA:717:C:H5''	1.92	0.52
1:CA:117:G:H2'	1:CA:118:U:O4'	2.09	0.52
3:CC:63:ILE:HG23	3:CC:98:ALA:HA	1.91	0.52
1:AA:748:G:C6	1:AA:749:A:C6	2.98	0.52
14:CN:50:LEU:HB2	14:CN:51:PRO:HD3	1.91	0.52
1:CA:338:A:N1	1:CA:351:G:N2	2.58	0.52
1:CA:954:G:N1	1:CA:1228:C:N4	2.56	0.52
30:DI:27:LEU:HD13	30:DI:32:VAL:HG11	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:860:U:H6	22:BA:860:U:H5'	1.74	0.52
22:DA:2108:A:C8	22:DA:2108:A:OP2	2.62	0.52
22:DA:372:G:N2	22:DA:400:G:H2'	2.23	0.52
12:CL:50:LYS:N	12:CL:50:LYS:CD	2.73	0.52
22:DA:2511:U:C4	22:DA:2512:C:C5	2.98	0.52
22:BA:1405:U:N3	22:BA:1406:U:C4	2.77	0.52
22:BA:981:A:H5''	22:BA:982:C:OP2	2.10	0.52
22:BA:1505:A:O2'	22:BA:1506:U:H5'	2.09	0.52
23:BB:40:U:HO2'	23:BB:43:C:H5	1.54	0.52
1:CA:297:G:H2'	1:CA:298:A:H5''	1.92	0.52
22:DA:2185:U:H2'	22:DA:2186:G:H8	1.74	0.52
1:CA:836:G:C5	1:CA:851:G:C6	2.97	0.52
34:BM:11:LYS:HE2	34:BM:87:GLY:O	2.09	0.52
30:BI:107:GLU:O	30:BI:111:THR:HG23	2.10	0.52
22:BA:2418:A:C5	22:BA:2419:U:C5	2.98	0.52
1:AA:1057:G:O3'	3:AC:196:GLY:HA3	2.09	0.52
17:AQ:40:THR:HG22	17:AQ:41:THR:N	2.25	0.52
45:BX:34:SER:CA	45:BX:49:ARG:HA	2.39	0.52
22:DA:1387:A:N6	22:DA:1401:G:O6	2.41	0.52
1:AA:429:U:P	4:AD:12:ARG:HH21	2.32	0.52
4:AD:25:ARG:O	4:AD:26:ALA:HB3	2.10	0.52
22:DA:1069:A:O2'	22:DA:1071:G:H5''	2.10	0.52
22:DA:1076:C:C4	22:DA:1077:A:N6	2.78	0.52
48:D0:24:VAL:CG1	48:D0:27:LEU:HD11	2.39	0.52
22:DA:1206:G:H2'	22:DA:1207:C:C5	2.45	0.52
22:DA:1206:G:O2'	22:DA:1207:C:C5'	2.58	0.52
22:DA:347:A:O2'	22:DA:348:A:H5'	2.09	0.52
42:DU:92:VAL:CG2	42:DU:101:THR:HG21	2.40	0.52
22:DA:1048:A:C6	22:DA:1111:A:C2	2.98	0.52
28:DG:58:ALA:O	28:DG:60:GLY:N	2.43	0.52
34:DM:90:GLU:O	34:DM:91:TYR:HB3	2.08	0.52
4:CD:25:ARG:O	4:CD:26:ALA:C	2.48	0.52
4:CD:2:ARG:HE	4:CD:114:ARG:HG2	1.74	0.52
44:BW:18:LYS:HE3	44:BW:19:ARG:CG	2.40	0.52
28:BG:126:THR:HG22	28:BG:128:THR:N	2.21	0.52
6:CF:18:VAL:O	6:CF:22:ILE:HG12	2.09	0.52
16:AP:28:ARG:CG	16:AP:29:ASN:ND2	2.55	0.52
10:CJ:66:GLU:CG	14:CN:100:TRP:HZ3	2.21	0.52
22:DA:2013:A:N6	22:DA:2014:A:C2	2.78	0.52
29:BH:18:GLN:CA	29:BH:18:GLN:HE21	2.22	0.52
22:DA:1290:C:O2'	22:DA:1291:C:H6	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1606:C:H4'	22:DA:1607:C:C5'	2.33	0.52
1:CA:1269:A:C2	1:CA:1313:U:H1'	2.45	0.52
33:DL:7:SER:HB2	33:DL:8:PRO:HD2	1.90	0.52
25:DD:10:GLY:HA3	25:DD:26:VAL:HB	1.92	0.52
22:BA:1999:C:O2'	22:BA:2000:C:H5'	2.10	0.52
1:AA:1078:U:O4'	5:AE:88:HIS:CE1	2.62	0.52
16:CP:21:VAL:CG2	16:CP:36:VAL:HG21	2.40	0.52
16:CP:21:VAL:HG23	16:CP:36:VAL:CG2	2.39	0.52
22:DA:1735:A:O2'	22:DA:1736:U:O5'	2.27	0.52
27:BF:134:GLN:CG	27:BF:135:ILE:N	2.65	0.52
22:DA:616:A:O2'	22:DA:617:G:O5'	2.28	0.52
21:AU:14:ALA:O	21:AU:15:LEU:HD12	2.09	0.52
7:CG:71:THR:HG23	7:CG:72:VAL:N	2.24	0.52
22:DA:945:A:C8	22:DA:2448:A:C2	2.98	0.52
22:DA:1911:U:H2'	22:DA:1918:A:C2	2.44	0.52
1:AA:984:C:N3	1:AA:1222:G:C2	2.77	0.52
1:AA:1447:A:H5''	1:AA:1448:C:H5	1.75	0.52
22:DA:2298:A:H2'	22:DA:2299:U:C6	2.44	0.52
37:DP:92:ARG:O	37:DP:93:LYS:HB2	2.09	0.52
22:BA:2772:C:H2'	22:BA:2773:C:H6	1.74	0.52
22:BA:784:G:C5	24:BC:227:VAL:HG11	2.45	0.52
1:CA:819:A:H4'	1:CA:820:U:OP2	2.10	0.52
1:CA:885:G:H5'	1:CA:885:G:H8	1.73	0.52
1:CA:1169:A:O2'	1:CA:1170:A:C8	2.61	0.52
22:DA:2144:G:O2'	22:DA:2145:C:H3'	2.09	0.52
1:CA:703:G:H4'	1:CA:704:A:H5'	1.90	0.52
22:BA:2020:A:H5'	48:B0:8:THR:HG22	1.90	0.52
27:DF:11:VAL:HG12	27:DF:12:VAL:H	1.74	0.52
22:BA:900:A:C5	22:BA:901:C:C5	2.97	0.52
30:BI:105:LEU:HD23	30:BI:108:ILE:HG21	1.91	0.52
27:DF:35:LEU:O	27:DF:36:ASN:HB2	2.08	0.52
22:BA:1694:C:H4'	22:BA:1695:G:H5''	1.92	0.52
22:BA:294:A:C5	22:BA:345:A:C2	2.98	0.52
2:AB:176:ASN:HD21	2:AB:194:GLY:CA	2.22	0.52
22:DA:2620:C:H2'	22:DA:2621:G:O4'	2.08	0.52
1:AA:421:U:H3'	1:AA:421:U:C6	2.42	0.52
3:AC:21:TRP:CB	3:AC:58:ARG:HG2	2.39	0.52
1:AA:613:C:H2'	1:AA:614:C:C6	2.45	0.52
43:DV:57:TYR:HD1	43:DV:57:TYR:H	1.57	0.52
13:AM:5:GLY:HA3	13:AM:65:GLU:HG3	1.90	0.52
22:BA:2897:U:H2'	22:BA:2898:U:H6	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:23:GLU:HG3	19:AS:23:GLU:O	2.09	0.52
6:AF:98:GLU:HG3	6:AF:99:ALA:N	2.24	0.52
22:DA:1689:A:H2'	22:DA:1690:A:C8	2.45	0.52
22:BA:1744:A:H5''	22:BA:1745:A:OP2	2.09	0.52
22:BA:1411:U:C2'	22:BA:1412:U:H5'	2.40	0.52
1:CA:470:C:C2	1:CA:471:U:C5	2.97	0.52
22:BA:1670:C:C5	22:BA:1671:U:C4	2.97	0.52
39:DR:55:ASP:CG	39:DR:56:GLY:H	2.12	0.52
22:DA:2219:U:H2'	22:DA:2220:U:O4'	2.09	0.52
35:DN:21:PHE:O	35:DN:25:ALA:HB3	2.09	0.52
22:BA:2467:C:C2'	22:BA:2468:A:H5'	2.39	0.52
22:DA:1313:U:C2'	22:DA:1313:U:O2	2.41	0.52
22:DA:1401:G:C5	22:DA:1402:U:C4	2.97	0.52
41:DT:15:HIS:CE1	41:DT:80:TRP:CH2	2.97	0.52
22:DA:2269:G:O2'	44:DW:18:LYS:HG2	2.10	0.52
22:DA:727:A:O2'	22:DA:728:G:C8	2.62	0.52
9:AI:75:ALA:HA	9:AI:78:ILE:HD12	1.92	0.52
1:AA:1508:A:C2'	1:AA:1509:C:O5'	2.57	0.52
41:DT:9:LYS:CG	41:DT:9:LYS:O	2.57	0.52
22:DA:83:A:OP2	42:DU:91:LYS:HE3	2.09	0.52
45:DX:2:ARG:HD2	45:DX:32:LEU:HD23	1.90	0.52
1:CA:1178:G:OP2	9:CI:98:ARG:NH2	2.42	0.52
13:AM:89:ARG:HB2	13:AM:96:VAL:HG22	1.91	0.52
43:DV:63:ILE:HD13	43:DV:72:VAL:CG2	2.39	0.52
1:AA:502:A:H2'	1:AA:503:C:O4'	2.09	0.52
37:DP:45:VAL:O	37:DP:60:VAL:HA	2.09	0.52
1:CA:1226:C:C5'	13:CM:94:LEU:HD21	2.36	0.52
22:DA:600:G:H1'	26:DE:100:MET:HG2	1.90	0.52
26:DE:29:HIS:HA	26:DE:32:VAL:HG22	1.92	0.52
2:AB:185:ILE:HA	2:AB:199:ILE:O	2.09	0.52
27:DF:42:ALA:O	27:DF:44:ALA:N	2.42	0.52
27:DF:52:ALA:HB1	27:DF:149:ARG:HE	1.74	0.52
1:CA:142:G:C6	1:CA:143:A:C8	2.97	0.52
1:CA:64:G:H4'	1:CA:65:A:H5''	1.91	0.52
1:CA:76:G:N2	1:CA:95:C:C2	2.77	0.52
1:CA:256:U:H2'	1:CA:257:G:O4'	2.10	0.52
23:DB:13:G:H5''	23:DB:13:G:C8	2.34	0.52
40:BS:73:LYS:HB3	40:BS:106:VAL:HB	1.91	0.52
40:BS:29:VAL:HG12	40:BS:30:SER:N	2.25	0.52
7:CG:116:ALA:O	7:CG:120:ALA:HB3	2.10	0.52
16:CP:1:MET:CA	16:CP:1:MET:HE2	2.38	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:107:VAL:HG13	25:DD:203:VAL:HG23	1.91	0.52
22:BA:2140:G:OP2	22:BA:2140:G:C8	2.63	0.52
22:BA:1626:A:O2'	22:BA:1627:G:OP2	2.27	0.52
22:DA:946:C:H5'	22:DA:946:C:H6	1.75	0.52
24:BC:94:LEU:C	24:BC:94:LEU:HD12	2.28	0.52
35:BN:33:ILE:HD11	35:BN:118:ARG:NH2	2.25	0.52
22:BA:1107:G:C4	22:BA:1108:U:C5	2.97	0.52
22:DA:2409:G:H2'	22:DA:2410:G:O4'	2.09	0.52
1:CA:246:A:C2	1:CA:279:A:C6	2.98	0.52
2:AB:98:GLY:C	2:AB:100:LEU:H	2.13	0.52
23:DB:37:C:H2'	23:DB:38:C:H5'	1.91	0.52
14:CN:76:PHE:HE2	14:CN:92:ILE:HG21	1.75	0.52
1:CA:1169:A:O2'	1:CA:1170:A:O4'	2.27	0.52
1:CA:439:U:H2'	1:CA:440:C:C6	2.44	0.52
22:DA:170:U:C5	22:DA:171:U:H5	2.28	0.52
22:DA:1936:A:C2	22:DA:1943:U:C5	2.97	0.52
11:AK:51:PHE:O	11:AK:56:LYS:HB3	2.10	0.52
47:DZ:4:ILE:HG21	47:DZ:56:VAL:CG1	2.38	0.52
8:AH:103:VAL:HG23	8:AH:110:MET:O	2.10	0.52
1:AA:1343:G:H4'	9:AI:123:ARG:HB3	1.91	0.52
33:BL:67:THR:CG2	33:BL:68:SER:N	2.72	0.52
22:DA:2066:C:H2'	22:DA:2067:G:H8	1.75	0.52
1:AA:292:G:C2	1:AA:309:A:C2	2.97	0.52
22:DA:1858:A:C6	22:DA:1885:A:C8	2.98	0.52
50:B2:20:ALA:O	50:B2:23:ALA:HB3	2.10	0.52
22:BA:1115:G:O2'	22:BA:1116:G:C5'	2.57	0.52
22:BA:2109:U:O4	22:BA:2110:G:C5	2.63	0.52
22:DA:1417:C:HO2'	22:DA:1418:G:C5'	2.23	0.52
26:DE:52:VAL:CG1	26:DE:74:LYS:HG2	2.40	0.52
26:BE:127:GLU:HG2	26:BE:133:LEU:HD13	1.90	0.52
22:BA:2889:C:C2'	22:BA:2890:G:O5'	2.58	0.52
30:DI:82:ALA:HB3	30:DI:100:ILE:CD1	2.40	0.52
15:AO:62:ARG:NH1	15:AO:86:LEU:HD12	2.25	0.52
5:CE:88:HIS:O	5:CE:89:THR:C	2.47	0.52
22:BA:2648:G:H2'	22:BA:2649:C:H6	1.73	0.52
22:BA:1593:A:H2'	22:BA:1594:U:O4'	2.10	0.52
22:BA:2593:U:H2'	22:BA:2594:C:C6	2.44	0.52
22:DA:2648:G:H2'	22:DA:2649:C:O4'	2.09	0.52
22:BA:839:U:H2'	22:BA:840:C:C6	2.45	0.52
22:BA:1240:U:H6	22:BA:1240:U:H5''	1.75	0.52
42:DU:12:VAL:O	42:DU:12:VAL:HG12	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1070:A:N1	22:BA:1097:U:H4'	2.24	0.52
24:DC:255:LYS:O	24:DC:256:THR:CG2	2.51	0.52
1:CA:1279:G:H5''	10:CJ:9:ARG:NH2	2.22	0.52
22:DA:1340:U:C4	22:DA:1603:A:C8	2.98	0.52
1:CA:369:G:C2	1:CA:370:C:C6	2.97	0.52
12:CL:26:CYS:HB2	12:CL:29:LYS:HE2	1.92	0.52
12:CL:89:LEU:C	12:CL:92:VAL:HG23	2.29	0.52
22:DA:1373:A:C2	22:DA:1374:G:H1'	2.45	0.52
22:DA:219:A:N6	22:DA:220:G:N1	2.58	0.52
22:DA:2748:A:N1	22:DA:2757:A:N7	2.58	0.52
49:B1:8:ILE:CG2	49:B1:51:ALA:CA	2.83	0.52
38:DQ:91:ARG:HG3	39:DR:11:GLN:CG	2.40	0.52
11:CK:26:PHE:CE1	11:CK:88:PRO:HG2	2.43	0.52
11:CK:126:ARG:O	21:CU:33:ARG:CZ	2.57	0.52
21:CU:33:ARG:O	21:CU:34:ARG:O	2.27	0.52
43:DV:9:ARG:HG2	43:DV:39:ALA:O	2.10	0.52
29:BH:35:LYS:O	29:BH:36:ALA:HB2	2.09	0.52
22:BA:1179:G:N7	22:BA:1180:U:H1'	2.24	0.52
1:CA:1381:U:O2	1:CA:1381:U:C2'	2.58	0.52
22:BA:197:A:H2'	22:BA:198:C:H5'	1.90	0.52
22:DA:628:G:C6	22:DA:636:G:C2	2.98	0.52
22:DA:640:C:O2	22:DA:640:C:H2'	2.10	0.52
1:AA:1142:G:N3	1:AA:1143:G:H1'	2.25	0.52
35:DN:103:ARG:CD	35:DN:110:MET:SD	2.92	0.52
22:DA:1140:C:O2'	22:DA:1141:U:H5'	2.10	0.52
46:BY:56:LEU:O	46:BY:57:LEU:CB	2.55	0.52
27:DF:111:ARG:H	27:DF:111:ARG:NE	2.08	0.52
1:CA:181:A:C2	1:CA:195:A:C2	2.98	0.52
1:CA:220:G:O2'	1:CA:221:C:H5'	2.10	0.52
22:DA:240:C:C3'	22:DA:241:A:H5''	2.37	0.52
22:DA:242:G:H5'	51:D3:63:TYR:CD1	2.45	0.52
22:DA:1156:A:H8	22:DA:1156:A:OP1	1.92	0.52
22:DA:1731:G:C2	22:DA:1733:G:N7	2.78	0.52
22:DA:414:C:H4'	22:DA:1879:C:O2	2.10	0.52
22:DA:411:G:C4'	22:DA:412:A:OP1	2.57	0.52
19:AS:33:TRP:NE1	19:AS:51:HIS:ND1	2.58	0.52
22:BA:545:U:H6	22:BA:546:U:H4'	1.75	0.52
41:BT:51:PHE:C	41:BT:52:GLU:HG2	2.30	0.52
5:AE:12:GLU:HB2	5:AE:38:VAL:CG1	2.31	0.52
1:AA:451:A:C1'	1:AA:452:A:N7	2.72	0.52
1:AA:44:A:OP2	16:AP:12:LYS:NZ	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:652:U:O2'	1:CA:653:U:O5'	2.27	0.52
22:DA:2298:A:N6	22:DA:2321:U:O4	2.42	0.52
22:DA:2656:U:C5	22:DA:2664:G:N2	2.78	0.52
22:BA:2663:G:C2'	22:BA:2664:G:H5'	2.39	0.52
37:DP:51:ASN:H	37:DP:56:SER:HB3	1.74	0.52
1:AA:914:A:C2'	1:AA:915:A:H8	2.23	0.52
22:BA:250:G:OP2	51:B3:12:ARG:NH1	2.42	0.52
1:CA:949:A:C4'	1:CA:1364:U:O4	2.57	0.52
22:DA:2553:G:H3'	22:DA:2554:U:H5''	1.90	0.52
8:AH:46:GLU:O	8:AH:47:ASP:CB	2.51	0.52
22:BA:532:A:N7	22:BA:2021:C:H2'	2.24	0.52
22:DA:287:G:C6	22:DA:354:A:N1	2.77	0.52
30:BI:78:LEU:HD23	30:BI:81:LYS:HE3	1.90	0.52
22:BA:2199:A:H5'	22:BA:2200:C:C5	2.40	0.52
9:CI:45:MET:HA	9:CI:48:ARG:HB2	1.92	0.52
36:BO:82:ALA:O	36:BO:87:ILE:HG12	2.09	0.52
26:BE:126:VAL:HG22	26:BE:127:GLU:N	2.23	0.52
1:AA:633:G:H2'	1:AA:634:C:C6	2.43	0.52
1:AA:357:G:H2'	1:AA:358:U:H5'	1.92	0.52
19:CS:79:TYR:CE1	19:CS:80:ARG:HD2	2.45	0.52
1:AA:788:U:H2'	1:AA:789:U:C6	2.44	0.52
22:BA:234:U:C2'	22:BA:235:U:H5'	2.40	0.52
1:AA:152:A:N6	1:AA:170:U:C2	2.78	0.52
38:BQ:46:TYR:CZ	38:BQ:50:ARG:NH1	2.78	0.52
1:AA:1488:G:O2'	1:AA:1489:G:H5'	2.09	0.52
22:DA:1444:G:N2	22:DA:1445:G:H1'	2.25	0.52
1:CA:122:G:O2'	1:CA:123:U:H5'	2.10	0.52
30:BI:75:ALA:HB3	30:BI:131:THR:HG21	1.91	0.52
17:CQ:14:ASP:HB2	17:CQ:54:ILE:HB	1.92	0.52
22:DA:1817:G:H5''	24:DC:86:ARG:NH1	2.25	0.52
1:CA:1130:A:N7	1:CA:1146:A:N6	2.58	0.52
1:CA:1279:G:H2'	10:CJ:45:ARG:HH21	1.74	0.52
22:DA:1398:C:HO2'	22:DA:1399:C:H6	1.56	0.52
49:D1:51:ALA:O	49:D1:52:LYS:CB	2.57	0.52
24:DC:203:VAL:O	24:DC:204:LEU:HB2	2.10	0.52
22:DA:1087:G:C4	22:DA:1089:A:C2	2.98	0.52
30:DI:74:PRO:HB2	30:DI:77:VAL:CG2	2.29	0.52
22:DA:1206:G:C5	22:DA:1207:C:C4	2.98	0.52
22:DA:333:G:HO2'	22:DA:334:C:H6	1.57	0.52
22:DA:65:U:H3'	22:DA:65:U:C6	2.44	0.52
22:DA:95:A:O2'	46:DY:41:HIS:HD2	1.93	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:3:ARG:HH11	41:DT:42:GLU:HG2	1.75	0.52
42:DU:20:LYS:HD2	42:DU:38:ILE:CD1	2.40	0.52
24:BC:91:ALA:O	24:BC:102:TYR:HA	2.10	0.52
22:DA:1572:A:H2'	22:DA:1573:G:C8	2.45	0.52
45:DX:29:LEU:HD12	45:DX:29:LEU:C	2.30	0.52
28:DG:138:GLN:CG	28:DG:138:GLN:O	2.58	0.52
1:CA:1181:G:H2'	1:CA:1182:G:N7	2.24	0.52
45:DX:58:ILE:CG2	45:DX:58:ILE:O	2.58	0.52
31:DJ:5:THR:HA	31:DJ:44:TYR:CE2	2.42	0.52
38:DQ:57:ARG:HH12	38:DQ:92:LYS:HE2	1.68	0.52
22:DA:2014:A:H2	22:DA:2613:U:C2	2.28	0.52
22:DA:2076:U:H5''	22:DA:2238:G:N2	2.25	0.52
22:DA:2360:G:H1'	33:DL:60:ARG:HD2	1.92	0.52
22:BA:1189:A:H2'	22:BA:1190:G:O5'	2.10	0.52
22:BA:1499:C:HO2'	22:BA:1500:G:H5'	1.68	0.52
22:DA:585:G:H1'	22:DA:1256:G:N2	2.24	0.52
22:DA:477:A:H2'	22:DA:478:A:C8	2.44	0.52
1:CA:1048:G:N2	1:CA:1210:C:C2	2.78	0.52
1:CA:996:A:C2	1:CA:997:U:N3	2.78	0.52
14:CN:2:LYS:CD	14:CN:5:MET:HG2	2.39	0.52
4:AD:57:LYS:HE2	4:AD:203:TYR:OH	2.09	0.52
33:DL:127:VAL:HG13	33:DL:132:ARG:HB2	1.92	0.52
29:DH:4:ILE:HG23	29:DH:17:ASP:O	2.10	0.52
22:DA:2574:G:O2'	25:DD:148:GLN:HB2	2.10	0.52
10:AJ:19:ASP:N	10:AJ:19:ASP:OD1	2.41	0.52
1:AA:844:G:H5''	1:AA:845:A:OP1	2.10	0.52
34:BM:13:HIS:O	34:BM:14:LYS:CB	2.56	0.52
8:AH:82:LEU:HD11	8:AH:84:ILE:HD11	1.83	0.52
23:DB:52:A:H2	23:DB:54:G:O6	1.93	0.52
7:CG:10:LYS:O	7:CG:10:LYS:HD2	2.09	0.52
2:CB:81:ASP:CG	2:CB:82:ALA:H	2.13	0.52
22:BA:2182:U:H2'	22:BA:2183:A:OP1	2.10	0.52
1:AA:949:A:C2'	1:AA:950:U:H5'	2.40	0.52
22:DA:402:A:H2'	22:DA:403:U:O4'	2.10	0.52
13:CM:12:LYS:CE	13:CM:16:ILE:HG22	2.40	0.52
13:CM:18:LEU:O	13:CM:24:VAL:HG23	2.09	0.52
22:BA:1055:G:H3'	22:BA:1056:G:H8	1.75	0.52
22:BA:1056:G:N2	22:BA:1102:C:C5	2.78	0.52
1:AA:62:U:H4'	1:AA:385:C:O2	2.09	0.52
22:BA:469:G:O6	50:B2:37:LYS:CE	2.51	0.52
37:DP:50:ARG:HA	37:DP:57:ALA:H	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:24:VAL:HG22	5:CE:27:GLY:H	1.75	0.52
47:DZ:46:MET:O	47:DZ:49:ALA:HB3	2.09	0.52
1:AA:914:A:O2'	1:AA:915:A:O4'	2.27	0.52
13:CM:69:ARG:HD2	13:CM:69:ARG:N	2.24	0.52
1:AA:1410:A:H2'	1:AA:1411:C:O5'	2.10	0.52
22:DA:2674:G:O2'	32:DK:30:ARG:HG3	2.10	0.52
1:CA:160:A:O2'	1:CA:344:A:N6	2.43	0.52
1:AA:125:U:H2'	1:AA:126:G:C5'	2.38	0.52
1:CA:590:U:C2'	1:CA:591:U:H5'	2.39	0.52
28:DG:76:ILE:O	28:DG:76:ILE:HG22	2.10	0.52
27:DF:12:VAL:CG1	27:DF:16:MET:HG3	2.37	0.52
37:BP:83:ILE:CD1	37:BP:83:ILE:C	2.78	0.52
1:CA:115:G:H5'	1:CA:116:A:OP1	2.10	0.52
45:DX:67:LEU:HD22	45:DX:77:TYR:CE1	2.45	0.52
24:BC:199:HIS:O	24:BC:202:ARG:HG3	2.09	0.52
7:AG:143:MET:HE3	7:AG:143:MET:HA	1.91	0.52
1:AA:1358:U:C6	1:AA:1359:C:C6	2.98	0.52
22:BA:1760:C:H2'	22:BA:1761:C:O4'	2.10	0.52
7:CG:49:LEU:HG	7:CG:123:LEU:HB3	1.92	0.52
22:BA:2405:G:H1'	22:BA:2412:A:H61	1.73	0.52
22:BA:1485:U:C2	22:BA:1505:A:C2	2.97	0.52
28:DG:145:ALA:HA	28:DG:148:ARG:CD	2.40	0.52
1:CA:1276:G:O2'	1:CA:1277:C:H5'	2.09	0.52
22:BA:1052:C:H2'	22:BA:1053:C:H5'	1.91	0.52
26:DE:5:LEU:HD23	26:DE:120:VAL:HG22	1.92	0.52
6:CF:21:MET:HG3	6:CF:24:ARG:HH22	1.73	0.52
52:B4:7:VAL:HG13	52:B4:38:GLY:HA2	1.92	0.52
22:BA:560:C:O2	38:BQ:47:ARG:NH1	2.41	0.52
47:DZ:40:THR:C	47:DZ:42:ALA:N	2.60	0.52
22:BA:1932:A:H2'	22:BA:1933:G:O4'	2.10	0.52
22:DA:2029:G:H2'	22:DA:2031:A:OP1	2.10	0.52
11:AK:96:ILE:HD12	11:AK:96:ILE:C	2.30	0.52
33:BL:85:VAL:HG21	33:BL:94:THR:HG23	1.92	0.52
44:DW:49:ASN:HD21	44:DW:80:SER:CA	2.23	0.52
22:DA:1073:A:OP2	22:DA:1073:A:H4'	2.10	0.52
22:DA:304:U:O2'	22:DA:305:C:P	2.67	0.52
22:DA:92:U:C6	22:DA:93:G:C8	2.98	0.52
41:DT:39:THR:OG1	41:DT:42:GLU:HG3	2.10	0.52
42:DU:92:VAL:HB	42:DU:101:THR:HG23	1.91	0.52
42:DU:95:PHE:N	42:DU:95:PHE:CD1	2.64	0.52
22:DA:1571:A:H3'	22:DA:1571:A:C8	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:54:G:C6	22:DA:55:G:N7	2.78	0.52
22:DA:1050:A:H2'	22:DA:1051:G:H8	1.75	0.52
1:CA:1157:A:C5	1:CA:1180:A:C6	2.98	0.52
22:DA:1154:G:OP1	38:DQ:57:ARG:HD2	2.09	0.52
22:DA:1540:G:O2'	22:DA:1541:C:H6	1.90	0.52
22:DA:2077:A:C5	22:DA:2435:A:C5	2.98	0.52
22:DA:1616:A:H4'	22:DA:1617:C:OP2	2.10	0.52
8:CH:28:SER:HA	8:CH:58:LEU:HD12	1.91	0.52
22:DA:564:C:O2'	22:DA:565:C:H5'	2.10	0.52
22:BA:1454:C:H41	35:BN:73:ASN:HD21	1.56	0.52
1:CA:1316:G:N2	1:CA:1318:A:C8	2.78	0.52
14:CN:20:PHE:CE1	14:CN:54:SER:HB2	2.45	0.52
22:DA:603:A:H4'	22:DA:604:G:C4'	2.40	0.52
22:DA:637:A:O5'	33:DL:112:LEU:HD21	2.09	0.52
19:AS:46:LEU:H	19:AS:61:VAL:HG22	1.73	0.52
11:AK:127:ARG:HG2	11:AK:127:ARG:HH11	1.75	0.52
2:AB:116:LEU:HB3	2:AB:140:LEU:CD2	2.40	0.52
22:DA:1565:C:N4	22:DA:1567:G:C2	2.78	0.52
22:DA:971:G:C6	22:DA:972:A:C4	2.98	0.52
22:DA:1639:C:C3'	22:DA:1640:A:H5''	2.39	0.52
27:DF:76:PHE:H	27:DF:76:PHE:HD2	1.58	0.52
22:BA:2182:U:C2'	22:BA:2183:A:OP1	2.58	0.52
4:AD:147:LYS:O	4:AD:148:ALA:C	2.49	0.52
10:AJ:20:GLN:O	10:AJ:24:GLU:HG3	2.10	0.52
1:CA:652:U:O2'	1:CA:653:U:H6	1.78	0.52
39:DR:90:ARG:O	39:DR:91:GLN:CB	2.54	0.52
3:CC:135:ARG:O	3:CC:137:VAL:N	2.43	0.52
40:BS:59:GLU:HA	40:BS:64:ALA:HA	1.90	0.52
22:DA:2667:C:O2'	22:DA:2668:G:C8	2.57	0.52
22:DA:1270:C:H2'	22:DA:1648:U:H5''	1.92	0.52
1:AA:569:C:C5'	1:AA:570:G:OP1	2.51	0.52
44:DW:14:ASP:O	44:DW:15:SER:HB2	2.09	0.52
10:CJ:30:LYS:HG3	10:CJ:36:VAL:HG22	1.91	0.52
1:CA:1393:U:C6	1:CA:1393:U:H3'	2.45	0.52
22:DA:2458:G:O2'	22:DA:2459:A:N7	2.43	0.52
2:AB:65:LYS:HG2	2:AB:153:MET:HG3	1.91	0.52
26:DE:98:LYS:O	26:DE:99:LYS:CB	2.55	0.52
1:CA:406:G:N7	1:CA:495:A:H2'	2.24	0.52
1:CA:441:A:N6	1:CA:493:A:N6	2.57	0.52
1:AA:934:C:H4'	1:AA:935:A:OP1	2.09	0.52
9:AI:118:ARG:HB3	9:AI:122:ARG:HG3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:931:C:H2'	1:AA:932:C:H6	1.73	0.52
22:DA:2507:C:H1'	22:DA:2583:G:N2	2.25	0.52
35:BN:65:LEU:C	35:BN:65:LEU:HD12	2.30	0.52
27:DF:11:VAL:HG12	27:DF:12:VAL:N	2.24	0.52
39:BR:61:ALA:HB2	39:BR:98:ILE:HA	1.92	0.52
42:BU:53:GLN:N	42:BU:54:PRO:CD	2.73	0.52
50:B2:12:ARG:NH2	50:B2:12:ARG:HB2	2.25	0.52
1:CA:116:A:O2'	1:CA:117:G:H5'	2.10	0.52
1:CA:130:A:H1'	1:CA:264:C:H5'	1.92	0.52
1:CA:1522:U:O2'	1:CA:1523:G:H5'	2.10	0.52
17:CQ:29:LYS:CE	17:CQ:36:PHE:CE2	2.92	0.52
1:CA:1064:G:N2	1:CA:1190:G:O2'	2.43	0.52
6:CF:79:ARG:HG2	6:CF:79:ARG:NH1	2.25	0.52
22:BA:857:G:H2'	22:BA:858:G:O4'	2.09	0.52
43:BV:2:PHE:HD1	43:BV:50:MET:CE	2.23	0.52
22:BA:163:C:O2'	22:BA:164:C:O5'	2.27	0.52
1:CA:1507:A:H2'	1:CA:1508:A:C8	2.45	0.52
22:BA:1668:A:H4'	22:BA:1669:A:O5'	2.10	0.52
22:BA:460:A:H2'	22:BA:461:C:O4'	2.09	0.52
22:BA:1767:G:O2'	22:BA:1768:C:H5'	2.10	0.52
24:BC:123:ILE:CG1	24:BC:123:ILE:O	2.58	0.52
3:AC:95:GLY:O	3:AC:96:VAL:CG1	2.58	0.52
38:BQ:91:ARG:CZ	39:BR:11:GLN:H	2.23	0.52
38:BQ:63:ARG:NH2	38:BQ:95:ALA:O	2.43	0.52
22:DA:1819:A:C3'	22:DA:1820:U:H5'	2.39	0.52
1:CA:1279:G:H2'	1:CA:1279:G:N3	2.23	0.52
4:AD:28:ASP:C	4:AD:29:THR:O	2.47	0.52
24:DC:245:THR:HB	24:DC:246:PRO:CD	2.40	0.52
22:DA:1062:G:O2'	22:DA:1063:G:H8	1.92	0.52
22:DA:1056:G:C2	22:DA:1102:C:H5	2.28	0.52
35:DN:36:THR:CG2	35:DN:41:ALA:HB2	2.39	0.52
1:AA:1276:G:C2'	1:AA:1277:C:H5'	2.40	0.52
22:DA:1239:G:C5	22:DA:1240:U:C6	2.98	0.52
22:DA:107:G:C5'	22:DA:294:A:OP1	2.58	0.52
22:DA:343:C:O2	22:DA:343:C:H2'	2.08	0.52
22:DA:70:G:OP2	22:DA:70:G:C8	2.57	0.52
22:DA:47:C:N4	22:DA:178:G:H1	2.08	0.52
4:CD:32:LYS:CB	4:CD:35:GLN:OE1	2.52	0.52
44:BW:17:ALA:HA	44:BW:35:ILE:CG2	2.35	0.52
44:BW:42:THR:HG22	44:BW:43:LYS:N	2.25	0.52
12:AL:121:PRO:O	12:AL:122:LYS:C	2.48	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:263:A:OP1	20:AT:73:ARG:HD3	2.10	0.52
20:AT:77:ASN:N	20:AT:77:ASN:HD22	2.07	0.52
38:DQ:6:GLY:C	38:DQ:8:ILE:N	2.64	0.52
26:BE:187:VAL:O	26:BE:188:MET:CB	2.59	0.52
1:CA:1198:G:N2	10:CJ:55:PRO:HG2	2.25	0.52
1:CA:998:C:H2'	1:CA:999:C:H6	1.75	0.52
4:AD:131:ILE:H	4:AD:131:ILE:CD1	2.10	0.52
1:AA:922:G:C6	1:AA:923:A:C6	2.97	0.52
22:BA:1872:A:H2'	22:BA:1873:G:O4'	2.10	0.52
21:AU:24:LYS:HG2	21:AU:25:ALA:H	1.75	0.52
41:BT:30:ILE:O	41:BT:30:ILE:HG12	2.09	0.52
22:DA:2516:A:C4	22:DA:2569:G:N2	2.77	0.52
22:DA:274:C:O2'	22:DA:275:C:O4'	2.27	0.52
27:DF:113:PHE:O	27:DF:114:ARG:HB2	2.09	0.52
1:CA:253:A:C2	1:CA:274:A:C2	2.98	0.52
22:DA:1626:A:O2'	22:DA:1627:G:OP2	2.24	0.52
1:AA:1120:C:H42	1:AA:1153:G:H1	1.58	0.52
1:AA:1382:C:O2'	1:AA:1383:C:C5'	2.50	0.52
4:AD:3:TYR:HE2	4:AD:5:GLY:O	1.93	0.52
1:AA:438:U:O2'	1:AA:439:U:P	2.68	0.52
25:DD:79:LEU:CD2	25:DD:79:LEU:N	2.72	0.52
3:CC:39:ARG:HE	3:CC:54:ILE:HG23	1.74	0.52
1:CA:1393:U:H3'	1:CA:1393:U:H6	1.74	0.52
35:BN:12:ARG:HD3	35:BN:16:HIS:CG	2.45	0.52
22:BA:372:G:C8	45:BX:60:LYS:HE2	2.44	0.52
1:CA:106:C:C2'	1:CA:107:G:C5'	2.85	0.52
22:DA:1936:A:C2	22:DA:1943:U:H5	2.28	0.52
22:DA:2530:A:H3'	28:DG:156:TYR:OH	2.10	0.52
5:CE:65:LYS:HZ3	5:CE:68:ARG:HD3	1.74	0.52
22:DA:2139:U:H3	22:DA:2152:G:H1	1.58	0.52
1:AA:337:G:O2'	1:AA:338:A:H5'	2.09	0.52
7:AG:3:ARG:HG3	7:AG:4:ARG:N	2.24	0.52
7:AG:99:ALA:O	7:AG:103:ILE:HG13	2.10	0.52
43:BV:5:ASN:HD22	43:BV:5:ASN:H	1.54	0.52
22:BA:1801:A:C4	24:BC:261:ARG:NH1	2.76	0.52
3:AC:122:GLN:HB3	3:AC:127:VAL:HG22	1.92	0.52
22:DA:1858:A:O2'	22:DA:1859:U:C5'	2.58	0.52
22:BA:1116:G:O2'	22:BA:1117:C:C5'	2.58	0.52
13:CM:81:ASP:C	13:CM:82:LEU:HD12	2.30	0.52
29:BH:100:ALA:O	29:BH:104:THR:HB	2.09	0.52
22:BA:1534:U:H2'	22:BA:1534:U:O2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1394:U:C6	22:BA:1394:U:C3'	2.93	0.52
25:DD:37:VAL:HG23	25:DD:91:THR:HA	1.92	0.52
1:AA:582:C:C2	1:AA:583:A:C8	2.98	0.52
22:BA:310:A:HO2'	22:BA:311:A:P	2.33	0.52
22:DA:2088:A:H2'	22:DA:2089:C:C6	2.45	0.52
4:AD:169:TRP:CD2	4:AD:185:PRO:HB3	2.45	0.52
1:AA:1480:A:C6	1:AA:1481:U:N3	2.78	0.52
36:DO:108:ASP:C	36:DO:110:ALA:H	2.14	0.52
2:AB:81:ASP:OD1	2:AB:83:ALA:N	2.43	0.52
16:AP:50:THR:HG22	16:AP:50:THR:O	2.09	0.52
22:DA:176:A:O5'	22:DA:176:A:H8	1.93	0.52
23:BB:92:C:C2'	23:BB:93:C:O5'	2.58	0.52
47:BZ:29:ARG:C	47:BZ:30:ARG:HG3	2.30	0.52
22:BA:1064:C:OP1	30:BI:87:SER:C	2.45	0.51
1:CA:1149:C:H2'	1:CA:1150:A:O4'	2.09	0.51
24:DC:7:PRO:HB3	24:DC:13:ARG:NH2	2.24	0.51
35:DN:16:HIS:O	35:DN:20:MET:CB	2.59	0.51
9:AI:85:ALA:C	9:AI:87:MET:H	2.13	0.51
22:DA:101:A:O2'	22:DA:102:U:OP2	2.28	0.51
22:DA:1205:A:H5''	22:DA:1206:G:C8	2.45	0.51
22:DA:310:A:O2'	22:DA:311:A:C5'	2.57	0.51
46:DY:28:LEU:CD2	46:DY:42:LEU:HD22	2.40	0.51
45:DX:29:LEU:HB2	45:DX:30:PRO:HD2	1.93	0.51
13:AM:95:PRO:CG	13:AM:101:THR:CG2	2.88	0.51
1:CA:1408:A:N1	1:CA:1494:G:C5	2.79	0.51
4:CD:8:LEU:HD22	4:CD:21:LYS:HD2	1.92	0.51
38:DQ:96:ASP:C	38:DQ:98:ALA:N	2.63	0.51
11:CK:124:LYS:HE3	21:CU:34:ARG:NH1	2.26	0.51
44:BW:19:ARG:CZ	44:BW:22:VAL:HB	2.40	0.51
43:DV:72:VAL:HB	43:DV:91:PHE:HB3	1.90	0.51
52:D4:7:VAL:CG2	52:D4:25:VAL:CG2	2.89	0.51
29:BH:8:LYS:O	29:BH:13:GLY:CA	2.53	0.51
22:DA:475:C:H2'	22:DA:476:G:C8	2.45	0.51
26:BE:5:LEU:HD13	26:BE:122:GLU:CG	2.40	0.51
1:CA:1271:A:H2'	1:CA:1272:G:C8	2.45	0.51
10:CJ:52:LEU:CD2	10:CJ:62:ARG:HG2	2.40	0.51
4:AD:196:GLU:O	4:AD:198:LEU:N	2.42	0.51
22:DA:659:G:H2'	22:DA:660:C:H6	1.73	0.51
11:AK:124:LYS:O	21:AU:33:ARG:HG2	2.10	0.51
24:BC:229:HIS:HD2	24:BC:246:PRO:CA	2.22	0.51
41:DT:30:ILE:HG22	41:DT:85:VAL:HG21	1.90	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:81:ILE:HG12	31:BJ:82:GLY:N	2.25	0.51
36:BO:111:ARG:C	36:BO:113:ALA:N	2.64	0.51
37:DP:22:GLY:HA3	37:DP:91:VAL:HG23	1.92	0.51
22:DA:1721:G:H1'	22:DA:1739:A:N6	2.25	0.51
31:DJ:37:ARG:NH2	31:DJ:39:LYS:HZ2	2.08	0.51
14:AN:26:LEU:O	14:AN:27:LYS:HB3	2.11	0.51
19:AS:33:TRP:O	19:AS:35:ARG:HG3	2.10	0.51
19:AS:55:GLN:CD	19:AS:56:HIS:H	2.14	0.51
25:DD:106:LYS:HD3	25:DD:106:LYS:N	2.25	0.51
22:DA:845:A:C2	22:DA:847:U:N1	2.78	0.51
8:AH:8:ASP:O	8:AH:9:MET:C	2.48	0.51
22:BA:1277:G:H4'	35:BN:20:MET:CE	2.38	0.51
22:BA:1057:A:N7	22:BA:1086:A:H2'	2.24	0.51
22:BA:1585:C:H2'	22:BA:1586:A:C4'	2.40	0.51
22:DA:484:C:H2'	22:DA:485:C:H6	1.75	0.51
22:BA:1421:G:C2	22:BA:1422:G:N7	2.77	0.51
22:DA:223:A:C6	22:DA:422:A:N7	2.78	0.51
22:DA:2653:U:N3	22:DA:2654:A:N6	2.57	0.51
25:DD:121:THR:HG22	25:DD:127:PHE:HB2	1.92	0.51
3:CC:113:LYS:HE3	3:CC:184:ASN:ND2	2.22	0.51
47:BZ:43:ILE:CD1	47:BZ:47:ILE:HD11	2.40	0.51
1:AA:652:U:O2'	1:AA:653:U:P	2.67	0.51
2:AB:150:ILE:HA	2:AB:153:MET:HB3	1.92	0.51
9:AI:23:GLY:HA3	9:AI:61:ASP:HB2	1.91	0.51
22:BA:2757:A:N1	28:BG:66:THR:HG21	2.25	0.51
22:BA:2221:G:C2'	22:BA:2222:C:H5'	2.40	0.51
24:BC:184:GLU:O	24:BC:185:ALA:HB3	2.09	0.51
1:CA:704:A:H2'	1:CA:705:G:C8	2.45	0.51
22:BA:1047:G:N2	22:BA:1110:G:C4	2.77	0.51
21:CU:53:LYS:HB2	21:CU:53:LYS:HZ2	1.71	0.51
22:DA:1107:G:N7	22:DA:1108:U:C5	2.78	0.51
12:CL:34:THR:HB	12:CL:53:ARG:CG	2.39	0.51
22:DA:1527:G:C2	22:DA:1546:G:N1	2.78	0.51
22:BA:2630:G:C2'	22:BA:2631:G:H5'	2.39	0.51
1:AA:828:U:H2'	1:AA:829:G:O5'	2.09	0.51
22:BA:788:A:O2'	22:BA:789:A:OP2	2.22	0.51
22:DA:13:A:O2'	22:DA:15:G:N7	2.44	0.51
34:DM:112:LEU:O	34:DM:112:LEU:HD13	2.09	0.51
1:CA:260:G:OP1	20:CT:74:HIS:CE1	2.59	0.51
3:AC:57:GLU:O	3:AC:59:PRO:HD2	2.10	0.51
22:DA:1421:G:H2'	22:DA:1421:G:N3	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:693:G:H2'	1:CA:694:A:C8	2.45	0.51
1:CA:564:C:H2'	1:CA:565:U:C6	2.45	0.51
11:AK:24:ALA:CB	11:AK:29:THR:HG23	2.40	0.51
22:DA:1682:G:O2'	22:DA:1683:U:C6	2.53	0.51
31:BJ:49:ASP:OD1	31:BJ:121:LYS:NZ	2.43	0.51
22:BA:2400:G:C2'	22:BA:2401:U:H5'	2.40	0.51
22:DA:694:U:H2'	22:DA:695:G:O5'	2.10	0.51
24:BC:241:LYS:O	24:BC:243:PRO:HD3	2.10	0.51
2:CB:27:LYS:N	2:CB:28:PRO:CD	2.72	0.51
39:DR:30:GLY:HA2	39:DR:63:VAL:O	2.10	0.51
22:BA:103:A:H2'	22:BA:104:A:C8	2.46	0.51
34:DM:119:LEU:O	34:DM:119:LEU:HD23	2.10	0.51
1:CA:1426:G:H2'	1:CA:1427:C:H6	1.75	0.51
5:AE:152:VAL:O	5:AE:155:LYS:CD	2.58	0.51
22:BA:2491:U:O5'	22:BA:2491:U:H2'	2.10	0.51
22:BA:636:G:N1	33:BL:111:ILE:HD11	2.21	0.51
22:DA:1819:A:H5''	24:DC:156:SER:HB2	1.92	0.51
1:CA:1129:C:O2'	1:CA:1130:A:H8	1.90	0.51
10:CJ:44:THR:HG23	10:CJ:70:HIS:CD2	2.45	0.51
10:CJ:11:LYS:HA	10:CJ:71:LEU:HA	1.92	0.51
1:CA:372:C:H4'	1:CA:373:A:OP2	2.11	0.51
22:DA:2283:C:C4	22:DA:2389:G:C4	2.98	0.51
22:DA:97:C:H2'	22:DA:98:G:O4'	2.10	0.51
22:DA:380:G:H1	22:DA:394:C:H42	1.57	0.51
31:DJ:45:THR:C	31:DJ:47:HIS:N	2.63	0.51
11:CK:126:ARG:CB	21:CU:33:ARG:HD2	2.38	0.51
2:AB:9:LEU:CD2	2:AB:11:ALA:N	2.73	0.51
22:DA:1536:C:H5''	22:DA:1537:G:O5'	2.09	0.51
22:BA:855:G:H21	44:BW:23:LYS:CB	2.23	0.51
44:BW:19:ARG:HH22	44:BW:22:VAL:HG21	1.74	0.51
22:BA:855:G:H1'	44:BW:23:LYS:HZ3	1.74	0.51
6:CF:3:HIS:O	6:CF:92:THR:HA	2.10	0.51
2:CB:46:VAL:N	2:CB:47:PRO:HD2	2.25	0.51
45:BX:38:TRP:HE3	45:BX:45:PHE:CD2	2.27	0.51
1:CA:1320:C:H2'	1:CA:1321:U:H5'	1.91	0.51
1:CA:1357:A:N7	1:CA:1358:U:C5	2.79	0.51
10:CJ:52:LEU:HA	10:CJ:62:ARG:HG2	1.92	0.51
22:BA:1875:G:H2'	22:BA:1876:A:OP2	2.11	0.51
31:DJ:25:LEU:C	31:DJ:25:LEU:HD22	2.31	0.51
22:DA:2697:G:N7	22:DA:2698:U:C5	2.78	0.51
16:CP:20:VAL:HG23	16:CP:34:GLU:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:142:A:C5	22:BA:143:C:C4	2.98	0.51
9:CI:64:ILE:HD12	9:CI:64:ILE:N	2.25	0.51
22:BA:1013:C:H2'	22:BA:1014:A:H8	1.75	0.51
22:DA:491:G:N3	22:DA:492:A:C8	2.79	0.51
42:DU:52:ASN:ND2	42:DU:54:PRO:HD3	2.25	0.51
1:CA:1346:A:C8	1:CA:1348:U:C2	2.98	0.51
1:CA:1348:U:O2'	1:CA:1349:A:H5'	2.10	0.51
1:CA:1036:A:O2'	1:CA:1037:C:H5'	2.10	0.51
22:BA:1288:G:C5	22:BA:1327:A:C2	2.98	0.51
22:DA:956:G:C1'	34:DM:82:MET:HE1	2.40	0.51
29:DH:9:VAL:HG12	29:DH:10:ALA:N	2.25	0.51
1:AA:616:G:C2'	1:AA:617:G:H5'	2.40	0.51
1:AA:626:G:H2'	1:AA:627:G:C8	2.45	0.51
1:CA:300:A:C2	1:CA:566:G:O6	2.62	0.51
22:DA:776:G:C8	22:DA:793:A:C2	2.98	0.51
22:DA:2848:G:OP2	37:DP:94:ALA:N	2.33	0.51
22:DA:1506:U:O5'	22:DA:1506:U:H6	1.93	0.51
22:DA:2443:C:H2'	22:DA:2444:G:C8	2.45	0.51
22:BA:2662:A:H2'	22:BA:2663:G:O4'	2.09	0.51
22:DA:868:U:HO2'	22:DA:869:G:P	2.34	0.51
2:CB:49:PHE:O	2:CB:53:LEU:HB3	2.10	0.51
1:AA:247:G:OP1	1:AA:247:G:H4'	2.09	0.51
1:AA:646:G:H2'	1:AA:647:C:C5'	2.38	0.51
22:DA:357:C:C4	22:DA:358:U:C5	2.98	0.51
22:DA:1526:C:N4	22:DA:1527:G:C6	2.78	0.51
22:DA:210:C:H4'	22:DA:1367:A:H1'	1.92	0.51
22:BA:2210:U:C2	22:BA:2212:A:N7	2.79	0.51
38:BQ:77:LYS:HE2	38:BQ:116:LEU:CD2	2.40	0.51
1:AA:829:G:C6	1:AA:858:G:C2	2.99	0.51
14:CN:46:LYS:HE3	19:CS:10:ILE:HB	1.92	0.51
24:BC:259:ASN:C	24:BC:261:ARG:H	2.14	0.51
22:BA:439:A:H2'	22:BA:440:C:O5'	2.11	0.51
10:CJ:81:GLU:O	10:CJ:86:ALA:CB	2.58	0.51
30:DI:18:ASN:HB3	30:DI:19:PRO:HD3	1.91	0.51
18:CR:21:ASP:OD1	18:CR:23:LYS:HE3	2.10	0.51
1:CA:777:A:C6	1:CA:778:G:C4	2.98	0.51
1:CA:944:G:H3'	1:CA:945:G:H5'	1.92	0.51
27:BF:168:LEU:HG	27:BF:169:LEU:HD12	1.92	0.51
49:B1:15:GLY:O	49:B1:16:THR:O	2.28	0.51
1:AA:39:G:C4	1:AA:40:C:C5	2.99	0.51
50:B2:27:GLY:O	50:B2:30:VAL:HB	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:20:LYS:C	19:CS:20:LYS:HD3	2.30	0.51
22:BA:980:A:C6	22:BA:981:A:N1	2.78	0.51
1:AA:19:A:C2'	1:AA:20:U:H5'	2.40	0.51
1:CA:9:G:C2	1:CA:10:A:C8	2.98	0.51
9:CI:12:LYS:O	9:CI:13:SER:HB3	2.10	0.51
22:BA:1523:U:O2'	22:BA:1524:G:H5'	2.10	0.51
36:DO:49:VAL:HG12	36:DO:50:ALA:H	1.75	0.51
22:BA:1377:G:H8	22:BA:1377:G:O5'	1.93	0.51
22:BA:1838:C:C5	22:BA:1899:A:C5	2.98	0.51
22:BA:211:C:O2'	22:BA:212:G:H5'	2.10	0.51
30:DI:63:ASP:O	30:DI:64:ARG:HB2	2.10	0.51
1:CA:399:G:C6	1:CA:400:C:C4	2.98	0.51
22:BA:1070:A:H2	30:BI:9:LYS:HG2	1.65	0.51
28:BG:162:ARG:NH1	28:BG:168:VAL:HG21	2.26	0.51
22:DA:1390:U:O2'	22:DA:1391:U:H5'	2.11	0.51
41:DT:58:VAL:HG22	41:DT:59:ASN:N	2.25	0.51
16:CP:75:ILE:HG22	16:CP:80:LYS:HD2	1.92	0.51
44:DW:30:VAL:CG2	44:DW:59:PHE:HE1	2.22	0.51
22:DA:739:A:C8	22:DA:739:A:OP2	2.64	0.51
22:DA:2834:G:H1'	22:DA:2879:A:N6	2.25	0.51
35:DN:28:LEU:C	35:DN:28:LEU:CD2	2.79	0.51
35:DN:92:GLY:N	35:DN:94:TYR:HE1	2.02	0.51
22:DA:321:U:H1'	26:DE:159:LEU:HD11	1.92	0.51
22:DA:321:U:H1'	26:DE:159:LEU:CD1	2.40	0.51
41:DT:68:LYS:HB2	41:DT:68:LYS:NZ	2.25	0.51
42:DU:35:VAL:CG1	42:DU:36:GLU:H	2.10	0.51
24:BC:108:GLY:O	24:BC:109:LEU:HD22	2.10	0.51
22:DA:1380:G:O2'	22:DA:1569:A:N6	2.43	0.51
22:DA:1381:G:C2'	22:DA:1382:G:H5''	2.40	0.51
22:DA:462:C:C2'	22:DA:463:G:H5'	2.40	0.51
2:CB:176:ASN:O	2:CB:178:LEU:N	2.44	0.51
34:DM:125:PRO:O	34:DM:126:ILE:HG23	2.10	0.51
12:AL:43:LYS:CB	12:AL:44:PRO:CD	2.81	0.51
43:DV:70:ILE:CD1	43:DV:70:ILE:N	2.68	0.51
6:CF:3:HIS:CD2	6:CF:65:GLU:HG2	2.46	0.51
22:DA:192:C:O2'	22:DA:802:A:N3	2.43	0.51
22:DA:2392:A:N1	33:DL:55:MET:HE3	2.26	0.51
20:AT:43:LYS:CE	20:AT:86:ALA:HA	2.40	0.51
22:DA:634:C:H2'	22:DA:635:C:H6	1.74	0.51
11:AK:85:VAL:CG1	11:AK:92:ARG:HG3	2.40	0.51
29:DH:5:LEU:HD23	29:DH:36:ALA:HB2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2453:A:O2'	22:DA:2572:A:H1'	2.11	0.51
22:DA:1139:G:C2'	22:DA:1140:C:H5'	2.41	0.51
22:DA:2732:G:H5''	22:DA:2733:A:O4'	2.10	0.51
22:BA:412:A:C2'	22:BA:413:C:C5'	2.86	0.51
33:DL:77:ILE:HG12	33:DL:101:ILE:HD11	1.92	0.51
22:BA:729:G:C2'	22:BA:729:G:N3	2.64	0.51
23:DB:68:C:O2'	23:DB:69:G:P	2.68	0.51
22:DA:1739:A:O2'	22:DA:1740:G:C5'	2.59	0.51
22:DA:2303:G:O6	22:DA:2314:A:N6	2.43	0.51
4:AD:147:LYS:N	4:AD:147:LYS:CD	2.74	0.51
22:BA:1106:G:C2	22:BA:1107:G:N9	2.78	0.51
22:DA:1965:C:H5''	22:DA:1966:A:H2'	1.92	0.51
22:DA:813:U:C2	22:DA:1195:G:N2	2.79	0.51
4:CD:176:LYS:HG2	4:CD:178:GLU:OE2	2.11	0.51
22:DA:2297:A:N3	22:DA:2298:A:N7	2.59	0.51
28:DG:157:LYS:C	28:DG:159:LYS:H	2.12	0.51
22:BA:37:C:H2'	22:BA:38:A:O5'	2.10	0.51
27:DF:32:LYS:HZ2	27:DF:32:LYS:CB	2.24	0.51
22:DA:1688:U:C4	22:DA:1698:A:C2	2.98	0.51
47:BZ:40:THR:CG2	47:BZ:43:ILE:H	2.23	0.51
22:DA:807:U:C2'	22:DA:807:U:O2	2.59	0.51
2:CB:119:GLN:HG2	2:CB:124:THR:HG23	1.90	0.51
1:AA:198:G:O2'	1:AA:199:A:O5'	2.27	0.51
42:DU:42:LYS:CB	42:DU:42:LYS:NZ	2.74	0.51
37:BP:91:VAL:HG11	37:BP:96:LEU:HD21	1.91	0.51
3:AC:129:PHE:CD2	3:AC:156:LEU:HD23	2.45	0.51
11:CK:63:GLN:HB2	11:CK:98:ALA:HB2	1.93	0.51
9:AI:117:LEU:HB3	9:AI:122:ARG:O	2.10	0.51
7:AG:20:GLU:HB3	7:AG:24:LYS:HE2	1.92	0.51
32:BK:91:SER:O	32:BK:92:GLU:C	2.48	0.51
32:BK:92:GLU:N	32:BK:92:GLU:OE1	2.43	0.51
1:CA:719:C:O2'	18:CR:37:LYS:HB3	2.11	0.51
30:BI:33:ASN:HB3	30:BI:36:GLU:CB	2.38	0.51
20:CT:42:ASP:O	20:CT:43:LYS:C	2.49	0.51
22:DA:2066:C:H5''	56:DA:3530:HOH:O	2.10	0.51
27:DF:35:LEU:HD12	27:DF:153:ILE:HG23	1.92	0.51
22:BA:1694:C:H4'	22:BA:1695:G:C5'	2.41	0.51
1:CA:464:U:O4	1:CA:466:A:C4'	2.58	0.51
1:AA:665:A:H2'	1:AA:732:C:O2	2.11	0.51
1:CA:306:A:H2'	1:CA:307:C:C6	2.44	0.51
38:BQ:104:ALA:O	38:BQ:107:ALA:HB3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:622:G:H2'	22:BA:623:C:H6	1.74	0.51
29:DH:140:ALA:C	29:DH:141:LYS:HG3	2.30	0.51
40:DS:28:LYS:HA	40:DS:70:LYS:HA	1.92	0.51
22:BA:945:A:C4	22:BA:2448:A:C2	2.98	0.51
40:DS:1:MET:H1	40:DS:1:MET:CE	2.23	0.51
38:DQ:71:ASN:HD21	38:DQ:106:THR:HG23	1.76	0.51
22:BA:2784:U:H4'	25:BD:42:ASN:ND2	2.25	0.51
34:DM:135:VAL:HG12	34:DM:136:MET:N	2.26	0.51
24:DC:259:ASN:OD1	24:DC:261:ARG:HB3	2.10	0.51
28:DG:68:ARG:C	28:DG:68:ARG:HD3	2.30	0.51
22:BA:1669:A:H2'	22:BA:1669:A:N3	2.24	0.51
22:BA:1897:G:C2	22:BA:1898:U:C2	2.98	0.51
49:D1:34:GLU:C	49:D1:35:LEU:HD23	2.31	0.51
22:DA:2556:C:H2'	22:DA:2557:G:O4'	2.11	0.51
22:BA:118:A:C8	22:BA:119:A:C8	2.98	0.51
1:AA:403:C:C2'	1:AA:404:G:H5'	2.41	0.51
22:DA:381:G:H5''	45:DX:15:ASN:HD22	1.74	0.51
5:AE:110:MET:HA	5:AE:113:VAL:CG1	2.40	0.51
1:CA:1278:G:O2'	1:CA:1279:G:C2	2.62	0.51
22:DA:1347:A:O2'	22:DA:1348:C:C5'	2.58	0.51
22:DA:1773:A:C8	22:DA:1829:A:N9	2.79	0.51
1:CA:532:A:H4'	1:CA:533:A:OP2	2.11	0.51
22:DA:77:G:C6	22:DA:110:G:C5	2.99	0.51
22:DA:112:U:H5'	46:DY:58:ASN:HD21	1.73	0.51
38:DQ:77:LYS:HE2	38:DQ:116:LEU:CD2	2.18	0.51
22:DA:123:G:O3'	22:DA:1376:C:H4'	2.11	0.51
25:BD:29:VAL:HB	25:BD:98:VAL:CG1	2.40	0.51
22:DA:37:C:O2'	26:DE:45:ALA:CB	2.59	0.51
1:CA:1071:C:O2	1:CA:1072:G:C8	2.63	0.51
1:AA:466:A:C4'	1:AA:467:U:OP2	2.57	0.51
22:DA:1914:C:O2'	22:DA:1915:U:H5''	2.10	0.51
31:DJ:6:ALA:HB3	31:DJ:45:THR:HB	1.92	0.51
21:CU:35:GLU:CG	21:CU:36:PHE:N	2.49	0.51
44:BW:42:THR:CG2	44:BW:43:LYS:HZ2	2.24	0.51
43:DV:75:GLN:HG2	43:DV:92:VAL:HG11	1.93	0.51
34:DM:32:GLY:HA2	34:DM:104:GLU:HA	1.92	0.51
31:BJ:74:TYR:CD2	31:BJ:92:MET:CE	2.93	0.51
6:CF:88:MET:HE1	18:CR:64:LEU:HD11	1.91	0.51
29:BH:31:VAL:C	29:BH:33:GLN:N	2.63	0.51
22:DA:190:A:H2'	22:DA:191:A:O4'	2.10	0.51
22:DA:1287:A:HO2'	22:DA:1288:G:C5'	2.23	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1611:C:O2'	22:DA:1612:C:H5'	2.11	0.51
44:BW:75:ASN:OD1	44:BW:76:ARG:N	2.44	0.51
1:AA:1241:G:C2	1:AA:1242:G:C5	2.99	0.51
22:DA:477:A:H2'	22:DA:478:A:H8	1.74	0.51
12:AL:87:LYS:O	12:AL:87:LYS:HG3	2.11	0.51
14:CN:62:ARG:HB3	14:CN:68:ARG:O	2.11	0.51
1:CA:1225:A:H4'	19:CS:77:ARG:HH12	1.76	0.51
22:BA:2431:U:C6	22:BA:2431:U:C5'	2.87	0.51
22:DA:605:G:O2'	22:DA:606:U:H5'	2.10	0.51
22:DA:622:G:H2'	22:DA:623:C:C6	2.44	0.51
22:DA:2585:U:O2'	22:DA:2586:U:C5'	2.44	0.51
2:AB:117:GLU:HA	2:AB:120:SER:CB	2.22	0.51
41:BT:34:VAL:HG11	41:BT:43:ILE:HD12	1.92	0.51
11:AK:122:PRO:HG2	21:AU:33:ARG:O	2.11	0.51
33:DL:94:THR:O	33:DL:98:ALA:N	2.42	0.51
32:DK:2:ILE:CD1	32:DK:2:ILE:N	2.73	0.51
27:DF:43:ILE:HG12	27:DF:77:LYS:HG2	1.93	0.51
1:CA:197:A:C6	1:CA:221:C:C4'	2.94	0.51
40:BS:25:ARG:HD3	40:BS:73:LYS:NZ	2.25	0.51
1:AA:1319:A:C5	1:AA:1323:G:C5	2.98	0.51
23:BB:90:C:C2'	23:BB:91:C:O5'	2.59	0.51
1:AA:300:A:H2'	1:AA:301:G:O4'	2.11	0.51
22:DA:2303:G:C6	22:DA:2314:A:N6	2.78	0.51
1:CA:865:A:C2	1:CA:918:A:C4'	2.92	0.51
22:DA:830:G:N3	22:DA:2448:A:C5	2.78	0.51
13:CM:12:LYS:CA	13:CM:12:LYS:HE3	2.33	0.51
19:AS:28:LYS:CB	19:AS:29:PRO:HD2	2.28	0.51
22:DA:1965:C:C5'	22:DA:1965:C:H6	2.22	0.51
1:CA:279:A:H4'	1:CA:280:C:O5'	2.09	0.51
6:CF:45:ARG:O	6:CF:56:LYS:HB3	2.10	0.51
25:DD:78:GLY:C	25:DD:79:LEU:HD22	2.31	0.51
29:DH:38:PRO:O	29:DH:40:THR:N	2.42	0.51
22:BA:784:G:H5''	24:BC:225:ASN:OD1	2.10	0.51
22:BA:2659:G:N2	22:BA:2661:G:H3'	2.25	0.51
40:DS:75:PHE:CZ	40:DS:104:THR:HG21	2.45	0.51
22:DA:2249:U:H1'	22:DA:2275:C:N4	2.25	0.51
4:CD:47:LEU:HD23	4:CD:52:VAL:HG23	1.93	0.51
4:CD:84:ASN:HD22	4:CD:86:GLY:N	2.09	0.51
1:AA:1504:G:C3'	1:AA:1505:G:H5'	2.40	0.51
22:BA:2340:A:H2'	22:BA:2341:G:C8	2.46	0.51
1:AA:322:C:O2'	20:AT:17:ARG:CG	2.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:7:GLY:N	35:DN:46:ARG:HH12	2.07	0.51
36:BO:24:THR:N	36:BO:42:PRO:HG3	2.26	0.51
20:CT:82:ILE:C	20:CT:84:LYS:N	2.61	0.51
22:DA:982:C:H4'	22:DA:983:A:OP1	2.11	0.51
39:BR:74:ILE:N	39:BR:74:ILE:HD12	2.25	0.51
1:CA:967:C:N3	1:CA:968:A:C6	2.79	0.51
22:DA:1416:G:C6	22:DA:1417:C:N4	2.78	0.51
29:BH:108:VAL:HG12	29:BH:109:GLU:N	2.25	0.51
26:BE:48:THR:H	26:BE:51:GLU:CG	2.22	0.51
22:DA:2294:G:N3	22:DA:2295:C:C6	2.78	0.51
22:BA:859:G:N2	22:BA:916:G:H2'	2.25	0.51
1:CA:383:A:H5''	1:CA:384:G:OP2	2.10	0.51
22:DA:1760:C:H3'	22:DA:1761:C:C6	2.45	0.51
1:CA:526:C:C6	1:CA:526:C:C3'	2.94	0.51
23:DB:21:G:C2	23:DB:22:U:H1'	2.45	0.51
1:CA:1477:U:H2'	1:CA:1478:U:H6	1.76	0.51
9:CI:5:TYR:CD2	9:CI:5:TYR:N	2.77	0.51
28:BG:117:PRO:O	28:BG:118:ALA:O	2.28	0.51
45:BX:10:ARG:HB2	45:BX:11:PRO:CD	2.40	0.51
15:AO:57:ARG:HB3	15:AO:57:ARG:HH11	1.75	0.51
13:AM:82:LEU:HD23	13:AM:82:LEU:N	2.24	0.51
4:AD:193:ASP:N	4:AD:193:ASP:OD1	2.43	0.51
22:BA:2469:A:C6	22:BA:2482:A:C8	2.98	0.51
37:BP:56:SER:O	37:BP:75:THR:HG23	2.11	0.51
38:BQ:91:ARG:CZ	38:BQ:93:ILE:HG21	2.40	0.51
22:BA:571:U:C4	22:BA:575:A:C5	2.98	0.51
24:DC:149:LYS:CE	24:DC:152:GLN:NE2	2.72	0.51
24:DC:179:GLU:HA	24:DC:269:ARG:O	2.10	0.51
1:CA:1143:G:C2'	1:CA:1144:G:C8	2.75	0.51
1:CA:1151:A:C6	1:CA:1152:A:N6	2.79	0.51
22:DA:919:U:N3	22:DA:920:A:N7	2.58	0.51
44:DW:25:PHE:O	44:DW:27:GLY:N	2.41	0.51
22:DA:1693:U:H5''	22:DA:1694:C:C5	2.45	0.51
1:CA:529:G:O6	12:CL:45:ASN:HA	2.11	0.51
22:DA:1240:U:O2	22:DA:1240:U:H2'	2.09	0.51
22:DA:324:A:O2'	22:DA:325:G:O4'	2.27	0.51
22:DA:64:A:O2'	41:DT:69:ARG:HG2	2.11	0.51
24:BC:108:GLY:O	24:BC:109:LEU:CD2	2.58	0.51
32:BK:45:GLU:HA	32:BK:45:GLU:OE2	2.10	0.51
22:DA:38:A:O2'	26:DE:43:THR:HA	2.11	0.51
1:AA:462:G:H5'	1:AA:463:U:OP2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:468:A:C2	1:AA:469:C:C5	2.98	0.51
41:BT:29:THR:N	41:BT:86:THR:HA	2.25	0.51
25:BD:104:VAL:HG13	25:BD:106:LYS:HD3	1.92	0.51
37:DP:44:GLY:HA3	37:DP:60:VAL:HG13	1.92	0.51
22:DA:800:A:C2	22:DA:802:A:C8	2.98	0.51
17:AQ:11:VAL:HG23	17:AQ:56:ASP:O	2.10	0.51
22:BA:1179:G:C6	22:BA:1180:U:O2'	2.64	0.51
33:DL:79:LEU:HB3	33:DL:114:GLY:H	1.75	0.51
5:AE:24:VAL:O	5:AE:25:LYS:C	2.49	0.51
29:DH:5:LEU:HA	29:DH:36:ALA:CB	2.40	0.51
22:BA:1784:A:H4'	22:BA:1785:A:H5''	1.89	0.51
36:BO:111:ARG:O	36:BO:114:GLY:N	2.43	0.51
9:CI:29:ILE:HD13	9:CI:38:PHE:CE1	2.46	0.51
5:CE:14:LEU:HD13	5:CE:59:ILE:HD12	1.93	0.51
27:DF:52:ALA:HA	27:DF:55:ASP:HB2	1.93	0.51
20:CT:55:PRO:HG2	20:CT:56:ILE:H	1.74	0.51
1:CA:68:G:O2'	1:CA:69:G:O5'	2.20	0.51
22:DA:1736:U:H2'	22:DA:1737:G:O4'	2.10	0.51
22:DA:1299:G:H5'	22:DA:1301:A:O4'	2.10	0.51
1:CA:1242:G:H4'	1:CA:1304:G:OP1	2.10	0.51
9:CI:59:LYS:HE3	9:CI:60:LEU:HD21	1.92	0.51
22:DA:617:G:C2'	22:DA:618:G:H8	2.23	0.51
22:DA:2792:A:C2	22:DA:2805:C:C2	2.99	0.51
13:CM:17:ALA:HB3	13:CM:18:LEU:HD12	1.92	0.51
26:BE:141:MET:O	26:BE:142:ALA:HB3	2.11	0.51
4:AD:3:TYR:O	4:AD:4:LEU:HB2	2.09	0.51
4:AD:2:ARG:HB3	4:AD:4:LEU:CD1	2.41	0.51
1:CA:108:G:H5'	1:CA:109:A:H5''	1.92	0.51
1:CA:1449:C:O2'	1:CA:1450:U:O4'	2.29	0.51
26:BE:41:GLN:HB2	26:BE:43:THR:CG2	2.40	0.51
35:DN:62:ASN:C	35:DN:64:ARG:H	2.13	0.51
25:DD:122:VAL:HG22	25:DD:127:PHE:O	2.09	0.51
1:CA:1501:C:C5	1:CA:1504:G:C4	2.99	0.51
1:AA:345:C:H6	1:AA:345:C:H5''	1.75	0.51
22:BA:2579:C:O2'	22:BA:2580:U:H5'	2.10	0.51
1:AA:496:A:C2'	1:AA:496:A:N3	2.71	0.51
22:BA:2635:A:H2'	22:BA:2636:C:O5'	2.11	0.51
4:CD:84:ASN:CG	4:CD:87:GLU:HG3	2.30	0.51
22:DA:1000:A:C6	22:DA:1001:A:C6	2.98	0.51
9:AI:62:LEU:HD23	9:AI:62:LEU:N	2.25	0.51
3:AC:155:ARG:HG2	3:AC:159:ALA:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:57:LEU:HD22	51:B3:53:ASP:HB3	1.92	0.51
32:BK:10:VAL:HB	32:BK:16:ALA:CB	2.36	0.51
1:AA:1468:A:C2'	1:AA:1469:C:H5''	2.41	0.51
36:BO:59:ALA:O	36:BO:61:GLN:N	2.44	0.51
29:BH:78:VAL:HB	29:BH:145:ASN:HB3	1.92	0.51
22:DA:1926:U:H1'	22:DA:1929:G:C6	2.45	0.51
30:BI:100:ILE:HG22	30:BI:101:SER:N	2.23	0.51
1:AA:232:G:H2'	1:AA:233:C:H6	1.76	0.51
28:DG:23:ILE:CG2	28:DG:24:THR:N	2.74	0.51
45:BX:12:VAL:HG23	45:BX:28:PHE:HB2	1.91	0.51
38:BQ:40:LYS:HD3	38:BQ:44:TYR:CE1	2.46	0.51
22:DA:1417:C:H4'	22:DA:1587:G:N2	2.25	0.51
27:DF:155:ILE:HD12	27:DF:155:ILE:H	1.75	0.51
22:DA:1510:G:C2	22:DA:1511:G:C6	2.99	0.51
6:AF:67:PRO:HG2	6:AF:70:VAL:HG22	1.92	0.51
10:CJ:92:LEU:HD13	10:CJ:92:LEU:N	2.25	0.51
1:CA:815:A:C2	1:CA:1529:G:C4	2.98	0.51
31:BJ:40:HIS:O	31:BJ:41:LYS:HG2	2.10	0.51
2:AB:118:THR:O	2:AB:118:THR:HG22	2.11	0.51
1:CA:1475:G:H4'	22:DA:1689:A:H4'	1.91	0.51
22:BA:1838:C:C4	22:BA:1899:A:C4	2.99	0.51
28:BG:117:PRO:O	28:BG:118:ALA:C	2.49	0.51
23:DB:81:G:C5	23:DB:82:U:C5	2.98	0.51
22:DA:1503:A:N6	22:DA:1504:A:H62	2.09	0.51
1:AA:895:G:C6	1:AA:896:C:C4	2.99	0.51
11:CK:14:GLN:HA	11:CK:76:TYR:O	2.10	0.51
8:CH:88:LYS:HA	8:CH:120:LEU:O	2.11	0.51
12:CL:32:VAL:HG12	12:CL:32:VAL:O	2.10	0.51
30:BI:89:SER:OG	30:BI:135:MET:HA	2.11	0.51
22:DA:1815:A:O4'	22:DA:1817:G:C8	2.64	0.51
22:DA:1385:A:O2'	22:DA:1386:C:H5''	2.11	0.51
22:DA:1388:G:N1	22:DA:1400:U:N3	2.57	0.51
41:DT:11:LEU:HD23	41:DT:32:LEU:HD12	1.92	0.51
44:DW:30:VAL:HG23	44:DW:59:PHE:CE1	2.45	0.51
44:DW:39:GLN:O	44:DW:56:HIS:HB3	2.11	0.51
22:DA:704:G:O2'	22:DA:726:G:N2	2.44	0.51
30:DI:52:LEU:CD1	30:DI:53:PRO:HD2	2.40	0.51
9:AI:5:TYR:HB2	9:AI:20:ILE:HB	1.91	0.51
1:CA:34:C:H2'	1:CA:35:G:H8	1.74	0.51
41:DT:74:ILE:HG13	41:DT:75:GLY:H	1.74	0.51
46:DY:28:LEU:HG	46:DY:42:LEU:CD2	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2214:C:C2	22:DA:2215:C:C5	2.98	0.51
22:DA:37:C:O2'	22:DA:38:A:H5'	2.11	0.51
22:DA:460:A:H5'	41:DT:72:GLN:O	2.10	0.51
1:CA:1117:A:C2	1:CA:1184:G:C6	2.99	0.51
1:AA:1306:A:H1'	1:AA:1332:A:C6	2.45	0.51
1:AA:71:A:C8	1:AA:100:G:C2	2.98	0.51
22:DA:1532:A:N1	22:DA:1540:G:O6	2.43	0.51
22:BA:923:G:H4'	44:BW:25:PHE:CE1	2.45	0.51
22:DA:1619:G:O2'	22:DA:1620:G:H5'	2.11	0.51
1:CA:595:A:H4'	1:CA:596:A:OP1	2.09	0.51
1:CA:1014:A:C2	19:CS:33:TRP:HB2	2.46	0.51
1:CA:1326:U:H2'	1:CA:1327:C:C6	2.45	0.51
1:CA:544:G:C2'	1:CA:545:C:O5'	2.58	0.51
29:BH:95:GLY:C	29:BH:97:ARG:H	2.13	0.51
41:BT:39:THR:O	41:BT:41:ALA:N	2.42	0.51
22:DA:595:C:O5'	22:DA:595:C:H6	1.93	0.51
22:DA:1735:A:O2'	22:DA:1736:U:C6	2.44	0.51
22:DA:1554:U:H2'	22:DA:1554:U:O2	2.11	0.51
1:CA:1004:A:N3	1:CA:1026:G:C5	2.79	0.51
22:DA:2305:U:H4'	27:DF:132:ARG:CG	2.41	0.51
2:CB:114:LYS:CE	2:CB:151:LYS:HB2	2.39	0.51
22:DA:2807:U:H3'	22:DA:2808:G:H5''	1.91	0.51
1:CA:1078:U:H2'	1:CA:1079:G:O4'	2.11	0.51
6:AF:51:ILE:O	6:AF:51:ILE:HG23	2.09	0.51
1:CA:112:G:C2	1:CA:330:C:C4	2.99	0.51
1:CA:246:A:C4	1:CA:282:A:N6	2.78	0.51
3:CC:149:LYS:CE	3:CC:200:TRP:CE3	2.88	0.51
23:DB:8:C:H5''	36:DO:15:ARG:NH1	2.24	0.51
22:BA:845:A:C6	22:BA:847:U:C6	2.98	0.51
22:BA:37:C:H1'	26:BE:45:ALA:HB2	1.92	0.51
22:BA:1348:C:C2'	22:BA:1349:C:H5'	2.34	0.51
22:DA:675:A:P	26:DE:60:TRP:HZ2	2.32	0.51
22:DA:2458:G:O2'	22:DA:2460:U:H5	1.88	0.51
16:CP:48:GLU:HG3	16:CP:51:ARG:NH2	2.25	0.51
38:DQ:15:LYS:HD2	38:DQ:15:LYS:C	2.30	0.51
22:DA:428:A:O2'	22:DA:429:A:H5'	2.10	0.51
17:CQ:73:THR:O	17:CQ:75:VAL:HG13	2.11	0.51
1:CA:444:G:C2	1:CA:445:G:C8	2.98	0.51
22:BA:1730:C:H1'	22:BA:1731:G:C2	2.46	0.51
22:BA:1253:A:C5	56:BA:3332:HOH:O	2.64	0.51
22:BA:26:G:H1'	22:BA:514:A:H61	1.73	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:339:U:H2'	22:BA:340:A:H5'	1.91	0.51
22:DA:383:C:H2'	22:DA:384:A:OP1	2.10	0.51
36:DO:48:LEU:HD13	36:DO:87:ILE:CD1	2.38	0.51
31:BJ:114:LEU:HD22	31:BJ:118:MET:HE2	1.92	0.51
3:CC:63:ILE:HG22	3:CC:97:PRO:O	2.11	0.51
1:CA:1531:A:H8	1:CA:1531:A:O5'	1.93	0.51
1:AA:1101:A:C8	2:AB:170:ILE:CG2	2.94	0.51
26:DE:139:LYS:HB2	26:DE:139:LYS:HZ2	1.75	0.51
1:AA:771:G:C4	1:AA:772:U:C5	2.99	0.51
33:BL:125:LEU:N	33:BL:125:LEU:HD23	2.25	0.51
22:BA:1572:A:C2'	22:BA:1573:G:H5'	2.40	0.51
22:BA:2752:C:H2'	22:BA:2753:A:H8	1.74	0.51
3:AC:119:ILE:HG22	3:AC:197:VAL:HG21	1.93	0.51
1:CA:1442:G:O2'	37:DP:113:LEU:HD13	2.11	0.51
40:DS:1:MET:H1	40:DS:1:MET:HE2	1.76	0.51
1:AA:335:C:H2'	1:AA:336:A:H8	1.75	0.51
28:BG:97:VAL:HA	28:BG:101:VAL:O	2.10	0.51
16:AP:42:ILE:HG22	16:AP:43:ALA:N	2.26	0.51
52:D4:1:MET:HB2	52:D4:34:LYS:O	2.10	0.51
1:AA:270:A:H2'	1:AA:271:C:C6	2.44	0.51
1:CA:1307:U:H1'	13:CM:107:THR:HG21	1.93	0.51
19:AS:52:ASN:O	19:AS:76:THR:HG22	2.11	0.51
22:BA:207:A:H2'	22:BA:208:C:O4'	2.11	0.51
22:DA:1464:G:C2	22:DA:1465:G:C5	2.99	0.51
1:AA:660:C:P	15:AO:4:THR:HG21	2.51	0.51
26:BE:4:VAL:HG12	26:BE:4:VAL:O	2.11	0.51
1:AA:1521:C:H2'	1:AA:1522:U:O5'	2.11	0.51
28:BG:2:ARG:HH21	28:BG:2:ARG:HG3	1.76	0.51
28:DG:11:PRO:O	28:DG:14:VAL:HG22	2.10	0.51
5:AE:152:VAL:HB	5:AE:155:LYS:CE	2.36	0.51
28:BG:168:VAL:HG23	28:BG:168:VAL:O	2.10	0.51
22:DA:1829:A:C8	22:DA:1830:C:C5	2.99	0.51
22:DA:1055:G:C4	22:DA:1056:G:C8	2.99	0.51
30:DI:52:LEU:HD12	30:DI:53:PRO:CD	2.41	0.51
22:DA:2834:G:H1'	22:DA:2879:A:H61	1.75	0.51
22:DA:2835:A:N6	22:DA:2879:A:C4	2.79	0.51
35:DN:31:HIS:O	35:DN:33:ILE:N	2.43	0.51
22:DA:125:A:O5'	50:D2:19:ARG:HD3	2.10	0.51
22:DA:1809:A:H2	22:DA:1810:A:C4	2.29	0.51
22:DA:2213:U:O2'	22:DA:2214:C:H5'	2.10	0.51
22:DA:37:C:O2'	26:DE:45:ALA:HB2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:39:VAL:CG1	27:BF:40:GLY:N	2.73	0.51
22:DA:2748:A:C2	22:DA:2757:A:C5	2.99	0.51
34:DM:73:ILE:HG21	34:DM:91:TYR:CE1	2.46	0.51
41:BT:85:VAL:O	41:BT:86:THR:O	2.29	0.51
28:BG:93:TYR:O	28:BG:94:ARG:HB3	2.11	0.51
6:CF:1:MET:HE3	6:CF:65:GLU:O	2.10	0.51
22:BA:866:A:C5'	22:BA:866:A:C8	2.65	0.51
22:DA:567:U:H5''	56:DA:3259:HOH:O	2.11	0.51
1:CA:1269:A:H2'	1:CA:1270:G:H5'	1.91	0.51
1:CA:1320:C:C2'	1:CA:1321:U:H5'	2.41	0.51
14:CN:80:ARG:HG2	14:CN:80:ARG:NH1	2.24	0.51
22:DA:621:A:C2'	22:DA:622:G:O5'	2.59	0.51
22:DA:627:A:C2	22:DA:637:A:C4	2.99	0.51
1:AA:683:G:C2'	1:AA:684:U:H5'	2.40	0.51
21:AU:24:LYS:HG2	21:AU:25:ALA:N	2.26	0.51
22:BA:390:U:O2'	22:BA:391:A:OP2	2.21	0.51
36:BO:2:ASP:O	36:BO:3:LYS:CG	2.59	0.51
33:DL:90:VAL:HB	33:DL:122:VAL:HA	1.91	0.51
22:DA:571:U:C4	22:DA:575:A:C5	2.99	0.51
40:BS:74:ILE:HG23	40:BS:74:ILE:O	2.11	0.51
51:D3:41:ARG:CB	51:D3:41:ARG:HH21	2.23	0.51
1:CA:1289:A:H2'	1:CA:1290:G:O4'	2.11	0.51
9:CI:51:LEU:CD1	9:CI:86:LEU:HD22	2.40	0.51
22:BA:2214:C:H6	22:BA:2214:C:C5'	2.11	0.51
22:BA:1027:A:C6	22:BA:1126:A:N3	2.79	0.51
1:AA:1367:C:H5''	10:AJ:62:ARG:HH11	1.75	0.51
35:BN:101:GLY:H	48:B0:41:HIS:CD2	2.29	0.51
2:CB:84:LEU:O	2:CB:84:LEU:CG	2.59	0.51
7:AG:62:GLU:O	7:AG:65:LEU:HB3	2.10	0.51
1:AA:1354:U:O2'	1:AA:1355:G:H5'	2.11	0.51
1:CA:261:U:P	20:CT:70:LYS:HE2	2.50	0.51
29:BH:24:GLY:O	29:BH:28:ASN:HB2	2.09	0.51
22:BA:1022:G:O2'	22:BA:1023:U:OP2	2.28	0.51
1:AA:1348:U:H2'	1:AA:1349:A:C8	2.44	0.51
1:CA:1451:U:C2	1:CA:1453:G:O6	2.64	0.51
36:DO:27:VAL:O	36:DO:37:ALA:HA	2.10	0.51
22:DA:2666:C:H2'	22:DA:2667:C:O5'	2.11	0.51
22:BA:659:G:C5	22:BA:660:C:C5	2.99	0.51
35:DN:73:ASN:C	35:DN:76:VAL:HG22	2.31	0.51
22:BA:1936:A:H2	22:BA:1943:U:C4	2.28	0.51
2:CB:118:THR:O	2:CB:122:ASP:HB2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:18:GLN:HE21	16:CP:35:ARG:NH2	2.09	0.51
42:DU:42:LYS:NZ	42:DU:42:LYS:HB3	2.25	0.51
22:DA:2151:U:HO2'	22:DA:2152:G:H8	1.59	0.51
29:BH:78:VAL:CB	29:BH:145:ASN:HB3	2.40	0.51
1:CA:719:C:H3'	1:CA:720:C:H6	1.74	0.51
38:BQ:26:ALA:CB	38:BQ:30:VAL:HG23	2.40	0.51
22:BA:899:A:HO2'	22:BA:900:A:H8	1.57	0.51
39:BR:42:ALA:HA	39:BR:46:GLU:CB	2.38	0.51
22:BA:2199:A:C4	22:BA:2225:A:C2	2.99	0.51
22:DA:1413:A:C5	22:DA:1414:C:N4	2.79	0.51
28:BG:30:GLY:O	28:BG:32:LEU:N	2.44	0.51
35:DN:19:ALA:HA	35:DN:22:ARG:HB3	1.93	0.51
22:DA:1858:A:H2'	22:DA:1859:U:C6	2.46	0.51
1:AA:138:G:C2'	1:AA:139:A:H5'	2.40	0.51
25:DD:30:GLU:HG2	25:DD:185:ASN:ND2	2.26	0.51
22:BA:1161:C:H2'	22:BA:1162:G:O5'	2.10	0.51
1:CA:585:G:C2'	1:CA:586:C:H5'	2.39	0.51
39:BR:102:SER:O	39:BR:103:ALA:O	2.29	0.51
2:AB:49:PHE:CD1	2:AB:53:LEU:HD23	2.46	0.51
23:BB:43:C:O2	27:BF:91:ARG:NH2	2.44	0.51
22:BA:1195:G:N3	22:BA:1226:A:H2	2.08	0.51
33:DL:50:PHE:CE2	33:DL:53:GLY:N	2.79	0.51
22:BA:554:U:O4	22:BA:555:G:C6	2.64	0.51
22:BA:920:A:C6	22:BA:921:C:C4	2.99	0.51
9:AI:112:ARG:HH22	10:AJ:64:GLN:HE22	1.58	0.51
49:D1:13:SER:OG	49:D1:46:VAL:HG22	2.10	0.51
44:BW:71:LYS:N	44:BW:71:LYS:HD3	2.26	0.51
22:BA:2321:U:H6	22:BA:2321:U:H5''	1.76	0.51
22:BA:2733:A:O2'	22:BA:2734:A:H5'	2.10	0.51
27:BF:60:SER:O	27:BF:61:GLY:C	2.48	0.51
22:BA:1009:A:O5'	22:BA:1009:A:H8	1.94	0.51
22:BA:1153:C:C2'	22:BA:1154:G:O5'	2.59	0.51
31:BJ:6:ALA:H	31:BJ:45:THR:HG21	1.76	0.51
30:BI:135:MET:HG2	30:BI:137:LEU:HG	1.92	0.51
22:BA:1064:C:H4'	30:BI:89:SER:N	2.26	0.51
1:CA:1129:C:P	9:CI:17:ARG:HH22	2.32	0.51
22:DA:1312:U:H4'	22:DA:1313:U:O5'	2.10	0.51
46:DY:19:LEU:HA	46:DY:22:LEU:CB	2.39	0.51
22:DA:2285:C:O4'	22:DA:2288:A:C2	2.64	0.51
22:DA:739:A:C4'	22:DA:740:C:OP1	2.51	0.51
1:CA:519:C:C2'	1:CA:520:A:H8	2.19	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:311:A:H61	22:DA:330:A:C5'	2.24	0.51
22:DA:1352:U:C5	22:DA:1377:G:C6	2.98	0.51
45:DX:2:ARG:HB3	45:DX:11:PRO:HD3	1.93	0.51
13:AM:92:ARG:NH2	13:AM:94:LEU:HD12	2.26	0.51
21:CU:39:LYS:H	21:CU:40:PRO:HD2	1.73	0.51
6:CF:88:MET:HG2	6:CF:90:MET:SD	2.50	0.51
37:DP:88:ARG:O	37:DP:111:GLU:HA	2.11	0.51
22:DA:246:C:H4'	22:DA:385:C:O2'	2.10	0.51
40:DS:36:LEU:C	40:DS:38:TYR:N	2.64	0.51
1:CA:597:G:C2	1:CA:644:U:C2	2.99	0.51
1:CA:963:G:O2'	1:CA:964:A:C8	2.63	0.51
1:CA:963:G:O2'	1:CA:964:A:P	2.68	0.51
10:AJ:10:LEU:HD11	10:AJ:98:VAL:HG12	1.91	0.51
2:CB:209:VAL:HG23	2:CB:210:THR:H	1.76	0.51
22:DA:2677:G:C4	22:DA:2731:G:N2	2.79	0.51
16:CP:36:VAL:O	16:CP:36:VAL:CG1	2.59	0.51
8:AH:74:ILE:HD12	8:AH:128:VAL:CG2	2.37	0.51
1:CA:255:G:C4	1:CA:256:U:C5	2.99	0.51
27:BF:131:VAL:HG21	27:BF:151:LEU:CD1	2.40	0.51
1:CA:1239:A:H5''	7:CG:118:ARG:NH1	2.20	0.51
1:AA:1361:G:C3'	1:AA:1362:A:H5''	2.41	0.51
1:CA:1370:G:H5''	9:CI:110:VAL:CG2	2.40	0.51
1:AA:1160:G:O2'	1:AA:1161:C:O5'	2.28	0.51
22:DA:2311:A:H1'	27:DF:78:ILE:CD1	2.41	0.51
1:CA:920:U:H2'	1:CA:921:U:C5	2.45	0.51
1:CA:155:A:H2'	1:CA:156:C:O4'	2.10	0.51
22:DA:1168:G:C2	22:DA:1182:G:C2	2.99	0.51
24:BC:93:VAL:O	24:BC:94:LEU:HB3	2.10	0.51
1:CA:119:A:H5'	1:CA:120:A:H5'	1.91	0.51
22:BA:1058:U:O4'	30:BI:117:THR:HG21	2.11	0.51
29:BH:1:MET:O	29:BH:20:ASN:ND2	2.44	0.51
1:CA:322:C:C5	1:CA:328:C:C5	2.98	0.51
3:CC:148:ILE:HD12	3:CC:200:TRP:O	2.11	0.51
1:CA:1450:U:C4'	1:CA:1451:U:H5	2.22	0.51
22:BA:601:C:O2	22:BA:605:G:H4'	2.10	0.51
25:DD:124:ARG:NH1	25:DD:125:TRP:HE1	1.89	0.51
20:AT:33:LYS:HE2	20:AT:33:LYS:CA	2.41	0.51
22:BA:1945:G:C4	22:BA:1946:U:C5	2.99	0.51
22:BA:1947:C:N3	22:BA:1960:A:C2	2.79	0.51
7:AG:110:ARG:HG3	7:AG:111:GLY:N	2.25	0.51
26:DE:60:TRP:CZ3	26:DE:62:GLN:CG	2.94	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:851:C:C2	22:DA:852:U:C5	2.99	0.51
22:DA:2259:U:O2'	22:DA:2260:C:C6	2.63	0.51
1:AA:180:U:C6	1:AA:180:U:H3'	2.45	0.51
12:AL:106:VAL:HG23	12:AL:116:TYR:HB3	1.93	0.51
22:BA:528:A:C2	22:BA:2043:C:C4'	2.91	0.51
1:AA:913:A:O2'	1:AA:914:A:OP2	2.25	0.51
13:CM:15:VAL:O	13:CM:19:THR:HG23	2.11	0.51
1:CA:1172:C:H2'	1:CA:1173:U:C6	2.45	0.51
1:CA:949:A:C2	1:CA:1233:G:C4	2.98	0.51
20:AT:14:GLU:OE1	20:AT:18:LYS:HE2	2.10	0.51
23:BB:35:C:H2'	23:BB:36:C:O5'	2.11	0.51
42:BU:73:ASN:HD22	42:BU:76:THR:H	1.59	0.51
22:BA:2225:A:H4'	22:BA:2226:C:O5'	2.11	0.51
45:DX:67:LEU:CD2	45:DX:77:TYR:CZ	2.93	0.51
17:CQ:30:HIS:CE1	17:CQ:32:ILE:H	2.28	0.51
3:AC:41:TYR:HD1	3:AC:42:LEU:CD1	2.24	0.51
2:AB:60:ALA:HB3	2:AB:223:GLY:HA3	1.92	0.51
22:DA:1836:C:O2	22:DA:1836:C:H2'	2.09	0.51
22:BA:2898:U:O2	31:BJ:134:ALA:HB1	2.10	0.51
16:CP:29:ASN:N	16:CP:29:ASN:OD1	2.41	0.51
22:BA:112:U:C5'	46:BY:58:ASN:HD21	2.24	0.51
33:BL:40:SER:O	33:BL:41:ARG:CB	2.58	0.51
22:DA:1497:U:C5	22:DA:1578:U:O5'	2.63	0.51
7:AG:77:ARG:O	7:AG:78:ARG:HB2	2.10	0.51
1:CA:805:C:H2'	1:CA:806:C:H6	1.76	0.51
22:DA:878:A:H4'	22:DA:898:C:H42	1.75	0.51
29:DH:103:VAL:C	29:DH:105:ALA:H	2.14	0.51
22:DA:2027:G:H2'	22:DA:2028:U:H6	1.75	0.51
22:DA:2098:U:O5'	22:DA:2098:U:H6	1.93	0.51
24:BC:44:ASN:OD1	24:BC:44:ASN:C	2.49	0.51
51:B3:51:LYS:NZ	51:B3:54:LEU:HD23	2.26	0.51
2:AB:168:GLU:HB3	2:AB:171:ALA:HB3	1.92	0.51
37:BP:4:ILE:O	37:BP:5:LYS:CB	2.56	0.51
37:BP:4:ILE:CG2	37:BP:5:LYS:N	2.74	0.51
5:AE:112:ALA:O	5:AE:113:VAL:C	2.49	0.51
22:DA:1813:G:N3	24:DC:49:THR:CB	2.70	0.51
41:DT:11:LEU:HD11	41:DT:46:ALA:CB	2.40	0.51
41:DT:11:LEU:CD1	41:DT:46:ALA:HB1	2.41	0.51
1:AA:408:A:C2	1:AA:435:A:N3	2.79	0.51
1:AA:428:G:O3'	4:AD:12:ARG:NH2	2.44	0.51
44:DW:31:LEU:C	44:DW:33:GLY:H	2.13	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DW:37:VAL:O	44:DW:38:ARG:CB	2.59	0.51
22:DA:1773:A:C2	22:DA:1978:A:C2	2.99	0.51
22:DA:165:A:C5	22:DA:166:U:C5	2.99	0.51
1:AA:204:G:C2	1:AA:465:A:C5	2.99	0.51
1:AA:468:A:N1	1:AA:469:C:N4	2.58	0.51
43:DV:26:PHE:HE2	43:DV:42:LEU:HD12	1.75	0.51
18:CR:32:ILE:CD1	18:CR:36:GLY:HA2	2.41	0.51
10:CJ:48:ARG:HB2	10:CJ:48:ARG:NH1	2.26	0.51
52:D4:7:VAL:CG2	52:D4:25:VAL:HG21	2.41	0.51
22:DA:2077:A:C8	22:DA:2435:A:C4	2.99	0.51
22:DA:1607:C:C4'	22:DA:1608:A:C8	2.92	0.51
1:CA:962:C:H42	1:CA:974:A:N6	2.09	0.51
14:CN:55:SER:C	14:CN:57:SER:H	2.15	0.51
20:AT:8:LYS:HA	20:AT:11:ILE:HG23	1.93	0.51
1:AA:1124:G:OP1	10:AJ:37:ARG:C	2.48	0.51
27:DF:108:PRO:O	27:DF:110:ILE:HG23	2.11	0.51
27:DF:42:ALA:HA	27:DF:48:LEU:HD11	1.92	0.51
17:CQ:46:HIS:NE2	17:CQ:48:GLU:HG2	2.26	0.51
22:DA:2227:A:H5''	22:DA:2228:G:OP2	2.11	0.51
22:DA:1442:U:C2	22:DA:1443:U:C5	2.99	0.51
24:BC:251:THR:CG2	24:BC:252:LYS:N	2.54	0.51
14:AN:20:PHE:O	14:AN:21:ALA:HB3	2.10	0.51
14:AN:62:ARG:NH1	14:AN:69:PRO:HG3	2.26	0.51
22:BA:1627:G:C2	22:BA:1628:G:C8	2.99	0.51
4:AD:147:LYS:H	4:AD:147:LYS:CE	2.22	0.51
34:BM:40:ARG:HB3	34:BM:95:LEU:HD12	1.93	0.51
22:BA:508:A:C4'	22:BA:509:C:OP2	2.45	0.51
5:AE:63:MET:O	5:AE:66:ALA:HB3	2.10	0.51
22:BA:302:C:O2'	22:BA:303:G:C5'	2.59	0.51
22:BA:1644:C:O2'	22:BA:1645:G:C5'	2.53	0.51
1:CA:1453:G:H5''	1:CA:1453:G:N3	2.26	0.51
36:DO:7:ARG:O	36:DO:8:ILE:C	2.48	0.51
22:DA:773:U:H5''	22:DA:774:G:OP2	2.10	0.51
22:DA:786:C:H4'	22:DA:1780:A:N7	2.26	0.51
1:CA:1176:A:H2'	1:CA:1177:G:O4'	2.10	0.51
2:CB:128:LEU:O	2:CB:129:THR:C	2.48	0.51
22:DA:1673:G:C2'	22:DA:1674:G:C5'	2.84	0.51
22:BA:1510:G:C8	22:BA:1510:G:H5'	2.45	0.51
28:DG:83:THR:CA	28:DG:84:LYS:HD3	2.41	0.51
22:DA:1014:A:C2'	22:DA:1015:U:H5'	2.41	0.51
44:BW:37:VAL:CG2	44:BW:55:ASP:O	2.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:198:G:C2'	1:AA:199:A:C8	2.93	0.51
12:AL:72:ASN:OD1	12:AL:104:SER:CB	2.54	0.51
1:CA:442:G:C6	1:CA:443:C:N4	2.79	0.51
1:CA:686:U:O2'	1:CA:687:A:O5'	2.28	0.51
1:AA:935:A:H2'	1:AA:936:C:C6	2.45	0.51
22:BA:1738:G:O2'	22:BA:1739:A:O5'	2.29	0.51
14:AN:92:ILE:HG22	14:AN:95:LEU:CB	2.41	0.51
22:DA:2068:U:C5'	22:DA:2068:U:H6	2.21	0.51
22:BA:324:A:O2'	22:BA:325:G:C5'	2.57	0.51
22:DA:2437:G:O4'	22:DA:2598:A:C2	2.64	0.51
39:BR:1:MET:HA	39:BR:42:ALA:O	2.10	0.51
1:AA:1014:A:H4'	19:AS:13:HIS:NE2	2.26	0.51
22:BA:2415:G:H2'	22:BA:2416:C:C6	2.43	0.51
6:AF:2:ARG:HH21	6:AF:68:GLN:HE21	1.58	0.51
50:D2:23:ALA:O	50:D2:24:THR:CB	2.59	0.51
38:BQ:97:ILE:C	38:BQ:97:ILE:HD12	2.30	0.51
48:B0:27:LEU:H	48:B0:27:LEU:CD2	2.24	0.51
22:BA:1360:G:H5''	22:BA:1360:G:H8	1.76	0.51
1:AA:736:C:OP1	18:AR:60:ARG:NH1	2.44	0.51
22:BA:1424:G:H2'	22:BA:1425:G:O4'	2.11	0.51
1:AA:421:U:C6	1:AA:421:U:C3'	2.94	0.51
25:BD:142:VAL:HG23	25:BD:143:PRO:CD	2.41	0.51
22:DA:1709:U:H2'	22:DA:1710:G:C8	2.46	0.51
22:DA:1017:G:N2	22:DA:1146:C:C2	2.79	0.51
1:CA:767:A:H2'	1:CA:768:A:O4'	2.11	0.51
13:CM:86:ARG:NH1	13:CM:90:HIS:HD2	2.09	0.51
22:BA:1742:U:O2'	22:BA:1743:G:H5'	2.11	0.51
22:DA:718:A:C3'	22:DA:719:C:H5'	2.41	0.51
22:BA:885:C:H3'	22:BA:885:C:H6	1.75	0.51
36:DO:28:VAL:O	36:DO:28:VAL:HG13	2.10	0.51
45:BX:31:ASN:O	45:BX:51:SER:HA	2.11	0.51
33:BL:96:LYS:HA	33:BL:101:ILE:HG22	1.93	0.51
1:CA:1150:A:O3'	10:CJ:43:PRO:HA	2.10	0.51
41:DT:20:ALA:O	41:DT:31:VAL:HG22	2.10	0.51
1:AA:429:U:O4'	1:AA:430:A:H5''	2.11	0.51
1:CA:62:U:O2'	1:CA:63:C:H5'	2.10	0.51
16:CP:75:ILE:HA	16:CP:78:VAL:CG2	2.40	0.51
22:DA:861:A:O2'	22:DA:862:G:O4'	2.24	0.51
22:DA:1825:U:H2'	22:DA:1826:G:O4'	2.11	0.51
1:AA:1284:C:C6	1:AA:1285:A:C8	2.99	0.51
12:CL:29:LYS:O	12:CL:80:LEU:HD12	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:142:ASN:HA	24:BC:153:LEU:O	2.11	0.51
24:BC:90:ILE:HD12	24:BC:103:ILE:O	2.10	0.51
22:DA:1381:G:C3'	22:DA:1382:G:H5''	2.41	0.51
22:DA:217:A:O2'	22:DA:218:A:O5'	2.29	0.51
22:DA:50:U:OP1	22:DA:50:U:H6	1.94	0.51
22:DA:1050:A:H2'	22:DA:1051:G:C8	2.46	0.51
49:B1:49:LYS:HG2	49:B1:50:GLU:N	2.26	0.51
49:B1:8:ILE:CG2	49:B1:9:LYS:N	2.74	0.51
13:AM:73:SER:HA	13:AM:76:ILE:HD12	1.92	0.51
31:DJ:3:THR:HG22	38:DQ:60:TRP:HE1	1.75	0.51
1:CA:734:G:O2'	1:CA:735:C:C5'	2.57	0.51
6:CF:42:TRP:HB2	6:CF:59:TYR:HB3	1.92	0.51
1:AA:945:G:N2	1:AA:1334:G:H4'	2.25	0.51
8:CH:86:LYS:O	8:CH:121:GLY:HA2	2.11	0.51
22:DA:480:A:H3'	22:DA:481:G:H5''	1.93	0.51
29:DH:89:LYS:HA	29:DH:125:THR:HG23	1.92	0.51
22:DA:600:G:H5'	26:DE:27:LEU:HD13	1.92	0.51
1:CA:1511:G:O2'	1:CA:1512:U:H5'	2.11	0.51
41:BT:31:VAL:CA	41:BT:32:LEU:HD23	2.41	0.51
41:BT:32:LEU:N	41:BT:83:ALA:CB	2.70	0.51
11:AK:124:LYS:HE2	11:AK:125:LYS:HA	1.93	0.51
24:BC:244:VAL:HG23	24:BC:245:THR:O	2.10	0.51
24:DC:147:PRO:HA	24:DC:187:CYS:HB3	1.93	0.51
22:DA:491:G:H2'	22:DA:492:A:N7	2.23	0.51
33:DL:17:LYS:HZ1	33:DL:19:LEU:HD22	1.74	0.51
23:DB:54:G:N2	27:DF:25:MET:HE2	2.25	0.51
32:BK:21:CYS:N	32:BK:41:ILE:HD11	2.26	0.51
22:DA:1441:G:C4	22:DA:1551:A:H2	2.29	0.51
7:CG:116:ALA:HA	7:CG:120:ALA:CB	2.41	0.51
19:AS:51:HIS:HA	19:AS:55:GLN:O	2.10	0.51
1:CA:1350:A:C2'	1:CA:1351:U:H5'	2.41	0.51
1:AA:1367:C:H5''	10:AJ:62:ARG:NH1	2.26	0.51
2:AB:209:VAL:O	2:AB:211:LEU:N	2.44	0.51
5:CE:13:LYS:CA	5:CE:13:LYS:HE2	2.29	0.51
22:DA:1183:U:H2'	22:DA:1184:U:H6	1.76	0.51
22:BA:548:G:H4'	22:BA:549:G:H5'	1.93	0.51
4:CD:81:LEU:O	4:CD:83:GLY:N	2.41	0.51
23:DB:85:G:N2	23:DB:92:C:C2	2.79	0.51
5:AE:38:VAL:HG22	5:AE:66:ALA:HB1	1.92	0.51
1:AA:882:C:O2'	1:AA:883:C:H5'	2.11	0.51
20:AT:27:MET:HE1	20:AT:57:VAL:CG2	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:66:ASN:ND2	29:DH:137:GLU:HB3	2.26	0.51
22:BA:1430:G:H2'	22:BA:1431:A:H8	1.75	0.51
22:DA:2102:G:C5	22:DA:2103:C:C5	2.99	0.51
14:CN:27:LYS:HB2	14:CN:45:LEU:HD22	1.93	0.51
9:AI:24:ASN:HB2	9:AI:26:LYS:HG2	1.93	0.51
22:DA:2893:A:H5''	22:DA:2894:G:C5'	2.41	0.51
34:DM:4:PRO:HD3	34:DM:68:PHE:CE2	2.43	0.51
30:BI:32:VAL:HG13	30:BI:66:PHE:CE2	2.46	0.51
1:AA:1014:A:H5''	19:AS:13:HIS:CG	2.46	0.51
9:CI:45:MET:HE3	9:CI:48:ARG:HG3	1.93	0.51
22:DA:2472:G:H1'	22:DA:2478:A:N6	2.26	0.51
39:BR:67:GLY:HA3	39:BR:93:PHE:CZ	2.47	0.51
22:BA:398:C:H2'	22:BA:399:U:O5'	2.11	0.51
1:AA:1033:G:H2'	1:AA:1034:G:C5'	2.41	0.51
13:AM:39:ALA:HB3	13:AM:42:VAL:HG13	1.92	0.51
34:BM:57:VAL:O	34:BM:58:LYS:HB2	2.11	0.51
22:DA:1482:G:C6	22:DA:1483:G:N7	2.79	0.51
25:DD:42:ASN:O	25:DD:43:ASP:CB	2.58	0.51
43:BV:68:LYS:O	43:BV:69:GLU:C	2.49	0.51
5:AE:106:ALA:HB2	5:AE:124:ALA:HB3	1.93	0.51
22:DA:930:G:N3	22:DA:933:A:C2	2.79	0.51
41:DT:12:ARG:HB2	41:DT:33:LYS:HG2	1.92	0.51
22:DA:1601:G:H2'	22:DA:1602:U:O4'	2.10	0.51
28:DG:87:GLN:HA	28:DG:129:GLU:HA	1.92	0.51
1:CA:153:C:H6	1:CA:153:C:O5'	1.94	0.51
2:AB:172:ILE:O	2:AB:175:ALA:HB3	2.11	0.51
5:AE:80:LEU:HD22	5:AE:80:LEU:N	2.25	0.50
22:BA:568:U:OP1	33:BL:36:LYS:HE3	2.12	0.50
22:DA:1797:G:H4'	24:DC:254:LYS:O	2.11	0.50
24:DC:89:ASN:O	24:DC:90:ILE:HG13	2.11	0.50
26:DE:149:ILE:HD13	26:DE:188:MET:SD	2.51	0.50
22:DA:920:A:C6	22:DA:921:C:C4	2.99	0.50
22:DA:1102:C:H2'	22:DA:1103:A:H8	1.74	0.50
35:DN:34:ILE:O	35:DN:112:TYR:HA	2.11	0.50
35:DN:24:MET:HG2	35:DN:44:LEU:CD1	2.29	0.50
1:AA:1533:C:O5'	1:AA:1533:C:H6	1.93	0.50
22:DA:298:G:O5'	22:DA:298:G:H8	1.93	0.50
22:DA:298:G:C2	22:DA:339:U:C5	2.99	0.50
24:BC:90:ILE:CG2	24:BC:102:TYR:HD1	2.21	0.50
22:DA:1048:A:C5	22:DA:1111:A:C2	2.99	0.50
34:DM:71:LYS:HD3	34:DM:95:LEU:CD1	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:52:PRO:O	39:DR:53:PHE:CD2	2.65	0.50
45:BX:67:LEU:HD22	45:BX:77:TYR:CG	2.46	0.50
22:DA:201:C:H2'	22:DA:202:U:H6	1.76	0.50
22:DA:247:G:C5	22:DA:249:C:H1'	2.46	0.50
22:DA:1613:G:C2	22:DA:1617:C:N3	2.79	0.50
8:CH:29:SER:O	8:CH:30:LYS:C	2.49	0.50
22:DA:654:A:H2'	22:DA:655:A:O5'	2.11	0.50
40:BS:2:GLU:O	40:BS:3:THR:HG23	2.10	0.50
22:DA:1139:G:H2'	22:DA:1140:C:O5'	2.11	0.50
22:DA:1566:A:C2	24:DC:212:TRP:HB2	2.46	0.50
22:DA:1666:G:H4'	32:DK:6:THR:HG23	1.92	0.50
22:DA:1156:A:H5''	22:DA:1157:G:OP2	2.12	0.50
38:DQ:46:TYR:HD1	39:DR:74:ILE:HG23	1.75	0.50
22:DA:1738:G:O2'	22:DA:1739:A:C8	2.54	0.50
32:BK:20:MET:C	32:BK:41:ILE:CD1	2.79	0.50
31:BJ:69:ARG:O	31:BJ:90:GLU:HG2	2.11	0.50
1:AA:1324:A:C5	1:AA:1325:C:C5	2.99	0.50
52:B4:9:LYS:O	52:B4:10:LEU:HD23	2.11	0.50
22:DA:2808:G:HO2'	22:DA:2809:A:H8	1.59	0.50
24:DC:76:VAL:O	24:DC:76:VAL:HG23	2.11	0.50
22:BA:1081:U:H2'	22:BA:1081:U:O2	2.11	0.50
1:AA:1152:A:C2	1:AA:1153:G:C5	2.99	0.50
22:BA:2197:U:O2'	22:BA:2198:A:P	2.69	0.50
22:DA:228:C:H5''	22:DA:229:C:C6	2.46	0.50
5:AE:144:GLU:HG2	5:AE:145:ASN:N	2.26	0.50
1:CA:740:U:O4'	15:CO:41:HIS:HE1	1.94	0.50
1:CA:563:A:N3	1:CA:563:A:C2'	2.72	0.50
22:DA:1649:G:H2'	22:DA:1650:A:H8	1.74	0.50
3:AC:142:ARG:HB3	3:AC:143:LEU:CD1	2.36	0.50
1:CA:457:G:OP2	1:CA:457:G:C8	2.65	0.50
22:BA:2013:A:H2'	22:BA:2014:A:H5'	1.93	0.50
22:DA:806:C:C2	22:DA:807:U:C5	2.98	0.50
22:DA:831:G:O5'	22:DA:831:G:H8	1.93	0.50
22:BA:275:C:N4	22:BA:276:U:C6	2.79	0.50
22:BA:1508:A:O2'	22:BA:1509:A:C8	2.62	0.50
29:BH:99:ILE:CG2	29:BH:99:ILE:O	2.59	0.50
17:CQ:62:GLU:HB2	17:CQ:72:TRP:CZ3	2.46	0.50
2:CB:49:PHE:O	2:CB:53:LEU:CB	2.59	0.50
24:DC:52:HIS:HD2	24:DC:217:PRO:O	1.95	0.50
1:AA:1504:G:H3'	1:AA:1505:G:H5'	1.93	0.50
22:DA:1545:A:H2'	22:DA:1546:G:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:100:VAL:O	4:CD:101:VAL:C	2.48	0.50
22:BA:1820:U:OP1	24:BC:176:ARG:HG2	2.11	0.50
10:AJ:81:GLU:O	10:AJ:84:VAL:HG12	2.10	0.50
1:CA:259:G:H2'	1:CA:260:G:O4'	2.11	0.50
37:DP:102:ARG:O	37:DP:103:THR:CB	2.59	0.50
22:BA:1359:A:H2'	22:BA:1360:G:O5'	2.10	0.50
1:CA:179:A:C2	1:CA:180:U:C2	2.99	0.50
1:CA:892:A:C5	1:CA:893:C:C4	2.99	0.50
22:BA:1906:G:C2'	22:BA:1907:G:O5'	2.59	0.50
24:BC:238:ASN:O	24:BC:239:PHE:HB2	2.11	0.50
25:BD:146:ILE:HB	25:BD:159:LYS:HD2	1.93	0.50
1:CA:287:U:C2'	1:CA:288:A:H5'	2.41	0.50
19:CS:43:MET:O	19:CS:61:VAL:HG11	2.11	0.50
52:B4:7:VAL:HG23	52:B4:8:LYS:N	2.27	0.50
22:BA:1838:C:HO2'	22:BA:1898:U:H5	1.57	0.50
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.11	0.50
22:BA:2006:C:H6	22:BA:2006:C:O5'	1.94	0.50
22:BA:1157:G:H2'	22:BA:1158:C:H6	1.75	0.50
16:CP:25:ARG:O	16:CP:26:ASN:ND2	2.44	0.50
5:AE:100:GLU:N	5:AE:121:ASN:HB2	2.26	0.50
22:DA:1819:A:H1'	22:DA:1821:A:C6	2.46	0.50
22:DA:1338:G:C4'	41:DT:18:GLU:OE2	2.52	0.50
4:AD:109:THR:HG22	4:AD:112:GLU:HB2	1.92	0.50
16:AP:20:VAL:HG22	16:AP:32:PHE:HB2	1.92	0.50
22:DA:2331:G:C2	22:DA:2385:C:N3	2.79	0.50
22:DA:858:G:C4	22:DA:2268:A:C2	2.99	0.50
2:AB:15:PHE:CD1	2:AB:16:GLY:N	2.76	0.50
7:CG:91:ARG:CG	7:CG:92:PRO:CD	2.75	0.50
22:DA:1053:C:N4	22:DA:1054:A:N6	2.59	0.50
48:D0:27:LEU:N	48:D0:27:LEU:HD22	2.26	0.50
22:DA:2815:C:O2'	48:D0:40:HIS:HB2	2.11	0.50
22:DA:2817:U:O2	22:DA:2836:U:H1'	2.10	0.50
1:AA:1286:U:H2'	1:AA:1286:U:O2	2.10	0.50
22:DA:291:G:C6	22:DA:292:U:C4	2.99	0.50
42:DU:24:VAL:HG12	42:DU:24:VAL:O	2.11	0.50
22:DA:1355:G:C2'	22:DA:1356:G:H5'	2.40	0.50
22:DA:1420:A:C8	22:DA:2211:A:N6	2.72	0.50
22:DA:2209:G:N1	22:DA:2216:G:C6	2.78	0.50
22:DA:397:U:O2'	22:DA:398:C:P	2.70	0.50
26:DE:58:LYS:HD3	26:DE:58:LYS:N	2.25	0.50
22:DA:1914:C:O2'	22:DA:1915:U:C5'	2.58	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1529:G:H2'	22:DA:1530:G:H8	1.76	0.50
37:DP:45:VAL:CG1	37:DP:46:VAL:N	2.75	0.50
22:DA:2616:C:O2'	22:DA:2617:U:H6	1.94	0.50
29:BH:9:VAL:O	29:BH:13:GLY:HA3	2.12	0.50
22:BA:1500:G:O2'	22:BA:1501:G:H5'	2.11	0.50
26:BE:119:ILE:HD13	26:BE:119:ILE:H	1.76	0.50
1:CA:1224:U:C5'	1:CA:1225:A:OP2	2.57	0.50
1:CA:1365:G:C2	1:CA:1366:C:C2	2.99	0.50
22:DA:638:G:O2'	22:DA:639:U:C5'	2.59	0.50
5:CE:103:GLY:HA3	5:CE:120:HIS:O	2.10	0.50
24:BC:246:PRO:HD2	24:BC:247:TRP:CZ3	2.45	0.50
26:DE:170:ARG:CZ	26:DE:176:ASP:HB2	2.39	0.50
1:CA:185:U:C4	1:CA:186:C:N4	2.79	0.50
1:CA:193:C:H1'	20:CT:54:GLN:HE21	1.72	0.50
1:CA:66:A:H61	1:CA:103:U:H3	1.59	0.50
23:DB:64:G:C5	23:DB:65:U:C4	2.99	0.50
32:BK:2:ILE:O	32:BK:3:GLN:O	2.30	0.50
1:AA:1314:C:C5	19:AS:5:LYS:HD3	2.47	0.50
1:CA:1250:A:H2'	1:CA:1251:A:O4'	2.11	0.50
35:BN:32:GLU:HB3	35:BN:115:LEU:HD12	1.94	0.50
22:BA:1081:U:C6	22:BA:1081:U:OP2	2.64	0.50
22:BA:301:G:C6	22:BA:317:G:C6	2.98	0.50
4:AD:3:TYR:CE2	4:AD:5:GLY:O	2.65	0.50
36:DO:6:ALA:O	36:DO:10:ARG:HG3	2.10	0.50
22:DA:1649:G:C2	22:DA:2009:A:C2	2.99	0.50
22:DA:363:G:O2'	22:DA:364:C:H5'	2.11	0.50
33:DL:20:GLY:HA2	33:DL:28:GLY:HA2	1.93	0.50
27:DF:92:GLY:O	27:DF:95:MET:HB3	2.10	0.50
21:CU:13:VAL:CG2	21:CU:15:LEU:HB3	2.41	0.50
21:CU:13:VAL:CG2	21:CU:15:LEU:HD23	2.41	0.50
35:DN:84:GLY:N	35:DN:85:PRO:CD	2.73	0.50
29:DH:66:ASN:HD22	29:DH:137:GLU:HB3	1.77	0.50
22:DA:2458:G:C4'	22:DA:2459:A:OP1	2.59	0.50
17:CQ:59:GLU:O	17:CQ:75:VAL:HG22	2.10	0.50
28:BG:33:THR:H	28:BG:34:ARG:NH1	2.08	0.50
1:AA:1197:A:H5'	1:AA:1197:A:H8	1.77	0.50
24:BC:119:VAL:HG12	24:BC:133:ASN:HD21	1.75	0.50
28:DG:8:VAL:HB	28:DG:49:LEU:HB3	1.93	0.50
22:DA:1317:G:N2	22:DA:1336:A:C2	2.79	0.50
22:BA:324:A:N6	22:BA:339:U:O4'	2.44	0.50
30:BI:6:ALA:HB3	30:BI:60:VAL:H	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1178:C:C2	22:DA:1179:G:C8	2.99	0.50
22:BA:79:C:O2'	22:BA:346:A:H1'	2.12	0.50
18:AR:33:THR:CG2	18:AR:37:LYS:HB2	2.40	0.50
1:CA:31:G:H5'	1:CA:306:A:N1	2.26	0.50
1:AA:687:A:N1	1:AA:704:A:C5	2.79	0.50
22:DA:597:G:H2'	22:DA:598:U:O4'	2.10	0.50
3:AC:152:VAL:CG2	3:AC:152:VAL:O	2.59	0.50
1:CA:696:A:H2'	1:CA:697:U:H6	1.77	0.50
32:BK:103:VAL:O	32:BK:122:VAL:HB	2.12	0.50
22:DA:560:C:C2'	22:DA:561:G:H5'	2.41	0.50
22:DA:1767:G:C5	22:DA:1768:C:H5	2.28	0.50
25:DD:169:ARG:O	25:DD:170:VAL:CG2	2.59	0.50
28:DG:152:ARG:CD	28:DG:153:PRO:HD2	2.41	0.50
1:AA:767:A:H2'	1:AA:768:A:O4'	2.11	0.50
11:AK:43:TRP:C	11:AK:43:TRP:CE3	2.85	0.50
1:AA:659:U:OP1	15:AO:4:THR:HG22	2.11	0.50
22:DA:615:U:N3	26:DE:35:TYR:CE1	2.79	0.50
22:DA:2767:C:O2'	22:DA:2768:U:H5'	2.11	0.50
15:AO:28:VAL:O	15:AO:31:LEU:HB2	2.12	0.50
22:DA:2635:A:H8	22:DA:2635:A:O5'	1.94	0.50
1:AA:999:C:H2'	1:AA:1000:A:H8	1.76	0.50
22:BA:2273:A:H2'	22:BA:2274:A:C8	2.45	0.50
22:BA:2720:U:C6	22:BA:2872:A:N6	2.79	0.50
22:BA:570:G:H2'	22:BA:2030:A:N7	2.25	0.50
22:DA:1798:U:C4	22:DA:1819:A:C2	2.98	0.50
24:DC:23:LEU:HD12	24:DC:80:LEU:CB	2.42	0.50
9:CI:6:TYR:HE2	9:CI:17:ARG:HA	1.76	0.50
22:DA:1393:A:H62	41:DT:19:LYS:CG	2.24	0.50
22:DA:1056:G:H1'	22:DA:1103:A:C6	2.46	0.50
48:D0:42:ILE:CD1	48:D0:48:TYR:CG	2.94	0.50
46:DY:21:LEU:HD23	46:DY:25:GLN:CD	2.31	0.50
22:DA:112:U:H5'	46:DY:58:ASN:ND2	2.26	0.50
45:DX:58:ILE:CG1	45:DX:66:VAL:HG11	2.42	0.50
21:CU:23:GLU:O	21:CU:24:LYS:HB3	2.11	0.50
1:AA:543:U:O2'	1:AA:544:G:H5'	2.12	0.50
4:CD:58:GLN:HG3	4:CD:62:ARG:HH11	1.77	0.50
18:CR:55:ALA:CA	18:CR:58:ILE:HG13	2.41	0.50
38:DQ:26:ALA:HA	38:DQ:29:ARG:HG3	1.92	0.50
17:AQ:73:THR:HG22	17:AQ:74:LEU:H	1.76	0.50
1:CA:1225:A:H2'	1:CA:1225:A:N3	2.26	0.50
19:CS:54:ARG:HG2	19:CS:55:GLN:N	2.25	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:623:C:O2'	22:DA:624:C:H5'	2.12	0.50
1:CA:811:C:H4'	1:CA:900:A:N6	2.26	0.50
11:AK:92:ARG:HD3	21:AU:24:LYS:HE2	1.91	0.50
27:DF:45:ASP:CG	27:DF:47:LYS:HB2	2.32	0.50
9:AI:98:ARG:HG3	9:AI:103:VAL:HG11	1.92	0.50
22:DA:1655:A:H5'	25:DD:118:PHE:CE1	2.45	0.50
32:BK:21:CYS:CA	32:BK:41:ILE:HD12	2.28	0.50
2:CB:90:PHE:CE2	2:CB:149:GLY:HA3	2.46	0.50
1:CA:864:A:H2	1:CA:917:G:N3	2.09	0.50
22:BA:548:G:C8	22:BA:548:G:C3'	2.94	0.50
6:AF:47:LEU:HB3	18:AR:65:SER:OG	2.11	0.50
1:AA:1155:A:O2'	1:AA:1156:G:H5'	2.11	0.50
22:DA:404:A:H1'	22:DA:406:G:C5	2.47	0.50
22:DA:406:G:O2'	22:DA:407:G:C5'	2.60	0.50
22:DA:410:G:N2	22:DA:418:C:C2	2.80	0.50
22:BA:1644:C:O2	22:BA:1644:C:H2'	2.09	0.50
7:CG:11:ILE:HD13	7:CG:24:LYS:HB2	1.94	0.50
50:D2:15:SER:O	50:D2:16:HIS:ND1	2.45	0.50
20:AT:27:MET:HE1	20:AT:57:VAL:HG22	1.94	0.50
34:BM:114:ARG:HA	34:BM:130:PHE:HE1	1.74	0.50
17:CQ:22:VAL:CG2	17:CQ:58:VAL:HG21	2.41	0.50
29:DH:64:ALA:C	29:DH:66:ASN:N	2.63	0.50
22:DA:1671:U:O2	22:DA:1673:G:H8	1.92	0.50
1:CA:846:G:C2'	1:CA:847:G:H5'	2.41	0.50
34:BM:64:TRP:HB2	34:BM:104:GLU:HB2	1.94	0.50
24:DC:32:LEU:HD23	24:DC:63:ILE:HG12	1.94	0.50
22:DA:2531:A:C5'	28:DG:156:TYR:CE2	2.93	0.50
1:AA:1469:C:C3'	1:AA:1469:C:H6	2.23	0.50
16:AP:48:GLU:OE1	16:AP:49:GLY:N	2.44	0.50
1:CA:342:C:C2'	1:CA:343:U:H5'	2.41	0.50
28:DG:8:VAL:O	28:DG:9:VAL:HB	2.11	0.50
39:BR:18:GLN:O	39:BR:97:LYS:O	2.29	0.50
22:BA:2086:U:H2'	22:BA:2087:G:H8	1.74	0.50
1:AA:1494:G:C2	1:AA:1495:U:C6	2.99	0.50
43:BV:5:ASN:N	43:BV:5:ASN:ND2	2.52	0.50
10:AJ:32:THR:HG23	10:AJ:33:GLY:N	2.26	0.50
26:DE:122:GLU:O	26:DE:122:GLU:HG2	2.11	0.50
22:BA:1857:G:N3	22:BA:1884:G:C2	2.79	0.50
1:CA:1040:U:C2'	1:CA:1041:G:H5'	2.41	0.50
1:AA:1427:C:H2'	1:AA:1428:A:H5'	1.94	0.50
22:BA:2080:A:C5'	45:BX:18:SER:HB3	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:3:VAL:O	12:AL:7:VAL:HG23	2.11	0.50
13:AM:68:LEU:HD11	13:AM:72:ILE:HD11	1.93	0.50
39:DR:19:THR:HG22	39:DR:20:VAL:H	1.76	0.50
22:BA:978:G:O2'	22:BA:979:A:H5'	2.12	0.50
38:DQ:47:ARG:O	38:DQ:47:ARG:HG2	2.02	0.50
2:CB:93:HIS:HB2	2:CB:145:ASN:O	2.10	0.50
39:BR:90:ARG:O	39:BR:91:GLN:HB3	2.10	0.50
1:CA:1527:U:H2'	1:CA:1528:U:H6	1.76	0.50
1:CA:831:A:OP1	2:CB:20:ARG:HG3	2.11	0.50
22:BA:182:A:O2'	22:BA:183:C:H5'	2.12	0.50
22:DA:934:U:H2'	22:DA:935:C:C6	2.45	0.50
1:AA:577:G:O2'	1:AA:578:C:H5'	2.11	0.50
26:DE:88:ARG:CB	26:DE:89:PRO:HD2	2.42	0.50
41:DT:64:LYS:N	41:DT:64:LYS:HD2	2.26	0.50
22:DA:2029:G:C2	22:DA:2033:A:N7	2.80	0.50
3:AC:95:GLY:O	3:AC:96:VAL:HG13	2.12	0.50
22:DA:1465:G:C5	22:DA:1466:U:C5	3.00	0.50
22:BA:1157:G:H2'	22:BA:1158:C:C6	2.45	0.50
45:BX:70:LEU:HB3	45:BX:75:GLU:HB2	1.94	0.50
1:CA:656:G:O2'	15:CO:27:GLN:NE2	2.43	0.50
5:CE:155:LYS:HB3	8:CH:70:VAL:HG23	1.92	0.50
1:AA:1048:G:OP1	14:AN:3:GLN:N	2.43	0.50
12:AL:74:GLN:O	12:AL:75:GLU:C	2.49	0.50
26:BE:37:ALA:C	26:BE:39:ALA:H	2.15	0.50
45:BX:19:HIS:C	45:BX:21:LEU:H	2.13	0.50
1:CA:1007:U:H2'	1:CA:1007:U:O2	2.10	0.50
24:DC:103:ILE:HD12	24:DC:104:LEU:N	2.26	0.50
6:CF:43:GLY:O	6:CF:44:ARG:C	2.49	0.50
22:DA:2798:U:C5'	22:DA:2800:A:H62	2.25	0.50
1:CA:1278:G:H4'	1:CA:1279:G:H5'	1.88	0.50
22:DA:2264:C:C5	22:DA:2265:U:C5	2.99	0.50
44:DW:35:ILE:HG22	44:DW:36:ILE:N	2.26	0.50
22:DA:728:G:N3	22:DA:730:A:C8	2.80	0.50
22:DA:1077:A:O2'	22:DA:1078:U:O5'	2.29	0.50
12:CL:115:LYS:O	12:CL:116:TYR:CB	2.59	0.50
22:DA:306:U:H3	22:DA:312:G:H1	1.58	0.50
22:DA:319:G:N7	22:DA:320:A:N7	2.59	0.50
22:DA:462:C:H2'	22:DA:463:G:O4'	2.11	0.50
38:BQ:86:SER:HB3	39:BR:51:VAL:CG1	2.40	0.50
4:CD:12:ARG:HG3	4:CD:33:ILE:HA	1.94	0.50
4:CD:2:ARG:NH2	4:CD:114:ARG:HH11	2.08	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:29:THR:CG2	4:CD:30:LYS:CD	2.83	0.50
10:CJ:15:HIS:HE1	10:CJ:68:ARG:CD	2.20	0.50
22:DA:527:C:O2'	22:DA:528:A:P	2.70	0.50
17:AQ:80:LYS:HZ2	17:AQ:80:LYS:N	2.09	0.50
8:CH:33:VAL:C	8:CH:35:ILE:H	2.14	0.50
26:BE:10:SER:O	26:BE:11:ALA:HB3	2.12	0.50
33:DL:83:ALA:CB	33:DL:118:THR:HG22	2.41	0.50
1:CA:765:G:O6	1:CA:811:C:C5	2.65	0.50
41:BT:39:THR:CG2	41:BT:39:THR:O	2.59	0.50
21:AU:33:ARG:CG	21:AU:34:ARG:H	2.24	0.50
41:DT:29:THR:N	41:DT:87:LEU:CB	2.64	0.50
8:AH:77:VAL:O	8:AH:79:ARG:HG2	2.12	0.50
22:DA:665:U:O2'	22:DA:666:A:H5'	2.12	0.50
22:BA:763:G:O2'	22:BA:765:C:H5'	2.11	0.50
22:DA:1732:C:H3'	22:DA:1733:G:H5''	1.93	0.50
27:BF:151:LEU:C	27:BF:151:LEU:CD1	2.80	0.50
22:DA:2226:C:H2'	22:DA:2227:A:H8	1.76	0.50
22:DA:1301:A:N7	22:DA:1303:G:C8	2.80	0.50
4:AD:116:LEU:HB3	4:AD:122:ILE:HD12	1.93	0.50
4:CD:77:GLU:C	4:CD:81:LEU:HD12	2.31	0.50
20:CT:61:ALA:C	20:CT:63:LYS:H	2.14	0.50
22:DA:404:A:N3	22:DA:406:G:C6	2.79	0.50
22:BA:1275:A:O2'	22:BA:1645:G:N3	2.44	0.50
33:DL:23:ILE:N	33:DL:23:ILE:CD1	2.74	0.50
22:BA:1958:C:C2'	22:BA:1959:G:H5'	2.42	0.50
29:DH:62:LEU:HD12	29:DH:63:ALA:H	1.76	0.50
47:BZ:34:THR:CG2	47:BZ:35:VAL:N	2.75	0.50
12:CL:19:ASN:HD22	12:CL:19:ASN:N	1.86	0.50
1:AA:314:C:O2'	1:AA:315:A:H5'	2.11	0.50
22:DA:1713:A:H1'	22:DA:1716:U:H5'	1.93	0.50
22:DA:2259:U:C5	22:DA:2427:C:N4	2.80	0.50
46:BY:18:LEU:O	46:BY:22:LEU:HB3	2.09	0.50
22:DA:533:G:O5'	38:DQ:23:TYR:CD2	2.63	0.50
1:CA:444:G:N1	1:CA:445:G:C5	2.80	0.50
5:CE:38:VAL:HG11	5:CE:70:MET:SD	2.51	0.50
1:AA:1170:A:H2'	1:AA:1171:A:O4'	2.12	0.50
37:BP:92:ARG:O	37:BP:92:ARG:HG3	2.11	0.50
16:CP:44:SER:HB2	16:CP:46:LYS:HD3	1.92	0.50
36:BO:67:ASN:H	36:BO:70:ALA:HB3	1.76	0.50
22:DA:352:A:C3'	22:DA:353:C:H4'	2.41	0.50
3:AC:13:ILE:HD13	3:AC:13:ILE:N	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:13:ILE:HG12	3:AC:14:VAL:HG22	1.92	0.50
22:BA:28:A:C2	22:BA:513:A:C8	3.00	0.50
6:AF:55:HIS:O	6:AF:56:LYS:CB	2.55	0.50
30:BI:56:VAL:HG23	30:BI:69:VAL:O	2.10	0.50
39:BR:61:ALA:HB2	39:BR:98:ILE:HD13	1.93	0.50
22:BA:2085:U:H2'	22:BA:2086:U:O5'	2.12	0.50
1:CA:115:G:C2	1:CA:289:G:N7	2.79	0.50
19:CS:14:LEU:C	19:CS:14:LEU:HD12	2.31	0.50
30:DI:132:ALA:HB1	30:DI:137:LEU:HB2	1.94	0.50
1:AA:121:U:O2'	1:AA:122:G:OP1	2.28	0.50
22:BA:1385:A:O2'	22:BA:1396:U:O2	2.27	0.50
31:DJ:86:GLN:O	31:DJ:87:ALA:HB2	2.11	0.50
1:CA:878:A:O2'	1:CA:879:C:H5'	2.12	0.50
1:AA:9:G:C2	1:AA:10:A:C8	2.99	0.50
1:CA:178:C:O2'	1:CA:179:A:H5'	2.11	0.50
1:CA:676:A:H2'	1:CA:677:U:C6	2.46	0.50
34:DM:62:LYS:C	34:DM:63:ILE:HD12	2.31	0.50
1:CA:414:A:O2'	1:CA:415:A:C4'	2.60	0.50
32:BK:4:GLU:O	32:BK:5:GLN:HB2	2.11	0.50
22:BA:830:G:H4'	22:BA:831:G:OP2	2.11	0.50
42:BU:27:VAL:HG22	42:BU:28:LEU:N	2.27	0.50
36:DO:77:ALA:O	36:DO:81:ARG:HG3	2.11	0.50
22:BA:2806:C:C2'	22:BA:2807:U:H5'	2.41	0.50
22:BA:1240:U:H5''	22:BA:1240:U:C6	2.46	0.50
23:BB:19:C:O2'	23:BB:20:G:H5'	2.12	0.50
29:BH:119:ASN:C	29:BH:121:VAL:H	2.14	0.50
12:AL:46:SER:O	12:AL:47:ALA:HB2	2.11	0.50
12:CL:74:GLN:NE2	12:CL:74:GLN:HA	2.27	0.50
27:BF:27:VAL:O	27:BF:27:VAL:CG1	2.59	0.50
22:DA:562:U:H2'	22:DA:572:A:O4'	2.10	0.50
12:CL:120:ARG:HG2	12:CL:121:PRO:N	2.26	0.50
22:BA:570:G:C4	22:BA:2030:A:N7	2.78	0.50
33:BL:96:LYS:HD3	33:BL:103:ILE:HA	1.92	0.50
10:CJ:38:GLY:O	10:CJ:40:ILE:CD1	2.60	0.50
27:BF:153:ILE:HD12	27:BF:153:ILE:O	2.12	0.50
4:AD:36:ALA:C	4:AD:38:GLY:H	2.14	0.50
22:DA:310:A:C4	22:DA:312:G:N7	2.79	0.50
24:BC:90:ILE:HG21	24:BC:102:TYR:CD1	2.47	0.50
51:B3:31:ILE:HG13	51:B3:31:ILE:O	2.12	0.50
22:DA:116:C:C2'	22:DA:117:G:H5'	2.42	0.50
22:DA:54:G:N1	22:DA:117:G:C2	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:47:VAL:CG1	39:BR:54:VAL:HB	2.41	0.50
1:CA:1092:A:C6	1:CA:1183:U:O2	2.64	0.50
25:BD:105:LYS:HE3	25:BD:176:ASP:HB3	1.92	0.50
1:AA:75:G:C5	1:AA:76:G:C8	2.98	0.50
1:CA:734:G:C2	1:CA:735:C:C2	2.99	0.50
22:DA:527:C:C5	22:DA:2779:U:C6	3.00	0.50
22:DA:1280:G:H2'	22:DA:1281:G:H5'	1.92	0.50
1:AA:264:C:H2'	1:AA:265:G:O4'	2.11	0.50
17:AQ:56:ASP:OD2	17:AQ:80:LYS:HA	2.12	0.50
20:AT:83:ASN:HA	20:AT:86:ALA:OXT	2.11	0.50
3:AC:33:ASP:O	3:AC:37:LYS:CB	2.60	0.50
1:AA:864:A:C3'	1:AA:865:A:C8	2.94	0.50
47:DZ:51:SER:HA	47:DZ:54:VAL:HG23	1.93	0.50
31:DJ:25:LEU:HB2	31:DJ:62:VAL:CG2	2.39	0.50
29:BH:89:LYS:CG	29:BH:90:LEU:H	2.00	0.50
36:BO:116:GLN:O	36:BO:117:PHE:HB3	2.12	0.50
38:DQ:46:TYR:CE2	38:DQ:50:ARG:NH1	2.79	0.50
32:BK:1:MET:CE	32:BK:32:TYR:CE1	2.95	0.50
22:BA:1459:G:C5	22:BA:1461:C:C4	2.99	0.50
9:CI:53:LEU:HG	9:CI:96:GLU:CB	2.41	0.50
4:CD:76:LYS:O	4:CD:79:ALA:HB3	2.11	0.50
22:BA:1106:G:C4	22:BA:1107:G:C8	3.00	0.50
16:AP:16:PHE:C	16:AP:16:PHE:CD1	2.84	0.50
15:CO:16:ARG:HB2	15:CO:23:SER:CB	2.42	0.50
4:CD:176:LYS:O	4:CD:176:LYS:HD2	2.11	0.50
22:DA:777:G:N2	22:DA:778:G:C4	2.80	0.50
26:BE:42:GLY:C	26:BE:43:THR:HG23	2.31	0.50
22:DA:2009:A:O2'	22:DA:2010:G:H5'	2.12	0.50
27:DF:65:LEU:CD1	27:DF:67:THR:HG22	2.37	0.50
38:DQ:31:TYR:C	38:DQ:33:VAL:H	2.15	0.50
44:BW:9:THR:O	44:BW:10:ARG:O	2.30	0.50
22:DA:2673:G:C2	22:DA:2674:G:C8	3.00	0.50
7:CG:148:LYS:HD2	11:CK:60:PHE:CD1	2.47	0.50
1:CA:159:G:C2	1:CA:161:A:OP2	2.65	0.50
22:BA:1416:G:O2'	22:BA:1417:C:C5'	2.60	0.50
22:DA:876:C:H2'	22:DA:877:A:OP1	2.10	0.50
22:DA:644:A:C2'	22:DA:645:C:C5'	2.89	0.50
22:DA:2369:A:C2'	22:DA:2370:G:H5'	2.42	0.50
19:CS:10:ILE:HG22	19:CS:14:LEU:HD11	1.93	0.50
1:AA:747:A:C5'	1:AA:748:G:OP2	2.59	0.50
22:BA:1590:A:H2'	22:BA:1591:A:H8	1.73	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:855:U:H2'	1:CA:856:C:H6	1.76	0.50
22:DA:11:C:H2'	22:DA:12:U:H5'	1.93	0.50
22:BA:395:U:O2'	22:BA:396:G:C8	2.62	0.50
13:CM:81:ASP:CB	13:CM:82:LEU:HD12	2.42	0.50
1:AA:1032:G:H2'	1:AA:1033:G:H5'	1.94	0.50
22:DA:2522:U:H2'	22:DA:2523:G:H5'	1.94	0.50
38:BQ:40:LYS:HB2	38:BQ:40:LYS:HZ3	1.75	0.50
1:CA:39:G:C4	1:CA:40:C:C5	2.99	0.50
22:BA:2134:A:O2'	22:BA:2135:A:H8	1.94	0.50
22:BA:1565:C:HO2'	22:BA:1566:A:P	2.34	0.50
25:BD:35:THR:CG2	25:BD:51:THR:HG22	2.42	0.50
22:BA:1383:A:H2'	22:BA:1384:A:C8	2.47	0.50
22:BA:1405:U:C2	22:BA:1406:U:C5	3.00	0.50
22:DA:1082:U:H2'	22:DA:1083:U:H5'	1.93	0.50
32:DK:25:LEU:HD23	32:DK:25:LEU:H	1.76	0.50
1:AA:781:A:C3'	1:AA:782:A:H5'	2.42	0.50
1:CA:1231:G:H2'	1:CA:1232:U:H6	1.76	0.50
16:CP:12:LYS:O	16:CP:13:LYS:HB2	2.11	0.50
22:DA:563:A:N3	38:DQ:36:GLN:NE2	2.59	0.50
13:AM:38:ILE:HG13	13:AM:55:LEU:HD21	1.94	0.50
1:CA:805:C:C2	1:CA:806:C:C5	3.00	0.50
1:AA:284:C:H2'	1:AA:285:C:H6	1.76	0.50
14:AN:11:LYS:HA	14:AN:14:ALA:HB3	1.92	0.50
22:DA:701:G:H2'	22:DA:701:G:N3	2.25	0.50
1:AA:1437:A:O5'	1:AA:1437:A:H8	1.95	0.50
1:CA:787:A:C2'	1:CA:788:U:H5'	2.42	0.50
36:BO:55:GLU:O	36:BO:56:LYS:C	2.47	0.50
22:BA:2280:G:C2	22:BA:2281:A:C8	2.99	0.50
22:BA:2848:G:O2'	22:BA:2867:G:N2	2.34	0.50
37:BP:53:GLY:O	37:BP:56:SER:OG	2.23	0.50
31:BJ:44:TYR:C	31:BJ:45:THR:CG2	2.78	0.50
38:BQ:93:ILE:CG2	38:BQ:94:LEU:H	2.24	0.50
5:AE:104:ILE:CG2	5:AE:104:ILE:O	2.53	0.50
22:DA:1799:G:C8	24:DC:179:GLU:OE1	2.60	0.50
1:CA:1133:G:C2	1:CA:1142:G:C5	2.99	0.50
1:AA:428:G:H1'	1:AA:430:A:C8	2.46	0.50
26:DE:108:ILE:O	26:DE:112:LEU:HB2	2.11	0.50
44:DW:45:HIS:HB3	44:DW:58:LEU:HD11	1.93	0.50
1:AA:1118:U:OP1	9:AI:10:ARG:HD2	2.11	0.50
1:AA:1256:A:C4	1:AA:1258:G:C6	3.00	0.50
22:DA:321:U:N1	26:DE:159:LEU:HD21	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:81:ARG:H	42:DU:81:ARG:CD	2.25	0.50
22:DA:468:G:H5''	26:DE:55:SER:HB2	1.92	0.50
3:CC:110:LEU:HD21	3:CC:203:LYS:CD	2.15	0.50
29:DH:25:TYR:O	29:DH:29:PHE:HB3	2.11	0.50
31:DJ:45:THR:N	31:DJ:46:PRO:CD	2.69	0.50
44:BW:51:GLY:H	44:BW:61:LYS:HZ2	1.58	0.50
43:DV:9:ARG:HD2	43:DV:40:ILE:O	2.11	0.50
43:DV:26:PHE:CE1	43:DV:86:LEU:CB	2.93	0.50
6:CF:35:LYS:HB2	6:CF:37:HIS:HE1	1.77	0.50
18:CR:72:ARG:HH21	21:CU:3:ILE:HD13	1.75	0.50
22:BA:1712:U:N3	22:BA:1713:A:C5	2.79	0.50
22:DA:206:U:H2'	22:DA:207:A:H8	1.76	0.50
1:AA:267:C:C5	1:AA:268:U:C5	3.00	0.50
1:CA:982:U:C1'	1:CA:983:A:N7	2.72	0.50
13:CM:94:LEU:N	13:CM:94:LEU:HD12	2.27	0.50
4:AD:18:LEU:HD21	4:AD:59:LYS:HG2	1.92	0.50
22:DA:638:G:O2'	22:DA:639:U:H5'	2.12	0.50
25:BD:121:THR:HB	25:BD:127:PHE:CD1	2.46	0.50
22:DA:1135:C:H6	22:DA:1135:C:H5''	1.76	0.50
29:BH:110:VAL:O	29:BH:111:ALA:HB2	2.11	0.50
7:CG:59:GLU:C	7:CG:61:PHE:H	2.15	0.50
24:BC:247:TRP:C	24:BC:249:VAL:H	2.15	0.50
17:CQ:3:LYS:NZ	17:CQ:6:THR:CG2	2.60	0.50
41:DT:29:THR:HB	41:DT:86:THR:CA	2.42	0.50
22:BA:988:A:OP2	47:BZ:11:SER:HB3	2.11	0.50
32:DK:6:THR:O	32:DK:8:LEU:HD12	2.12	0.50
27:DF:103:ILE:H	27:DF:107:VAL:CG1	2.24	0.50
27:DF:43:ILE:HG12	27:DF:77:LYS:HD3	1.94	0.50
22:DA:1156:A:H4'	22:DA:1157:G:OP1	2.08	0.50
22:DA:840:C:H4'	22:DA:1192:G:O2'	2.11	0.50
32:BK:52:VAL:HG23	32:BK:53:LYS:N	2.26	0.50
9:CI:51:LEU:C	9:CI:53:LEU:H	2.14	0.50
22:BA:1327:A:H2'	22:BA:1328:A:O5'	2.11	0.50
22:DA:947:A:H2'	22:DA:948:C:C6	2.47	0.50
35:BN:44:LEU:HD11	35:BN:48:VAL:HG23	1.93	0.50
52:D4:36:ARG:O	52:D4:37:GLN:HB3	2.10	0.50
20:CT:59:ARG:C	20:CT:61:ALA:N	2.65	0.50
8:CH:81:GLY:O	8:CH:82:LEU:HB2	2.11	0.50
12:CL:2:THR:CB	12:CL:5:GLN:HB2	2.30	0.50
1:AA:1091:U:O2	1:AA:1093:A:C8	2.65	0.50
22:DA:223:A:O2'	22:DA:408:G:N3	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:5:HIS:NE2	3:CC:183:TYR:HE2	2.09	0.50
22:DA:2298:A:O2'	22:DA:2299:U:C5'	2.60	0.50
1:CA:667:G:H4'	15:CO:50:HIS:CG	2.46	0.50
22:DA:14:A:N6	22:DA:526:A:C4	2.79	0.50
11:CK:74:LYS:HD2	11:CK:104:PHE:HE1	1.76	0.50
20:AT:53:MET:CE	20:AT:57:VAL:CG2	2.90	0.50
1:AA:642:A:N7	8:AH:106:SER:HA	2.27	0.50
1:AA:587:G:N2	1:AA:755:G:C5	2.79	0.50
22:DA:424:G:C2	22:DA:425:G:C8	3.00	0.50
47:DZ:15:ARG:HD2	47:DZ:15:ARG:H	1.76	0.50
1:AA:647:C:C2'	1:AA:648:A:H5'	2.42	0.50
27:DF:8:LYS:HB2	27:DF:8:LYS:HZ3	1.74	0.50
40:DS:55:ILE:H	40:DS:55:ILE:HD12	1.76	0.50
22:BA:1437:C:H2'	22:BA:1438:U:C6	2.45	0.50
51:D3:28:LEU:HA	51:D3:32:LEU:HD21	1.93	0.50
52:D4:10:LEU:HD12	52:D4:33:HIS:ND1	2.26	0.50
22:BA:871:U:OP1	34:BM:5:LYS:HG3	2.10	0.50
34:BM:5:LYS:NZ	34:BM:5:LYS:HB3	2.26	0.50
22:DA:1249:U:H4'	38:DQ:3:VAL:HB	1.92	0.50
1:CA:775:G:O2'	1:CA:776:G:H5'	2.12	0.50
1:CA:738:C:N3	1:CA:739:C:C5	2.79	0.50
1:AA:417:G:C5	1:AA:418:C:C4	3.00	0.50
1:AA:131:A:H2'	1:AA:132:C:C6	2.46	0.50
30:BI:72:THR:HB	30:BI:112:LYS:NZ	2.26	0.50
1:AA:1453:G:N3	1:AA:1453:G:H2'	2.27	0.50
22:DA:1768:C:H2'	22:DA:1768:C:O2	2.11	0.50
52:B4:3:VAL:C	52:B4:4:ARG:HG2	2.30	0.50
16:AP:40:ASN:OD1	16:AP:42:ILE:HB	2.10	0.50
1:AA:1294:G:C6	1:AA:1295:U:C4	3.00	0.50
25:BD:38:LYS:O	25:BD:46:ARG:HA	2.12	0.50
35:DN:21:PHE:O	35:DN:25:ALA:CB	2.59	0.50
23:DB:81:G:H2'	23:DB:82:U:H6	1.77	0.50
22:BA:2840:C:H2'	22:BA:2841:C:H6	1.77	0.50
25:BD:39:ASP:CG	25:BD:40:LEU:N	2.65	0.50
1:AA:134:G:H2'	1:AA:135:C:C6	2.47	0.50
1:AA:886:G:H2'	1:AA:887:G:O4'	2.12	0.50
37:DP:10:GLU:HG2	37:DP:10:GLU:O	2.10	0.50
19:CS:15:LEU:HD23	19:CS:15:LEU:C	2.32	0.50
22:BA:1074:G:H2'	22:BA:1075:C:C6	2.47	0.50
22:BA:2489:U:H2'	22:BA:2490:G:O5'	2.12	0.50
22:DA:1341:G:H2'	22:DA:1397:U:O2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1342:A:C3'	22:DA:1343:G:H5''	2.41	0.50
1:CA:62:U:H4'	1:CA:378:G:H22	1.77	0.50
22:DA:1773:A:C8	22:DA:1829:A:C1'	2.95	0.50
48:D0:32:THR:HG21	48:D0:47:TYR:CE2	2.47	0.50
26:DE:162:ARG:C	26:DE:164:LEU:H	2.15	0.50
41:DT:69:ARG:NE	41:DT:70:HIS:HD2	2.10	0.50
22:DA:118:A:O5'	22:DA:119:A:H5''	2.11	0.50
22:DA:164:C:H2'	22:DA:165:A:O4'	2.12	0.50
22:DA:46:G:H2'	22:DA:46:G:N3	2.25	0.50
28:BG:137:LYS:O	28:BG:140:ILE:HD13	2.10	0.50
22:DA:36:G:C2'	22:DA:37:C:H5'	2.42	0.50
39:BR:39:LEU:HB3	39:BR:49:ILE:HD13	1.93	0.50
22:DA:2750:A:O2'	22:DA:2752:C:N4	2.40	0.50
1:AA:99:C:H2'	1:AA:100:G:OP2	2.11	0.50
44:BW:22:VAL:O	44:BW:25:PHE:HB2	2.12	0.50
18:CR:31:TYR:CD2	18:CR:54:LEU:HD21	2.47	0.50
33:DL:58:TYR:O	51:D3:12:ARG:CZ	2.59	0.50
22:DA:1290:C:O2'	22:DA:1291:C:C6	2.63	0.50
22:BA:1497:U:H5''	22:BA:1498:C:OP2	2.11	0.50
17:AQ:16:MET:HE3	17:AQ:21:VAL:HG12	1.94	0.50
17:AQ:49:ASN:O	17:AQ:49:ASN:ND2	2.44	0.50
40:DS:7:HIS:CE1	40:DS:10:ALA:HA	2.47	0.50
40:DS:8:ARG:HB3	40:DS:102:HIS:CE1	2.47	0.50
38:BQ:4:LYS:NZ	38:BQ:5:ARG:HA	2.26	0.50
1:CA:994:A:N6	1:CA:1216:A:C5'	2.75	0.50
22:DA:2642:G:H5'	31:DJ:80:HIS:CE1	2.47	0.50
22:DA:2694:G:C4	22:DA:2695:U:C6	2.99	0.50
1:AA:794:A:H2'	1:AA:795:C:C6	2.46	0.50
21:AU:36:PHE:HA	21:AU:39:LYS:HE2	1.94	0.50
3:CC:26:LYS:CE	3:CC:26:LYS:HA	2.24	0.50
25:DD:32:ASN:HA	25:DD:51:THR:O	2.11	0.50
41:BT:2:ILE:HG13	41:BT:3:ARG:CZ	2.42	0.50
22:DA:1661:G:C4	22:DA:1662:U:C6	3.00	0.50
27:DF:111:ARG:NH1	27:DF:113:PHE:CE1	2.80	0.50
27:DF:103:ILE:HG21	27:DF:173:ASP:O	2.12	0.50
6:AF:42:TRP:HZ2	6:AF:61:LEU:CD2	2.25	0.50
1:CA:68:G:H5'	1:CA:171:A:H1'	1.94	0.50
1:AA:875:U:O2'	8:AH:14:ARG:NH1	2.45	0.50
23:DB:61:G:O2'	23:DB:62:C:H5'	2.12	0.50
22:DA:1736:U:C2'	22:DA:1737:G:O5'	2.60	0.50
22:DA:2093:G:N2	22:DA:2094:A:C5	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:29:VAL:CG1	40:BS:30:SER:N	2.74	0.50
7:CG:30:MET:HE1	7:CG:33:GLY:HA2	1.93	0.50
1:AA:1202:U:N3	14:AN:81:ILE:HG21	2.26	0.50
1:AA:563:A:H1'	1:AA:566:G:O2'	2.12	0.50
29:DH:31:VAL:CB	29:DH:32:PRO:CD	2.86	0.50
22:DA:830:G:C4	22:DA:2448:A:C5	2.99	0.50
1:CA:511:C:H4'	4:CD:40:HIS:CD2	2.47	0.50
8:AH:5:PRO:O	8:AH:8:ASP:HB3	2.12	0.50
1:AA:1382:C:HO2'	1:AA:1383:C:H5'	1.74	0.50
1:AA:1346:A:O4'	1:AA:1348:U:C6	2.63	0.50
22:DA:1869:G:C2	22:DA:1873:G:N1	2.79	0.50
22:BA:33:C:H4'	22:BA:34:U:OP1	2.12	0.50
1:CA:1449:C:O2'	1:CA:1450:U:H5'	2.11	0.50
1:AA:580:C:H2'	1:AA:581:G:O4'	2.11	0.50
7:CG:11:ILE:CG2	7:CG:24:LYS:HZ1	2.25	0.50
27:DF:32:LYS:HD2	27:DF:156:THR:HG21	1.93	0.50
3:CC:84:GLU:C	3:CC:86:LEU:N	2.65	0.50
22:DA:1635:A:C2'	22:DA:1636:U:H5'	2.41	0.50
1:AA:652:U:C4	1:AA:752:G:N3	2.79	0.50
22:BA:1430:G:H2'	22:BA:1431:A:C8	2.47	0.50
22:BA:1568:G:H4'	24:BC:58:LYS:CG	2.42	0.50
22:DA:2845:U:H2'	22:DA:2846:G:O4'	2.12	0.50
2:CB:125:PHE:HD1	2:CB:137:THR:HG22	1.77	0.50
22:DA:667:U:O2	51:D3:1:PRO:HB3	2.11	0.50
23:BB:52:A:H4'	23:BB:53:A:OP1	2.11	0.50
22:DA:1975:G:C4	22:DA:1976:U:C6	3.00	0.50
22:BA:2602:A:H5''	22:BA:2603:G:C5'	2.40	0.50
45:DX:19:HIS:C	45:DX:21:LEU:N	2.65	0.50
22:BA:2425:A:H5''	22:BA:2427:C:H5'	1.94	0.50
1:AA:1387:G:C6	1:AA:1388:C:N4	2.80	0.50
27:DF:5:ASP:C	27:DF:7:TYR:N	2.65	0.50
40:DS:55:ILE:HG23	40:DS:66:ILE:HG21	1.92	0.50
1:AA:636:U:O2'	1:AA:637:C:H5'	2.12	0.50
1:AA:290:C:H2'	1:AA:291:U:C5'	2.42	0.50
1:AA:857:C:H2'	1:AA:858:G:O4'	2.11	0.50
9:CI:49:GLN:HA	9:CI:52:GLU:HG3	1.93	0.50
19:CS:38:THR:HB	19:CS:69:LYS:NZ	2.27	0.50
22:BA:2383:G:O2'	22:BA:2384:U:C5'	2.59	0.50
37:DP:62:LYS:O	37:DP:63:ILE:CB	2.59	0.50
22:DA:2472:G:H1'	22:DA:2478:A:H61	1.76	0.50
14:CN:47:LEU:CD1	14:CN:50:LEU:HD21	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:716:A:N3	11:CK:118:ASN:O	2.44	0.50
26:BE:12:LEU:O	26:BE:13:THR:HB	2.11	0.50
36:DO:12:THR:CG2	36:DO:16:ARG:HH11	2.24	0.50
29:BH:143:ILE:HD12	29:BH:143:ILE:C	2.32	0.50
25:BD:53:GLY:CA	25:BD:77:ARG:H	2.24	0.50
6:CF:81:ASN:O	6:CF:84:VAL:HG12	2.11	0.50
22:DA:1907:G:N2	22:DA:1924:C:C2	2.79	0.50
32:BK:120:PRO:HG3	37:BP:65:ASN:HD21	1.77	0.50
11:CK:22:ILE:CD1	11:CK:31:VAL:HG22	2.41	0.50
28:DG:28:LYS:H	28:DG:79:THR:HG22	1.77	0.50
22:BA:912:C:H2'	22:BA:913:U:C6	2.47	0.50
1:AA:103:U:O2	1:AA:103:U:H2'	2.11	0.50
22:BA:2264:C:H41	44:BW:11:ASN:ND2	2.10	0.50
32:DK:66:LYS:HG2	32:DK:66:LYS:O	2.12	0.50
1:CA:623:C:H6	1:CA:623:C:O5'	1.95	0.50
32:BK:51:LYS:C	32:BK:51:LYS:HE3	2.32	0.50
22:BA:1604:C:H2'	22:BA:1605:C:C6	2.47	0.50
25:BD:12:THR:CG2	25:BD:13:ARG:N	2.67	0.50
33:BL:93:ASN:ND2	33:BL:94:THR:H	2.03	0.50
28:BG:84:LYS:CB	28:BG:132:LEU:H	2.25	0.50
1:CA:1151:A:C5'	10:CJ:70:HIS:HE1	2.25	0.50
34:BM:36:VAL:HG12	34:BM:127:LYS:C	2.32	0.50
35:DN:28:LEU:CD1	35:DN:48:VAL:HG11	2.41	0.50
12:CL:85:ARG:O	12:CL:86:VAL:HG22	2.11	0.50
22:DA:61:C:N3	22:DA:94:A:C2	2.80	0.50
24:BC:103:ILE:HG23	24:BC:104:LEU:N	2.25	0.50
24:BC:257:ARG:NE	24:BC:269:ARG:HH22	2.06	0.50
22:DA:117:G:O4'	22:DA:126:A:C2	2.64	0.50
22:DA:118:A:C2	22:DA:178:G:H1'	2.40	0.50
1:CA:1097:C:C2	1:CA:1098:C:C5	2.99	0.50
1:AA:953:G:C2'	1:AA:954:G:H5'	2.42	0.50
41:BT:26:LYS:O	41:BT:27:SER:CB	2.59	0.50
38:DQ:79:ILE:HA	38:DQ:82:LEU:CD1	2.34	0.50
1:CA:796:C:OP1	11:CK:127:ARG:HB3	2.12	0.50
39:DR:39:LEU:HB2	39:DR:49:ILE:CD1	2.42	0.50
44:BW:16:GLU:OE2	44:BW:16:GLU:CA	2.60	0.50
22:BA:855:G:C2	44:BW:23:LYS:HG2	2.46	0.50
1:CA:671:G:N2	1:CA:736:C:C2	2.80	0.50
22:DA:1327:A:C2	22:DA:1328:A:H1'	2.47	0.50
44:BW:73:PRO:HG2	44:BW:76:ARG:HD2	1.91	0.50
1:CA:642:A:C8	8:CH:106:SER:HA	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:514:A:N3	22:DA:581:C:O2'	2.29	0.50
1:CA:936:C:O2'	1:CA:937:A:C8	2.46	0.50
1:CA:973:G:C6	1:CA:974:A:C6	3.00	0.50
14:CN:54:SER:O	14:CN:55:SER:HB2	2.12	0.50
22:BA:1656:C:H5''	25:BD:141:ARG:CB	2.41	0.50
10:AJ:17:LEU:HD21	10:AJ:96:VAL:CG2	2.41	0.50
47:DZ:52:PHE:CD2	47:DZ:53:MET:HG2	2.47	0.50
37:BP:103:THR:HG23	37:BP:103:THR:O	2.11	0.50
22:BA:142:A:C2	22:BA:143:C:C2	3.00	0.50
22:DA:2721:A:C2	22:DA:2873:A:C5	2.99	0.50
1:CA:140:U:O2	1:CA:183:C:N4	2.45	0.50
1:CA:182:A:H2	1:CA:194:C:N4	2.10	0.50
22:DA:1408:G:H22	22:DA:1595:C:H1'	1.75	0.50
17:CQ:18:LYS:CD	17:CQ:48:GLU:OE2	2.55	0.50
22:DA:972:A:N1	22:DA:973:A:N6	2.60	0.50
23:DB:68:C:HO2'	23:DB:69:G:H5''	1.77	0.50
25:DD:119:ALA:CB	25:DD:163:GLY:C	2.80	0.50
22:DA:1515:A:H5'	22:DA:1557:C:H5'	1.94	0.50
22:DA:2415:G:H4'	33:DL:66:PHE:CB	2.40	0.50
37:DP:78:PRO:HG2	37:DP:79:VAL:N	2.26	0.50
1:AA:1269:A:C2	1:AA:1312:G:N3	2.80	0.50
1:AA:959:A:H5''	1:AA:960:U:OP2	2.11	0.50
14:AN:80:ARG:HG3	14:AN:81:ILE:N	2.27	0.50
1:AA:558:G:C4	1:AA:559:A:H2	2.25	0.50
2:CB:110:ILE:HA	2:CB:113:LEU:HB3	1.94	0.50
1:CA:17:U:H4'	1:CA:1080:A:O4'	2.12	0.50
41:BT:50:LEU:HD23	46:BY:26:PHE:CE1	2.46	0.50
22:BA:1055:G:N3	22:BA:1055:G:H2'	2.26	0.50
1:AA:1191:A:OP1	3:AC:3:LYS:HD3	2.11	0.50
22:DA:233:A:H2'	22:DA:234:U:C5	2.47	0.50
10:AJ:53:ILE:HD11	14:AN:84:ARG:CZ	2.42	0.50
1:CA:740:U:H5'	15:CO:41:HIS:ND1	2.27	0.50
1:CA:756:C:C2'	1:CA:757:U:C5'	2.90	0.50
22:DA:786:C:O2'	22:DA:787:C:H5'	2.10	0.50
22:BA:956:G:H4'	34:BM:82:MET:HE1	1.94	0.50
22:BA:215:G:H4'	22:BA:216:A:OP1	2.11	0.50
1:CA:1471:U:H2'	1:CA:1472:U:H6	1.76	0.50
22:BA:1936:A:H2'	22:BA:1945:G:O6	2.12	0.50
3:CC:46:LEU:HD11	3:CC:86:LEU:CD1	2.42	0.50
1:AA:877:G:N3	8:AH:1:SER:N	2.59	0.50
22:BA:2659:G:P	28:BG:157:LYS:HE3	2.51	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:272:A:O2'	22:BA:273:G:P	2.69	0.50
1:CA:821:G:O2'	1:CA:822:U:O4'	2.27	0.50
22:BA:528:A:H8	22:BA:528:A:C3'	2.24	0.50
6:AF:3:HIS:H	6:AF:92:THR:HG21	1.71	0.50
22:DA:2563:U:H1'	22:DA:2566:A:N6	2.27	0.50
22:DA:5:A:C2	22:DA:2899:A:N3	2.80	0.50
22:BA:2563:U:O2	22:BA:2565:A:H8	1.94	0.50
10:CJ:33:GLY:O	10:CJ:35:GLN:N	2.40	0.50
4:CD:204:SER:OG	5:CE:105:ILE:HD11	2.11	0.50
22:DA:187:G:C2	22:DA:210:C:O2	2.65	0.50
30:BI:58:ILE:HG22	30:BI:60:VAL:HG23	1.92	0.50
22:DA:2738:A:H2'	22:DA:2739:U:O5'	2.12	0.50
1:CA:350:G:C6	1:CA:351:G:C6	3.00	0.50
46:BY:45:GLN:O	46:BY:46:VAL:CB	2.57	0.50
1:AA:122:G:O2'	1:AA:123:U:H5'	2.12	0.50
1:CA:1050:G:O2'	1:CA:1051:C:C6	2.62	0.50
22:DA:1858:A:H62	22:DA:1884:G:H21	1.60	0.50
22:BA:2728:U:O2'	22:BA:2729:G:H5''	2.11	0.50
1:AA:506:G:C6	1:AA:507:C:C4	3.00	0.50
38:BQ:40:LYS:HB2	38:BQ:40:LYS:NZ	2.27	0.50
26:DE:52:VAL:CG1	26:DE:74:LYS:HD3	2.41	0.50
1:CA:177:G:C3'	1:CA:178:C:H5'	2.42	0.50
43:BV:6:ALA:HB1	43:BV:40:ILE:CG2	2.41	0.50
12:AL:7:VAL:HG22	17:AQ:30:HIS:HD2	1.77	0.50
25:DD:56:LYS:HZ3	25:DD:56:LYS:HB3	1.77	0.50
19:CS:79:TYR:CD1	19:CS:80:ARG:N	2.78	0.50
24:DC:68:ARG:HH12	24:DC:115:ILE:CD1	2.25	0.50
22:BA:1098:A:H3'	22:BA:1099:G:C8	2.47	0.50
22:DA:559:G:C5	22:DA:560:C:C5	3.00	0.50
15:AO:86:LEU:C	15:AO:86:LEU:HD23	2.32	0.50
1:CA:525:C:H2'	1:CA:525:C:O2	2.10	0.50
22:BA:70:G:H2'	22:BA:113:U:O2'	2.12	0.50
22:DA:936:A:C2	22:DA:937:C:C2	3.00	0.50
1:CA:470:C:N3	1:CA:471:U:C5	2.80	0.50
1:CA:1426:G:H2'	1:CA:1427:C:C6	2.47	0.50
13:CM:107:THR:HG22	13:CM:107:THR:O	2.11	0.50
22:DA:719:C:H6	22:DA:719:C:O5'	1.93	0.50
42:DU:86:PHE:CG	42:DU:87:GLU:N	2.80	0.50
1:AA:715:A:H8	1:AA:715:A:O5'	1.95	0.50
47:BZ:24:LEU:O	47:BZ:24:LEU:HG	2.11	0.50
3:AC:194:VAL:O	3:AC:194:VAL:HG12	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:6:ILE:N	13:AM:6:ILE:HD12	2.27	0.50
22:BA:571:U:C4	22:BA:2030:A:N1	2.80	0.50
4:CD:191:SER:O	4:CD:192:ALA:HB2	2.08	0.50
1:CA:378:G:C2	1:CA:386:C:O2	2.65	0.50
1:CA:59:A:H2'	1:CA:59:A:N3	2.26	0.50
22:DA:1091:G:O2'	22:DA:1092:C:H5'	2.12	0.50
12:CL:106:VAL:CG1	12:CL:109:ARG:HG2	2.42	0.50
1:CA:502:A:OP1	12:CL:114:SER:HB2	2.12	0.50
22:DA:1206:G:C6	22:DA:1207:C:C4	3.00	0.50
22:DA:305:C:H1'	22:DA:313:G:N2	2.26	0.50
22:DA:92:U:H2'	22:DA:93:G:O4'	2.11	0.50
42:DU:33:VAL:O	42:DU:34:ILE:CG1	2.57	0.50
22:DA:167:A:H2'	22:DA:168:G:O4'	2.12	0.50
39:BR:49:ILE:CD1	39:BR:53:PHE:H	2.24	0.50
1:CA:1157:A:C6	1:CA:1180:A:C6	2.99	0.50
41:BT:29:THR:HG22	41:BT:86:THR:CG2	2.20	0.50
44:BW:49:ASN:O	44:BW:49:ASN:CG	2.50	0.50
43:DV:23:ALA:O	43:DV:24:ASN:HB2	2.12	0.50
1:CA:674:G:C4'	18:CR:69:TYR:CE1	2.94	0.50
18:CR:72:ARG:HG3	18:CR:73:HIS:CE1	2.47	0.50
32:DK:34:GLY:H	32:DK:37:ASP:HB2	1.76	0.50
22:DA:529:A:C5	22:DA:2023:C:C4	3.00	0.50
8:CH:58:LEU:HD23	8:CH:58:LEU:C	2.32	0.50
22:DA:1252:G:H4'	22:DA:1253:A:OP1	2.10	0.50
26:BE:5:LEU:O	26:BE:6:LYS:C	2.50	0.50
13:CM:100:ARG:NH1	13:CM:102:LYS:HE3	2.27	0.50
4:AD:52:VAL:HG22	4:AD:53:GLN:N	2.27	0.50
33:DL:85:VAL:O	33:DL:86:GLU:HB2	2.12	0.50
22:DA:2136:G:H2'	22:DA:2137:U:C6	2.47	0.50
22:DA:1993:U:O2'	22:DA:1994:C:H5'	2.12	0.50
1:AA:1123:U:O3'	10:AJ:38:GLY:HA3	2.12	0.50
1:AA:1134:G:N1	1:AA:1141:C:C4	2.80	0.50
1:AA:1143:G:N3	1:AA:1144:G:C8	2.80	0.50
22:DA:1665:A:H1'	32:DK:1:MET:CG	2.41	0.50
1:CA:1203:C:OP1	14:CN:1:ALA:HB3	2.11	0.50
17:CQ:68:LYS:O	17:CQ:69:THR:CB	2.59	0.50
38:DQ:46:TYR:HA	38:DQ:49:ARG:HE	1.77	0.50
25:DD:111:GLY:HA3	25:DD:194:PRO:HG2	1.94	0.50
22:DA:2311:A:H3'	22:DA:2312:U:C6	2.35	0.50
13:CM:18:LEU:H	13:CM:18:LEU:CD1	2.25	0.50
2:CB:159:ALA:HA	2:CB:180:ILE:CG2	2.40	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:188:ARG:HG2	24:DC:188:ARG:HH21	1.77	0.50
1:CA:663:A:N1	1:CA:743:A:C2	2.80	0.50
1:AA:580:C:O2'	1:AA:581:G:H5'	2.12	0.50
22:BA:2495:G:O2'	22:BA:2496:C:H5'	2.12	0.50
22:DA:672:C:C3'	22:DA:672:C:C6	2.95	0.50
30:BI:21:PRO:HB2	30:BI:22:PRO:HD3	1.94	0.50
23:DB:42:C:H41	27:DF:87:LYS:HZ3	1.57	0.50
3:CC:17:TRP:CZ2	14:CN:94:GLY:O	2.65	0.50
29:DH:37:VAL:HG23	29:DH:38:PRO:HD2	1.94	0.50
22:DA:833:A:H2'	22:DA:834:G:H8	1.76	0.50
22:BA:273:G:O2'	22:BA:274:C:O5'	2.30	0.50
37:DP:13:LYS:HD3	37:DP:76:HIS:HA	1.94	0.50
1:CA:821:G:C4	1:CA:822:U:C5	2.99	0.50
22:DA:2190:G:C5'	22:DA:2191:A:OP2	2.53	0.50
39:DR:75:VAL:HG12	39:DR:85:LYS:O	2.11	0.50
28:BG:36:LEU:N	28:BG:36:LEU:CD2	2.74	0.50
1:AA:1052:U:C5'	1:AA:1053:G:OP2	2.60	0.50
1:AA:1083:U:C5'	1:AA:1086:U:H5	2.20	0.50
37:BP:92:ARG:HH11	37:BP:92:ARG:CB	2.25	0.50
3:AC:156:LEU:N	3:AC:156:LEU:CD1	2.75	0.50
1:AA:27:G:C5	1:AA:557:G:C2	3.00	0.50
13:CM:46:GLU:O	13:CM:47:LEU:HB2	2.12	0.50
1:AA:596:A:C6	1:AA:645:G:C2	3.00	0.50
22:BA:511:U:H5	22:BA:512:G:C5	2.28	0.50
19:AS:62:THR:CG2	19:AS:63:ASP:N	2.75	0.50
15:CO:63:ARG:HH22	22:DA:715:A:C5'	2.24	0.50
22:BA:1856:U:O4	22:BA:1857:G:N1	2.45	0.50
31:DJ:142:ILE:HD12	31:DJ:142:ILE:N	2.26	0.50
22:DA:2469:A:C6	22:DA:2482:A:C8	3.00	0.50
1:CA:944:G:H2'	1:CA:945:G:H5''	1.93	0.50
37:DP:102:ARG:HG3	37:DP:107:ALA:HA	1.93	0.50
2:CB:66:ILE:O	2:CB:88:GLN:HB2	2.11	0.50
22:BA:151:C:H2'	22:BA:152:A:C8	2.47	0.50
22:DA:9:G:C5	22:DA:2629:U:C5	2.99	0.50
22:BA:2704:C:O2	22:BA:2704:C:H2'	2.11	0.50
22:BA:2077:A:O2'	22:BA:2078:C:H5'	2.11	0.50
1:CA:1442:G:H2'	1:CA:1443:C:C6	2.47	0.50
22:DA:2187:U:H6	22:DA:2187:U:O5'	1.94	0.50
22:BA:2134:A:N6	22:BA:2157:G:C6	2.80	0.50
1:AA:908:A:C2	1:AA:909:A:C4	3.00	0.50
13:CM:92:ARG:HD2	19:CS:79:TYR:OH	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1850:G:C5	22:BA:1851:U:C4	3.00	0.50
22:BA:1206:G:O2'	22:BA:1207:C:H5'	2.11	0.50
22:DA:1767:G:C4	22:DA:1768:C:H5	2.30	0.50
20:AT:60:GLN:HE21	20:AT:65:LEU:CD2	2.25	0.50
22:DA:2185:U:H2'	22:DA:2186:G:C8	2.46	0.50
31:DJ:122:LEU:C	31:DJ:123:LYS:HD2	2.32	0.50
22:BA:1247:A:C4	22:BA:1249:U:C5	2.99	0.50
43:BV:29:ILE:HG22	43:BV:90:ASP:HA	1.92	0.50
7:CG:12:LEU:H	7:CG:12:LEU:CD1	2.25	0.50
51:B3:28:LEU:HD11	51:B3:40:LYS:HB3	1.93	0.50
2:AB:79:VAL:O	2:AB:83:ALA:HB3	2.11	0.50
23:BB:92:C:H2'	23:BB:93:C:O5'	2.11	0.50
22:BA:1356:G:C2	22:BA:1357:C:C2	3.00	0.50
22:DA:146:A:C2	22:DA:147:C:C2	3.00	0.50
4:CD:128:VAL:O	4:CD:128:VAL:HG22	2.11	0.50
26:BE:91:ASP:C	26:BE:91:ASP:OD2	2.49	0.50
1:CA:580:C:H2'	1:CA:581:G:C8	2.47	0.50
22:BA:2824:C:H2'	22:BA:2825:G:O5'	2.12	0.50
37:BP:50:ARG:HG2	37:BP:57:ALA:H	0.40	0.49
38:BQ:91:ARG:HD3	39:BR:11:GLN:CG	2.41	0.49
22:BA:2680:U:P	25:BD:114:LYS:CE	2.90	0.49
33:BL:93:ASN:O	33:BL:94:THR:HG22	2.11	0.49
22:DA:1338:G:C2'	22:DA:1339:G:H5'	2.42	0.49
1:CA:370:C:O2'	1:CA:371:A:H5'	2.12	0.49
22:DA:1080:A:C2	22:DA:1081:U:C4	3.00	0.49
35:DN:114:GLU:HG3	35:DN:118:ARG:HD3	1.94	0.49
9:AI:56:MET:HE2	9:AI:57:VAL:H	1.77	0.49
22:DA:112:U:C4	22:DA:113:U:C2	3.00	0.49
24:BC:141:HIS:HE2	24:BC:193:GLU:C	2.15	0.49
22:DA:180:G:P	50:D2:35:ARG:HH12	2.35	0.49
22:DA:216:A:C4	22:DA:217:A:N7	2.80	0.49
49:B1:8:ILE:CD1	49:B1:24:LYS:HG2	2.33	0.49
1:AA:462:G:C8	1:AA:463:U:C5	2.99	0.49
1:AA:463:U:O2'	1:AA:464:U:H5'	2.10	0.49
1:AA:92:U:H2'	1:AA:93:U:C6	2.47	0.49
31:DJ:44:TYR:HB2	38:DQ:63:ARG:NE	2.27	0.49
4:CD:57:LYS:CB	4:CD:199:ILE:HB	2.39	0.49
11:CK:57:SER:O	11:CK:90:PRO:HB3	2.12	0.49
29:BH:31:VAL:CG1	29:BH:36:ALA:O	2.60	0.49
17:AQ:18:LYS:HB3	17:AQ:47:ASP:HB2	1.93	0.49
17:AQ:54:ILE:C	17:AQ:54:ILE:CD1	2.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:504:A:C2	22:DA:1234:U:H4'	2.47	0.49
25:BD:120:GLY:CA	25:BD:162:ALA:HB2	2.34	0.49
1:AA:619:U:C2	4:AD:131:ILE:HD12	2.47	0.49
22:DA:2061:G:C4	22:DA:2063:C:N4	2.80	0.49
22:DA:1021:A:HO2'	22:DA:1022:G:P	2.35	0.49
36:BO:3:LYS:CG	36:BO:4:LYS:N	2.75	0.49
24:BC:247:TRP:O	24:BC:249:VAL:N	2.44	0.49
16:CP:57:ILE:O	16:CP:61:VAL:HG23	2.11	0.49
22:DA:2722:G:H4'	35:DN:3:HIS:O	2.11	0.49
7:AG:27:ASN:OD1	7:AG:35:LYS:NZ	2.44	0.49
1:CA:71:A:N3	1:CA:72:A:C8	2.80	0.49
22:BA:729:G:H2'	22:BA:1775:U:H1'	1.94	0.49
23:DB:30:C:O2	23:DB:30:C:H2'	2.11	0.49
22:DA:2092:U:H5	22:DA:2226:C:OP2	1.95	0.49
22:DA:1654:A:C2	22:DA:1655:A:C8	2.99	0.49
1:CA:1244:G:C5	1:CA:1245:C:C4	3.00	0.49
24:BC:252:LYS:HZ2	24:BC:252:LYS:HA	1.77	0.49
1:AA:1314:C:C2'	1:AA:1315:U:H5'	2.41	0.49
22:DA:2306:C:C5	22:DA:2307:G:N2	2.80	0.49
2:CB:117:GLU:OE2	2:CB:151:LYS:HD3	2.12	0.49
1:CA:865:A:H5'	1:CA:1078:U:O4	2.12	0.49
22:DA:1765:U:H2'	22:DA:1766:G:C5'	2.42	0.49
42:BU:80:ASP:O	42:BU:81:ARG:HB2	2.11	0.49
22:DA:1223:G:N2	22:DA:1225:G:H3'	2.27	0.49
22:DA:1863:G:H2'	22:DA:1864:U:O4'	2.12	0.49
3:CC:183:TYR:CD1	3:CC:200:TRP:CE2	3.00	0.49
22:BA:1644:C:C2'	22:BA:1644:C:O2	2.60	0.49
36:DO:53:THR:HB	36:DO:65:THR:HG22	1.93	0.49
22:BA:847:U:O2'	22:BA:848:C:H5'	2.12	0.49
22:DA:211:C:H2'	22:DA:212:G:O4'	2.12	0.49
11:CK:74:LYS:CA	11:CK:78:ILE:HD11	2.37	0.49
14:CN:94:GLY:O	14:CN:95:LEU:C	2.50	0.49
35:DN:86:ARG:HB3	35:DN:117:ASP:OD1	2.12	0.49
20:AT:29:THR:HA	20:AT:32:LYS:CG	2.41	0.49
1:AA:355:C:O4'	1:AA:388:G:O2'	2.30	0.49
1:AA:49:U:H5	1:AA:365:U:O4	1.95	0.49
23:BB:46:A:C5	23:BB:47:C:C5	3.00	0.49
22:DA:831:G:O3'	33:DL:38:GLN:N	2.38	0.49
3:AC:166:TRP:N	3:AC:166:TRP:HE3	1.98	0.49
22:BA:357:C:C6	22:BA:358:U:C5	3.00	0.49
35:BN:12:ARG:HG3	35:BN:12:ARG:NH2	2.16	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:426:C:HO2'	22:DA:427:U:H5'	1.77	0.49
9:AI:21:LYS:HD2	9:AI:21:LYS:C	2.32	0.49
22:DA:532:A:H2'	38:DQ:27:ARG:NH1	2.26	0.49
3:AC:156:LEU:CD1	3:AC:156:LEU:H	2.26	0.49
22:DA:2823:A:C5	22:DA:2824:C:C6	3.00	0.49
1:AA:6:G:O2'	1:AA:7:A:H8	1.94	0.49
22:DA:1471:G:N1	22:DA:1521:G:H1'	2.27	0.49
3:AC:137:VAL:HG11	3:AC:169:GLU:HB3	1.93	0.49
1:AA:597:G:H2'	1:AA:597:G:N3	2.27	0.49
1:CA:8:A:H62	4:CD:205:LYS:HB2	1.76	0.49
1:AA:637:C:O2'	1:AA:638:U:H5'	2.11	0.49
22:DA:2349:G:OP1	51:D3:44:ARG:NH2	2.45	0.49
22:DA:2371:G:C2	22:DA:2372:U:C5	3.00	0.49
37:DP:31:VAL:HG12	37:DP:38:ARG:HG2	1.94	0.49
27:BF:174:PHE:CD1	27:BF:176:PHE:CE1	3.00	0.49
1:CA:855:U:OP2	1:CA:871:U:N3	2.44	0.49
38:DQ:40:LYS:CD	38:DQ:44:TYR:CE2	2.90	0.49
4:CD:3:TYR:CE2	4:CD:5:GLY:N	2.80	0.49
22:DA:1884:G:H8	22:DA:1884:G:OP2	1.95	0.49
7:AG:80:GLY:C	7:AG:82:SER:H	2.14	0.49
1:CA:628:G:C2'	1:CA:629:A:H5'	2.42	0.49
26:BE:127:GLU:N	26:BE:127:GLU:OE1	2.44	0.49
22:BA:947:A:O2'	22:BA:984:A:H2	1.95	0.49
22:BA:1535:A:H4'	22:BA:1536:C:OP2	2.08	0.49
1:AA:19:A:N3	1:AA:917:G:C2	2.80	0.49
1:CA:309:A:H5''	16:CP:29:ASN:O	2.12	0.49
1:CA:815:A:H4'	1:CA:817:C:C4	2.47	0.49
31:DJ:120:ARG:O	31:DJ:123:LYS:NZ	2.44	0.49
22:DA:2561:U:C2'	22:DA:2562:U:O5'	2.60	0.49
10:AJ:66:GLU:HB3	14:AN:98:ALA:HB2	1.93	0.49
22:BA:2435:A:C2'	22:BA:2436:G:O5'	2.60	0.49
22:DA:759:G:O5'	22:DA:759:G:H8	1.94	0.49
49:D1:3:GLY:O	49:D1:4:ILE:HB	2.12	0.49
13:CM:105:ALA:HB1	13:CM:109:LYS:HD3	1.94	0.49
38:BQ:91:ARG:HD3	39:BR:11:GLN:HG3	1.94	0.49
5:AE:76:ASN:CB	5:AE:81:GLN:HG3	2.42	0.49
22:DA:1814:G:C6	22:DA:1815:A:C6	3.00	0.49
24:DC:23:LEU:HD12	24:DC:80:LEU:HB2	1.94	0.49
22:DA:1343:G:C2'	22:DA:1344:U:C5	2.91	0.49
1:AA:429:U:H3'	4:AD:8:LEU:CD2	2.40	0.49
26:DE:195:GLN:O	26:DE:199:MET:HB2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1788:C:C2'	22:DA:1789:A:H5'	2.41	0.49
24:DC:229:HIS:CG	24:DC:230:PRO:HD2	2.47	0.49
22:DA:1059:G:N3	30:DI:131:THR:HG22	2.27	0.49
22:DA:1062:G:OP1	22:DA:1070:A:C4'	2.60	0.49
22:DA:2834:G:C1'	22:DA:2879:A:H61	2.25	0.49
22:DA:85:G:HO2'	22:DA:86:G:H5''	1.76	0.49
22:DA:1358:G:N2	22:DA:1374:G:C6	2.80	0.49
22:DA:2210:U:C4'	22:DA:2211:A:H5'	2.43	0.49
44:BW:24:ARG:HD2	44:BW:25:PHE:CA	2.42	0.49
28:BG:94:ARG:HG3	28:BG:127:GLN:OE1	2.12	0.49
6:CF:9:MET:O	6:CF:85:ILE:HG13	2.11	0.49
18:CR:64:LEU:O	18:CR:66:LEU:HD23	2.12	0.49
52:D4:7:VAL:HG21	52:D4:25:VAL:HG23	1.93	0.49
8:CH:78:SER:HB2	8:CH:124:ILE:O	2.12	0.49
8:CH:92:PRO:HG3	8:CH:127:TYR:OH	2.12	0.49
1:CA:961:U:O4	1:CA:983:A:C6	2.65	0.49
10:CJ:53:ILE:HD11	14:CN:84:ARG:CZ	2.42	0.49
1:AA:1079:G:N2	1:AA:1080:A:C2	2.80	0.49
47:DZ:28:LEU:CD2	47:DZ:28:LEU:N	2.75	0.49
22:DA:1139:G:H5'	31:DJ:104:ALA:HB1	1.93	0.49
22:DA:2714:G:C8	22:DA:2714:G:O5'	2.63	0.49
22:DA:2682:A:N6	22:DA:2728:U:H1'	2.05	0.49
25:DD:24:VAL:HG23	25:DD:190:LYS:CA	2.42	0.49
33:DL:93:ASN:O	33:DL:95:LEU:N	2.44	0.49
22:BA:1131:G:O2'	22:BA:2026:U:H5'	2.11	0.49
22:BA:987:C:H2'	22:BA:988:A:H5'	1.94	0.49
22:DA:1667:G:P	32:DK:6:THR:HA	2.52	0.49
22:DA:1991:U:C4'	22:DA:1991:U:C6	2.95	0.49
7:AG:26:VAL:HG23	7:AG:27:ASN:H	1.76	0.49
1:CA:72:A:C5	1:CA:73:C:C4	3.00	0.49
8:AH:15:ASN:O	8:AH:18:ALA:HB3	2.12	0.49
7:CG:37:THR:O	7:CG:41:ILE:HG13	2.13	0.49
1:AA:1202:U:C5	1:AA:1203:C:C5	3.00	0.49
22:BA:2149:U:O2'	22:BA:2150:C:O5'	2.30	0.49
2:CB:159:ALA:C	2:CB:160:LEU:HD12	2.32	0.49
12:CL:2:THR:HG22	12:CL:4:ASN:H	1.77	0.49
22:BA:1643:G:C2'	22:BA:1644:C:O5'	2.60	0.49
1:AA:224:U:C2'	1:AA:225:C:H5'	2.42	0.49
20:AT:33:LYS:CA	20:AT:33:LYS:CE	2.90	0.49
22:BA:1945:G:O2'	22:BA:1946:U:H5'	2.12	0.49
26:DE:73:ILE:HG13	26:DE:78:TRP:NE1	2.25	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:153:U:C2'	22:BA:154:U:H5'	2.41	0.49
32:BK:113:MET:O	32:BK:116:ILE:CD1	2.60	0.49
22:DA:674:G:O3'	26:DE:60:TRP:CH2	2.64	0.49
22:DA:1490:A:H8	24:DC:73:ILE:CD1	2.26	0.49
22:DA:851:C:H4'	47:DZ:46:MET:HG2	1.93	0.49
12:AL:113:ARG:HD2	12:AL:118:VAL:HG11	1.94	0.49
9:AI:26:LYS:C	9:AI:27:ILE:HD12	2.30	0.49
1:CA:770:C:O2'	1:CA:899:C:N3	2.45	0.49
22:BA:2756:U:H4'	22:BA:2757:A:O5'	2.12	0.49
22:DA:156:A:C2	22:DA:157:C:C2	3.00	0.49
22:DA:170:U:C2	22:DA:171:U:C5	3.00	0.49
1:AA:1198:G:H2'	1:AA:1199:U:H6	1.77	0.49
24:BC:182:LYS:C	24:BC:183:VAL:HG23	2.33	0.49
22:DA:2823:A:C2'	22:DA:2824:C:H5'	2.42	0.49
22:BA:1416:G:O2'	22:BA:1417:C:C6	2.59	0.49
22:BA:1739:A:H5''	22:BA:1739:A:C8	2.47	0.49
22:DA:288:U:H2'	22:DA:289:G:O4'	2.12	0.49
22:DA:352:A:H3'	22:DA:353:C:C4'	2.42	0.49
35:BN:65:LEU:O	35:BN:65:LEU:HD12	2.13	0.49
39:BR:64:VAL:O	39:BR:65:ALA:HB3	2.12	0.49
8:AH:85:TYR:O	8:AH:86:LYS:HD2	2.11	0.49
27:DF:12:VAL:O	27:DF:16:MET:HB2	2.12	0.49
22:BA:616:A:H4'	26:BE:101:TYR:CE2	2.47	0.49
1:CA:1082:A:P	5:CE:22:LYS:HE3	2.52	0.49
22:BA:864:G:C6	22:BA:865:C:N4	2.80	0.49
1:CA:259:G:P	20:CT:35:TYR:HH	2.35	0.49
7:AG:146:ALA:C	7:AG:148:LYS:N	2.64	0.49
38:BQ:97:ILE:CD1	38:BQ:105:PHE:HB2	2.42	0.49
3:CC:122:GLN:O	3:CC:127:VAL:HG13	2.12	0.49
22:BA:31:C:H4'	22:BA:1238:G:H4'	1.94	0.49
22:BA:2575:C:H2'	22:BA:2578:G:O6	2.12	0.49
8:CH:12:ARG:HD3	8:CH:26:MET:HE2	1.95	0.49
9:CI:94:ARG:HH11	9:CI:94:ARG:HG3	1.77	0.49
1:AA:1437:A:O2'	1:AA:1438:G:H5'	2.11	0.49
22:BA:451:U:C2	22:BA:453:A:N7	2.80	0.49
26:BE:98:LYS:HE2	56:BE:301:HOH:O	2.11	0.49
36:BO:81:ARG:O	36:BO:84:GLU:HB3	2.13	0.49
22:BA:1754:A:C6	22:BA:1755:A:C6	3.00	0.49
22:DA:1485:U:O2'	22:DA:1486:U:H5'	2.11	0.49
22:DA:2021:C:H4'	22:DA:2022:U:OP2	2.11	0.49
22:BA:238:C:C6	22:BA:238:C:H3'	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:57:ASN:O	40:DS:61:ASN:HB2	2.11	0.49
38:BQ:60:TRP:CH2	38:BQ:93:ILE:HB	2.47	0.49
22:BA:1059:G:C2	22:BA:1080:A:C4	3.00	0.49
22:DA:2320:U:H1'	22:DA:2333:A:H62	1.78	0.49
22:DA:856:G:C1'	44:DW:23:LYS:HB3	2.43	0.49
22:DA:1064:C:OP1	30:DI:88:GLY:HA3	2.11	0.49
22:DA:302:C:O2'	22:DA:303:G:C5'	2.59	0.49
22:DA:1363:C:N4	22:DA:1368:G:H1	2.10	0.49
22:DA:177:G:OP2	22:DA:177:G:N2	2.30	0.49
22:DA:1809:A:N3	22:DA:1810:A:C8	2.80	0.49
34:DM:17:ASN:CB	34:DM:38:ARG:HH12	2.25	0.49
1:AA:212:G:C2	1:AA:213:G:C5	3.00	0.49
22:DA:1916:A:H2'	22:DA:1917:U:C6	2.47	0.49
11:CK:123:PRO:O	21:CU:34:ARG:N	2.44	0.49
21:CU:28:LEU:C	21:CU:28:LEU:HD23	2.32	0.49
17:AQ:49:ASN:O	17:AQ:50:ASN:C	2.50	0.49
1:AA:263:A:P	20:AT:73:ARG:NH1	2.85	0.49
1:AA:1240:U:H3'	1:AA:1241:G:C5'	2.41	0.49
1:CA:1225:A:N3	1:CA:1225:A:C2'	2.74	0.49
1:CA:984:C:O2'	1:CA:985:C:C6	2.65	0.49
22:DA:1245:G:H4'	26:DE:33:VAL:CG1	2.35	0.49
22:DA:655:A:H4'	22:DA:656:G:O5'	2.12	0.49
22:DA:2135:A:C8	22:DA:2135:A:OP2	2.65	0.49
22:DA:2438:U:O2'	22:DA:2440:C:OP1	2.30	0.49
11:AK:85:VAL:CG1	11:AK:92:ARG:NH1	2.75	0.49
22:DA:2061:G:N3	22:DA:2063:C:C4	2.80	0.49
1:CA:545:C:C2'	1:CA:546:A:H5'	2.41	0.49
1:CA:227:G:N2	16:CP:64:GLY:HA3	2.27	0.49
37:BP:103:THR:O	37:BP:104:GLY:O	2.30	0.49
22:DA:1665:A:O2'	22:DA:1666:G:H5'	2.12	0.49
22:DA:1667:G:O2'	22:DA:1668:A:P	2.70	0.49
22:DA:1667:G:OP1	32:DK:6:THR:HA	2.11	0.49
1:CA:1458:G:H4'	20:CT:22:SER:HB2	1.93	0.49
51:D3:2:LYS:O	51:D3:3:ILE:O	2.30	0.49
1:CA:274:A:H4'	1:CA:275:G:O5'	2.12	0.49
23:DB:57:A:C6	27:DF:25:MET:CG	2.95	0.49
42:BU:12:VAL:HA	42:BU:69:VAL:HG12	1.94	0.49
1:AA:972:C:O5'	10:AJ:59:LYS:HG2	2.11	0.49
1:AA:528:C:C5'	1:AA:528:C:H6	2.24	0.49
22:DA:2092:U:C5	22:DA:2225:A:O2'	2.63	0.49
22:DA:1560:G:N3	22:DA:1560:G:H2'	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1370:G:C5'	9:CI:110:VAL:HG21	2.42	0.49
9:CI:59:LYS:CE	9:CI:60:LEU:HG	2.40	0.49
24:DC:93:VAL:HG12	24:DC:101:ARG:O	2.12	0.49
1:AA:437:U:H4'	4:AD:153:ARG:HH22	1.78	0.49
29:DH:9:VAL:CG1	29:DH:10:ALA:H	2.24	0.49
1:AA:87:C:O2'	1:AA:88:U:O5'	2.30	0.49
4:AD:2:ARG:C	4:AD:4:LEU:HD13	2.33	0.49
36:DO:62:LEU:HD11	36:DO:65:THR:CG2	2.41	0.49
6:CF:54:LEU:HD12	6:CF:56:LYS:N	2.28	0.49
35:DN:81:ASN:O	35:DN:82:GLU:HB2	2.11	0.49
22:DA:2356:U:H4'	44:DW:16:GLU:CG	2.38	0.49
17:CQ:11:VAL:HG22	17:CQ:58:VAL:CG1	2.42	0.49
1:CA:1175:G:H2'	1:CA:1176:A:C8	2.47	0.49
22:DA:834:G:H5'	51:D3:56:LEU:HD11	1.94	0.49
1:CA:106:C:H2'	1:CA:107:G:O4'	2.13	0.49
22:BA:250:G:C6	22:BA:251:A:C6	3.00	0.49
1:CA:704:A:O2'	1:CA:705:G:O4'	2.30	0.49
1:AA:1343:G:O3'	9:AI:123:ARG:HB3	2.12	0.49
34:BM:50:ARG:O	34:BM:53:MET:HB3	2.13	0.49
10:AJ:92:LEU:O	10:AJ:93:ALA:HB3	2.11	0.49
27:DF:11:VAL:C	27:DF:13:LYS:H	2.15	0.49
21:CU:9:GLU:HB3	21:CU:10:PRO:HD3	1.89	0.49
1:CA:436:C:H2'	1:CA:437:U:C6	2.47	0.49
1:AA:868:C:N4	1:AA:869:G:C2	2.80	0.49
27:DF:129:MET:HE1	27:DF:174:PHE:CE1	2.47	0.49
22:DA:2372:U:H1'	49:D1:45:HIS:CE1	2.47	0.49
1:CA:1081:A:H2'	1:CA:1082:A:O4'	2.12	0.49
10:CJ:32:THR:HG23	10:CJ:83:THR:OG1	2.12	0.49
22:BA:1856:U:C4	22:BA:1857:G:C6	3.01	0.49
1:CA:1434:A:N6	1:CA:1435:G:C6	2.79	0.49
31:BJ:30:THR:HG22	31:BJ:31:GLU:N	2.27	0.49
25:BD:182:ALA:O	25:BD:183:GLU:C	2.50	0.49
22:DA:910:A:C2	34:DM:13:HIS:CE1	3.00	0.49
1:CA:525:C:C2'	1:CA:526:C:H5'	2.41	0.49
22:BA:2861:U:O2'	22:BA:2862:G:H5'	2.12	0.49
1:AA:303:A:H2'	1:AA:304:U:O4'	2.12	0.49
29:DH:49:ALA:O	29:DH:53:GLU:N	2.46	0.49
1:AA:5:U:H3'	1:AA:5:U:OP1	2.12	0.49
37:BP:80:VAL:CG1	37:BP:81:ASP:N	2.67	0.49
22:BA:996:A:O3'	38:BQ:91:ARG:HG2	2.11	0.49
22:BA:2033:A:OP1	56:BA:3480:HOH:O	2.20	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:58:C:H2'	1:CA:59:A:O5'	2.13	0.49
22:DA:2285:C:OP2	49:D1:5:ARG:HD3	2.12	0.49
35:DN:100:CYS:O	48:D0:41:HIS:CD2	2.66	0.49
22:DA:1277:G:N3	35:DN:23:ASN:HB3	2.27	0.49
9:AI:8:THR:O	9:AI:81:GLY:CA	2.61	0.49
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.47	0.49
3:CC:191:THR:HB	3:CC:192:TYR:CE1	2.47	0.49
12:CL:85:ARG:HH12	12:CL:87:LYS:HA	1.77	0.49
22:DA:1211:C:H4'	22:DA:1212:G:OP2	2.13	0.49
22:DA:342:A:H2'	22:DA:343:C:O5'	2.12	0.49
22:DA:74:A:H4'	22:DA:75:G:O5'	2.13	0.49
26:DE:132:LYS:HG2	26:DE:132:LYS:O	2.13	0.49
42:DU:3:LYS:HD3	42:DU:82:VAL:CG2	2.42	0.49
32:BK:18:ARG:H	32:BK:45:GLU:CB	2.13	0.49
22:DA:1359:A:H2'	22:DA:1359:A:N3	2.27	0.49
22:DA:1427:A:H4'	22:DA:1428:C:O5'	2.12	0.49
22:DA:379:G:C4	22:DA:396:G:N1	2.80	0.49
49:B1:33:LEU:HB3	49:B1:51:ALA:HB3	1.91	0.49
1:AA:203:G:C2	1:AA:215:C:N3	2.80	0.49
25:BD:104:VAL:HG13	25:BD:106:LYS:CD	2.41	0.49
22:DA:536:G:C2'	22:DA:537:G:H5'	2.42	0.49
31:DJ:45:THR:O	31:DJ:46:PRO:C	2.51	0.49
21:CU:31:VAL:O	21:CU:32:ARG:C	2.51	0.49
44:BW:40:ARG:HH11	44:BW:45:HIS:CE1	2.30	0.49
44:BW:51:GLY:O	44:BW:52:CYS:O	2.31	0.49
8:CH:31:LEU:O	8:CH:35:ILE:HG13	2.12	0.49
22:DA:565:C:H4'	22:DA:1253:A:N6	2.27	0.49
26:BE:149:ILE:HD12	26:BE:175:ILE:HB	1.95	0.49
1:CA:971:G:C2'	1:CA:1365:G:O2'	2.58	0.49
1:CA:980:C:O2	14:CN:58:ARG:HA	2.13	0.49
14:CN:61:ASN:ND2	14:CN:72:PHE:CE1	2.80	0.49
22:DA:1200:C:C2'	22:DA:1201:U:H5'	2.42	0.49
22:BA:2307:G:N2	22:BA:2311:A:C8	2.81	0.49
22:DA:2729:G:H5''	25:DD:190:LYS:HZ1	1.76	0.49
36:BO:2:ASP:O	36:BO:3:LYS:HB3	2.12	0.49
36:BO:79:ALA:HA	36:BO:115:LEU:HD22	1.94	0.49
22:BA:988:A:H2'	22:BA:989:G:O5'	2.12	0.49
22:DA:2875:C:O2'	22:DA:2876:G:O5'	2.31	0.49
22:DA:2876:G:O2'	22:DA:2877:G:C5'	2.61	0.49
2:AB:69:VAL:CG2	2:AB:160:LEU:HD11	2.43	0.49
22:DA:1654:A:O2'	22:DA:1655:A:O5'	2.29	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2788:C:O2'	22:DA:2809:A:N3	2.37	0.49
29:DH:32:PRO:HA	45:DX:38:TRP:HD1	1.77	0.49
22:DA:2741:A:H2'	22:DA:2742:G:O4'	2.11	0.49
20:CT:67:HIS:HB3	20:CT:68:LYS:HD2	1.94	0.49
22:BA:1585:C:C3'	22:BA:1586:A:H5'	2.35	0.49
30:BI:27:LEU:HD12	30:BI:27:LEU:C	2.33	0.49
11:CK:74:LYS:HG3	11:CK:78:ILE:HD11	1.92	0.49
9:AI:129:ARG:HA	9:AI:129:ARG:HH11	1.76	0.49
1:AA:587:G:C2	1:AA:755:G:C6	3.00	0.49
22:DA:2406:A:C2	33:DL:69:ARG:NH2	2.80	0.49
22:DA:791:C:C4	22:DA:794:A:O4'	2.65	0.49
46:BY:18:LEU:HD13	46:BY:22:LEU:HB2	1.94	0.49
36:BO:30:ARG:HG2	36:BO:31:THR:N	2.27	0.49
1:AA:519:C:H2'	1:AA:520:A:C8	2.48	0.49
22:DA:1522:A:H1'	22:DA:1524:G:C4	2.48	0.49
34:BM:132:THR:CG2	34:BM:133:LYS:H	2.20	0.49
42:BU:48:VAL:O	42:BU:53:GLN:CB	2.61	0.49
2:AB:187:ASP:OD1	2:AB:188:THR:N	2.45	0.49
1:CA:130:A:N6	1:CA:234:C:O4'	2.45	0.49
15:CO:52:ARG:O	15:CO:55:LEU:HB3	2.13	0.49
1:AA:121:U:H5''	1:AA:121:U:C6	2.43	0.49
22:BA:623:C:H2'	22:BA:624:C:H6	1.77	0.49
3:AC:82:ASP:O	3:AC:86:LEU:HG	2.12	0.49
1:CA:487:A:H2'	1:CA:488:C:O4'	2.12	0.49
22:BA:1305:C:O2	22:BA:1305:C:H2'	2.11	0.49
22:BA:1406:U:O2'	22:BA:1407:G:O5'	2.31	0.49
2:AB:161:PHE:HA	2:AB:183:PHE:O	2.12	0.49
38:BQ:49:ARG:HG3	38:BQ:49:ARG:NH1	2.27	0.49
22:BA:2523:G:O2'	22:BA:2524:G:H5'	2.13	0.49
16:AP:40:ASN:OD1	16:AP:42:ILE:N	2.41	0.49
22:BA:734:A:C5	22:BA:735:A:N7	2.80	0.49
22:BA:839:U:H1'	22:BA:1191:G:H1'	1.93	0.49
22:BA:103:A:H2'	22:BA:104:A:O4'	2.12	0.49
26:BE:134:LEU:HD11	26:BE:138:LEU:HD11	1.93	0.49
40:DS:44:ALA:O	40:DS:48:LYS:CB	2.60	0.49
24:DC:110:LYS:HB3	24:DC:113:ASP:CG	2.32	0.49
22:DA:1346:G:O2'	22:DA:1347:A:O5'	2.30	0.49
4:AD:7:LYS:NZ	4:AD:21:LYS:HG3	2.27	0.49
1:CA:367:U:OP1	1:CA:395:C:H1'	2.13	0.49
22:DA:1063:G:C5	22:DA:1064:C:N4	2.80	0.49
12:CL:41:PRO:HG2	12:CL:45:ASN:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:85:ARG:O	12:CL:86:VAL:CG2	2.60	0.49
22:DA:340:A:H2'	22:DA:341:C:C5'	2.40	0.49
26:DE:162:ARG:O	26:DE:164:LEU:N	2.46	0.49
46:DY:49:ASP:HA	46:DY:52:ARG:CD	2.42	0.49
22:DA:1361:G:H2'	22:DA:1362:C:H5'	1.86	0.49
22:DA:449:A:C5	22:DA:450:G:C8	3.00	0.49
22:DA:453:A:N3	22:DA:457:A:O2'	2.46	0.49
1:AA:262:A:C6	1:AA:263:A:C6	3.00	0.49
12:AL:49:ARG:HD3	12:AL:49:ARG:N	2.28	0.49
26:BE:108:ILE:CD1	26:BE:180:LEU:CD1	2.91	0.49
14:CN:63:CYS:HB2	14:CN:79:SER:OG	2.12	0.49
19:CS:32:THR:O	19:CS:32:THR:HG23	2.12	0.49
1:AA:8:A:N6	4:AD:201:GLU:O	2.45	0.49
20:AT:8:LYS:C	20:AT:11:ILE:HG23	2.32	0.49
22:DA:627:A:O4'	22:DA:637:A:N6	2.45	0.49
22:DA:638:G:H2'	22:DA:639:U:C5	2.47	0.49
5:CE:103:GLY:HA3	5:CE:121:ASN:CA	2.36	0.49
26:DE:63:LYS:HA	26:DE:63:LYS:CE	2.42	0.49
11:AK:109:ILE:HB	21:AU:5:VAL:CG2	2.42	0.49
22:BA:137:U:C4	22:BA:142:A:N6	2.72	0.49
22:DA:241:A:N1	22:DA:255:A:H5'	2.27	0.49
32:DK:59:LYS:HG2	32:DK:89:ASN:HA	1.95	0.49
1:AA:958:A:C6	1:AA:959:A:N1	2.80	0.49
1:CA:155:A:C5	1:CA:156:C:C5	3.01	0.49
8:AH:88:LYS:HA	8:AH:91:LEU:CG	2.42	0.49
1:CA:279:A:H5''	1:CA:280:C:C3'	2.32	0.49
27:DF:1:ALA:HA	27:DF:97:GLU:HB2	1.94	0.49
22:DA:1754:A:C6	22:DA:1755:A:C5	3.01	0.49
13:AM:106:ARG:NH1	13:AM:109:LYS:HD3	2.25	0.49
22:DA:1700:A:C2'	22:DA:1701:A:C5'	2.81	0.49
1:AA:1457:G:O3'	20:AT:26:MET:HB3	2.13	0.49
3:CC:42:LEU:CD1	3:CC:86:LEU:HD22	2.42	0.49
1:AA:344:A:H4'	1:AA:345:C:OP2	2.11	0.49
22:DA:873:C:C4'	34:DM:64:TRP:HE1	2.19	0.49
22:BA:2656:U:C4	22:BA:2664:G:N2	2.79	0.49
22:BA:1507:C:C4	22:BA:1508:A:C2	3.00	0.49
1:AA:1055:A:C6	1:AA:1206:G:C5	3.00	0.49
45:DX:20:ALA:O	45:DX:21:LEU:CB	2.57	0.49
22:DA:352:A:C3'	22:DA:353:C:C4'	2.90	0.49
22:DA:356:G:C2	22:DA:357:C:C2	3.00	0.49
22:DA:2507:C:H1'	22:DA:2583:G:C2	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:92:ILE:HG22	14:AN:95:LEU:HB3	1.94	0.49
22:BA:1438:U:H3'	56:BA:3629:HOH:O	2.12	0.49
2:AB:22:TRP:CD1	2:AB:22:TRP:O	2.65	0.49
1:AA:1338:G:H2'	1:AA:1339:A:H8	1.72	0.49
22:DA:644:A:C2'	22:DA:645:C:H5''	2.42	0.49
1:CA:855:U:C5	1:CA:871:U:O4	2.60	0.49
26:DE:37:ALA:HA	26:DE:40:ARG:HB3	1.92	0.49
22:DA:950:G:H2'	22:DA:951:C:O4'	2.13	0.49
26:BE:75:SER:OG	26:BE:77:ILE:HG23	2.13	0.49
22:BA:2373:G:H2'	22:BA:2374:C:H6	1.74	0.49
25:BD:9:VAL:CG2	25:BD:10:GLY:N	2.75	0.49
36:DO:24:THR:O	36:DO:90:VAL:HB	2.12	0.49
2:AB:49:PHE:CD1	2:AB:49:PHE:C	2.86	0.49
1:CA:61:G:H8	1:CA:61:G:H5''	1.76	0.49
22:BA:2681:C:C2	22:BA:2724:U:O4	2.66	0.49
1:AA:55:A:C5	1:AA:56:U:C5	2.99	0.49
22:BA:2385:C:O2'	22:BA:2386:A:H5'	2.12	0.49
22:BA:1678:A:H2'	22:BA:1679:A:H5'	1.94	0.49
1:CA:784:A:H2'	1:CA:785:G:C8	2.47	0.49
32:BK:51:LYS:O	32:BK:51:LYS:CE	2.61	0.49
1:CA:431:A:C2	1:CA:432:A:H1'	2.47	0.49
22:BA:928:A:C2'	22:BA:929:U:H5'	2.42	0.49
1:CA:683:G:H2'	1:CA:684:U:O4'	2.13	0.49
40:DS:89:ALA:O	40:DS:90:LYS:HB2	2.12	0.49
22:BA:2846:G:H2'	22:BA:2847:U:O4'	2.12	0.49
22:BA:1079:C:N4	22:BA:1088:A:H2	2.10	0.49
30:BI:90:GLY:O	30:BI:92:PRO:HD3	2.12	0.49
1:CA:1138:G:H2'	1:CA:1139:G:OP1	2.13	0.49
22:DA:1404:C:O2'	22:DA:1405:U:H5'	2.13	0.49
46:DY:18:LEU:C	46:DY:19:LEU:HD12	2.33	0.49
46:DY:18:LEU:HD13	46:DY:22:LEU:HD13	1.95	0.49
26:DE:196:VAL:HG13	26:DE:200:LEU:HD23	1.94	0.49
44:DW:24:ARG:O	44:DW:25:PHE:CB	2.61	0.49
30:DI:77:VAL:HB	30:DI:80:LYS:CE	2.42	0.49
22:DA:79:C:O2'	22:DA:346:A:H1'	2.12	0.49
22:DA:71:A:OP2	22:DA:71:A:H3'	2.13	0.49
22:DA:77:G:O2'	22:DA:78:U:O5'	2.30	0.49
22:DA:320:A:C2'	26:DE:131:THR:OG1	2.51	0.49
50:D2:30:VAL:CG1	50:D2:30:VAL:O	2.61	0.49
22:DA:1569:A:C2	22:DA:1570:A:N3	2.81	0.49
1:CA:1084:G:C4	1:CA:1085:U:C5	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1086:U:H6	1:CA:1086:U:C5'	2.26	0.49
1:AA:953:G:C2	1:AA:954:G:H1'	2.47	0.49
29:DH:25:TYR:O	29:DH:30:LEU:HG	2.12	0.49
18:CR:39:VAL:CG1	18:CR:40:PRO:CD	2.89	0.49
48:D0:3:GLN:NE2	48:D0:7:PRO:HD3	2.27	0.49
22:DA:2616:C:HO2'	22:DA:2617:U:H6	1.59	0.49
22:DA:558:U:OP1	31:DJ:113:PRO:HD2	2.12	0.49
29:BH:5:LEU:O	29:BH:16:GLY:HA2	2.13	0.49
22:DA:1611:C:O2'	22:DA:1612:C:C5'	2.60	0.49
17:AQ:16:MET:CG	17:AQ:20:ILE:HD13	2.42	0.49
22:DA:475:C:C6	22:DA:476:G:N7	2.81	0.49
22:DA:477:A:O2'	22:DA:478:A:O5'	2.30	0.49
26:BE:119:ILE:CD1	26:BE:187:VAL:HG22	2.42	0.49
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.47	0.49
5:CE:79:THR:OG1	5:CE:121:ASN:ND2	2.46	0.49
22:DA:1006:C:O5'	22:DA:1006:C:H6	1.95	0.49
22:DA:1122:G:N3	22:DA:1122:G:H2'	2.27	0.49
11:AK:126:ARG:H	21:AU:33:ARG:HH22	1.55	0.49
24:BC:229:HIS:CD2	24:BC:230:PRO:HD2	2.47	0.49
22:DA:271:G:C2	22:DA:272:A:C6	3.00	0.49
27:DF:136:ILE:O	27:DF:137:PHE:O	2.30	0.49
1:CA:78:A:C6	1:CA:79:G:C6	3.00	0.49
24:DC:169:ALA:O	24:DC:185:ALA:HB3	2.12	0.49
1:AA:1157:A:C6	1:AA:1180:A:C6	3.00	0.49
1:AA:300:A:H1'	1:AA:565:U:O2	2.12	0.49
24:DC:75:ALA:HB1	24:DC:93:VAL:HG22	1.94	0.49
4:AD:113:ALA:O	4:AD:116:LEU:HB2	2.13	0.49
13:CM:13:HIS:CD2	13:CM:16:ILE:HD13	2.47	0.49
29:BH:41:LYS:CA	29:BH:44:ILE:HG12	2.35	0.49
1:AA:983:A:C2'	1:AA:983:A:N3	2.75	0.49
22:BA:332:A:C5	22:BA:335:C:C4	3.00	0.49
3:CC:152:VAL:HG23	3:CC:156:LEU:CD2	2.39	0.49
22:DA:2651:C:O2'	22:DA:2652:C:H5'	2.12	0.49
42:DU:4:ILE:HD13	42:DU:69:VAL:HG12	1.95	0.49
1:AA:148:G:N2	1:AA:175:C:O2	2.46	0.49
1:AA:175:C:C2'	1:AA:176:C:H5'	2.43	0.49
46:BY:9:LYS:HB3	46:BY:12:GLU:HG3	1.95	0.49
22:BA:416:U:C4	22:BA:417:C:C4	3.01	0.49
2:AB:143:LEU:H	2:AB:143:LEU:HD23	1.77	0.49
22:BA:528:A:C8	22:BA:528:A:H3'	2.47	0.49
1:AA:1082:A:O2'	1:AA:1083:U:H5'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:9:GLN:C	37:DP:11:GLN:H	2.15	0.49
7:AG:22:LEU:HD23	7:AG:25:PHE:HD2	1.78	0.49
7:AG:22:LEU:HD11	7:AG:46:LEU:HD22	1.94	0.49
22:DA:1975:G:C2	22:DA:1976:U:C6	3.01	0.49
22:DA:2581:G:C6	22:DA:2610:C:C2	2.99	0.49
9:CI:10:ARG:O	9:CI:11:ARG:CB	2.61	0.49
10:AJ:80:THR:O	10:AJ:82:LYS:N	2.45	0.49
7:AG:145:GLU:HA	7:AG:148:LYS:HD2	1.94	0.49
1:AA:1101:A:N7	2:AB:170:ILE:CG2	2.76	0.49
22:DA:1416:G:N1	22:DA:1417:C:C4	2.81	0.49
1:CA:861:G:H2'	1:CA:862:C:H6	1.77	0.49
33:DL:48:ARG:HG3	33:DL:48:ARG:NH1	2.28	0.49
22:BA:1257:C:C5'	26:BE:78:TRP:CZ3	2.95	0.49
25:DD:38:LYS:NZ	25:DD:38:LYS:HB3	2.28	0.49
22:BA:1786:A:C4	22:BA:1938:A:C6	3.00	0.49
1:CA:908:A:H2'	1:CA:909:A:C8	2.47	0.49
22:BA:536:G:H2'	22:BA:537:G:O5'	2.13	0.49
22:BA:699:A:H1'	22:BA:1634:A:H2'	1.95	0.49
1:AA:562:U:C4	1:AA:884:U:C6	3.01	0.49
22:BA:1650:A:H2'	22:BA:1651:G:H5''	1.93	0.49
16:CP:77:GLU:C	16:CP:79:ASN:H	2.16	0.49
22:BA:1577:C:H2'	22:BA:1578:U:C1'	2.43	0.49
22:DA:1723:G:O2'	22:DA:1724:G:H5'	2.13	0.49
33:BL:79:LEU:HD13	33:BL:116:VAL:HG12	1.94	0.49
22:BA:1520:U:H2'	22:BA:1521:G:O5'	2.12	0.49
1:AA:37:U:O2'	1:AA:38:G:H5'	2.13	0.49
25:BD:15:PHE:H	37:BP:11:GLN:HE21	1.59	0.49
22:BA:1074:G:H2'	22:BA:1075:C:C5	2.48	0.49
33:BL:77:ILE:N	33:BL:77:ILE:HD12	2.28	0.49
22:DA:1820:U:O2'	24:DC:199:HIS:CD2	2.66	0.49
4:CD:90:LEU:HD21	4:CD:196:GLU:HB3	1.94	0.49
22:DA:1345:C:C2	22:DA:1346:G:C8	3.01	0.49
16:CP:71:VAL:HG23	16:CP:72:ALA:N	2.26	0.49
36:DO:13:ARG:O	36:DO:17:LYS:HB2	2.13	0.49
44:DW:54:ARG:HB3	44:DW:54:ARG:NH1	2.27	0.49
1:CA:35:G:H2'	1:CA:36:C:C6	2.48	0.49
12:CL:49:ARG:HH11	12:CL:89:LEU:HD21	1.77	0.49
22:DA:75:G:O2'	22:DA:76:C:O5'	2.27	0.49
42:DU:95:PHE:O	42:DU:97:SER:N	2.46	0.49
22:DA:1048:A:C6	22:DA:1049:C:N4	2.81	0.49
28:DG:53:PRO:HG3	28:DG:61:TRP:NE1	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1072:G:C5	1:CA:1073:U:C5	3.01	0.49
4:CD:20:LEU:O	4:CD:21:LYS:CB	2.61	0.49
31:DJ:38:GLY:C	31:DJ:40:HIS:H	2.16	0.49
31:DJ:111:LYS:HB2	31:DJ:115:GLY:HA3	1.91	0.49
22:DA:2379:G:C4	22:DA:2380:C:C5	3.01	0.49
1:AA:1241:G:O2'	1:AA:1242:G:C8	2.52	0.49
35:BN:73:ASN:ND2	35:BN:76:VAL:HG11	2.28	0.49
1:CA:980:C:OP2	1:CA:981:U:O4	2.30	0.49
1:AA:164:G:H2'	1:AA:165:G:H5'	1.93	0.49
22:BA:1869:G:N2	22:BA:1873:G:C6	2.80	0.49
1:CA:541:G:O2'	1:CA:542:G:H5'	2.12	0.49
41:BT:54:GLU:O	41:BT:55:VAL:CB	2.56	0.49
1:AA:695:A:H61	1:AA:797:C:H1'	1.77	0.49
11:AK:125:LYS:C	21:AU:33:ARG:NH1	2.66	0.49
11:AK:125:LYS:C	21:AU:33:ARG:NH2	2.66	0.49
7:CG:22:LEU:O	7:CG:26:VAL:HG22	2.12	0.49
7:CG:55:LYS:HE3	7:CG:63:VAL:HG21	1.94	0.49
22:BA:137:U:O2'	22:BA:138:U:P	2.71	0.49
22:DA:271:G:N2	22:DA:367:G:C4	2.81	0.49
5:CE:131:ASN:HD22	5:CE:132:PRO:N	2.10	0.49
1:CA:1458:G:O2'	20:CT:22:SER:CB	2.59	0.49
32:DK:108:ARG:HA	32:DK:116:ILE:HG21	1.94	0.49
9:CI:58:GLU:HG3	9:CI:59:LYS:H	1.78	0.49
2:CB:151:LYS:HG3	2:CB:152:ASP:OD1	2.13	0.49
29:DH:32:PRO:HA	45:DX:38:TRP:CD1	2.48	0.49
1:AA:483:C:H2'	1:AA:484:G:C8	2.47	0.49
19:AS:39:ILE:HD11	19:AS:70:LEU:CD2	2.42	0.49
1:CA:824:G:H1'	8:CH:1:SER:N	2.27	0.49
1:CA:563:A:H1'	1:CA:566:G:O2'	2.13	0.49
7:CG:24:LYS:O	7:CG:28:ILE:CG1	2.60	0.49
15:AO:63:ARG:CG	15:AO:87:ARG:HH12	2.23	0.49
20:AT:56:ILE:CG2	20:AT:57:VAL:N	2.76	0.49
22:BA:1936:A:N3	22:BA:1943:U:H5	2.11	0.49
22:BA:2015:A:C4	48:B0:2:VAL:HG21	2.48	0.49
22:BA:1429:G:N3	22:BA:1568:G:C2	2.81	0.49
24:DC:30:ALA:C	24:DC:32:LEU:H	2.15	0.49
1:AA:330:C:O5'	1:AA:330:C:H6	1.96	0.49
22:DA:1000:A:N1	22:DA:1001:A:C2	2.80	0.49
1:AA:914:A:C2	1:AA:915:A:C8	3.01	0.49
25:DD:179:ARG:NH2	37:DP:11:GLN:NE2	2.61	0.49
22:DA:2563:U:H2'	22:DA:2565:A:OP2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1844:C:C2'	22:DA:1845:G:H5'	2.42	0.49
27:DF:8:LYS:HZ2	27:DF:8:LYS:HB2	1.77	0.49
37:BP:17:PRO:HG3	37:BP:83:ILE:O	2.12	0.49
1:AA:290:C:O2'	1:AA:291:U:H5'	2.11	0.49
2:CB:59:ILE:CG2	2:CB:62:ARG:HD3	2.42	0.49
9:CI:47:VAL:O	9:CI:50:PRO:HG2	2.12	0.49
22:BA:611:C:C2'	22:BA:612:G:H5'	2.42	0.49
23:BB:17:C:C2'	23:BB:18:G:H5'	2.43	0.49
22:BA:314:C:O2'	22:BA:315:G:H5'	2.13	0.49
18:AR:33:THR:HG21	18:AR:37:LYS:HB2	1.95	0.49
1:AA:1264:U:O2	1:AA:1272:G:C2	2.65	0.49
22:BA:1476:U:O2'	22:BA:1477:A:H5'	2.13	0.49
1:CA:1108:G:H5''	3:CC:175:HIS:CE1	2.48	0.49
32:BK:63:VAL:HG22	32:BK:107:LEU:CD2	2.41	0.49
18:AR:42:ARG:C	18:AR:43:ILE:HD13	2.33	0.49
1:CA:448:A:C4	1:CA:487:A:C2	3.01	0.49
25:BD:20:VAL:CG1	25:BD:21:SER:N	2.74	0.49
22:BA:1485:U:N3	22:BA:1505:A:C2	2.80	0.49
22:DA:1114:C:O2'	22:DA:1115:G:C8	2.66	0.49
33:BL:38:GLN:O	33:BL:40:SER:O	2.30	0.49
24:DC:44:ASN:C	24:DC:46:GLY:N	2.65	0.49
22:BA:2865:U:C4	22:BA:2866:U:C5	3.00	0.49
1:AA:1098:C:C2	1:AA:1099:G:C8	3.00	0.49
27:BF:110:ILE:O	27:BF:111:ARG:C	2.51	0.49
37:BP:62:LYS:HB3	37:BP:69:VAL:HG13	1.94	0.49
22:DA:1838:C:C2	22:DA:1899:A:C2	3.00	0.49
6:CF:49:TYR:CE1	18:CR:65:SER:HA	2.48	0.49
1:AA:1416:G:H2'	1:AA:1417:G:H5'	1.94	0.49
35:DN:120:GLU:OE1	35:DN:120:GLU:HA	2.13	0.49
8:AH:48:PHE:N	8:AH:48:PHE:CD1	2.81	0.49
22:BA:2572:A:N7	25:BD:150:GLN:HB3	2.28	0.49
33:BL:95:LEU:HD22	33:BL:100:ILE:HG12	1.95	0.49
22:DA:1340:U:O2'	22:DA:1341:G:OP1	2.22	0.49
30:DI:90:GLY:O	30:DI:92:PRO:HD3	2.13	0.49
22:DA:2834:G:C1'	22:DA:2879:A:N6	2.76	0.49
22:DA:301:G:C6	22:DA:302:C:N4	2.80	0.49
22:DA:304:U:C2'	22:DA:305:C:OP2	2.59	0.49
22:DA:311:A:N6	22:DA:330:A:C5'	2.75	0.49
42:DU:35:VAL:CG1	42:DU:36:GLU:N	2.70	0.49
50:D2:30:VAL:O	50:D2:34:ARG:HG2	2.12	0.49
22:DA:54:G:C6	22:DA:117:G:N2	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1364:G:OP2	45:DX:1:SER:CA	2.60	0.49
22:DA:2747:G:O6	22:DA:2755:C:H5''	2.11	0.49
34:DM:71:LYS:HD3	34:DM:95:LEU:HD11	1.95	0.49
1:AA:202:G:H21	1:AA:466:A:H61	1.60	0.49
1:AA:208:U:H5	1:AA:210:C:C5	2.31	0.49
1:AA:212:G:H2'	1:AA:213:G:C8	2.48	0.49
1:CA:1493:A:C8	22:DA:1913:A:N6	2.72	0.49
22:DA:997:G:O2'	22:DA:998:C:H5'	2.13	0.49
31:DJ:41:LYS:C	31:DJ:43:GLU:N	2.64	0.49
6:CF:41:ASP:CG	6:CF:58:HIS:HE1	2.16	0.49
22:DA:2056:G:C6	22:DA:2577:A:C8	3.00	0.49
22:DA:2440:C:O2'	22:DA:2441:U:H4'	2.13	0.49
1:CA:810:C:C2'	1:CA:811:C:H5'	2.42	0.49
1:CA:577:G:C8	1:CA:816:A:C2	3.01	0.49
1:AA:707:U:H4'	11:AK:21:HIS:CD2	2.48	0.49
22:DA:2712:C:C2	22:DA:2715:C:OP1	2.66	0.49
22:DA:1429:G:O2'	22:DA:1430:G:C8	2.66	0.49
22:DA:1431:A:H2'	22:DA:1432:G:H8	1.78	0.49
24:DC:212:TRP:C	24:DC:212:TRP:CD1	2.86	0.49
22:DA:1566:A:H2	24:DC:212:TRP:HB2	1.77	0.49
29:BH:66:ASN:C	29:BH:68:ARG:H	2.15	0.49
1:AA:1372:U:H2'	1:AA:1373:G:O4'	2.12	0.49
31:BJ:135:GLN:CA	31:BJ:135:GLN:NE2	2.74	0.49
1:CA:139:A:C2'	1:CA:140:U:H5'	2.43	0.49
1:AA:1328:C:H5''	13:AM:27:THR:CG2	2.29	0.49
12:AL:83:GLY:HA2	12:AL:94:TYR:HA	1.94	0.49
22:DA:1731:G:C2	22:DA:1733:G:C5	3.01	0.49
1:AA:1319:A:C8	1:AA:1323:G:C5	3.00	0.49
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.28	0.49
9:CI:51:LEU:HG	9:CI:86:LEU:HD21	1.88	0.49
2:AB:26:MET:HE3	2:AB:192:PRO:CG	2.29	0.49
5:CE:13:LYS:CE	5:CE:13:LYS:HA	2.27	0.49
22:DA:843:G:H2'	22:DA:844:A:C8	2.48	0.49
24:BC:93:VAL:HG12	24:BC:94:LEU:N	2.25	0.49
29:BH:1:MET:HB3	29:BH:21:VAL:O	2.12	0.49
1:AA:450:G:H2'	1:AA:451:A:OP1	2.13	0.49
22:DA:1965:C:OP1	22:DA:1966:A:H2'	2.12	0.49
22:DA:1864:U:O3'	22:DA:2409:G:N2	2.46	0.49
22:DA:419:U:H5''	56:DA:3233:HOH:O	2.12	0.49
36:DO:25:ARG:HD2	36:DO:93:ASP:OD1	2.12	0.49
22:DA:2654:A:H4'	22:DA:2655:G:OP1	2.10	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:666:G:C5	1:CA:741:G:N1	2.81	0.49
22:BA:1934:C:H4'	22:BA:1974:C:O3'	2.13	0.49
46:BY:8:GLU:O	46:BY:9:LYS:HB3	2.13	0.49
3:AC:142:ARG:CB	3:AC:143:LEU:HD13	2.35	0.49
1:CA:807:A:H2'	1:CA:808:C:C6	2.48	0.49
25:DD:34:VAL:CG1	25:DD:48:ILE:HG13	2.42	0.49
3:CC:42:LEU:HD12	3:CC:46:LEU:HD12	1.95	0.49
22:DA:834:G:C5'	51:D3:56:LEU:HD11	2.43	0.49
2:CB:119:GLN:HA	2:CB:122:ASP:HB3	1.93	0.49
16:CP:41:PRO:O	16:CP:42:ILE:HD13	2.13	0.49
1:AA:198:G:N3	1:AA:199:A:C8	2.81	0.49
13:AM:3:ILE:HA	13:AM:56:ARG:NH1	2.27	0.49
25:DD:105:LYS:HA	25:DD:177:VAL:HG22	1.93	0.49
22:DA:1471:G:H1	22:DA:1521:G:H1'	1.77	0.49
3:AC:137:VAL:CG1	3:AC:169:GLU:HB3	2.43	0.49
4:AD:172:VAL:O	4:AD:173:ASP:CB	2.60	0.49
30:BI:32:VAL:HG22	30:BI:66:PHE:CG	2.47	0.49
22:BA:499:U:H2'	22:BA:500:G:O4'	2.13	0.49
31:DJ:88:THR:HG23	31:DJ:91:GLU:HG3	1.93	0.49
22:BA:1927:A:H2'	22:BA:1928:A:C8	2.48	0.49
12:CL:72:ASN:HD22	12:CL:72:ASN:N	2.08	0.49
14:CN:47:LEU:HD11	14:CN:50:LEU:HD21	1.93	0.49
4:CD:64:TYR:CD2	4:CD:93:LEU:HB3	2.47	0.49
23:BB:70:C:HO2'	23:BB:71:C:H5'	1.76	0.49
1:CA:240:G:H2'	1:CA:241:G:H8	1.77	0.49
49:B1:16:THR:HG21	49:B1:41:VAL:HG22	1.95	0.49
22:BA:2520:C:O2'	22:BA:2521:C:C5'	2.60	0.49
34:DM:62:LYS:O	34:DM:63:ILE:HD12	2.11	0.49
2:AB:56:LEU:HB2	2:AB:183:PHE:CE1	2.48	0.49
28:DG:148:ARG:HD3	28:DG:152:ARG:NH2	2.27	0.49
2:CB:20:ARG:HA	2:CB:20:ARG:HE	1.77	0.49
24:DC:124:LYS:HG3	24:DC:125:PRO:O	2.13	0.49
24:DC:41:GLY:HA3	24:DC:53:ILE:HG23	1.94	0.49
25:DD:184:ARG:HH22	37:DP:6:GLN:HE21	1.59	0.49
28:BG:89:VAL:O	28:BG:159:LYS:HA	2.12	0.49
22:BA:594:U:H2'	22:BA:595:C:C6	2.48	0.49
27:DF:63:LYS:HD3	27:DF:63:LYS:C	2.33	0.49
1:AA:1077:G:N1	1:AA:1081:A:C6	2.80	0.49
8:AH:104:SER:O	8:AH:122:GLY:HA3	2.13	0.49
22:BA:2489:U:O2	22:BA:2491:U:C4	2.66	0.49
33:BL:29:LYS:HG2	33:BL:30:THR:HG23	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:371:A:N3	1:CA:373:A:N6	2.60	0.49
22:DA:861:A:O2'	22:DA:862:G:H5'	2.13	0.49
22:DA:1693:U:C4'	22:DA:1694:C:OP2	2.56	0.49
2:AB:32:GLY:O	2:AB:33:ALA:HB2	2.13	0.49
35:DN:16:HIS:O	35:DN:20:MET:HB2	2.13	0.49
1:CA:503:C:C2'	1:CA:504:C:H5'	2.42	0.49
22:DA:60:G:H1	22:DA:89:A:N6	2.11	0.49
1:CA:1092:A:N6	1:CA:1093:A:N6	2.60	0.49
34:DM:46:ILE:HA	34:DM:103:TYR:OH	2.13	0.49
31:DJ:4:PHE:CG	31:DJ:5:THR:N	2.80	0.49
1:CA:790:A:H2'	1:CA:791:G:O4'	2.12	0.49
44:BW:22:VAL:HG13	44:BW:25:PHE:CD2	2.48	0.49
44:BW:39:GLN:HG3	44:BW:42:THR:CA	2.42	0.49
17:AQ:54:ILE:HG12	17:AQ:55:GLY:N	2.28	0.49
1:CA:642:A:N7	8:CH:106:SER:HA	2.28	0.49
8:CH:84:ILE:O	8:CH:123:GLU:HA	2.13	0.49
12:AL:49:ARG:CG	12:AL:49:ARG:NH1	2.47	0.49
1:AA:487:A:H2'	1:AA:488:C:O4'	2.13	0.49
38:BQ:4:LYS:HZ2	38:BQ:5:ARG:N	2.10	0.49
1:CA:1266:G:H3'	1:CA:1266:G:C8	2.48	0.49
14:CN:5:MET:O	14:CN:9:GLU:HG3	2.13	0.49
22:BA:1655:A:H3'	22:BA:1656:C:H6	1.78	0.49
24:BC:246:PRO:CD	24:BC:247:TRP:CZ3	2.95	0.49
11:AK:108:ASN:HD22	21:AU:6:ARG:HA	1.78	0.49
22:DA:272:A:C4	22:DA:273:G:N7	2.81	0.49
5:CE:135:VAL:O	5:CE:139:THR:HG23	2.12	0.49
1:CA:174:A:H2'	1:CA:175:C:H6	1.78	0.49
12:AL:58:ASN:HD21	12:AL:60:PHE:HD1	1.61	0.49
32:BK:21:CYS:HB2	32:BK:39:ILE:CD1	2.39	0.49
22:DA:1438:U:O4	22:DA:1439:A:H2	1.94	0.49
1:AA:1323:G:O2'	1:AA:1324:A:C8	2.62	0.49
52:B4:10:LEU:HD23	52:B4:10:LEU:N	2.28	0.49
22:BA:2149:U:O2'	22:BA:2150:C:C4'	2.61	0.49
22:BA:1627:G:C8	22:BA:1627:G:C5'	2.85	0.49
4:AD:145:ARG:HH11	4:AD:147:LYS:CE	2.17	0.49
1:AA:984:C:O2'	1:AA:985:C:C5'	2.61	0.49
1:CA:243:A:C2	1:CA:246:A:C8	3.01	0.49
36:DO:7:ARG:NH2	36:DO:29:HIS:HD2	2.11	0.49
22:DA:1635:A:H2'	22:DA:1636:U:C6	2.47	0.49
1:AA:877:G:N2	8:AH:1:SER:H3	2.10	0.49
1:CA:21:G:C2'	1:CA:914:A:H61	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:73:LEU:HD21	12:AL:103:CYS:SG	2.53	0.49
46:BY:17:GLU:OE2	46:BY:21:LEU:HD11	2.12	0.49
38:DQ:39:ILE:O	38:DQ:42:GLY:N	2.44	0.49
1:CA:493:A:H2'	1:CA:494:G:O4'	2.12	0.49
3:AC:102:ILE:HD12	3:AC:102:ILE:N	2.26	0.49
5:CE:44:ARG:HH22	5:CE:70:MET:HB2	1.76	0.49
22:DA:2567:G:H2'	22:DA:2568:U:C6	2.47	0.49
22:BA:1378:A:HO2'	22:BA:1379:U:P	2.36	0.49
32:BK:61:VAL:CG2	32:BK:112:PHE:CE2	2.95	0.49
3:AC:6:PRO:CG	3:AC:183:TYR:CD2	2.92	0.49
1:AA:328:C:O2	1:AA:328:C:C2'	2.51	0.49
22:BA:876:C:H2'	22:BA:877:A:C8	2.47	0.49
22:DA:187:G:H2'	22:DA:1365:A:H2	1.78	0.49
21:CU:10:PRO:O	21:CU:11:PHE:CB	2.60	0.49
39:BR:1:MET:CG	39:BR:1:MET:O	2.61	0.49
41:BT:11:LEU:HG	41:BT:46:ALA:HB1	1.93	0.49
1:AA:291:U:C2'	1:AA:292:G:H5'	2.41	0.49
22:BA:478:A:C6	22:BA:480:A:C6	3.00	0.49
1:AA:382:A:O2'	1:AA:383:A:H5'	2.13	0.49
22:BA:2199:A:N3	22:BA:2199:A:H2'	2.26	0.49
10:AJ:33:GLY:HA2	10:AJ:83:THR:HB	1.95	0.49
22:BA:61:C:H6	22:BA:61:C:O5'	1.96	0.49
30:DI:23:VAL:HG21	30:DI:37:PHE:HE2	1.77	0.49
22:DA:1379:U:C2'	22:DA:1379:U:O2	2.61	0.49
7:AG:83:THR:O	7:AG:84:TYR:C	2.50	0.49
1:AA:1288:A:C6	1:AA:1289:A:C5	3.01	0.49
41:DT:62:VAL:HG12	41:DT:63:VAL:H	1.78	0.49
26:BE:127:GLU:N	26:BE:127:GLU:CD	2.64	0.49
39:BR:57:GLY:HA2	39:BR:103:ALA:O	2.13	0.49
29:DH:54:LEU:HA	29:DH:57:LYS:HG3	1.94	0.49
50:D2:10:LEU:HD21	50:D2:14:ARG:NH1	2.28	0.49
28:DG:152:ARG:HD2	28:DG:153:PRO:CD	2.43	0.49
28:DG:152:ARG:CG	28:DG:153:PRO:HD2	2.42	0.49
43:BV:2:PHE:HB3	43:BV:61:LEU:HD22	1.94	0.49
8:CH:111:THR:HG22	8:CH:113:ARG:N	2.28	0.49
22:BA:1923:U:H2'	22:BA:1924:C:H6	1.77	0.49
1:AA:11:G:H2'	1:AA:12:U:H6	1.78	0.49
1:CA:772:U:C2'	1:CA:773:G:H5'	2.43	0.49
22:BA:927:A:H2'	22:BA:928:A:C8	2.48	0.49
1:CA:896:C:H2'	1:CA:897:C:H5'	1.95	0.49
22:BA:171:U:O2'	22:BA:172:A:H5'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:908:C:O2'	22:BA:909:A:H5'	2.12	0.49
3:AC:184:ASN:HD22	3:AC:185:THR:H	1.61	0.49
22:BA:2714:G:P	56:BA:3547:HOH:O	2.70	0.49
22:BA:1005:C:H1'	22:BA:1012:U:C4	2.47	0.49
48:B0:50:GLY:O	48:B0:51:ARG:O	2.29	0.49
22:BA:2798:U:H3'	22:BA:2798:U:OP2	2.13	0.49
22:DA:1337:G:H8	22:DA:1337:G:OP2	1.95	0.49
22:DA:1817:G:H4'	24:DC:85:ASN:O	2.12	0.49
4:CD:187:ARG:NH2	4:CD:191:SER:CB	2.76	0.49
41:DT:61:LEU:C	41:DT:61:LEU:CD1	2.81	0.49
27:BF:129:MET:HG2	27:BF:153:ILE:HD11	1.81	0.49
1:CA:386:C:H6	1:CA:386:C:H3'	1.77	0.49
22:DA:2266:A:O2'	22:DA:2267:A:OP2	2.27	0.49
44:DW:30:VAL:O	44:DW:30:VAL:CG2	2.61	0.49
22:DA:743:A:O2'	22:DA:744:U:H5'	2.13	0.49
22:DA:1070:A:C5'	22:DA:1071:G:H5''	2.38	0.49
35:DN:34:ILE:HD12	35:DN:44:LEU:CD2	2.43	0.49
35:DN:56:LYS:HE2	35:DN:87:PHE:O	2.12	0.49
22:DA:300:A:N7	22:DA:334:C:H4'	2.28	0.49
22:DA:90:U:C4	22:DA:91:A:N7	2.81	0.49
22:DA:93:G:O2'	22:DA:94:A:H8	1.96	0.49
22:DA:1360:G:C6	22:DA:1372:U:C2	3.01	0.49
1:CA:1518:A:H2	1:CA:1519:A:C2	2.31	0.49
11:CK:124:LYS:O	21:CU:33:ARG:NH2	2.45	0.49
6:CF:3:HIS:ND1	6:CF:95:ALA:N	2.60	0.49
21:CU:3:ILE:HG22	21:CU:19:LYS:HZ1	1.78	0.49
22:DA:479:A:O2'	22:DA:480:A:H5'	2.13	0.49
22:DA:505:A:O2'	22:DA:506:G:C5'	2.61	0.49
22:DA:513:A:H2'	22:DA:514:A:C8	2.48	0.49
3:CC:33:ASP:HB2	14:CN:64:ARG:HH21	1.78	0.49
26:BE:5:LEU:HD12	26:BE:10:SER:HB3	1.95	0.49
1:CA:1271:A:H5'	1:CA:1314:C:H5''	1.95	0.49
1:CA:1342:C:H2'	1:CA:1343:G:C8	2.48	0.49
33:DL:117:THR:CG2	33:DL:118:THR:H	1.99	0.49
21:AU:52:VAL:CG1	21:AU:53:LYS:N	2.63	0.49
25:DD:10:GLY:O	25:DD:11:MET:CB	2.58	0.49
3:AC:33:ASP:O	3:AC:37:LYS:HB3	2.13	0.49
31:DJ:64:VAL:CG1	31:DJ:65:THR:H	2.26	0.49
36:BO:7:ARG:HA	36:BO:10:ARG:NH2	2.27	0.49
7:CG:61:PHE:O	7:CG:63:VAL:N	2.41	0.49
16:CP:36:VAL:O	16:CP:36:VAL:HG13	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:51:THR:HG21	25:DD:76:GLY:HA3	1.86	0.49
9:CI:20:ILE:HD11	9:CI:61:ASP:O	2.12	0.49
29:BH:66:ASN:C	29:BH:68:ARG:N	2.66	0.49
27:DF:47:LYS:HA	27:DF:50:ASP:HB3	1.94	0.49
12:AL:23:LEU:CB	12:AL:58:ASN:ND2	2.70	0.49
1:CA:268:U:C4	1:CA:269:C:N4	2.81	0.49
22:DA:2199:A:C2	22:DA:2200:C:C1'	2.96	0.49
22:BA:2503:A:OP2	22:BA:2503:A:H3'	2.12	0.49
1:CA:1241:G:H2'	1:CA:1242:G:H8	1.78	0.49
51:D3:41:ARG:CB	51:D3:41:ARG:NH2	2.75	0.49
1:AA:1317:C:H2'	1:AA:1318:A:C5'	2.43	0.49
1:AA:1202:U:H1'	14:AN:68:ARG:HD2	1.94	0.49
22:DA:2805:C:C5	22:DA:2806:C:C5	3.01	0.49
1:CA:1297:G:C8	1:CA:1297:G:OP2	2.66	0.49
3:CC:148:ILE:HD13	3:CC:201:ILE:CD1	2.43	0.49
28:DG:94:ARG:CD	28:DG:105:SER:HB2	2.43	0.49
1:CA:666:G:C5	1:CA:741:G:C6	3.01	0.49
22:DA:185:G:C5	22:DA:212:G:N2	2.81	0.49
23:DB:37:C:C2'	23:DB:38:C:H5'	2.42	0.49
27:DF:65:LEU:HD11	27:DF:67:THR:CG2	2.37	0.49
22:DA:1456:G:O2'	22:DA:1457:U:C5'	2.61	0.49
3:AC:139:ASN:C	3:AC:139:ASN:ND2	2.66	0.49
40:BS:84:ARG:HB2	40:BS:96:ILE:CD1	2.43	0.49
1:CA:1394:A:N6	1:CA:1501:C:H5'	2.28	0.49
37:BP:33:GLU:OE1	37:BP:33:GLU:C	2.51	0.49
2:AB:36:LYS:HA	2:AB:36:LYS:CE	2.36	0.49
22:BA:359:G:H5''	22:BA:360:U:OP2	2.12	0.49
22:BA:2637:U:OP1	25:BD:83:ARG:NH2	2.45	0.49
22:DA:1714:U:H6	22:DA:1714:U:O5'	1.96	0.49
1:CA:201:G:H2'	1:CA:202:G:C8	2.48	0.49
22:DA:2191:A:H3'	22:DA:2192:U:H6	1.78	0.49
28:BG:61:TRP:HE3	28:BG:61:TRP:HA	1.76	0.49
1:CA:441:A:H2'	1:CA:442:G:H5'	1.93	0.49
22:BA:2755:C:H6	22:BA:2755:C:O5'	1.96	0.49
22:DA:2145:C:H5'	22:DA:2147:A:OP2	2.13	0.49
51:B3:61:LEU:CB	51:B3:64:ALA:HB2	2.39	0.49
22:BA:1731:G:C6	22:BA:1733:G:C5	3.01	0.49
22:BA:2392:A:O3'	51:B3:26:ALA:HB1	2.12	0.49
22:DA:1519:G:C6	22:DA:1520:U:C2	3.00	0.49
27:DF:141:ASP:O	27:DF:144:LYS:HG2	2.13	0.49
1:AA:141:G:C2	1:AA:142:G:H1'	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:151:GLN:O	4:CD:154:VAL:HG12	2.13	0.49
28:BG:71:LEU:HD13	28:BG:74:MET:SD	2.52	0.49
1:AA:424:G:O5'	1:AA:424:G:H8	1.95	0.49
1:CA:1434:A:N6	1:CA:1435:G:N1	2.60	0.49
1:CA:892:A:C6	1:CA:893:C:C4	3.00	0.49
22:DA:132:G:N2	22:DA:148:U:C2	2.81	0.49
22:BA:1171:G:C5	22:BA:1172:C:C5	3.01	0.49
1:CA:564:C:O2'	1:CA:565:U:H5'	2.13	0.49
5:AE:82:HIS:NE2	8:AH:95:MET:HE1	2.28	0.49
4:AD:124:VAL:O	4:AD:126:GLY:N	2.38	0.49
1:AA:57:G:H2'	1:AA:58:C:C6	2.47	0.49
1:AA:339:C:H2'	1:AA:340:U:C6	2.48	0.49
6:CF:21:MET:HA	6:CF:24:ARG:NH1	2.27	0.49
22:DA:713:G:H21	22:DA:718:A:H2	1.61	0.49
1:AA:849:G:C6	1:AA:850:U:C4	3.00	0.49
26:DE:76:PRO:HA	26:DE:82:GLY:O	2.13	0.49
37:DP:98:TYR:CE2	37:DP:99:LEU:HD21	2.48	0.49
3:AC:63:ILE:CG2	3:AC:98:ALA:HB2	2.43	0.49
11:AK:26:PHE:CE1	11:AK:88:PRO:HG2	2.48	0.49
22:BA:2282:G:H5''	22:BA:2283:C:O4'	2.13	0.49
8:CH:24:VAL:HG22	8:CH:25:THR:N	2.28	0.49
33:BL:28:GLY:O	39:BR:82:HIS:NE2	2.46	0.48
33:BL:29:LYS:HG3	33:BL:30:THR:CG2	2.43	0.48
22:DA:1819:A:H5''	24:DC:156:SER:CB	2.43	0.48
10:CJ:7:ARG:HG3	10:CJ:75:ASP:CG	2.33	0.48
22:DA:1388:G:C2	22:DA:1389:G:C8	3.01	0.48
4:AD:21:LYS:HD3	4:AD:21:LYS:O	2.13	0.48
22:DA:2264:C:H2'	22:DA:2265:U:O4'	2.12	0.48
22:DA:862:G:H2'	22:DA:863:A:O4'	2.12	0.48
22:DA:965:C:H4'	22:DA:2273:A:H1'	1.95	0.48
22:DA:2838:G:N2	22:DA:2881:U:C2	2.81	0.48
22:DA:118:A:OP2	22:DA:119:A:C3'	2.54	0.48
22:DA:1573:G:H2'	22:DA:1574:C:H5'	1.95	0.48
22:DA:1810:A:H2'	22:DA:1811:G:C8	2.48	0.48
22:DA:2230:G:H2'	22:DA:2231:U:H6	1.78	0.48
1:CA:213:G:H5''	1:CA:214:C:H5	1.78	0.48
1:AA:75:G:C2	1:AA:96:U:N3	2.81	0.48
44:BW:24:ARG:C	44:BW:24:ARG:HD2	2.32	0.48
22:BA:2331:G:O2'	44:BW:39:GLN:O	2.31	0.48
44:BW:40:ARG:NH1	44:BW:45:HIS:NE2	2.60	0.48
22:DA:1328:A:C4	22:DA:1330:C:N4	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:263:A:P	20:AT:73:ARG:HH11	2.36	0.48
38:DQ:4:LYS:O	38:DQ:5:ARG:HG3	2.13	0.48
25:DD:133:THR:O	25:DD:134:HIS:C	2.50	0.48
11:AK:114:PRO:O	11:AK:115:ILE:HD13	2.12	0.48
11:AK:22:ILE:HG12	11:AK:85:VAL:HA	1.94	0.48
41:BT:57:VAL:HG22	41:BT:58:VAL:N	2.28	0.48
24:BC:221:GLY:HA3	24:BC:229:HIS:CE1	2.48	0.48
27:DF:105:ILE:HG22	27:DF:105:ILE:O	2.13	0.48
1:CA:82:G:C5	1:CA:89:U:C5	3.01	0.48
1:AA:1328:C:C5'	13:AM:27:THR:HG21	2.28	0.48
22:DA:489:G:C8	22:DA:491:G:N7	2.81	0.48
22:DA:245:G:OP2	33:DL:67:THR:HG21	2.13	0.48
23:DB:57:A:C5	27:DF:25:MET:CB	2.95	0.48
23:DB:67:G:O2'	23:DB:68:C:O5'	2.30	0.48
27:BF:37:MET:HE3	27:BF:151:LEU:CB	2.43	0.48
22:DA:2415:G:H4'	33:DL:65:GLY:O	2.13	0.48
9:CI:109:GLN:CG	9:CI:110:VAL:H	2.26	0.48
1:CA:1037:C:C6	1:CA:1037:C:OP2	2.66	0.48
8:AH:12:ARG:NH1	8:AH:26:MET:HA	2.28	0.48
4:CD:73:ASN:HA	4:CD:76:LYS:HE3	1.95	0.48
13:CM:22:TYR:HB2	13:CM:65:GLU:HG2	1.94	0.48
22:BA:1588:G:C2	22:BA:1589:U:C6	3.01	0.48
1:CA:1297:G:H1'	7:CG:113:LYS:NZ	2.26	0.48
3:CC:148:ILE:HD12	3:CC:149:LYS:H	1.77	0.48
28:DG:92:GLY:O	28:DG:93:TYR:C	2.50	0.48
22:DA:526:A:C6	22:DA:2626:C:C4'	2.96	0.48
30:BI:16:MET:O	30:BI:19:PRO:HD3	2.12	0.48
3:CC:21:TRP:CH2	14:CN:93:PRO:HG2	2.48	0.48
22:BA:777:G:O2'	22:BA:778:G:C5'	2.52	0.48
7:AG:110:ARG:HG2	7:AG:118:ARG:HG2	1.94	0.48
22:BA:2217:G:H2'	22:BA:2218:G:O4'	2.12	0.48
22:BA:1430:G:H2'	22:BA:1431:A:C5'	2.43	0.48
22:DA:668:A:C4	22:DA:670:A:N7	2.81	0.48
22:DA:1278:C:HO2'	35:DN:27:SER:HB3	1.76	0.48
27:BF:128:SER:OG	27:BF:154:THR:HB	2.12	0.48
13:AM:2:ARG:O	13:AM:3:ILE:HG23	2.12	0.48
25:DD:104:VAL:O	25:DD:177:VAL:HG21	2.13	0.48
6:AF:10:VAL:HG12	6:AF:11:HIS:N	2.28	0.48
22:DA:870:U:H2'	22:DA:871:U:C5'	2.37	0.48
13:CM:8:ILE:N	13:CM:9:PRO:CD	2.76	0.48
1:CA:157:U:H2'	1:CA:158:G:H5'	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:346:G:N3	1:CA:346:G:C2'	2.76	0.48
16:CP:46:LYS:H	16:CP:46:LYS:HZ2	1.61	0.48
22:BA:531:C:H4'	22:BA:532:A:H5''	1.95	0.48
1:AA:596:A:N3	1:AA:597:G:C8	2.80	0.48
6:AF:7:VAL:O	6:AF:7:VAL:CG2	2.61	0.48
22:BA:2210:U:O2	22:BA:2212:A:C8	2.66	0.48
1:AA:1526:G:OP2	21:AU:38:GLU:HB2	2.12	0.48
22:DA:2370:G:C6	22:DA:2371:G:C6	3.01	0.48
1:AA:605:U:H2'	1:AA:606:G:C8	2.46	0.48
10:AJ:32:THR:HG23	10:AJ:33:GLY:H	1.78	0.48
22:DA:982:C:C4'	22:DA:983:A:OP1	2.60	0.48
1:CA:1466:C:C5	1:CA:1467:C:C5	3.01	0.48
38:BQ:105:PHE:O	38:BQ:108:LEU:N	2.46	0.48
1:AA:701:U:C2'	1:AA:701:U:O2	2.61	0.48
7:AG:69:ARG:HD2	7:AG:95:ARG:HG2	1.95	0.48
18:CR:25:ILE:HD12	18:CR:67:LEU:HD21	1.95	0.48
37:DP:47:ILE:HD13	37:DP:61:ARG:HB2	1.95	0.48
1:AA:1108:G:C5	1:AA:1109:C:C6	3.01	0.48
22:DA:1767:G:N2	22:DA:1986:C:N1	2.60	0.48
23:DB:77:U:C2'	23:DB:78:A:H5'	2.42	0.48
25:BD:86:GLU:OE1	25:BD:86:GLU:HA	2.13	0.48
4:CD:94:GLU:CD	4:CD:99:ASN:HD21	2.16	0.48
9:AI:55:ASP:O	9:AI:59:LYS:HE3	2.13	0.48
32:BK:28:SER:O	32:BK:29:HIS:HB2	2.12	0.48
22:BA:1469:A:H2'	22:BA:1470:A:C8	2.48	0.48
28:DG:37:ASN:HD22	28:DG:40:VAL:HG21	1.76	0.48
22:BA:71:A:N3	22:BA:71:A:H5''	2.28	0.48
1:CA:872:A:C4	1:CA:874:G:N7	2.81	0.48
22:BA:1983:G:O2'	22:BA:1984:G:H5'	2.12	0.48
2:CB:83:ALA:O	2:CB:85:SER:N	2.44	0.48
1:CA:418:C:H1'	1:CA:540:G:O2'	2.13	0.48
5:AE:139:THR:O	5:AE:140:ILE:C	2.50	0.48
33:BL:132:ARG:HA	33:BL:142:ILE:CD1	2.41	0.48
24:DC:159:THR:N	24:DC:194:VAL:CG1	2.76	0.48
4:AD:36:ALA:C	4:AD:38:GLY:N	2.66	0.48
4:AD:7:LYS:HZ3	4:AD:21:LYS:HB2	1.78	0.48
16:CP:71:VAL:O	16:CP:75:ILE:HG13	2.13	0.48
22:DA:2383:G:H2'	22:DA:2384:U:C6	2.48	0.48
22:DA:730:A:O2'	22:DA:731:C:H5'	2.13	0.48
35:DN:97:ILE:HD11	35:DN:99:LYS:NZ	2.27	0.48
46:DY:21:LEU:HA	46:DY:25:GLN:HB3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:D2:21:ARG:HG2	50:D2:31:LEU:HD12	1.95	0.48
22:DA:1364:G:OP2	45:DX:1:SER:HA	2.13	0.48
22:DA:2210:U:H4'	22:DA:2211:A:H5'	1.95	0.48
1:AA:1308:U:OP2	13:AM:97:ARG:HG3	2.13	0.48
1:AA:211:G:H2'	1:AA:212:G:O5'	2.12	0.48
1:CA:1498:U:H5'	1:CA:1519:A:N1	2.28	0.48
4:CD:28:ASP:OD1	4:CD:29:THR:N	2.47	0.48
41:BT:25:GLU:O	41:BT:27:SER:N	2.42	0.48
38:BQ:65:ASN:O	38:BQ:69:ARG:HB3	2.12	0.48
21:CU:33:ARG:NH2	21:CU:34:ARG:CD	2.76	0.48
44:BW:18:LYS:CG	44:BW:19:ARG:N	2.64	0.48
22:DA:2054:A:C2	22:DA:2616:C:N3	2.81	0.48
22:DA:1308:A:N6	22:DA:1309:G:N1	2.62	0.48
1:CA:599:C:C4'	8:CH:121:GLY:HA3	2.40	0.48
1:CA:1266:G:C6	1:CA:1270:G:O6	2.66	0.48
1:CA:1366:C:C4	1:CA:1367:C:N4	2.82	0.48
22:DA:603:A:C4'	22:DA:604:G:O5'	2.57	0.48
22:DA:660:C:C5'	26:DE:94:GLN:OE1	2.58	0.48
25:BD:118:PHE:O	25:BD:119:ALA:HB3	2.13	0.48
11:AK:34:THR:OG1	11:AK:39:ASN:N	2.32	0.48
36:BO:3:LYS:HG3	36:BO:4:LYS:N	2.27	0.48
41:BT:14:PRO:HA	41:BT:32:LEU:HB3	1.94	0.48
16:CP:4:ILE:HG12	16:CP:57:ILE:CD1	2.44	0.48
1:CA:69:G:N2	1:CA:71:A:H62	2.11	0.48
22:DA:976:G:H2'	22:DA:977:G:C8	2.42	0.48
27:BF:105:ILE:O	27:BF:105:ILE:HG13	2.12	0.48
1:CA:1244:G:O2'	1:CA:1245:C:H5'	2.12	0.48
1:AA:1157:A:N7	1:AA:1180:A:C6	2.81	0.48
1:AA:1157:A:N7	1:AA:1180:A:N6	2.61	0.48
22:DA:618:G:H2'	22:DA:619:G:C8	2.48	0.48
5:CE:11:GLN:CB	5:CE:116:VAL:HB	2.43	0.48
22:BA:2094:A:C5'	29:BH:25:TYR:CD1	2.93	0.48
22:DA:1222:U:OP2	39:DR:90:ARG:NH2	2.46	0.48
22:DA:228:C:C2	22:DA:418:C:H4'	2.48	0.48
28:DG:88:LEU:CD1	28:DG:93:TYR:HB3	2.40	0.48
1:CA:744:C:O2'	1:CA:745:G:H5'	2.12	0.48
22:BA:845:A:H3'	22:BA:845:A:N3	2.28	0.48
6:AF:36:ILE:CG2	6:AF:64:VAL:HG22	2.32	0.48
7:CG:99:ALA:HB3	7:CG:100:MET:HE3	1.93	0.48
34:BM:77:PRO:CD	34:BM:80:VAL:HG11	2.42	0.48
11:CK:81:LEU:HD13	11:CK:81:LEU:N	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:191:LEU:N	24:DC:191:LEU:HD22	2.28	0.48
1:CA:821:G:O2'	1:CA:822:U:H5'	2.14	0.48
28:DG:83:THR:HA	28:DG:84:LYS:HD3	1.94	0.48
46:BY:21:LEU:O	46:BY:22:LEU:C	2.51	0.48
22:DA:533:G:C2	22:DA:534:U:C2	3.01	0.48
11:AK:63:GLN:HG3	11:AK:98:ALA:HB2	1.96	0.48
1:AA:1501:C:N3	1:AA:1504:G:C6	2.81	0.48
1:AA:243:A:C2	1:AA:245:U:H2'	2.48	0.48
1:AA:1429:A:C2	1:AA:1472:U:N3	2.81	0.48
36:BO:59:ALA:N	36:BO:62:LEU:CD1	2.76	0.48
22:DA:1520:U:C4	22:DA:1521:G:C5	3.00	0.48
22:BA:1559:U:OP1	22:BA:1559:U:H6	1.96	0.48
15:CO:8:ALA:O	15:CO:11:VAL:HB	2.13	0.48
22:DA:12:U:O2	22:DA:12:U:H2'	2.12	0.48
39:BR:73:LYS:C	39:BR:74:ILE:HD12	2.33	0.48
1:AA:122:G:O5'	1:AA:122:G:H8	1.97	0.48
15:CO:69:LEU:CD1	15:CO:77:TYR:HA	2.43	0.48
31:DJ:1:MET:SD	31:DJ:2:LYS:CE	3.00	0.48
1:CA:1431:A:C6	1:CA:1432:G:N1	2.81	0.48
41:DT:62:VAL:CG1	41:DT:63:VAL:N	2.76	0.48
28:BG:115:GLN:OE1	28:BG:115:GLN:N	2.44	0.48
3:AC:42:LEU:HG	3:AC:67:ILE:HD11	1.95	0.48
39:DR:66:HIS:CD2	39:DR:94:THR:HG22	2.48	0.48
29:BH:61:VAL:CG1	29:BH:61:VAL:O	2.61	0.48
15:AO:78:THR:O	15:AO:81:ILE:HG12	2.14	0.48
1:AA:783:C:O2'	1:AA:784:A:H5'	2.12	0.48
7:AG:138:GLU:OE1	7:AG:138:GLU:HA	2.14	0.48
44:BW:71:LYS:CD	44:BW:71:LYS:N	2.76	0.48
1:AA:304:U:O2'	1:AA:305:G:H5'	2.14	0.48
22:BA:1050:A:C2	22:BA:2751:G:C5	3.01	0.48
35:DN:58:ASP:O	35:DN:59:SER:HB3	2.13	0.48
24:DC:135:PRO:HG2	24:DC:138:SER:OG	2.13	0.48
7:AG:14:ASP:HB3	7:AG:18:GLY:H	1.77	0.48
22:DA:2740:A:N6	22:DA:2764:A:C8	2.81	0.48
31:DJ:105:VAL:O	31:DJ:105:VAL:HG22	2.13	0.48
1:AA:1421:G:C2	1:AA:1422:G:C8	3.01	0.48
5:CE:40:ASP:OD1	5:CE:41:GLY:N	2.39	0.48
45:DX:24:THR:O	45:DX:25:LYS:C	2.52	0.48
22:DA:133:U:H2'	22:DA:134:G:O4'	2.13	0.48
2:AB:25:LYS:HE2	2:AB:191:ASP:OD1	2.14	0.48
22:BA:1063:G:O2'	22:BA:1064:C:C5'	2.62	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:110:VAL:O	33:BL:111:ILE:CB	2.49	0.48
22:DA:1800:C:C2	22:DA:1802:A:C8	3.02	0.48
22:DA:1802:A:O2'	22:DA:1803:A:H5'	2.12	0.48
22:DA:1805:A:N3	22:DA:1813:G:C2	2.81	0.48
49:D1:52:LYS:HB2	49:D1:52:LYS:NZ	2.28	0.48
22:DA:785:G:O2'	22:DA:1779:U:H5''	2.12	0.48
22:DA:762:U:H4'	22:DA:763:G:C5'	2.43	0.48
22:DA:1075:C:O2'	22:DA:1076:C:H6	1.97	0.48
22:DA:1103:A:H8	22:DA:1103:A:O5'	1.95	0.48
22:DA:1274:A:C6	22:DA:1302:A:C2	3.01	0.48
40:BS:72:THR:HG21	40:BS:108:SER:OG	2.13	0.48
1:AA:927:G:O2'	1:AA:928:G:H5'	2.14	0.48
12:CL:22:ALA:O	12:CL:58:ASN:ND2	2.45	0.48
12:CL:86:VAL:C	12:CL:88:ASP:H	2.16	0.48
39:BR:49:ILE:HG22	39:BR:54:VAL:HG12	1.95	0.48
28:DG:1:SER:C	28:DG:3:VAL:N	2.67	0.48
34:DM:72:PRO:O	34:DM:91:TYR:O	2.31	0.48
1:AA:210:C:C4'	1:AA:211:G:N2	2.76	0.48
1:CA:499:A:O2'	1:CA:500:G:C8	2.64	0.48
41:BT:20:ALA:O	41:BT:21:SER:C	2.50	0.48
25:BD:104:VAL:HA	25:BD:106:LYS:HZ2	1.75	0.48
43:DV:3:THR:C	43:DV:4:ILE:HG13	2.33	0.48
6:CF:4:TYR:O	6:CF:63:ASN:HA	2.13	0.48
31:DJ:110:PRO:CB	31:DJ:111:LYS:HG2	2.31	0.48
45:BX:44:ARG:HE	45:BX:46:VAL:HG13	1.76	0.48
45:BX:67:LEU:HD22	45:BX:77:TYR:CD2	2.48	0.48
17:AQ:13:SER:O	17:AQ:16:MET:SD	2.71	0.48
29:DH:84:ALA:N	29:DH:148:ALA:HA	2.29	0.48
1:CA:971:G:OP1	1:CA:972:C:H5''	2.13	0.48
1:CA:961:U:C4	1:CA:983:A:C6	3.01	0.48
22:DA:599:A:C2	22:DA:659:G:C6	3.01	0.48
22:DA:656:G:O2'	22:DA:657:U:O4'	2.28	0.48
1:AA:16:A:H2	1:AA:1080:A:N3	2.11	0.48
22:BA:1872:A:C2'	22:BA:1873:G:O4'	2.61	0.48
21:AU:24:LYS:O	21:AU:28:LEU:HB2	2.13	0.48
22:DA:2544:G:C5'	22:DA:2645:G:N7	2.74	0.48
22:DA:1429:G:O2'	22:DA:1430:G:P	2.72	0.48
41:BT:14:PRO:HG2	41:BT:14:PRO:O	2.13	0.48
22:DA:573:U:C4'	22:DA:574:A:OP1	2.41	0.48
22:DA:574:A:OP2	56:DA:3266:HOH:O	2.20	0.48
31:BJ:54:ILE:HD12	31:BJ:55:ILE:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:66:A:C6	1:CA:67:C:C4	3.00	0.48
1:CA:97:G:C6	1:CA:98:A:H1'	2.48	0.48
1:CA:254:G:C2'	1:CA:255:G:H5'	2.42	0.48
22:DA:973:A:H1'	22:DA:1188:U:C5	2.49	0.48
22:DA:2196:C:O2'	22:DA:2197:U:H5'	2.13	0.48
22:DA:411:G:C5'	22:DA:412:A:OP1	2.61	0.48
1:AA:979:C:H5''	1:AA:980:C:OP2	2.13	0.48
1:AA:1161:C:O2'	1:AA:1162:C:C6	2.63	0.48
52:B4:15:LYS:O	52:B4:16:ILE:CB	2.61	0.48
22:BA:1328:A:HO2'	22:BA:1329:U:H6	1.60	0.48
4:AD:150:LYS:O	4:AD:150:LYS:HG3	2.13	0.48
34:BM:73:ILE:HG12	34:BM:93:VAL:HG12	1.95	0.48
29:BH:52:ALA:C	29:BH:54:LEU:H	2.17	0.48
24:DC:128:THR:O	24:DC:129:LEU:HB3	2.14	0.48
4:AD:2:ARG:CZ	4:AD:114:ARG:CD	2.91	0.48
22:BA:1296:G:H2'	22:BA:1297:C:O5'	2.12	0.48
22:BA:846:U:H2'	22:BA:846:U:O2	2.13	0.48
22:DA:464:U:C6	22:DA:788:A:C2	3.02	0.48
26:BE:147:LEU:HA	26:BE:147:LEU:HD22	1.53	0.48
15:AO:63:ARG:NH1	15:AO:87:ARG:NH2	2.61	0.48
22:DA:2705:A:H2'	22:DA:2706:A:H5'	1.95	0.48
1:AA:1456:A:H2'	1:AA:1457:G:O4'	2.12	0.48
1:AA:1458:G:OP1	20:AT:29:THR:HG21	2.13	0.48
22:BA:244:A:H2'	22:BA:245:G:O4'	2.13	0.48
22:BA:245:G:O6	51:B3:7:ARG:HG3	2.13	0.48
22:BA:153:U:H2'	22:BA:154:U:O5'	2.13	0.48
22:DA:674:G:H4'	26:DE:69:ARG:HB3	1.94	0.48
22:BA:2444:G:P	26:BE:63:LYS:HE2	2.52	0.48
44:BW:8:SER:C	44:BW:9:THR:HG22	2.33	0.48
1:AA:1053:G:H5''	1:AA:1055:A:OP1	2.12	0.48
3:AC:129:PHE:CE1	3:AC:130:ARG:HD3	2.48	0.48
25:DD:108:ASP:OD1	25:DD:207:VAL:HG23	2.12	0.48
1:AA:929:G:O2'	1:AA:930:C:H5'	2.14	0.48
22:DA:287:G:C2'	22:DA:288:U:H5'	2.42	0.48
22:DA:2581:G:H5''	22:DA:2582:G:OP1	2.13	0.48
1:AA:1494:G:N3	1:AA:1495:U:C6	2.82	0.48
22:BA:2414:G:H2'	22:BA:2415:G:H5'	1.94	0.48
4:AD:190:LEU:HD12	4:AD:190:LEU:C	2.33	0.48
22:BA:1820:U:H4'	22:BA:1821:A:OP2	2.13	0.48
1:CA:312:C:N4	1:CA:313:A:N6	2.62	0.48
22:DA:443:A:H2'	26:DE:40:ARG:NE	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1570:A:H2'	22:BA:1571:A:C8	2.48	0.48
48:B0:27:LEU:HD23	48:B0:27:LEU:N	2.26	0.48
7:CG:75:LYS:HB3	7:CG:86:VAL:O	2.12	0.48
5:AE:125:LYS:HG3	5:AE:126:ALA:N	2.28	0.48
1:CA:892:A:H2'	1:CA:893:C:H6	1.77	0.48
22:DA:2293:G:O2'	22:DA:2294:G:H5'	2.12	0.48
22:BA:1534:U:H5'	22:BA:1535:A:P	2.53	0.48
24:DC:120:ASP:CG	24:DC:121:ALA:N	2.66	0.48
22:BA:1610:A:H4'	22:BA:1611:C:OP2	2.12	0.48
22:BA:1206:G:C5	22:BA:1207:C:C5	3.01	0.48
1:CA:688:G:C8	1:CA:688:G:H5''	2.47	0.48
18:AR:22:TYR:CZ	18:AR:23:LYS:HE3	2.47	0.48
22:BA:1249:U:H5'	22:BA:1249:U:H6	1.77	0.48
9:CI:5:TYR:HD2	9:CI:5:TYR:N	2.12	0.48
4:CD:123:MET:HE2	4:CD:126:GLY:O	2.13	0.48
3:CC:72:PRO:HG3	3:CC:104:GLU:OE1	2.13	0.48
26:BE:115:GLN:O	26:BE:116:ASP:C	2.51	0.48
26:DE:144:GLU:O	26:DE:145:ASP:C	2.51	0.48
22:BA:321:U:H1'	26:BE:159:LEU:HG	1.95	0.48
22:BA:2722:G:H8	22:BA:2722:G:O5'	1.96	0.48
12:AL:20:VAL:HG23	12:AL:20:VAL:O	2.13	0.48
1:CA:381:C:O2	1:CA:381:C:H2'	2.12	0.48
8:CH:94:VAL:O	8:CH:95:MET:HB2	2.14	0.48
22:BA:520:G:H2'	22:BA:521:U:H6	1.77	0.48
22:BA:996:A:O2'	38:BQ:91:ARG:CG	2.60	0.48
22:BA:1069:A:N1	22:BA:1074:G:N7	2.61	0.48
22:BA:2033:A:H5''	56:BA:3481:HOH:O	2.13	0.48
1:CA:1283:U:HO2'	1:CA:1284:C:H6	1.59	0.48
22:DA:2267:A:N7	56:DA:3536:HOH:O	2.35	0.48
22:DA:1828:G:O2'	22:DA:1829:A:H5'	2.13	0.48
22:DA:1695:G:H8	24:DC:7:PRO:HB2	1.75	0.48
2:AB:40:ILE:CG1	2:AB:41:ASN:H	2.17	0.48
1:AA:1260:G:H4'	1:AA:1284:C:H5'	1.96	0.48
22:DA:104:A:H2'	22:DA:105:C:C6	2.48	0.48
22:DA:91:A:O2'	22:DA:92:U:H6	1.96	0.48
22:DA:95:A:O2'	46:DY:41:HIS:CD2	2.66	0.48
46:DY:45:GLN:C	46:DY:47:ARG:H	2.17	0.48
22:DA:1363:C:C2	22:DA:1364:G:C8	3.01	0.48
22:DA:463:G:N2	22:DA:466:A:OP2	2.42	0.48
22:DA:53:A:N7	22:DA:54:G:C5	2.81	0.48
1:CA:206:C:H2'	1:CA:207:C:H4'	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:204:G:C8	1:AA:205:A:H5''	2.48	0.48
41:BT:29:THR:CA	41:BT:86:THR:H	2.24	0.48
21:CU:33:ARG:HG2	21:CU:34:ARG:H	1.78	0.48
6:CF:6:ILE:N	6:CF:6:ILE:CD1	2.71	0.48
37:DP:19:PHE:O	37:DP:20:ARG:CB	2.61	0.48
25:DD:146:ILE:CG1	25:DD:155:VAL:HG22	2.41	0.48
22:DA:204:A:O4'	22:DA:206:U:C6	2.66	0.48
22:DA:1256:G:O2'	22:DA:1257:C:C5'	2.61	0.48
51:D3:15:LYS:HG2	51:D3:16:THR:H	1.79	0.48
33:DL:141:LYS:HD2	33:DL:141:LYS:C	2.34	0.48
1:AA:865:A:O2'	1:AA:866:C:H5'	2.12	0.48
41:BT:15:HIS:HB3	41:BT:31:VAL:HG22	1.94	0.48
41:DT:50:LEU:CD2	41:DT:51:PHE:CD1	2.94	0.48
33:DL:77:ILE:CD1	33:DL:125:LEU:HD13	2.43	0.48
33:DL:99:ASN:O	33:DL:100:ILE:CB	2.61	0.48
22:DA:1669:A:C2'	22:DA:1670:C:H5'	2.42	0.48
22:DA:1991:U:C3'	22:DA:1991:U:C6	2.97	0.48
32:DK:17:ARG:H	32:DK:45:GLU:HG2	1.79	0.48
1:CA:142:G:C2	1:CA:143:A:C1'	2.93	0.48
20:CT:26:MET:HE1	20:CT:27:MET:HA	1.96	0.48
1:CA:101:A:C4	1:CA:102:G:C8	3.01	0.48
1:CA:65:A:H4'	1:CA:66:A:O5'	2.14	0.48
23:DB:54:G:H21	27:DF:25:MET:CE	2.26	0.48
7:CG:137:ARG:HD2	7:CG:137:ARG:C	2.33	0.48
2:CB:110:ILE:HD11	2:CB:150:ILE:CG2	2.40	0.48
2:CB:80:LYS:O	2:CB:81:ASP:C	2.51	0.48
22:BA:2107:G:O6	22:BA:2183:A:C5	2.66	0.48
6:AF:49:TYR:HB2	6:AF:50:PRO:CD	2.43	0.48
1:AA:44:A:C2	1:AA:399:G:C2	3.02	0.48
1:AA:452:A:N6	1:AA:480:U:C2	2.81	0.48
1:AA:1210:C:O2'	1:AA:1211:U:H5'	2.14	0.48
22:BA:1296:G:C2'	22:BA:1297:C:O5'	2.60	0.48
22:DA:751:A:C2	22:DA:789:A:C4	3.01	0.48
11:CK:81:LEU:CD1	11:CK:104:PHE:CD2	2.87	0.48
25:DD:34:VAL:HG22	25:DD:92:VAL:O	2.13	0.48
22:DA:807:U:H1'	22:DA:2445:G:H5'	1.95	0.48
8:AH:1:SER:O	8:AH:3:GLN:N	2.46	0.48
1:CA:914:A:O2'	1:CA:915:A:O5'	2.31	0.48
22:DA:2259:U:O2'	22:DA:2260:C:H6	1.96	0.48
22:BA:528:A:H2	22:BA:2043:C:C4'	2.25	0.48
2:AB:90:PHE:O	2:AB:149:GLY:HA3	2.11	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2623:G:H4'	22:DA:2825:G:H2'	1.95	0.48
33:BL:18:ARG:O	33:BL:19:LEU:O	2.31	0.48
22:BA:2562:U:C4	22:BA:2563:U:C5	3.01	0.48
1:CA:1387:G:C4	1:CA:1388:C:C5	3.01	0.48
22:BA:2415:G:H4'	33:BL:66:PHE:CB	2.42	0.48
1:CA:714:G:H2'	1:CA:715:A:C8	2.49	0.48
1:CA:716:A:C6	1:CA:717:U:C4	3.02	0.48
44:DW:77:LYS:HB2	44:DW:77:LYS:NZ	2.28	0.48
1:CA:306:A:C4	1:CA:307:C:C6	3.02	0.48
36:DO:94:ARG:CD	36:DO:97:PHE:O	2.61	0.48
22:DA:1681:G:O2'	22:DA:1762:A:H2'	2.13	0.48
22:BA:946:C:H2'	22:BA:947:A:C8	2.46	0.48
32:BK:12:ASP:HA	32:BK:98:ARG:O	2.12	0.48
22:DA:754:U:H2'	22:DA:755:U:H6	1.79	0.48
22:BA:2405:G:O2'	22:BA:2406:A:P	2.71	0.48
39:DR:19:THR:HA	39:DR:96:VAL:O	2.14	0.48
22:BA:1394:U:H2'	22:BA:1395:A:O5'	2.13	0.48
22:DA:1767:G:C4	22:DA:1768:C:C5	3.02	0.48
1:CA:38:G:N2	1:CA:397:A:C4	2.82	0.48
42:BU:33:VAL:O	42:BU:64:ILE:HG22	2.13	0.48
22:BA:1052:C:C6	22:BA:1052:C:H3'	2.48	0.48
1:AA:11:G:C6	1:AA:12:U:C4	3.01	0.48
25:BD:25:THR:HG22	25:BD:25:THR:O	2.09	0.48
32:BK:118:LEU:O	32:BK:119:ALA:HB3	2.12	0.48
3:CC:49:ALA:O	3:CC:50:SER:HB2	2.13	0.48
34:DM:53:MET:HB2	34:DM:120:ALA:HB2	1.94	0.48
1:CA:1124:G:N2	1:CA:1127:G:N2	2.62	0.48
22:DA:1338:G:O6	41:DT:66:LYS:HE2	2.13	0.48
22:DA:919:U:H6	22:DA:919:U:C5'	2.26	0.48
44:DW:51:GLY:HA3	44:DW:59:PHE:O	2.12	0.48
22:DA:1064:C:H2'	22:DA:1065:U:H6	1.76	0.48
35:DN:90:ARG:NH2	35:DN:116:VAL:HG12	2.27	0.48
1:AA:1258:G:O2'	1:AA:1259:C:C5'	2.62	0.48
9:AI:82:ILE:O	9:AI:86:LEU:N	2.39	0.48
41:DT:67:VAL:HB	41:DT:76:ARG:HG3	1.96	0.48
46:DY:59:GLU:C	46:DY:61:ALA:H	2.16	0.48
24:BC:106:PRO:CA	24:BC:141:HIS:HE1	2.25	0.48
50:D2:21:ARG:HG2	50:D2:31:LEU:CD1	2.44	0.48
22:DA:1572:A:H2'	22:DA:1573:G:H8	1.78	0.48
1:CA:1158:C:C2	1:CA:1160:G:C8	3.02	0.48
1:CA:1182:G:C3'	1:CA:1183:U:H5'	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:2:ARG:HH21	4:CD:114:ARG:CZ	2.27	0.48
21:CU:27:VAL:O	21:CU:31:VAL:HG23	2.14	0.48
37:BP:111:GLU:H	37:BP:111:GLU:CD	2.17	0.48
22:DA:2051:A:C2	22:DA:2052:A:N6	2.81	0.48
29:BH:32:PRO:O	29:BH:33:GLN:HB2	2.13	0.48
22:DA:2239:G:H2'	22:DA:2240:U:H6	1.78	0.48
22:DA:799:G:O5'	22:DA:800:A:H3'	2.12	0.48
22:DA:1289:C:HO2'	22:DA:1290:C:C5'	2.27	0.48
17:AQ:82:VAL:OXT	17:AQ:82:VAL:HG22	2.13	0.48
1:CA:644:U:H2'	1:CA:645:G:H8	1.78	0.48
42:DU:45:GLN:HA	42:DU:45:GLN:NE2	2.24	0.48
12:AL:38:THR:HA	12:AL:49:ARG:O	2.12	0.48
25:BD:118:PHE:C	25:BD:120:GLY:H	2.14	0.48
4:AD:133:SER:O	4:AD:134:TYR:C	2.49	0.48
25:DD:133:THR:CG2	25:DD:134:HIS:H	1.99	0.48
22:DA:1142:A:H4'	31:DJ:27:ARG:HH22	1.78	0.48
22:DA:571:U:C4	22:DA:2030:A:C6	3.01	0.48
9:CI:38:PHE:HE2	9:CI:71:ILE:HG22	1.78	0.48
5:CE:132:PRO:O	5:CE:134:ASN:N	2.47	0.48
1:CA:275:G:O2'	1:CA:276:G:O5'	2.31	0.48
42:BU:5:ARG:CB	42:BU:5:ARG:HH21	2.25	0.48
40:BS:21:ALA:CB	40:BS:74:ILE:HD13	2.43	0.48
31:DJ:37:ARG:NH2	31:DJ:39:LYS:NZ	2.62	0.48
1:AA:978:A:C1'	1:AA:1322:C:H5	2.25	0.48
1:AA:978:A:H1'	1:AA:1322:C:C5	2.47	0.48
22:BA:1716:U:O2'	22:BA:1717:A:C5'	2.50	0.48
1:AA:1182:G:H4'	1:AA:1183:U:H5'	1.96	0.48
23:BB:89:U:H3'	23:BB:90:C:H5''	1.94	0.48
22:BA:2152:G:O2'	22:BA:2153:C:C4'	2.61	0.48
13:CM:16:ILE:CD1	13:CM:16:ILE:H	2.26	0.48
4:CD:150:LYS:N	4:CD:150:LYS:HD3	2.29	0.48
29:BH:50:ARG:C	29:BH:52:ALA:H	2.16	0.48
1:AA:1191:A:C2	1:AA:1192:C:C4	3.01	0.48
22:DA:2668:G:O2'	22:DA:2669:G:P	2.71	0.48
1:CA:740:U:O4'	15:CO:41:HIS:CE1	2.66	0.48
22:BA:659:G:N2	26:BE:30:GLN:HE22	2.09	0.48
22:DA:778:G:C6	22:DA:779:U:N3	2.81	0.48
30:BI:19:PRO:HG2	30:BI:23:VAL:HG22	1.96	0.48
23:DB:41:G:O6	27:DF:68:LYS:HD3	2.13	0.48
22:BA:216:A:H2'	22:BA:217:A:C8	2.47	0.48
3:CC:38:VAL:O	3:CC:42:LEU:HD23	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:39:ARG:HG2	3:CC:54:ILE:HG21	1.94	0.48
7:AG:108:ARG:NH2	7:AG:118:ARG:HH22	2.12	0.48
33:DL:143:GLU:N	33:DL:143:GLU:OE1	2.46	0.48
1:AA:1025:U:H5''	1:AA:1026:G:OP1	2.14	0.48
22:DA:676:A:C2	22:DA:2070:A:O4'	2.67	0.48
22:DA:2461:A:H1'	22:DA:2492:U:O2	2.12	0.48
22:DA:1489:C:C4'	22:DA:1490:A:OP1	2.57	0.48
4:CD:84:ASN:C	4:CD:84:ASN:ND2	2.53	0.48
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.96	0.48
1:CA:106:C:H1'	1:CA:379:C:H5''	1.95	0.48
44:BW:9:THR:CG2	44:BW:10:ARG:HD3	2.44	0.48
11:AK:64:VAL:O	11:AK:68:ARG:HG3	2.13	0.48
47:DZ:4:ILE:CG2	47:DZ:56:VAL:HG13	2.44	0.48
47:BZ:38:GLU:OE1	47:BZ:38:GLU:N	2.41	0.48
28:DG:67:ALA:O	28:DG:71:LEU:HB2	2.13	0.48
22:BA:580:U:O3'	38:BQ:30:VAL:CG1	2.61	0.48
48:B0:42:ILE:CD1	48:B0:48:TYR:HB2	2.43	0.48
45:DX:69:GLU:HA	45:DX:72:ALA:HB3	1.95	0.48
22:BA:1820:U:O2	24:BC:200:MET:HG3	2.13	0.48
27:BF:107:VAL:HG13	27:BF:113:PHE:CZ	2.49	0.48
27:BF:107:VAL:HG11	27:BF:175:PRO:HG2	1.94	0.48
10:AJ:80:THR:HB	10:AJ:83:THR:HG22	1.95	0.48
24:BC:7:PRO:CB	24:BC:13:ARG:HB2	2.43	0.48
31:DJ:23:LYS:NZ	31:DJ:142:ILE:H	2.11	0.48
13:AM:84:CYS:O	13:AM:88:LEU:HD12	2.14	0.48
22:DA:2537:U:H2'	22:DA:2538:C:H6	1.79	0.48
32:BK:63:VAL:CG1	32:BK:103:VAL:HG12	2.43	0.48
32:BK:121:GLU:O	32:BK:122:VAL:C	2.52	0.48
40:DS:70:LYS:N	40:DS:70:LYS:HE3	2.27	0.48
35:BN:87:PHE:HE1	35:BN:116:VAL:CG1	2.26	0.48
22:BA:807:U:C2'	22:BA:808:G:H5'	2.43	0.48
28:BG:96:ALA:O	28:BG:97:VAL:CB	2.61	0.48
22:BA:2862:G:H2'	22:BA:2863:C:C6	2.48	0.48
42:BU:33:VAL:HG23	42:BU:64:ILE:CG2	2.43	0.48
22:DA:1464:G:C2	22:DA:1465:G:C4	3.02	0.48
1:AA:37:U:C2'	1:AA:38:G:H5'	2.44	0.48
37:BP:22:GLY:O	37:BP:109:ILE:HD11	2.13	0.48
30:BI:61:TYR:CD2	30:BI:61:TYR:N	2.81	0.48
3:CC:171:ARG:O	3:CC:173:PRO:HD2	2.12	0.48
42:BU:44:HIS:O	42:BU:45:GLN:C	2.51	0.48
35:BN:52:ILE:HG21	35:BN:94:TYR:CG	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:998:C:OP2	38:BQ:57:ARG:NH2	2.43	0.48
24:DC:181:ARG:HG3	24:DC:182:LYS:N	2.29	0.48
24:DC:24:HIS:CE1	24:DC:79:ARG:NH1	2.82	0.48
4:CD:187:ARG:NH1	4:CD:196:GLU:OE2	2.46	0.48
22:DA:2800:A:N1	22:DA:2801:G:N3	2.62	0.48
22:DA:2334:U:O3'	36:DO:13:ARG:HB2	2.11	0.48
44:DW:30:VAL:CG2	44:DW:59:PHE:CD1	2.96	0.48
44:DW:49:ASN:OD1	44:DW:80:SER:HA	2.13	0.48
22:DA:729:G:C8	24:DC:206:LYS:HE3	2.49	0.48
48:D0:42:ILE:HD12	48:D0:47:TYR:O	2.14	0.48
42:DU:82:VAL:H	42:DU:96:LYS:HZ2	1.61	0.48
50:D2:34:ARG:HB3	50:D2:42:LEU:CD1	2.43	0.48
22:DA:395:U:O2'	22:DA:396:G:O5'	2.31	0.48
39:BR:49:ILE:HB	39:BR:53:PHE:N	2.28	0.48
49:B1:50:GLU:OE1	49:B1:50:GLU:CA	2.61	0.48
39:DR:10:LYS:NZ	39:DR:23:GLU:HG3	2.28	0.48
22:DA:1532:A:C2	22:DA:1540:G:N1	2.82	0.48
1:CA:734:G:H2'	1:CA:735:C:C6	2.49	0.48
32:DK:11:ALA:HB2	32:DK:64:ARG:HH12	1.75	0.48
29:BH:6:LEU:HD13	29:BH:6:LEU:N	2.28	0.48
51:D3:12:ARG:HD3	51:D3:12:ARG:N	2.29	0.48
19:CS:40:PHE:CB	19:CS:41:PRO:CD	2.78	0.48
51:D3:49:VAL:HG21	51:D3:54:LEU:HA	1.94	0.48
22:DA:1329:U:O2'	22:DA:1330:C:P	2.70	0.48
22:DA:1252:G:C2	22:DA:1253:A:H2	2.32	0.48
22:DA:508:A:N6	40:DS:9:HIS:NE2	2.49	0.48
19:CS:36:ARG:O	19:CS:36:ARG:HG2	2.13	0.48
20:AT:82:ILE:CD1	20:AT:83:ASN:N	2.72	0.48
26:DE:29:HIS:ND1	33:DL:6:LEU:CD2	2.74	0.48
21:AU:49:ALA:O	21:AU:52:VAL:HG12	2.13	0.48
1:CA:765:G:H1'	1:CA:812:G:N2	2.29	0.48
19:AS:43:MET:HA	19:AS:46:LEU:HD12	1.94	0.48
41:BT:61:LEU:HA	56:BT:101:HOH:O	2.12	0.48
22:DA:1668:A:O4'	22:DA:1669:A:C2	2.66	0.48
22:DA:1667:G:O2'	22:DA:1991:U:O4	2.26	0.48
22:DA:2094:A:O2'	22:DA:2095:A:O4'	2.31	0.48
1:AA:977:A:O2'	1:AA:978:A:H5''	2.13	0.48
52:B4:16:ILE:HA	52:B4:24:ARG:O	2.13	0.48
22:BA:2148:G:O2'	22:BA:2149:U:C4'	2.61	0.48
1:CA:919:A:O2'	1:CA:920:U:H5'	2.13	0.48
43:DV:56:PHE:C	43:DV:58:SER:N	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:813:U:C2	22:DA:814:C:C6	3.01	0.48
10:AJ:53:ILE:CG1	14:AN:84:ARG:CZ	2.91	0.48
22:DA:2298:A:C6	22:DA:2321:U:C5	3.01	0.48
22:DA:2662:A:C2'	22:DA:2663:G:H5'	2.44	0.48
22:DA:2668:G:N3	22:DA:2669:G:C8	2.81	0.48
22:BA:657:U:H2'	22:BA:658:U:C6	2.49	0.48
22:BA:2249:U:H4'	22:BA:2250:G:OP2	2.14	0.48
1:AA:819:A:N7	1:AA:1529:G:C2	2.81	0.48
33:DL:92:LEU:HD22	33:DL:124:GLY:CA	2.35	0.48
37:BP:31:VAL:O	37:BP:37:LYS:HA	2.14	0.48
35:BN:16:HIS:HD2	35:BN:16:HIS:O	1.97	0.48
22:DA:1716:U:O2'	22:DA:1717:A:C5'	2.61	0.48
22:DA:426:C:C2'	22:DA:427:U:H5'	2.42	0.48
22:DA:1824:G:OP2	22:DA:1824:G:H8	1.95	0.48
33:BL:62:PRO:HG3	51:B3:24:LYS:HD3	1.95	0.48
22:DA:1832:C:C2'	22:DA:1833:C:O5'	2.60	0.48
7:AG:68:VAL:HG12	7:AG:102:TRP:HE3	1.78	0.48
34:BM:31:PHE:CZ	34:BM:110:GLU:HG2	2.48	0.48
6:AF:8:PHE:CE1	6:AF:21:MET:HE1	2.45	0.48
22:BA:320:A:H4'	22:BA:322:A:C8	2.48	0.48
22:BA:745:G:H2'	22:BA:746:U:H5'	1.95	0.48
15:CO:55:LEU:O	15:CO:58:MET:N	2.47	0.48
23:BB:14:U:OP2	23:BB:70:C:O2'	2.31	0.48
7:AG:74:VAL:HA	7:AG:87:PRO:HA	1.95	0.48
50:D2:24:THR:HG21	50:D2:27:GLY:HA3	1.94	0.48
22:BA:626:A:C2	33:BL:78:ARG:HD3	2.48	0.48
22:DA:1417:C:H2'	22:DA:1418:G:C8	2.49	0.48
28:BG:38:ASP:H	28:BG:40:VAL:CG1	2.27	0.48
22:DA:749:A:H1'	22:DA:1618:A:OP1	2.13	0.48
22:DA:1057:A:N3	22:DA:1082:U:C2	2.81	0.48
1:AA:1451:U:O5'	1:AA:1452:C:H5	1.96	0.48
22:BA:1214:A:H4'	22:BA:1239:G:H4'	1.95	0.48
22:BA:807:U:O2'	22:BA:808:G:H5'	2.13	0.48
45:DX:39:VAL:O	45:DX:41:SER:N	2.46	0.48
22:BA:832:U:O2'	22:BA:833:A:H5'	2.14	0.48
16:AP:23:ASP:O	16:AP:24:SER:C	2.51	0.48
22:DA:2396:G:C2	22:DA:2421:G:C2	3.01	0.48
48:D0:50:GLY:C	48:D0:51:ARG:HG3	2.33	0.48
19:CS:44:ILE:HG12	19:CS:45:GLY:N	2.27	0.48
22:BA:9:G:C5	22:BA:2629:U:C5	3.02	0.48
5:CE:155:LYS:NZ	8:CH:72:GLU:HG2	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:431:A:H2'	1:CA:431:A:N3	2.28	0.48
22:BA:1520:U:O2'	22:BA:1521:G:H5'	2.14	0.48
43:BV:4:ILE:O	43:BV:63:ILE:HA	2.13	0.48
16:AP:81:ALA:O	16:AP:82:ALA:HB2	2.13	0.48
1:CA:449:G:O2'	1:CA:450:G:H5'	2.14	0.48
47:DZ:41:PRO:HA	47:DZ:44:ARG:HB3	1.95	0.48
22:BA:1210:G:P	22:BA:1212:G:H5'	2.53	0.48
13:CM:49:GLU:HA	13:CM:49:GLU:OE1	2.13	0.48
37:DP:83:ILE:O	37:DP:83:ILE:HG23	2.13	0.48
28:BG:17:LYS:HE3	28:BG:17:LYS:HB2	1.67	0.48
31:BJ:3:THR:HG21	38:BQ:60:TRP:HE1	1.78	0.48
5:AE:152:VAL:CB	5:AE:155:LYS:NZ	2.41	0.48
24:DC:255:LYS:C	24:DC:256:THR:CG2	2.80	0.48
1:CA:1130:A:N7	1:CA:1146:A:C6	2.82	0.48
9:CI:30:ASN:O	9:CI:31:GLN:CG	2.61	0.48
22:DA:1342:A:C6	22:DA:1397:U:C5	3.01	0.48
22:DA:1388:G:H2'	22:DA:1389:G:H8	1.78	0.48
41:DT:8:LEU:CD2	41:DT:46:ALA:HA	2.43	0.48
1:AA:410:G:OP2	4:AD:21:LYS:CE	2.61	0.48
16:AP:4:ILE:O	16:AP:68:SER:OG	2.29	0.48
22:DA:1068:G:O2'	22:DA:1069:A:H5'	2.13	0.48
22:DA:1275:A:C4	35:DN:16:HIS:HD2	2.32	0.48
22:DA:334:C:O2'	22:DA:335:C:OP1	2.28	0.48
26:DE:135:ALA:C	26:DE:137:LYS:N	2.66	0.48
24:BC:80:LEU:HD11	24:BC:109:LEU:CB	2.44	0.48
50:D2:18:PHE:O	50:D2:21:ARG:N	2.45	0.48
22:DA:125:A:O3'	50:D2:19:ARG:HG3	2.14	0.48
45:DX:26:ARG:HG3	45:DX:27:ARG:N	2.27	0.48
22:DA:36:G:H5'	22:DA:451:U:O2	2.13	0.48
49:B1:9:LYS:N	49:B1:9:LYS:CD	2.77	0.48
22:DA:142:A:O2'	22:DA:143:C:C6	2.49	0.48
1:AA:542:G:N3	1:AA:543:U:C5	2.81	0.48
37:BP:24:THR:O	37:BP:25:VAL:O	2.30	0.48
10:AJ:29:ALA:HB3	10:AJ:36:VAL:HG21	1.96	0.48
6:CF:86:ARG:CD	18:CR:63:TYR:O	2.57	0.48
22:DA:1131:G:C5	22:DA:2025:C:H4'	2.49	0.48
51:D3:11:LYS:C	51:D3:12:ARG:HD3	2.34	0.48
1:AA:266:G:OP2	1:AA:267:C:H5	1.97	0.48
8:CH:33:VAL:C	8:CH:35:ILE:N	2.66	0.48
25:BD:119:ALA:HB1	25:BD:123:LYS:HB3	1.95	0.48
22:DA:2452:C:H2'	22:DA:2453:A:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DZ:23:LEU:CD1	47:DZ:28:LEU:HD21	2.41	0.48
22:DA:1034:G:O2'	22:DA:1035:U:O4'	2.20	0.48
31:DJ:25:LEU:C	31:DJ:27:ARG:N	2.67	0.48
22:DA:2728:U:H2'	22:DA:2729:G:C8	2.48	0.48
41:BT:30:ILE:HG12	41:BT:32:LEU:CD2	2.43	0.48
24:BC:230:PRO:HG2	24:BC:245:THR:O	2.14	0.48
22:DA:2588:G:C2'	22:DA:2589:A:H5'	2.43	0.48
22:DA:1665:A:H1'	32:DK:1:MET:HG3	1.95	0.48
27:DF:110:ILE:HA	27:DF:111:ARG:HH11	1.79	0.48
1:CA:151:A:H2'	1:CA:152:A:O4'	2.13	0.48
1:CA:169:C:O2'	1:CA:170:U:H5'	2.14	0.48
1:CA:197:A:N6	1:CA:221:C:C5'	2.76	0.48
24:DC:144:GLU:CB	24:DC:187:CYS:HB2	2.39	0.48
51:D3:2:LYS:HB2	51:D3:2:LYS:HE3	1.68	0.48
22:DA:1736:U:H2'	22:DA:1737:G:O5'	2.14	0.48
32:BK:1:MET:HG3	32:BK:67:LYS:HG3	1.96	0.48
1:AA:1317:C:H6	1:AA:1317:C:H3'	1.78	0.48
1:AA:1365:G:O2'	1:AA:1366:C:H5'	2.14	0.48
22:BA:1105:U:H2'	22:BA:1106:G:C8	2.45	0.48
1:AA:1151:A:N6	1:AA:1152:A:N6	2.61	0.48
1:AA:1150:A:O2'	10:AJ:42:LEU:C	2.51	0.48
22:BA:2197:U:OP1	4:CD:150:LYS:CE	2.62	0.48
15:CO:16:ARG:HH12	15:CO:76:ARG:HD2	1.78	0.48
12:CL:7:VAL:O	12:CL:7:VAL:CG1	2.58	0.48
36:DO:18:LEU:HD13	36:DO:25:ARG:CG	2.38	0.48
22:DA:279:A:C6	22:DA:361:G:O2'	2.67	0.48
23:DB:42:C:O2'	23:DB:43:C:H5'	2.14	0.48
21:CU:14:ALA:O	21:CU:15:LEU:C	2.52	0.48
25:DD:124:ARG:NH1	25:DD:125:TRP:NE1	2.48	0.48
1:CA:885:G:H1'	1:CA:914:A:C2	2.49	0.48
1:AA:198:G:N2	1:AA:220:G:H1'	2.29	0.48
22:DA:265:A:C6	22:DA:428:A:O4'	2.66	0.48
22:DA:1943:U:O4'	22:DA:1943:U:O2	2.32	0.48
11:AK:51:PHE:CE1	11:AK:60:PHE:HE2	2.18	0.48
22:DA:2563:U:H4'	32:DK:28:SER:HA	1.96	0.48
15:AO:52:ARG:HA	15:AO:55:LEU:HB3	1.94	0.48
34:BM:53:MET:HE2	34:BM:120:ALA:HB2	1.94	0.48
22:BA:28:A:C4	22:BA:29:U:C6	3.02	0.48
22:BA:875:G:H2'	22:BA:876:C:H5'	1.96	0.48
22:BA:872:U:H2'	22:BA:873:C:C6	2.48	0.48
22:BA:2210:U:OP1	22:BA:2210:U:H6	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DX:63:ILE:HD12	45:DX:63:ILE:N	2.29	0.48
9:CI:49:GLN:O	9:CI:52:GLU:HG2	2.13	0.48
4:AD:138:PRO:HA	4:AD:181:PHE:HD2	1.79	0.48
10:AJ:33:GLY:O	10:AJ:34:ALA:CB	2.61	0.48
22:DA:1596:A:C6	22:DA:1597:A:C6	3.01	0.48
15:AO:73:ASP:OD2	15:AO:76:ARG:HG3	2.14	0.48
8:AH:21:LYS:HE2	8:AH:21:LYS:CA	2.41	0.48
7:AG:83:THR:O	7:AG:85:GLN:N	2.46	0.48
38:BQ:40:LYS:HA	38:BQ:43:GLN:HG2	1.93	0.48
22:BA:95:A:O2'	46:BY:41:HIS:CD2	2.67	0.48
22:DA:30:G:C2	22:DA:31:C:C2	3.01	0.48
40:DS:25:ARG:HA	40:DS:74:ILE:HG21	1.94	0.48
1:AA:52:C:H2'	1:AA:53:A:C8	2.48	0.48
20:AT:66:ILE:O	20:AT:67:HIS:O	2.32	0.48
39:BR:91:GLN:OE1	39:BR:91:GLN:HA	2.14	0.48
22:BA:134:G:N2	22:BA:146:A:C4	2.82	0.48
24:DC:259:ASN:OD1	24:DC:262:THR:HG23	2.13	0.48
23:BB:37:C:C5	23:BB:38:C:C5	3.01	0.48
22:DA:699:A:N6	22:DA:1633:G:H21	2.11	0.48
22:BA:2056:G:C2	22:BA:2057:G:C8	3.00	0.48
48:D0:29:VAL:HA	48:D0:35:GLU:O	2.13	0.48
45:BX:73:ARG:HG3	45:BX:73:ARG:O	2.14	0.48
26:BE:132:LYS:NZ	26:BE:132:LYS:HB3	2.29	0.48
42:BU:97:SER:O	42:BU:98:ASN:CB	2.61	0.48
45:BX:50:VAL:HG12	45:BX:51:SER:O	2.13	0.48
24:DC:250:GLN:HG2	24:DC:250:GLN:H	1.51	0.48
1:CA:1146:A:C6	1:CA:1147:C:C4	3.02	0.48
22:DA:1340:U:H5'	41:DT:61:LEU:CD2	2.44	0.48
22:DA:1603:A:H2'	22:DA:1604:C:C6	2.49	0.48
41:DT:48:GLN:HA	41:DT:48:GLN:NE2	2.28	0.48
26:DE:148:ILE:CA	26:DE:187:VAL:HB	2.40	0.48
26:DE:118:LEU:HD11	26:DE:188:MET:HE2	1.95	0.48
22:DA:2286:G:N7	49:D1:33:LEU:CD2	2.75	0.48
44:DW:37:VAL:C	44:DW:39:GLN:H	2.16	0.48
24:DC:16:VAL:HB	24:DC:203:VAL:HB	1.94	0.48
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.14	0.48
1:CA:520:A:O2'	12:CL:69:GLU:HG3	2.13	0.48
12:CL:97:VAL:O	12:CL:97:VAL:CG2	2.56	0.48
22:DA:70:G:O3'	22:DA:113:U:H4'	2.13	0.48
26:DE:128:ALA:CB	26:DE:129:PRO:CD	2.83	0.48
27:BF:40:GLY:N	27:BF:84:ILE:CD1	2.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2748:A:C2	22:DA:2749:A:C4	3.02	0.48
1:AA:1227:A:O2'	1:AA:1228:C:O5'	2.22	0.48
13:AM:94:LEU:HD22	13:AM:95:PRO:HD2	1.96	0.48
22:DA:996:A:O2'	38:DQ:91:ARG:HG2	2.13	0.48
1:AA:500:G:C4	1:AA:501:C:C5	3.01	0.48
32:DK:69:VAL:HG11	32:DK:106:GLU:HG2	1.95	0.48
22:BA:1188:U:O2'	22:BA:1189:A:H5'	2.12	0.48
17:AQ:15:LYS:HD2	17:AQ:16:MET:N	2.28	0.48
22:DA:28:A:H2'	22:DA:29:U:O4'	2.13	0.48
26:BE:172:ALA:O	26:BE:175:ILE:HG22	2.14	0.48
22:DA:2136:G:O6	22:DA:2156:G:C2	2.66	0.48
22:BA:1871:A:C8	22:BA:1872:A:C6	3.01	0.48
11:AK:34:THR:HG1	11:AK:39:ASN:H	1.58	0.48
2:CB:74:ALA:CB	2:CB:206:ILE:HD11	2.43	0.48
22:DA:2714:G:C2'	22:DA:2715:C:H5'	2.44	0.48
22:BA:391:A:C6	22:BA:411:G:C2	3.02	0.48
11:AK:125:LYS:O	21:AU:33:ARG:NH1	2.46	0.48
33:DL:99:ASN:O	33:DL:100:ILE:HB	2.14	0.48
7:CG:26:VAL:HG12	7:CG:42:VAL:HG21	1.96	0.48
11:AK:109:ILE:O	11:AK:110:THR:CG2	2.61	0.48
36:BO:110:ALA:O	36:BO:113:ALA:HB3	2.13	0.48
1:CA:68:G:N2	1:CA:152:A:C1'	2.75	0.48
22:BA:990:A:C5'	22:BA:990:A:C8	2.87	0.48
22:DA:2093:G:C2	22:DA:2094:A:N7	2.81	0.48
22:BA:1462:C:O2'	22:BA:1463:C:C5'	2.62	0.48
1:AA:1317:C:C6	1:AA:1317:C:C3'	2.97	0.48
1:AA:1322:C:O2'	1:AA:1323:G:C5'	2.61	0.48
22:BA:1028:A:N6	22:BA:1125:G:H2'	2.29	0.48
2:AB:206:ILE:HD13	2:AB:207:ARG:H	1.78	0.48
22:BA:2148:G:O2'	22:BA:2149:U:O4'	2.31	0.48
22:DA:947:A:O2'	22:DA:948:C:O4'	2.29	0.48
22:DA:931:U:C2'	22:DA:931:U:O2	2.61	0.48
1:CA:511:C:C2	1:CA:512:U:C5	3.01	0.48
1:CA:1299:A:H62	1:CA:1302:C:H41	1.61	0.48
15:CO:41:HIS:CD2	15:CO:41:HIS:C	2.87	0.48
22:BA:2250:G:H21	22:BA:2496:C:C5'	2.22	0.48
22:BA:962:G:P	56:BA:3355:HOH:O	2.71	0.48
3:AC:106:ARG:O	3:AC:107:LYS:HB2	2.12	0.48
26:BE:113:VAL:CG1	26:BE:114:ARG:N	2.76	0.48
22:DA:2104:C:O2	22:DA:2105:U:C5	2.62	0.48
24:DC:71:ASP:OD2	24:DC:118:GLY:HA2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:35:ARG:HB2	12:AL:37:TYR:CE1	2.48	0.48
12:AL:113:ARG:HD2	12:AL:118:VAL:CG1	2.43	0.48
22:DA:370:G:H2'	22:DA:424:G:OP1	2.13	0.48
22:DA:1957:C:O2'	22:DA:1985:C:H1'	2.13	0.48
1:AA:1003:G:H21	1:AA:1005:A:H5'	1.74	0.48
9:AI:26:LYS:O	9:AI:62:LEU:HD23	2.13	0.48
1:CA:770:C:O2'	1:CA:771:G:H5'	2.14	0.48
22:DA:533:G:H2'	22:DA:534:U:C6	2.49	0.48
22:DA:2019:A:C4'	38:DQ:33:VAL:HG21	2.39	0.48
22:BA:2393:U:H2'	22:BA:2394:C:O4'	2.14	0.48
1:AA:555:U:H2'	1:AA:556:C:O5'	2.13	0.48
22:DA:2675:A:H2'	22:DA:2676:C:O4'	2.14	0.48
8:CH:46:GLU:N	8:CH:63:LYS:HG3	2.29	0.48
1:CA:158:G:N7	1:CA:164:G:C6	2.82	0.48
7:AG:22:LEU:HD11	7:AG:46:LEU:CD2	2.43	0.48
22:DA:1975:G:N3	22:DA:1976:U:C6	2.82	0.48
22:BA:1735:A:O2'	22:BA:1736:U:O4'	2.27	0.48
22:BA:566:U:O2'	22:BA:809:G:OP2	2.26	0.48
22:DA:1833:C:N4	22:DA:1834:U:O4	2.47	0.48
22:DA:2432:A:C6	45:DX:20:ALA:HA	2.47	0.48
23:BB:49:C:O3'	36:BO:68:LYS:HE2	2.12	0.48
1:AA:515:G:N1	1:AA:537:G:C6	2.82	0.48
3:AC:137:VAL:HG22	3:AC:148:ILE:HG23	1.94	0.48
10:AJ:63:ASP:OD2	14:AN:97:LYS:NZ	2.47	0.48
1:AA:1387:G:C4	1:AA:1388:C:C5	3.02	0.48
11:CK:15:VAL:O	11:CK:16:SER:CB	2.59	0.48
22:BA:1912:A:N1	22:BA:1919:A:N7	2.62	0.48
22:DA:2636:C:P	25:DD:81:GLU:HB2	2.54	0.48
22:BA:686:U:O4	50:B2:12:ARG:NH2	2.47	0.48
22:BA:60:G:C8	22:BA:62:U:H2'	2.48	0.48
36:BO:54:VAL:O	36:BO:54:VAL:HG22	2.14	0.48
22:BA:1842:G:O4'	24:BC:242:HIS:ND1	2.47	0.48
22:BA:1565:C:O2'	22:BA:1566:A:O5'	2.30	0.48
36:DO:105:ALA:O	36:DO:109:ALA:CB	2.62	0.48
5:CE:33:THR:OG1	5:CE:49:TYR:CZ	2.65	0.48
1:CA:1490:U:C5'	1:CA:1491:G:OP2	2.62	0.48
8:CH:9:MET:HA	8:CH:26:MET:HE2	1.94	0.48
52:D4:1:MET:HB3	52:D4:34:LYS:HE3	1.95	0.48
1:CA:43:C:H2'	1:CA:44:A:C5'	2.43	0.48
22:BA:1612:C:C2'	22:BA:1613:G:O5'	2.61	0.48
22:BA:2805:C:C4	22:BA:2806:C:C4	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DZ:40:THR:HG22	47:DZ:42:ALA:H	1.77	0.48
2:AB:68:PHE:CD2	2:AB:83:ALA:HB1	2.49	0.48
6:CF:49:TYR:HE1	18:CR:65:SER:HA	1.78	0.48
34:DM:53:MET:CE	34:DM:117:PHE:CE1	2.96	0.48
22:BA:178:G:O2'	22:BA:179:C:H5'	2.14	0.48
7:AG:52:ARG:HH21	7:AG:124:SER:CB	2.27	0.48
22:BA:1787:A:O4'	22:BA:2589:A:H4'	2.14	0.48
26:DE:158:PHE:HA	26:DE:169:VAL:HG11	1.95	0.48
22:BA:2754:U:O5'	22:BA:2754:U:H6	1.96	0.48
19:AS:10:ILE:HD11	19:AS:15:LEU:HB2	1.95	0.48
5:AE:94:PHE:CD1	5:AE:94:PHE:O	2.67	0.48
8:AH:36:ALA:CB	8:AH:60:LEU:HD21	2.43	0.48
22:BA:2489:U:C2'	22:BA:2490:G:O5'	2.62	0.48
22:BA:2515:C:O2	22:BA:2570:G:C2	2.67	0.48
22:DA:1820:U:O2'	24:DC:199:HIS:HD2	1.97	0.48
26:DE:147:LEU:CD2	26:DE:179:SER:HB2	2.43	0.48
22:DA:2345:G:C5	22:DA:2381:A:C2	3.02	0.48
22:DA:1071:G:O6	22:DA:1089:A:C2	2.66	0.48
22:DA:2837:A:N6	22:DA:2882:A:N6	2.60	0.48
1:AA:1253:G:H2'	1:AA:1254:A:H8	1.79	0.48
1:CA:549:C:H2'	1:CA:550:G:O4'	2.14	0.48
12:CL:109:ARG:HD2	12:CL:109:ARG:HA	1.69	0.48
22:DA:310:A:C8	22:DA:312:G:O6	2.66	0.48
22:DA:82:U:C3'	22:DA:83:A:H5''	2.43	0.48
22:DA:445:C:H2'	22:DA:446:G:N7	2.28	0.48
26:DE:46:GLN:HB3	26:DE:86:ALA:HB1	1.95	0.48
26:DE:59:PRO:HB2	26:DE:67:ARG:NH2	2.29	0.48
22:DA:2748:A:C6	22:DA:2757:A:N7	2.82	0.48
29:DH:24:GLY:O	29:DH:25:TYR:C	2.52	0.48
41:BT:22:THR:O	41:BT:25:GLU:HB3	2.13	0.48
1:AA:92:U:C2'	1:AA:93:U:C6	2.96	0.48
18:CR:72:ARG:HA	21:CU:4:LYS:HE3	1.94	0.48
37:DP:59:THR:HA	37:DP:72:VAL:HA	1.95	0.48
22:DA:202:U:H2'	22:DA:202:U:O2	2.13	0.48
40:DS:24:ILE:HG22	40:DS:35:ILE:CD1	2.41	0.48
22:BA:1189:A:C2'	22:BA:1190:G:O5'	2.62	0.48
22:BA:819:A:OP2	22:BA:1187:G:N2	2.43	0.48
22:DA:503:A:C5'	22:DA:504:A:O5'	2.62	0.48
14:CN:8:ARG:NH1	14:CN:12:ARG:HH22	2.11	0.48
19:CS:52:ASN:C	19:CS:54:ARG:H	2.17	0.48
4:AD:131:ILE:O	4:AD:133:SER:N	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:17:LEU:HD23	10:AJ:18:ILE:HA	1.96	0.48
10:AJ:22:THR:HG22	10:AJ:23:ALA:N	2.29	0.48
22:DA:1431:A:H2'	22:DA:1432:G:C8	2.49	0.48
41:BT:31:VAL:C	41:BT:32:LEU:CD2	2.74	0.48
1:CA:67:C:O2	1:CA:68:G:N7	2.47	0.48
8:AH:76:ARG:NE	8:AH:78:SER:O	2.47	0.48
22:DA:242:G:C5	51:D3:4:LYS:HE3	2.49	0.48
23:DB:24:G:H4'	23:DB:26:C:H5	1.78	0.48
25:DD:137:SER:C	25:DD:138:LEU:CD2	2.82	0.48
22:DA:1551:A:C4	22:DA:1552:A:H8	2.31	0.48
22:DA:1007:C:H2'	22:DA:1008:A:C8	2.48	0.48
1:CA:1347:G:H3'	9:CI:109:GLN:O	2.13	0.48
22:DA:956:G:H1'	34:DM:82:MET:HE1	1.95	0.48
1:AA:674:G:H4'	18:AR:69:TYR:CE1	2.48	0.48
10:AJ:70:HIS:H	10:AJ:70:HIS:CD2	2.32	0.48
31:BJ:64:VAL:HG11	31:BJ:68:LYS:HB2	1.92	0.48
7:CG:88:VAL:CG2	7:CG:89:GLU:H	2.14	0.48
22:DA:813:U:C2	22:DA:814:C:C5	3.02	0.48
10:AJ:53:ILE:HD11	14:AN:84:ARG:NH1	2.28	0.48
36:DO:34:HIS:HA	36:DO:65:THR:O	2.14	0.48
22:BA:38:A:O2'	26:BE:43:THR:HA	2.12	0.48
27:DF:93:GLU:C	27:DF:95:MET:H	2.17	0.48
1:AA:174:A:HO2'	1:AA:175:C:H5'	1.77	0.48
22:BA:1967:C:H2'	22:BA:1968:G:C8	2.49	0.48
1:AA:363:A:C2'	1:AA:364:A:H5'	2.44	0.48
22:BA:242:G:O5'	51:B3:2:LYS:HE2	2.14	0.48
1:AA:344:A:O2'	37:BP:36:LYS:HE2	2.13	0.48
8:AH:1:SER:C	8:AH:3:GLN:N	2.66	0.48
22:BA:1508:A:O2'	22:BA:1509:A:P	2.72	0.48
32:BK:95:ILE:C	32:BK:95:ILE:CD1	2.64	0.48
24:BC:182:LYS:O	24:BC:183:VAL:CG2	2.62	0.48
1:CA:687:A:C2	1:CA:704:A:C6	3.02	0.48
3:AC:154:GLY:O	3:AC:195:ILE:CG1	2.61	0.48
22:DA:2674:G:C6	22:DA:2675:A:C6	3.02	0.48
25:DD:110:THR:HG23	25:DD:171:THR:HG22	1.96	0.48
25:DD:110:THR:CG2	25:DD:171:THR:HG22	2.43	0.48
29:BH:80:ILE:O	29:BH:81:ALA:HB2	2.12	0.48
23:DB:49:C:H2'	23:DB:50:A:H8	1.79	0.48
27:DF:12:VAL:HG12	27:DF:12:VAL:O	2.14	0.48
40:DS:18:ARG:CA	40:DS:76:VAL:HG11	2.38	0.48
39:BR:42:ALA:CB	39:BR:46:GLU:HB2	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2348:U:P	51:D3:37:THR:HG21	2.54	0.48
1:CA:1082:A:OP2	5:CE:22:LYS:HE3	2.13	0.48
22:DA:2522:U:O2'	22:DA:2523:G:H5'	2.14	0.48
22:BA:861:A:N3	23:BB:79:G:O2'	2.47	0.48
22:BA:1360:G:C6	22:BA:1372:U:C2	3.02	0.48
14:CN:25:GLU:O	14:CN:28:ALA:HB3	2.12	0.48
3:CC:70:ALA:HB2	3:CC:114:LEU:HD11	1.96	0.48
1:AA:903:G:C4	1:AA:904:U:C6	3.02	0.48
24:BC:83:ASP:OD1	24:BC:84:PRO:CD	2.62	0.48
36:DO:89:ASP:O	36:DO:90:VAL:HG13	2.14	0.48
34:DM:31:PHE:O	34:DM:105:MET:N	2.43	0.48
18:CR:53:GLN:O	18:CR:56:ARG:HB2	2.14	0.48
28:BG:97:VAL:HG22	28:BG:102:ILE:HG12	1.95	0.48
1:AA:192:A:C6	1:AA:193:C:C4	3.02	0.48
9:CI:94:ARG:NH1	9:CI:94:ARG:HG3	2.29	0.48
3:AC:185:THR:O	3:AC:186:SER:HB2	2.13	0.48
9:AI:3:ASN:O	9:AI:4:GLN:HG2	2.13	0.48
22:BA:1282:U:H2'	22:BA:1283:G:O4'	2.14	0.48
17:CQ:80:LYS:O	17:CQ:81:ALA:HB3	2.14	0.48
22:BA:1513:U:C2'	22:BA:1514:G:H5'	2.43	0.48
30:BI:12:VAL:HG23	30:BI:13:ALA:H	1.78	0.48
15:CO:36:ASN:O	15:CO:37:HIS:C	2.51	0.48
22:BA:696:G:O2'	22:BA:697:G:H5'	2.13	0.48
37:BP:28:LYS:O	37:BP:80:VAL:O	2.32	0.48
31:BJ:3:THR:HG21	38:BQ:60:TRP:NE1	2.28	0.48
22:BA:1088:A:H4'	22:BA:1089:A:H8	1.78	0.48
30:BI:85:ILE:HD13	30:BI:88:GLY:HA2	1.96	0.48
5:AE:120:HIS:C	5:AE:121:ASN:HD22	2.17	0.48
8:AH:45:ILE:CD1	8:AH:60:LEU:HD22	2.44	0.48
22:DA:1789:A:O2'	22:DA:1790:C:H5'	2.13	0.48
24:DC:245:THR:HB	24:DC:246:PRO:HD2	1.96	0.48
22:DA:1064:C:C5	22:DA:1065:U:C5	3.02	0.48
22:DA:1071:G:N2	22:DA:1090:A:OP2	2.46	0.48
22:DA:1085:A:H4'	22:DA:1105:U:O4'	2.14	0.48
9:AI:16:ALA:HB2	9:AI:66:VAL:CG2	2.44	0.48
11:CK:33:ILE:O	11:CK:41:LEU:HB2	2.13	0.48
46:DY:57:LEU:O	46:DY:60:LYS:HE3	2.14	0.48
46:DY:1:MET:N	46:DY:5:GLU:HG2	2.29	0.48
22:DA:122:G:O2'	22:DA:123:G:C5'	2.62	0.48
22:DA:120:U:C2	22:DA:149:A:N6	2.82	0.48
1:CA:205:A:C4	1:CA:206:C:N4	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:92:ARG:HB3	13:AM:92:ARG:CZ	2.43	0.48
38:DQ:61:ILE:H	38:DQ:61:ILE:CD1	2.26	0.48
44:BW:22:VAL:O	44:BW:25:PHE:CD2	2.66	0.48
37:DP:86:LYS:N	37:DP:86:LYS:NZ	2.62	0.48
29:BH:14:SER:O	29:BH:16:GLY:N	2.47	0.48
45:BX:44:ARG:HG2	45:BX:45:PHE:N	2.27	0.48
22:DA:1330:C:O2'	22:DA:1331:G:O5'	2.31	0.48
22:DA:1608:A:N7	22:DA:1611:C:N4	2.61	0.48
1:CA:595:A:C4'	1:CA:596:A:OP1	2.62	0.48
22:DA:503:A:C6	22:DA:506:G:C6	3.01	0.48
1:CA:1272:G:H2'	1:CA:1273:C:C5'	2.43	0.48
14:CN:61:ASN:C	14:CN:62:ARG:HG3	2.34	0.48
14:CN:72:PHE:CG	14:CN:73:LEU:N	2.82	0.48
3:AC:34:SER:OG	3:AC:94:ALA:HA	2.13	0.48
1:AA:923:A:O2'	1:AA:924:C:H5'	2.14	0.48
1:AA:1141:C:O2	1:AA:1142:G:C8	2.67	0.48
10:AJ:11:LYS:O	10:AJ:12:ALA:HB2	2.14	0.48
1:AA:845:A:H3'	1:AA:845:A:C8	2.49	0.48
1:AA:792:A:N3	1:AA:794:A:C5	2.82	0.48
36:BO:115:LEU:HD12	36:BO:116:GLN:H	1.77	0.48
22:DA:1991:U:C4'	22:DA:1991:U:H6	2.27	0.48
1:CA:182:A:C5	1:CA:184:G:C8	3.02	0.48
12:AL:23:LEU:O	12:AL:25:ALA:N	2.46	0.48
1:CA:255:G:H2'	1:CA:256:U:H6	1.78	0.48
1:CA:269:C:H2'	1:CA:270:A:H8	1.74	0.48
22:DA:1439:A:N7	22:DA:1440:U:H1'	2.29	0.48
22:DA:1475:G:HO2'	22:DA:1476:U:H6	1.60	0.48
19:AS:30:LEU:O	19:AS:49:ALA:CB	2.61	0.48
22:DA:614:A:OP2	22:DA:614:A:N3	2.47	0.48
22:DA:931:U:H5	22:DA:1182:G:N2	2.12	0.48
4:AD:94:GLU:HG3	4:AD:99:ASN:ND2	2.29	0.48
22:DA:1919:A:C2'	22:DA:1920:C:H5'	2.44	0.48
15:CO:16:ARG:HB2	15:CO:23:SER:OG	2.14	0.48
22:DA:993:G:O2'	22:DA:994:C:H5'	2.14	0.48
39:DR:87:GLN:HG2	39:DR:88:GLY:H	1.78	0.48
22:BA:1974:C:H2'	22:BA:1975:G:O5'	2.14	0.48
22:DA:689:A:N3	22:DA:779:U:C1'	2.77	0.48
22:DA:360:U:H2'	22:DA:361:G:O4'	2.13	0.48
22:DA:2356:U:C4'	44:DW:16:GLU:HG3	2.37	0.48
32:BK:113:MET:HA	32:BK:116:ILE:CG1	2.43	0.48
1:AA:752:G:O2'	1:AA:753:A:P	2.71	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:586:C:O2'	8:AH:3:GLN:NE2	2.46	0.48
22:BA:361:G:OP2	22:BA:361:G:C8	2.67	0.48
22:DA:2102:G:C6	22:DA:2103:C:C5	3.02	0.48
16:CP:38:PHE:O	16:CP:38:PHE:CG	2.67	0.48
2:AB:90:PHE:H	2:AB:149:GLY:HA2	1.78	0.48
22:BA:1707:G:C5	22:BA:1756:G:C6	3.02	0.48
22:BA:1139:G:C2'	22:BA:1140:C:H5'	2.44	0.48
28:BG:7:PRO:O	28:BG:68:ARG:NH1	2.45	0.48
22:DA:2508:G:H2'	22:DA:2509:G:C8	2.49	0.48
10:CJ:35:GLN:NE2	10:CJ:78:GLU:HB2	2.29	0.48
20:AT:18:LYS:O	20:AT:19:HIS:C	2.52	0.48
40:DS:68:ASP:O	40:DS:69:LEU:HD12	2.13	0.48
4:CD:160:LEU:HA	4:CD:160:LEU:HD13	1.73	0.48
22:DA:2636:C:OP1	25:DD:81:GLU:HB2	2.14	0.48
20:CT:81:GLN:O	20:CT:82:ILE:HG12	2.14	0.48
1:AA:868:C:H2'	1:AA:869:G:C5'	2.43	0.48
31:DJ:92:MET:HE2	31:DJ:95:ARG:HD2	1.96	0.48
45:DX:67:LEU:CD2	45:DX:77:TYR:CE1	2.96	0.48
51:D3:44:ARG:H	51:D3:45:PRO:HD2	1.79	0.48
22:BA:611:C:C2'	22:BA:612:G:O5'	2.62	0.48
22:BA:1694:C:H4'	22:BA:1695:G:O5'	2.13	0.48
26:DE:37:ALA:HB1	26:DE:92:HIS:O	2.13	0.48
30:DI:20:SER:H	30:DI:21:PRO:CD	2.26	0.48
1:AA:686:U:O2'	1:AA:687:A:C8	2.59	0.48
1:AA:687:A:C6	1:AA:704:A:N7	2.82	0.48
25:DD:208:LYS:O	25:DD:209:ALA:HB2	2.12	0.48
22:BA:2136:G:O6	22:BA:2156:G:N3	2.47	0.48
22:BA:1848:A:O2'	22:BA:1849:G:H5'	2.14	0.48
2:AB:56:LEU:CD1	2:AB:220:VAL:CG2	2.91	0.48
15:AO:44:GLU:O	15:AO:45:HIS:HB2	2.13	0.48
22:DA:1499:C:C4	22:DA:1500:G:N7	2.81	0.48
25:DD:37:VAL:HG12	25:DD:37:VAL:O	2.13	0.48
51:B3:54:LEU:HA	51:B3:54:LEU:HD13	1.76	0.48
1:AA:135:C:H2'	1:AA:136:C:H5'	1.95	0.48
44:BW:11:ASN:C	44:BW:12:GLY:O	2.50	0.48
22:BA:1604:C:H2'	22:BA:1605:C:H6	1.79	0.48
4:CD:145:ARG:HG3	4:CD:146:GLU:N	2.29	0.48
11:AK:54:SER:HA	11:AK:57:SER:OG	2.14	0.48
1:AA:761:G:H2'	1:AA:762:U:C6	2.49	0.48
22:BA:930:G:C5'	22:BA:931:U:OP2	2.61	0.48
6:AF:20:GLY:O	6:AF:24:ARG:HD3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1170:C:OP2	22:DA:1170:C:H6	1.96	0.48
29:DH:109:GLU:OE2	29:DH:109:GLU:HA	2.13	0.48
22:DA:1678:A:H2'	22:DA:1679:A:O4'	2.13	0.48
1:AA:429:U:C4'	1:AA:430:A:O5'	2.62	0.47
4:AD:25:ARG:HD3	4:AD:30:LYS:CE	2.44	0.47
16:CP:78:VAL:C	16:CP:80:LYS:N	2.67	0.47
22:DA:727:A:H2'	22:DA:728:G:N7	2.28	0.47
22:DA:2835:A:N6	22:DA:2879:A:N9	2.62	0.47
22:DA:1238:G:H2'	22:DA:1239:G:H8	1.78	0.47
22:DA:291:G:O2'	22:DA:292:U:H5'	2.14	0.47
22:DA:67:U:C2'	22:DA:68:G:H8	2.23	0.47
22:DA:1571:A:H8	22:DA:1571:A:H3'	1.78	0.47
27:BF:39:VAL:CG1	27:BF:49:LEU:CD1	2.89	0.47
22:DA:2752:C:O2'	22:DA:2753:A:H8	1.97	0.47
1:CA:1117:A:N1	1:CA:1184:G:O6	2.46	0.47
22:DA:143:C:C4	22:DA:144:A:N6	2.82	0.47
1:CA:1494:G:C2'	1:CA:1495:U:O5'	2.62	0.47
22:DA:1914:C:C6	22:DA:1915:U:C6	3.02	0.47
31:DJ:45:THR:N	31:DJ:46:PRO:HD2	2.30	0.47
38:DQ:57:ARG:C	38:DQ:59:LEU:H	2.17	0.47
11:CK:121:ARG:NH2	21:CU:35:GLU:HG2	2.29	0.47
44:BW:50:VAL:CG1	44:BW:51:GLY:N	2.69	0.47
21:CU:16:ARG:CG	21:CU:19:LYS:CG	2.80	0.47
22:BA:2362:C:H2'	22:BA:2363:G:H5'	1.96	0.47
22:DA:193:U:H2'	22:DA:194:G:H5'	1.96	0.47
22:DA:1286:A:C6	22:DA:1289:C:C2	3.02	0.47
22:DA:1612:C:C2'	22:DA:1613:G:O5'	2.61	0.47
35:BN:73:ASN:C	35:BN:76:VAL:HG12	2.33	0.47
1:CA:1343:G:C6	1:CA:1344:C:C4	3.02	0.47
10:CJ:52:LEU:O	14:CN:80:ARG:HG3	2.13	0.47
1:CA:1317:C:OP1	14:CN:56:PRO:HD2	2.14	0.47
20:AT:43:LYS:HE2	20:AT:86:ALA:CB	2.44	0.47
33:DL:121:THR:O	33:DL:121:THR:HG23	2.14	0.47
11:AK:22:ILE:HD11	11:AK:85:VAL:CG1	2.27	0.47
21:AU:23:GLU:HA	21:AU:27:VAL:HG23	1.96	0.47
5:CE:114:LEU:O	5:CE:119:VAL:HG23	2.13	0.47
22:DA:2697:G:C2	22:DA:2711:A:C2	3.02	0.47
22:DA:2454:G:C2	22:DA:2499:C:N3	2.82	0.47
34:BM:1:MET:HA	34:BM:1:MET:CE	2.43	0.47
41:DT:27:SER:O	41:DT:28:ASN:HB3	2.14	0.47
41:DT:28:ASN:O	41:DT:29:THR:CG2	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1663:G:C2	22:DA:1998:A:C5	3.02	0.47
1:CA:76:G:N2	1:CA:95:C:N3	2.61	0.47
22:DA:664:G:H5'	22:DA:940:G:H4'	1.95	0.47
23:DB:109:A:C6	23:DB:110:C:N4	2.82	0.47
9:CI:57:VAL:O	9:CI:57:VAL:HG12	2.14	0.47
14:AN:82:LYS:HE2	14:AN:82:LYS:HA	1.96	0.47
7:CG:72:VAL:HG12	7:CG:144:ALA:HB1	1.94	0.47
22:DA:2304:G:N2	22:DA:2312:U:H3	1.94	0.47
22:DA:830:G:P	22:DA:830:G:H8	2.37	0.47
22:DA:1167:C:O2'	22:DA:1168:G:H5'	2.12	0.47
24:BC:76:VAL:O	24:BC:77:VAL:O	2.32	0.47
1:AA:1152:A:O2'	1:AA:1153:G:C5'	2.62	0.47
22:BA:301:G:HO2'	22:BA:302:C:P	2.37	0.47
1:CA:246:A:N7	1:CA:281:G:N2	2.61	0.47
3:CC:5:HIS:HA	3:CC:6:PRO:HD2	1.75	0.47
22:BA:1963:U:O2'	22:BA:1964:G:H5''	2.14	0.47
7:CG:101:ARG:O	7:CG:104:VAL:HG22	2.13	0.47
22:DA:808:G:H2'	22:DA:809:G:C8	2.49	0.47
11:CK:81:LEU:HD11	11:CK:104:PHE:HB3	1.95	0.47
23:DB:46:A:HO2'	23:DB:47:C:H6	1.62	0.47
35:DN:64:ARG:NH2	35:DN:64:ARG:HG2	2.29	0.47
25:DD:121:THR:HG21	25:DD:127:PHE:CD1	2.49	0.47
22:DA:1702:G:C6	22:DA:1703:G:C5	3.02	0.47
26:DE:78:TRP:HB3	26:DE:79:ARG:O	2.14	0.47
26:DE:79:ARG:CG	26:DE:80:SER:H	2.12	0.47
22:DA:2457:U:C4	22:DA:2458:G:C5	3.02	0.47
16:CP:41:PRO:C	16:CP:42:ILE:HD13	2.34	0.47
26:DE:44:ARG:HH22	26:DE:87:ALA:HB3	1.78	0.47
22:DA:867:C:O2'	22:DA:868:U:O5'	2.31	0.47
1:CA:1514:G:H2'	1:CA:1515:G:C8	2.49	0.47
39:DR:46:GLU:OE1	39:DR:48:LYS:HG3	2.13	0.47
1:AA:1501:C:C4	1:AA:1504:G:C5	3.02	0.47
1:AA:338:A:C6	1:AA:351:G:O6	2.66	0.47
7:CG:148:LYS:HB2	7:CG:148:LYS:HZ3	1.76	0.47
11:CK:51:PHE:HE2	11:CK:64:VAL:HG21	1.79	0.47
1:CA:344:A:O2'	1:CA:345:C:OP1	2.27	0.47
22:DA:1296:G:H1'	22:DA:1645:G:N2	2.29	0.47
1:AA:520:A:C2	1:AA:536:C:O2	2.67	0.47
15:AO:24:THR:HG22	15:AO:25:GLU:N	2.27	0.47
3:AC:147:GLY:O	3:AC:148:ILE:HB	2.14	0.47
36:DO:69:ASP:O	36:DO:70:ALA:C	2.52	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:27:G:O2'	22:BA:28:A:OP2	2.27	0.47
22:BA:580:U:O2'	22:BA:581:C:H5'	2.14	0.47
22:BA:870:U:C2'	22:BA:871:U:H5'	2.44	0.47
1:AA:292:G:N2	1:AA:309:A:C4	2.82	0.47
39:BR:21:ARG:NH2	39:BR:93:PHE:CE2	2.82	0.47
1:AA:122:G:H2'	1:AA:123:U:H6	1.79	0.47
22:BA:1381:G:C2'	22:BA:1382:G:H5'	2.43	0.47
22:DA:31:C:O5'	22:DA:31:C:H6	1.97	0.47
22:DA:2106:U:C4	22:DA:2107:G:N7	2.81	0.47
22:BA:2078:C:O2'	22:BA:2079:U:H5'	2.14	0.47
22:BA:1845:G:H2'	22:BA:1846:G:C5'	2.44	0.47
5:CE:125:LYS:HB2	5:CE:125:LYS:HE3	1.69	0.47
22:DA:1767:G:N2	22:DA:1986:C:C2	2.82	0.47
7:CG:34:LYS:CB	7:CG:34:LYS:NZ	2.77	0.47
1:AA:577:G:H2'	1:AA:578:C:H6	1.79	0.47
1:AA:577:G:O4'	1:AA:816:A:H2'	2.14	0.47
1:AA:1293:C:H2'	1:AA:1294:G:H8	1.78	0.47
1:CA:1509:C:H2'	1:CA:1510:C:H6	1.78	0.47
22:BA:2850:A:H2'	22:BA:2851:A:H8	1.78	0.47
16:CP:2:VAL:HG22	16:CP:3:THR:N	2.28	0.47
9:AI:112:ARG:HH22	10:AJ:64:GLN:NE2	2.11	0.47
34:DM:53:MET:HE1	34:DM:117:PHE:CE1	2.49	0.47
22:DA:918:A:H5''	23:DB:97:C:O2'	2.14	0.47
56:DA:3265:HOH:O	33:DL:35:HIS:HB2	2.14	0.47
22:BA:466:A:H2'	22:BA:467:G:H5'	1.95	0.47
22:BA:292:U:H2'	22:BA:293:U:O4'	2.13	0.47
22:BA:2788:C:H2'	22:BA:2789:C:C6	2.49	0.47
22:BA:1488:C:H2'	22:BA:1489:C:H6	1.79	0.47
4:CD:10:LEU:O	4:CD:14:GLU:HG2	2.14	0.47
22:DA:2109:U:H2'	22:DA:2110:G:OP1	2.13	0.47
7:CG:90:VAL:HG12	7:CG:94:ARG:HD3	1.96	0.47
22:DA:1748:C:O2'	22:DA:1749:A:H5'	2.13	0.47
22:BA:2617:U:H2'	22:BA:2618:G:O4'	2.14	0.47
22:BA:2582:G:H2'	22:BA:2582:G:N3	2.28	0.47
2:CB:21:TYR:N	2:CB:21:TYR:CD1	2.82	0.47
23:BB:48:U:O2	23:BB:48:U:H2'	2.14	0.47
12:CL:42:LYS:CG	12:CL:43:LYS:N	2.66	0.47
22:DA:1816:C:HO2'	24:DC:61:TYR:HH	1.62	0.47
1:AA:429:U:C1'	1:AA:430:A:C5'	2.91	0.47
22:DA:2269:G:O2'	44:DW:18:LYS:CD	2.62	0.47
22:DA:2330:G:N2	44:DW:38:ARG:HA	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1062:G:C8	22:DA:1088:A:H8	2.33	0.47
22:DA:1079:C:N3	22:DA:1088:A:H2	2.12	0.47
35:DN:87:PHE:CE1	35:DN:90:ARG:CD	2.95	0.47
35:DN:87:PHE:HE1	35:DN:90:ARG:HD2	1.77	0.47
9:AI:17:ARG:HE	9:AI:65:THR:HB	1.78	0.47
9:AI:15:ALA:C	9:AI:66:VAL:HG23	2.34	0.47
1:CA:530:G:N3	1:CA:530:G:H3'	2.29	0.47
22:DA:1206:G:C4	22:DA:1207:C:C5	3.02	0.47
22:DA:291:G:N1	22:DA:350:G:N7	2.61	0.47
22:DA:116:C:H2'	22:DA:117:G:C5'	2.44	0.47
22:DA:1363:C:H42	22:DA:1368:G:H1	1.61	0.47
28:DG:58:ALA:O	28:DG:59:ASP:C	2.52	0.47
34:DM:19:GLY:N	34:DM:38:ARG:NH2	2.46	0.47
22:DA:995:C:O2'	38:DQ:60:TRP:CH2	2.67	0.47
38:DQ:96:ASP:C	38:DQ:96:ASP:OD1	2.51	0.47
22:DA:1535:A:H5'	22:DA:1536:C:OP2	2.14	0.47
22:DA:677:A:O3'	22:DA:2071:A:H5''	2.13	0.47
22:DA:1616:A:OP1	22:DA:1616:A:H2'	2.14	0.47
26:BE:174:GLY:O	26:BE:175:ILE:C	2.53	0.47
1:CA:1269:A:H2'	1:CA:1270:G:C5'	2.44	0.47
1:CA:1318:A:H8	1:CA:1318:A:O5'	1.97	0.47
14:CN:68:ARG:HG3	14:CN:69:PRO:CD	2.44	0.47
19:CS:52:ASN:OD1	19:CS:57:VAL:HG13	2.13	0.47
1:AA:693:G:HO2'	1:AA:694:A:H5'	1.75	0.47
11:AK:124:LYS:HZ3	11:AK:127:ARG:NE	2.11	0.47
32:DK:8:LEU:HD12	32:DK:8:LEU:N	2.29	0.47
14:CN:1:ALA:HA	14:CN:67:GLY:O	2.14	0.47
1:CA:101:A:C5	1:CA:102:G:N7	2.82	0.47
1:CA:68:G:C5'	1:CA:171:A:O2'	2.61	0.47
1:CA:254:G:H4'	17:CQ:16:MET:CE	2.42	0.47
1:CA:275:G:C2	1:CA:276:G:C5	3.02	0.47
22:DA:991:C:N4	22:DA:1185:G:O6	2.47	0.47
23:DB:64:G:H5''	23:DB:65:U:OP2	2.14	0.47
32:BK:1:MET:C	32:BK:2:ILE:HD12	2.35	0.47
22:BA:2151:U:C4	22:BA:2152:G:N7	2.82	0.47
22:BA:2094:A:C2	22:BA:2196:C:C2	3.02	0.47
1:AA:374:A:OP1	1:AA:452:A:N1	2.47	0.47
1:CA:654:G:H2'	1:CA:655:A:H8	1.79	0.47
1:CA:1294:G:H2'	1:CA:1295:U:O5'	2.13	0.47
22:DA:1874:C:H2'	22:DA:1875:G:O4'	2.13	0.47
1:CA:26:A:H61	1:CA:558:G:C2'	2.27	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:722:G:N3	1:CA:722:G:C2'	2.77	0.47
22:DA:1702:G:C6	22:DA:1703:G:N7	2.83	0.47
22:BA:2773:C:H2'	22:BA:2774:C:H6	1.79	0.47
29:DH:96:THR:O	29:DH:97:ARG:CG	2.61	0.47
44:DW:43:LYS:HD3	44:DW:43:LYS:HA	1.60	0.47
24:DC:71:ASP:CA	24:DC:117:SER:O	2.60	0.47
28:DG:85:LYS:O	28:DG:86:LEU:CB	2.61	0.47
28:DG:86:LEU:HA	28:DG:163:TYR:CB	2.43	0.47
24:BC:184:GLU:O	24:BC:186:ASP:N	2.47	0.47
3:AC:129:PHE:CZ	3:AC:130:ARG:HD3	2.49	0.47
8:CH:39:LEU:HB2	8:CH:45:ILE:CD1	2.43	0.47
22:BA:1739:A:H2'	22:BA:1740:G:O4'	2.15	0.47
16:CP:44:SER:C	16:CP:46:LYS:HZ2	2.17	0.47
22:BA:1435:G:C8	22:BA:1435:G:H5''	2.49	0.47
30:BI:56:VAL:HG22	30:BI:57:VAL:N	2.29	0.47
38:BQ:81:GLY:CA	38:BQ:116:LEU:HD13	2.44	0.47
4:AD:189:ASP:O	4:AD:190:LEU:HB3	2.14	0.47
25:DD:183:GLU:H	25:DD:183:GLU:CD	2.18	0.47
22:DA:2889:C:C2'	22:DA:2890:G:H5'	2.43	0.47
7:AG:145:GLU:N	7:AG:148:LYS:HB2	2.29	0.47
22:BA:626:A:H2'	33:BL:78:ARG:CZ	2.45	0.47
1:CA:305:G:C5'	1:CA:306:A:OP1	2.62	0.47
1:CA:306:A:C5	1:CA:307:C:C5	3.02	0.47
39:BR:37:GLU:N	39:BR:37:GLU:CD	2.66	0.47
22:BA:859:G:C8	22:BA:859:G:OP2	2.64	0.47
22:DA:121:G:C1'	22:DA:148:U:N3	2.78	0.47
2:AB:60:ALA:CB	2:AB:223:GLY:HA3	2.44	0.47
22:BA:2595:G:H1	24:BC:238:ASN:HD21	1.60	0.47
11:AK:28:ASN:OD1	11:AK:29:THR:N	2.47	0.47
22:BA:1924:C:C2	22:BA:1925:C:C6	3.02	0.47
22:BA:1782:U:H1'	22:BA:2609:U:O4'	2.14	0.47
9:CI:7:GLY:HA3	9:CI:84:ARG:O	2.14	0.47
1:AA:403:C:O2'	1:AA:404:G:H5'	2.14	0.47
1:CA:1307:U:H1'	13:CM:107:THR:CG2	2.44	0.47
14:AN:11:LYS:NZ	14:AN:11:LYS:HB2	2.29	0.47
22:BA:2825:G:H2'	22:BA:2826:A:H5'	1.96	0.47
22:BA:520:G:H2'	22:BA:521:U:C6	2.48	0.47
22:BA:2388:A:H5'	22:BA:2389:G:OP2	2.14	0.47
1:AA:390:U:H2'	1:AA:391:G:C8	2.49	0.47
41:BT:67:VAL:C	41:BT:68:LYS:HD3	2.35	0.47
46:BY:38:GLN:N	46:BY:38:GLN:OE1	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:24:THR:HG23	34:BM:24:THR:O	2.13	0.47
27:BF:1:ALA:O	27:BF:2:LYS:HB3	2.12	0.47
22:BA:2740:A:C6	22:BA:2764:A:C8	3.03	0.47
30:BI:126:ARG:HA	30:BI:129:GLU:CD	2.35	0.47
39:BR:80:ARG:O	39:BR:81:LYS:HD3	2.13	0.47
1:CA:1129:C:C4	1:CA:1139:G:C5	3.02	0.47
22:DA:1389:G:O2'	22:DA:1390:U:O4'	2.30	0.47
22:DA:2330:G:C6	22:DA:2386:A:N6	2.82	0.47
44:DW:25:PHE:CD1	44:DW:25:PHE:C	2.87	0.47
22:DA:1693:U:O2'	24:DC:13:ARG:NH2	2.43	0.47
22:DA:1773:A:C8	22:DA:1829:A:H1'	2.49	0.47
22:DA:1053:C:N4	22:DA:1054:A:H62	2.12	0.47
1:AA:1258:G:C4	1:AA:1259:C:C5	3.02	0.47
1:AA:1277:C:O2'	1:AA:1279:G:C8	2.62	0.47
9:AI:65:THR:CG2	9:AI:66:VAL:N	2.76	0.47
22:DA:139:U:H2'	22:DA:139:U:O2	2.13	0.47
22:DA:300:A:H2	22:DA:319:G:H21	1.60	0.47
22:DA:333:G:C2	22:DA:334:C:C6	3.02	0.47
22:DA:72:U:O2'	22:DA:73:A:H5'	2.14	0.47
26:DE:131:THR:HG22	26:DE:161:ALA:N	2.29	0.47
24:BC:161:VAL:HG22	24:BC:175:LEU:HA	1.96	0.47
22:DA:125:A:OP2	50:D2:19:ARG:NH2	2.47	0.47
22:DA:1426:G:H8	22:DA:1426:G:OP2	1.97	0.47
1:AA:468:A:N3	1:AA:469:C:C5	2.83	0.47
1:CA:1493:A:C8	1:CA:1493:A:OP1	2.68	0.47
1:CA:1493:A:H2'	1:CA:1494:G:OP1	2.13	0.47
4:CD:8:LEU:HD13	4:CD:8:LEU:HA	1.70	0.47
25:BD:106:LYS:O	25:BD:175:LEU:O	2.32	0.47
39:DR:51:VAL:HB	39:DR:52:PRO:HD2	1.95	0.47
44:BW:46:ALA:CB	44:BW:80:SER:HB3	2.44	0.47
43:DV:69:GLU:C	43:DV:70:ILE:HD13	2.34	0.47
6:CF:41:ASP:OD1	6:CF:58:HIS:HE1	1.97	0.47
18:CR:33:THR:CG2	18:CR:39:VAL:HG22	2.44	0.47
33:DL:57:LEU:HA	33:DL:60:ARG:HG2	1.96	0.47
1:CA:1360:A:C2	1:CA:1361:G:H1'	2.49	0.47
1:CA:1380:U:C4'	1:CA:1381:U:OP1	2.59	0.47
1:CA:958:A:O2'	1:CA:959:A:H5'	2.13	0.47
1:CA:963:G:C6	1:CA:973:G:O6	2.67	0.47
19:CS:13:HIS:O	19:CS:17:LYS:HG2	2.13	0.47
20:AT:43:LYS:HD3	20:AT:86:ALA:CB	2.44	0.47
22:DA:656:G:O2'	22:DA:657:U:C5'	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:18:ILE:CG2	10:AJ:19:ASP:N	2.77	0.47
46:BY:44:LYS:O	46:BY:47:ARG:HB3	2.14	0.47
22:DA:1451:C:H5'	22:DA:1452:G:OP1	2.13	0.47
22:DA:2695:U:O2	22:DA:2695:U:C2'	2.60	0.47
22:DA:2590:A:H5''	24:DC:237:ARG:CG	2.27	0.47
21:AU:3:ILE:CA	21:AU:19:LYS:HZ1	2.28	0.47
22:BA:141:G:H5'	22:BA:142:A:N7	2.29	0.47
32:DK:16:ALA:CB	32:DK:45:GLU:HG3	2.43	0.47
31:BJ:56:VAL:O	31:BJ:124:VAL:O	2.32	0.47
1:CA:70:U:C4'	1:CA:71:A:OP1	2.59	0.47
1:CA:79:G:N1	1:CA:80:A:N6	2.61	0.47
17:CQ:16:MET:HE3	17:CQ:19:SER:OG	2.14	0.47
1:AA:415:A:O2'	1:AA:416:G:H5'	2.14	0.47
22:DA:2094:A:O2'	22:DA:2095:A:H8	1.95	0.47
32:BK:19:VAL:HG23	32:BK:43:ILE:HA	1.94	0.47
22:DA:1553:A:N7	22:DA:1555:G:C6	2.83	0.47
1:CA:1249:C:H42	1:CA:1287:A:H2'	1.79	0.47
1:AA:298:A:H2'	1:AA:299:G:O4'	2.14	0.47
22:DA:2314:A:C2	22:DA:2315:G:C4	3.01	0.47
1:CA:1396:A:H4'	1:CA:1397:C:O5'	2.15	0.47
1:CA:867:G:H2'	1:CA:868:C:H6	1.79	0.47
1:AA:716:A:C6	1:AA:717:U:N3	2.82	0.47
22:BA:1276:A:H5''	22:BA:1276:A:H8	1.79	0.47
1:CA:563:A:C8	1:CA:567:G:O4'	2.67	0.47
22:DA:1649:G:C6	22:DA:2009:A:C6	3.02	0.47
20:AT:35:TYR:CG	20:AT:36:ALA:N	2.83	0.47
1:CA:1499:A:C2'	1:CA:1500:A:H5'	2.44	0.47
1:AA:877:G:H21	8:AH:1:SER:N	2.12	0.47
22:BA:2638:G:O2'	22:BA:2775:G:N2	2.45	0.47
1:CA:106:C:H2'	1:CA:107:G:H5'	1.87	0.47
1:CA:1464:U:C2'	1:CA:1465:A:H5'	2.44	0.47
9:AI:118:ARG:HB3	9:AI:122:ARG:CG	2.44	0.47
33:BL:19:LEU:HA	33:BL:27:LEU:O	2.13	0.47
1:CA:636:U:H2'	1:CA:637:C:C6	2.49	0.47
37:BP:63:ILE:O	37:BP:63:ILE:HG22	2.14	0.47
25:DD:12:THR:HG23	25:DD:13:ARG:N	2.20	0.47
1:CA:351:G:H4'	1:CA:352:C:OP1	2.13	0.47
3:AC:191:THR:O	3:AC:192:TYR:HB3	2.14	0.47
22:BA:1569:A:C2	22:BA:1570:A:C4	3.02	0.47
40:DS:103:ILE:HG22	40:DS:103:ILE:O	2.14	0.47
1:CA:1480:A:O2'	1:CA:1481:U:H5'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:770:G:H1'	22:DA:1379:U:C4	2.49	0.47
22:BA:918:A:H4'	23:BB:97:C:O2	2.15	0.47
1:CA:1162:C:H2'	1:CA:1163:A:O4'	2.14	0.47
52:D4:9:LYS:HD3	52:D4:9:LYS:C	2.35	0.47
25:BD:33:ARG:NH2	25:BD:51:THR:HG23	2.28	0.47
1:AA:720:C:H5''	18:AR:40:PRO:HB3	1.96	0.47
22:DA:1173:U:H1'	22:DA:1177:G:N2	2.29	0.47
1:CA:382:A:C8	1:CA:383:A:C6	3.02	0.47
22:BA:2552:U:H6	22:BA:2552:U:O5'	1.98	0.47
25:DD:36:GLN:OE1	25:DD:67:HIS:HE1	1.97	0.47
22:BA:2578:G:H2'	22:BA:2578:G:N3	2.28	0.47
22:DA:2691:C:C4	22:DA:2719:G:N2	2.82	0.47
22:BA:1577:C:H2'	22:BA:1578:U:O4'	2.14	0.47
1:CA:896:C:C2'	1:CA:897:C:H5'	2.45	0.47
45:BX:73:ARG:O	45:BX:73:ARG:CG	2.62	0.47
19:AS:40:PHE:CB	19:AS:42:ASN:HD22	2.27	0.47
30:BI:91:LYS:O	30:BI:97:VAL:HG21	2.14	0.47
22:BA:1365:A:O5'	45:BX:27:ARG:NH2	2.42	0.47
3:CC:105:VAL:HG12	3:CC:105:VAL:O	2.13	0.47
37:DP:54:LEU:HG	37:DP:54:LEU:O	2.14	0.47
26:DE:97:ASN:OD1	26:DE:97:ASN:C	2.53	0.47
22:BA:1985:C:C2'	22:BA:1986:C:O5'	2.62	0.47
22:BA:1079:C:N3	22:BA:1080:A:N7	2.62	0.47
24:DC:35:LYS:O	24:DC:36:ASN:CB	2.61	0.47
22:DA:1345:C:O2'	22:DA:1346:G:P	2.73	0.47
1:AA:408:A:P	4:AD:109:THR:HG21	2.54	0.47
26:DE:105:LEU:HB3	26:DE:200:LEU:CD1	2.41	0.47
22:DA:2353:G:H4'	44:DW:28:GLU:HG2	1.96	0.47
9:AI:20:ILE:HD12	9:AI:85:ALA:C	2.34	0.47
22:DA:61:C:C4'	46:DY:43:LEU:HD23	2.41	0.47
1:AA:1306:A:H1'	1:AA:1332:A:N6	2.29	0.47
13:AM:94:LEU:HB3	13:AM:95:PRO:HD2	1.96	0.47
1:AA:208:U:H3'	1:AA:208:U:H6	1.79	0.47
1:AA:468:A:HO2'	1:AA:469:C:H5'	1.70	0.47
1:CA:408:A:C5	1:CA:409:U:C5	3.03	0.47
1:AA:77:A:N6	1:AA:90:C:C4	2.80	0.47
31:DJ:48:VAL:HG12	31:DJ:49:ASP:N	2.28	0.47
44:BW:23:LYS:CG	44:BW:24:ARG:O	2.41	0.47
31:BJ:89:PHE:C	31:BJ:89:PHE:CD1	2.88	0.47
32:DK:64:ARG:O	32:DK:82:ASN:HA	2.14	0.47
22:DA:1282:U:C2'	22:DA:1283:G:H5'	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:257:G:C2'	1:AA:258:G:O5'	2.62	0.47
1:CA:595:A:H5''	1:CA:596:A:OP1	2.14	0.47
1:CA:1266:G:H3'	1:CA:1266:G:H8	1.79	0.47
10:CJ:52:LEU:HD23	10:CJ:62:ARG:CG	2.44	0.47
22:DA:625:G:C6	22:DA:626:A:N7	2.82	0.47
3:AC:35:ASP:C	3:AC:37:LYS:H	2.17	0.47
1:AA:15:G:C4	1:AA:16:A:C8	3.03	0.47
22:DA:2060:A:C3'	26:DE:63:LYS:HZ3	2.28	0.47
22:DA:575:A:N3	22:DA:576:U:C6	2.82	0.47
37:DP:91:VAL:HG22	37:DP:109:ILE:HD13	1.96	0.47
22:BA:139:U:C5	41:BT:1:MET:SD	3.07	0.47
7:AG:23:ALA:O	7:AG:26:VAL:CG2	2.62	0.47
8:AH:6:ILE:HD11	8:AH:31:LEU:HG	1.96	0.47
1:AA:1328:C:C4	1:AA:1329:A:N7	2.83	0.47
22:DA:975:A:H8	22:DA:990:A:H62	1.59	0.47
27:DF:27:VAL:O	27:DF:27:VAL:HG23	2.14	0.47
27:BF:100:GLU:C	27:BF:102:LEU:N	2.67	0.47
27:BF:134:GLN:C	27:BF:136:ILE:H	2.16	0.47
22:DA:1007:C:H3'	22:DA:1008:A:H8	1.79	0.47
2:AB:206:ILE:HD13	2:AB:207:ARG:N	2.29	0.47
35:BN:101:GLY:C	35:BN:102:PHE:CD2	2.87	0.47
22:DA:2804:U:C2'	22:DA:2805:C:H5'	2.43	0.47
22:DA:2808:G:O2'	22:DA:2809:A:H8	1.97	0.47
35:BN:44:LEU:HD11	35:BN:48:VAL:HG21	1.96	0.47
22:DA:484:C:O2'	22:DA:485:C:C5'	2.52	0.47
22:DA:1494:A:H3'	22:DA:1494:A:OP2	2.14	0.47
22:DA:228:C:H4'	22:DA:229:C:H6	1.79	0.47
22:BA:603:A:C4'	22:BA:604:G:O5'	2.50	0.47
1:CA:756:C:H2'	1:CA:757:U:H5'	1.95	0.47
22:DA:779:U:H5''	24:DC:42:ARG:NH2	2.30	0.47
22:DA:2849:U:OP1	37:DP:92:ARG:NH1	2.47	0.47
1:CA:477:C:H3'	1:CA:478:A:H8	1.78	0.47
25:DD:34:VAL:HA	25:DD:49:GLN:O	2.15	0.47
28:DG:18:ILE:CD1	28:DG:42:VAL:HG13	2.34	0.47
22:BA:2660:A:C2	22:BA:2661:G:C4	3.02	0.47
22:BA:278:A:N3	22:BA:278:A:H2'	2.28	0.47
1:AA:179:A:C2'	1:AA:180:U:H5'	2.45	0.47
39:BR:25:LEU:N	39:BR:94:THR:CG2	2.77	0.47
39:BR:25:LEU:N	39:BR:94:THR:HG21	2.29	0.47
22:BA:2188:U:O2'	22:BA:2189:U:H5'	2.13	0.47
32:BK:87:LEU:HD22	32:BK:93:GLN:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:289:G:N2	22:DA:352:A:C4	2.82	0.47
45:DX:76:LYS:HG3	45:DX:77:TYR:N	2.30	0.47
10:AJ:28:THR:CG2	10:AJ:28:THR:O	2.62	0.47
30:DI:127:SER:C	30:DI:128:ILE:HD13	2.34	0.47
3:CC:20:THR:O	3:CC:20:THR:CG2	2.61	0.47
30:DI:21:PRO:HD2	30:DI:22:PRO:HD2	1.97	0.47
44:DW:77:LYS:HZ3	44:DW:77:LYS:HB2	1.79	0.47
1:CA:967:C:N3	1:CA:968:A:N6	2.62	0.47
26:DE:52:VAL:HG12	26:DE:74:LYS:CG	2.44	0.47
1:AA:1453:G:O2'	1:AA:1454:G:O5'	2.30	0.47
22:BA:1464:G:C2'	22:BA:1465:G:H5'	2.44	0.47
22:BA:1465:G:C5	22:BA:1466:U:C4	3.02	0.47
1:AA:678:U:O2'	1:AA:679:C:H5'	2.15	0.47
42:BU:83:GLY:HA3	42:BU:96:LYS:HE2	1.96	0.47
31:BJ:40:HIS:H	31:BJ:40:HIS:HD2	1.60	0.47
7:AG:88:VAL:HG22	7:AG:89:GLU:N	2.29	0.47
22:BA:2083:G:H2'	22:BA:2084:C:H5'	1.96	0.47
45:DX:37:PHE:HB2	45:DX:46:VAL:O	2.14	0.47
11:AK:43:TRP:HE3	11:AK:44:ALA:CA	2.27	0.47
3:AC:95:GLY:C	3:AC:96:VAL:HG13	2.34	0.47
36:BO:74:VAL:O	36:BO:77:ALA:HB3	2.14	0.47
22:BA:2:G:H2'	22:BA:3:U:C6	2.49	0.47
22:BA:2780:G:H4'	22:BA:2781:A:OP2	2.14	0.47
22:BA:108:G:O2'	22:BA:109:C:H5'	2.13	0.47
6:AF:41:ASP:OD2	6:AF:58:HIS:NE2	2.45	0.47
7:CG:79:VAL:HG23	7:CG:79:VAL:O	2.15	0.47
1:CA:604:G:H2'	1:CA:605:U:O4'	2.13	0.47
22:BA:574:A:P	56:BA:3267:HOH:O	2.71	0.47
44:DW:19:ARG:HA	44:DW:34:SER:HA	1.95	0.47
22:DA:740:C:H5'	22:DA:1784:A:H3'	1.96	0.47
22:DA:705:A:H2'	22:DA:706:A:C8	2.49	0.47
22:DA:729:G:O6	24:DC:207:ALA:N	2.41	0.47
1:AA:1130:A:C5	1:AA:1146:A:C6	3.03	0.47
9:AI:15:ALA:O	9:AI:66:VAL:HG23	2.14	0.47
12:CL:115:LYS:O	12:CL:116:TYR:HB2	2.15	0.47
46:DY:47:ARG:O	46:DY:48:ARG:C	2.53	0.47
22:BA:1818:U:H2'	24:BC:152:GLN:O	2.14	0.47
22:DA:1425:G:H8	22:DA:1425:G:O5'	1.98	0.47
1:CA:1405:G:C8	1:CA:1405:G:H3'	2.50	0.47
4:CD:39:GLN:C	4:CD:41:GLY:N	2.67	0.47
22:DA:536:G:H2'	22:DA:537:G:O4'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:29:ALA:O	21:CU:32:ARG:CB	2.62	0.47
2:AB:9:LEU:HB2	2:AB:42:LEU:CD1	2.44	0.47
38:DQ:94:LEU:HD13	39:DR:4:VAL:CG1	2.44	0.47
44:BW:19:ARG:HH12	44:BW:22:VAL:HG11	1.78	0.47
37:DP:19:PHE:CE1	37:DP:58:PHE:CE2	3.02	0.47
22:DA:2024:G:O2'	22:DA:2025:C:O4'	2.32	0.47
22:DA:579:G:C8	22:DA:2017:U:O4	2.67	0.47
22:DA:204:A:O2'	22:DA:205:G:O5'	2.28	0.47
33:DL:62:PRO:HG2	51:D3:24:LYS:HB3	1.94	0.47
22:DA:1307:A:H2'	22:DA:1308:A:C5'	2.45	0.47
22:DA:1324:G:C1'	22:DA:1616:A:N6	2.57	0.47
4:AD:194:ILE:O	4:AD:194:ILE:CG1	2.54	0.47
22:DA:637:A:P	33:DL:128:THR:HG21	2.55	0.47
29:DH:4:ILE:HG22	29:DH:5:LEU:N	2.30	0.47
5:CE:95:MET:CE	5:CE:143:LEU:CD2	2.92	0.47
29:BH:97:ARG:HG2	29:BH:111:ALA:HB1	1.96	0.47
41:BT:37:ASP:C	41:BT:38:ALA:O	2.51	0.47
41:BT:44:LYS:O	41:BT:48:GLN:HG2	2.13	0.47
27:DF:111:ARG:HH12	27:DF:113:PHE:HE1	1.63	0.47
1:CA:86:G:O2'	1:CA:87:C:P	2.72	0.47
1:CA:170:U:O2'	1:CA:171:A:C5'	2.49	0.47
10:AJ:57:VAL:CG2	10:AJ:58:ASN:N	2.55	0.47
22:DA:1300:G:H5'	22:DA:1301:A:N3	2.29	0.47
22:DA:1438:U:H2'	22:DA:1439:A:O4'	2.13	0.47
22:DA:1441:G:C2	22:DA:1551:A:C2	3.03	0.47
32:DK:40:LYS:HD2	32:DK:59:LYS:HB3	1.96	0.47
1:CA:1250:A:C6	1:CA:1251:A:C6	3.02	0.47
4:AD:99:ASN:O	4:AD:103:ARG:HB2	2.14	0.47
16:AP:19:VAL:HG13	16:AP:37:GLY:C	2.34	0.47
1:AA:1152:A:N3	1:AA:1153:G:C8	2.83	0.47
4:CD:68:GLU:O	4:CD:69:ARG:C	2.52	0.47
22:BA:1141:U:C4'	22:BA:1142:A:O5'	2.58	0.47
1:AA:372:C:H5'	1:AA:373:A:OP1	2.13	0.47
16:AP:11:ALA:O	16:AP:12:LYS:C	2.53	0.47
22:DA:1196:C:H1'	22:DA:1226:A:N9	2.30	0.47
22:DA:418:C:H2'	22:DA:419:U:C6	2.47	0.47
17:AQ:27:PHE:HA	17:AQ:37:ILE:O	2.15	0.47
1:CA:1454:G:HO2'	1:CA:1455:G:H5''	1.76	0.47
23:DB:34:A:C5	23:DB:44:G:C8	3.02	0.47
1:AA:393:A:O2'	1:AA:394:G:H5'	2.14	0.47
22:DA:1635:A:H5'	22:DA:1635:A:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:804:A:C2'	22:DA:806:C:C4	2.97	0.47
22:DA:806:C:C2'	22:DA:807:U:H6	2.27	0.47
22:BA:2661:G:C2'	22:BA:2662:A:O5'	2.62	0.47
22:BA:274:C:C2'	22:BA:275:C:H5'	2.44	0.47
24:DC:63:ILE:O	24:DC:64:VAL:HB	2.15	0.47
22:BA:2064:C:H2'	22:BA:2065:C:C6	2.49	0.47
22:BA:2065:C:H2'	22:BA:2066:C:H6	1.79	0.47
1:CA:202:G:H21	1:CA:465:A:H61	1.62	0.47
22:DA:265:A:C5	22:DA:428:A:C8	3.02	0.47
17:CQ:61:ARG:HD3	17:CQ:75:VAL:HG11	1.97	0.47
17:CQ:73:THR:HG23	17:CQ:75:VAL:HG12	1.95	0.47
1:CA:495:A:C4'	1:CA:496:A:O5'	2.61	0.47
42:DU:85:ARG:CA	42:DU:85:ARG:NE	2.78	0.47
11:CK:51:PHE:C	11:CK:52:ARG:HD2	2.35	0.47
2:CB:105:THR:C	2:CB:108:GLN:HG2	2.34	0.47
22:BA:1378:A:HO2'	22:BA:1379:U:H3'	1.76	0.47
22:DA:1831:G:C6	22:DA:1832:C:N3	2.83	0.47
28:BG:142:GLN:CA	28:BG:142:GLN:NE2	2.74	0.47
22:DA:2902:C:H2'	22:DA:2903:U:H5'	1.96	0.47
36:BO:31:THR:HG23	36:BO:34:HIS:N	2.23	0.47
3:AC:10:ARG:O	3:AC:13:ILE:O	2.32	0.47
22:BA:27:G:N2	22:BA:512:G:O2'	2.37	0.47
22:BA:324:A:HO2'	22:BA:325:G:H5'	1.78	0.47
30:BI:40:ALA:HB3	30:BI:68:PHE:CE1	2.50	0.47
49:D1:10:LEU:HB2	49:D1:20:TYR:HB2	1.96	0.47
1:AA:381:C:H2'	1:AA:382:A:C5'	2.44	0.47
22:DA:2418:A:N6	22:DA:2419:U:C4	2.82	0.47
43:BV:5:ASN:HB3	43:BV:64:VAL:HB	1.95	0.47
30:DI:132:ALA:CA	30:DI:137:LEU:HD12	2.44	0.47
4:AD:1:ALA:O	4:AD:67:LEU:CD1	2.63	0.47
22:BA:397:U:C2'	22:BA:398:C:H5'	2.45	0.47
22:DA:1857:G:N3	22:DA:1884:G:N1	2.62	0.47
50:B2:21:ARG:C	50:B2:23:ALA:H	2.17	0.47
37:DP:107:ALA:O	37:DP:108:ARG:C	2.53	0.47
22:BA:132:G:C2'	22:BA:133:U:H5'	2.44	0.47
1:CA:582:C:C2'	1:CA:583:A:H5'	2.44	0.47
27:BF:142:TYR:HA	27:BF:145:VAL:HG13	1.96	0.47
3:AC:22:PHE:HD2	3:AC:22:PHE:C	2.18	0.47
1:CA:382:A:H2'	1:CA:382:A:H8	1.58	0.47
22:BA:1244:A:O5'	33:BL:7:SER:HB3	2.15	0.47
22:DA:1760:C:H3'	22:DA:1761:C:H6	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DV:1:MET:O	43:DV:2:PHE:HB2	2.15	0.47
43:BV:1:MET:HG3	43:BV:2:PHE:N	2.29	0.47
1:CA:772:U:O2'	1:CA:773:G:H5'	2.15	0.47
4:CD:10:LEU:H	4:CD:10:LEU:CD1	2.27	0.47
1:AA:287:U:H2'	1:AA:288:A:H8	1.79	0.47
41:DT:53:VAL:CG2	41:DT:92:ASN:HD22	2.27	0.47
24:BC:23:LEU:HD12	24:BC:82:TYR:N	2.29	0.47
47:DZ:5:LYS:CE	47:DZ:57:GLU:OE2	2.62	0.47
1:CA:1487:G:C2'	1:CA:1488:G:H5'	2.45	0.47
1:AA:1058:G:C5	1:AA:1059:C:C5	3.02	0.47
1:CA:610:U:O4'	1:CA:610:U:O2	2.32	0.47
1:CA:1130:A:C6	1:CA:1146:A:C5	3.02	0.47
22:DA:1388:G:C2'	22:DA:1389:G:C8	2.95	0.47
41:DT:46:ALA:O	41:DT:47:VAL:HG13	2.15	0.47
46:DY:22:LEU:CG	46:DY:23:ARG:NH1	2.78	0.47
51:D3:33:THR:HG22	51:D3:34:LYS:H	1.79	0.47
22:DA:2323:G:C6	22:DA:2324:U:C4	3.03	0.47
22:DA:2337:G:C2'	22:DA:2338:C:H5'	2.44	0.47
22:DA:2344:U:O2'	22:DA:2345:G:C5'	2.62	0.47
22:DA:1787:A:C2	22:DA:1788:C:C4	3.02	0.47
12:CL:88:ASP:HB3	12:CL:89:LEU:HD22	1.96	0.47
22:DA:96:C:O2'	22:DA:97:C:H5'	2.15	0.47
42:DU:81:ARG:O	42:DU:82:VAL:HG13	2.15	0.47
22:DA:1361:G:C4	22:DA:1362:C:C6	3.03	0.47
1:CA:212:G:O2'	1:CA:213:G:O5'	2.29	0.47
4:CD:109:THR:HG22	4:CD:110:ARG:N	2.29	0.47
31:DJ:43:GLU:HG2	31:DJ:45:THR:HG22	1.96	0.47
44:BW:23:LYS:HD2	44:BW:24:ARG:HB3	1.95	0.47
44:BW:39:GLN:CG	44:BW:42:THR:H	2.23	0.47
11:CK:92:ARG:HD2	11:CK:92:ARG:HA	1.70	0.47
48:D0:3:GLN:HE22	48:D0:7:PRO:CD	2.28	0.47
22:DA:2014:A:C2	22:DA:2613:U:O2	2.67	0.47
45:BX:38:TRP:CE3	45:BX:45:PHE:CE2	3.01	0.47
22:DA:2072:C:C2'	22:DA:2073:C:H5'	2.44	0.47
22:DA:648:G:H2'	22:DA:649:G:H8	1.79	0.47
22:DA:1283:G:N2	22:DA:1286:A:H5'	2.29	0.47
8:CH:59:GLU:C	8:CH:60:LEU:HD12	2.35	0.47
22:DA:503:A:N3	22:DA:505:A:H2'	2.30	0.47
22:BA:1179:G:O6	22:BA:1180:U:H1'	2.12	0.47
14:CN:40:ARG:HH12	19:CS:6:LYS:HB2	1.76	0.47
22:DA:638:G:O6	22:DA:651:G:C5	2.67	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:83:ALA:O	33:DL:85:VAL:HG12	2.14	0.47
22:DA:2136:G:C2'	22:DA:2137:U:C6	2.98	0.47
25:DD:9:VAL:O	37:DP:4:ILE:CD1	2.62	0.47
22:BA:1654:A:C4'	25:BD:118:PHE:CE1	2.98	0.47
22:DA:2726:A:O2'	22:DA:2727:A:C5'	2.57	0.47
41:BT:40:LYS:HG2	41:BT:58:VAL:O	2.15	0.47
31:DJ:56:VAL:CG2	31:DJ:124:VAL:HG23	2.45	0.47
1:CA:253:A:C6	1:CA:274:A:N1	2.82	0.47
22:DA:822:G:H5''	56:DA:3358:HOH:O	2.15	0.47
22:DA:973:A:H4'	22:DA:974:G:OP2	2.14	0.47
22:DA:1439:A:C2	22:DA:1553:A:N7	2.82	0.47
32:DK:87:LEU:HD23	32:DK:87:LEU:H	1.79	0.47
25:DD:17:GLU:N	25:DD:17:GLU:CD	2.66	0.47
14:AN:40:ARG:NH2	14:AN:44:VAL:HG21	2.30	0.47
19:AS:4:LEU:CD1	19:AS:4:LEU:H	2.24	0.47
1:AA:995:C:H4'	14:AN:7:ALA:HB2	1.95	0.47
52:B4:10:LEU:HD12	52:B4:33:HIS:HD2	1.69	0.47
1:AA:1152:A:O2'	1:AA:1153:G:H5'	2.14	0.47
29:DH:12:LEU:HD12	29:DH:12:LEU:C	2.34	0.47
1:AA:370:C:C2'	1:AA:371:A:H5'	2.45	0.47
1:AA:982:U:C2	1:AA:983:A:N1	2.82	0.47
12:CL:6:LEU:C	12:CL:8:ARG:N	2.67	0.47
1:CA:1296:C:H1'	1:CA:1302:C:N3	2.29	0.47
22:BA:34:U:H2'	22:BA:34:U:H6	1.50	0.47
1:CA:321:A:C8	1:CA:328:C:C2	3.03	0.47
1:AA:274:A:O2'	1:AA:275:G:O5'	2.32	0.47
22:BA:604:G:H2'	22:BA:605:G:C8	2.49	0.47
1:AA:579:A:H5'	1:AA:728:A:H1'	1.95	0.47
22:BA:786:C:O2'	22:BA:787:C:H5'	2.14	0.47
22:DA:873:C:C4'	34:DM:64:TRP:CD1	2.97	0.47
41:BT:73:ARG:HH21	41:BT:73:ARG:HB3	1.77	0.47
29:DH:99:ILE:HG21	29:DH:130:VAL:HG21	1.96	0.47
24:DC:31:PRO:O	24:DC:32:LEU:HG	2.14	0.47
28:DG:132:LEU:CD1	28:DG:132:LEU:N	2.77	0.47
28:DG:163:TYR:O	28:DG:164:ALA:C	2.52	0.47
1:CA:465:A:C8	1:CA:467:U:OP1	2.67	0.47
1:AA:197:A:H1'	1:AA:198:G:O4'	2.15	0.47
2:AB:153:MET:HE2	2:AB:157:PRO:HG3	1.95	0.47
1:AA:723:U:OP1	21:AU:48:LYS:HD3	2.15	0.47
1:AA:1053:G:C6	1:AA:1199:U:C2	3.03	0.47
3:AC:133:MET:HE3	3:AC:167:TYR:HB2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1430:A:C2	1:AA:1471:U:C2	3.03	0.47
1:CA:1461:G:C6	1:CA:1462:C:C4	3.02	0.47
7:AG:21:LEU:CD2	7:AG:96:ASN:HD22	2.28	0.47
22:DA:1905:C:C5	22:DA:1930:G:C6	3.03	0.47
22:BA:1252:G:N3	38:BQ:32:ARG:CG	2.75	0.47
15:CO:88:ARG:CD	22:DA:716:A:OP1	2.63	0.47
28:BG:23:ILE:CD1	28:BG:23:ILE:H	2.25	0.47
22:BA:65:U:C2	22:BA:66:C:C5	3.02	0.47
1:CA:259:G:C2'	1:CA:260:G:H5'	2.44	0.47
22:BA:345:A:O2'	22:BA:347:A:N7	2.44	0.47
22:DA:712:G:C2	22:DA:720:U:O2	2.67	0.47
22:DA:721:A:H8	22:DA:721:A:O5'	1.97	0.47
22:BA:2672:U:H2'	22:BA:2673:G:O5'	2.13	0.47
1:CA:177:G:C2'	1:CA:178:C:H5'	2.44	0.47
1:CA:1190:G:H4'	1:CA:1191:A:OP2	2.15	0.47
22:BA:414:C:H4'	22:BA:1879:C:O2	2.15	0.47
1:CA:619:U:C4	4:CD:131:ILE:HD11	2.49	0.47
25:BD:142:VAL:HG23	25:BD:144:GLY:H	1.79	0.47
22:DA:749:A:C4	22:DA:750:A:H8	2.33	0.47
1:AA:1453:G:HO2'	1:AA:1454:G:P	2.37	0.47
22:BA:1034:G:C5	22:BA:1122:G:C2	3.03	0.47
1:CA:296:U:N3	1:CA:297:G:C5	2.83	0.47
22:BA:146:A:H2'	22:BA:147:C:H6	1.79	0.47
22:DA:2578:G:H21	25:DD:130:GLN:NE2	2.12	0.47
1:AA:725:G:H2'	1:AA:726:C:C6	2.50	0.47
28:DG:51:PHE:CE2	28:DG:68:ARG:HA	2.49	0.47
25:BD:46:ARG:HH11	25:BD:46:ARG:HG2	1.78	0.47
22:DA:381:G:C5'	45:DX:15:ASN:HD22	2.28	0.47
19:AS:10:ILE:HG22	19:AS:38:THR:N	2.30	0.47
22:DA:260:G:C6	22:DA:261:G:C5	3.03	0.47
1:CA:49:U:O2	1:CA:362:G:H1'	2.14	0.47
35:BN:18:GLN:NE2	35:BN:22:ARG:NH1	2.63	0.47
1:AA:827:U:N3	1:AA:870:U:C2	2.82	0.47
25:BD:191:GLY:O	25:BD:192:ALA:HB3	2.14	0.47
22:DA:2080:A:H4'	45:DX:22:ASN:HD22	1.79	0.47
38:BQ:94:LEU:O	38:BQ:94:LEU:HD12	2.14	0.47
22:BA:1153:C:H2'	22:BA:1154:G:C5'	2.44	0.47
22:BA:1069:A:C6	22:BA:1074:G:C5	3.03	0.47
5:AE:100:GLU:CB	5:AE:121:ASN:HA	2.44	0.47
22:DA:1797:G:N2	22:DA:1803:A:H2	2.13	0.47
24:DC:156:SER:HB3	24:DC:159:THR:HG23	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:264:LYS:HG3	24:DC:265:PHE:CD2	2.50	0.47
24:DC:80:LEU:CD2	24:DC:109:LEU:HB3	2.44	0.47
24:DC:35:LYS:O	24:DC:36:ASN:HB2	2.14	0.47
1:CA:1151:A:C2'	1:CA:1152:A:O5'	2.62	0.47
1:CA:1129:C:C4	1:CA:1139:G:C4	3.03	0.47
1:CA:1255:G:H21	1:CA:1258:G:H21	1.60	0.47
26:DE:178:VAL:HG13	26:DE:179:SER:N	2.30	0.47
16:AP:20:VAL:HG21	16:AP:32:PHE:HB2	1.94	0.47
22:DA:2339:C:O2'	22:DA:2340:A:P	2.72	0.47
22:DA:2352:A:O5'	22:DA:2352:A:H8	1.98	0.47
44:DW:23:LYS:CD	44:DW:24:ARG:HB2	2.44	0.47
22:DA:2284:A:P	49:D1:5:ARG:HG3	2.55	0.47
22:DA:2331:G:N2	22:DA:2385:C:C2	2.82	0.47
22:DA:1826:G:H2'	22:DA:1827:U:O5'	2.14	0.47
24:DC:16:VAL:HG12	24:DC:16:VAL:O	2.15	0.47
22:DA:1078:U:H4'	22:DA:1079:C:H5''	1.95	0.47
22:DA:1064:C:C6	22:DA:1065:U:H5	2.33	0.47
30:DI:54:ILE:HD12	30:DI:54:ILE:N	2.30	0.47
22:DA:1277:G:O2'	35:DN:24:MET:HB2	2.13	0.47
35:DN:28:LEU:C	35:DN:30:ARG:H	2.18	0.47
9:AI:49:GLN:O	9:AI:51:LEU:N	2.47	0.47
22:DA:322:A:C2	22:DA:340:A:N6	2.83	0.47
22:DA:319:G:OP2	26:DE:132:LYS:HD2	2.15	0.47
22:DA:1241:A:H2'	22:DA:1242:U:O5'	2.14	0.47
22:DA:305:C:C2	22:DA:313:G:N1	2.82	0.47
22:DA:82:U:H5''	22:DA:296:U:H5''	1.97	0.47
49:B1:7:LYS:HE3	51:B3:33:THR:HG21	1.96	0.47
22:DA:379:G:N1	22:DA:396:G:C6	2.83	0.47
22:DA:165:A:C4	22:DA:166:U:C6	3.03	0.47
22:DA:2212:A:C8	22:DA:2214:C:N4	2.82	0.47
22:DA:45:G:C5'	22:DA:46:G:OP1	2.63	0.47
22:DA:36:G:N1	22:DA:445:C:C4	2.83	0.47
22:DA:444:C:O2'	22:DA:445:C:O5'	2.32	0.47
38:BQ:88:GLU:OE1	38:BQ:88:GLU:O	2.33	0.47
22:DA:1051:G:H2'	22:DA:1052:C:H6	1.77	0.47
1:CA:1092:A:C8	1:CA:1093:A:N7	2.83	0.47
2:CB:95:TRP:CH2	2:CB:171:ALA:HA	2.49	0.47
1:CA:213:G:C2'	1:CA:214:C:C6	2.75	0.47
13:AM:95:PRO:HG2	13:AM:101:THR:CG2	2.44	0.47
1:AA:201:G:N2	1:AA:217:C:O2	2.47	0.47
1:CA:1408:A:N1	1:CA:1494:G:C6	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:29:THR:O	4:CD:30:LYS:HB2	2.14	0.47
45:DX:53:LYS:CA	45:DX:56:ARG:CB	2.85	0.47
38:DQ:79:ILE:HD13	38:DQ:80:ASN:N	2.29	0.47
43:DV:21:ARG:C	43:DV:23:ALA:H	2.18	0.47
1:AA:545:C:O2	1:AA:545:C:C2'	2.62	0.47
28:BG:93:TYR:O	28:BG:105:SER:HB3	2.15	0.47
37:BP:24:THR:C	37:BP:25:VAL:HG12	2.35	0.47
6:CF:41:ASP:OD2	6:CF:58:HIS:CE1	2.65	0.47
32:DK:76:VAL:CG1	32:DK:77:ILE:N	2.78	0.47
22:DA:1264:A:C6	22:DA:1265:A:N6	2.82	0.47
22:DA:2024:G:C2	22:DA:2040:G:N3	2.83	0.47
22:DA:1608:A:C5	22:DA:1611:C:N4	2.82	0.47
44:BW:70:VAL:CG2	44:BW:75:ASN:OD1	2.62	0.47
22:DA:1324:G:O2'	22:DA:1616:A:C6	2.63	0.47
17:AQ:51:GLU:O	17:AQ:52:CYS:O	2.32	0.47
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.49	0.47
8:CH:28:SER:CB	8:CH:57:GLU:O	2.62	0.47
1:CA:964:A:H2'	1:CA:965:U:C5'	2.44	0.47
1:CA:985:C:O2'	1:CA:986:U:H6	1.96	0.47
4:AD:200:VAL:HG11	5:AE:102:THR:HG23	1.97	0.47
1:CA:986:U:C2	1:CA:1220:G:N2	2.82	0.47
4:AD:199:ILE:HG12	4:AD:200:VAL:N	2.29	0.47
51:D3:18:LYS:CG	51:D3:19:GLY:H	2.26	0.47
22:DA:2135:A:O2'	22:DA:2136:G:O4'	2.22	0.47
3:AC:18:ASN:CB	3:AC:39:ARG:HH12	2.28	0.47
22:BA:2308:G:H2'	22:BA:2310:C:H5	1.80	0.47
5:CE:71:ILE:HG12	5:CE:144:GLU:HG2	1.96	0.47
22:DA:1141:U:O2	22:DA:1142:A:C6	2.67	0.47
1:AA:843:U:H2'	1:AA:844:G:H5'	1.95	0.47
22:BA:412:A:H2'	22:BA:413:C:H6	1.80	0.47
22:DA:1430:G:O2'	22:DA:1431:A:O4'	2.32	0.47
21:AU:36:PHE:HD1	21:AU:39:LYS:CB	2.16	0.47
24:BC:229:HIS:HD2	24:BC:246:PRO:HB3	1.79	0.47
24:BC:245:THR:HB	24:BC:246:PRO:HD2	1.97	0.47
36:BO:103:VAL:O	36:BO:105:ALA:O	2.32	0.47
22:DA:1566:A:C2	24:DC:212:TRP:CE3	3.03	0.47
5:CE:131:ASN:C	5:CE:131:ASN:ND2	2.66	0.47
27:DF:48:LEU:N	27:DF:48:LEU:HD23	2.24	0.47
1:AA:1371:G:C5	1:AA:1372:U:C4	3.03	0.47
17:CQ:68:LYS:C	17:CQ:69:THR:HG23	2.35	0.47
1:CA:248:C:O2'	1:CA:249:U:O5'	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:255:G:C2	1:CA:256:U:C5	3.03	0.47
23:DB:17:C:O2'	23:DB:18:G:C8	2.65	0.47
42:BU:40:LEU:O	42:BU:41:VAL:HG13	2.14	0.47
22:DA:1737:G:C6	22:DA:1738:G:N1	2.83	0.47
22:DA:2201:G:C5	22:DA:2223:G:C2	3.03	0.47
25:DD:118:PHE:CG	25:DD:119:ALA:N	2.83	0.47
22:DA:1475:G:O2'	22:DA:1476:U:H6	1.97	0.47
22:DA:1008:A:C8	22:DA:1008:A:OP1	2.68	0.47
19:AS:31:ARG:HG2	19:AS:56:HIS:CD2	2.50	0.47
22:DA:2308:G:N7	22:DA:2310:C:N4	2.62	0.47
22:BA:2107:G:H2'	22:BA:2152:G:OP1	2.15	0.47
22:DA:2806:C:N4	22:DA:2807:U:C4	2.83	0.47
1:AA:969:A:H2'	1:AA:970:C:H6	1.78	0.47
35:BN:24:MET:HE2	35:BN:44:LEU:HB2	1.97	0.47
8:AH:9:MET:CE	8:AH:32:LYS:CA	2.89	0.47
13:CM:23:GLY:HA3	13:CM:64:VAL:HG13	1.95	0.47
16:AP:10:GLY:HA3	16:AP:15:PRO:CA	2.31	0.47
24:DC:129:LEU:HD23	24:DC:129:LEU:N	2.29	0.47
22:DA:1867:G:O6	22:DA:1875:G:N2	2.47	0.47
22:DA:226:A:C2	22:DA:230:G:C6	3.02	0.47
1:CA:328:C:C2'	1:CA:328:C:O2	2.62	0.47
12:AL:33:CYS:CA	12:AL:53:ARG:O	2.57	0.47
1:CA:666:G:O2'	1:CA:667:G:H5'	2.15	0.47
22:DA:2658:C:H5''	28:DG:157:LYS:CD	2.45	0.47
22:DA:686:U:H6	22:DA:788:A:C2	2.31	0.47
22:DA:691:C:O2'	22:DA:692:C:H5'	2.15	0.47
22:DA:526:A:N6	22:DA:2626:C:C4'	2.68	0.47
27:DF:60:SER:OG	27:DF:88:VAL:HG11	2.15	0.47
23:DB:42:C:H2'	23:DB:43:C:C6	2.50	0.47
1:CA:723:U:C4'	21:CU:48:LYS:HD2	2.44	0.47
1:AA:185:U:C2'	1:AA:186:C:H6	2.27	0.47
20:AT:53:MET:HG3	20:AT:54:GLN:N	2.29	0.47
20:AT:27:MET:CE	20:AT:57:VAL:CG2	2.93	0.47
22:BA:1748:C:H2'	22:BA:1749:A:H8	1.80	0.47
24:BC:20:ASN:ND2	24:BC:22:GLU:H	2.12	0.47
1:AA:640:A:H4'	8:AH:107:LYS:HZ1	1.79	0.47
1:CA:1394:A:C6	1:CA:1501:C:H4'	2.50	0.47
22:DA:2459:A:C2'	22:DA:2459:A:N3	2.77	0.47
22:BA:2663:G:O2'	22:BA:2664:G:H5'	2.15	0.47
2:CB:115:ASP:O	2:CB:119:GLN:CB	2.63	0.47
2:CB:122:ASP:CG	2:CB:124:THR:HG22	2.34	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:239:PHE:CD1	24:DC:240:GLY:N	2.69	0.47
22:DA:668:A:C4	22:DA:670:A:C5	3.03	0.47
28:BG:35:THR:O	28:BG:36:LEU:HD22	2.14	0.47
28:DG:154:GLU:O	28:DG:156:TYR:N	2.48	0.47
1:AA:1051:C:H2'	1:AA:1052:U:C6	2.49	0.47
25:DD:180:VAL:HG22	25:DD:187:LEU:HD13	1.96	0.47
1:AA:1504:G:H3'	56:AA:1801:HOH:O	2.14	0.47
22:DA:2772:C:O2	22:DA:2772:C:H2'	2.15	0.47
1:AA:1430:A:H2'	1:AA:1430:A:N3	2.29	0.47
39:DR:97:LYS:CG	39:DR:97:LYS:O	2.63	0.47
22:BA:308:G:C2'	22:BA:309:A:H5'	2.44	0.47
22:DA:1932:A:C2	22:DA:1933:G:H1'	2.49	0.47
4:CD:100:VAL:HG11	4:CD:142:VAL:HG11	1.96	0.47
22:DA:187:G:H2'	22:DA:1365:A:C2	2.50	0.47
30:BI:60:VAL:HG22	30:BI:66:PHE:CB	2.45	0.47
39:BR:16:GLU:HA	39:BR:98:ILE:CG2	2.40	0.47
1:AA:1494:G:C8	22:BA:1913:A:N3	2.83	0.47
22:BA:503:A:C6	22:BA:506:G:C6	3.03	0.47
31:DJ:88:THR:HG22	31:DJ:91:GLU:OE1	2.15	0.47
9:CI:49:GLN:HA	9:CI:52:GLU:CG	2.43	0.47
19:CS:11:ASP:O	19:CS:14:LEU:HG	2.15	0.47
28:BG:26:LYS:HB3	28:BG:32:LEU:HA	1.96	0.47
3:CC:91:ALA:CB	3:CC:98:ALA:HB3	2.44	0.47
26:BE:60:TRP:CZ2	26:BE:70:SER:HB3	2.50	0.47
22:BA:1450:G:H2'	22:BA:1451:C:C6	2.50	0.47
1:AA:1102:A:H8	1:AA:1102:A:H5''	1.80	0.47
1:AA:1028:C:C2	1:AA:1034:G:C4	3.03	0.47
22:BA:80:G:C2	22:BA:107:G:C2	3.02	0.47
3:AC:20:THR:CG2	3:AC:57:GLU:HB3	2.44	0.47
22:DA:836:G:C6	22:DA:837:C:C4	3.03	0.47
29:DH:72:ILE:O	29:DH:72:ILE:HG13	2.14	0.47
1:CA:738:C:C2	1:CA:739:C:C5	3.03	0.47
22:BA:363:G:H2'	22:BA:364:C:C6	2.49	0.47
22:BA:364:C:O2'	22:BA:365:U:H5'	2.15	0.47
22:DA:8:C:C2'	22:DA:9:G:H5'	2.45	0.47
22:DA:1681:G:O2'	22:DA:1762:A:C2'	2.62	0.47
32:BK:63:VAL:HG13	32:BK:103:VAL:HG12	1.96	0.47
3:CC:161:ILE:HD13	3:CC:161:ILE:N	2.25	0.47
22:DA:2602:A:C3'	22:DA:2602:A:OP1	2.63	0.47
22:BA:792:A:C3'	22:BA:793:A:H5'	2.43	0.47
22:DA:1483:G:H2'	22:DA:1484:U:C5	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:118:GLY:O	30:DI:119:ALA:CB	2.63	0.47
22:DA:121:G:N3	22:DA:131:A:N1	2.63	0.47
22:DA:517:C:H2'	22:DA:517:C:O2	2.14	0.47
22:BA:1299:G:H2'	22:BA:1639:C:N4	2.29	0.47
22:BA:17:G:H2'	22:BA:18:U:C6	2.49	0.47
14:CN:26:LEU:C	14:CN:26:LEU:HD23	2.35	0.47
1:CA:836:G:C6	1:CA:851:G:C5	3.03	0.47
22:DA:1726:C:H2'	22:DA:1727:C:C6	2.50	0.47
22:DA:1726:C:H2'	22:DA:1727:C:H6	1.78	0.47
22:BA:645:C:H42	22:BA:2350:C:C1'	2.28	0.47
1:CA:907:A:C2'	1:CA:908:A:H5'	2.45	0.47
25:DD:129:THR:HG22	25:DD:130:GLN:O	2.15	0.47
22:BA:2665:A:C2	22:BA:2666:C:C6	3.02	0.47
22:DA:1924:C:H2'	22:DA:1925:C:O4'	2.14	0.47
22:DA:2692:G:H2'	22:DA:2693:G:H8	1.80	0.47
22:BA:2344:U:H4'	22:BA:2345:G:OP1	2.14	0.47
34:BM:96:ILE:HG13	34:BM:96:ILE:O	2.14	0.47
1:AA:152:A:C8	1:AA:153:C:C5	3.02	0.47
24:BC:123:ILE:HG12	24:BC:123:ILE:O	2.15	0.47
7:AG:78:ARG:HH22	7:AG:81:GLY:HA2	1.79	0.47
44:BW:11:ASN:O	44:BW:12:GLY:O	2.33	0.47
1:AA:1077:G:N2	1:AA:1081:A:C4	2.83	0.47
35:BN:18:GLN:HE21	35:BN:22:ARG:NH1	2.12	0.47
25:DD:196:ALA:O	25:DD:197:THR:C	2.53	0.47
6:CF:80:PHE:CE2	24:DC:123:ILE:HG21	2.49	0.47
50:B2:1:MET:CE	50:B2:2:LYS:H	2.27	0.47
7:AG:45:ALA:C	7:AG:47:GLU:H	2.18	0.47
22:DA:2794:C:C2	22:DA:2803:G:N2	2.82	0.47
22:BA:817:C:H2'	22:BA:818:G:O4'	2.15	0.47
50:D2:26:ASN:HD22	50:D2:29:GLN:NE2	2.12	0.47
22:DA:252:G:H2'	22:DA:253:C:O5'	2.14	0.47
27:BF:141:ASP:HB3	27:BF:144:LYS:HB2	1.97	0.47
22:DA:543:G:C2	22:DA:551:G:C6	3.03	0.47
50:B2:35:ARG:HG2	50:B2:42:LEU:HD21	1.97	0.47
29:DH:50:ARG:NH1	29:DH:50:ARG:HA	2.29	0.47
1:CA:425:G:H2'	1:CA:426:U:O4'	2.14	0.47
22:BA:1088:A:H4'	22:BA:1089:A:C8	2.50	0.47
22:BA:670:A:H4'	22:BA:671:C:H5''	1.97	0.47
22:DA:1803:A:HO2'	22:DA:1804:C:C4'	2.24	0.47
1:CA:1282:C:O2'	1:CA:1283:U:C6	2.68	0.47
10:CJ:7:ARG:NH1	10:CJ:102:LEU:HG	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1313:U:C6	22:DA:1610:A:H8	2.32	0.47
41:DT:10:VAL:CG2	41:DT:11:LEU:HD12	2.25	0.47
27:BF:35:LEU:CB	27:BF:153:ILE:CG2	2.66	0.47
44:DW:49:ASN:ND2	44:DW:80:SER:HA	2.29	0.47
46:DY:31:GLN:C	46:DY:33:ALA:H	2.18	0.47
28:BG:136:ASP:C	28:BG:136:ASP:OD1	2.53	0.47
22:DA:2746:U:C5'	28:DG:137:LYS:HG2	2.42	0.47
49:B1:10:LEU:O	49:B1:19:PHE:HB2	2.15	0.47
34:DM:43:ALA:HA	34:DM:46:ILE:HD11	1.96	0.47
1:AA:953:G:H2'	1:AA:954:G:H5'	1.97	0.47
4:CD:29:THR:C	4:CD:31:CYS:N	2.68	0.47
22:DA:995:C:O2'	38:DQ:60:TRP:HH2	1.98	0.47
38:DQ:65:ASN:O	38:DQ:69:ARG:HB2	2.15	0.47
38:DQ:78:PHE:CE2	38:DQ:109:VAL:HG22	2.49	0.47
18:CR:32:ILE:CD1	18:CR:33:THR:O	2.62	0.47
37:DP:59:THR:OG1	37:DP:72:VAL:HG12	2.15	0.47
22:DA:189:G:H3'	22:DA:189:G:C8	2.49	0.47
22:DA:2243:U:O2'	22:DA:2244:U:H5'	2.14	0.47
22:DA:1608:A:C5	22:DA:1611:C:C4	3.03	0.47
8:CH:54:THR:C	8:CH:56:PRO:HD3	2.34	0.47
1:CA:994:A:N7	1:CA:1216:A:C4'	2.78	0.47
1:CA:1357:A:C8	1:CA:1358:U:C5	3.03	0.47
19:CS:35:ARG:HD2	19:CS:71:GLY:HA2	1.97	0.47
5:CE:77:ASN:HB3	5:CE:79:THR:HG22	1.97	0.47
22:BA:263:G:H2'	22:BA:264:C:O5'	2.15	0.47
39:DR:27:ILE:HG13	39:DR:33:VAL:HG11	1.95	0.47
21:AU:16:ARG:HG2	21:AU:19:LYS:HG2	1.96	0.47
27:DF:113:PHE:HE2	27:DF:116:LEU:HB2	1.79	0.47
8:AH:77:VAL:HG11	8:AH:124:ILE:HD11	1.96	0.47
22:DA:818:G:H4'	22:DA:838:C:O3'	2.15	0.47
22:DA:2199:A:H2'	22:DA:2199:A:N3	2.28	0.47
22:DA:1438:U:N3	22:DA:1555:G:C2	2.83	0.47
22:DA:389:G:H1'	22:DA:2412:A:O2'	2.15	0.47
1:CA:1244:G:C6	1:CA:1245:C:C4	3.02	0.47
1:AA:1162:C:O2'	1:AA:1163:A:C5'	2.63	0.47
22:DA:617:G:O2'	22:DA:618:G:C8	2.38	0.47
1:CA:155:A:C2	1:CA:167:A:C4	3.02	0.47
29:DH:68:ARG:CG	29:DH:71:LYS:CD	2.92	0.47
22:BA:1020:A:C2	22:BA:1141:U:O2'	2.64	0.47
22:BA:1022:G:N2	22:BA:1142:A:N1	2.62	0.47
1:CA:652:U:O4	1:CA:752:G:H2'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1068:G:N7	1:AA:1094:G:H2'	2.29	0.47
22:DA:1494:A:H2'	22:DA:1495:A:H8	1.67	0.47
1:CA:330:C:O2'	1:CA:331:G:H8	1.96	0.47
22:DA:1875:G:H8	22:DA:1875:G:OP2	1.97	0.47
1:AA:1443:C:H2'	1:AA:1444:U:O4'	2.14	0.47
22:BA:659:G:C6	22:BA:660:C:C4	3.03	0.47
22:DA:775:G:O6	22:DA:787:C:H2'	2.15	0.47
26:BE:147:LEU:HB2	26:BE:186:VAL:HA	1.97	0.47
22:DA:586:A:H2	22:DA:809:G:N3	2.13	0.47
29:DH:61:VAL:CG1	29:DH:62:LEU:H	2.22	0.47
34:DM:8:LYS:HE3	34:DM:8:LYS:CA	2.37	0.47
24:BC:29:PHE:CZ	24:BC:31:PRO:CG	2.97	0.47
26:DE:60:TRP:HB3	26:DE:61:ARG:H	1.48	0.47
13:AM:18:LEU:HD23	13:AM:33:LEU:HD21	1.97	0.47
37:DP:13:LYS:H	37:DP:13:LYS:HD2	1.79	0.47
1:CA:846:G:O2'	1:CA:847:G:H5'	2.15	0.47
34:BM:28:PHE:HD2	34:BM:104:GLU:OE1	1.97	0.47
22:DA:1745:A:N3	22:DA:1746:A:C8	2.83	0.47
16:CP:48:GLU:HA	16:CP:51:ARG:HH21	1.80	0.47
12:AL:109:ARG:HH21	12:AL:116:TYR:HE2	1.63	0.47
1:CA:223:A:C4	1:CA:224:U:C6	3.02	0.47
1:AA:1053:G:O2'	1:AA:1054:C:P	2.73	0.47
3:CC:53:ARG:HB2	3:CC:53:ARG:NH1	2.29	0.47
24:BC:131:MET:HA	24:BC:134:ILE:CD1	2.39	0.47
1:CA:160:A:H4'	1:CA:344:A:N1	2.29	0.47
51:D3:28:LEU:O	51:D3:29:ARG:HB3	2.14	0.47
42:BU:54:PRO:HG2	42:BU:55:GLY:H	1.80	0.47
1:AA:828:U:C6	1:AA:828:U:H3'	2.50	0.47
1:CA:289:G:N1	1:CA:290:C:C4	2.83	0.47
45:DX:70:LEU:O	45:DX:74:GLY:N	2.47	0.47
42:BU:85:ARG:HG3	42:BU:86:PHE:N	2.30	0.47
7:AG:128:GLU:O	7:AG:129:ASN:C	2.53	0.47
1:CA:1031:C:H5'	1:CA:1032:G:C5'	2.43	0.47
1:CA:338:A:N6	1:CA:351:G:N1	2.47	0.47
17:CQ:29:LYS:HE2	17:CQ:36:PHE:CD2	2.49	0.47
3:AC:144:GLY:O	3:AC:145:ALA:CB	2.60	0.47
22:DA:7:G:H4'	31:DJ:15:TRP:CH2	2.49	0.47
31:BJ:140:LEU:N	31:BJ:140:LEU:HD12	2.29	0.47
34:DM:97:GLN:HB2	34:DM:98:PRO:CD	2.44	0.47
24:BC:144:GLU:OE2	24:BC:188:ARG:HB2	2.15	0.47
22:DA:121:G:N3	22:DA:131:A:C2	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:18:VAL:H	6:AF:19:PRO:HD2	1.79	0.47
22:BA:634:C:H2'	22:BA:635:C:C6	2.50	0.47
22:BA:1849:G:H2'	22:BA:1850:G:H8	1.79	0.47
22:DA:934:U:H6	22:DA:934:U:H5''	1.80	0.47
22:BA:734:A:C5	22:BA:735:A:C8	3.02	0.47
26:DE:88:ARG:CB	26:DE:89:PRO:CD	2.93	0.47
22:BA:2082:A:H2'	22:BA:2083:G:O4'	2.14	0.47
22:BA:1524:G:O2'	22:BA:1525:A:H5'	2.15	0.47
1:AA:1521:C:C2'	1:AA:1522:U:O5'	2.62	0.47
22:BA:321:U:O2'	26:BE:162:ARG:NH1	2.48	0.47
26:DE:2:GLU:HG2	26:DE:13:THR:OG1	2.15	0.47
29:DH:48:GLU:HA	29:DH:51:ARG:HE	1.79	0.47
22:DA:2480:C:N4	22:DA:2481:G:C6	2.83	0.47
22:BA:2500:U:H5''	22:BA:2501:C:OP2	2.15	0.47
48:B0:5:ASN:O	48:B0:7:PRO:HD3	2.15	0.47
38:BQ:12:ARG:O	38:BQ:13:HIS:C	2.50	0.47
2:CB:116:LEU:HD13	2:CB:140:LEU:HB2	1.96	0.47
1:AA:441:A:C2	1:AA:497:G:C6	3.03	0.47
45:DX:16:ASN:O	45:DX:17:ARG:HB2	2.15	0.47
22:BA:1345:C:H2'	22:BA:1345:C:O2	2.15	0.47
22:DA:1815:A:C1'	22:DA:1817:G:C8	2.98	0.47
22:DA:1385:A:O2'	22:DA:1386:C:C6	2.67	0.47
41:DT:43:ILE:CD1	41:DT:83:ALA:HB1	2.45	0.47
22:DA:2324:U:O2'	22:DA:2385:C:H5	1.97	0.47
22:DA:965:C:H4'	22:DA:2273:A:C1'	2.44	0.47
44:DW:32:ALA:O	44:DW:34:SER:N	2.47	0.47
22:DA:1827:U:C2'	22:DA:1828:G:O4'	2.62	0.47
2:AB:48:MET:HA	2:AB:48:MET:CE	2.45	0.47
48:D0:38:LEU:H	48:D0:41:HIS:HE1	1.59	0.47
35:DN:118:ARG:O	35:DN:118:ARG:HG2	2.14	0.47
22:DA:310:A:N7	22:DA:312:G:C6	2.82	0.47
22:DA:65:U:C3'	22:DA:65:U:C6	2.98	0.47
42:DU:73:ASN:HB3	42:DU:95:PHE:CE2	2.49	0.47
22:DA:160:A:N6	22:DA:167:A:H1'	2.30	0.47
22:DA:46:G:N2	22:DA:47:C:N1	2.63	0.47
39:BR:49:ILE:HG21	39:BR:53:PHE:CA	2.44	0.47
28:DG:3:VAL:C	28:DG:5:LYS:H	2.18	0.47
1:AA:209:U:C5'	1:AA:210:C:OP2	2.52	0.47
1:AA:210:C:H4'	1:AA:211:G:C2	2.48	0.47
1:CA:428:G:H1'	1:CA:430:A:C8	2.50	0.47
22:DA:538:A:C5'	31:DJ:7:LYS:NZ	2.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:126:THR:CG2	28:BG:128:THR:H	2.21	0.47
34:DM:66:ARG:NE	34:DM:101:VAL:HG11	2.29	0.47
9:AI:32:ARG:HE	9:AI:36:GLN:CD	2.18	0.47
22:DA:2040:G:C5	22:DA:2041:U:C5	3.03	0.47
45:BX:40:GLU:C	45:BX:42:GLU:N	2.68	0.47
22:DA:2077:A:N1	22:DA:2078:C:C4	2.83	0.47
51:D3:50:SER:O	51:D3:53:ASP:N	2.45	0.47
1:AA:255:G:C5	1:AA:256:U:C5	3.03	0.47
26:BE:5:LEU:HD23	26:BE:120:VAL:O	2.14	0.47
1:CA:974:A:HO2'	1:CA:975:A:P	2.37	0.47
10:CJ:51:VAL:HB	14:CN:80:ARG:CB	2.35	0.47
1:AA:8:A:C5	4:AD:205:LYS:HB3	2.50	0.47
22:DA:1676:A:C2	22:DA:1993:U:C5'	2.81	0.47
25:DD:151:THR:O	25:DD:152:PRO:C	2.53	0.47
2:AB:163:ILE:O	2:AB:185:ILE:CG1	2.56	0.47
22:BA:263:G:C2'	22:BA:264:C:O5'	2.63	0.47
29:BH:97:ARG:HE	29:BH:97:ARG:HB2	1.49	0.47
24:BC:230:PRO:HD2	24:BC:246:PRO:HA	1.96	0.47
47:BZ:8:GLN:HB3	47:BZ:31:ILE:HA	1.97	0.47
22:DA:819:A:C4	22:DA:820:A:C8	3.03	0.47
22:DA:2197:U:O2'	22:DA:2198:A:C8	2.63	0.47
22:DA:1554:U:H5''	22:DA:1555:G:OP2	2.14	0.47
33:DL:65:GLY:O	33:DL:66:PHE:HB2	2.15	0.47
1:CA:1348:U:O2'	1:CA:1349:A:C5'	2.63	0.47
7:CG:4:ARG:HE	7:CG:6:ILE:CA	2.27	0.47
1:AA:1161:C:O2'	1:AA:1162:C:C5'	2.63	0.47
22:BA:2150:C:C2'	22:BA:2151:U:C5	2.96	0.47
22:DA:1963:U:O2'	22:DA:1964:G:H5''	2.14	0.47
5:AE:59:ILE:O	5:AE:63:MET:HG2	2.14	0.47
22:BA:1083:U:O2	22:BA:1086:A:N1	2.48	0.47
22:BA:1106:G:C6	22:BA:1107:G:N7	2.83	0.47
29:BH:41:LYS:C	29:BH:43:ASN:N	2.65	0.47
1:CA:1308:U:H5	13:CM:97:ARG:NH1	2.12	0.47
1:CA:1301:U:H2'	1:CA:1303:C:C6	2.49	0.47
27:BF:71:LYS:CD	27:BF:80:GLN:HG3	2.31	0.47
22:DA:405:U:H3'	22:DA:406:G:C5'	2.44	0.47
1:AA:1060:U:C5	3:AC:1:GLY:CA	2.93	0.47
3:CC:172:VAL:O	3:CC:174:LEU:HD22	2.15	0.47
1:CA:1452:C:H5'	1:CA:1453:G:C4	2.50	0.47
22:DA:185:G:C6	22:DA:212:G:N2	2.82	0.47
27:DF:87:LYS:O	27:DF:88:VAL:HB	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:124:ARG:NH1	25:DD:125:TRP:CE2	2.83	0.47
1:CA:1472:U:C2	1:CA:1473:G:C8	3.02	0.47
20:AT:27:MET:CE	20:AT:57:VAL:HG22	2.45	0.47
1:CA:729:A:H2'	1:CA:730:G:O5'	2.15	0.47
2:AB:36:LYS:HE3	2:AB:36:LYS:CA	2.35	0.47
22:BA:2531:A:C6	22:BA:2532:G:C5	3.03	0.47
22:BA:726:G:O2'	22:BA:727:A:O5'	2.32	0.47
1:AA:66:A:C2'	1:AA:66:A:N3	2.76	0.47
42:DU:42:LYS:HZ3	42:DU:42:LYS:HB3	1.79	0.47
24:BC:132:ARG:NH1	24:BC:169:ALA:HA	2.29	0.47
36:BO:57:ALA:O	36:BO:58:ILE:C	2.54	0.47
35:BN:71:ARG:HG3	35:BN:71:ARG:HH21	1.76	0.47
10:CJ:35:GLN:NE2	10:CJ:78:GLU:H	2.13	0.47
1:AA:596:A:N6	1:AA:645:G:N1	2.62	0.47
28:DG:23:ILE:O	28:DG:24:THR:HG23	2.15	0.47
39:BR:61:ALA:CB	39:BR:98:ILE:H	2.28	0.47
25:DD:183:GLU:N	25:DD:183:GLU:CD	2.67	0.47
22:DA:1178:C:H2'	22:DA:1179:G:O4'	2.15	0.47
22:BA:2145:C:H3'	22:BA:2146:C:H5''	1.96	0.47
22:DA:1598:A:C2	22:DA:1599:U:C2	3.03	0.47
42:DU:94:PHE:CD2	42:DU:94:PHE:O	2.63	0.47
25:BD:142:VAL:HG23	25:BD:144:GLY:N	2.30	0.47
22:DA:2294:G:C2	22:DA:2295:C:C6	3.02	0.47
1:AA:1454:G:N2	1:AA:1455:G:C4	2.82	0.47
22:BA:1206:G:C6	22:BA:1207:C:C4	3.03	0.47
1:AA:675:A:OP1	18:AR:70:THR:HG21	2.15	0.47
22:BA:319:G:C5	22:BA:333:G:C2	3.02	0.47
22:BA:2648:G:C2	22:BA:2649:C:C2	3.03	0.47
1:AA:400:C:H2'	1:AA:401:C:H5'	1.97	0.47
1:AA:191:G:H2'	1:AA:192:A:C8	2.50	0.47
1:AA:475:C:C2'	1:AA:476:U:H5'	2.45	0.47
1:CA:1115:U:C2'	1:CA:1116:U:H5'	2.45	0.47
22:BA:1744:A:H3'	22:BA:1745:A:H8	1.80	0.47
45:BX:70:LEU:O	45:BX:74:GLY:N	2.47	0.47
42:DU:11:ILE:HG21	42:DU:79:ALA:HB2	1.97	0.47
2:CB:17:HIS:O	2:CB:18:GLN:HB2	2.15	0.47
1:AA:229:U:H2'	1:AA:230:G:O4'	2.14	0.47
1:CA:762:U:O5'	1:CA:762:U:H6	1.97	0.47
1:CA:1235:U:H6	1:CA:1235:U:H3'	1.80	0.47
22:BA:1059:G:H4'	30:BI:116:MET:CE	2.45	0.47
22:BA:670:A:H4'	22:BA:671:C:O5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:95:LEU:HD22	33:BL:100:ILE:HD11	1.97	0.47
22:DA:1388:G:C4	22:DA:1389:G:N7	2.83	0.47
22:DA:1469:A:C2'	22:DA:1470:A:C8	2.73	0.47
16:CP:52:LEU:O	16:CP:53:ASP:CB	2.62	0.47
22:DA:2385:C:O2'	22:DA:2386:A:H8	1.92	0.47
22:DA:855:G:O2'	44:DW:23:LYS:HD3	2.15	0.47
2:AB:40:ILE:HG21	2:AB:201:GLY:CA	2.44	0.47
22:DA:1103:A:H5''	22:DA:1104:C:OP2	2.15	0.47
35:DN:87:PHE:HD1	35:DN:90:ARG:HD2	1.80	0.47
1:AA:1126:U:C6	1:AA:1281:C:N3	2.83	0.47
1:AA:1256:A:H1'	1:AA:1258:G:N7	2.26	0.47
9:AI:89:TYR:O	9:AI:90:ASP:CB	2.63	0.47
22:DA:1204:A:N9	22:DA:1206:G:C6	2.83	0.47
22:DA:90:U:C5	22:DA:91:A:N7	2.83	0.47
42:DU:14:THR:HG21	42:DU:64:ILE:CD1	2.36	0.47
42:DU:81:ARG:HB2	42:DU:96:LYS:HG3	1.96	0.47
46:DY:54:LYS:O	46:DY:57:LEU:HB3	2.15	0.47
51:B3:31:ILE:HD13	51:B3:34:LYS:HD2	1.86	0.47
22:DA:1354:A:C8	22:DA:1355:G:C8	3.03	0.47
22:DA:379:G:C2	22:DA:396:G:C6	3.03	0.47
22:DA:457:A:C2	22:DA:458:G:N2	2.83	0.47
39:BR:39:LEU:HA	39:BR:49:ILE:CG2	2.44	0.47
22:DA:2748:A:C2	22:DA:2757:A:N7	2.83	0.47
2:CB:101:THR:HG23	2:CB:174:GLU:HB3	1.97	0.47
1:CA:213:G:C8	1:CA:214:C:C5	3.02	0.47
13:AM:89:ARG:NH1	13:AM:94:LEU:HB3	2.29	0.47
38:DQ:91:ARG:CG	39:DR:11:GLN:HG3	2.45	0.47
21:CU:36:PHE:HA	21:CU:39:LYS:HE2	1.97	0.47
22:DA:1532:A:C6	22:DA:1540:G:O6	2.68	0.47
44:BW:18:LYS:HG3	44:BW:19:ARG:HG3	1.97	0.47
43:DV:79:ARG:O	43:DV:87:GLN:HB2	2.15	0.47
32:DK:35:VAL:HG21	32:DK:69:VAL:HG22	1.97	0.47
29:BH:30:LEU:O	29:BH:35:LYS:HB2	2.14	0.47
51:D3:50:SER:O	51:D3:51:LYS:C	2.52	0.47
22:DA:1307:A:C2'	22:DA:1308:A:H5'	2.45	0.47
19:CS:32:THR:HG21	19:CS:48:ILE:CG2	2.45	0.47
22:BA:197:A:C2'	22:BA:198:C:H5'	2.45	0.47
35:DN:38:LEU:O	35:DN:38:LEU:HD12	2.14	0.47
22:DA:1138:G:H2'	22:DA:1139:G:O4'	2.15	0.47
17:CQ:4:ILE:CG2	17:CQ:5:ARG:N	2.62	0.47
22:BA:411:G:H5''	22:BA:412:A:OP1	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:88:LYS:O	41:BT:89:GLU:CB	2.63	0.47
41:DT:21:SER:HA	41:DT:25:GLU:HB2	1.96	0.47
25:DD:114:LYS:CD	25:DD:116:LYS:HZ2	2.18	0.47
32:DK:9:ASN:ND2	32:DK:9:ASN:N	2.60	0.47
27:DF:46:LYS:HE2	27:DF:83:PRO:HG3	1.97	0.47
2:AB:162:VAL:HG23	2:AB:184:ALA:CB	2.45	0.47
2:AB:67:LEU:O	2:AB:160:LEU:HD12	2.14	0.47
23:DB:60:C:H2'	23:DB:61:G:C8	2.50	0.47
27:BF:134:GLN:C	27:BF:136:ILE:HG12	2.34	0.47
40:BS:29:VAL:HG22	40:BS:55:ILE:HD11	1.97	0.47
22:DA:1441:G:H4'	22:DA:1628:G:OP1	2.15	0.47
14:AN:42:ASN:O	14:AN:44:VAL:N	2.48	0.47
1:CA:134:G:H2'	1:CA:135:C:H5'	1.94	0.47
22:DA:2314:A:O2'	22:DA:2315:G:H8	1.97	0.47
1:CA:917:G:C6	1:CA:918:A:C6	3.03	0.47
22:DA:946:C:O2'	22:DA:947:A:H5'	2.15	0.47
22:DA:1962:C:C4'	22:DA:1963:U:OP1	2.57	0.47
1:AA:672:U:O2'	1:AA:673:A:H5'	2.15	0.47
1:AA:623:C:C2'	1:AA:624:C:H5'	2.45	0.47
1:CA:509:A:OP1	4:CD:50:TYR:HD2	1.98	0.47
22:DA:1223:G:O5'	22:DA:1223:G:H8	1.98	0.47
22:DA:227:A:H5'	22:DA:229:C:N4	2.31	0.47
22:DA:233:A:O2'	22:DA:234:U:O5'	2.32	0.47
22:DA:404:A:C5'	22:DA:405:U:OP1	2.63	0.47
1:AA:1460:C:H2'	1:AA:1461:G:O5'	2.15	0.47
22:DA:2666:C:C2'	22:DA:2667:C:O5'	2.63	0.47
7:CG:100:MET:HE3	7:CG:100:MET:N	2.18	0.47
1:AA:224:U:C2	1:AA:225:C:C5	3.03	0.47
7:AG:107:ALA:CA	7:AG:122:GLU:HG3	2.45	0.47
22:DA:734:A:C4	22:DA:735:A:C8	3.03	0.47
5:CE:24:VAL:HG23	5:CE:25:LYS:N	2.29	0.47
4:CD:200:VAL:CG1	4:CD:201:GLU:N	2.78	0.47
22:BA:68:G:C2	22:BA:74:A:C4	3.02	0.47
22:DA:370:G:C6	22:DA:424:G:N7	2.83	0.47
1:CA:771:G:C2	1:CA:809:G:C2	3.03	0.47
30:DI:103:ALA:O	30:DI:107:GLU:HB2	2.15	0.47
44:BW:9:THR:CG2	44:BW:10:ARG:N	2.70	0.47
43:BV:21:ARG:HA	43:BV:25:LYS:O	2.15	0.47
32:BK:38:ILE:HD11	32:BK:112:PHE:HZ	1.78	0.47
15:AO:42:PHE:HE1	15:AO:55:LEU:HB2	1.80	0.47
3:AC:16:PRO:HB2	3:AC:17:TRP:H	1.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:87:ALA:HB2	14:AN:92:ILE:HD12	1.97	0.47
22:DA:1845:G:C5	22:DA:1846:G:N7	2.83	0.47
51:D3:28:LEU:HD23	51:D3:28:LEU:O	2.14	0.47
22:DA:1259:G:H2'	22:DA:1260:A:H8	1.79	0.47
22:BA:481:G:O2'	22:BA:482:A:P	2.72	0.47
2:AB:187:ASP:OD2	2:AB:202:ASN:HA	2.14	0.47
22:BA:1840:G:C2	22:BA:1841:U:C2	3.03	0.47
22:BA:686:U:O4	50:B2:12:ARG:HB2	2.16	0.47
1:CA:1076:U:C2	1:CA:1082:A:C2	3.03	0.47
33:BL:55:MET:HA	33:BL:56:PRO:HD3	1.63	0.47
15:CO:63:ARG:HH22	22:DA:715:A:H5''	1.79	0.47
22:BA:1449:G:H2'	22:BA:1450:G:O5'	2.14	0.47
7:CG:64:ALA:HB2	7:CG:126:ALA:CB	2.42	0.47
1:AA:814:A:H5'	56:AA:1760:HOH:O	2.15	0.47
22:DA:783:A:H8	22:DA:783:A:H2'	1.53	0.47
1:AA:1031:C:HO2'	1:AA:1032:G:H5''	1.80	0.47
22:BA:608:A:C2	22:BA:621:A:C2	3.02	0.47
38:BQ:34:ALA:O	38:BQ:37:ALA:HB3	2.14	0.47
1:CA:947:G:OP1	13:CM:106:ARG:CG	2.62	0.47
22:DA:40:U:C4	22:DA:41:C:N4	2.83	0.47
1:CA:585:G:N3	1:CA:879:C:H4'	2.30	0.47
20:AT:68:LYS:HB2	20:AT:68:LYS:HZ2	1.80	0.47
25:BD:9:VAL:HG22	25:BD:26:VAL:CG1	2.44	0.47
30:DI:106:GLN:HA	30:DI:109:ALA:HB3	1.98	0.47
31:DJ:21:THR:HG23	31:DJ:61:LYS:CB	2.44	0.47
10:CJ:90:LEU:HD23	10:CJ:92:LEU:HD11	1.97	0.47
25:DD:36:GLN:HE21	25:DD:38:LYS:NZ	2.13	0.47
28:BG:88:LEU:HD11	28:BG:95:ALA:HB2	1.96	0.47
26:DE:5:LEU:CD2	26:DE:120:VAL:HG22	2.45	0.47
24:DC:259:ASN:C	24:DC:261:ARG:H	2.19	0.47
1:CA:1509:C:O2'	1:CA:1510:C:H5'	2.14	0.47
1:CA:785:G:H2'	1:CA:785:G:N3	2.29	0.47
6:AF:99:ALA:O	6:AF:100:SER:HB2	2.15	0.47
22:BA:912:C:C4	22:BA:913:U:O4	2.68	0.47
22:DA:146:A:C6	22:DA:147:C:C4	3.03	0.47
40:DS:44:ALA:O	40:DS:48:LYS:HB2	2.15	0.47
6:CF:80:PHE:HE2	24:DC:123:ILE:HG12	1.81	0.47
22:BA:445:C:O2'	22:BA:446:G:H5'	2.14	0.47
22:BA:1542:U:H2'	22:BA:1543:G:O4'	2.15	0.47
22:BA:2768:U:H2'	22:BA:2769:U:O5'	2.15	0.47
40:BS:39:THR:HG22	40:BS:44:ALA:HB2	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:160:TYR:CD1	24:DC:160:TYR:C	2.88	0.47
27:DF:19:PHE:O	27:DF:20:ASN:HB3	2.15	0.47
25:BD:113:SER:O	25:BD:167:ASN:N	2.42	0.46
30:BI:79:LEU:HD11	30:BI:132:ALA:HA	1.96	0.46
1:CA:1133:G:C2	1:CA:1142:G:C6	3.02	0.46
22:DA:1385:A:O2'	22:DA:1386:C:O5'	2.32	0.46
22:DA:2289:G:O2'	22:DA:2290:G:C5'	2.62	0.46
22:DA:2331:G:O2'	44:DW:40:ARG:CB	2.62	0.46
22:DA:856:G:O4'	44:DW:23:LYS:HB3	2.15	0.46
36:DO:17:LYS:CE	36:DO:21:LEU:CD1	2.87	0.46
44:DW:33:GLY:O	44:DW:34:SER:HB2	2.15	0.46
22:DA:1062:G:C8	22:DA:1070:A:OP2	2.66	0.46
22:DA:1077:A:HO2'	22:DA:1078:U:C4'	2.28	0.46
35:DN:97:ILE:HD11	35:DN:99:LYS:HZ2	1.80	0.46
1:AA:1146:A:C2	1:AA:1147:C:H1'	2.51	0.46
22:DA:1204:A:N1	22:DA:1241:A:N1	2.63	0.46
24:BC:142:ASN:O	24:BC:142:ASN:CG	2.53	0.46
24:BC:257:ARG:CD	24:BC:269:ARG:NH2	2.78	0.46
22:DA:2213:U:O2'	22:DA:2214:C:C5'	2.63	0.46
39:BR:49:ILE:CG2	39:BR:54:VAL:HG12	2.45	0.46
39:BR:51:VAL:CB	39:BR:52:PRO:CD	2.79	0.46
2:CB:103:TRP:HZ2	2:CB:155:GLY:HA2	1.79	0.46
1:CA:408:A:OP1	4:CD:111:ALA:HB3	2.15	0.46
31:DJ:41:LYS:C	31:DJ:43:GLU:H	2.19	0.46
38:DQ:88:GLU:HG2	38:DQ:90:ASP:OD2	2.15	0.46
22:BA:923:G:N3	44:BW:23:LYS:CE	2.67	0.46
37:DP:85:VAL:O	37:DP:85:VAL:HG13	2.15	0.46
22:DA:1261:C:O2	22:DA:1262:A:C8	2.68	0.46
22:DA:2040:G:O2'	22:DA:2041:U:H5'	2.15	0.46
29:BH:6:LEU:CD1	29:BH:6:LEU:N	2.78	0.46
22:DA:207:A:H2'	22:DA:208:C:C6	2.50	0.46
22:DA:1286:A:C2	22:DA:1329:U:C5	3.03	0.46
22:DA:1291:C:O2'	22:DA:1292:G:H5'	2.14	0.46
17:AQ:80:LYS:CD	17:AQ:80:LYS:N	2.78	0.46
1:AA:1303:C:H2'	1:AA:1304:G:N7	2.30	0.46
12:AL:85:ARG:HG3	12:AL:86:VAL:N	2.31	0.46
14:CN:80:ARG:HG2	14:CN:81:ILE:N	2.30	0.46
26:DE:28:VAL:HG23	26:DE:29:HIS:N	2.29	0.46
22:DA:627:A:N6	33:DL:112:LEU:HD23	2.30	0.46
4:AD:129:VAL:HG11	4:AD:134:TYR:CB	2.44	0.46
32:BK:71:ARG:CG	32:BK:106:GLU:OE2	2.62	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1011:G:C4	22:DA:1151:A:C2	3.03	0.46
22:DA:2716:C:H2'	22:DA:2717:C:H6	1.80	0.46
41:BT:48:GLN:HB3	41:BT:49:LYS:HE3	1.97	0.46
1:AA:693:G:H2'	1:AA:694:A:C5'	2.43	0.46
36:BO:89:ASP:O	36:BO:90:VAL:HG13	2.15	0.46
47:BZ:11:SER:O	47:BZ:15:ARG:NE	2.47	0.46
22:BA:141:G:C5'	22:BA:142:A:C8	2.97	0.46
22:BA:142:A:C4	22:BA:143:C:C4	3.03	0.46
27:DF:111:ARG:NH2	27:DF:113:PHE:CE1	2.84	0.46
27:DF:136:ILE:HG23	27:DF:142:TYR:CD1	2.50	0.46
31:BJ:136:GLN:N	31:BJ:137:PRO:CD	2.77	0.46
1:CA:68:G:C2'	1:CA:69:G:O5'	2.63	0.46
22:DA:491:G:O2'	22:DA:492:A:H8	1.97	0.46
27:BF:131:VAL:CG2	27:BF:151:LEU:H	2.27	0.46
27:BF:135:ILE:C	27:BF:137:PHE:N	2.68	0.46
1:AA:528:C:O2'	1:AA:535:A:H2'	2.15	0.46
22:DA:1007:C:H2'	22:DA:1008:A:N7	2.30	0.46
32:DK:107:LEU:HD23	32:DK:108:ARG:N	2.30	0.46
7:CG:118:ARG:O	7:CG:122:GLU:CB	2.63	0.46
1:AA:1159:U:N3	1:AA:1182:G:C4	2.83	0.46
22:DA:844:A:H2'	22:DA:845:A:O4'	2.16	0.46
22:DA:1962:C:O2'	22:DA:1964:G:OP2	2.31	0.46
1:AA:373:A:O2'	1:AA:374:A:C5'	2.62	0.46
4:AD:2:ARG:HB2	4:AD:4:LEU:CD1	2.44	0.46
1:CA:666:G:C4	1:CA:741:G:C2	3.03	0.46
22:BA:1962:C:O2'	22:BA:1964:G:OP2	2.32	0.46
22:BA:441:U:H2'	22:BA:442:G:C8	2.50	0.46
23:DB:44:G:H5''	27:DF:91:ARG:NH1	2.30	0.46
1:AA:184:G:N3	1:AA:185:U:C5	2.82	0.46
1:AA:221:C:H2'	1:AA:222:C:H5'	1.96	0.46
17:CQ:25:GLU:CG	17:CQ:40:THR:CG2	2.93	0.46
22:DA:196:A:H61	22:DA:831:G:H21	1.62	0.46
22:DA:1746:A:C4	22:DA:1747:U:C5	3.03	0.46
22:DA:425:G:C4	22:DA:426:C:C5	3.03	0.46
1:CA:445:G:C4	1:CA:446:G:C8	3.03	0.46
1:CA:441:A:N6	1:CA:493:A:H62	2.13	0.46
13:AM:3:ILE:H	13:AM:56:ARG:NH1	2.14	0.46
1:AA:1472:U:O2'	1:AA:1473:G:H5'	2.15	0.46
1:CA:164:G:H2'	1:CA:165:G:H5'	1.96	0.46
22:BA:1378:A:O2'	22:BA:1379:U:P	2.73	0.46
22:BA:565:C:H2'	22:BA:566:U:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:43:ALA:HB1	16:CP:46:LYS:HZ1	1.80	0.46
3:AC:147:GLY:CA	3:AC:171:ARG:H	2.28	0.46
22:BA:638:G:C5	22:BA:651:G:C2	3.03	0.46
37:DP:28:LYS:HZ3	37:DP:82:SER:HB2	1.80	0.46
34:BM:132:THR:CG2	34:BM:133:LYS:N	2.78	0.46
9:CI:45:MET:HA	9:CI:48:ARG:CG	2.45	0.46
22:DA:983:A:C6	22:DA:984:A:C2	3.03	0.46
1:AA:1491:G:H5''	1:AA:1492:A:OP1	2.15	0.46
2:CB:10:LYS:HE3	2:CB:10:LYS:HA	1.98	0.46
1:AA:550:G:H2'	1:AA:551:U:H5'	1.96	0.46
26:BE:145:ASP:HA	26:BE:166:LYS:O	2.15	0.46
22:DA:2638:G:H2'	22:DA:2775:G:H22	1.80	0.46
26:BE:47:LYS:HB3	26:BE:51:GLU:HG3	1.96	0.46
22:BA:826:U:P	56:BA:3696:HOH:O	2.73	0.46
1:CA:1120:C:H2'	1:CA:1121:U:C6	2.48	0.46
10:CJ:92:LEU:HD22	10:CJ:93:ALA:N	2.29	0.46
22:BA:235:U:H2'	22:BA:236:C:H6	1.80	0.46
32:BK:47:ILE:HG13	32:BK:48:PRO:CD	2.45	0.46
9:CI:90:ASP:HB3	9:CI:93:LEU:CD2	2.45	0.46
22:BA:2850:A:C2	22:BA:2851:A:C4	3.04	0.46
11:AK:43:TRP:HE3	11:AK:44:ALA:HA	1.80	0.46
39:DR:79:ARG:O	39:DR:80:ARG:CB	2.63	0.46
1:CA:761:G:O2'	1:CA:762:U:H5'	2.15	0.46
1:CA:75:G:C2	1:CA:96:U:C2	3.03	0.46
1:AA:1302:C:OP1	13:AM:12:LYS:HE2	2.15	0.46
1:CA:218:U:H2'	1:CA:219:U:O4'	2.14	0.46
46:DY:30:MET:SD	46:DY:30:MET:O	2.73	0.46
1:AA:166:U:H5''	1:AA:167:A:OP2	2.15	0.46
1:AA:607:A:C6	1:AA:608:A:C6	3.03	0.46
33:DL:9:ALA:HB3	33:DL:12:SER:OG	2.15	0.46
16:CP:32:PHE:CD1	16:CP:32:PHE:C	2.88	0.46
31:BJ:44:TYR:O	31:BJ:45:THR:HB	2.15	0.46
38:BQ:94:LEU:HD23	39:BR:11:GLN:CB	2.45	0.46
22:BA:1059:G:C2	22:BA:1080:A:N3	2.83	0.46
30:BI:126:ARG:CA	30:BI:129:GLU:HB2	2.43	0.46
22:DA:1815:A:H1'	22:DA:1817:G:C8	2.50	0.46
4:CD:196:GLU:N	4:CD:196:GLU:OE1	2.45	0.46
1:CA:1145:A:H4'	1:CA:1146:A:OP1	2.15	0.46
46:DY:23:ARG:HB3	46:DY:27:ASN:OD1	2.14	0.46
26:DE:118:LEU:HD12	26:DE:186:VAL:CG1	2.46	0.46
49:D1:33:LEU:HB2	49:D1:51:ALA:CB	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:730:A:H2'	22:DA:731:C:H6	1.79	0.46
22:DA:785:G:O2'	22:DA:1779:U:H5'	2.15	0.46
22:DA:105:C:C2'	22:DA:106:C:C5	2.97	0.46
42:DU:64:ILE:O	42:DU:65:GLN:O	2.33	0.46
22:DA:117:G:C6	22:DA:119:A:N6	2.83	0.46
1:CA:1068:G:C2	1:CA:1069:C:C6	3.03	0.46
1:CA:1094:G:C2'	1:CA:1095:U:OP2	2.63	0.46
1:CA:407:U:H2'	1:CA:408:A:C8	2.50	0.46
22:BA:923:G:H4'	44:BW:25:PHE:CZ	2.51	0.46
44:BW:49:ASN:O	44:BW:50:VAL:HG23	2.14	0.46
1:AA:499:A:O2'	1:AA:500:G:C8	2.66	0.46
6:CF:39:LEU:HD12	6:CF:39:LEU:C	2.36	0.46
37:DP:16:VAL:HA	37:DP:17:PRO:HD3	1.47	0.46
44:BW:74:LYS:O	44:BW:75:ASN:C	2.51	0.46
22:BA:1499:C:H2'	22:BA:1500:G:C8	2.46	0.46
22:DA:513:A:N1	22:DA:514:A:C6	2.83	0.46
12:AL:88:ASP:O	12:AL:90:PRO:HD3	2.15	0.46
1:AA:486:U:C5'	1:AA:486:U:C6	2.89	0.46
1:CA:1218:C:H2'	1:CA:1219:A:C8	2.51	0.46
1:CA:1312:G:H2'	1:CA:1313:U:H6	1.80	0.46
22:DA:604:G:C2	22:DA:605:G:C6	3.03	0.46
22:DA:1676:A:H2'	22:DA:1677:A:O4'	2.15	0.46
1:AA:1021:A:C2'	1:AA:1022:A:C5'	2.76	0.46
1:AA:790:A:H2'	1:AA:791:G:C8	2.50	0.46
1:AA:791:G:C6	1:AA:792:A:N7	2.84	0.46
16:CP:20:VAL:CG2	16:CP:21:VAL:N	2.78	0.46
37:BP:102:ARG:C	37:BP:103:THR:HG22	2.34	0.46
22:BA:974:G:C4	22:BA:1186:G:C2	3.03	0.46
1:CA:198:G:N3	1:CA:199:A:C8	2.83	0.46
24:DC:131:MET:CE	24:DC:183:VAL:HG11	2.44	0.46
1:CA:1239:A:H5'	7:CG:118:ARG:HH22	1.80	0.46
7:CG:41:ILE:HG22	7:CG:41:ILE:O	2.14	0.46
1:CA:1350:A:H2	7:CG:33:GLY:HA3	1.80	0.46
7:CG:9:ARG:C	7:CG:10:LYS:HG3	2.36	0.46
22:DA:830:G:C2	22:DA:2448:A:C5	3.03	0.46
7:CG:14:ASP:CB	7:CG:18:GLY:H	2.16	0.46
23:DB:91:C:O2'	23:DB:92:C:H5'	2.14	0.46
5:AE:55:VAL:O	5:AE:59:ILE:HG23	2.15	0.46
1:AA:1459:G:O2'	1:AA:1460:C:H5'	2.15	0.46
22:BA:2540:C:O2'	22:BA:2541:A:H5'	2.14	0.46
22:DA:686:U:C6	22:DA:788:A:N1	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:54:LEU:HD12	6:CF:55:HIS:N	2.30	0.46
3:CC:17:TRP:CD1	14:CN:90:GLY:HA2	2.50	0.46
20:AT:33:LYS:N	20:AT:33:LYS:CE	2.70	0.46
17:CQ:38:LYS:O	17:CQ:39:ARG:HD2	2.14	0.46
7:AG:112:ASP:HB2	7:AG:118:ARG:CG	2.45	0.46
37:BP:32:VAL:O	37:BP:33:GLU:O	2.32	0.46
13:AM:19:THR:HA	13:AM:24:VAL:CG2	2.37	0.46
1:AA:325:A:H2'	1:AA:326:G:O4'	2.16	0.46
28:DG:117:PRO:CG	28:DG:143:VAL:CG1	2.93	0.46
1:CA:202:G:O2'	1:CA:468:A:C8	2.49	0.46
38:DQ:23:TYR:HB2	38:DQ:28:SER:HB3	1.96	0.46
38:DQ:38:VAL:O	38:DQ:42:GLY:N	2.49	0.46
1:CA:443:C:H2'	1:CA:444:G:C5'	2.45	0.46
11:AK:51:PHE:HZ	11:AK:64:VAL:CG1	2.28	0.46
1:AA:1169:A:C2	1:AA:1170:A:C4	3.03	0.46
2:AB:127:LYS:HG3	2:AB:128:LEU:N	2.20	0.46
22:BA:2393:U:O3'	33:BL:62:PRO:HA	2.15	0.46
1:AA:1429:A:N1	1:AA:1472:U:C4	2.83	0.46
22:DA:2675:A:C2	22:DA:2676:C:C2	3.04	0.46
40:DS:29:VAL:CG2	40:DS:69:LEU:O	2.60	0.46
33:BL:64:PHE:C	33:BL:64:PHE:CD1	2.88	0.46
22:BA:1901:A:N3	22:BA:1902:C:C6	2.83	0.46
20:CT:9:ARG:HD2	20:CT:9:ARG:HA	1.71	0.46
42:DU:13:LEU:HD13	42:DU:13:LEU:O	2.16	0.46
22:DA:12:U:O4	22:DA:13:A:N6	2.48	0.46
2:CB:30:ILE:HD11	2:CB:188:THR:CB	2.45	0.46
22:BA:608:A:N3	22:BA:621:A:C2	2.83	0.46
31:BJ:31:GLU:HG3	31:BJ:142:ILE:HG21	1.97	0.46
1:CA:1336:C:H1'	1:CA:1337:G:C2	2.51	0.46
3:AC:59:PRO:O	3:AC:60:ALA:C	2.54	0.46
18:CR:28:LEU:C	18:CR:30:ASN:H	2.18	0.46
22:DA:2047:C:H2'	22:DA:2048:G:H5'	1.98	0.46
22:BA:1565:C:H3'	24:BC:17:LYS:HZ3	1.80	0.46
22:BA:1300:G:H2'	22:BA:1635:A:OP1	2.16	0.46
22:BA:1534:U:H3'	22:BA:1536:C:H5	1.79	0.46
22:BA:2619:C:H5'	25:BD:155:VAL:O	2.15	0.46
22:DA:2065:C:HO2'	22:DA:2449:U:H3	1.63	0.46
22:DA:2691:C:O2'	22:DA:2692:G:C5'	2.63	0.46
22:BA:2345:G:C4	22:BA:2381:A:C2	3.03	0.46
22:DA:1444:G:C4	22:DA:1445:G:C8	3.03	0.46
19:AS:10:ILE:HD11	19:AS:15:LEU:HD13	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:10:ILE:HG13	19:AS:10:ILE:O	2.12	0.46
47:DZ:5:LYS:HE2	47:DZ:57:GLU:OE2	2.14	0.46
7:AG:15:PRO:HG2	7:AG:43:TYR:OH	2.16	0.46
1:CA:1060:U:O2'	1:CA:1061:G:H5'	2.15	0.46
8:CH:110:MET:HE1	8:CH:114:ALA:O	2.15	0.46
39:DR:13:ARG:HE	39:DR:13:ARG:C	2.18	0.46
26:BE:169:VAL:CG2	26:BE:169:VAL:O	2.62	0.46
25:DD:140:HIS:CD2	25:DD:140:HIS:N	2.83	0.46
30:BI:18:ASN:ND2	30:BI:38:CYS:HB3	2.29	0.46
43:DV:43:ASP:HB3	43:DV:46:LYS:HB2	1.97	0.46
37:BP:7:LEU:O	37:BP:10:GLU:HG2	2.15	0.46
37:BP:13:LYS:NZ	37:BP:80:VAL:CG1	2.78	0.46
22:BA:2032:G:N1	22:BA:2572:A:C8	2.83	0.46
22:DA:1388:G:C4	22:DA:1389:G:C8	3.03	0.46
22:DA:2271:G:C2'	22:DA:2272:U:C5'	2.92	0.46
22:DA:857:G:N3	44:DW:19:ARG:NH1	2.56	0.46
22:DA:1829:A:H2'	22:DA:1830:C:H6	1.80	0.46
22:DA:763:G:C4	22:DA:765:C:C6	3.03	0.46
22:DA:1080:A:O2'	22:DA:1081:U:C6	2.68	0.46
22:DA:1087:G:H21	22:DA:1103:A:H1'	1.80	0.46
48:D0:38:LEU:O	48:D0:41:HIS:ND1	2.47	0.46
9:AI:57:VAL:HG12	9:AI:58:GLU:HG2	1.97	0.46
1:AA:1507:A:C8	1:AA:1507:A:H5''	2.50	0.46
1:CA:33:A:C4	1:CA:34:C:C5	3.03	0.46
1:CA:502:A:OP1	12:CL:114:SER:CB	2.64	0.46
22:DA:1239:G:C6	22:DA:1240:U:C5	3.03	0.46
22:DA:63:A:C8	22:DA:64:A:N7	2.83	0.46
46:DY:33:ALA:C	46:DY:35:GLY:H	2.19	0.46
24:BC:161:VAL:HG22	24:BC:175:LEU:HD12	1.98	0.46
39:BR:49:ILE:CG2	39:BR:53:PHE:CA	2.94	0.46
1:CA:1178:G:H2'	1:CA:1180:A:OP2	2.15	0.46
1:AA:500:G:C5'	1:AA:500:G:H8	2.29	0.46
6:CF:41:ASP:O	6:CF:42:TRP:C	2.54	0.46
6:CF:6:ILE:HB	6:CF:62:MET:HB3	1.97	0.46
32:DK:101:GLY:O	32:DK:120:PRO:HB3	2.14	0.46
22:DA:1265:A:H4'	22:DA:1266:G:H4'	1.97	0.46
22:DA:580:U:H4'	38:DQ:30:VAL:HG11	1.98	0.46
40:DS:81:SER:HB3	40:DS:97:LEU:HD12	1.97	0.46
44:BW:75:ASN:O	44:BW:76:ARG:CB	2.64	0.46
22:DA:478:A:C2	22:DA:480:A:C8	3.03	0.46
1:CA:1360:A:C2	1:CA:1361:G:C1'	2.99	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:53:ILE:CD1	14:CN:84:ARG:CZ	2.94	0.46
33:DL:3:LEU:C	33:DL:3:LEU:CD1	2.82	0.46
22:BA:1998:A:H2'	22:BA:1999:C:C6	2.50	0.46
1:AA:1079:G:H5'	5:AE:133:ILE:HG21	1.98	0.46
1:CA:763:G:N3	1:CA:764:C:C6	2.84	0.46
1:CA:765:G:C4	1:CA:812:G:C6	3.03	0.46
11:AK:34:THR:HB	11:AK:40:ALA:HA	1.97	0.46
22:DA:2700:A:C4	22:DA:2701:U:C5	3.04	0.46
25:DD:32:ASN:HB2	25:DD:50:VAL:HB	1.97	0.46
1:CA:66:A:C2'	1:CA:66:A:N3	2.75	0.46
38:DQ:46:TYR:HA	38:DQ:49:ARG:HH21	1.79	0.46
23:DB:27:C:C2'	23:DB:28:C:H5'	2.45	0.46
22:DA:1654:A:H1'	25:DD:118:PHE:HB3	1.96	0.46
32:DK:61:VAL:O	32:DK:61:VAL:HG23	2.15	0.46
9:CI:59:LYS:CG	9:CI:60:LEU:HG	2.43	0.46
22:BA:2742:G:OP1	52:B4:36:ARG:HD3	2.15	0.46
24:BC:75:ALA:HB1	24:BC:94:LEU:O	2.16	0.46
1:AA:1364:U:C3'	1:AA:1365:G:H5'	2.46	0.46
22:DA:373:U:O2	22:DA:374:A:C8	2.69	0.46
34:BM:72:PRO:O	34:BM:73:ILE:O	2.33	0.46
22:BA:545:U:O4'	22:BA:545:U:O2	2.33	0.46
16:AP:51:ARG:HG2	16:AP:52:LEU:N	2.29	0.46
1:AA:62:U:O3'	1:AA:384:G:N2	2.49	0.46
22:BA:1421:G:C2	22:BA:1422:G:C8	3.04	0.46
22:DA:417:C:C2'	22:DA:418:C:H5'	2.46	0.46
3:CC:149:LYS:HD2	3:CC:149:LYS:C	2.35	0.46
3:CC:154:GLY:O	3:CC:156:LEU:N	2.48	0.46
3:CC:183:TYR:CE1	3:CC:200:TRP:CZ2	3.03	0.46
22:DA:1647:U:C4'	22:DA:1648:U:OP1	2.64	0.46
15:AO:30:LEU:O	15:AO:33:ALA:HB3	2.15	0.46
29:DH:2:GLN:O	29:DH:3:VAL:CG2	2.60	0.46
1:AA:1024:G:C5	1:AA:1025:U:C5	3.04	0.46
22:BA:780:G:H2'	22:BA:782:A:N7	2.31	0.46
22:BA:2330:G:N2	44:BW:38:ARG:HA	2.23	0.46
22:DA:2248:C:H3'	22:DA:2249:U:C6	2.50	0.46
2:AB:148:GLY:HA2	2:AB:151:LYS:CE	2.46	0.46
39:BR:24:LYS:CA	39:BR:94:THR:HG23	2.39	0.46
22:DA:2559:C:H2'	22:DA:2560:A:H8	1.80	0.46
7:AG:21:LEU:HD21	7:AG:96:ASN:ND2	2.30	0.46
12:CL:34:THR:O	12:CL:35:ARG:HD3	2.16	0.46
1:AA:520:A:H2	1:AA:536:C:O2	1.99	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1016:A:N7	1:AA:1017:U:H1'	2.30	0.46
30:BI:105:LEU:HA	30:BI:108:ILE:HD12	1.97	0.46
21:AU:45:LYS:HA	21:AU:45:LYS:HE3	1.96	0.46
22:DA:771:G:H2'	22:DA:772:C:H5'	1.96	0.46
10:AJ:83:THR:O	10:AJ:86:ALA:HB3	2.16	0.46
23:BB:15:A:O2'	23:BB:16:G:H5'	2.15	0.46
34:BM:45:GLN:O	34:BM:46:ILE:C	2.53	0.46
30:DI:19:PRO:HB2	30:DI:21:PRO:HD2	1.97	0.46
22:DA:1856:U:H2'	22:DA:1857:G:C5'	2.44	0.46
22:BA:1403:A:O2'	22:BA:1404:C:H5'	2.16	0.46
1:CA:777:A:C6	1:CA:778:G:C5	3.03	0.46
1:AA:551:U:O2'	1:AA:552:U:H5'	2.15	0.46
1:AA:551:U:C2'	1:AA:552:U:O5'	2.63	0.46
1:CA:240:G:OP1	1:CA:240:G:H4'	2.16	0.46
2:AB:72:LYS:O	2:AB:74:ALA:N	2.48	0.46
1:CA:1190:G:O3'	3:CC:2:GLN:HB3	2.14	0.46
3:CC:14:VAL:O	3:CC:15:LYS:HB2	2.15	0.46
25:DD:56:LYS:C	25:DD:58:ASN:H	2.19	0.46
22:BA:2525:G:C2	22:BA:2539:C:C2	3.03	0.46
22:BA:1243:C:H2'	22:BA:1244:A:O4'	2.16	0.46
27:BF:90:LEU:HB3	27:BF:95:MET:HA	1.97	0.46
22:BA:1113:U:N3	22:BA:1114:C:C5	2.83	0.46
22:BA:1980:G:O2'	22:BA:1982:U:H5	1.98	0.46
3:AC:79:LYS:HE3	3:AC:79:LYS:N	2.29	0.46
1:AA:811:C:H4'	1:AA:900:A:N6	2.29	0.46
9:CI:87:MET:CE	9:CI:88:GLU:HG3	2.45	0.46
22:DA:2641:G:H5''	31:DJ:78:THR:CB	2.46	0.46
22:DA:1497:U:H6	22:DA:1497:U:H3'	1.80	0.46
22:DA:930:G:C2	22:DA:933:A:N1	2.84	0.46
23:DB:81:G:O2'	23:DB:82:U:H5'	2.15	0.46
22:BA:2435:A:H2'	22:BA:2436:G:O5'	2.15	0.46
40:DS:3:THR:HG23	40:DS:57:ASN:HB3	1.96	0.46
50:B2:42:LEU:HA	50:B2:42:LEU:HD13	1.63	0.46
1:AA:1302:C:H2'	1:AA:1302:C:H6	1.28	0.46
8:CH:110:MET:CE	8:CH:114:ALA:HB1	2.46	0.46
38:DQ:16:ILE:HG22	38:DQ:17:LEU:N	2.30	0.46
22:BA:39:G:H2'	22:BA:40:U:C6	2.50	0.46
22:BA:2874:C:H2'	22:BA:2875:C:H6	1.81	0.46
20:CT:46:ALA:C	20:CT:48:LYS:H	2.17	0.46
27:BF:23:SER:O	27:BF:26:GLN:HB3	2.15	0.46
8:CH:89:ASP:N	8:CH:89:ASP:OD1	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:51:ARG:O	34:BM:52:ALA:C	2.53	0.46
9:AI:42:THR:O	9:AI:43:ALA:HB2	2.15	0.46
22:BA:1080:A:O3'	30:BI:126:ARG:HG3	2.15	0.46
22:DA:1693:U:OP2	22:DA:1694:C:N4	2.39	0.46
22:DA:1063:G:O2'	22:DA:1064:C:H6	1.94	0.46
22:DA:1080:A:O2'	22:DA:1081:U:H6	1.98	0.46
22:DA:1103:A:H3'	22:DA:1104:C:C6	2.50	0.46
22:DA:2887:A:H1'	48:D0:39:ARG:NH2	2.26	0.46
1:CA:523:A:C2	1:CA:527:G:O6	2.68	0.46
1:CA:532:A:H62	3:CC:191:THR:HG21	1.80	0.46
22:DA:293:U:H5''	22:DA:294:A:OP2	2.15	0.46
22:DA:58:G:C2'	22:DA:59:U:H5'	2.45	0.46
22:DA:70:G:O2'	22:DA:71:A:H5'	2.14	0.46
46:DY:55:THR:HG22	46:DY:56:LEU:HD22	1.97	0.46
24:BC:141:HIS:NE2	24:BC:193:GLU:C	2.68	0.46
22:DA:149:A:N1	22:DA:150:U:C2	2.84	0.46
22:DA:48:G:N2	22:DA:177:G:C2	2.84	0.46
22:DA:216:A:N3	22:DA:217:A:C8	2.83	0.46
3:CC:136:ALA:HA	3:CC:139:ASN:ND2	2.31	0.46
25:BD:2:ILE:HG13	25:BD:100:LEU:HD21	1.97	0.46
22:DA:33:C:O2	22:DA:447:A:N6	2.49	0.46
22:DA:796:C:H2'	22:DA:797:G:H8	1.81	0.46
1:CA:212:G:N2	1:CA:213:G:C5	2.84	0.46
4:CD:36:ALA:HA	4:CD:41:GLY:HA3	1.96	0.46
22:DA:538:A:O2'	31:DJ:8:PRO:CD	2.63	0.46
44:BW:24:ARG:O	44:BW:25:PHE:CB	2.62	0.46
44:BW:50:VAL:C	44:BW:52:CYS:N	2.67	0.46
43:DV:77:VAL:HG13	43:DV:77:VAL:O	2.15	0.46
6:CF:90:MET:HE2	18:CR:60:ARG:HD3	1.97	0.46
44:BW:28:GLU:C	44:BW:63:ASP:HB3	2.36	0.46
22:DA:197:A:H5'	22:DA:197:A:C8	2.51	0.46
22:DA:1613:G:C6	22:DA:1619:G:O6	2.68	0.46
20:AT:73:ARG:O	20:AT:77:ASN:ND2	2.49	0.46
1:CA:1382:C:HO2'	1:CA:1383:C:H6	1.60	0.46
22:DA:2135:A:H8	22:DA:2135:A:OP2	1.98	0.46
22:BA:1655:A:H5'	25:BD:118:PHE:CD2	2.51	0.46
22:DA:2447:G:N7	22:DA:2500:U:H2'	2.31	0.46
22:DA:2514:U:H2'	22:DA:2515:C:C6	2.51	0.46
22:DA:1019:U:OP1	22:DA:1035:U:O2'	2.29	0.46
22:DA:1638:C:H4'	22:DA:2710:C:O2	2.16	0.46
5:CE:109:ALA:HB3	5:CE:135:VAL:CG1	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:9:ASN:HD21	32:DK:17:ARG:NH2	2.14	0.46
27:DF:101:ARG:HH11	27:DF:138:PRO:HG2	1.79	0.46
6:AF:71:ILE:CG2	6:AF:72:ASP:N	2.78	0.46
12:AL:23:LEU:HB3	12:AL:24:GLU:HG3	1.97	0.46
22:DA:1188:U:C2'	22:DA:1189:A:H5'	2.45	0.46
23:DB:68:C:O2'	23:DB:69:G:H5''	2.15	0.46
42:DU:54:PRO:CG	42:DU:55:GLY:H	2.23	0.46
27:BF:134:GLN:NE2	27:BF:148:VAL:O	2.48	0.46
22:DA:1299:G:H4'	22:DA:1301:A:C4	2.51	0.46
22:DA:1304:A:C2	22:DA:1305:C:C2	3.02	0.46
1:AA:978:A:O4'	1:AA:1322:C:C6	2.68	0.46
22:BA:1327:A:C2'	22:BA:1328:A:O5'	2.63	0.46
24:BC:12:ARG:CG	24:BC:12:ARG:NH1	2.52	0.46
22:DA:2303:G:C6	22:DA:2314:A:C6	3.03	0.46
1:CA:18:C:N3	1:CA:19:A:N7	2.64	0.46
1:CA:155:A:C6	1:CA:167:A:C6	3.04	0.46
22:DA:849:A:C6	22:DA:850:U:C4	3.04	0.46
4:AD:147:LYS:O	4:AD:149:LYS:N	2.48	0.46
35:BN:44:LEU:CD1	35:BN:48:VAL:HG23	2.45	0.46
22:DA:1026:G:H2'	22:DA:1027:A:H8	1.79	0.46
16:AP:19:VAL:HG12	16:AP:38:PHE:N	2.29	0.46
16:AP:16:PHE:O	16:AP:16:PHE:CD1	2.67	0.46
22:DA:1965:C:C3'	22:DA:1966:A:C5'	2.82	0.46
22:DA:228:C:O2	22:DA:418:C:H4'	2.16	0.46
22:DA:2654:A:N3	22:DA:2656:U:O4	2.49	0.46
22:BA:2540:C:C2'	22:BA:2541:A:C5'	2.86	0.46
34:BM:77:PRO:HB2	34:BM:80:VAL:CG1	2.46	0.46
23:DB:44:G:H3'	27:DF:91:ARG:HE	1.80	0.46
22:DA:2849:U:C4	22:DA:2867:G:C8	3.04	0.46
22:BA:1665:A:C2'	22:BA:1666:G:H5'	2.46	0.46
1:AA:49:U:C4	1:AA:364:A:C6	3.04	0.46
7:AG:110:ARG:HG3	7:AG:111:GLY:H	1.81	0.46
33:DL:92:LEU:HD23	33:DL:124:GLY:HA3	1.96	0.46
34:DM:34:LYS:HB2	34:DM:131:VAL:HG22	1.93	0.46
25:DD:173:GLN:HA	25:DD:173:GLN:NE2	2.18	0.46
22:BA:227:A:N6	22:BA:410:G:H1'	2.30	0.46
22:BA:2105:U:OP2	22:BA:2105:U:H6	1.99	0.46
22:DA:2275:C:HO2'	34:DM:84:LYS:HA	1.79	0.46
37:BP:3:ILE:CD1	37:BP:3:ILE:C	2.83	0.46
22:BA:434:U:C4'	22:BA:435:C:OP1	2.57	0.46
22:DA:2100:G:C6	22:DA:2190:G:C5	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1000:A:C6	22:DA:1001:A:N1	2.83	0.46
1:CA:1089:G:H1'	1:CA:1167:A:N6	2.30	0.46
22:DA:1936:A:H2	22:DA:1943:U:C4	2.33	0.46
22:DA:2550:G:C6	22:DA:2551:C:C4	3.04	0.46
1:AA:555:U:C2'	1:AA:556:C:O5'	2.64	0.46
28:BG:15:ASP:O	28:BG:16:VAL:HB	2.14	0.46
23:BB:49:C:OP1	36:BO:101:GLY:HA3	2.15	0.46
35:BN:75:ILE:C	35:BN:75:ILE:HD12	2.35	0.46
39:BR:60:LYS:N	39:BR:100:GLY:HA3	2.24	0.46
22:BA:897:C:H5''	22:BA:898:C:OP2	2.15	0.46
51:D3:36:ALA:O	51:D3:40:LYS:HG3	2.16	0.46
23:BB:35:C:H2'	23:BB:36:C:O4'	2.15	0.46
22:BA:475:C:C4	22:BA:481:G:C6	3.04	0.46
1:AA:867:G:O2'	1:AA:868:C:H5'	2.14	0.46
22:DA:642:U:H3'	22:DA:642:U:C6	2.50	0.46
1:CA:130:A:N7	17:CQ:65:PRO:HD2	2.29	0.46
1:CA:1106:G:C4	1:CA:1107:C:C5	3.03	0.46
39:BR:67:GLY:C	39:BR:93:PHE:CE2	2.89	0.46
19:AS:80:ARG:CG	19:AS:80:ARG:O	2.63	0.46
22:BA:270:A:C2	22:BA:369:U:H4'	2.51	0.46
31:BJ:58:ASN:ND2	31:BJ:128:ASN:HB2	2.28	0.46
42:BU:78:LYS:CG	42:BU:79:ALA:H	2.27	0.46
8:CH:41:GLU:C	8:CH:43:GLY:H	2.18	0.46
19:CS:46:LEU:CD2	19:CS:46:LEU:H	2.26	0.46
1:CA:739:C:C2'	1:CA:739:C:O2	2.64	0.46
1:CA:586:C:O2'	1:CA:878:A:H4'	2.15	0.46
24:BC:17:LYS:HA	24:BC:17:LYS:HE3	1.97	0.46
25:BD:9:VAL:CG2	25:BD:26:VAL:HG12	2.44	0.46
22:BA:2508:G:H2'	22:BA:2509:G:O4'	2.16	0.46
51:D3:6:VAL:HB	51:D3:9:ALA:CB	2.45	0.46
22:DA:693:A:O2'	22:DA:694:U:H5'	2.16	0.46
6:AF:37:HIS:ND1	6:AF:95:ALA:HB1	2.31	0.46
24:DC:259:ASN:O	24:DC:260:LYS:CB	2.63	0.46
22:DA:1838:C:N4	22:DA:1899:A:O4'	2.49	0.46
1:AA:761:G:H2'	1:AA:762:U:H6	1.80	0.46
7:AG:43:TYR:O	7:AG:47:GLU:HB2	2.15	0.46
1:CA:1235:U:H3'	1:CA:1235:U:C6	2.50	0.46
22:DA:2861:U:O2'	22:DA:2862:G:H5'	2.16	0.46
22:DA:924:G:O2'	22:DA:925:A:H5'	2.15	0.46
26:DE:9:GLN:HG3	26:DE:9:GLN:O	2.15	0.46
45:DX:49:ARG:HB3	45:DX:49:ARG:HE	1.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DV:10:LYS:HG3	43:DV:10:LYS:O	2.15	0.46
22:BA:2557:G:H2'	22:BA:2558:C:C6	2.51	0.46
22:BA:160:A:C6	22:BA:161:A:C6	3.04	0.46
5:AE:121:ASN:ND2	5:AE:122:VAL:H	2.13	0.46
5:AE:155:LYS:CA	5:AE:158:LYS:NZ	2.55	0.46
22:BA:2513:A:H2	25:BD:148:GLN:HE21	1.62	0.46
4:CD:190:LEU:HA	4:CD:190:LEU:HD23	1.57	0.46
1:CA:1139:G:H4'	1:CA:1140:C:C5'	2.45	0.46
1:CA:1145:A:HO2'	1:CA:1146:A:C5'	2.29	0.46
10:CJ:44:THR:HG23	10:CJ:70:HIS:CG	2.50	0.46
22:DA:1343:G:C2'	22:DA:1344:U:C6	2.98	0.46
22:DA:1403:A:C2	22:DA:1404:C:C2	3.03	0.46
46:DY:22:LEU:HD12	46:DY:23:ARG:NH1	2.27	0.46
1:CA:452:A:H2'	1:CA:453:G:O4'	2.16	0.46
22:DA:2384:U:H3'	22:DA:2386:A:P	2.54	0.46
9:AI:18:VAL:HG21	9:AI:82:ILE:HG13	1.97	0.46
12:CL:89:LEU:HA	12:CL:90:PRO:HD2	1.47	0.46
22:DA:105:C:C2'	22:DA:106:C:C6	2.98	0.46
26:DE:132:LYS:HA	26:DE:135:ALA:HB3	1.96	0.46
42:DU:81:ARG:HB3	42:DU:96:LYS:NZ	2.27	0.46
22:DA:52:A:C6	22:DA:118:A:C2	3.03	0.46
22:DA:214:G:N2	22:DA:215:G:N2	2.63	0.46
22:DA:1372:U:O2'	22:DA:2214:C:C5	2.69	0.46
22:DA:37:C:H2'	22:DA:38:A:O4'	2.15	0.46
1:AA:204:G:N3	1:AA:465:A:C2	2.84	0.46
4:CD:2:ARG:HH21	4:CD:114:ARG:HH11	1.62	0.46
11:CK:125:LYS:C	21:CU:33:ARG:HE	2.19	0.46
21:CU:25:ALA:O	21:CU:26:GLY:C	2.52	0.46
43:DV:75:GLN:CG	43:DV:92:VAL:CG1	2.93	0.46
10:AJ:35:GLN:CB	10:AJ:77:VAL:HB	2.45	0.46
32:DK:63:VAL:CG1	32:DK:64:ARG:HD3	2.45	0.46
22:DA:2619:C:H2'	22:DA:2619:C:O2	2.15	0.46
22:DA:678:C:C4	22:DA:679:C:N4	2.84	0.46
17:AQ:65:PRO:C	17:AQ:66:LEU:HD23	2.36	0.46
8:CH:126:CYS:C	8:CH:127:TYR:HD1	2.18	0.46
29:DH:84:ALA:H	29:DH:148:ALA:HA	1.80	0.46
22:BA:2304:G:H22	22:BA:2312:U:H3	1.62	0.46
22:DA:2061:G:N3	22:DA:2063:C:N4	2.62	0.46
22:DA:2710:C:OP1	35:DN:15:SER:HB2	2.15	0.46
22:DA:1429:G:O2'	22:DA:1430:G:H8	1.99	0.46
11:AK:111:ASP:HB3	21:AU:19:LYS:HD2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BO:107:ALA:O	36:BO:110:ALA:HB3	2.16	0.46
32:DK:17:ARG:HH11	32:DK:18:ARG:HG2	1.79	0.46
22:DA:1996:C:H5	32:DK:32:TYR:HH	1.62	0.46
1:CA:174:A:C2	1:CA:175:C:C6	3.03	0.46
8:AH:75:GLN:O	8:AH:126:CYS:HB2	2.16	0.46
1:AA:1328:C:C2	1:AA:1329:A:C8	3.04	0.46
27:DF:25:MET:C	27:DF:27:VAL:H	2.18	0.46
42:BU:10:VAL:HG21	42:BU:69:VAL:HB	1.97	0.46
27:BF:131:VAL:C	27:BF:132:ARG:HG3	2.32	0.46
22:DA:2225:A:O2'	22:DA:2226:C:OP2	2.34	0.46
22:DA:1009:A:C2	22:DA:1010:A:C2	3.04	0.46
1:AA:957:U:O2	1:AA:959:A:C8	2.69	0.46
1:CA:1026:G:N1	1:CA:1036:A:N6	2.43	0.46
22:DA:2305:U:C5	22:DA:2312:U:N3	2.83	0.46
22:BA:2140:G:H2'	22:BA:2141:G:H8	1.79	0.46
4:CD:73:ASN:HD22	4:CD:76:LYS:CE	2.28	0.46
13:CM:61:LYS:O	13:CM:62:PHE:HB2	2.15	0.46
23:DB:90:C:O2'	23:DB:91:C:O4'	2.29	0.46
22:BA:1024:G:N2	22:BA:1142:A:H2	2.12	0.46
29:DH:133:GLN:NE2	29:DH:139:PHE:CE2	2.84	0.46
12:CL:3:VAL:HG23	12:CL:4:ASN:N	2.25	0.46
22:DA:1881:C:H2'	22:DA:1882:U:O4'	2.15	0.46
22:DA:231:A:O2'	22:DA:232:G:O5'	2.33	0.46
1:CA:322:C:O2	1:CA:332:G:N2	2.49	0.46
51:D3:56:LEU:HD12	51:D3:56:LEU:N	2.31	0.46
22:BA:1507:C:H2'	22:BA:1508:A:N3	2.30	0.46
1:AA:198:G:O6	1:AA:220:G:C6	2.69	0.46
9:AI:60:LEU:CD2	9:AI:60:LEU:H	2.27	0.46
1:CA:1172:C:C2'	1:CA:1173:U:H5'	2.46	0.46
1:CA:445:G:C2	1:CA:446:G:C8	3.03	0.46
22:BA:2757:A:N3	22:BA:2757:A:H2'	2.30	0.46
22:DA:155:A:C2	22:DA:172:A:C6	3.04	0.46
6:AF:91:ARG:HG3	6:AF:92:THR:H	1.80	0.46
1:CA:704:A:O2'	1:CA:705:G:C5'	2.63	0.46
22:DA:2566:A:O2'	22:DA:2567:G:P	2.74	0.46
22:BA:1733:G:O2'	22:BA:1734:G:P	2.73	0.46
34:BM:55:ARG:O	34:BM:56:ALA:HB2	2.16	0.46
37:BP:59:THR:HG23	37:BP:72:VAL:HG12	1.98	0.46
49:B1:13:SER:OG	49:B1:46:VAL:HG13	2.15	0.46
6:AF:46:GLN:NE2	6:AF:56:LYS:CG	2.78	0.46
27:DF:144:LYS:HG3	27:DF:145:VAL:H	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:D4:30:GLU:HB2	52:D4:33:HIS:CD2	2.50	0.46
21:CU:9:GLU:CB	21:CU:10:PRO:CD	2.86	0.46
22:BA:669:G:C6	22:BA:801:G:O6	2.68	0.46
15:CO:88:ARG:HG3	22:DA:716:A:OP1	2.15	0.46
45:DX:63:ILE:HD13	45:DX:64:ASP:H	1.81	0.46
22:DA:1171:G:H22	22:DA:1179:G:H1'	1.77	0.46
1:CA:803:G:C5	1:CA:804:U:C4	3.03	0.46
2:CB:25:LYS:HD2	2:CB:25:LYS:H	1.81	0.46
30:DI:18:ASN:N	30:DI:19:PRO:CD	2.79	0.46
9:AI:28:VAL:CB	9:AI:63:TYR:HD2	2.26	0.46
7:AG:83:THR:HG22	7:AG:83:THR:O	2.15	0.46
1:CA:320:A:C2	1:CA:334:C:N3	2.83	0.46
1:CA:1417:G:N2	1:CA:1484:C:C4	2.83	0.46
49:B1:3:GLY:C	49:B1:4:ILE:HG12	2.36	0.46
43:BV:42:LEU:HD23	43:BV:42:LEU:N	2.30	0.46
4:AD:168:THR:CG2	4:AD:183:ARG:NH2	2.79	0.46
22:DA:2294:G:C5	22:DA:2295:C:C5	3.04	0.46
22:BA:1301:A:C2	22:BA:1303:G:C6	3.04	0.46
22:BA:423:A:H5''	22:BA:424:G:O5'	2.15	0.46
22:BA:1309:G:OP1	50:B2:9:VAL:CG1	2.64	0.46
1:CA:1113:C:H2'	1:CA:1114:C:H6	1.80	0.46
22:BA:31:C:O3'	22:BA:1238:G:H5'	2.16	0.46
1:CA:607:A:N1	1:CA:608:A:C2	2.84	0.46
1:CA:851:G:C2	1:CA:852:G:C8	3.04	0.46
2:AB:118:THR:O	2:AB:119:GLN:CB	2.64	0.46
22:BA:1441:G:H2'	22:BA:1442:U:C6	2.51	0.46
22:DA:938:G:N2	22:DA:939:G:C5	2.84	0.46
47:DZ:43:ILE:C	47:DZ:43:ILE:HD12	2.36	0.46
22:DA:2557:G:H2'	22:DA:2558:C:C6	2.51	0.46
41:DT:12:ARG:HG3	46:DY:29:ARG:NH1	2.30	0.46
22:BA:108:G:C2'	22:BA:109:C:H5'	2.46	0.46
23:DB:95:U:H2'	23:DB:96:G:H8	1.80	0.46
22:BA:306:U:C3'	22:BA:307:G:H5'	2.45	0.46
9:CI:46:VAL:O	9:CI:79:ARG:HG3	2.14	0.46
35:BN:51:LEU:HD12	35:BN:51:LEU:HA	1.63	0.46
12:AL:71:HIS:ND1	12:AL:71:HIS:C	2.68	0.46
22:BA:430:A:H5''	22:BA:431:U:OP2	2.16	0.46
5:AE:136:VAL:O	5:AE:137:ARG:HB2	2.16	0.46
1:CA:1133:G:C6	1:CA:1142:G:O6	2.69	0.46
22:DA:705:A:H2'	22:DA:706:A:H8	1.80	0.46
22:DA:75:G:H4'	46:DY:48:ARG:HH21	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:254:LYS:O	24:BC:255:LYS:CB	2.63	0.46
22:DA:116:C:C2'	22:DA:117:G:O5'	2.63	0.46
38:BQ:85:ALA:O	38:BQ:88:GLU:CB	2.64	0.46
1:AA:1305:G:N2	1:AA:1331:G:H2'	2.31	0.46
1:CA:408:A:N3	1:CA:435:A:C2	2.84	0.46
28:BG:8:VAL:O	28:BG:9:VAL:CG1	2.51	0.46
22:BA:855:G:N2	44:BW:23:LYS:CG	2.63	0.46
28:BG:93:TYR:HE2	28:BG:106:LEU:C	2.18	0.46
21:AU:9:GLU:CB	21:AU:10:PRO:CD	2.92	0.46
10:CJ:66:GLU:HG2	10:CJ:67:ILE:N	2.30	0.46
38:DQ:29:ARG:HD2	48:D0:9:ARG:NH1	2.31	0.46
22:DA:2428:G:H4'	22:DA:2429:G:C5	2.51	0.46
40:DS:35:ILE:HG13	40:DS:36:LEU:HD22	1.97	0.46
8:CH:77:VAL:HG21	8:CH:127:TYR:CE1	2.50	0.46
14:CN:72:PHE:CD1	14:CN:72:PHE:C	2.88	0.46
33:DL:3:LEU:CD1	33:DL:4:ASN:N	2.77	0.46
33:DL:3:LEU:O	33:DL:6:LEU:HB2	2.15	0.46
25:BD:118:PHE:CD2	25:BD:119:ALA:N	2.80	0.46
1:AA:14:U:O2	1:AA:17:U:H5	1.97	0.46
29:DH:35:LYS:O	29:DH:36:ALA:HB2	2.15	0.46
10:AJ:11:LYS:HB3	10:AJ:71:LEU:CD2	2.45	0.46
35:DN:37:THR:OG1	35:DN:40:LYS:HE3	2.16	0.46
41:BT:17:SER:O	41:BT:18:GLU:CB	2.63	0.46
1:AA:791:G:C5	1:AA:792:A:N7	2.84	0.46
11:AK:124:LYS:NZ	21:AU:33:ARG:NH2	2.51	0.46
36:BO:37:ALA:HB3	36:BO:78:VAL:HG11	1.96	0.46
34:BM:13:HIS:O	34:BM:14:LYS:HB3	2.15	0.46
29:BH:134:VAL:HG22	29:BH:139:PHE:HA	1.98	0.46
1:CA:85:U:O2	1:CA:85:U:O4'	2.34	0.46
24:DC:183:VAL:HG13	24:DC:185:ALA:H	1.81	0.46
8:AH:4:ASP:HB2	8:AH:80:PRO:HG3	1.98	0.46
22:DA:1437:C:N3	22:DA:1438:U:O4	2.48	0.46
9:CI:59:LYS:HE3	9:CI:60:LEU:CD1	2.45	0.46
9:CI:51:LEU:CD1	9:CI:82:ILE:HG22	2.46	0.46
22:BA:1025:G:H4'	22:BA:1026:G:OP2	2.15	0.46
22:DA:607:U:C5	22:DA:619:G:C4	3.04	0.46
22:DA:2313:C:O2'	22:DA:2314:A:H5'	2.15	0.46
2:CB:82:ALA:HB1	2:CB:217:ALA:CB	2.46	0.46
22:DA:845:A:C2	22:DA:847:U:C6	3.04	0.46
34:BM:41:LEU:HD22	34:BM:124:LEU:HD22	1.97	0.46
13:CM:64:VAL:O	13:CM:65:GLU:C	2.54	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:674:G:H1	1:AA:716:A:H61	1.63	0.46
1:AA:372:C:C4'	1:AA:373:A:OP1	2.64	0.46
1:AA:62:U:H5''	1:AA:385:C:H1'	1.97	0.46
1:AA:983:A:H2'	1:AA:983:A:N3	2.30	0.46
29:BH:53:GLU:CG	29:BH:53:GLU:O	2.62	0.46
1:AA:1091:U:H1'	1:AA:1095:U:O2	2.15	0.46
22:DA:406:G:O2'	22:DA:407:G:C8	2.69	0.46
1:CA:587:G:H2'	1:CA:588:G:OP2	2.15	0.46
31:BJ:25:LEU:CD2	31:BJ:26:GLY:N	2.70	0.46
22:DA:1649:G:C6	22:DA:2009:A:N1	2.84	0.46
22:BA:2496:C:OP1	34:BM:82:MET:HB2	2.16	0.46
25:BD:90:PHE:N	25:BD:90:PHE:CD1	2.83	0.46
1:CA:208:U:O2	1:CA:210:C:H4'	2.15	0.46
22:BA:252:G:N2	22:BA:253:C:H1'	2.30	0.46
28:BG:154:GLU:OE1	28:BG:157:LYS:HB2	2.15	0.46
29:BH:83:LYS:HE3	29:BH:98:ASP:CG	2.35	0.46
22:DA:2868:A:C2	22:DA:2869:G:C4	3.03	0.46
1:CA:1309:G:H1'	13:CM:72:ILE:HD12	1.96	0.46
1:CA:1168:U:O2'	1:CA:1169:A:H5'	2.15	0.46
1:CA:496:A:C2'	1:CA:496:A:N3	2.71	0.46
11:CK:63:GLN:O	11:CK:66:ALA:HB3	2.14	0.46
28:DG:7:PRO:O	28:DG:8:VAL:CB	2.61	0.46
22:BA:28:A:H2'	22:BA:29:U:O4'	2.16	0.46
1:CA:602:A:C2	1:CA:637:C:O2	2.69	0.46
21:CU:10:PRO:O	21:CU:11:PHE:HB3	2.14	0.46
41:BT:10:VAL:HG23	41:BT:11:LEU:HD23	1.98	0.46
42:BU:42:LYS:HB3	42:BU:57:ILE:HG23	1.97	0.46
27:BF:116:LEU:O	27:BF:176:PHE:HA	2.15	0.46
1:AA:731:G:O2'	1:AA:732:C:H5'	2.16	0.46
33:BL:21:ARG:HA	33:BL:21:ARG:HD3	1.69	0.46
22:BA:1358:G:N2	22:BA:1374:G:C5	2.84	0.46
22:DA:2046:G:P	48:D0:11:LYS:NZ	2.89	0.46
22:DA:1510:G:OP2	22:DA:1510:G:H3'	2.15	0.46
30:DI:30:GLN:CG	30:DI:31:GLY:N	2.79	0.46
22:BA:2136:G:C6	22:BA:2137:U:O4	2.69	0.46
22:BA:2267:A:H5''	22:BA:2268:A:H5'	1.96	0.46
22:DA:16:C:H42	22:DA:524:G:H1	1.62	0.46
25:BD:16:THR:HG21	25:BD:20:VAL:HB	1.96	0.46
22:DA:910:A:H62	34:DM:12:MET:CA	2.26	0.46
22:BA:2258:C:C2	22:BA:2426:A:C4'	2.98	0.46
22:BA:1000:A:C6	22:BA:1001:A:C6	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:9:G:N3	1:CA:10:A:C8	2.83	0.46
31:BJ:120:ARG:O	31:BJ:123:LYS:HE2	2.16	0.46
22:BA:2204:G:O5'	24:BC:149:LYS:HE3	2.14	0.46
40:BS:18:ARG:CG	40:BS:76:VAL:HG13	2.44	0.46
45:DX:51:SER:O	45:DX:55:MET:N	2.49	0.46
28:DG:50:THR:HG22	28:DG:51:PHE:N	2.31	0.46
22:DA:929:U:H2'	22:DA:930:G:O4'	2.16	0.46
4:AD:169:TRP:CE3	4:AD:185:PRO:HB3	2.51	0.46
25:BD:39:ASP:CG	25:BD:40:LEU:H	2.19	0.46
22:BA:1542:U:O2'	22:BA:1543:G:H5'	2.14	0.46
22:BA:728:G:O2'	22:BA:730:A:H5''	2.15	0.46
22:BA:1824:G:H2'	22:BA:1825:U:H6	1.80	0.46
22:BA:2428:G:H5''	22:BA:2429:G:OP1	2.16	0.46
22:DA:2672:U:H3'	22:DA:2672:U:C6	2.50	0.46
1:AA:504:C:H3'	1:AA:504:C:H6	1.81	0.46
22:BA:996:A:P	38:BQ:91:ARG:NH1	2.89	0.46
30:BI:79:LEU:HD22	30:BI:137:LEU:CD1	2.46	0.46
5:AE:100:GLU:HB3	5:AE:121:ASN:CA	2.45	0.46
24:DC:171:VAL:CG1	24:DC:173:LEU:HD13	2.44	0.46
24:DC:181:ARG:HE	24:DC:265:PHE:CB	2.25	0.46
10:CJ:5:ARG:CZ	10:CJ:5:ARG:HA	2.46	0.46
4:AD:27:ILE:O	4:AD:27:ILE:HG22	2.15	0.46
26:DE:105:LEU:HD13	26:DE:105:LEU:O	2.16	0.46
1:CA:377:G:H5'	16:CP:5:ARG:NH1	2.31	0.46
22:DA:1827:U:H3'	56:DA:3723:HOH:O	2.16	0.46
22:DA:1900:A:C6	22:DA:1970:A:N7	2.84	0.46
22:DA:1080:A:N3	22:DA:1081:U:C5	2.84	0.46
1:AA:1260:G:OP1	1:AA:1284:C:H4'	2.15	0.46
1:AA:1533:C:C3'	1:AA:1534:A:C5'	2.85	0.46
22:DA:91:A:O2'	22:DA:92:U:P	2.73	0.46
22:BA:1798:U:C4	22:BA:1819:A:C2	3.04	0.46
24:BC:156:SER:O	24:BC:194:VAL:HG11	2.15	0.46
39:BR:39:LEU:O	39:BR:40:MET:HB2	2.16	0.46
1:AA:75:G:N3	1:AA:76:G:H1'	2.31	0.46
22:DA:1154:G:O5'	22:DA:1154:G:H8	1.99	0.46
31:DJ:35:ARG:HA	31:DJ:40:HIS:CD2	2.51	0.46
44:BW:25:PHE:HB3	44:BW:66:VAL:HG23	1.98	0.46
43:DV:30:ILE:HB	43:DV:38:LEU:HB3	1.96	0.46
31:DJ:89:PHE:HE2	31:DJ:100:VAL:HG11	1.76	0.46
22:DA:199:A:C8	22:DA:2433:A:C6	3.04	0.46
22:DA:2238:G:C4'	22:DA:2239:G:OP1	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:261:U:OP2	20:AT:73:ARG:NH2	2.44	0.46
22:DA:512:G:OP2	22:DA:1235:G:H5'	2.16	0.46
22:DA:564:C:H2'	22:DA:565:C:C5'	2.46	0.46
3:CC:37:LYS:O	3:CC:40:GLN:HB3	2.16	0.46
14:CN:52:ARG:CA	14:CN:52:ARG:NE	2.75	0.46
26:DE:28:VAL:O	26:DE:32:VAL:HG13	2.14	0.46
1:CA:577:G:C6	1:CA:812:G:N2	2.83	0.46
1:AA:1124:G:H3'	1:AA:1145:A:H62	1.76	0.46
1:AA:1144:G:C8	1:AA:1144:G:OP2	2.69	0.46
22:BA:1340:U:C4'	22:BA:1341:G:OP2	2.52	0.46
11:AK:111:ASP:HB3	21:AU:19:LYS:CD	2.45	0.46
1:CA:73:C:O2'	1:CA:74:A:H8	1.99	0.46
23:DB:18:G:N2	23:DB:19:C:O2	2.49	0.46
22:DA:1735:A:N3	22:DA:1736:U:C6	2.83	0.46
1:AA:1317:C:C6	1:AA:1317:C:H3'	2.50	0.46
14:AN:40:ARG:CZ	14:AN:44:VAL:HG21	2.46	0.46
1:AA:1157:A:N3	1:AA:1181:G:C4	2.83	0.46
7:CG:72:VAL:HG11	7:CG:144:ALA:HB1	1.97	0.46
27:DF:76:PHE:CD2	27:DF:76:PHE:N	2.84	0.46
24:DC:99:GLU:O	24:DC:100:ARG:HG2	2.16	0.46
1:CA:1079:G:H2'	1:CA:1080:A:C8	2.51	0.46
25:DD:73:VAL:CG2	25:DD:74:GLU:N	2.77	0.46
42:BU:25:LYS:N	42:BU:34:ILE:O	2.49	0.46
22:DA:1910:G:H1	22:DA:1920:C:H42	1.62	0.46
22:DA:401:A:H2'	22:DA:402:A:C8	2.50	0.46
32:DK:13:ASN:O	32:DK:14:SER:HB3	2.16	0.46
16:AP:10:GLY:O	16:AP:11:ALA:HB2	2.15	0.46
1:AA:385:C:H2'	1:AA:386:C:H6	1.81	0.46
15:CO:20:ASP:OD1	15:CO:23:SER:HB2	2.16	0.46
22:DA:406:G:O2'	22:DA:407:G:H5'	2.15	0.46
1:CA:321:A:N6	1:CA:332:G:H1	2.13	0.46
3:CC:130:ARG:O	3:CC:133:MET:HG2	2.16	0.46
3:CC:148:ILE:HD12	3:CC:149:LYS:N	2.31	0.46
1:CA:1377:A:H2'	1:CA:1378:C:OP2	2.16	0.46
22:DA:690:G:H2'	22:DA:691:C:O4'	2.16	0.46
22:BA:960:A:N7	22:BA:962:G:C8	2.84	0.46
23:DB:42:C:O2'	23:DB:43:C:C5'	2.64	0.46
29:DH:66:ASN:O	29:DH:67:ALA:HB3	2.16	0.46
22:BA:245:G:H2'	22:BA:246:C:H6	1.81	0.46
3:AC:166:TRP:N	3:AC:166:TRP:CE3	2.78	0.46
28:DG:120:ILE:HG12	28:DG:134:GLY:HA3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:83:THR:O	28:DG:140:ILE:HD12	2.15	0.46
22:DA:874:G:C2	22:DA:904:G:C2	3.03	0.46
1:AA:1502:A:N6	1:AA:1504:G:N2	2.64	0.46
5:CE:157:GLY:HA3	8:CH:63:LYS:HZ1	1.81	0.46
22:BA:1733:G:C2	22:BA:1734:G:C5	3.03	0.46
22:DA:1833:C:C4	22:DA:1834:U:C5	3.04	0.46
13:AM:1:ALA:N	13:AM:8:ILE:HG23	2.30	0.46
10:CJ:35:GLN:HE22	10:CJ:78:GLU:HB2	1.80	0.46
30:BI:56:VAL:HG11	30:BI:68:PHE:HD2	1.80	0.46
19:AS:64:GLU:N	19:AS:64:GLU:CD	2.65	0.46
49:D1:10:LEU:HD22	49:D1:10:LEU:H	1.81	0.46
31:DJ:95:ARG:O	31:DJ:96:ARG:C	2.54	0.46
3:CC:63:ILE:O	3:CC:63:ILE:HG23	2.15	0.46
4:CD:137:SER:CB	4:CD:138:PRO:CD	2.91	0.46
22:BA:62:U:C4'	22:BA:63:A:OP1	2.61	0.46
22:DA:708:G:N2	22:DA:724:U:H1'	2.31	0.46
19:CS:60:PHE:HE2	19:CS:62:THR:HG1	1.61	0.46
7:AG:74:VAL:HB	7:AG:85:GLN:HE21	1.81	0.46
22:BA:621:A:H2'	22:BA:622:G:O4'	2.16	0.46
2:CB:8:MET:CE	2:CB:9:LEU:CD2	2.94	0.46
34:DM:96:ILE:O	34:DM:96:ILE:HG13	2.14	0.46
2:AB:72:LYS:C	2:AB:74:ALA:N	2.69	0.46
22:BA:2134:A:O2'	22:BA:2135:A:C8	2.64	0.46
1:AA:688:G:H8	1:AA:688:G:H5''	1.80	0.46
22:DA:1482:G:C4	22:DA:1483:G:C8	3.04	0.46
22:BA:1535:A:O2'	22:BA:1536:C:OP1	2.28	0.46
9:CI:127:SER:C	9:CI:129:ARG:N	2.68	0.46
1:AA:711:G:O2'	1:AA:712:A:H5'	2.15	0.46
28:DG:148:ARG:HB2	28:DG:152:ARG:NH2	2.30	0.46
22:DA:1887:C:H2'	22:DA:1888:G:H5'	1.98	0.46
28:BG:95:ALA:HA	28:BG:103:ASN:O	2.16	0.46
22:BA:2851:A:H2'	22:BA:2852:G:O4'	2.15	0.46
1:CA:1227:A:O5'	13:CM:109:LYS:HE3	2.16	0.46
32:DK:121:GLU:O	32:DK:122:VAL:OXT	2.33	0.46
24:DC:82:TYR:O	24:DC:84:PRO:HD3	2.16	0.46
22:DA:2797:U:O2	22:DA:2797:U:H2'	2.15	0.46
1:CA:1440:U:OP2	1:CA:1440:U:H6	1.98	0.46
13:CM:5:GLY:C	13:CM:6:ILE:HG13	2.36	0.46
2:AB:166:ASP:OD1	2:AB:167:HIS:N	2.48	0.46
38:BQ:57:ARG:HG2	38:BQ:61:ILE:CD1	2.41	0.46
22:BA:1074:G:HO2'	22:BA:1075:C:H6	1.52	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:152:VAL:O	5:AE:155:LYS:HE3	2.16	0.46
1:CA:1257:A:O2'	1:CA:1258:G:OP1	2.29	0.46
22:DA:1343:G:O2'	22:DA:1344:U:H6	1.97	0.46
1:CA:388:G:O2'	1:CA:389:A:P	2.73	0.46
30:DI:77:VAL:HB	30:DI:80:LYS:HZ2	1.80	0.46
30:DI:8:VAL:C	30:DI:9:LYS:HG2	2.36	0.46
35:DN:24:MET:SD	35:DN:44:LEU:HD22	2.56	0.46
12:CL:22:ALA:HB3	12:CL:94:TYR:OH	2.16	0.46
22:DA:345:A:H2'	22:DA:346:A:OP2	2.16	0.46
46:DY:1:MET:H2	46:DY:5:GLU:CG	2.29	0.46
22:DA:72:U:H5'	46:DY:54:LYS:HE3	1.98	0.46
24:BC:68:ARG:HH22	24:BC:115:ILE:HG23	1.80	0.46
22:DA:1356:G:C2	22:DA:1376:C:O2	2.68	0.46
22:DA:2090:A:H61	22:DA:2229:U:H3	1.64	0.46
45:DX:32:LEU:CD1	45:DX:50:VAL:O	2.64	0.46
22:DA:36:G:H2'	22:DA:37:C:H5'	1.98	0.46
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.15	0.46
1:CA:427:U:C4	1:CA:428:G:C6	3.03	0.46
4:CD:34:GLU:HB3	4:CD:35:GLN:H	1.51	0.46
38:DQ:91:ARG:HG3	39:DR:11:GLN:HG3	1.97	0.46
21:CU:33:ARG:CZ	21:CU:34:ARG:HD3	2.46	0.46
2:AB:42:LEU:CG	2:AB:43:GLU:HG3	2.29	0.46
32:DK:4:GLU:C	32:DK:5:GLN:HG2	2.36	0.46
37:DP:21:PRO:HA	37:DP:46:VAL:CG1	2.43	0.46
48:D0:3:GLN:NE2	48:D0:7:PRO:CD	2.79	0.46
22:DA:2054:A:C2	22:DA:2616:C:C2	3.03	0.46
40:DS:88:ARG:HD2	40:DS:94:ASP:CG	2.36	0.46
22:DA:192:C:OP1	22:DA:2243:U:OP1	2.34	0.46
33:DL:62:PRO:HG2	51:D3:24:LYS:HB2	1.98	0.46
1:CA:596:A:H2'	1:CA:597:G:C8	2.51	0.46
22:DA:476:G:O2'	22:DA:477:A:H3'	2.15	0.46
3:CC:33:ASP:HB2	14:CN:64:ARG:NH2	2.31	0.46
14:CN:20:PHE:C	14:CN:24:ALA:HB2	2.35	0.46
22:DA:659:G:C5'	26:DE:95:LYS:HD3	2.45	0.46
5:AE:21:SER:OG	5:AE:28:ARG:HB2	2.16	0.46
5:CE:104:ILE:HD13	5:CE:122:VAL:CG2	2.41	0.46
35:DN:108:ALA:O	35:DN:110:MET:HG2	2.16	0.46
2:CB:71:THR:O	2:CB:72:LYS:C	2.54	0.46
31:DJ:17:VAL:HG12	31:DJ:18:VAL:N	2.30	0.46
1:CA:227:G:O2'	16:CP:63:GLN:NE2	2.45	0.46
16:CP:4:ILE:HA	16:CP:20:VAL:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:110:MET:HG2	5:CE:139:THR:CG2	2.46	0.46
5:CE:131:ASN:C	5:CE:131:ASN:HD22	2.17	0.46
27:DF:136:ILE:HG22	27:DF:137:PHE:N	2.31	0.46
1:CA:267:C:H2'	1:CA:268:U:C5'	2.45	0.46
38:DQ:46:TYR:CD2	38:DQ:46:TYR:C	2.89	0.46
2:AB:162:VAL:CG2	2:AB:184:ALA:CB	2.94	0.46
19:AS:4:LEU:N	19:AS:4:LEU:HD12	2.27	0.46
35:BN:101:GLY:HA2	35:BN:110:MET:H	1.80	0.46
9:AI:40:ARG:O	9:AI:44:ARG:HD3	2.15	0.46
33:BL:82:LEU:HG	33:BL:90:VAL:HG21	1.97	0.46
6:AF:47:LEU:CD1	6:AF:51:ILE:HG22	2.45	0.46
22:BA:1587:G:C4	22:BA:1588:G:C8	3.04	0.46
29:DH:132:PHE:CZ	29:DH:134:VAL:HB	2.51	0.46
1:AA:1447:A:H5''	1:AA:1448:C:C5	2.51	0.46
42:BU:71:ILE:CD1	42:BU:71:ILE:O	2.63	0.46
1:CA:1446:A:C2'	1:CA:1447:A:C5'	2.91	0.46
1:CA:1447:A:O3'	1:CA:1448:C:H6	1.99	0.46
1:CA:1449:C:N3	1:CA:1455:G:C2	2.84	0.46
28:DG:104:LEU:N	28:DG:112:VAL:HG23	2.31	0.46
22:BA:1934:C:H2'	22:BA:1935:G:O5'	2.15	0.46
35:DN:64:ARG:HH21	35:DN:64:ARG:HG2	1.80	0.46
22:DA:1754:A:C2	22:DA:1755:A:C4	3.03	0.46
12:AL:4:ASN:ND2	12:AL:8:ARG:NH1	2.62	0.46
29:DH:136:SER:C	29:DH:137:GLU:HG3	2.36	0.46
22:DA:833:A:OP2	33:DL:39:LYS:NZ	2.49	0.46
2:AB:19:THR:HA	2:AB:37:VAL:HG23	1.98	0.46
29:BH:94:ILE:HG23	29:BH:98:ASP:HB3	1.96	0.46
22:DA:2869:G:H2'	22:DA:2870:C:H6	1.79	0.46
25:DD:112:THR:O	25:DD:113:SER:HB3	2.14	0.46
22:DA:156:A:H2'	22:DA:157:C:H6	1.81	0.46
1:AA:1501:C:C4	1:AA:1504:G:C6	3.03	0.46
32:BK:10:VAL:CB	32:BK:16:ALA:CB	2.91	0.46
1:CA:1533:C:C3'	1:CA:1534:A:H5''	2.45	0.46
16:CP:46:LYS:NZ	16:CP:46:LYS:H	2.13	0.46
16:CP:44:SER:N	16:CP:46:LYS:NZ	2.62	0.46
1:AA:519:C:O2'	1:AA:520:A:H5'	2.16	0.46
22:DA:2580:U:H5''	22:DA:2581:G:OP2	2.15	0.46
22:DA:1335:C:H2'	22:DA:1336:A:O4'	2.15	0.46
1:CA:780:A:O2'	1:CA:781:A:H5''	2.16	0.46
22:BA:1385:A:C2	22:BA:1386:C:N3	2.83	0.46
22:BA:1359:A:C2'	22:BA:1360:G:O5'	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:144:ILE:N	4:AD:144:ILE:HD13	2.29	0.46
22:DA:7:G:O2'	31:DJ:15:TRP:HZ2	1.97	0.46
1:AA:39:G:C5	1:AA:40:C:C5	3.03	0.46
43:DV:57:TYR:N	43:DV:57:TYR:CD1	2.80	0.46
34:DM:63:ILE:HD11	34:DM:105:MET:HE2	1.98	0.46
22:DA:910:A:C4	34:DM:13:HIS:ND1	2.84	0.46
24:BC:237:ARG:O	24:BC:238:ASN:HB2	2.15	0.46
22:BA:1241:A:H2'	22:BA:1242:U:H5'	1.96	0.46
22:DA:816:C:H2'	22:DA:817:C:H6	1.80	0.46
30:DI:12:VAL:CG1	30:DI:13:ALA:N	2.79	0.46
48:B0:36:LYS:O	48:B0:37:HIS:HB3	2.16	0.46
4:CD:123:MET:HE3	4:CD:126:GLY:O	2.16	0.46
24:DC:260:LYS:HA	24:DC:263:ASP:OD1	2.16	0.46
1:CA:767:A:H2'	1:CA:768:A:H8	1.79	0.46
50:D2:26:ASN:HD22	50:D2:26:ASN:HA	1.57	0.46
22:BA:2447:G:C4	22:BA:2500:U:C5	3.04	0.46
22:BA:2300:C:H6	22:BA:2300:C:O5'	1.98	0.46
1:AA:295:C:H2'	1:AA:296:U:O4'	2.16	0.46
22:DA:535:G:O2'	38:DQ:52:ARG:HB2	2.16	0.46
9:CI:4:GLN:HG2	9:CI:4:GLN:H	1.53	0.46
14:AN:64:ARG:CB	14:AN:77:GLY:O	2.64	0.46
18:AR:29:LYS:HA	18:AR:32:ILE:HD11	1.98	0.46
22:BA:1059:G:C6	22:BA:1080:A:N1	2.84	0.46
33:BL:95:LEU:HD22	33:BL:100:ILE:CD1	2.46	0.46
10:CJ:42:LEU:HD12	10:CJ:42:LEU:N	2.31	0.46
10:CJ:7:ARG:CZ	10:CJ:102:LEU:CD2	2.94	0.46
1:AA:430:A:HO2'	1:AA:431:A:C5'	2.03	0.46
22:DA:2345:G:C4	22:DA:2347:C:H5	2.34	0.46
22:DA:1060:U:O4	30:DI:131:THR:HG22	2.16	0.46
22:DA:1060:U:H4'	22:DA:1061:U:C3'	2.46	0.46
22:DA:1061:U:H3	30:DI:74:PRO:HD3	1.80	0.46
30:DI:77:VAL:HB	30:DI:80:LYS:NZ	2.30	0.46
30:DI:77:VAL:HB	30:DI:80:LYS:HE3	1.96	0.46
1:AA:1138:G:N2	1:AA:1140:C:N4	2.64	0.46
9:AI:8:THR:O	9:AI:81:GLY:HA2	2.16	0.46
24:BC:106:PRO:CA	24:BC:141:HIS:CE1	2.99	0.46
24:BC:159:THR:OG1	24:BC:194:VAL:HG11	2.16	0.46
38:DQ:73:ILE:HD11	38:DQ:77:LYS:HD3	1.98	0.46
22:DA:1381:G:H2'	22:DA:1381:G:N3	2.31	0.46
22:DA:2232:C:OP1	45:DX:26:ARG:NH1	2.48	0.46
22:DA:39:G:N2	22:DA:441:U:C2	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:444:C:H2'	22:DA:444:C:H6	1.57	0.46
38:BQ:82:LEU:HD22	38:BQ:88:GLU:OE2	2.16	0.46
22:DA:2752:C:O2'	22:DA:2753:A:C5'	2.64	0.46
22:DA:2756:U:C2'	22:DA:2757:A:H5'	2.45	0.46
2:CB:178:LEU:HD12	2:CB:178:LEU:HA	1.78	0.46
13:AM:92:ARG:HH11	13:AM:92:ARG:HG2	1.80	0.46
1:CA:1408:A:C6	1:CA:1494:G:C6	3.04	0.46
44:BW:26:GLY:O	44:BW:27:GLY:C	2.55	0.46
1:AA:546:A:P	4:AD:68:GLU:HB2	2.56	0.46
18:CR:71:ASP:HB3	21:CU:3:ILE:CD1	2.44	0.46
32:DK:35:VAL:HG21	32:DK:69:VAL:CG2	2.46	0.46
37:DP:59:THR:HG23	37:DP:72:VAL:HG12	1.98	0.46
44:BW:28:GLU:HB2	44:BW:31:LEU:HD11	1.93	0.46
17:AQ:16:MET:CB	17:AQ:19:SER:HB3	2.23	0.46
8:CH:58:LEU:HD23	8:CH:59:GLU:N	2.31	0.46
22:DA:512:G:OP2	22:DA:1235:G:H4'	2.15	0.46
1:CA:1315:U:H3'	1:CA:1316:G:H8	1.80	0.46
1:CA:1319:A:N6	1:CA:1323:G:N3	2.64	0.46
1:CA:994:A:O2'	1:CA:995:C:H5'	2.16	0.46
22:DA:621:A:O2'	22:DA:622:G:O4'	2.30	0.46
22:DA:2136:G:N3	22:DA:2137:U:C6	2.84	0.46
32:BK:105:ARG:NE	32:BK:106:GLU:OE2	2.49	0.46
31:DJ:80:HIS:O	31:DJ:81:ILE:C	2.54	0.46
2:AB:185:ILE:CG1	2:AB:185:ILE:O	2.64	0.46
2:CB:72:LYS:O	2:CB:73:ARG:C	2.54	0.46
33:DL:96:LYS:HD3	33:DL:103:ILE:HA	1.98	0.46
21:AU:16:ARG:HD2	21:AU:19:LYS:HG2	1.96	0.46
22:DA:2686:G:C4	22:DA:2687:U:C5	3.04	0.46
32:DK:1:MET:HA	32:DK:33:ALA:O	2.16	0.46
27:DF:110:ILE:HB	27:DF:113:PHE:HB2	1.98	0.46
27:DF:42:ALA:CB	27:DF:48:LEU:HD11	2.46	0.46
31:BJ:132:HIS:HB3	31:BJ:135:GLN:CG	2.46	0.46
8:AH:100:ILE:HD11	8:AH:128:VAL:HB	1.98	0.46
23:DB:116:G:H2'	23:DB:117:G:H8	1.80	0.46
42:BU:10:VAL:CG1	42:BU:24:VAL:HG23	2.46	0.46
25:DD:137:SER:CB	25:DD:138:LEU:HD22	2.46	0.46
7:CG:119:LEU:HA	7:CG:122:GLU:HB3	1.96	0.46
1:CA:1517:G:C8	22:DA:1920:C:OP1	2.69	0.46
22:BA:544:C:H2'	22:BA:544:C:O2	2.16	0.46
4:CD:80:ARG:HB2	4:CD:81:LEU:H	1.30	0.46
20:CT:61:ALA:O	20:CT:63:LYS:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:984:C:HO2'	1:AA:985:C:H6	1.62	0.46
1:AA:1350:A:H2	7:AG:33:GLY:HA3	1.80	0.46
22:DA:1195:G:N3	22:DA:1226:A:H2	2.13	0.46
1:CA:112:G:C4	1:CA:330:C:N4	2.84	0.46
22:DA:223:A:H2	22:DA:407:G:N3	2.14	0.46
1:CA:560:A:C8	1:CA:566:G:C4	3.04	0.46
22:DA:362:A:C4	22:DA:363:G:C8	3.04	0.46
35:DN:67:PHE:CE2	35:DN:73:ASN:ND2	2.84	0.46
25:DD:78:GLY:C	25:DD:80:TRP:CZ3	2.89	0.46
34:BM:114:ARG:CA	34:BM:130:PHE:CE1	2.98	0.46
22:BA:748:G:O5'	40:BS:89:ALA:HB2	2.16	0.46
22:DA:675:A:C6	22:DA:676:A:N6	2.84	0.46
3:AC:151:GLU:HA	3:AC:166:TRP:HA	1.96	0.46
22:BA:1430:G:C2'	22:BA:1431:A:C5'	2.91	0.46
1:AA:113:G:C4	1:AA:114:U:C5	3.03	0.46
1:AA:35:G:O2'	12:AL:117:GLY:HA2	2.15	0.46
1:CA:1054:C:H1'	1:CA:1196:A:C5	2.51	0.46
1:AA:1409:C:HO2'	1:AA:1410:A:H5'	1.76	0.46
3:CC:53:ARG:HD3	3:CC:55:VAL:HG13	1.97	0.46
22:DA:2150:C:O2'	22:DA:2151:U:C6	2.64	0.46
13:CM:2:ARG:H	13:CM:2:ARG:HD2	1.80	0.46
22:DA:487:C:H1'	40:DS:53:SER:HA	1.98	0.46
42:BU:17:ASP:CB	42:BU:20:LYS:HD2	2.46	0.46
1:AA:517:G:C5'	1:AA:519:C:C2	2.99	0.46
7:AG:68:VAL:CG2	7:AG:103:ILE:HD11	2.42	0.46
25:BD:133:THR:HG23	25:BD:134:HIS:N	2.29	0.46
42:BU:49:PRO:O	42:BU:51:LEU:N	2.49	0.46
1:AA:292:G:N3	1:AA:309:A:C2	2.84	0.46
22:DA:642:U:H5'	22:DA:2349:G:O3'	2.16	0.46
24:BC:196:ASN:OD1	24:BC:197:ALA:N	2.49	0.46
22:DA:1171:G:C4	22:DA:1179:G:N2	2.84	0.46
1:CA:781:A:H4'	1:CA:1523:G:O4'	2.16	0.46
39:BR:87:GLN:HG2	39:BR:88:GLY:N	2.30	0.46
1:CA:1049:U:H2'	1:CA:1049:U:O2	2.15	0.46
31:DJ:20:ALA:HA	31:DJ:23:LYS:HG2	1.97	0.46
22:DA:2483:C:N3	34:DM:123:LYS:NZ	2.46	0.46
4:CD:166:LYS:HA	4:CD:167:PRO:HD2	1.73	0.46
26:DE:52:VAL:O	26:DE:74:LYS:HD3	2.15	0.46
1:AA:1296:C:H5'	13:AM:13:HIS:NE2	2.31	0.46
28:BG:148:ARG:HD2	28:BG:163:TYR:HE2	1.77	0.46
22:DA:9:G:H1	22:DA:2629:U:H2'	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1084:G:H2'	1:AA:1085:U:C5	2.51	0.46
22:BA:1556:C:H2'	22:BA:1557:C:H5'	1.97	0.46
25:BD:139:SER:HA	25:BD:142:VAL:HG13	1.98	0.46
44:DW:70:VAL:CG2	44:DW:70:VAL:O	2.63	0.46
22:BA:1303:G:O2'	22:BA:1304:A:H5'	2.16	0.46
51:B3:56:LEU:H	51:B3:56:LEU:HD23	1.79	0.46
22:DA:1986:C:O2	22:DA:1986:C:H2'	2.16	0.46
1:AA:678:U:H1'	1:AA:777:A:O3'	2.15	0.46
1:CA:607:A:C2	1:CA:608:A:C4	3.04	0.46
19:CS:12:LEU:C	19:CS:12:LEU:HD13	2.36	0.46
22:BA:2578:G:C5	25:BD:145:SER:HB2	2.51	0.46
24:DC:51:ARG:O	24:DC:53:ILE:HG22	2.16	0.46
47:DZ:37:ARG:O	47:DZ:38:GLU:HB2	2.14	0.46
7:AG:132:THR:O	7:AG:135:LYS:HB3	2.15	0.46
22:BA:2264:C:H41	44:BW:11:ASN:HD21	1.62	0.46
28:BG:175:LYS:O	28:BG:176:LYS:C	2.53	0.46
3:CC:206:ILE:HG12	3:CC:206:ILE:OXT	2.16	0.46
22:BA:2422:C:H6	22:BA:2422:C:H5''	1.80	0.46
22:BA:1313:U:O2	22:BA:1313:U:H2'	2.16	0.46
25:BD:12:THR:HG22	25:BD:24:VAL:HG22	1.97	0.46
25:BD:113:SER:HB2	25:BD:114:LYS:NZ	2.31	0.46
30:BI:123:ALA:HA	30:BI:126:ARG:CZ	2.46	0.46
5:AE:153:ALA:C	5:AE:155:LYS:N	2.66	0.46
33:BL:91:ASP:HB2	33:BL:94:THR:HB	1.95	0.46
22:DA:1815:A:C1'	22:DA:1817:G:N7	2.79	0.46
22:DA:1346:G:O2'	22:DA:1347:A:H5'	2.16	0.46
22:DA:1385:A:HO2'	22:DA:1386:C:H6	1.61	0.46
22:DA:1345:C:C5'	22:DA:1396:U:O4	2.63	0.46
22:DA:1402:U:C2'	22:DA:1403:A:O5'	2.63	0.46
22:DA:1790:C:C2'	24:DC:207:ALA:HB2	2.45	0.46
22:DA:2886:A:C2	22:DA:2887:A:N7	2.84	0.46
1:CA:502:A:C2	1:CA:503:C:C2	3.03	0.46
46:DY:2:LYS:CG	46:DY:4:LYS:HE3	2.45	0.46
24:BC:141:HIS:O	24:BC:143:VAL:N	2.49	0.46
24:BC:256:THR:O	24:BC:257:ARG:C	2.54	0.46
22:DA:119:A:C5'	22:DA:120:U:OP1	2.62	0.46
22:DA:1571:A:C3'	22:DA:1571:A:C8	2.99	0.46
22:DA:1809:A:C2'	22:DA:1810:A:C8	2.99	0.46
22:DA:379:G:C2	22:DA:396:G:C5	3.04	0.46
22:DA:49:A:C6	22:DA:177:G:C6	3.04	0.46
28:BG:136:ASP:O	28:BG:140:ILE:CD1	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:45:ALA:O	26:DE:46:GLN:CB	2.64	0.46
26:DE:58:LYS:HA	26:DE:59:PRO:HD3	1.68	0.46
1:CA:1084:G:C6	1:CA:1085:U:O4	2.69	0.46
1:CA:1086:U:O2'	1:CA:1087:G:H5'	2.15	0.46
34:DM:72:PRO:HA	34:DM:92:TRP:CE3	2.51	0.46
34:DM:40:ARG:HB2	34:DM:93:VAL:CG2	2.45	0.46
1:AA:212:G:H2'	1:AA:213:G:H8	1.79	0.46
29:DH:27:ARG:NH1	45:DX:59:ASP:CA	2.75	0.46
31:DJ:44:TYR:CD2	31:DJ:44:TYR:C	2.90	0.46
11:CK:121:ARG:HH21	21:CU:35:GLU:CB	2.29	0.46
22:DA:1534:U:H3'	22:DA:1534:U:O2	2.16	0.46
43:DV:48:MET:SD	43:DV:85:LYS:HA	2.55	0.46
37:BP:21:PRO:HA	37:BP:46:VAL:HG12	1.98	0.46
22:DA:679:C:C2	22:DA:680:C:C5	3.04	0.46
22:DA:1285:A:H2'	22:DA:1286:A:C5'	2.45	0.46
22:DA:1611:C:O2'	22:DA:1612:C:O5'	2.34	0.46
35:DN:54:LEU:HD11	35:DN:66:ALA:CB	2.24	0.46
22:DA:502:A:H62	22:DA:505:A:N6	2.13	0.46
22:DA:513:A:C2	22:DA:514:A:C4	3.04	0.46
35:BN:73:ASN:CA	35:BN:76:VAL:CG1	2.77	0.46
38:BQ:8:ILE:C	38:BQ:8:ILE:CD1	2.83	0.46
1:CA:1363:A:C5	1:CA:1365:G:C6	3.04	0.46
1:CA:981:U:P	14:CN:12:ARG:HH12	2.38	0.46
9:CI:118:ARG:O	9:CI:119:LYS:HB3	2.16	0.46
1:CA:1319:A:P	19:CS:4:LEU:HD21	2.55	0.46
11:AK:19:VAL:HB	11:AK:34:THR:O	2.16	0.46
25:DD:148:GLN:CG	25:DD:152:PRO:CG	2.84	0.46
1:AA:795:C:C5'	1:AA:796:C:OP2	2.55	0.46
7:CG:59:GLU:OE2	7:CG:63:VAL:CG2	2.58	0.46
22:DA:1997:C:O2'	22:DA:1998:A:C5'	2.63	0.46
22:BA:1014:A:H2'	22:BA:1015:U:C6	2.51	0.46
27:DF:103:ILE:N	27:DF:103:ILE:CD1	2.78	0.46
1:CA:195:A:N7	1:CA:196:A:N6	2.64	0.46
1:CA:198:G:O2'	1:CA:199:A:P	2.74	0.46
12:AL:23:LEU:HG	12:AL:24:GLU:H	1.81	0.46
22:DA:975:A:C2	22:DA:976:G:C8	3.04	0.46
23:DB:29:A:H2'	23:DB:30:C:C6	2.51	0.46
23:DB:109:A:C6	23:DB:110:C:C4	3.04	0.46
23:DB:109:A:O2'	23:DB:110:C:O5'	2.34	0.46
2:CB:89:PHE:CZ	2:CB:153:MET:HA	2.50	0.46
1:CA:865:A:H5'	1:CA:1078:U:C4	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1027:A:O2'	22:DA:1028:A:C8	2.68	0.46
41:BT:50:LEU:H	41:BT:50:LEU:CD1	2.03	0.46
1:AA:1350:A:H2'	1:AA:1351:U:O4'	2.16	0.46
22:DA:1869:G:C2	22:DA:1873:G:C6	3.04	0.46
22:DA:228:C:H4'	22:DA:229:C:C6	2.50	0.46
22:DA:2298:A:O2'	22:DA:2299:U:H5'	2.16	0.46
28:DG:91:VAL:CG2	28:DG:92:GLY:H	2.27	0.46
1:CA:560:A:H5'	1:CA:566:G:N2	2.31	0.46
30:BI:24:GLY:O	30:BI:34:ILE:HD12	2.16	0.46
23:DB:46:A:C2'	23:DB:47:C:C6	2.90	0.46
27:DF:31:GLU:HG3	27:DF:32:LYS:N	2.30	0.46
22:BA:85:G:H5''	22:BA:85:G:H8	1.79	0.46
20:AT:26:MET:CE	20:AT:56:ILE:HD11	2.46	0.46
12:CL:19:ASN:ND2	12:CL:19:ASN:N	2.54	0.46
22:BA:1507:C:C4	22:BA:1508:A:N1	2.84	0.46
1:CA:842:U:O2'	1:CA:846:G:C6	2.69	0.46
29:DH:143:ILE:C	29:DH:144:VAL:HG22	2.37	0.46
22:DA:1490:A:H5'	22:DA:1490:A:N3	2.31	0.46
28:DG:168:VAL:O	28:DG:168:VAL:HG12	2.14	0.46
22:DA:1014:A:C2	22:DA:1149:G:C2	3.04	0.46
16:CP:48:GLU:HG3	16:CP:51:ARG:CZ	2.46	0.46
22:DA:2259:U:C6	22:DA:2427:C:C4	3.04	0.46
4:AD:54:LEU:HD22	4:AD:55:ARG:N	2.31	0.46
3:CC:93:ILE:O	3:CC:93:ILE:HG13	2.16	0.46
3:CC:53:ARG:CD	3:CC:55:VAL:HG13	2.45	0.46
1:AA:1088:G:O2'	1:AA:1089:G:O5'	2.34	0.46
6:AF:3:HIS:HB2	6:AF:92:THR:CG2	2.45	0.46
13:CM:103:THR:CG2	13:CM:104:ASN:N	2.77	0.46
16:AP:48:GLU:CG	16:AP:49:GLY:N	2.56	0.46
22:BA:2544:G:O5'	22:BA:2544:G:H8	1.99	0.46
22:BA:1253:A:C3'	22:BA:1254:A:C5'	2.89	0.46
22:DA:1545:A:H2'	22:DA:1546:G:C5'	2.45	0.46
22:DA:2059:A:O3'	26:DE:64:GLY:HA2	2.16	0.46
35:DN:46:ARG:HG3	35:DN:46:ARG:H	1.52	0.46
39:BR:42:ALA:CB	39:BR:46:GLU:CB	2.94	0.46
39:BR:21:ARG:HG3	39:BR:95:ASP:OD1	2.14	0.46
34:BM:43:ALA:O	34:BM:46:ILE:HG13	2.16	0.46
22:BA:2480:C:H2'	22:BA:2481:G:C5'	2.45	0.46
30:DI:23:VAL:HG21	30:DI:37:PHE:CE2	2.51	0.46
22:BA:81:G:C2	22:BA:106:C:C2	3.04	0.46
1:AA:1066:C:H5''	1:AA:1066:C:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:102:ARG:CB	37:DP:107:ALA:HB2	2.45	0.46
38:DQ:64:ILE:HG12	38:DQ:64:ILE:H	1.65	0.46
1:CA:240:G:H2'	1:CA:241:G:C8	2.51	0.46
1:CA:584:G:H2'	1:CA:585:G:C8	2.51	0.46
22:BA:2136:G:C2	22:BA:2137:U:O4	2.69	0.46
25:BD:142:VAL:CB	25:BD:143:PRO:CD	2.94	0.46
1:AA:293:G:C4	1:AA:294:U:C5	3.04	0.46
36:DO:24:THR:H	36:DO:90:VAL:HG12	1.81	0.46
1:AA:21:G:H2'	1:AA:22:G:C8	2.51	0.46
22:DA:1500:G:C6	22:DA:1501:G:N7	2.84	0.46
27:BF:88:VAL:CG1	27:BF:90:LEU:CD1	2.94	0.46
5:AE:82:HIS:NE2	8:AH:95:MET:CE	2.79	0.46
39:DR:78:ARG:HB2	39:DR:83:TYR:CD1	2.51	0.46
31:BJ:60:ASP:OD1	31:BJ:61:LYS:HG3	2.15	0.46
22:BA:2720:U:C2	22:BA:2872:A:C6	3.04	0.45
38:BQ:57:ARG:HA	38:BQ:60:TRP:CE3	2.51	0.45
5:AE:96:GLN:HE21	5:AE:96:GLN:CA	2.28	0.45
33:BL:93:ASN:ND2	33:BL:93:ASN:C	2.65	0.45
22:DA:1814:G:N1	22:DA:1815:A:N6	2.64	0.45
1:CA:1256:A:C2'	1:CA:1257:A:OP2	2.65	0.45
22:DA:1340:U:H5'	41:DT:61:LEU:HD22	1.98	0.45
41:DT:19:LYS:O	41:DT:20:ALA:HB2	2.16	0.45
26:DE:196:VAL:HA	26:DE:199:MET:HB3	1.98	0.45
1:CA:371:A:H2'	1:CA:372:C:O4'	2.16	0.45
22:DA:917:A:H2	23:DB:79:G:H21	1.63	0.45
22:DA:1830:C:C4'	24:DC:14:HIS:HE1	2.29	0.45
35:DN:33:ILE:HG12	35:DN:118:ARG:CD	2.46	0.45
35:DN:24:MET:HG3	35:DN:44:LEU:HD22	1.98	0.45
9:AI:93:LEU:O	9:AI:97:LEU:HB2	2.15	0.45
1:CA:518:C:C5	1:CA:530:G:C6	3.04	0.45
1:CA:523:A:H61	12:CL:88:ASP:HB2	1.81	0.45
12:CL:49:ARG:HH11	12:CL:89:LEU:CD2	2.29	0.45
22:DA:76:C:HO2'	22:DA:77:G:P	2.40	0.45
22:BA:2287:A:C8	22:BA:2289:G:C8	3.05	0.45
22:DA:397:U:O2'	22:DA:398:C:C5'	2.64	0.45
22:DA:2751:G:N3	28:DG:2:ARG:NH2	2.63	0.45
1:CA:1084:G:OP1	1:CA:1086:U:C5	2.69	0.45
49:B1:8:ILE:HG21	49:B1:51:ALA:CB	2.46	0.45
1:CA:1408:A:C2	1:CA:1494:G:C5	3.04	0.45
31:DJ:140:LEU:C	31:DJ:140:LEU:HD13	2.36	0.45
1:CA:794:A:H2'	1:CA:795:C:C5	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:9:LEU:HD21	2:AB:11:ALA:CB	2.28	0.45
39:DR:49:ILE:HB	39:DR:51:VAL:O	2.16	0.45
29:DH:83:LYS:HE2	29:DH:149:GLU:CB	2.23	0.45
6:CF:90:MET:HE1	18:CR:60:ARG:CD	2.45	0.45
11:CK:91:GLY:O	11:CK:92:ARG:C	2.54	0.45
22:DA:2242:G:N7	22:DA:2243:U:H5	2.09	0.45
40:DS:39:THR:HB	40:DS:40:ASN:H	1.64	0.45
22:DA:1323:C:N4	22:DA:1324:G:N7	2.64	0.45
44:BW:73:PRO:HG2	44:BW:76:ARG:HB2	1.99	0.45
22:BA:1178:C:H2'	22:BA:1178:C:O2	2.16	0.45
1:CA:1319:A:C6	1:CA:1323:G:C4	3.04	0.45
1:CA:1014:A:H1'	19:CS:34:SER:OG	2.15	0.45
4:AD:87:GLU:O	4:AD:90:LEU:HB2	2.16	0.45
22:DA:2136:G:C2'	22:DA:2137:U:C5	2.92	0.45
10:AJ:74:VAL:HG12	10:AJ:75:ASP:N	2.31	0.45
47:DZ:19:HIS:CD2	47:DZ:52:PHE:HZ	2.35	0.45
22:BA:136:G:H2'	22:BA:137:U:C6	2.51	0.45
9:CI:70:GLY:C	9:CI:71:ILE:HG13	2.36	0.45
22:DA:1190:G:OP1	33:DL:32:GLY:HA2	2.16	0.45
23:DB:29:A:OP2	36:DO:32:PRO:HD2	2.16	0.45
23:DB:53:A:H2'	23:DB:53:A:N3	2.31	0.45
22:DA:1737:G:H5'	22:DA:1738:G:OP2	2.16	0.45
1:AA:972:C:HO2'	1:AA:973:G:P	2.39	0.45
22:DA:1627:G:C6	22:DA:1640:A:C5	3.04	0.45
14:AN:22:LYS:O	14:AN:25:GLU:HG2	2.16	0.45
19:AS:4:LEU:CD2	19:AS:9:PHE:N	2.79	0.45
1:AA:1162:C:N3	1:AA:1175:G:C2	2.84	0.45
1:AA:1180:A:C5'	1:AA:1181:G:OP2	2.63	0.45
25:DD:172:VAL:HG21	25:DD:194:PRO:CD	2.45	0.45
22:BA:2148:G:HO2'	22:BA:2149:U:P	2.39	0.45
22:DA:2631:G:N2	22:DA:2788:C:C2	2.84	0.45
42:BU:25:LYS:CG	42:BU:36:GLU:HB3	2.32	0.45
20:CT:61:ALA:O	20:CT:67:HIS:CG	2.69	0.45
1:CA:753:A:H4'	1:CA:754:C:C5'	2.46	0.45
12:CL:2:THR:O	12:CL:6:LEU:CD1	2.64	0.45
22:BA:441:U:O2'	26:BE:41:GLN:NE2	2.48	0.45
22:DA:586:A:O5'	22:DA:586:A:H8	1.99	0.45
27:DF:60:SER:O	27:DF:62:GLN:N	2.47	0.45
23:DB:42:C:N4	27:DF:87:LYS:NZ	2.62	0.45
22:BA:1945:G:H2'	22:BA:1946:U:C5	2.51	0.45
7:AG:110:ARG:CG	7:AG:111:GLY:N	2.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:26:VAL:HG13	34:BM:104:GLU:OE2	2.16	0.45
29:DH:94:ILE:CD1	29:DH:98:ASP:OD1	2.64	0.45
1:AA:114:U:H2'	1:AA:115:G:H8	1.80	0.45
22:BA:2450:A:O2'	22:BA:2451:A:H5'	2.16	0.45
22:BA:726:G:O2'	22:BA:727:A:H8	1.99	0.45
1:AA:66:A:N6	1:AA:104:G:C4	2.84	0.45
2:AB:148:GLY:HA2	2:AB:151:LYS:HB3	1.98	0.45
9:AI:27:ILE:HG13	9:AI:62:LEU:HD21	1.98	0.45
34:DM:4:PRO:O	34:DM:5:LYS:C	2.55	0.45
51:B3:27:ASN:N	51:B3:27:ASN:HD22	2.12	0.45
22:DA:1519:G:N1	22:DA:1520:U:C2	2.84	0.45
22:BA:1198:U:H2'	22:BA:1199:U:C6	2.51	0.45
33:BL:68:SER:HB3	33:BL:71:ALA:HB3	1.95	0.45
40:DS:18:ARG:HA	40:DS:76:VAL:CG1	2.41	0.45
30:DI:102:ARG:HD3	30:DI:140:GLU:O	2.16	0.45
22:BA:475:C:O5'	22:BA:475:C:H6	1.99	0.45
15:CO:55:LEU:C	15:CO:57:ARG:N	2.69	0.45
1:CA:464:U:N3	1:CA:466:A:H4'	2.31	0.45
22:BA:2192:U:H2'	22:BA:2193:G:H8	1.80	0.45
1:CA:1040:U:H6	1:CA:1040:U:O5'	1.98	0.45
2:CB:13:VAL:HG23	2:CB:211:LEU:HD22	1.98	0.45
22:BA:1385:A:C5	22:BA:1403:A:C6	3.03	0.45
29:BH:100:ALA:O	29:BH:104:THR:CB	2.65	0.45
22:BA:1476:U:O2'	22:BA:1477:A:C5'	2.63	0.45
1:CA:708:C:H2'	1:CA:709:U:C6	2.51	0.45
22:BA:2080:A:C5'	45:BX:18:SER:HB2	2.44	0.45
22:DA:2046:G:H2'	22:DA:2047:C:C6	2.51	0.45
49:B1:16:THR:HB	49:B1:41:VAL:HG21	1.97	0.45
1:CA:1189:U:O2'	3:CC:175:HIS:CD2	2.67	0.45
30:DI:30:GLN:CG	30:DI:31:GLY:H	2.26	0.45
4:CD:130:ASN:C	4:CD:131:ILE:HD13	2.36	0.45
32:BK:11:ALA:O	32:BK:99:ILE:HA	2.16	0.45
22:DA:2511:U:C4	22:DA:2512:C:C4	3.04	0.45
22:DA:749:A:C2	22:DA:750:A:C8	3.04	0.45
27:BF:52:ALA:HB2	27:BF:149:ARG:HD3	1.97	0.45
2:AB:161:PHE:HD1	2:AB:183:PHE:CB	2.28	0.45
30:DI:71:LYS:HG3	30:DI:72:THR:N	2.30	0.45
22:BA:806:C:H2'	22:BA:807:U:H6	1.81	0.45
2:CB:20:ARG:HA	2:CB:20:ARG:NE	2.31	0.45
1:CA:835:U:C2'	1:CA:836:G:O5'	2.64	0.45
22:BA:1289:C:H2'	22:BA:1290:C:C6	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:55:VAL:CG2	41:DT:56:GLU:N	2.79	0.45
2:CB:57:ASN:HB2	2:CB:219:THR:HB	1.98	0.45
27:DF:4:HIS:CE1	27:DF:96:TRP:CZ2	3.03	0.45
22:BA:717:C:O2	22:BA:717:C:C2'	2.63	0.45
22:BA:2807:U:O5'	22:BA:2807:U:H6	1.98	0.45
22:BA:1774:C:H4'	22:BA:1979:U:O2	2.16	0.45
22:DA:1465:G:H2'	22:DA:1466:U:O4'	2.16	0.45
49:D1:4:ILE:O	49:D1:4:ILE:HG22	2.15	0.45
22:BA:2714:G:H2'	22:BA:2715:C:C6	2.51	0.45
34:DM:53:MET:CE	34:DM:117:PHE:HE1	2.29	0.45
1:AA:390:U:H2'	1:AA:391:G:H8	1.82	0.45
1:AA:827:U:C4	1:AA:870:U:C2	3.03	0.45
22:BA:160:A:C4	22:BA:167:A:C2	3.04	0.45
22:BA:1467:U:C4	22:BA:1546:G:C2	3.04	0.45
22:DA:435:C:C6	22:DA:436:C:C6	3.04	0.45
22:BA:2870:C:H2'	22:BA:2871:U:H5'	1.97	0.45
12:CL:20:VAL:O	12:CL:20:VAL:HG23	2.16	0.45
11:CK:58:THR:O	11:CK:61:ALA:HB3	2.16	0.45
22:BA:149:A:H2'	22:BA:150:U:H6	1.80	0.45
22:DA:1581:G:H2'	22:DA:1582:C:H5'	1.98	0.45
22:BA:2639:A:H4'	31:BJ:96:ARG:NH2	2.31	0.45
22:DA:1040:A:H2'	22:DA:1041:G:O4'	2.16	0.45
22:BA:995:C:H42	31:BJ:2:LYS:HB2	1.81	0.45
38:BQ:63:ARG:HH12	38:BQ:96:ASP:C	2.14	0.45
12:CL:42:LYS:CD	12:CL:43:LYS:CG	2.88	0.45
8:AH:39:LEU:O	8:AH:44:PHE:HB2	2.16	0.45
25:BD:148:GLN:HB2	25:BD:152:PRO:HG2	1.97	0.45
33:BL:91:ASP:O	33:BL:93:ASN:O	2.34	0.45
22:DA:1819:A:C5'	24:DC:156:SER:HB2	2.46	0.45
46:DY:19:LEU:HG	46:DY:22:LEU:CD2	2.44	0.45
1:AA:433:G:H2'	1:AA:434:U:C5'	2.47	0.45
22:DA:2331:G:H1'	44:DW:40:ARG:CB	2.41	0.45
22:DA:952:G:C4	22:DA:966:G:N2	2.84	0.45
22:DA:2332:C:H4'	44:DW:40:ARG:CZ	2.47	0.45
22:DA:1792:G:C2'	22:DA:1793:C:H5'	2.46	0.45
22:DA:730:A:N3	22:DA:731:C:C6	2.84	0.45
1:AA:1125:U:C5	1:AA:1127:G:C5	3.03	0.45
1:AA:1277:C:H1'	1:AA:1282:C:C2	2.51	0.45
12:CL:84:GLY:H	12:CL:94:TYR:HA	1.81	0.45
22:DA:301:G:N1	22:DA:302:C:N4	2.65	0.45
46:DY:1:MET:N	46:DY:1:MET:HE3	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:122:G:C6	22:DA:130:C:N3	2.84	0.45
22:DA:219:A:N6	22:DA:220:G:C6	2.84	0.45
22:DA:2214:C:C2	22:DA:2215:C:C6	3.05	0.45
25:BD:97:SER:OG	25:BD:99:GLU:CG	2.63	0.45
1:CA:205:A:C2	1:CA:206:C:N4	2.85	0.45
13:AM:87:GLY:C	13:AM:89:ARG:H	2.19	0.45
1:AA:203:G:N2	1:AA:215:C:C2	2.84	0.45
1:AA:204:G:C1'	1:AA:465:A:H2	2.28	0.45
1:AA:468:A:C2	1:AA:469:C:C4	3.03	0.45
31:DJ:8:PRO:HG2	31:DJ:9:GLU:N	2.31	0.45
22:BA:2336:A:N6	44:BW:40:ARG:HD2	2.31	0.45
22:BA:2356:U:H4'	44:BW:16:GLU:CG	2.31	0.45
22:BA:2356:U:C5'	44:BW:16:GLU:HG3	2.47	0.45
43:DV:21:ARG:HE	43:DV:87:GLN:CG	2.28	0.45
1:AA:499:A:H1'	1:AA:500:G:C8	2.51	0.45
34:DM:66:ARG:CD	34:DM:101:VAL:CG1	2.90	0.45
6:CF:35:LYS:HE2	6:CF:37:HIS:HE1	1.80	0.45
22:DA:2071:A:H2'	22:DA:2072:C:H6	1.80	0.45
26:BE:174:GLY:O	26:BE:175:ILE:O	2.34	0.45
22:BA:1655:A:H2'	22:BA:1656:C:O4'	2.17	0.45
1:CA:577:G:H1	1:CA:764:C:N4	2.12	0.45
19:AS:41:PRO:C	19:AS:43:MET:H	2.20	0.45
1:CA:543:U:H2'	1:CA:544:G:O5'	2.16	0.45
34:BM:4:PRO:CG	34:BM:70:ASP:HA	2.45	0.45
22:DA:271:G:N1	22:DA:272:A:N6	2.64	0.45
20:CT:31:ILE:C	20:CT:33:LYS:H	2.20	0.45
1:CA:69:G:H2'	1:CA:70:U:C6	2.51	0.45
2:AB:67:LEU:HB3	2:AB:160:LEU:HD12	1.97	0.45
1:AA:952:U:H5'	1:AA:972:C:H41	1.81	0.45
27:BF:151:LEU:C	27:BF:151:LEU:HD12	2.36	0.45
1:CA:1243:C:N4	1:CA:1244:G:O6	2.50	0.45
22:BA:1125:G:H5'	52:B4:37:GLN:HG3	1.97	0.45
22:DA:618:G:O2'	22:DA:619:G:C5'	2.64	0.45
7:CG:142:ARG:C	7:CG:144:ALA:H	2.18	0.45
1:AA:1150:A:O5'	1:AA:1150:A:H8	2.00	0.45
29:BH:37:VAL:HG23	29:BH:38:PRO:HD2	1.97	0.45
4:CD:50:TYR:O	4:CD:51:GLY:C	2.52	0.45
30:DI:96:LYS:HE2	30:DI:138:VAL:CG1	2.33	0.45
1:AA:1336:C:O2'	1:AA:1337:G:OP2	2.28	0.45
5:AE:71:ILE:HD13	5:AE:144:GLU:HB2	1.98	0.45
1:CA:1450:U:H4'	1:CA:1451:U:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:185:ILE:HA	2:CB:199:ILE:HG13	1.98	0.45
22:DA:809:G:C6	22:DA:810:U:N3	2.84	0.45
22:DA:1455:G:N7	35:DN:64:ARG:NH1	2.64	0.45
22:DA:1706:C:HO2'	22:DA:1707:G:P	2.38	0.45
10:CJ:30:LYS:HG2	10:CJ:36:VAL:CG2	2.38	0.45
3:CC:116:ALA:HB2	3:CC:199:VAL:HG21	1.98	0.45
1:AA:184:G:O2'	1:AA:185:U:C6	2.36	0.45
29:DH:66:ASN:HA	29:DH:137:GLU:OE2	2.16	0.45
22:BA:274:C:C6	22:BA:275:C:C5	3.03	0.45
1:CA:21:G:H1'	1:CA:914:A:N6	2.31	0.45
12:AL:115:LYS:O	12:AL:116:TYR:CB	2.64	0.45
22:DA:2851:A:H2'	22:DA:2852:G:C8	2.51	0.45
4:AD:54:LEU:CD2	4:AD:55:ARG:N	2.79	0.45
38:DQ:31:TYR:C	38:DQ:33:VAL:N	2.70	0.45
22:DA:1109:C:H5''	22:DA:1110:G:OP2	2.17	0.45
22:DA:357:C:H2'	22:DA:358:U:H6	1.81	0.45
36:DO:67:ASN:O	36:DO:68:LYS:C	2.54	0.45
22:BA:2470:G:C2'	22:BA:2471:A:H5'	2.45	0.45
1:AA:1014:A:C5'	19:AS:13:HIS:CD2	2.99	0.45
1:CA:953:G:C6	1:CA:954:G:C5	3.04	0.45
22:BA:2397:G:H2'	22:BA:2398:U:H6	1.81	0.45
40:BS:13:SER:OG	40:BS:16:LYS:HG3	2.16	0.45
1:AA:814:A:P	56:AA:1760:HOH:O	2.74	0.45
2:CB:212:TYR:O	2:CB:212:TYR:CD2	2.66	0.45
1:AA:671:G:N2	1:AA:736:C:C2	2.85	0.45
1:CA:582:C:O2'	1:CA:583:A:H5'	2.17	0.45
1:CA:892:A:C4	1:CA:893:C:C5	3.04	0.45
1:AA:357:G:O2'	1:AA:358:U:H5'	2.16	0.45
24:BC:180:MET:CG	24:BC:268:ARG:NH1	2.79	0.45
22:BA:633:A:H2'	22:BA:634:C:H5'	1.98	0.45
22:DA:2006:C:H2'	22:DA:2007:U:C6	2.52	0.45
2:AB:49:PHE:HB2	2:AB:52:ALA:HB3	1.97	0.45
42:BU:94:PHE:O	42:BU:94:PHE:CG	2.68	0.45
22:BA:1606:C:O2'	22:BA:1607:C:P	2.72	0.45
1:CA:1421:G:H1	1:CA:1479:C:H42	1.65	0.45
22:BA:2385:C:H2'	22:BA:2386:A:C8	2.51	0.45
1:CA:784:A:N6	1:CA:799:G:C6	2.84	0.45
17:CQ:14:ASP:OD2	17:CQ:52:CYS:HB2	2.16	0.45
23:BB:19:C:C2'	23:BB:20:G:H5'	2.47	0.45
22:BA:2840:C:H4'	35:BN:91:ALA:O	2.16	0.45
3:CC:49:ALA:HA	3:CC:74:ILE:HG21	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BX:26:ARG:NH1	45:BX:27:ARG:O	2.49	0.45
22:BA:186:G:H2'	22:BA:187:G:H8	1.82	0.45
22:BA:760:G:H2'	22:BA:761:A:O4'	2.16	0.45
39:DR:70:GLU:CD	39:DR:70:GLU:H	2.17	0.45
15:CO:72:LYS:HA	15:CO:72:LYS:HD3	1.64	0.45
22:BA:2097:A:O2'	22:BA:2098:U:H5'	2.16	0.45
23:BB:75:G:O2'	43:BV:88:HIS:HE1	1.99	0.45
22:BA:2838:G:H2'	22:BA:2839:G:O4'	2.17	0.45
22:BA:1061:U:H1'	22:BA:1070:A:O4'	2.16	0.45
1:CA:1150:A:N6	1:CA:1151:A:N6	2.64	0.45
41:DT:5:GLU:HA	41:DT:8:LEU:HB2	1.97	0.45
22:DA:1794:A:N3	22:DA:1795:C:C6	2.85	0.45
30:DI:54:ILE:HG23	30:DI:70:THR:HG21	1.98	0.45
9:AI:29:ILE:O	9:AI:30:ASN:C	2.55	0.45
22:DA:319:G:C6	22:DA:333:G:N1	2.84	0.45
50:D2:30:VAL:HG22	50:D2:33:ARG:NH1	2.30	0.45
22:DA:2230:G:H4'	45:DX:29:LEU:CD1	2.47	0.45
28:BG:139:VAL:O	28:BG:140:ILE:C	2.51	0.45
39:BR:52:PRO:O	39:BR:53:PHE:HB2	2.16	0.45
2:CB:99:MET:O	2:CB:103:TRP:CB	2.63	0.45
49:B1:10:LEU:HD23	49:B1:50:GLU:O	2.17	0.45
1:AA:211:G:N1	1:AA:212:G:N3	2.65	0.45
1:CA:1405:G:H1'	1:CA:1518:A:HO2'	1.81	0.45
22:DA:1914:C:O2'	22:DA:1915:U:O4'	2.34	0.45
1:CA:411:A:H1'	1:CA:413:G:O4'	2.16	0.45
22:DA:538:A:H5'	31:DJ:7:LYS:HZ3	1.80	0.45
38:DQ:78:PHE:CZ	38:DQ:82:LEU:HD11	2.50	0.45
21:CU:24:LYS:CG	21:CU:25:ALA:N	2.51	0.45
22:DA:1537:G:C3'	22:DA:1538:G:H4'	2.44	0.45
12:AL:43:LYS:HZ3	12:AL:43:LYS:HB2	1.80	0.45
44:BW:46:ALA:HB3	44:BW:80:SER:HB3	1.99	0.45
1:CA:672:U:H2'	1:CA:673:A:H8	1.80	0.45
32:DK:34:GLY:C	32:DK:35:VAL:CG2	2.84	0.45
32:DK:35:VAL:HA	32:DK:62:VAL:HG12	1.97	0.45
22:DA:2013:A:OP1	40:DS:97:LEU:N	2.49	0.45
2:CB:46:VAL:CG1	2:CB:47:PRO:CD	2.88	0.45
22:DA:1615:C:C5	22:DA:1617:C:C4	3.04	0.45
1:CA:1270:G:O2'	1:CA:1314:C:H5'	2.16	0.45
33:DL:117:THR:CG2	33:DL:118:THR:N	2.67	0.45
1:AA:1079:G:C2	1:AA:1080:A:C6	3.05	0.45
1:AA:923:A:C6	1:AA:924:C:C4	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:151:THR:CB	25:DD:152:PRO:CD	2.95	0.45
2:CB:72:LYS:O	2:CB:74:ALA:N	2.49	0.45
23:DB:83:G:C6	23:DB:94:A:N6	2.85	0.45
22:BA:412:A:H2'	22:BA:413:C:C5'	2.46	0.45
34:BM:4:PRO:HG2	34:BM:92:TRP:CZ3	2.52	0.45
36:BO:28:VAL:HG23	36:BO:106:LEU:CD2	2.46	0.45
1:CA:66:A:C5	1:CA:67:C:H5	2.34	0.45
22:DA:492:A:H2'	22:DA:493:G:C8	2.51	0.45
1:CA:276:G:C2	1:CA:277:C:C2	3.04	0.45
22:DA:973:A:C5'	22:DA:974:G:OP2	2.65	0.45
22:BA:1460:U:H3'	22:BA:1461:C:C5'	2.46	0.45
22:DA:1441:G:C4	22:DA:1442:U:C5	3.04	0.45
14:AN:20:PHE:C	14:AN:22:LYS:H	2.20	0.45
22:BA:1717:A:H2'	22:BA:1718:G:O4'	2.15	0.45
1:CA:1003:G:H21	1:CA:1005:A:H5''	1.78	0.45
1:AA:1202:U:O2'	1:AA:1203:C:O5'	2.34	0.45
25:DD:106:LYS:HB3	25:DD:206:ALA:H	1.81	0.45
22:DA:959:A:O2'	22:DA:960:A:O4'	2.34	0.45
22:DA:946:C:O2'	22:DA:947:A:C8	2.58	0.45
41:BT:12:ARG:HD2	46:BY:29:ARG:NH2	2.32	0.45
13:CM:13:HIS:NE2	13:CM:41:ASP:HA	2.32	0.45
1:AA:451:A:C2	1:AA:480:U:C5	3.04	0.45
22:DA:484:C:H2'	22:DA:485:C:C6	2.51	0.45
1:AA:1091:U:H5''	1:AA:1092:A:OP2	2.17	0.45
1:CA:1449:C:O2'	1:CA:1450:U:O5'	2.34	0.45
28:DG:104:LEU:H	28:DG:112:VAL:HG23	1.81	0.45
22:BA:933:A:H3'	22:BA:934:U:C5'	2.46	0.45
22:DA:183:C:H2'	22:DA:184:C:C5'	2.37	0.45
3:CC:32:LEU:CD1	14:CN:76:PHE:HA	2.45	0.45
20:AT:53:MET:C	20:AT:53:MET:HE2	2.37	0.45
3:CC:46:LEU:HD22	3:CC:75:VAL:CG2	2.34	0.45
47:BZ:6:ILE:HD11	47:BZ:47:ILE:HD11	1.97	0.45
50:D2:46:LYS:HD2	50:D2:46:LYS:N	2.30	0.45
29:DH:40:THR:O	29:DH:42:LYS:N	2.47	0.45
24:BC:29:PHE:CZ	24:BC:31:PRO:HG3	2.51	0.45
22:BA:2532:G:C5	22:BA:2533:U:C5	3.04	0.45
22:BA:1509:A:N3	22:BA:1510:G:C8	2.85	0.45
2:CB:119:GLN:HG2	2:CB:124:THR:CG2	2.46	0.45
22:BA:2635:A:C2'	22:BA:2636:C:O5'	2.64	0.45
12:AL:115:LYS:O	12:AL:116:TYR:HB2	2.16	0.45
46:BY:23:ARG:HA	46:BY:23:ARG:NE	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2794:C:H2'	22:BA:2795:C:C6	2.51	0.45
1:CA:701:U:O2'	1:CA:702:A:P	2.75	0.45
15:AO:42:PHE:CE1	15:AO:55:LEU:HD22	2.51	0.45
22:DA:352:A:O3'	22:DA:353:C:H4'	2.16	0.45
22:BA:2415:G:C5	22:BA:2416:C:C5	3.03	0.45
1:AA:863:U:O2	1:AA:867:G:C2	2.69	0.45
10:CJ:25:ILE:O	10:CJ:25:ILE:CG2	2.61	0.45
5:CE:151:MET:O	5:CE:154:ALA:HB3	2.16	0.45
22:BA:2729:G:C8	22:BA:2729:G:H5''	2.46	0.45
2:CB:13:VAL:CG2	2:CB:211:LEU:HD22	2.46	0.45
27:BF:16:MET:O	27:BF:20:ASN:N	2.50	0.45
22:BA:1360:G:C8	22:BA:1360:G:H5''	2.51	0.45
22:BA:1374:G:C5	22:BA:1375:U:C5	3.04	0.45
22:BA:1624:U:C2	22:BA:1625:C:C5	3.04	0.45
22:DA:953:G:H2'	22:DA:954:G:H5'	1.98	0.45
19:AS:47:THR:O	19:AS:48:ILE:C	2.54	0.45
19:AS:48:ILE:O	19:AS:48:ILE:CD1	2.65	0.45
22:DA:2049:G:N2	22:DA:2620:C:C2	2.84	0.45
22:BA:2302:U:H2'	22:BA:2303:G:H8	1.81	0.45
1:CA:694:A:H2'	1:CA:695:A:H5''	1.97	0.45
1:CA:46:G:HO2'	1:CA:365:U:H1'	1.80	0.45
35:BN:87:PHE:HE1	35:BN:116:VAL:HG12	1.82	0.45
22:BA:1673:G:C3'	22:BA:1674:G:H5'	2.46	0.45
25:DD:42:ASN:O	25:DD:43:ASP:HB2	2.16	0.45
1:CA:296:U:N3	1:CA:297:G:N7	2.64	0.45
39:BR:68:ARG:HD3	39:BR:92:TRP:CZ2	2.52	0.45
1:CA:1423:G:C2	1:CA:1424:U:C2	3.04	0.45
1:AA:942:G:H2'	1:AA:942:G:N3	2.31	0.45
31:BJ:121:LYS:HE3	31:BJ:121:LYS:HB2	1.72	0.45
1:AA:1098:C:H2'	1:AA:1099:G:O4'	2.17	0.45
35:DN:25:ALA:O	35:DN:29:VAL:HG22	2.16	0.45
22:BA:119:A:H4'	22:BA:120:U:O5'	2.17	0.45
22:DA:252:G:C2'	22:DA:253:C:O5'	2.64	0.45
24:DC:143:VAL:HB	24:DC:153:LEU:HB3	1.98	0.45
22:BA:1233:C:C4	22:BA:1234:U:C5	3.04	0.45
22:BA:2610:C:H4'	54:BA:3136:ERY:C30	2.46	0.45
22:BA:1220:G:H2'	22:BA:1221:C:C6	2.51	0.45
22:DA:1216:G:C2'	22:DA:1217:U:H5'	2.46	0.45
22:BA:2834:G:O6	22:BA:2879:A:H2'	2.16	0.45
31:BJ:44:TYR:C	31:BJ:44:TYR:CD1	2.70	0.45
31:BJ:44:TYR:HB2	38:BQ:63:ARG:CG	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:108:GLY:HA2	5:AE:111:ARG:HB3	1.98	0.45
22:BA:572:A:OP2	39:BR:80:ARG:NH2	2.46	0.45
1:CA:1147:C:O2	9:CI:17:ARG:NE	2.49	0.45
22:DA:2340:A:H2'	22:DA:2341:G:C8	2.51	0.45
22:DA:2341:G:C5	22:DA:2342:C:C5	3.04	0.45
22:DA:763:G:C5	22:DA:765:C:C5	3.04	0.45
22:DA:1063:G:C2	22:DA:1064:C:N3	2.85	0.45
22:DA:1065:U:N3	22:DA:1074:G:C6	2.84	0.45
22:DA:296:U:H2'	22:DA:297:G:H8	1.81	0.45
22:DA:300:A:H2'	22:DA:301:G:C5'	2.47	0.45
22:DA:321:U:C2	26:DE:159:LEU:HD11	2.51	0.45
22:DA:91:A:HO2'	22:DA:92:U:H6	1.62	0.45
24:BC:103:ILE:O	24:BC:104:LEU:O	2.34	0.45
22:DA:2209:G:C6	22:DA:2210:U:O4	2.69	0.45
22:DA:397:U:O2'	22:DA:398:C:O5'	2.34	0.45
22:DA:467:G:C6	22:DA:468:G:N7	2.85	0.45
22:DA:2756:U:O4'	22:DA:2757:A:H5''	2.16	0.45
1:AA:1226:C:H2'	13:AM:101:THR:O	2.17	0.45
1:AA:210:C:H5''	1:AA:211:G:OP1	2.16	0.45
38:DQ:75:TYR:OH	38:DQ:92:LYS:HE3	2.17	0.45
21:CU:37:TYR:O	21:CU:38:GLU:HG3	2.16	0.45
22:BA:2356:U:H5''	44:BW:16:GLU:HG3	1.98	0.45
44:BW:18:LYS:HE3	44:BW:19:ARG:HG3	1.97	0.45
44:BW:19:ARG:NH2	44:BW:22:VAL:CG2	2.78	0.45
44:BW:49:ASN:ND2	44:BW:50:VAL:N	2.64	0.45
52:D4:7:VAL:O	52:D4:8:LYS:CG	2.65	0.45
22:DA:2378:A:C8	22:DA:2379:G:O4'	2.69	0.45
22:DA:479:A:H4'	22:DA:480:A:C5'	2.47	0.45
1:AA:487:A:H8	1:AA:487:A:H5'	1.81	0.45
4:AD:11:SER:HA	4:AD:18:LEU:CD1	2.38	0.45
22:BA:1655:A:C2	22:BA:1656:C:H1'	2.51	0.45
22:DA:2060:A:H3'	26:DE:63:LYS:NZ	2.31	0.45
41:BT:39:THR:HB	41:BT:42:GLU:N	2.25	0.45
11:AK:121:ARG:HG3	21:AU:35:GLU:HG2	1.98	0.45
22:DA:1566:A:C2	24:DC:212:TRP:CG	3.04	0.45
27:DF:59:ILE:HG12	27:DF:137:PHE:CE1	2.51	0.45
1:CA:91:U:N1	1:CA:92:U:C5	2.85	0.45
23:DB:58:A:O2'	23:DB:59:A:H5'	2.16	0.45
22:DA:1721:G:O2'	22:DA:1722:A:H8	1.99	0.45
22:DA:1737:G:C6	22:DA:1738:G:C2	3.05	0.45
1:AA:511:C:C2	1:AA:512:U:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:117:GLY:HA2	25:DD:164:GLN:OE1	2.17	0.45
1:CA:119:A:H4'	1:CA:120:A:C8	2.51	0.45
22:BA:1057:A:H62	22:BA:1087:G:P	2.40	0.45
22:BA:1107:G:N3	22:BA:1108:U:C6	2.84	0.45
1:AA:622:A:C8	1:AA:623:C:C6	3.04	0.45
22:BA:1588:G:N3	22:BA:1589:U:C6	2.84	0.45
1:AA:982:U:O2	1:AA:983:A:N1	2.50	0.45
22:DA:2298:A:C6	22:DA:2321:U:C4	3.05	0.45
23:DB:9:G:OP2	36:DO:15:ARG:HD3	2.16	0.45
23:DB:48:U:H5'	36:DO:30:ARG:NH2	2.31	0.45
1:CA:587:G:C2	1:CA:755:G:C5	3.04	0.45
34:BM:77:PRO:HB2	34:BM:80:VAL:HG12	1.99	0.45
23:DB:42:C:H42	27:DF:87:LYS:HD2	1.82	0.45
3:CC:36:PHE:CZ	14:CN:91:GLU:O	2.66	0.45
3:AC:107:LYS:HA	3:AC:108:PRO:HD2	1.76	0.45
22:BA:154:U:H2'	22:BA:155:A:C8	2.50	0.45
26:BE:32:VAL:CG2	26:BE:33:VAL:N	2.79	0.45
1:CA:927:G:N1	1:CA:1391:U:C2	2.84	0.45
24:DC:105:ALA:HA	24:DC:106:PRO:HD3	1.67	0.45
22:BA:356:G:C6	22:BA:357:C:C4	3.04	0.45
22:DA:1717:A:O2'	22:DA:1718:G:O4'	2.33	0.45
1:CA:1309:G:C6	1:CA:1329:A:N1	2.85	0.45
22:DA:155:A:C2'	22:DA:156:A:H5'	2.46	0.45
3:CC:85:LYS:C	3:CC:89:VAL:HG21	2.36	0.45
22:BA:2222:C:H4'	24:BC:184:GLU:OE1	2.16	0.45
22:BA:2394:C:P	51:B3:29:ARG:HH21	2.40	0.45
22:DA:2548:U:H2'	22:DA:2549:G:O4'	2.16	0.45
8:CH:46:GLU:N	8:CH:63:LYS:CG	2.80	0.45
22:BA:1416:G:C4	22:BA:1417:C:C5	3.04	0.45
1:AA:930:C:O2'	1:AA:931:C:H5'	2.17	0.45
20:AT:14:GLU:O	20:AT:15:LYS:C	2.55	0.45
1:CA:711:G:C2'	1:CA:712:A:H5'	2.46	0.45
22:BA:1853:A:C5	22:BA:1889:A:C6	3.04	0.45
7:AG:121:ASN:O	7:AG:125:ASP:CB	2.62	0.45
23:BB:34:A:H2'	23:BB:35:C:OP2	2.17	0.45
22:BA:2225:A:H4'	22:BA:2226:C:H6	1.82	0.45
45:DX:67:LEU:HD23	45:DX:77:TYR:CE2	2.50	0.45
19:CS:37:SER:O	19:CS:69:LYS:HA	2.16	0.45
10:AJ:84:VAL:HG12	10:AJ:85:ASP:H	1.81	0.45
1:CA:780:A:H1'	1:CA:803:G:N2	2.32	0.45
26:DE:40:ARG:HG2	26:DE:92:HIS:CG	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:32:VAL:HG22	30:DI:58:ILE:HG21	1.98	0.45
4:AD:88:ASN:N	4:AD:88:ASN:OD1	2.49	0.45
22:BA:925:A:H2'	22:BA:926:G:O4'	2.16	0.45
1:CA:461:A:O5'	1:CA:462:G:OP2	2.35	0.45
2:CB:9:LEU:O	2:CB:10:LYS:CB	2.64	0.45
22:DA:1416:G:N2	22:DA:1417:C:C2	2.85	0.45
4:CD:167:PRO:HG2	4:CD:170:LEU:HD11	1.98	0.45
1:AA:9:G:OP2	5:AE:125:LYS:HE2	2.16	0.45
22:DA:1510:G:N2	22:DA:1511:G:C2	2.84	0.45
1:CA:693:G:O2'	1:CA:694:A:H5'	2.16	0.45
12:CL:75:GLU:C	12:CL:77:SER:H	2.19	0.45
28:BG:1:SER:CA	28:BG:5:LYS:HG3	2.46	0.45
2:AB:220:VAL:HG12	2:AB:220:VAL:O	2.15	0.45
22:DA:1835:G:C4	22:DA:1836:C:C5	3.04	0.45
13:AM:22:TYR:CD2	13:AM:22:TYR:O	2.70	0.45
1:AA:677:U:H2'	1:AA:678:U:C6	2.51	0.45
2:CB:93:HIS:CE1	2:CB:145:ASN:ND2	2.84	0.45
22:BA:1223:G:N2	22:BA:1226:A:OP2	2.41	0.45
2:CB:67:LEU:CD1	2:CB:157:PRO:HG3	2.47	0.45
22:BA:1410:G:C2	22:BA:1593:A:C2	3.04	0.45
22:BA:1606:C:O2'	22:BA:1607:C:O5'	2.34	0.45
22:DA:1623:G:C6	22:DA:1624:U:C4	3.05	0.45
8:CH:12:ARG:HD3	8:CH:26:MET:CE	2.47	0.45
1:CA:617:G:C2	1:CA:624:C:C2	3.04	0.45
23:BB:74:U:O2	43:BV:29:ILE:HD12	2.16	0.45
15:AO:3:SER:HB3	15:AO:6:ALA:CB	2.46	0.45
52:B4:7:VAL:O	52:B4:8:LYS:HB2	2.16	0.45
22:DA:1723:G:C2'	22:DA:1724:G:H5'	2.47	0.45
42:BU:98:ASN:C	42:BU:98:ASN:OD1	2.55	0.45
22:BA:187:G:C2	22:BA:210:C:O2	2.70	0.45
36:DO:20:GLU:O	36:DO:20:GLU:HG2	2.16	0.45
22:BA:1844:C:C6	22:BA:1844:C:C3'	3.00	0.45
4:CD:184:LYS:H	4:CD:184:LYS:HG2	1.54	0.45
22:BA:2001:C:C2	22:BA:2002:G:C8	3.04	0.45
25:BD:14:ILE:HA	37:BP:11:GLN:NE2	2.15	0.45
45:BX:34:SER:H	45:BX:50:VAL:H	1.65	0.45
22:BA:570:G:H2'	22:BA:2030:A:C8	2.51	0.45
22:BA:573:U:O2'	22:BA:574:A:H3'	2.17	0.45
22:DA:2206:C:N3	22:DA:2207:C:C5	2.85	0.45
28:BG:167:VAL:O	28:BG:168:VAL:C	2.53	0.45
1:CA:1256:A:N9	1:CA:1278:G:C6	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1279:G:H2'	10:CJ:45:ARG:NH2	2.31	0.45
22:DA:1340:U:C4'	22:DA:1340:U:OP1	2.60	0.45
4:AD:34:GLU:O	4:AD:36:ALA:N	2.44	0.45
4:AD:7:LYS:HG3	4:AD:8:LEU:HD22	1.98	0.45
1:CA:375:U:C2	1:CA:376:G:C8	3.05	0.45
22:DA:2279:G:N2	22:DA:2327:A:C2	2.85	0.45
22:DA:2345:G:C6	22:DA:2347:C:N4	2.77	0.45
1:AA:1285:A:H5'	1:AA:1286:U:C4	2.52	0.45
1:AA:1508:A:H2'	1:AA:1509:C:O4'	2.16	0.45
12:CL:108:ASP:O	12:CL:110:LYS:HD3	2.17	0.45
22:DA:76:C:N3	22:DA:111:A:C2	2.84	0.45
22:DA:298:G:O3'	22:DA:299:A:H8	2.00	0.45
22:DA:301:G:C4	22:DA:302:C:N4	2.85	0.45
22:DA:78:U:HO2'	22:DA:79:C:H6	1.62	0.45
46:DY:58:ASN:C	46:DY:60:LYS:N	2.69	0.45
22:DA:1354:A:H2'	22:DA:1355:G:O4'	2.15	0.45
22:DA:1574:C:H2'	22:DA:1575:C:O4'	2.16	0.45
22:DA:1050:A:C2	22:DA:2751:G:C2	3.05	0.45
22:DA:2761:A:H1'	28:DG:142:GLN:NE2	2.30	0.45
1:AA:202:G:N2	1:AA:466:A:H61	2.14	0.45
1:CA:411:A:H4'	1:CA:412:A:OP1	2.16	0.45
25:BD:107:VAL:HG12	25:BD:107:VAL:O	2.15	0.45
25:BD:106:LYS:CB	25:BD:206:ALA:H	2.30	0.45
21:CU:33:ARG:NH2	21:CU:34:ARG:HD3	2.32	0.45
21:CU:37:TYR:O	21:CU:38:GLU:CG	2.65	0.45
22:BA:923:G:N2	44:BW:23:LYS:HE2	2.31	0.45
44:BW:23:LYS:HG3	44:BW:24:ARG:N	2.28	0.45
44:BW:18:LYS:H	44:BW:36:ILE:HG12	1.79	0.45
43:DV:75:GLN:HG3	43:DV:92:VAL:CG1	2.46	0.45
1:CA:6:G:O2'	1:CA:7:A:P	2.75	0.45
1:AA:396:C:H3'	1:AA:397:A:H5"	1.98	0.45
37:BP:88:ARG:CG	37:BP:112:ARG:NH2	2.80	0.45
32:DK:76:VAL:HG12	32:DK:77:ILE:N	2.32	0.45
22:DA:1289:C:C5'	22:DA:1289:C:H6	2.29	0.45
22:DA:1326:U:O2'	22:DA:1327:A:O5'	2.33	0.45
22:DA:1327:A:C2'	22:DA:1328:A:C8	2.91	0.45
17:AQ:47:ASP:O	17:AQ:48:GLU:C	2.55	0.45
22:DA:1255:U:O2'	22:DA:1256:G:P	2.74	0.45
26:BE:108:ILE:HD13	26:BE:180:LEU:HD13	1.99	0.45
22:DA:604:G:C6	22:DA:625:G:C6	3.05	0.45
33:DL:111:ILE:O	33:DL:131:ALA:CB	2.63	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:157:U:O2'	1:AA:158:G:H5'	2.17	0.45
1:CA:765:G:C4	1:CA:812:G:N1	2.84	0.45
1:AA:1124:G:C3'	1:AA:1145:A:N6	2.77	0.45
43:DV:16:ALA:CB	43:DV:19:ARG:NH2	2.79	0.45
33:DL:100:ILE:N	56:DL:204:HOH:O	2.49	0.45
33:DL:96:LYS:C	33:DL:98:ALA:H	2.20	0.45
46:BY:57:LEU:CA	46:BY:60:LYS:CB	2.91	0.45
11:AK:108:ASN:CG	21:AU:6:ARG:HG2	2.37	0.45
32:DK:2:ILE:N	32:DK:2:ILE:HD13	2.31	0.45
27:DF:105:ILE:C	27:DF:108:PRO:HD2	2.37	0.45
20:CT:30:PHE:CD1	20:CT:56:ILE:HD12	2.50	0.45
23:DB:114:C:N4	23:DB:115:A:N6	2.65	0.45
1:AA:978:A:C1'	1:AA:1322:C:C5	3.00	0.45
14:AN:44:VAL:C	14:AN:46:LYS:H	2.18	0.45
9:CI:96:GLU:O	9:CI:99:LYS:HG2	2.17	0.45
1:CA:134:G:O2'	1:CA:135:C:H5'	2.15	0.45
1:AA:1181:G:C2	1:AA:1182:G:N2	2.84	0.45
25:DD:107:VAL:CG1	25:DD:109:VAL:CG2	2.92	0.45
22:BA:2151:U:N3	22:BA:2152:G:C5	2.84	0.45
47:DZ:18:LYS:O	47:DZ:21:ALA:HB3	2.16	0.45
22:BA:1056:G:O2'	22:BA:1086:A:C8	2.70	0.45
29:BH:3:VAL:CA	29:BH:37:VAL:O	2.63	0.45
1:AA:1090:U:H2'	1:AA:1091:U:H6	1.81	0.45
22:DA:1223:G:OP2	39:DR:90:ARG:NH1	2.50	0.45
1:CA:330:C:H6	1:CA:330:C:H5'	1.81	0.45
22:DA:2408:U:O2'	22:DA:2409:G:C8	2.70	0.45
22:DA:406:G:H2'	22:DA:407:G:C8	2.52	0.45
12:AL:53:ARG:HA	12:AL:63:THR:HA	1.99	0.45
22:BA:1275:A:H4'	22:BA:1276:A:O5'	2.17	0.45
22:DA:684:G:OP1	50:D2:16:HIS:CD2	2.69	0.45
22:DA:688:U:O2'	22:DA:689:A:H5'	2.16	0.45
6:CF:52:ASN:C	6:CF:54:LEU:H	2.19	0.45
34:BM:78:LEU:O	34:BM:80:VAL:N	2.49	0.45
3:CC:32:LEU:O	3:CC:36:PHE:CD2	2.70	0.45
1:AA:880:C:H2'	1:AA:881:G:H8	1.81	0.45
22:DA:1717:A:C6	22:DA:1744:A:C5	3.04	0.45
22:DA:2260:C:H2'	22:DA:2261:C:C6	2.50	0.45
4:CD:84:ASN:HB3	4:CD:87:GLU:HG3	1.98	0.45
22:DA:2854:G:C2	22:DA:2864:G:C2	3.05	0.45
39:BR:24:LYS:HA	39:BR:94:THR:CG2	2.37	0.45
1:CA:769:G:O2'	1:CA:770:C:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:90:MET:HB3	6:AF:91:ARG:H	1.48	0.45
22:DA:2550:G:N2	22:DA:2559:C:O2	2.50	0.45
3:AC:129:PHE:O	3:AC:133:MET:HG3	2.16	0.45
7:AG:25:PHE:CE1	7:AG:104:VAL:CG2	3.00	0.45
1:CA:591:U:H2'	1:CA:592:G:O4'	2.17	0.45
3:AC:183:TYR:OH	3:AC:198:LYS:HD3	2.17	0.45
52:D4:27:CYS:SG	52:D4:30:GLU:O	2.74	0.45
19:AS:62:THR:HG22	19:AS:63:ASP:N	2.30	0.45
22:BA:686:U:C4'	22:BA:687:C:OP2	2.59	0.45
1:CA:128:G:N2	1:CA:129:A:N3	2.64	0.45
22:BA:2461:A:H1'	22:BA:2492:U:C2	2.52	0.45
1:AA:68:G:C6	1:AA:69:G:H1'	2.52	0.45
22:BA:2325:G:C6	22:BA:2326:C:C4	3.04	0.45
22:BA:1256:G:H21	26:BE:77:ILE:HG13	1.80	0.45
22:BA:2573:C:H2'	56:BA:3709:HOH:O	2.17	0.45
22:BA:861:A:C2	22:BA:917:A:C4	3.04	0.45
1:CA:945:G:H1'	1:CA:1337:G:O2'	2.16	0.45
22:BA:1360:G:P	56:BA:3614:HOH:O	2.74	0.45
22:BA:1681:G:H4'	22:BA:1763:G:C8	2.51	0.45
3:AC:49:ALA:HB1	3:AC:75:VAL:HG22	1.97	0.45
6:AF:66:ALA:CB	6:AF:67:PRO:HD2	2.44	0.45
1:CA:929:G:C4	1:CA:930:C:C5	3.05	0.45
22:DA:749:A:C6	22:DA:1618:A:C2	3.03	0.45
22:BA:1394:U:C2'	22:BA:1395:A:O5'	2.65	0.45
22:DA:560:C:O2'	22:DA:561:G:H5'	2.15	0.45
28:DG:152:ARG:HD2	28:DG:153:PRO:HD3	1.97	0.45
22:DA:653:U:H2'	22:DA:653:U:O2	2.17	0.45
22:BA:1594:U:H2'	22:BA:1595:C:C6	2.51	0.45
26:DE:175:ILE:O	26:DE:175:ILE:CG2	2.65	0.45
22:DA:961:C:C5	22:DA:2456:C:H5'	2.51	0.45
2:AB:115:ASP:O	2:AB:119:GLN:HB3	2.16	0.45
3:AC:63:ILE:HG22	3:AC:98:ALA:HB2	1.99	0.45
19:AS:40:PHE:HB3	19:AS:42:ASN:HD22	1.82	0.45
16:CP:30:GLY:O	16:CP:32:PHE:N	2.50	0.45
22:BA:718:A:H2'	22:BA:719:C:H5'	1.98	0.45
22:DA:2083:G:H2'	22:DA:2084:C:H5'	1.98	0.45
22:BA:279:A:H2'	22:BA:280:U:O4'	2.15	0.45
1:CA:905:U:H5''	1:CA:906:A:OP2	2.16	0.45
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.16	0.45
1:AA:1511:G:C5	1:AA:1512:U:C5	3.05	0.45
7:CG:69:ARG:HH11	7:CG:95:ARG:NH1	2.14	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BO:25:ARG:HG3	36:BO:27:VAL:CG2	2.47	0.45
36:BO:36:TYR:CD2	36:BO:36:TYR:N	2.84	0.45
47:BZ:16:LEU:HD23	47:BZ:16:LEU:HA	1.17	0.45
5:AE:143:LEU:HA	5:AE:143:LEU:HD23	1.79	0.45
36:DO:76:LYS:HG3	36:DO:76:LYS:O	2.16	0.45
22:BA:239:C:O2'	22:BA:240:C:H5'	2.17	0.45
8:AH:40:LYS:O	8:AH:42:GLU:N	2.50	0.45
1:CA:239:U:C6	1:CA:239:U:C4'	2.99	0.45
45:BX:30:PRO:CB	45:BX:32:LEU:CD1	2.58	0.45
22:BA:567:U:C2'	22:BA:568:U:O5'	2.65	0.45
25:BD:148:GLN:N	25:BD:148:GLN:OE1	2.50	0.45
33:BL:29:LYS:C	33:BL:30:THR:HG23	2.37	0.45
28:BG:85:LYS:HA	28:BG:130:ILE:O	2.16	0.45
28:BG:166:GLU:OE2	28:BG:167:VAL:N	2.49	0.45
22:DA:1603:A:C2	22:DA:1604:C:H1'	2.52	0.45
41:DT:11:LEU:CD1	41:DT:11:LEU:H	2.24	0.45
1:CA:483:C:H2'	1:CA:484:G:C8	2.51	0.45
22:DA:1789:A:H2'	22:DA:1790:C:O4'	2.17	0.45
22:DA:1070:A:H61	30:DI:8:VAL:HG12	1.78	0.45
30:DI:49:GLU:HG3	30:DI:54:ILE:HD11	1.97	0.45
22:DA:2818:U:OP1	22:DA:2837:A:H1'	2.17	0.45
22:DA:292:U:H2'	22:DA:293:U:C6	2.51	0.45
42:DU:100:GLU:O	42:DU:101:THR:C	2.55	0.45
42:DU:38:ILE:HG21	42:DU:64:ILE:HD13	1.98	0.45
28:DG:1:SER:HB2	28:DG:61:TRP:HB3	1.98	0.45
2:CB:96:LEU:H	2:CB:99:MET:HE3	1.81	0.45
1:AA:215:C:H2'	1:AA:216:U:C6	2.51	0.45
44:BW:18:LYS:H	44:BW:36:ILE:CG1	2.30	0.45
10:AJ:26:VAL:O	10:AJ:29:ALA:HB3	2.16	0.45
6:CF:62:MET:O	6:CF:63:ASN:HB2	2.16	0.45
32:DK:104:THR:C	32:DK:106:GLU:N	2.69	0.45
22:DA:1263:U:H4'	48:D0:6:LYS:HE3	1.98	0.45
22:DA:193:U:O3'	22:DA:803:U:H4'	2.16	0.45
22:DA:197:A:O2'	22:DA:2244:U:OP1	2.34	0.45
8:CH:28:SER:N	8:CH:57:GLU:O	2.48	0.45
22:DA:476:G:O2'	22:DA:477:A:O5'	2.32	0.45
22:DA:582:A:C6	22:DA:583:G:C6	3.04	0.45
1:AA:489:C:H2'	1:AA:490:C:O5'	2.16	0.45
26:BE:7:ASP:CG	26:BE:8:ALA:N	2.69	0.45
1:CA:934:C:H5	1:CA:1344:C:N3	2.15	0.45
4:AD:11:SER:CA	4:AD:18:LEU:HD12	2.40	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:116:VAL:CG1	33:DL:117:THR:H	2.30	0.45
1:CA:763:G:C4	1:CA:764:C:C6	3.04	0.45
1:CA:765:G:C6	1:CA:812:G:C5	3.04	0.45
2:AB:186:VAL:O	2:AB:186:VAL:HG23	2.16	0.45
22:BA:1826:G:C5	22:BA:1827:U:C5	3.04	0.45
22:DA:1011:G:O2'	22:DA:1012:U:OP1	2.31	0.45
22:DA:1452:G:C4	22:DA:2702:G:C6	3.05	0.45
41:DT:28:ASN:C	41:DT:29:THR:HG22	2.37	0.45
5:CE:109:ALA:HB3	5:CE:135:VAL:HG11	1.99	0.45
29:BH:68:ARG:HH12	29:BH:140:ALA:HB1	1.82	0.45
27:DF:39:VAL:HG13	27:DF:49:LEU:HD21	1.95	0.45
1:CA:84:U:C2'	1:CA:85:U:H5'	2.46	0.45
22:DA:971:G:H2'	22:DA:972:A:C5'	2.45	0.45
23:DB:109:A:O2'	23:DB:110:C:C6	2.54	0.45
1:AA:528:C:H5'	1:AA:529:G:OP2	2.16	0.45
32:BK:40:LYS:HG3	32:BK:41:ILE:N	2.32	0.45
32:DK:87:LEU:O	32:DK:89:ASN:N	2.50	0.45
24:BC:252:LYS:HZ2	24:BC:252:LYS:CA	2.28	0.45
1:AA:1324:A:H5'	1:AA:1362:A:O2'	2.16	0.45
14:AN:19:TYR:HB2	14:AN:54:SER:OG	2.17	0.45
1:AA:1215:G:HO2'	1:AA:1216:A:H5'	1.80	0.45
24:BC:12:ARG:HD2	24:BC:12:ARG:HA	1.82	0.45
22:BA:2139:U:O2	22:BA:2152:G:N2	2.50	0.45
24:DC:75:ALA:HA	24:DC:95:TYR:HA	1.97	0.45
24:BC:76:VAL:HG22	24:BC:76:VAL:O	2.14	0.45
24:BC:94:LEU:HD12	24:BC:95:TYR:H	1.81	0.45
22:BA:544:C:H3'	22:BA:545:U:O2	2.16	0.45
13:CM:95:PRO:CD	13:CM:108:ARG:HG2	2.33	0.45
22:DA:1193:G:N2	22:DA:1194:A:C4	2.84	0.45
39:DR:89:HIS:O	39:DR:89:HIS:CD2	2.70	0.45
22:DA:416:U:N3	22:DA:417:C:C4	2.85	0.45
12:AL:33:CYS:H	12:AL:54:VAL:CG1	2.27	0.45
36:DO:30:ARG:HG3	36:DO:35:ILE:HD11	1.98	0.45
22:DA:2296:U:C5	36:DO:9:ARG:NH2	2.81	0.45
1:CA:940:C:C5'	7:CG:101:ARG:NH2	2.76	0.45
22:DA:686:U:OP2	56:DA:3703:HOH:O	2.21	0.45
26:BE:112:LEU:CD1	26:BE:186:VAL:HG11	2.34	0.45
23:DB:38:C:C4'	36:DO:100:HIS:NE2	2.78	0.45
22:BA:777:G:H2'	22:BA:778:G:H8	1.82	0.45
33:DL:124:GLY:H	33:DL:143:GLU:CG	2.29	0.45
22:DA:2443:C:C2'	22:DA:2444:G:O4'	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:360:U:H5'	22:BA:361:G:OP1	2.16	0.45
24:DC:32:LEU:HD23	24:DC:63:ILE:HG13	1.99	0.45
12:AL:35:ARG:CB	12:AL:37:TYR:CE1	2.99	0.45
22:BA:528:A:C2	22:BA:2042:A:H2'	2.51	0.45
36:BO:14:ALA:O	36:BO:15:ARG:C	2.54	0.45
22:DA:1954:G:O2'	22:DA:1955:U:OP2	2.35	0.45
1:CA:110:C:H2'	1:CA:111:G:H8	1.75	0.45
11:CK:64:VAL:CG2	11:CK:65:ALA:N	2.79	0.45
22:DA:2622:U:O2'	22:DA:2824:C:N4	2.50	0.45
10:AJ:91:ASP:N	10:AJ:91:ASP:OD1	2.49	0.45
39:BR:41:ILE:HG22	39:BR:42:ALA:N	2.32	0.45
34:BM:6:ARG:O	34:BM:7:THR:HG23	2.16	0.45
23:BB:33:G:C2'	23:BB:34:A:H5'	2.47	0.45
22:BA:478:A:N6	22:BA:480:A:C6	2.84	0.45
1:CA:129:A:O2'	1:CA:130:A:H8	1.95	0.45
22:BA:2808:G:O2'	22:BA:2809:A:OP2	2.34	0.45
22:BA:312:G:H2'	22:BA:313:G:H8	1.82	0.45
22:BA:1858:A:H8	22:BA:1858:A:OP2	2.00	0.45
22:BA:1859:U:H2'	22:BA:1860:G:H8	1.82	0.45
19:AS:80:ARG:HG3	19:AS:80:ARG:O	2.16	0.45
2:CB:9:LEU:N	2:CB:9:LEU:HD23	2.30	0.45
1:CA:669:G:N2	1:CA:738:C:C2	2.84	0.45
39:DR:66:HIS:CD2	39:DR:94:THR:CG2	3.00	0.45
22:DA:1043:C:N4	22:DA:1044:C:C5	2.85	0.45
24:DC:2:VAL:O	24:DC:3:VAL:CB	2.64	0.45
22:BA:825:A:C2'	22:BA:826:U:H5'	2.47	0.45
22:DA:754:U:H2'	22:DA:755:U:C6	2.52	0.45
36:DO:75:GLY:HA3	36:DO:109:ALA:O	2.17	0.45
19:CS:79:TYR:CD1	19:CS:80:ARG:HD2	2.51	0.45
22:DA:1982:U:H6	22:DA:1982:U:C5'	2.29	0.45
22:BA:2466:C:C5'	52:B4:5:ALA:HB3	2.46	0.45
18:AR:22:TYR:CA	18:AR:57:ALA:HB1	2.47	0.45
22:BA:735:A:H3'	22:BA:736:C:C6	2.51	0.45
22:BA:2243:U:O2	22:BA:2434:A:C2	2.70	0.45
24:DC:176:ARG:C	24:DC:178:GLY:N	2.69	0.45
45:DX:17:ARG:NH1	45:DX:23:ALA:HB2	2.32	0.45
45:DX:40:GLU:O	45:DX:43:LYS:N	2.50	0.45
28:BG:27:GLY:O	28:BG:28:LYS:C	2.54	0.45
20:AT:38:ILE:HG12	20:AT:38:ILE:H	1.42	0.45
22:BA:1064:C:H4'	30:BI:89:SER:HB2	1.98	0.45
28:BG:131:VAL:HG23	28:BG:131:VAL:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1128:C:H1'	1:CA:1148:U:O4	2.15	0.45
22:DA:2816:G:H1'	48:D0:40:HIS:CD2	2.52	0.45
35:DN:10:LEU:HA	35:DN:10:LEU:HD13	1.72	0.45
12:CL:89:LEU:CB	12:CL:92:VAL:CG2	2.79	0.45
22:DA:1238:G:C2'	22:DA:1239:G:H5'	2.47	0.45
24:BC:257:ARG:CD	24:BC:269:ARG:HH22	2.29	0.45
22:DA:1359:A:C2	22:DA:1360:G:O4'	2.70	0.45
22:DA:2217:G:O2'	22:DA:2218:G:O5'	2.35	0.45
9:CI:98:ARG:HG2	9:CI:103:VAL:HG21	1.98	0.45
1:CA:206:C:O5'	1:CA:207:C:OP2	2.35	0.45
34:DM:36:VAL:O	34:DM:127:LYS:O	2.35	0.45
1:AA:396:C:C3'	1:AA:397:A:H5''	2.46	0.45
18:CR:39:VAL:HG13	18:CR:40:PRO:CD	2.39	0.45
44:BW:28:GLU:HB3	44:BW:31:LEU:CG	2.46	0.45
22:DA:558:U:H4'	31:DJ:111:LYS:NZ	2.31	0.45
22:DA:2394:C:H41	51:D3:30:HIS:HE1	1.62	0.45
51:D3:30:HIS:HB3	51:D3:31:ILE:H	1.39	0.45
33:DL:47:ARG:H	33:DL:47:ARG:HG3	1.56	0.45
17:AQ:67:SER:O	17:AQ:68:LYS:C	2.55	0.45
22:DA:478:A:C6	22:DA:480:A:C6	3.05	0.45
1:CA:1322:C:O2	1:CA:1322:C:C2'	2.61	0.45
1:CA:996:A:C2	1:CA:997:U:C4	3.05	0.45
19:CS:5:LYS:HB2	19:CS:6:LYS:H	1.59	0.45
22:DA:621:A:C2	22:DA:622:G:H1'	2.52	0.45
37:DP:4:ILE:O	37:DP:4:ILE:HG22	2.16	0.45
22:BA:1866:A:O2'	22:BA:1867:G:C5'	2.64	0.45
10:AJ:17:LEU:HD21	10:AJ:96:VAL:HG22	1.98	0.45
5:CE:98:ALA:O	5:CE:121:ASN:HB2	2.17	0.45
2:AB:221:ARG:HG2	2:AB:221:ARG:O	2.16	0.45
25:DD:50:VAL:HG21	25:DD:82:PHE:CD2	2.51	0.45
22:DA:2843:G:H2'	22:DA:2844:G:C8	2.51	0.45
27:DF:39:VAL:CB	27:DF:49:LEU:HG	2.47	0.45
6:AF:38:ARG:HB3	6:AF:63:ASN:CB	2.26	0.45
8:AH:4:ASP:OD2	8:AH:76:ARG:NH1	2.50	0.45
1:CA:277:C:C2'	1:CA:278:G:H8	2.20	0.45
1:AA:533:A:C3'	1:AA:534:U:H5''	2.47	0.45
32:DK:60:ALA:CB	32:DK:86:LEU:HA	2.47	0.45
1:CA:1304:G:C2'	1:CA:1333:A:H61	2.30	0.45
1:AA:1269:A:C8	1:AA:1270:G:H1'	2.52	0.45
1:AA:1270:G:O3'	1:AA:1314:C:H5'	2.17	0.45
1:AA:1202:U:C6	1:AA:1203:C:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:103:ARG:NE	35:BN:110:MET:CE	2.80	0.45
1:AA:32:A:C2	1:AA:33:A:C5	3.04	0.45
23:DB:87:U:O2'	23:DB:88:C:OP1	2.31	0.45
15:CO:22:GLY:O	15:CO:23:SER:C	2.53	0.45
1:CA:1297:G:O2'	7:CG:113:LYS:HE3	2.16	0.45
22:DA:812:C:H42	22:DA:1195:G:H1	1.63	0.45
2:CB:162:VAL:HG11	2:CB:172:ILE:HD11	1.97	0.45
1:CA:587:G:C2	1:CA:755:G:C6	3.05	0.45
1:CA:560:A:C5	5:CE:127:TYR:CE2	3.05	0.45
6:CF:45:ARG:O	6:CF:56:LYS:HA	2.17	0.45
7:AG:107:ALA:HA	7:AG:122:GLU:HG3	1.98	0.45
22:DA:734:A:C5	22:DA:735:A:C8	3.05	0.45
29:DH:94:ILE:CB	29:DH:98:ASP:HB2	2.46	0.45
1:CA:21:G:H1'	1:CA:915:A:N6	2.32	0.45
28:DG:124:CYS:CB	28:DG:130:ILE:HA	2.38	0.45
5:CE:25:LYS:HZ3	5:CE:25:LYS:HB2	1.80	0.45
22:BA:2063:C:C2'	22:BA:2064:C:H5'	2.47	0.45
16:CP:48:GLU:CD	16:CP:51:ARG:HB2	2.37	0.45
48:B0:33:SER:O	48:B0:34:GLY:C	2.54	0.45
1:AA:173:U:C2	1:AA:197:A:N1	2.84	0.45
1:CA:47:C:O2'	1:CA:48:C:C5'	2.59	0.45
23:BB:53:A:O2'	23:BB:54:G:C5'	2.57	0.45
22:DA:156:A:H3'	22:DA:156:A:OP2	2.16	0.45
20:CT:2:ASN:O	20:CT:3:ILE:C	2.54	0.45
34:DM:69:PRO:O	34:DM:70:ASP:CB	2.62	0.45
31:BJ:13:ARG:O	31:BJ:14:ASP:CB	2.60	0.45
22:BA:1379:U:H5'	22:BA:1379:U:H6	1.81	0.45
22:BA:2340:A:H2'	22:BA:2341:G:H8	1.80	0.45
25:DD:110:THR:HG23	25:DD:171:THR:CA	2.47	0.45
22:DA:2902:C:O2'	22:DA:2903:U:H5'	2.15	0.45
3:AC:71:ARG:N	3:AC:72:PRO:CD	2.80	0.45
22:BA:26:G:C6	22:BA:27:G:N1	2.85	0.45
22:BA:1822:C:H6	22:BA:1822:C:O5'	2.00	0.45
22:DA:2478:A:H2'	22:DA:2479:U:O4'	2.17	0.45
1:CA:340:U:C2	1:CA:350:G:N2	2.85	0.45
22:BA:1450:G:C4	22:BA:1451:C:C5	3.05	0.45
26:DE:139:LYS:HZ3	26:DE:139:LYS:HB2	1.78	0.45
1:AA:665:A:N9	1:AA:733:G:H1'	2.32	0.45
8:CH:65:PHE:CE2	8:CH:66:GLN:HG2	2.50	0.45
22:BA:1997:C:H6	22:BA:1997:C:C5'	2.30	0.45
22:DA:2467:C:N4	22:DA:2468:A:N1	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1431:A:C6	1:CA:1432:G:C6	3.04	0.45
22:BA:1687:G:H2'	22:BA:1688:U:C6	2.52	0.45
1:AA:1064:G:O4'	1:AA:1066:C:C6	2.69	0.45
22:DA:1587:G:N2	22:DA:1588:G:C1'	2.80	0.45
22:BA:1486:U:C2'	22:BA:1487:U:H5'	2.47	0.45
7:AG:90:VAL:HG22	7:AG:91:ARG:N	2.32	0.45
23:BB:5:U:H2'	23:BB:6:G:C8	2.52	0.45
1:AA:1405:G:H1'	1:AA:1519:A:O4'	2.17	0.45
22:DA:1042:G:C5	22:DA:1043:C:C4	3.04	0.45
22:BA:1682:G:H2'	22:BA:1683:U:H6	1.78	0.45
22:DA:1823:G:C5'	56:DC:410:HOH:O	2.62	0.45
1:CA:608:A:H2'	1:CA:609:A:O4'	2.16	0.45
1:CA:524:G:C4	1:CA:525:C:C5	3.05	0.45
1:CA:835:U:C2	1:CA:852:G:C6	3.05	0.45
22:BA:1595:C:H6	22:BA:1595:C:O5'	1.99	0.45
22:DA:935:C:O2'	22:DA:936:A:H5'	2.17	0.45
22:BA:2865:U:C2	22:BA:2866:U:C5	3.05	0.45
22:BA:2081:U:H2'	22:BA:2082:A:C8	2.52	0.45
22:BA:103:A:H2'	22:BA:104:A:H8	1.81	0.45
28:DG:10:VAL:HG23	28:DG:10:VAL:O	2.17	0.45
14:AN:64:ARG:HB2	14:AN:77:GLY:O	2.17	0.45
27:DF:58:ALA:HB1	27:DF:139:GLU:HG2	1.99	0.45
22:BA:1950:G:H5''	22:BA:1951:U:OP2	2.17	0.45
28:DG:161:VAL:HG12	28:DG:161:VAL:O	2.16	0.45
22:BA:2645:G:C3'	22:BA:2646:C:H5'	2.45	0.45
22:BA:341:C:H2'	22:BA:342:A:O4'	2.17	0.45
22:BA:1060:U:C5'	22:BA:1061:U:OP1	2.62	0.45
12:CL:43:LYS:HB3	12:CL:44:PRO:CD	2.29	0.45
22:DA:2204:G:N3	22:DA:2205:A:C8	2.85	0.45
24:DC:24:HIS:CG	24:DC:25:LYS:N	2.84	0.45
44:DW:18:LYS:HZ2	44:DW:18:LYS:HA	1.80	0.45
22:DA:1825:U:OP1	24:DC:246:PRO:HG3	2.17	0.45
22:DA:1056:G:O5'	22:DA:1085:A:C2	2.70	0.45
48:D0:42:ILE:HD11	48:D0:48:TYR:CB	2.37	0.45
35:DN:33:ILE:HG23	35:DN:114:GLU:HB2	1.98	0.45
1:AA:1532:U:O2	1:AA:1534:A:H8	1.99	0.45
22:DA:323:C:OP1	22:DA:324:A:C8	2.70	0.45
42:DU:90:LYS:CB	42:DU:92:VAL:HG13	2.46	0.45
24:BC:141:HIS:CD2	24:BC:194:VAL:N	2.85	0.45
22:DA:1373:A:H4'	22:DA:2212:A:H1'	1.99	0.45
22:DA:120:U:C1'	22:DA:149:A:C8	2.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1158:C:N3	1:CA:1160:G:C8	2.85	0.45
1:AA:215:C:O2	1:AA:465:A:N6	2.50	0.45
1:AA:468:A:H2'	1:AA:469:C:C6	2.52	0.45
22:DA:538:A:C5'	31:DJ:7:LYS:HZ3	2.29	0.45
11:CK:123:PRO:HB2	11:CK:125:LYS:CG	2.47	0.45
21:CU:33:ARG:CZ	21:CU:34:ARG:HB2	2.47	0.45
22:DA:1536:C:H5''	22:DA:1537:G:C5'	2.47	0.45
44:BW:36:ILE:O	44:BW:39:GLN:HB3	2.16	0.45
1:CA:6:G:O6	5:CE:99:SER:HB2	2.17	0.45
10:AJ:35:GLN:HG2	10:AJ:77:VAL:CG1	2.46	0.45
10:AJ:77:VAL:O	10:AJ:79:PRO:HD2	2.16	0.45
2:AB:46:VAL:CB	2:AB:47:PRO:HD3	2.18	0.45
45:BX:77:TYR:C	45:BX:77:TYR:CD1	2.90	0.45
22:DA:2077:A:C8	22:DA:2435:A:N3	2.85	0.45
1:AA:267:C:HO2'	1:AA:268:U:H6	1.64	0.45
17:AQ:13:SER:HB3	17:AQ:16:MET:HE1	1.98	0.45
1:AA:945:G:H21	1:AA:1334:G:H4'	1.81	0.45
22:DA:481:G:OP2	42:DU:43:LYS:HA	2.17	0.45
38:DQ:9:ALA:C	38:DQ:11:ALA:H	2.19	0.45
26:BE:8:ALA:O	26:BE:9:GLN:C	2.54	0.45
1:CA:1210:C:C2'	1:CA:1211:U:O5'	2.65	0.45
1:CA:1361:G:C2'	1:CA:1362:A:H5'	2.39	0.45
14:CN:52:ARG:HH21	14:CN:58:ARG:NE	2.15	0.45
19:CS:5:LYS:HE3	19:CS:6:LYS:N	2.32	0.45
20:AT:47:GLN:HE21	20:AT:82:ILE:HD13	1.80	0.45
1:CA:764:C:O2	1:CA:764:C:C2'	2.54	0.45
21:AU:24:LYS:O	21:AU:26:GLY:N	2.50	0.45
10:AJ:71:LEU:O	10:AJ:72:ARG:HD3	2.17	0.45
41:BT:37:ASP:OD2	41:BT:37:ASP:N	2.49	0.45
24:BC:229:HIS:O	24:BC:231:HIS:O	2.35	0.45
41:BT:2:ILE:HG13	41:BT:3:ARG:NH2	2.32	0.45
9:CI:29:ILE:CD1	9:CI:38:PHE:CE1	2.99	0.45
22:DA:2680:U:OP2	25:DD:114:LYS:CD	2.65	0.45
27:DF:137:PHE:HB2	27:DF:138:PRO:CD	2.39	0.45
1:CA:186:C:O2'	1:CA:187:G:H5'	2.17	0.45
8:AH:14:ARG:HB2	8:AH:74:ILE:HG22	1.98	0.45
12:AL:24:GLU:OE1	12:AL:29:LYS:NZ	2.50	0.45
1:CA:247:G:C2	1:CA:248:C:C4	3.05	0.45
14:AN:15:LEU:HD23	14:AN:18:LYS:CD	2.29	0.45
42:BU:10:VAL:CG2	42:BU:69:VAL:HB	2.47	0.45
22:DA:2197:U:C5	22:DA:2224:G:C5	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1654:A:O2'	22:DA:1655:A:P	2.74	0.45
32:DK:107:LEU:C	32:DK:109:SER:N	2.69	0.45
1:CA:1250:A:C5	1:CA:1287:A:N7	2.85	0.45
52:B4:26:ILE:HD13	52:B4:26:ILE:N	2.31	0.45
22:BA:1326:U:C2'	22:BA:1327:A:H5'	2.46	0.45
22:DA:2314:A:O2'	22:DA:2315:G:C8	2.70	0.45
22:BA:544:C:N4	22:BA:548:G:OP1	2.50	0.45
1:CA:261:U:H5	20:CT:73:ARG:NE	2.12	0.45
20:CT:60:GLN:CD	20:CT:65:LEU:HD12	2.37	0.45
8:CH:82:LEU:HD12	12:CL:3:VAL:HG11	1.99	0.45
12:CL:5:GLN:HG3	12:CL:9:LYS:HZ2	1.81	0.45
1:AA:1091:U:C2	1:AA:1095:U:C4	3.05	0.45
24:DC:129:LEU:O	24:DC:130:PRO:C	2.55	0.45
22:DA:2407:A:C2	22:DA:2408:U:N3	2.84	0.45
22:BA:1644:C:HO2'	22:BA:1645:G:H5'	1.76	0.45
22:BA:659:G:C5	22:BA:660:C:C4	3.05	0.45
2:CB:162:VAL:HG11	2:CB:172:ILE:CD1	2.47	0.45
1:CA:588:G:N2	1:CA:589:U:H1'	2.31	0.45
22:BA:847:U:O2	22:BA:934:U:H1'	2.17	0.45
17:AQ:45:VAL:HA	17:AQ:72:TRP:O	2.17	0.45
17:CQ:58:VAL:HB	17:CQ:74:LEU:HD12	1.96	0.45
1:CA:1499:A:H1'	1:CA:1520:C:H5'	1.99	0.45
37:BP:31:VAL:HG22	37:BP:32:VAL:N	2.31	0.45
22:DA:674:G:C4'	26:DE:69:ARG:HG2	2.47	0.45
22:DA:675:A:P	26:DE:60:TRP:CZ2	3.10	0.45
22:BA:2531:A:OP1	28:BG:174:LYS:CG	2.65	0.45
22:DA:1713:A:H4'	22:DA:1714:U:OP1	2.15	0.45
22:DA:2191:A:C4	22:DA:2192:U:C5	3.04	0.45
39:BR:24:LYS:HE2	39:BR:24:LYS:HB3	1.64	0.45
14:CN:31:SER:OG	14:CN:45:LEU:HD13	2.17	0.45
1:AA:1197:A:OP2	56:AA:1782:HOH:O	2.21	0.45
22:DA:2142:A:H3'	22:DA:2143:C:H4'	1.98	0.45
24:BC:170:TYR:HD2	24:BC:183:VAL:C	2.21	0.45
45:DX:31:ASN:ND2	45:DX:31:ASN:N	2.48	0.45
34:DM:68:PHE:O	34:DM:70:ASP:HB2	2.16	0.45
22:DA:2821:A:H2'	22:DA:2822:G:O4'	2.17	0.45
22:BA:2547:A:C2	22:BA:2562:U:C2	3.04	0.45
22:DA:283:G:H3'	22:DA:284:U:H6	1.80	0.45
35:BN:67:PHE:HE2	35:BN:71:ARG:NH1	2.14	0.45
1:AA:596:A:C5'	1:AA:596:A:C8	2.99	0.45
30:BI:52:LEU:HD12	30:BI:52:LEU:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:34:THR:HG1	11:CK:35:ASP:H	1.65	0.45
37:DP:31:VAL:O	37:DP:32:VAL:CG1	2.64	0.45
22:DA:958:U:H6	22:DA:958:U:H2'	1.46	0.45
10:CJ:81:GLU:C	10:CJ:83:THR:H	2.19	0.45
18:AR:53:GLN:O	18:AR:56:ARG:HB3	2.17	0.45
22:DA:2401:U:H3'	22:DA:2402:U:H5''	1.98	0.45
43:BV:6:ALA:HB1	43:BV:41:GLU:O	2.16	0.45
34:BM:21:ALA:HB3	34:BM:100:LYS:N	2.32	0.45
25:BD:77:ARG:HD3	25:BD:200:ASP:OD1	2.16	0.45
22:DA:121:G:H1'	22:DA:148:U:C2	2.52	0.45
22:BA:1850:G:C5	22:BA:1851:U:C5	3.04	0.45
22:BA:1223:G:P	39:BR:68:ARG:HH12	2.40	0.45
43:BV:2:PHE:HD1	43:BV:50:MET:HE2	1.81	0.45
31:BJ:40:HIS:N	31:BJ:40:HIS:CD2	2.85	0.45
22:BA:645:C:N4	22:BA:2350:C:C4'	2.80	0.45
32:BK:47:ILE:HA	32:BK:47:ILE:HD12	1.78	0.45
1:CA:1508:A:H2'	1:CA:1509:C:O4'	2.16	0.45
24:BC:116:GLN:N	24:BC:127:ASN:OD1	2.44	0.45
1:AA:82:G:N2	1:AA:84:U:H3	2.15	0.45
22:BA:2417:C:H2'	22:BA:2418:A:O5'	2.17	0.45
22:DA:1838:C:C4	22:DA:1899:A:C4	3.05	0.45
3:CC:74:ILE:O	3:CC:74:ILE:HG12	2.17	0.45
34:DM:49:ALA:O	34:DM:120:ALA:HB1	2.17	0.45
22:BA:1343:G:H2'	22:BA:1344:U:C6	2.52	0.45
33:DL:71:ALA:HA	33:DL:74:THR:HB	1.99	0.45
22:DA:2363:G:O2'	22:DA:2364:C:H5'	2.16	0.45
7:CG:48:THR:HG22	7:CG:121:ASN:OD1	2.17	0.45
23:BB:57:A:H2'	23:BB:58:A:C8	2.52	0.45
22:BA:1319:C:O2'	22:BA:1320:C:H5'	2.17	0.45
22:DA:1549:A:C6	22:DA:1550:C:N3	2.85	0.45
6:AF:34:GLY:C	6:AF:35:LYS:HG2	2.37	0.45
22:DA:1876:A:H2'	22:DA:1876:A:N3	2.31	0.45
35:DN:95:THR:HG23	35:DN:95:THR:O	2.17	0.45
52:B4:1:MET:CE	52:B4:34:LYS:HG2	2.46	0.45
22:DA:327:G:H21	42:DU:67:SER:HB2	1.82	0.45
22:BA:1063:G:H5'	30:BI:76:ALA:HB3	1.98	0.45
33:BL:29:LYS:O	33:BL:30:THR:HG23	2.17	0.45
33:BL:110:VAL:HG12	33:BL:131:ALA:HB2	1.99	0.45
22:DA:1805:A:N3	24:DC:49:THR:HG22	2.32	0.45
4:AD:28:ASP:O	4:AD:29:THR:O	2.35	0.45
49:D1:28:THR:C	49:D1:29:LYS:HG2	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:765:C:C2	22:DA:766:U:C6	3.05	0.45
22:DA:1071:G:O4'	22:DA:1088:A:O2'	2.34	0.45
1:AA:1508:A:O2'	1:AA:1509:C:C5'	2.63	0.45
22:DA:1206:G:O2'	22:DA:1207:C:H5'	2.17	0.45
22:DA:310:A:C5	22:DA:312:G:C5	3.05	0.45
46:DY:56:LEU:HD22	46:DY:56:LEU:N	2.32	0.45
22:DA:2752:C:O2'	22:DA:2753:A:C8	2.70	0.45
1:CA:207:C:O2	1:CA:207:C:H2'	2.16	0.45
1:AA:1331:G:C2'	1:AA:1332:A:OP2	2.64	0.45
4:CD:29:THR:O	4:CD:31:CYS:N	2.44	0.45
28:BG:94:ARG:HA	28:BG:127:GLN:O	2.17	0.45
22:DA:2024:G:C5	22:DA:2040:G:C2	3.05	0.45
22:DA:2056:G:C2	22:DA:2057:G:N7	2.85	0.45
29:BH:5:LEU:HD23	29:BH:36:ALA:HB2	1.97	0.45
22:DA:677:A:O2'	22:DA:2071:A:H5'	2.17	0.45
17:AQ:48:GLU:OE1	17:AQ:49:ASN:N	2.41	0.45
8:CH:57:GLU:HG3	8:CH:58:LEU:H	1.81	0.45
22:DA:502:A:C5	22:DA:505:A:N7	2.85	0.45
26:BE:175:ILE:HD11	26:BE:180:LEU:HD11	1.99	0.45
22:BA:1654:A:H2'	22:BA:1655:A:C8	2.47	0.45
22:BA:1865:U:O2'	22:BA:1866:A:H5''	2.16	0.45
29:BH:89:LYS:C	29:BH:90:LEU:HD12	2.36	0.45
34:BM:69:PRO:O	34:BM:70:ASP:CG	2.55	0.45
41:DT:25:GLU:HA	41:DT:29:THR:O	2.17	0.45
36:BO:51:ALA:HB3	36:BO:78:VAL:HG13	1.98	0.45
29:BH:130:VAL:HG23	29:BH:131:SER:H	1.82	0.45
6:AF:38:ARG:O	6:AF:39:LEU:HB2	2.17	0.45
1:CA:183:C:O2	1:CA:183:C:C2'	2.65	0.45
17:CQ:67:SER:OG	17:CQ:70:LYS:HD3	2.17	0.45
23:DB:52:A:O2'	23:DB:53:A:C8	2.62	0.45
23:DB:11:C:C5	23:DB:12:C:C5	3.04	0.45
23:DB:67:G:HO2'	23:DB:68:C:P	2.39	0.45
32:BK:43:ILE:HD13	32:BK:52:VAL:HG21	1.96	0.45
1:AA:1324:A:H2'	1:AA:1325:C:O4'	2.17	0.45
14:AN:27:LYS:HA	14:AN:30:ILE:HG22	1.99	0.45
14:AN:27:LYS:O	14:AN:31:SER:HB2	2.17	0.45
1:AA:1049:U:H4'	1:AA:1050:G:OP2	2.16	0.45
22:BA:2151:U:H6	22:BA:2151:U:H2'	1.30	0.45
22:DA:569:U:OP1	22:DA:945:A:H2'	2.17	0.45
22:DA:1184:U:OP1	47:DZ:29:ARG:CD	2.65	0.45
13:CM:21:ILE:CG2	13:CM:22:TYR:N	2.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1081:U:N3	22:BA:1082:U:C5	2.85	0.45
16:AP:19:VAL:CG1	16:AP:37:GLY:CA	2.94	0.45
1:AA:1154:G:N3	1:AA:1155:A:C8	2.84	0.45
1:AA:453:G:N1	1:AA:454:G:C4	2.85	0.45
1:AA:480:U:C5'	1:AA:481:G:OP2	2.62	0.45
1:CA:654:G:O2'	1:CA:655:A:C5'	2.64	0.45
22:DA:483:A:C8	22:DA:484:C:C5	3.05	0.45
3:CC:179:ALA:HB1	3:CC:202:PHE:HE1	1.82	0.45
22:DA:2298:A:O2'	22:DA:2299:U:O4'	2.34	0.45
22:DA:2666:C:O2	22:DA:2666:C:O4'	2.33	0.45
1:CA:756:C:C2	1:CA:757:U:C6	3.05	0.45
22:DA:777:G:O2'	22:DA:778:G:O5'	2.31	0.45
17:AQ:10:ARG:O	17:AQ:22:VAL:CG1	2.65	0.45
22:DA:1686:C:C2	22:DA:1703:G:C2	3.04	0.45
29:DH:59:ALA:HA	29:DH:63:ALA:CB	2.45	0.45
1:CA:1500:A:H2'	1:CA:1501:C:O5'	2.16	0.45
22:BA:226:A:C6	22:BA:227:A:C6	3.04	0.45
22:DA:425:G:C6	22:DA:426:C:N4	2.85	0.45
1:CA:1167:A:O2'	1:CA:1168:U:OP1	2.35	0.45
22:BA:2756:U:H1'	22:BA:2757:A:H5''	1.99	0.45
11:AK:51:PHE:HE1	11:AK:60:PHE:CE2	2.18	0.45
1:AA:691:G:O6	11:AK:56:LYS:HE2	2.17	0.45
33:BL:62:PRO:HG3	51:B3:24:LYS:CD	2.47	0.45
13:CM:2:ARG:O	13:CM:3:ILE:HB	2.17	0.45
22:DA:1833:C:H2'	22:DA:1834:U:C6	2.52	0.45
36:BO:59:ALA:CA	36:BO:62:LEU:CD1	2.95	0.45
22:BA:900:A:C5	22:BA:901:C:C6	3.05	0.45
11:CK:107:THR:HG22	11:CK:108:ASN:N	2.32	0.45
41:BT:33:LYS:HG3	41:BT:80:TRP:HE3	1.79	0.45
1:CA:1480:A:C5	1:CA:1481:U:C6	3.04	0.45
1:AA:122:G:H2'	1:AA:123:U:C6	2.52	0.45
22:BA:2615:U:H2'	22:BA:2616:C:H6	1.82	0.45
1:AA:727:G:N1	1:AA:731:G:C6	2.84	0.45
2:CB:111:LYS:O	2:CB:111:LYS:HD3	2.16	0.45
22:DA:2362:C:P	51:D3:43:LEU:HD21	2.57	0.45
1:CA:878:A:H2'	1:CA:879:C:H6	1.81	0.45
27:BF:13:LYS:HG3	27:BF:14:LYS:N	2.31	0.45
40:BS:37:THR:HB	40:BS:38:TYR:CE1	2.52	0.45
6:CF:75:GLU:O	6:CF:79:ARG:HG3	2.17	0.45
29:DH:75:LEU:N	29:DH:75:LEU:HD12	2.32	0.45
35:BN:96:ARG:NH1	35:BN:116:VAL:HG23	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1131:G:O2'	1:AA:1132:C:O5'	2.34	0.45
15:AO:45:HIS:O	15:AO:47:LYS:N	2.44	0.45
22:DA:263:G:H4'	22:DA:430:A:O4'	2.17	0.45
1:AA:677:U:H2'	1:AA:678:U:H6	1.82	0.45
31:BJ:84:ILE:HG23	31:BJ:84:ILE:O	2.17	0.45
4:AD:125:ASN:HA	4:AD:141:VAL:CG2	2.47	0.45
22:BA:2647:U:O2'	22:BA:2648:G:H5'	2.17	0.45
2:AB:27:LYS:N	2:AB:28:PRO:CD	2.79	0.45
6:CF:81:ASN:C	6:CF:81:ASN:ND2	2.70	0.45
22:DA:961:C:C5	22:DA:2456:C:H4'	2.51	0.45
1:AA:583:A:C6	1:AA:759:A:N7	2.84	0.45
1:AA:1098:C:O2'	1:AA:1099:G:H5'	2.17	0.45
26:BE:68:ALA:O	26:BE:69:ARG:C	2.54	0.45
22:BA:2804:U:O2'	22:BA:2805:C:H5'	2.16	0.45
16:CP:2:VAL:HG11	16:CP:65:ALA:HB2	1.97	0.45
51:B3:28:LEU:HD12	51:B3:28:LEU:HA	1.73	0.45
3:CC:106:ARG:HG2	3:CC:107:LYS:HG3	1.98	0.45
1:AA:1489:G:C2'	1:AA:1490:U:H5'	2.47	0.45
22:BA:536:G:H2'	22:BA:537:G:C5'	2.47	0.45
22:BA:930:G:H5''	22:BA:931:U:OP2	2.16	0.45
1:CA:1436:U:H2'	1:CA:1437:A:C8	2.52	0.45
22:BA:2536:G:C5	22:BA:2537:U:C4	3.05	0.45
22:BA:2693:G:O2'	22:BA:2694:G:H5'	2.16	0.45
22:BA:1398:C:H2'	22:BA:1399:C:C6	2.51	0.45
22:DA:1659:G:C2	22:DA:2002:G:N3	2.85	0.45
34:BM:25:ASP:OD2	34:BM:25:ASP:N	2.50	0.45
1:AA:162:A:C5	1:AA:163:C:H1'	2.52	0.45
22:DA:1958:C:P	56:DA:3716:HOH:O	2.74	0.45
22:BA:2748:A:N6	22:BA:2749:A:C6	2.85	0.45
5:AE:152:VAL:O	5:AE:155:LYS:CE	2.65	0.45
22:BA:636:G:H3'	33:BL:128:THR:HG21	1.98	0.45
1:CA:1285:A:C4'	1:CA:1286:U:OP1	2.58	0.45
22:DA:1389:G:N2	22:DA:1390:U:O2	2.50	0.45
41:DT:14:PRO:CG	41:DT:15:HIS:N	2.80	0.45
41:DT:34:VAL:O	41:DT:35:ALA:HB3	2.17	0.45
22:DA:2271:G:HO2'	22:DA:2272:U:H5'	1.78	0.45
23:DB:100:G:H2'	23:DB:101:A:C8	2.52	0.45
1:CA:35:G:H21	12:CL:114:SER:HB3	1.81	0.45
22:DA:1208:C:N4	22:DA:1239:G:C6	2.85	0.45
22:DA:306:U:C5	22:DA:307:G:C5	3.06	0.45
22:DA:323:C:OP1	22:DA:324:A:H8	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:75:G:O2'	22:DA:76:C:H6	2.00	0.45
46:DY:57:LEU:HD13	46:DY:60:LYS:CE	2.45	0.45
51:B3:32:LEU:O	51:B3:33:THR:C	2.53	0.45
22:DA:116:C:C2'	22:DA:117:G:C5'	2.95	0.45
22:DA:1426:G:C5'	22:DA:1427:A:OP2	2.65	0.45
22:DA:164:C:HO2'	22:DA:165:A:H5'	1.79	0.45
22:DA:37:C:O2	22:DA:444:C:N3	2.50	0.45
1:CA:207:C:O2	1:CA:213:G:C6	2.70	0.45
1:CA:214:C:H2'	1:CA:215:C:C5	2.51	0.45
1:AA:953:G:H2'	1:AA:954:G:C5'	2.47	0.45
13:AM:76:ILE:O	13:AM:79:LEU:HB2	2.17	0.45
1:AA:204:G:N3	1:AA:465:A:C4	2.85	0.45
1:CA:429:U:H4'	1:CA:430:A:O5'	2.17	0.45
22:DA:1529:G:O6	22:DA:1543:G:C2	2.70	0.45
44:BW:49:ASN:HA	44:BW:61:LYS:H	1.82	0.45
43:DV:41:GLU:HG2	43:DV:42:LEU:N	2.32	0.45
37:BP:87:ARG:HG3	37:BP:88:ARG:H	1.82	0.45
11:CK:91:GLY:O	11:CK:94:SER:N	2.49	0.45
22:DA:2015:A:C2'	22:DA:2016:U:H5'	2.47	0.45
29:BH:31:VAL:CB	29:BH:32:PRO:HD2	2.42	0.45
40:DS:33:LEU:N	40:DS:36:LEU:CD2	2.80	0.45
22:DA:1289:C:H1'	22:DA:1330:C:H5'	1.98	0.45
1:AA:255:G:O2'	1:AA:256:U:H5'	2.17	0.45
1:CA:642:A:O2'	1:CA:643:C:O5'	2.34	0.45
26:BE:149:ILE:O	26:BE:188:MET:HA	2.16	0.45
1:CA:996:A:N6	1:CA:1046:A:O4'	2.49	0.45
1:AA:164:G:C2'	1:AA:165:G:H5'	2.47	0.45
21:AU:23:GLU:HB3	21:AU:24:LYS:H	1.44	0.45
1:AA:1141:C:O2'	1:AA:1142:G:H8	1.99	0.45
22:BA:1791:A:N6	22:BA:1828:G:O2'	2.45	0.45
36:BO:3:LYS:HG3	36:BO:4:LYS:H	1.81	0.45
33:DL:99:ASN:C	33:DL:100:ILE:HG22	2.37	0.45
22:BA:142:A:C2	22:BA:143:C:N3	2.84	0.45
6:AF:4:TYR:O	6:AF:63:ASN:HA	2.16	0.45
8:AH:31:LEU:O	8:AH:31:LEU:HD12	2.17	0.45
23:DB:59:A:C2'	23:DB:60:C:H5'	2.47	0.45
23:DB:60:C:H2'	23:DB:61:G:H8	1.81	0.45
22:DA:1731:G:HO2'	22:DA:1732:C:H5''	1.76	0.45
22:DA:1731:G:C4'	22:DA:1732:C:OP1	2.46	0.45
27:BF:109:ARG:C	27:BF:136:ILE:HG22	2.38	0.45
32:BK:40:LYS:HE3	32:BK:57:VAL:HG13	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1440:U:H2'	22:DA:1441:G:H8	1.80	0.45
19:AS:51:HIS:HE2	19:AS:53:GLY:C	2.20	0.45
1:CA:1346:A:H5''	9:CI:121:ARG:HH22	1.81	0.45
2:CB:84:LEU:HD12	2:CB:84:LEU:C	2.38	0.45
1:AA:965:U:O2	1:AA:969:A:C2	2.70	0.45
4:AD:149:LYS:HZ2	4:AD:177:MET:HG3	1.82	0.45
2:CB:160:LEU:HD13	2:CB:180:ILE:CG2	2.46	0.45
1:AA:961:U:O2	1:AA:983:A:C4	2.70	0.45
22:DA:225:C:H2'	22:DA:225:C:O2	2.17	0.45
22:DA:230:G:O2'	22:DA:231:A:H8	2.00	0.45
3:CC:140:ALA:O	3:CC:145:ALA:CB	2.55	0.45
1:CA:757:U:H2'	1:CA:758:C:O4'	2.17	0.45
22:DA:2628:C:HO2'	22:DA:2781:A:H2'	1.81	0.45
1:CA:1470:U:C2'	1:CA:1471:U:O5'	2.65	0.45
1:AA:877:G:N2	8:AH:1:SER:N	2.64	0.45
22:BA:1510:G:C4	22:BA:1511:G:C8	3.05	0.45
35:BN:12:ARG:CG	35:BN:12:ARG:NH2	2.75	0.45
22:DA:265:A:N6	22:DA:428:A:O4'	2.49	0.45
1:CA:441:A:C2	1:CA:497:G:C5	3.05	0.45
22:DA:155:A:N1	22:DA:172:A:C6	2.85	0.45
3:AC:76:ILE:HD11	3:AC:102:ILE:HG12	1.97	0.45
22:DA:2141:G:N2	22:DA:2151:U:O2	2.50	0.45
34:DM:69:PRO:O	34:DM:70:ASP:HB3	2.17	0.45
31:DJ:57:LEU:HD21	31:DJ:128:ASN:HA	1.98	0.45
1:CA:346:G:N3	1:CA:346:G:H5''	2.32	0.45
22:DA:351:C:N4	22:DA:352:A:H62	2.14	0.45
22:DA:1468:U:O2	22:DA:1525:A:C2	2.69	0.45
22:BA:2470:G:N2	22:BA:2471:A:C4	2.85	0.45
1:AA:858:G:O2'	1:AA:859:G:C5'	2.65	0.45
51:D3:42:HIS:O	51:D3:45:PRO:HG2	2.17	0.45
22:DA:2417:C:H2'	22:DA:2418:A:O4'	2.16	0.45
22:DA:2367:G:C2'	22:DA:2368:C:H5'	2.45	0.45
22:DA:2369:A:C4	22:DA:2370:G:C8	3.04	0.45
22:DA:981:A:H3'	22:DA:982:C:O2	2.17	0.45
1:CA:337:G:C2	1:CA:338:A:C5	3.05	0.45
15:AO:69:LEU:HD22	15:AO:77:TYR:HB2	1.98	0.45
22:BA:1857:G:H1'	22:BA:1884:G:H22	1.81	0.45
1:CA:718:A:H5'	11:CK:118:ASN:CG	2.36	0.45
13:CM:84:CYS:SG	13:CM:85:TYR:N	2.90	0.45
18:AR:33:THR:HG22	18:AR:37:LYS:O	2.17	0.45
22:BA:447:A:N1	22:BA:454:A:H2'	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:70:LYS:HG3	24:BC:101:ARG:CZ	2.47	0.45
18:CR:28:LEU:C	18:CR:30:ASN:N	2.69	0.45
1:AA:737:C:C2	1:AA:738:C:C5	3.04	0.45
22:DA:2045:C:H2'	22:DA:2046:G:O5'	2.17	0.45
25:BD:49:GLN:HE22	25:BD:67:HIS:CE1	2.34	0.45
24:DC:2:VAL:O	24:DC:3:VAL:CG2	2.65	0.45
36:DO:88:LYS:O	36:DO:89:ASP:HB3	2.15	0.45
15:AO:44:GLU:HG3	15:AO:45:HIS:N	2.32	0.45
7:AG:53:SER:C	7:AG:55:LYS:N	2.70	0.45
22:BA:146:A:H2'	22:BA:147:C:C6	2.52	0.45
16:AP:42:ILE:HD13	16:AP:42:ILE:N	2.32	0.45
22:BA:2682:A:C8	25:BD:11:MET:CG	3.00	0.45
11:CK:31:VAL:O	11:CK:43:TRP:HA	2.17	0.45
22:BA:1522:A:O2'	22:BA:1523:U:OP2	2.32	0.45
40:DS:51:LEU:O	40:DS:54:ALA:HB3	2.16	0.45
1:CA:1231:G:H2'	1:CA:1232:U:C6	2.52	0.45
22:DA:898:C:C5	22:DA:899:A:C5	3.05	0.45
24:DC:74:PRO:HG2	24:DC:96:LYS:HB2	1.98	0.45
22:BA:1783:A:H5'	22:BA:2608:G:H4'	1.99	0.45
38:DQ:111:LYS:O	38:DQ:114:ALA:HB3	2.17	0.45
22:DA:1563:U:H2'	22:DA:1564:C:O4'	2.17	0.45
22:BA:1135:C:H6	22:BA:1135:C:H5''	1.81	0.45
8:AH:30:LYS:HA	8:AH:30:LYS:CE	2.46	0.45
22:BA:2185:U:C5	22:BA:2186:G:N7	2.85	0.45
22:BA:995:C:OP2	38:BQ:52:ARG:NH1	2.50	0.44
8:AH:48:PHE:H	8:AH:48:PHE:HD1	1.64	0.44
22:DA:2264:C:C6	22:DA:2265:U:C5	3.05	0.44
22:DA:704:G:O2'	22:DA:705:A:C8	2.71	0.44
24:DC:221:GLY:O	24:DC:224:MET:HG2	2.17	0.44
22:DA:1078:U:H4'	22:DA:1079:C:C5'	2.47	0.44
22:DA:1087:G:C4	22:DA:1089:A:N3	2.85	0.44
1:AA:1277:C:O2'	1:AA:1279:G:H8	2.00	0.44
1:AA:1507:A:C6	1:AA:1530:G:C6	3.05	0.44
22:DA:301:G:O2'	22:DA:302:C:O5'	2.34	0.44
22:DA:82:U:H2'	22:DA:83:A:C4'	2.47	0.44
42:DU:82:VAL:O	42:DU:96:LYS:CG	2.65	0.44
24:BC:159:THR:N	24:BC:194:VAL:CG1	2.79	0.44
22:DA:54:G:O2'	50:D2:35:ARG:HD3	2.17	0.44
22:DA:123:G:C2	22:DA:129:C:N3	2.85	0.44
22:DA:149:A:C6	22:DA:150:U:N3	2.86	0.44
22:DA:177:G:H5''	22:DA:178:G:OP2	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:449:A:C2'	22:DA:450:G:C5'	2.95	0.44
22:DA:455:C:N4	22:DA:473:G:OP2	2.50	0.44
27:BF:82:TYR:O	27:BF:84:ILE:HG22	2.17	0.44
1:AA:466:A:C6	1:AA:468:A:N6	2.86	0.44
1:AA:70:U:O2'	1:AA:71:A:C8	2.70	0.44
43:DV:30:ILE:HD12	43:DV:38:LEU:HD23	1.98	0.44
34:DM:36:VAL:HG13	43:DV:82:TYR:HD1	1.81	0.44
43:DV:44:HIS:CE1	43:DV:86:LEU:O	2.70	0.44
31:BJ:89:PHE:CE1	31:BJ:93:ILE:CG1	3.00	0.44
22:BA:2353:G:H2'	22:BA:2354:C:O5'	2.17	0.44
22:DA:2245:U:H5''	22:DA:2246:G:H5'	1.98	0.44
22:DA:2377:A:C6	22:DA:2378:A:C6	3.04	0.44
17:AQ:18:LYS:CA	17:AQ:47:ASP:CB	2.74	0.44
1:AA:1303:C:O2'	1:AA:1304:G:C8	2.69	0.44
22:DA:474:G:H4'	22:DA:475:C:OP1	2.15	0.44
26:BE:5:LEU:CD2	26:BE:121:VAL:HA	2.48	0.44
1:CA:1219:A:C4	1:CA:1220:G:C8	3.04	0.44
9:CI:117:LEU:HD22	9:CI:123:ARG:HD3	1.97	0.44
14:CN:9:GLU:OE1	14:CN:62:ARG:HD2	2.18	0.44
20:AT:3:ILE:HA	20:AT:7:LYS:NZ	2.32	0.44
22:DA:630:G:H4'	22:DA:640:C:O2'	2.17	0.44
22:DA:1994:C:P	25:DD:132:ALA:HB3	2.56	0.44
2:CB:206:ILE:CG2	2:CB:210:THR:OG1	2.65	0.44
1:AA:785:G:C2'	1:AA:786:G:H5'	2.47	0.44
11:AK:108:ASN:ND2	21:AU:6:ARG:HA	2.32	0.44
36:BO:79:ALA:HB1	36:BO:113:ALA:CB	2.47	0.44
1:CA:72:A:C6	1:CA:73:C:N4	2.85	0.44
1:CA:94:G:C4'	1:CA:95:C:OP1	2.53	0.44
1:CA:267:C:H2'	1:CA:268:U:O5'	2.16	0.44
27:BF:98:PHE:CD2	27:BF:98:PHE:C	2.90	0.44
12:AL:45:ASN:N	12:AL:45:ASN:ND2	2.65	0.44
32:BK:41:ILE:HA	32:BK:41:ILE:HD12	1.72	0.44
22:DA:1558:C:H6	22:DA:1558:C:OP1	2.00	0.44
19:AS:55:GLN:CA	19:AS:55:GLN:NE2	2.80	0.44
1:CA:1004:A:N3	1:CA:1026:G:C6	2.85	0.44
1:AA:1162:C:C2'	1:AA:1163:A:C8	2.96	0.44
27:DF:131:VAL:O	27:DF:132:ARG:HB2	2.16	0.44
13:CM:62:PHE:O	13:CM:64:VAL:HG23	2.16	0.44
22:BA:2820:A:OP1	35:BN:2:ARG:NH2	2.50	0.44
29:DH:134:VAL:O	29:DH:134:VAL:HG22	2.17	0.44
22:DA:485:C:H2'	22:DA:486:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1495:A:H2'	22:DA:1496:A:C8	2.52	0.44
39:DR:90:ARG:HD2	39:DR:90:ARG:HA	1.82	0.44
20:CT:17:ARG:HD2	20:CT:17:ARG:O	2.16	0.44
22:BA:1276:A:C8	22:BA:1276:A:H5''	2.52	0.44
23:DB:8:C:O2'	36:DO:40:ILE:HD13	2.16	0.44
22:BA:602:A:C2	22:BA:656:G:C6	3.05	0.44
22:BA:655:A:H4'	22:BA:656:G:OP1	2.17	0.44
22:BA:37:C:C2'	22:BA:38:A:O5'	2.65	0.44
22:DA:810:U:O2'	33:DL:20:GLY:O	2.34	0.44
25:BD:32:ASN:O	25:BD:95:SER:HA	2.17	0.44
23:DB:42:C:C4	23:DB:43:C:N4	2.85	0.44
22:DA:1455:G:O2'	22:DA:1456:G:O5'	2.34	0.44
24:BC:30:ALA:N	24:BC:31:PRO:HD2	2.32	0.44
40:BS:43:ALA:O	40:BS:46:LEU:HB2	2.16	0.44
23:BB:44:G:O2'	23:BB:45:A:OP2	2.32	0.44
22:DA:2460:U:H2'	22:DA:2461:A:O4'	2.16	0.44
28:BG:156:TYR:O	28:BG:157:LYS:HG3	2.17	0.44
37:DP:13:LYS:HE3	37:DP:76:HIS:O	2.18	0.44
22:DA:2103:C:C2'	22:DA:2104:C:H5'	2.48	0.44
1:CA:821:G:C2'	1:CA:822:U:C6	2.94	0.44
2:CB:118:THR:HG22	2:CB:118:THR:O	2.16	0.44
40:DS:75:PHE:CE2	40:DS:104:THR:CG2	2.99	0.44
22:DA:2192:U:O2	22:DA:2192:U:C2'	2.64	0.44
22:DA:425:G:H2'	22:DA:426:C:H6	1.81	0.44
1:AA:1004:A:C2	1:AA:1005:A:H1'	2.52	0.44
1:AA:1053:G:O6	1:AA:1199:U:H2'	2.17	0.44
1:AA:1171:A:O2'	1:AA:1172:C:H5'	2.17	0.44
51:B3:60:CYS:O	51:B3:61:LEU:HD23	2.17	0.44
1:CA:686:U:O2	1:CA:687:A:C5	2.70	0.44
22:DA:2771:C:H5''	25:DD:207:VAL:HG11	1.98	0.44
1:CA:1438:G:O2'	1:CA:1439:G:H5'	2.17	0.44
40:BS:24:ILE:HA	40:BS:24:ILE:HD12	1.49	0.44
13:AM:44:ILE:N	13:AM:44:ILE:HD12	2.33	0.44
1:AA:521:G:OP2	12:AL:50:LYS:NZ	2.50	0.44
22:DA:1933:G:H2'	22:DA:1934:C:O4'	2.18	0.44
35:BN:71:ARG:HG2	35:BN:71:ARG:HH21	1.82	0.44
22:BA:28:A:H2'	22:BA:29:U:H6	1.81	0.44
22:DA:2067:G:H5''	22:DA:2068:U:OP2	2.16	0.44
52:D4:27:CYS:SG	52:D4:33:HIS:HB2	2.56	0.44
22:BA:2415:G:C6	22:BA:2416:C:C4	3.05	0.44
22:BA:479:A:N3	22:BA:481:G:H5''	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1820:U:C2	24:BC:200:MET:HG2	2.50	0.44
22:BA:289:G:C8	22:BA:290:U:C5	3.05	0.44
18:CR:44:THR:HG1	18:CR:46:THR:HG22	1.81	0.44
22:BA:2492:U:C2	22:BA:2493:U:C5	3.05	0.44
22:DA:2889:C:N4	22:DA:2890:G:C6	2.86	0.44
15:AO:34:GLN:O	15:AO:38:LEU:HD22	2.17	0.44
1:AA:138:G:O2'	1:AA:139:A:H5'	2.18	0.44
1:CA:947:G:P	13:CM:106:ARG:HG3	2.57	0.44
27:BF:162:ASP:O	27:BF:163:GLU:C	2.55	0.44
7:AG:69:ARG:HG3	7:AG:95:ARG:HG2	1.98	0.44
22:BA:2079:U:O2'	45:BX:22:ASN:ND2	2.49	0.44
43:BV:93:ARG:O	43:BV:94:ALA:CB	2.65	0.44
25:BD:9:VAL:CG2	25:BD:26:VAL:HB	2.47	0.44
11:AK:20:ALA:HA	11:AK:33:ILE:CD1	2.47	0.44
22:DA:2533:U:C4	22:DA:2534:A:C4	3.06	0.44
17:AQ:4:ILE:C	17:AQ:5:ARG:HG3	2.37	0.44
7:CG:12:LEU:HD22	7:CG:12:LEU:C	2.38	0.44
22:DA:615:U:O4	26:DE:39:ALA:HB2	2.18	0.44
1:AA:1438:G:O2'	1:AA:1439:G:H5'	2.17	0.44
22:DA:1550:C:H5''	22:DA:1720:U:O2'	2.16	0.44
28:BG:116:LEU:HD21	28:BG:122:ALA:HB3	2.00	0.44
26:DE:141:MET:O	26:DE:142:ALA:HB3	2.17	0.44
42:BU:60:LYS:HA	42:BU:60:LYS:HD2	1.61	0.44
42:DU:80:ASP:OD1	42:DU:80:ASP:N	2.49	0.44
22:DA:2474:U:O4'	22:DA:2474:U:O2	2.34	0.44
22:BA:2819:G:H5''	56:BA:3802:HOH:O	2.17	0.44
25:BD:114:LYS:CE	25:BD:114:LYS:CA	2.92	0.44
22:BA:1071:G:C4	22:BA:1089:A:C6	3.06	0.44
5:AE:96:GLN:CB	5:AE:123:LEU:HD13	2.46	0.44
5:AE:75:LEU:HD23	5:AE:79:THR:O	2.16	0.44
8:AH:36:ALA:HA	8:AH:39:LEU:HD12	1.98	0.44
1:CA:1130:A:C5	1:CA:1146:A:C5	3.04	0.44
22:DA:922:C:C4	22:DA:923:G:N7	2.85	0.44
44:DW:67:LYS:HB3	44:DW:80:SER:HB2	1.99	0.44
22:DA:1065:U:C2	22:DA:1074:G:N1	2.85	0.44
35:DN:36:THR:HG23	35:DN:41:ALA:HB2	1.98	0.44
1:CA:502:A:C2'	1:CA:503:C:H5'	2.47	0.44
1:CA:520:A:HO2'	12:CL:69:GLU:HG3	1.83	0.44
12:CL:81:ILE:HD11	12:CL:94:TYR:HB2	1.99	0.44
22:DA:1205:A:N7	26:DE:165:HIS:CE1	2.85	0.44
22:DA:1206:G:O2'	22:DA:1207:C:O5'	2.36	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:329:G:C4'	22:DA:330:A:OP1	2.64	0.44
22:DA:345:A:O2'	22:DA:346:A:C2	2.61	0.44
41:DT:68:LYS:O	41:DT:69:ARG:HB3	2.16	0.44
42:DU:17:ASP:CB	42:DU:38:ILE:HA	2.45	0.44
22:DA:83:A:P	42:DU:91:LYS:HZ2	2.39	0.44
46:DY:31:GLN:C	46:DY:33:ALA:N	2.70	0.44
24:BC:105:ALA:HA	24:BC:106:PRO:HD2	1.62	0.44
22:DA:54:G:H2'	22:DA:55:G:O5'	2.18	0.44
45:DX:1:SER:O	45:DX:2:ARG:C	2.55	0.44
25:BD:105:LYS:CE	25:BD:176:ASP:HB3	2.47	0.44
38:DQ:94:LEU:HD13	39:DR:4:VAL:HG12	1.98	0.44
43:DV:21:ARG:NE	43:DV:87:GLN:HG2	2.31	0.44
28:BG:112:VAL:HG23	28:BG:113:ASP:H	1.82	0.44
24:BC:203:VAL:HG12	24:BC:204:LEU:N	2.31	0.44
17:AQ:16:MET:HB2	17:AQ:19:SER:CB	2.23	0.44
8:CH:78:SER:OG	8:CH:123:GLU:HG3	2.16	0.44
38:DQ:4:LYS:O	38:DQ:5:ARG:CB	2.65	0.44
1:CA:1213:A:C8	1:CA:1215:G:C5	3.05	0.44
14:CN:60:ARG:CG	14:CN:61:ASN:N	2.80	0.44
22:DA:627:A:O2'	22:DA:628:G:H8	1.98	0.44
26:DE:28:VAL:CG2	26:DE:29:HIS:N	2.80	0.44
40:BS:2:GLU:C	40:BS:3:THR:HG22	2.38	0.44
3:AC:39:ARG:O	3:AC:43:THR:HG23	2.17	0.44
10:AJ:71:LEU:O	10:AJ:72:ARG:CD	2.66	0.44
1:CA:543:U:C2'	1:CA:544:G:C5'	2.95	0.44
41:BT:38:ALA:HB1	41:BT:43:ILE:HG21	1.99	0.44
2:AB:221:ARG:HG2	2:AB:221:ARG:HH11	1.82	0.44
2:AB:66:ILE:HD13	2:AB:66:ILE:HA	1.83	0.44
3:CC:26:LYS:HE3	3:CC:26:LYS:CA	2.25	0.44
24:BC:246:PRO:HG2	24:BC:247:TRP:CZ2	2.51	0.44
9:CI:27:ILE:O	9:CI:33:SER:HA	2.17	0.44
29:BH:133:GLN:CA	29:BH:133:GLN:OE1	2.63	0.44
12:AL:24:GLU:HB2	12:AL:26:CYS:HG	1.78	0.44
1:CA:275:G:O2'	1:CA:276:G:C8	2.67	0.44
42:BU:24:VAL:HA	42:BU:35:VAL:HG22	1.99	0.44
22:DA:1740:G:C2'	22:DA:1741:C:C5'	2.95	0.44
32:DK:92:GLU:O	32:DK:93:GLN:O	2.36	0.44
1:CA:1242:G:N2	1:CA:1243:C:H1'	2.31	0.44
22:DA:1495:A:H2'	22:DA:1496:A:O4'	2.17	0.44
1:CA:113:G:C1'	1:CA:354:G:H5'	2.46	0.44
12:AL:33:CYS:N	12:AL:54:VAL:HA	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:755:G:C2	1:CA:756:C:C5	3.06	0.44
22:DA:686:U:P	56:DA:3703:HOH:O	2.75	0.44
22:DA:280:U:C5	22:DA:281:C:C4	3.05	0.44
35:DN:62:ASN:N	35:DN:62:ASN:OD1	2.50	0.44
35:DN:75:ILE:O	35:DN:79:LEU:HB2	2.16	0.44
22:BA:83:A:N6	22:BA:101:A:C4	2.86	0.44
1:CA:1473:G:O2'	22:DA:1702:G:H4'	2.16	0.44
22:BA:1959:G:H2'	22:BA:1960:A:O5'	2.17	0.44
17:CQ:43:LEU:O	17:CQ:45:VAL:HG23	2.17	0.44
22:BA:592:A:O2'	51:B3:2:LYS:HA	2.17	0.44
1:AA:346:G:P	37:BP:33:GLU:OE1	2.75	0.44
1:CA:821:G:C2'	1:CA:822:U:H6	2.25	0.44
1:AA:197:A:O2'	1:AA:198:G:O4'	2.34	0.44
22:BA:68:G:N2	22:BA:74:A:C4	2.86	0.44
48:B0:47:TYR:CZ	48:B0:52:LYS:HB2	2.49	0.44
28:BG:66:THR:OG1	28:BG:67:ALA:N	2.51	0.44
28:DG:154:GLU:C	28:DG:156:TYR:H	2.20	0.44
22:DA:2674:G:C6	22:DA:2675:A:C5	3.05	0.44
16:CP:44:SER:HB2	16:CP:46:LYS:CG	2.48	0.44
25:DD:110:THR:CB	25:DD:171:THR:HG22	2.47	0.44
22:BA:511:U:C5	22:BA:512:G:C4	3.06	0.44
26:BE:82:GLY:O	26:BE:83:VAL:HB	2.17	0.44
19:AS:62:THR:HG22	19:AS:64:GLU:H	1.82	0.44
22:BA:1917:U:C4	22:BA:1918:A:C5	3.05	0.44
11:CK:35:ASP:OD1	11:CK:37:GLN:HG3	2.17	0.44
22:DA:2372:U:H2'	22:DA:2372:U:O2	2.17	0.44
1:CA:1032:G:H2'	1:CA:1033:G:O4'	2.17	0.44
23:BB:13:G:O2'	23:BB:15:A:OP2	2.36	0.44
23:BB:71:C:H2'	23:BB:72:G:H5'	1.99	0.44
19:CS:30:LEU:HD12	19:CS:30:LEU:N	2.32	0.44
22:BA:1992:G:N2	22:BA:1996:C:O2'	2.46	0.44
1:CA:1040:U:O2'	1:CA:1041:G:H5'	2.17	0.44
1:AA:702:A:N3	22:BA:1847:A:H2	2.15	0.44
1:AA:701:U:O2'	1:AA:702:A:P	2.75	0.44
1:CA:862:C:N3	1:CA:863:U:C4	2.85	0.44
12:CL:33:CYS:HA	12:CL:54:VAL:HG13	1.99	0.44
1:AA:937:A:H2'	1:AA:938:A:C5'	2.47	0.44
1:CA:619:U:N3	4:CD:130:ASN:OD1	2.49	0.44
22:BA:977:G:O6	56:BA:3585:HOH:O	2.21	0.44
22:DA:1498:C:O2'	22:DA:1499:C:C5'	2.65	0.44
22:DA:1500:G:N1	22:DA:1501:G:C5	2.84	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:91:ARG:N	27:BF:95:MET:HB2	2.32	0.44
22:BA:374:A:H2'	22:BA:375:G:C5'	2.47	0.44
32:DK:47:ILE:CG2	32:DK:49:ARG:HG3	2.46	0.44
22:DA:693:A:C2'	22:DA:694:U:H5'	2.47	0.44
22:DA:2082:A:H2'	22:DA:2083:G:O5'	2.17	0.44
26:BE:197:GLU:O	26:BE:198:GLU:C	2.56	0.44
8:AH:20:ASN:ND2	8:AH:64:TYR:HE2	2.14	0.44
22:BA:1725:U:H2'	22:BA:1726:C:O4'	2.17	0.44
35:DN:104:ALA:O	35:DN:105:GLY:C	2.54	0.44
22:DA:732:C:C4	22:DA:733:G:C8	3.04	0.44
22:DA:1837:C:O2	22:DA:1904:G:C2	2.71	0.44
15:AO:65:LEU:HD22	15:AO:65:LEU:HA	1.82	0.44
34:DM:54:THR:HG22	34:DM:54:THR:O	2.17	0.44
19:CS:42:ASN:N	19:CS:42:ASN:OD1	2.51	0.44
22:DA:1123:C:H2'	22:DA:1124:G:C8	2.52	0.44
22:DA:2257:U:O2'	22:DA:2258:C:H5'	2.17	0.44
22:BA:2745:C:C4	22:BA:2746:U:C4	3.06	0.44
38:BQ:59:LEU:HA	38:BQ:59:LEU:HD23	1.65	0.44
5:AE:149:PRO:HG2	5:AE:150:GLU:HG2	1.98	0.44
8:AH:66:GLN:HB3	8:AH:67:GLY:H	1.51	0.44
22:BA:2571:U:HO2'	25:BD:151:THR:CG2	2.30	0.44
22:BA:2571:U:HO2'	25:BD:151:THR:HG21	1.78	0.44
22:DA:1395:A:H4'	22:DA:1397:U:C5	2.51	0.44
41:DT:20:ALA:HB1	41:DT:31:VAL:HG11	1.99	0.44
1:AA:408:A:C6	1:AA:409:U:N3	2.85	0.44
16:CP:78:VAL:O	16:CP:80:LYS:N	2.50	0.44
44:DW:24:ARG:O	44:DW:25:PHE:HB2	2.18	0.44
22:DA:1076:C:O2'	22:DA:1077:A:C8	2.71	0.44
22:DA:2879:A:O2'	22:DA:2880:C:O5'	2.34	0.44
22:DA:1207:C:N4	22:DA:1208:C:H41	2.15	0.44
22:DA:301:G:C4	22:DA:302:C:C4	3.06	0.44
22:DA:323:C:N4	22:DA:333:G:N7	2.66	0.44
22:DA:95:A:C2'	22:DA:96:C:C5'	2.86	0.44
24:BC:104:LEU:HB3	24:BC:105:ALA:H	1.72	0.44
22:DA:1570:A:C2	22:DA:1571:A:C2	3.06	0.44
22:DA:33:C:H2'	22:DA:446:G:H22	1.78	0.44
26:DE:57:LYS:NZ	26:DE:58:LYS:N	2.65	0.44
1:CA:1071:C:C5'	5:CE:53:ARG:NH1	2.81	0.44
1:AA:466:A:N6	1:AA:468:A:H62	2.15	0.44
1:CA:1408:A:C8	1:CA:1409:C:C5	3.05	0.44
4:CD:29:THR:CB	4:CD:30:LYS:HE3	2.45	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:26:ALA:C	4:CD:31:CYS:SG	2.96	0.44
29:DH:24:GLY:C	29:DH:26:ALA:N	2.70	0.44
22:DA:995:C:H1'	38:DQ:60:TRP:HZ2	1.82	0.44
18:CR:54:LEU:O	18:CR:55:ALA:C	2.55	0.44
22:DA:1264:A:N3	22:DA:2015:A:N6	2.64	0.44
22:DA:2023:C:O2'	22:DA:2024:G:H5'	2.18	0.44
22:DA:2040:G:C6	22:DA:2041:U:C4	3.05	0.44
22:DA:199:A:H2	22:DA:2078:C:HO2'	1.61	0.44
1:AA:251:G:N1	1:AA:266:G:O6	2.50	0.44
17:AQ:14:ASP:HB2	17:AQ:54:ILE:HG22	1.99	0.44
8:CH:76:ARG:HD3	8:CH:76:ARG:C	2.37	0.44
22:DA:1201:U:H2'	22:DA:1202:G:H8	1.82	0.44
5:CE:75:LEU:HD13	5:CE:79:THR:O	2.16	0.44
1:AA:845:A:H8	1:AA:845:A:H3'	1.82	0.44
22:BA:1341:G:C4	41:BT:84:TYR:CD1	3.06	0.44
1:AA:785:G:N2	1:AA:798:U:C2	2.86	0.44
22:DA:571:U:C6	22:DA:575:A:N6	2.85	0.44
22:DA:1998:A:H2'	22:DA:1999:C:O4'	2.17	0.44
1:CA:1202:U:HO2'	1:CA:1203:C:C4'	2.28	0.44
1:CA:74:A:C6	1:CA:97:G:C6	3.05	0.44
40:DS:49:LYS:HZ3	40:DS:49:LYS:HB3	1.80	0.44
22:DA:838:C:H2'	22:DA:839:U:C5'	2.47	0.44
22:DA:973:A:C4'	22:DA:974:G:OP2	2.65	0.44
23:DB:16:G:C6	23:DB:69:G:C4	3.05	0.44
22:DA:1442:U:N3	22:DA:1443:U:C5	2.86	0.44
31:BJ:70:THR:HA	31:BJ:90:GLU:HG2	1.99	0.44
14:AN:40:ARG:NH1	14:AN:44:VAL:CG1	2.73	0.44
1:AA:1160:G:HO2'	1:AA:1161:C:H6	1.66	0.44
1:AA:1162:C:C2	1:AA:1175:G:N2	2.85	0.44
25:DD:107:VAL:H	25:DD:206:ALA:N	2.13	0.44
21:AU:13:VAL:O	21:AU:15:LEU:HD12	2.17	0.44
24:DC:93:VAL:HG13	24:DC:94:LEU:N	2.32	0.44
1:CA:511:C:O2'	1:CA:512:U:H6	2.01	0.44
34:BM:95:LEU:HA	34:BM:95:LEU:HD12	1.60	0.44
22:BA:547:A:N1	22:BA:549:G:N2	2.65	0.44
34:DM:35:ALA:HB2	34:DM:100:LYS:N	2.33	0.44
1:CA:754:C:H5''	1:CA:754:C:O2	2.17	0.44
22:BA:304:U:O2'	22:BA:305:C:H5'	2.18	0.44
22:DA:233:A:C2	22:DA:234:U:C2	3.06	0.44
42:DU:4:ILE:HG23	42:DU:71:ILE:CG2	2.46	0.44
1:CA:563:A:C4	1:CA:567:G:C8	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:685:A:H5'	22:DA:686:U:OP1	2.17	0.44
13:CM:75:SER:C	13:CM:77:LYS:H	2.21	0.44
22:BA:2494:G:O2'	34:BM:79:ALA:HA	2.17	0.44
35:DN:67:PHE:HE2	35:DN:73:ASN:ND2	2.16	0.44
39:DR:81:LYS:HA	39:DR:81:LYS:HD3	1.82	0.44
20:AT:53:MET:HE2	20:AT:54:GLN:HA	1.99	0.44
22:BA:1946:U:C2	22:BA:1947:C:C5	3.05	0.44
26:DE:73:ILE:O	26:DE:73:ILE:CG1	2.64	0.44
1:CA:728:A:C8	15:CO:53:ARG:NH2	2.85	0.44
22:BA:2771:C:H2'	22:BA:2772:C:C6	2.53	0.44
26:BE:24:ASN:C	26:BE:24:ASN:ND2	2.70	0.44
22:BA:278:A:H2	22:BA:362:A:C8	2.31	0.44
28:DG:122:ALA:CB	28:DG:131:VAL:O	2.61	0.44
1:AA:178:C:O2'	1:AA:179:A:H5'	2.18	0.44
12:AL:113:ARG:O	12:AL:115:LYS:O	2.36	0.44
22:BA:2043:C:N3	22:BA:2777:G:C2	2.85	0.44
39:BR:66:HIS:CE1	39:BR:94:THR:HB	2.52	0.44
22:DA:155:A:C2	22:DA:172:A:C2	3.05	0.44
28:DG:154:GLU:HA	28:DG:154:GLU:OE1	2.17	0.44
1:AA:1171:A:H2'	1:AA:1172:C:H6	1.79	0.44
25:DD:179:ARG:HB2	25:DD:188:LEU:HD12	1.99	0.44
22:DA:2893:A:H5''	22:DA:2894:G:H5'	1.99	0.44
22:BA:2888:C:O2	22:BA:2888:C:H2'	2.17	0.44
22:BA:1721:G:H22	22:BA:1738:G:H2'	1.83	0.44
22:BA:2563:U:H1'	22:BA:2566:A:N6	2.32	0.44
28:DG:25:ILE:HG22	28:DG:78:VAL:HG21	1.99	0.44
22:BA:869:G:H2'	22:BA:870:U:O4'	2.17	0.44
30:DI:139:VAL:O	30:DI:140:GLU:HB2	2.18	0.44
22:BA:480:A:H3'	22:BA:481:G:C5'	2.47	0.44
11:CK:35:ASP:C	11:CK:37:GLN:N	2.71	0.44
1:CA:115:G:C4'	1:CA:116:A:OP1	2.64	0.44
27:BF:106:ALA:C	27:BF:108:PRO:CD	2.85	0.44
35:DN:22:ARG:O	35:DN:22:ARG:CG	2.65	0.44
22:DA:1596:A:N1	22:DA:1597:A:N1	2.66	0.44
22:DA:1597:A:H3'	22:DA:1597:A:C8	2.53	0.44
23:BB:70:C:C2'	23:BB:71:C:H5'	2.46	0.44
22:BA:345:A:O2'	22:BA:346:A:N7	2.51	0.44
22:BA:369:U:O2'	22:BA:370:G:P	2.75	0.44
1:AA:1103:C:H3'	1:AA:1103:C:H6	1.83	0.44
38:BQ:27:ARG:NH1	38:BQ:27:ARG:HG3	2.31	0.44
1:AA:1263:C:C2'	1:AA:1264:U:H5'	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1487:U:N3	22:BA:1503:A:C2	2.85	0.44
39:BR:58:VAL:HG22	39:BR:59:ILE:N	2.31	0.44
22:BA:2023:C:H5''	22:BA:2023:C:C6	2.52	0.44
48:B0:10:SER:O	48:B0:14:MET:HG3	2.16	0.44
22:DA:1683:U:C2'	22:DA:1684:G:H5'	2.47	0.44
26:DE:5:LEU:HD12	26:DE:10:SER:HB2	1.99	0.44
1:CA:1154:G:H2'	1:CA:1155:A:C8	2.50	0.44
47:DZ:39:ASP:HA	47:DZ:43:ILE:HD11	1.99	0.44
22:DA:563:A:H2	38:DQ:36:GLN:OE1	2.00	0.44
47:DZ:40:THR:C	47:DZ:42:ALA:H	2.19	0.44
22:BA:2715:C:C4	22:BA:2716:C:C5	3.06	0.44
19:AS:10:ILE:HG22	19:AS:38:THR:H	1.82	0.44
12:CL:20:VAL:N	12:CL:21:PRO:CD	2.80	0.44
22:BA:1398:C:H2'	22:BA:1399:C:H6	1.83	0.44
1:AA:832:G:N3	1:AA:832:G:H2'	2.32	0.44
1:AA:1499:A:O2'	1:AA:1500:A:H5'	2.18	0.44
32:DK:10:VAL:HG13	32:DK:12:ASP:OD1	2.17	0.44
12:CL:51:VAL:HG12	12:CL:52:CYS:N	2.31	0.44
22:BA:497:A:H2'	22:BA:498:G:O4'	2.17	0.44
22:BA:597:G:C2	22:BA:661:A:C2	3.05	0.44
38:BQ:15:LYS:O	38:BQ:19:GLN:HG3	2.17	0.44
37:BP:14:GLN:O	37:BP:15:ASP:HB3	2.17	0.44
32:DK:79:PHE:N	32:DK:79:PHE:CD1	2.85	0.44
45:BX:76:LYS:H	45:BX:76:LYS:HG2	1.65	0.44
1:AA:1424:U:H2'	1:AA:1425:U:O5'	2.17	0.44
22:BA:2643:G:H2'	22:BA:2644:G:O4'	2.17	0.44
22:BA:1070:A:C2	22:BA:1097:U:H4'	2.53	0.44
5:AE:81:GLN:HE22	5:AE:146:MET:CE	2.30	0.44
10:CJ:44:THR:CG2	10:CJ:45:ARG:H	2.27	0.44
22:DA:1343:G:N3	22:DA:1344:U:C5	2.85	0.44
4:AD:109:THR:HG23	4:AD:112:GLU:CB	2.47	0.44
1:CA:57:G:H2'	1:CA:58:C:C6	2.53	0.44
22:DA:2337:G:C2	22:DA:2338:C:C2	3.06	0.44
22:DA:965:C:C4'	22:DA:2273:A:H1'	2.46	0.44
1:AA:1279:G:C2'	1:AA:1279:G:N3	2.68	0.44
1:AA:1282:C:O2'	1:AA:1283:U:C5'	2.65	0.44
22:DA:345:A:C2'	22:DA:346:A:OP2	2.64	0.44
22:DA:84:A:OP2	22:DA:84:A:C8	2.65	0.44
22:DA:90:U:C5	22:DA:91:A:C5	3.05	0.44
24:BC:254:LYS:HB3	24:BC:254:LYS:HE3	1.72	0.44
32:BK:18:ARG:HB2	32:BK:45:GLU:CB	2.43	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:120:U:N3	22:DA:149:A:N6	2.66	0.44
22:DA:165:A:N3	22:DA:166:U:C6	2.86	0.44
22:DA:46:G:C2	22:DA:47:C:C4	3.05	0.44
22:DA:796:C:O5'	22:DA:796:C:H6	1.98	0.44
28:DG:1:SER:CB	28:DG:61:TRP:HE3	2.25	0.44
1:CA:1192:C:H2'	1:CA:1193:G:O5'	2.18	0.44
1:CA:405:U:H1'	1:CA:498:A:H2'	1.99	0.44
1:AA:92:U:O2'	1:AA:93:U:H6	1.96	0.44
1:AA:500:G:C6	1:AA:546:A:C2	3.05	0.44
11:CK:90:PRO:O	11:CK:91:GLY:C	2.56	0.44
37:DP:72:VAL:O	37:DP:72:VAL:HG23	2.18	0.44
22:DA:2024:G:C6	22:DA:2040:G:C2	3.05	0.44
22:DA:2077:A:N7	22:DA:2435:A:C2	2.85	0.44
8:CH:29:SER:OG	8:CH:32:LYS:CB	2.65	0.44
1:CA:1221:G:C2	1:CA:1222:G:C1'	3.01	0.44
22:DA:602:A:H5'	22:DA:605:G:OP1	2.17	0.44
25:BD:125:TRP:O	25:BD:126:ASN:CB	2.65	0.44
11:AK:87:GLY:O	11:AK:92:ARG:HD2	2.18	0.44
25:DD:186:LEU:HD21	37:DP:3:ILE:CD1	2.27	0.44
22:DA:2544:G:H2'	22:DA:2545:G:H8	1.80	0.44
5:CE:36:THR:CG2	5:CE:63:MET:HE2	2.46	0.44
27:DF:134:GLN:HG3	27:DF:149:ARG:O	2.16	0.44
27:DF:41:GLU:HG2	27:DF:42:ALA:N	2.29	0.44
31:BJ:54:ILE:HD11	31:BJ:56:VAL:CG2	2.48	0.44
9:AI:103:VAL:CG2	9:AI:104:THR:N	2.81	0.44
22:DA:976:G:N2	22:DA:1155:A:C2	2.86	0.44
23:DB:115:A:H2'	23:DB:116:G:H8	1.79	0.44
22:DA:2093:G:N7	22:DA:2225:A:C4	2.85	0.44
32:BK:2:ILE:HG21	32:BK:39:ILE:HD12	2.00	0.44
22:BA:1462:C:C2'	22:BA:1463:C:C5'	2.91	0.44
22:DA:2413:G:C2'	22:DA:2414:G:H5'	2.47	0.44
1:CA:1349:A:OP1	9:CI:121:ARG:HB2	2.17	0.44
22:BA:2149:U:HO2'	22:BA:2150:C:C4'	2.30	0.44
22:DA:1920:C:H2'	22:DA:1921:G:O4'	2.17	0.44
18:AR:62:ARG:HD3	18:AR:69:TYR:HD2	1.81	0.44
1:AA:627:G:C2	1:AA:628:G:C4	3.05	0.44
19:AS:50:VAL:HG12	19:AS:74:ALA:CB	2.48	0.44
13:CM:14:ALA:HB1	13:CM:33:LEU:CD1	2.47	0.44
22:DA:235:U:O2'	22:DA:236:C:H5'	2.18	0.44
28:DG:91:VAL:CG2	28:DG:93:TYR:HE2	2.29	0.44
3:AC:108:PRO:C	3:AC:110:LEU:H	2.20	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:125:TRP:CD1	25:DD:160:LYS:HB3	2.53	0.44
1:AA:183:C:O2'	1:AA:184:G:C5'	2.65	0.44
20:AT:30:PHE:O	20:AT:33:LYS:HB2	2.18	0.44
22:BA:483:A:O2'	42:BU:56:GLY:CA	2.57	0.44
22:BA:225:C:H2'	22:BA:226:A:O4'	2.18	0.44
1:CA:21:G:P	56:CA:1817:HOH:O	2.75	0.44
22:DA:1712:U:C5	22:DA:1713:A:C5	3.05	0.44
22:BA:2103:C:H2'	22:BA:2104:C:C5'	2.38	0.44
16:CP:40:ASN:HA	16:CP:41:PRO:HD3	1.81	0.44
2:AB:148:GLY:HA2	2:AB:151:LYS:HE3	1.99	0.44
22:DA:1957:C:H5'	22:DA:1984:G:O2'	2.18	0.44
9:AI:27:ILE:N	9:AI:27:ILE:CD1	2.77	0.44
22:DA:909:A:C6	22:DA:912:C:C2	3.06	0.44
11:AK:63:GLN:HG3	11:AK:98:ALA:CB	2.47	0.44
23:BB:110:C:H2'	23:BB:111:U:C5'	2.47	0.44
37:BP:92:ARG:O	37:BP:93:LYS:CB	2.54	0.44
3:AC:153:SER:HB3	3:AC:164:THR:CG2	2.39	0.44
1:AA:27:G:H2'	1:AA:28:A:C8	2.52	0.44
3:CC:8:GLY:HA3	14:CN:88:MET:SD	2.57	0.44
10:AJ:33:GLY:CA	10:AJ:83:THR:CB	2.96	0.44
22:BA:90:U:H2'	22:BA:91:A:H8	1.82	0.44
2:CB:191:ASP:HA	2:CB:192:PRO:HD2	1.92	0.44
1:CA:1228:C:HO2'	1:CA:1229:A:P	2.40	0.44
2:CB:15:PHE:O	2:CB:39:ILE:HD11	2.18	0.44
26:BE:12:LEU:HD22	26:BE:12:LEU:HA	1.85	0.44
23:BB:78:A:H2'	23:BB:79:G:O4'	2.17	0.44
2:CB:9:LEU:HG	2:CB:10:LYS:H	1.81	0.44
22:DA:1481:U:H3	22:DA:1510:G:H1	1.66	0.44
45:DX:61:LYS:O	45:DX:65:THR:HB	2.17	0.44
26:BE:85:PHE:O	26:BE:86:ALA:C	2.54	0.44
1:AA:908:A:C2	1:AA:909:A:C5	3.05	0.44
19:CS:79:TYR:CG	19:CS:80:ARG:N	2.86	0.44
22:BA:1845:G:H2'	22:BA:1846:G:H5'	1.98	0.44
22:BA:1304:A:C2	22:BA:1305:C:C6	3.06	0.44
50:D2:10:LEU:O	50:D2:10:LEU:HD23	2.17	0.44
22:DA:560:C:H2'	22:DA:561:G:H5'	1.99	0.44
1:AA:650:G:N2	1:AA:651:C:H1'	2.33	0.44
22:BA:2551:C:H2'	22:BA:2552:U:C6	2.52	0.44
22:BA:1607:C:H4'	22:BA:1608:A:O5'	2.17	0.44
10:CJ:65:TYR:HD2	14:CN:96:LYS:O	2.01	0.44
30:BI:107:GLU:HA	30:BI:110:GLN:HB3	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:117:G:C6	22:BA:119:A:N6	2.86	0.44
27:BF:61:GLY:HA3	27:BF:94:ARG:HD2	1.98	0.44
7:AG:78:ARG:HH12	7:AG:81:GLY:C	2.20	0.44
22:DA:2027:G:C5	22:DA:2028:U:C5	3.06	0.44
22:DA:572:A:OP2	39:DR:80:ARG:NH1	2.48	0.44
1:CA:604:G:C5	1:CA:605:U:C5	3.05	0.44
22:DA:2672:U:C6	22:DA:2672:U:C3'	3.01	0.44
8:AH:20:ASN:HD22	8:AH:64:TYR:HE2	1.65	0.44
22:BA:579:G:C2	22:BA:1262:A:C5	3.06	0.44
1:AA:376:G:H2'	1:AA:377:G:H8	1.83	0.44
1:AA:1478:U:H2'	1:AA:1479:C:H6	1.82	0.44
22:DA:1895:C:C4	22:DA:1896:G:N7	2.86	0.44
1:AA:860:A:N6	1:AA:861:G:C2	2.85	0.44
22:BA:2463:C:O5'	22:BA:2463:C:H6	2.00	0.44
31:DJ:98:GLU:HG2	31:DJ:98:GLU:H	1.60	0.44
46:BY:30:MET:O	46:BY:34:SER:HB3	2.18	0.44
18:AR:28:LEU:C	18:AR:30:ASN:N	2.70	0.44
22:DA:1782:U:H1'	22:DA:2609:U:O4'	2.17	0.44
22:BA:2847:U:H2'	22:BA:2848:G:C5'	2.47	0.44
38:BQ:61:ILE:HG23	38:BQ:75:TYR:CE1	2.53	0.44
22:DA:1812:U:O2	24:DC:43:ASN:ND2	2.42	0.44
1:CA:1138:G:N3	1:CA:1138:G:H5''	2.33	0.44
1:CA:1133:G:N1	1:CA:1142:G:C6	2.86	0.44
1:AA:409:U:H2'	1:AA:410:G:C8	2.52	0.44
22:DA:782:A:O2'	24:DC:223:ALA:O	2.35	0.44
22:DA:2817:U:C2'	22:DA:2818:U:O5'	2.65	0.44
9:AI:49:GLN:C	9:AI:51:LEU:N	2.70	0.44
9:AI:64:ILE:HG21	9:AI:78:ILE:HG23	1.99	0.44
9:AI:86:LEU:HD23	9:AI:93:LEU:CD2	2.48	0.44
22:DA:103:A:O2'	22:DA:104:A:O4'	2.31	0.44
22:DA:67:U:C2	22:DA:68:G:C8	3.06	0.44
22:DA:70:G:H4'	22:DA:71:A:OP1	2.16	0.44
22:BA:1819:A:H5''	24:BC:159:THR:HG21	2.00	0.44
24:BC:269:ARG:HA	24:BC:269:ARG:HD3	1.71	0.44
22:DA:1351:C:O2'	22:DA:1571:A:C1'	2.62	0.44
22:DA:452:G:N2	22:DA:457:A:H1'	2.33	0.44
39:BR:4:VAL:HG22	39:BR:40:MET:HB3	2.00	0.44
22:DA:2750:A:HO2'	22:DA:2752:C:H41	1.59	0.44
1:CA:1084:G:C8	1:CA:1085:U:C6	3.05	0.44
1:CA:1091:U:C2	1:CA:1093:A:OP2	2.71	0.44
45:BX:6:VAL:HG23	45:BX:66:VAL:HG13	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:410:G:OP1	4:CD:25:ARG:NE	2.49	0.44
28:BG:112:VAL:HG23	28:BG:113:ASP:N	2.32	0.44
37:BP:86:LYS:HD3	37:BP:86:LYS:HA	1.72	0.44
37:BP:88:ARG:HD3	37:BP:112:ARG:NH2	2.33	0.44
11:CK:27:ASN:O	11:CK:56:LYS:HD3	2.17	0.44
22:DA:2072:C:H2'	22:DA:2073:C:H5'	2.00	0.44
1:AA:1242:G:C6	1:AA:1243:C:C5	3.05	0.44
1:AA:946:A:C2	1:AA:1236:A:N3	2.85	0.44
1:CA:595:A:C5'	1:CA:596:A:OP1	2.66	0.44
8:CH:29:SER:OG	8:CH:32:LYS:HB2	2.17	0.44
12:AL:86:VAL:CG1	12:AL:89:LEU:HD23	2.44	0.44
22:BA:1178:C:C4	22:BA:1180:U:C4	3.06	0.44
1:AA:487:A:H2'	1:AA:488:C:C6	2.52	0.44
38:BQ:4:LYS:CD	38:BQ:7:VAL:HG13	2.46	0.44
1:CA:1215:G:O2'	1:CA:1216:A:C5'	2.65	0.44
1:CA:973:G:O6	1:CA:974:A:C6	2.70	0.44
14:CN:61:ASN:ND2	14:CN:72:PHE:CZ	2.85	0.44
22:BA:197:A:H62	22:BA:2430:A:C2'	2.30	0.44
22:DA:620:G:H8	22:DA:622:G:O6	2.00	0.44
33:DL:120:VAL:CG1	33:DL:121:THR:H	2.26	0.44
26:DE:29:HIS:CB	33:DL:6:LEU:HD21	2.41	0.44
22:BA:1999:C:H4'	22:BA:2723:C:O2	2.18	0.44
11:AK:85:VAL:O	11:AK:112:VAL:HG22	2.17	0.44
10:AJ:17:LEU:HD23	10:AJ:18:ILE:CA	2.48	0.44
22:DA:1120:G:C6	22:DA:1121:C:N4	2.85	0.44
37:DP:3:ILE:O	37:DP:3:ILE:CG1	2.64	0.44
22:DA:2695:U:O2	22:DA:2696:U:C6	2.70	0.44
33:DL:99:ASN:O	33:DL:100:ILE:HG22	2.17	0.44
2:AB:130:LYS:HZ2	2:AB:130:LYS:HA	1.78	0.44
22:DA:1667:G:OP1	32:DK:7:MET:N	2.44	0.44
27:DF:52:ALA:HB1	27:DF:149:ARG:NE	2.31	0.44
1:CA:73:C:HO2'	1:CA:74:A:H8	1.63	0.44
8:AH:10:LEU:HD22	8:AH:74:ILE:HG13	1.99	0.44
1:AA:1319:A:N7	1:AA:1323:G:C5	2.85	0.44
9:CI:51:LEU:HD23	9:CI:60:LEU:HD11	2.00	0.44
1:AA:1181:G:O2'	1:AA:1182:G:N9	2.51	0.44
22:DA:2308:G:C8	22:DA:2310:C:N4	2.86	0.44
1:CA:16:A:C3'	1:CA:17:U:H5'	2.44	0.44
4:AD:149:LYS:O	4:AD:150:LYS:HG3	2.17	0.44
4:AD:98:ASP:OD2	4:AD:99:ASN:N	2.50	0.44
35:BN:24:MET:HE3	35:BN:44:LEU:HB2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:10:ASP:C	13:CM:44:ILE:HD12	2.38	0.44
1:AA:617:G:C2	1:AA:618:C:C5	3.05	0.44
1:AA:63:C:P	1:AA:384:G:N2	2.90	0.44
1:AA:1448:C:O2'	1:AA:1449:C:H5'	2.17	0.44
1:CA:112:G:O2'	1:CA:113:G:H5'	2.17	0.44
1:CA:325:A:N6	1:CA:326:G:C6	2.86	0.44
3:CC:129:PHE:CE2	3:CC:130:ARG:HG3	2.52	0.44
1:AA:274:A:HO2'	1:AA:275:G:C1'	2.31	0.44
25:DD:121:THR:O	25:DD:122:VAL:HB	2.17	0.44
3:CC:113:LYS:O	3:CC:116:ALA:HB3	2.17	0.44
1:AA:222:C:O2'	1:AA:223:A:H5'	2.18	0.44
20:AT:27:MET:HG3	20:AT:28:ARG:N	2.32	0.44
3:CC:39:ARG:HG2	3:CC:54:ILE:CG2	2.48	0.44
22:BA:417:C:H6	22:BA:417:C:O5'	2.01	0.44
22:BA:2015:A:C5	48:B0:2:VAL:CG2	3.01	0.44
22:BA:2013:A:N3	40:BS:88:ARG:NH1	2.66	0.44
2:CB:131:LYS:C	2:CB:131:LYS:HE3	2.37	0.44
1:AA:180:U:C6	1:AA:180:U:C3'	3.01	0.44
22:DA:668:A:C2'	22:DA:670:A:H62	2.22	0.44
22:DA:265:A:O2'	22:DA:266:G:H1'	2.18	0.44
1:CA:1309:G:C1'	13:CM:72:ILE:HD11	2.47	0.44
6:AF:3:HIS:CD2	6:AF:94:HIS:HA	2.52	0.44
14:AN:50:LEU:HB3	14:AN:51:PRO:HD2	1.98	0.44
36:BO:67:ASN:O	36:BO:68:LYS:C	2.55	0.44
36:BO:70:ALA:O	36:BO:71:ALA:C	2.54	0.44
29:BH:78:VAL:HG23	29:BH:78:VAL:O	2.18	0.44
22:DA:287:G:C2	22:DA:354:A:C2	3.05	0.44
28:DG:25:ILE:HG22	28:DG:25:ILE:O	2.16	0.44
49:B1:13:SER:OG	49:B1:46:VAL:CG1	2.65	0.44
30:BI:30:GLN:NE2	30:BI:32:VAL:HB	2.33	0.44
22:BA:2415:G:C4	22:BA:2416:C:C6	3.05	0.44
22:DA:2348:U:C2'	22:DA:2349:G:H8	2.31	0.44
22:DA:2418:A:OP1	51:D3:44:ARG:HD3	2.17	0.44
22:DA:2765:A:C3'	22:DA:2766:A:H5'	2.48	0.44
22:DA:1885:A:H2'	22:DA:1886:U:O4'	2.17	0.44
22:DA:673:C:C4'	26:DE:77:ILE:HD11	2.47	0.44
22:BA:21:A:C2'	22:BA:22:C:H5'	2.47	0.44
1:AA:1273:C:H2'	1:AA:1274:A:O4'	2.18	0.44
34:DM:102:LEU:H	34:DM:102:LEU:HD22	1.83	0.44
22:BA:1374:G:C2'	22:BA:1375:U:H5'	2.47	0.44
22:DA:547:A:C8	22:DA:549:G:N2	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:5:U:H2'	23:BB:6:G:H8	1.83	0.44
22:BA:2671:G:H2'	22:BA:2672:U:H5'	1.97	0.44
23:BB:55:U:H2'	23:BB:56:G:O4'	2.18	0.44
1:CA:1414:U:H2'	1:CA:1415:G:H8	1.83	0.44
52:B4:13:ASN:N	52:B4:13:ASN:ND2	2.62	0.44
31:BJ:18:VAL:CG2	31:BJ:140:LEU:CD1	2.95	0.44
1:AA:358:U:H2'	1:AA:359:G:O5'	2.17	0.44
22:DA:16:C:O3'	48:D0:10:SER:CB	2.66	0.44
22:DA:1383:A:N3	22:DA:1383:A:H2'	2.31	0.44
20:CT:69:ASN:C	20:CT:69:ASN:ND2	2.70	0.44
28:BG:54:ARG:HG3	28:BG:57:TYR:CD1	2.53	0.44
7:AG:73:GLU:HA	7:AG:140:VAL:CG1	2.48	0.44
22:BA:1148:U:H3'	22:BA:1148:U:H6	1.82	0.44
1:AA:901:A:N7	1:AA:902:G:H1'	2.33	0.44
1:AA:901:A:C5	1:AA:902:G:H1'	2.52	0.44
1:AA:1293:C:C5	1:AA:1294:G:N7	2.86	0.44
22:BA:460:A:C2	22:BA:470:A:C4	3.06	0.44
19:AS:40:PHE:HB2	19:AS:42:ASN:ND2	2.33	0.44
22:DA:924:G:C2'	22:DA:925:A:H5'	2.48	0.44
1:AA:316:C:C2	1:AA:317:U:C5	3.05	0.44
26:BE:65:THR:O	26:BE:65:THR:HG23	2.17	0.44
44:DW:57:THR:HG22	44:DW:57:THR:O	2.16	0.44
16:AP:74:LEU:HD23	16:AP:74:LEU:N	2.32	0.44
27:DF:23:SER:HB3	27:DF:26:GLN:HB2	1.98	0.44
50:D2:5:PHE:HD2	50:D2:6:GLN:N	2.14	0.44
28:BG:162:ARG:NH2	28:BG:168:VAL:HG21	2.32	0.44
28:BG:83:THR:C	28:BG:84:LYS:HD3	2.38	0.44
1:CA:1151:A:C2'	1:CA:1152:A:H8	2.29	0.44
1:CA:1282:C:O2'	1:CA:1283:U:O5'	2.36	0.44
10:CJ:44:THR:HG22	10:CJ:45:ARG:N	2.30	0.44
41:DT:10:VAL:O	41:DT:11:LEU:C	2.56	0.44
1:CA:376:G:H5''	16:CP:5:ARG:HB2	2.00	0.44
44:DW:25:PHE:O	44:DW:65:LYS:HA	2.18	0.44
22:DA:762:U:OP1	56:DA:3675:HOH:O	2.21	0.44
22:DA:1210:G:H4'	22:DA:1211:C:O5'	2.17	0.44
22:DA:295:G:N2	22:DA:296:U:C6	2.86	0.44
22:DA:319:G:C5	22:DA:320:A:C5	3.06	0.44
22:DA:87:U:HO2'	22:DA:88:G:P	2.41	0.44
42:DU:8:ASP:OD1	42:DU:9:GLU:N	2.51	0.44
22:DA:215:G:O2'	22:DA:216:A:O5'	2.31	0.44
45:DX:2:ARG:CB	45:DX:11:PRO:HD3	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:57:LYS:HZ1	26:DE:58:LYS:N	2.16	0.44
1:CA:206:C:C6	1:CA:206:C:H3'	2.52	0.44
22:DA:1914:C:C2'	22:DA:1915:U:C6	3.00	0.44
25:BD:105:LYS:N	25:BD:106:LYS:HD2	2.32	0.44
38:DQ:61:ILE:CD1	38:DQ:61:ILE:N	2.81	0.44
44:BW:41:GLY:HA2	44:BW:44:PHE:CZ	2.53	0.44
34:DM:23:GLY:O	34:DM:101:VAL:HG12	2.18	0.44
6:CF:2:ARG:CG	6:CF:4:TYR:CZ	2.95	0.44
18:CR:33:THR:C	18:CR:35:SER:H	2.21	0.44
22:BA:2352:A:O5'	22:BA:2352:A:H8	2.00	0.44
29:BH:9:VAL:HG12	29:BH:13:GLY:H	1.82	0.44
22:BA:867:C:C4	22:BA:868:U:C5	3.05	0.44
40:DS:40:ASN:OD1	40:DS:41:LYS:N	2.50	0.44
17:AQ:55:GLY:CA	17:AQ:82:VAL:HG11	2.46	0.44
20:AT:72:ALA:O	20:AT:73:ARG:C	2.56	0.44
40:DS:9:HIS:O	40:DS:10:ALA:C	2.54	0.44
22:BA:1178:C:C2'	22:BA:1178:C:O2	2.65	0.44
1:AA:487:A:C2'	1:AA:488:C:H5'	2.45	0.44
1:CA:962:C:C2	1:CA:963:G:N7	2.85	0.44
14:CN:20:PHE:HB3	14:CN:24:ALA:HB2	1.99	0.44
1:CA:763:G:H2'	1:CA:764:C:C6	2.48	0.44
22:DA:2572:A:C8	25:DD:150:GLN:HB3	2.52	0.44
25:DD:151:THR:CB	25:DD:152:PRO:HD3	2.48	0.44
1:AA:1142:G:O2'	1:AA:1143:G:O4'	2.35	0.44
10:AJ:73:LEU:HA	10:AJ:73:LEU:HD22	1.65	0.44
35:DN:38:LEU:N	35:DN:39:PRO:CD	2.81	0.44
22:BA:1337:G:O2'	22:BA:1338:G:H5'	2.18	0.44
22:DA:1566:A:H5''	24:DC:213:ARG:NH1	2.33	0.44
22:DA:2516:A:O2'	22:DA:2517:C:H5'	2.18	0.44
5:CE:55:VAL:N	5:CE:56:PRO:CD	2.79	0.44
24:DC:144:GLU:CA	24:DC:151:GLY:HA2	2.38	0.44
22:DA:976:G:O2'	22:DA:977:G:C5'	2.66	0.44
23:DB:66:A:N3	23:DB:108:A:N1	2.66	0.44
40:BS:28:LYS:O	40:BS:29:VAL:C	2.56	0.44
22:DA:2304:G:H2'	22:DA:2305:U:C5'	2.47	0.44
22:BA:2149:U:O2'	22:BA:2150:C:P	2.76	0.44
1:CA:652:U:O2'	1:CA:653:U:P	2.76	0.44
1:AA:1069:C:C3'	1:AA:1070:U:H5''	2.47	0.44
1:CA:1296:C:N3	1:CA:1297:G:N2	2.65	0.44
1:CA:245:U:HO2'	1:CA:246:A:H5'	1.78	0.44
22:DA:2668:G:O2'	22:DA:2669:G:O5'	2.35	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:103:ASN:HA	28:DG:112:VAL:HB	1.99	0.44
1:AA:579:A:O2'	15:AO:53:ARG:NH1	2.51	0.44
22:BA:2495:G:H2'	22:BA:2496:C:H5'	2.00	0.44
22:DA:674:G:O3'	26:DE:60:TRP:CZ2	2.71	0.44
22:DA:2103:C:H2'	22:DA:2104:C:C4'	2.48	0.44
28:DG:162:ARG:HG3	28:DG:166:GLU:HG3	1.98	0.44
16:CP:51:ARG:HD3	16:CP:51:ARG:HA	1.62	0.44
22:DA:2259:U:O4'	22:DA:2427:C:C2'	2.64	0.44
22:DA:2869:G:C8	22:DA:2870:C:C5	3.06	0.44
22:DA:425:G:C2	22:DA:426:C:C5	3.05	0.44
1:AA:912:C:O2'	1:AA:913:A:H5'	2.18	0.44
28:BG:61:TRP:O	28:BG:65:GLY:N	2.31	0.44
22:DA:156:A:C2'	22:DA:157:C:O4'	2.64	0.44
23:BB:110:C:C2'	23:BB:111:U:H5'	2.48	0.44
37:DP:9:GLN:C	37:DP:11:GLN:N	2.70	0.44
1:AA:1399:C:O2	1:AA:1401:G:C6	2.71	0.44
2:CB:105:THR:HG23	2:CB:108:GLN:OE1	2.18	0.44
1:AA:936:C:H2'	1:AA:936:C:O2	2.17	0.44
1:CA:161:A:H2'	1:CA:162:A:C8	2.53	0.44
22:DA:1973:G:O6	22:DA:1974:C:N4	2.51	0.44
18:CR:19:GLU:HG2	18:CR:20:ILE:N	2.33	0.44
22:DA:355:U:H2'	22:DA:356:G:H8	1.83	0.44
22:DA:1519:G:N3	22:DA:1519:G:H2'	2.33	0.44
36:DO:69:ASP:O	36:DO:72:ALA:HB3	2.18	0.44
7:AG:68:VAL:HG21	7:AG:103:ILE:CG1	2.47	0.44
1:AA:1526:G:P	21:AU:38:GLU:HB2	2.58	0.44
3:CC:11:LEU:O	3:CC:13:ILE:N	2.50	0.44
28:BG:18:ILE:HD12	28:BG:42:VAL:CG1	2.44	0.44
16:CP:54:LEU:H	16:CP:54:LEU:CD2	2.27	0.44
22:BA:1912:A:N1	22:BA:1919:A:C5	2.86	0.44
1:AA:858:G:O2'	1:AA:859:G:H5''	2.16	0.44
22:BA:2297:A:C8	22:BA:2297:A:C5'	2.99	0.44
22:DA:644:A:O2'	22:DA:645:C:C5'	2.64	0.44
22:BA:1820:U:H3	24:BC:197:ALA:HA	1.82	0.44
22:BA:286:U:H2'	22:BA:287:G:H8	1.83	0.44
22:BA:287:G:N2	22:BA:353:C:N3	2.61	0.44
25:BD:69:ALA:CA	25:BD:73:VAL:CG1	2.94	0.44
25:BD:68:PHE:CB	25:BD:73:VAL:HG12	2.48	0.44
34:BM:46:ILE:CD1	34:BM:46:ILE:C	2.80	0.44
22:BA:438:G:H2'	22:BA:439:A:H5'	2.00	0.44
22:DA:950:G:C2'	22:DA:951:C:H5'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:67:LEU:N	18:CR:67:LEU:HD23	2.33	0.44
2:AB:71:THR:C	2:AB:72:LYS:HG2	2.38	0.44
1:CA:708:C:C4'	11:CK:38:GLY:HA3	2.48	0.44
3:AC:49:ALA:HB1	3:AC:75:VAL:CG2	2.48	0.44
22:BA:2302:U:H3	22:BA:2314:A:H61	1.65	0.44
3:AC:152:VAL:HG12	3:AC:197:VAL:HG13	1.99	0.44
1:AA:53:A:C2'	1:AA:54:C:O5'	2.65	0.44
12:CL:33:CYS:CB	12:CL:77:SER:O	2.66	0.44
22:DA:753:A:O2'	22:DA:754:U:H5'	2.17	0.44
22:BA:2641:G:H5''	31:BJ:78:THR:HB	1.98	0.44
22:DA:2784:U:H4'	25:DD:42:ASN:HB3	1.99	0.44
5:AE:82:HIS:CE1	8:AH:95:MET:CE	3.01	0.44
22:BA:1132:U:H5'	31:BJ:84:ILE:CD1	2.48	0.44
22:DA:961:C:H5	22:DA:2456:C:C5'	2.30	0.44
1:AA:1231:G:C5	1:AA:1232:U:C4	3.05	0.44
22:BA:1052:C:C6	22:BA:1052:C:C3'	3.00	0.44
22:DA:2526:G:C2'	52:D4:1:MET:H1	2.31	0.44
9:CI:87:MET:SD	9:CI:87:MET:N	2.90	0.44
2:AB:119:GLN:HA	2:AB:122:ASP:HB2	1.98	0.44
26:BE:37:ALA:O	26:BE:39:ALA:N	2.51	0.44
1:AA:661:G:C2	1:AA:745:G:C2	3.05	0.44
29:DH:45:GLU:C	29:DH:47:PHE:H	2.21	0.44
22:BA:2142:A:H2'	22:BA:2143:C:OP2	2.18	0.44
22:BA:1956:U:C2'	22:BA:1957:C:H5'	2.47	0.44
34:BM:103:TYR:N	34:BM:103:TYR:CD1	2.86	0.44
25:BD:13:ARG:HD2	37:BP:55:HIS:ND1	2.32	0.44
5:AE:103:GLY:HA2	5:AE:121:ASN:CA	2.36	0.44
5:AE:148:SER:O	5:AE:152:VAL:HA	2.17	0.44
5:AE:96:GLN:HE21	5:AE:96:GLN:HA	1.83	0.44
22:DA:1817:G:H5''	24:DC:86:ARG:HH12	1.82	0.44
24:DC:20:ASN:HA	24:DC:21:PRO:HD3	1.81	0.44
22:DA:2796:U:C5	22:DA:2798:U:O4	2.70	0.44
22:DA:1387:A:O2'	22:DA:1388:G:OP2	2.29	0.44
22:DA:2331:G:N1	22:DA:2385:C:N4	2.66	0.44
24:DC:229:HIS:CE1	24:DC:230:PRO:HD2	2.53	0.44
7:CG:91:ARG:NE	7:CG:92:PRO:HD2	2.33	0.44
22:DA:1358:G:C5	56:DA:3415:HOH:O	2.70	0.44
22:DA:53:A:H2	22:DA:179:C:H4'	1.78	0.44
22:DA:45:G:H5'	22:DA:46:G:OP1	2.18	0.44
1:AA:1331:G:HO2'	1:AA:1332:A:P	2.41	0.44
13:AM:86:ARG:HA	13:AM:96:VAL:HG13	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1914:C:O4'	22:DA:1914:C:O2	2.36	0.44
45:DX:58:ILE:HA	45:DX:66:VAL:HG21	1.99	0.44
41:BT:20:ALA:C	41:BT:22:THR:N	2.70	0.44
1:AA:74:A:C6	1:AA:97:G:C6	3.06	0.44
21:CU:32:ARG:HB3	21:CU:33:ARG:H	1.67	0.44
22:DA:1529:G:H2'	22:DA:1530:G:O4'	2.18	0.44
1:AA:544:G:C5	1:AA:545:C:C5	3.06	0.44
12:AL:120:ARG:HA	12:AL:121:PRO:HD2	1.81	0.44
37:BP:88:ARG:HD3	37:BP:112:ARG:HH21	1.82	0.44
6:CF:38:ARG:O	6:CF:62:MET:O	2.36	0.44
37:DP:85:VAL:C	37:DP:86:LYS:HZ3	2.20	0.44
1:CA:599:C:O3'	8:CH:121:GLY:HA3	2.17	0.44
8:CH:28:SER:O	8:CH:29:SER:HB3	2.17	0.44
35:BN:78:LYS:O	35:BN:79:LEU:C	2.53	0.44
26:BE:5:LEU:HD13	26:BE:122:GLU:HG3	2.00	0.44
1:CA:1215:G:O2'	1:CA:1216:A:H5'	2.18	0.44
1:CA:1014:A:H2	1:CA:1219:A:H1'	1.82	0.44
1:CA:942:G:N2	1:CA:1342:C:C1'	2.78	0.44
1:CA:963:G:O6	1:CA:973:G:O6	2.36	0.44
7:CG:78:ARG:HG3	7:CG:82:SER:O	2.18	0.44
19:CS:16:LYS:O	19:CS:17:LYS:HD3	2.18	0.44
20:AT:82:ILE:HD12	20:AT:83:ASN:CB	2.48	0.44
22:DA:608:A:N7	22:DA:621:A:N7	2.66	0.44
33:DL:116:VAL:CG1	33:DL:117:THR:N	2.80	0.44
22:DA:388:G:C5	22:DA:390:U:H2'	2.52	0.44
1:AA:1133:G:N1	1:AA:1142:G:C6	2.85	0.44
41:BT:37:ASP:O	41:BT:38:ALA:O	2.36	0.44
11:AK:127:ARG:NH1	11:AK:127:ARG:HG2	2.32	0.44
16:CP:20:VAL:HG23	16:CP:34:GLU:C	2.38	0.44
22:DA:1999:C:H2'	22:DA:2000:C:O4'	2.17	0.44
29:BH:72:ILE:HD11	29:BH:142:VAL:CG1	2.47	0.44
27:DF:135:ILE:O	27:DF:137:PHE:N	2.51	0.44
1:AA:512:U:H2'	1:AA:513:C:C6	2.53	0.44
25:DD:119:ALA:HB3	25:DD:163:GLY:N	2.32	0.44
22:DA:1441:G:C6	22:DA:1442:U:C4	3.05	0.44
7:CG:41:ILE:O	7:CG:45:ALA:HB3	2.18	0.44
22:BA:1716:U:H2'	22:BA:1717:A:H8	1.78	0.44
14:AN:5:MET:SD	14:AN:8:ARG:NH1	2.91	0.44
22:DA:607:U:C5	22:DA:619:G:C5	2.87	0.44
35:BN:103:ARG:CZ	35:BN:110:MET:HE1	2.48	0.44
22:DA:959:A:C2'	22:DA:960:A:C8	2.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1080:A:OP1	5:CE:51:LYS:NZ	2.49	0.44
1:CA:155:A:H2'	1:CA:156:C:C6	2.53	0.44
13:CM:12:LYS:HE2	13:CM:16:ILE:CG2	2.46	0.44
22:BA:1058:U:H4'	30:BI:117:THR:CG2	2.47	0.44
42:DU:59:GLU:O	42:DU:60:LYS:HD2	2.16	0.44
22:BA:1021:A:C6	22:BA:1023:U:C5	3.05	0.44
29:DH:132:PHE:CD1	29:DH:133:GLN:N	2.85	0.44
22:DA:1162:G:N2	39:DR:91:GLN:NE2	2.66	0.44
1:CA:243:A:H4'	1:CA:244:U:H5'	2.00	0.44
22:DA:280:U:H5	22:DA:281:C:C4	2.34	0.44
1:AA:149:A:H2'	1:AA:149:A:N3	2.33	0.44
14:CN:92:ILE:HD12	14:CN:95:LEU:HD23	2.00	0.44
3:CC:38:VAL:HG23	3:CC:39:ARG:N	2.33	0.44
26:DE:79:ARG:O	26:DE:80:SER:C	2.56	0.44
22:DA:804:A:H2'	22:DA:806:C:N4	2.33	0.44
26:DE:70:SER:O	26:DE:71:GLY:C	2.56	0.44
46:BY:37:LEU:O	46:BY:37:LEU:HD13	2.18	0.44
29:DH:99:ILE:CG2	29:DH:100:ALA:N	2.73	0.44
1:CA:885:G:O2'	1:CA:886:G:C5'	2.66	0.44
12:AL:34:THR:HG22	12:AL:35:ARG:HH21	1.83	0.44
1:AA:912:C:H6	1:AA:912:C:O5'	2.01	0.44
13:AM:3:ILE:O	13:AM:3:ILE:CG1	2.65	0.44
13:CM:47:LEU:HD23	13:CM:48:SER:C	2.38	0.44
1:AA:1380:U:C4	7:AG:2:ARG:HA	2.53	0.44
1:CA:1533:C:O5'	1:CA:1533:C:H6	1.98	0.44
3:AC:10:ARG:O	3:AC:11:LEU:C	2.56	0.44
9:CI:14:SER:HB2	9:CI:77:ALA:HB2	1.99	0.44
22:DA:210:C:H4'	22:DA:1367:A:C1'	2.48	0.44
41:BT:8:LEU:HD12	41:BT:46:ALA:CA	2.43	0.44
39:BR:15:SER:H	39:BR:18:GLN:NE2	2.16	0.44
8:CH:100:ILE:O	8:CH:100:ILE:HD12	2.17	0.44
19:CS:38:THR:N	19:CS:69:LYS:CD	2.78	0.44
25:BD:69:ALA:N	25:BD:73:VAL:CG1	2.81	0.44
22:BA:611:C:C2'	22:BA:612:G:C5'	2.94	0.44
27:BF:174:PHE:HD1	27:BF:176:PHE:CE1	2.35	0.44
51:D3:46:LYS:HD3	51:D3:46:LYS:O	2.18	0.44
4:CD:137:SER:HB2	4:CD:138:PRO:CD	2.43	0.44
1:CA:1106:G:H2'	1:CA:1107:C:H6	1.83	0.44
10:AJ:80:THR:H	10:AJ:83:THR:CG2	2.31	0.44
30:DI:37:PHE:CE1	30:DI:56:VAL:CG2	2.99	0.44
1:CA:1430:A:C2'	1:CA:1431:A:H5'	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:34:GLU:OE2	21:AU:18:PHE:HE1	2.01	0.44
22:DA:24:G:C6	22:DA:25:U:C4	3.06	0.44
22:BA:2726:A:O2'	22:BA:2727:A:C5'	2.65	0.44
34:BM:21:ALA:HA	34:BM:97:GLN:HG2	2.00	0.44
24:DC:2:VAL:HB	24:DC:3:VAL:H	1.34	0.44
3:CC:15:LYS:HG3	3:CC:16:PRO:HD2	1.98	0.44
34:DM:63:ILE:CD1	34:DM:105:MET:CE	2.96	0.44
37:BP:98:TYR:CE2	37:BP:99:LEU:CD1	3.00	0.44
22:BA:831:G:C6	22:BA:832:U:C4	3.06	0.44
16:AP:41:PRO:C	16:AP:42:ILE:HD13	2.37	0.44
22:DA:1146:C:N4	22:DA:1147:A:N6	2.65	0.44
22:BA:2244:U:H2'	22:BA:2245:U:O4'	2.18	0.44
1:AA:725:G:O2'	1:AA:726:C:H5'	2.18	0.44
1:AA:1293:C:H2'	1:AA:1294:G:O4'	2.18	0.44
1:AA:72:A:H2'	1:AA:73:C:C6	2.52	0.44
24:DC:242:HIS:HA	24:DC:243:PRO:HD3	1.84	0.44
30:DI:64:ARG:HB2	30:DI:64:ARG:NH1	2.31	0.44
22:BA:553:G:H2'	22:BA:554:U:O4'	2.18	0.44
26:DE:26:ALA:HB1	33:DL:9:ALA:HB2	1.98	0.44
1:CA:889:A:H1'	1:CA:891:U:C6	2.52	0.44
1:AA:471:U:H2'	1:AA:472:U:O4'	2.17	0.44
1:AA:669:G:O2'	1:AA:670:G:H5'	2.18	0.44
22:BA:2697:G:C5	22:BA:2698:U:C5	3.06	0.44
43:BV:55:GLU:HG3	43:BV:55:GLU:H	1.47	0.44
29:DH:28:ASN:HA	29:DH:28:ASN:HD22	1.57	0.44
36:BO:83:LEU:HA	36:BO:83:LEU:HD12	1.56	0.44
2:AB:105:THR:O	2:AB:105:THR:HG22	2.18	0.44
36:BO:17:LYS:HD3	36:BO:17:LYS:O	2.18	0.44
21:CU:44:ARG:HG3	21:CU:44:ARG:O	2.17	0.44
22:BA:883:G:H2'	22:BA:884:U:O4'	2.18	0.44
1:CA:506:G:C6	1:CA:507:C:C4	3.05	0.44
22:BA:802:A:H2'	22:BA:803:U:C6	2.53	0.44
8:AH:45:ILE:HD12	8:AH:60:LEU:HD22	1.99	0.44
22:BA:670:A:H4'	22:BA:671:C:C5'	2.47	0.44
28:BG:83:THR:C	28:BG:84:LYS:CD	2.86	0.44
1:CA:1255:G:O2'	1:CA:1258:G:H1'	2.18	0.44
1:CA:1278:G:OP2	1:CA:1278:G:H8	1.99	0.44
4:AD:28:ASP:HB2	4:AD:33:ILE:HB	1.98	0.44
22:DA:916:G:HO2'	22:DA:917:A:P	2.41	0.44
44:DW:18:LYS:H	44:DW:36:ILE:HG13	1.77	0.44
24:DC:230:PRO:HG2	24:DC:245:THR:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1060:U:H4'	22:DA:1061:U:C2'	2.47	0.44
22:DA:112:U:C5	22:DA:113:U:C4	3.05	0.44
22:DA:310:A:C2	22:DA:330:A:C4	3.06	0.44
22:DA:333:G:O2'	22:DA:334:C:H6	2.01	0.44
22:DA:321:U:HO2'	26:DE:162:ARG:HH11	1.65	0.44
22:DA:120:U:H5''	56:DA:3222:HOH:O	2.18	0.44
22:DA:35:G:O2'	22:DA:36:G:H8	2.01	0.44
1:CA:1084:G:OP1	1:CA:1086:U:C6	2.71	0.44
1:CA:1102:A:H5''	1:CA:1102:A:C8	2.50	0.44
22:DA:136:G:H2'	22:DA:137:U:C6	2.53	0.44
22:DA:142:A:O2'	22:DA:143:C:O4'	2.36	0.44
22:DA:1153:C:H2'	22:DA:1154:G:H8	1.78	0.44
11:CK:126:ARG:O	11:CK:127:ARG:HB2	2.17	0.44
21:CU:33:ARG:NH2	21:CU:34:ARG:HD2	2.33	0.44
22:BA:2365:G:C2'	22:BA:2366:A:C8	3.01	0.44
1:CA:671:G:N1	1:CA:672:U:C2	2.85	0.44
18:CR:70:THR:OG1	18:CR:71:ASP:N	2.51	0.44
32:DK:76:VAL:HB	37:DP:72:VAL:HG22	1.99	0.44
44:BW:28:GLU:OE2	44:BW:29:SER:N	2.51	0.44
22:BA:1711:A:H2'	22:BA:1712:U:H6	1.83	0.44
22:DA:2071:A:H2'	22:DA:2072:C:C6	2.53	0.44
22:DA:1333:G:O2'	22:DA:1334:G:H5'	2.18	0.44
17:AQ:78:VAL:HG12	17:AQ:79:GLU:HG3	2.00	0.44
20:AT:69:ASN:O	20:AT:72:ALA:HB3	2.18	0.44
1:AA:487:A:H2'	1:AA:488:C:H6	1.83	0.44
26:BE:108:ILE:CD1	26:BE:180:LEU:HD13	2.47	0.44
1:CA:1319:A:C2'	1:CA:1320:C:OP2	2.66	0.44
1:CA:998:C:C5	1:CA:999:C:H5	2.35	0.44
10:CJ:52:LEU:HG	10:CJ:62:ARG:HG2	2.00	0.44
22:BA:1654:A:C1'	25:BD:118:PHE:CD1	2.95	0.44
11:AK:121:ARG:CZ	21:AU:35:GLU:HG3	2.48	0.44
21:AU:33:ARG:HG2	21:AU:34:ARG:H	1.81	0.44
29:BH:134:VAL:HG21	29:BH:139:PHE:C	2.37	0.44
1:CA:139:A:H2'	1:CA:140:U:H5'	2.00	0.44
22:BA:763:G:O2'	22:BA:764:A:H3'	2.18	0.44
22:DA:991:C:O2'	22:DA:992:C:C5'	2.66	0.44
23:DB:58:A:O2'	23:DB:59:A:O5'	2.36	0.44
23:DB:10:G:C8	23:DB:11:C:C5	3.06	0.44
23:DB:16:G:N1	23:DB:17:C:C4	2.86	0.44
27:BF:109:ARG:HB2	27:BF:136:ILE:HG22	1.96	0.44
25:DD:88:GLU:O	25:DD:89:GLU:HG3	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1555:G:H2'	22:DA:1556:C:C6	2.53	0.44
1:CA:1240:U:O2'	7:CG:37:THR:CG2	2.65	0.44
19:AS:4:LEU:O	19:AS:5:LYS:HB2	2.17	0.44
7:CG:9:ARG:HG3	7:CG:10:LYS:N	2.33	0.44
7:CG:128:GLU:O	7:CG:129:ASN:HB2	2.18	0.44
22:BA:2437:G:O2'	22:BA:2438:U:H5'	2.18	0.44
22:DA:1766:G:O6	22:DA:1987:A:C6	2.70	0.44
22:BA:1277:G:H5'	35:BN:20:MET:HE3	1.92	0.44
13:CM:57:ASP:C	13:CM:59:VAL:H	2.22	0.44
29:DH:12:LEU:HD13	29:DH:19:VAL:HG21	2.00	0.44
1:AA:478:A:H2'	1:AA:479:U:O4'	2.18	0.44
12:CL:5:GLN:HG3	12:CL:9:LYS:HZ3	1.81	0.44
12:CL:6:LEU:H	12:CL:6:LEU:HD12	1.83	0.44
22:DA:1868:C:N4	22:DA:1869:G:O6	2.51	0.44
1:AA:993:G:N3	1:AA:993:G:H2'	2.33	0.44
22:DA:2657:A:C5	22:DA:2665:A:C5	3.06	0.44
1:CA:743:A:C6	1:CA:744:C:C4	3.05	0.44
22:BA:601:C:O2'	22:BA:605:G:OP1	2.32	0.44
8:CH:1:SER:O	8:CH:3:GLN:N	2.51	0.44
3:AC:138:GLN:C	3:AC:140:ALA:H	2.21	0.44
29:DH:38:PRO:O	29:DH:40:THR:HG23	2.18	0.44
1:CA:844:G:C2	1:CA:846:G:O2'	2.62	0.44
1:CA:844:G:C2'	1:CA:845:A:H5''	2.48	0.44
1:AA:198:G:C6	1:AA:220:G:C4	3.05	0.44
22:DA:589:U:H2'	22:DA:590:A:H5'	1.96	0.44
28:BG:33:THR:CA	28:BG:34:ARG:NH1	2.76	0.44
22:DA:2149:U:C6	22:DA:2150:C:H5	2.35	0.44
49:D1:47:ILE:H	49:D1:47:ILE:CD1	2.20	0.44
16:AP:46:LYS:NZ	16:AP:48:GLU:H	2.15	0.44
36:DO:11:ALA:HB2	36:DO:96:GLY:CA	2.48	0.44
22:DA:1317:G:N2	22:DA:1336:A:N3	2.66	0.44
22:BA:869:G:C6	22:BA:870:U:C4	3.06	0.44
22:DA:2519:U:H1'	22:DA:2520:C:C5	2.47	0.44
22:DA:2348:U:O2'	22:DA:2349:G:H8	2.01	0.44
22:BA:1692:U:H2'	22:BA:1694:C:C4	2.53	0.44
1:CA:954:G:C2	1:CA:1228:C:N3	2.86	0.44
22:BA:2485:G:OP1	34:BM:45:GLN:NE2	2.50	0.44
1:AA:1072:G:C5	1:AA:1073:U:C4	3.06	0.44
31:BJ:128:ASN:O	31:BJ:128:ASN:CG	2.56	0.44
20:CT:50:PHE:O	20:CT:53:MET:HG3	2.18	0.44
28:DG:19:ASN:N	28:DG:19:ASN:ND2	2.62	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1416:G:C2	22:DA:1417:C:C5	3.06	0.44
22:DA:1416:G:N3	22:DA:1417:C:C5	2.86	0.44
3:AC:41:TYR:HD1	3:AC:42:LEU:HD13	1.81	0.44
1:AA:137:U:O2	1:AA:137:U:C2'	2.60	0.44
1:CA:146:G:C2	1:CA:147:G:C8	3.06	0.44
22:DA:1510:G:N2	22:DA:1511:G:C6	2.86	0.44
25:BD:49:GLN:NE2	25:BD:67:HIS:CE1	2.85	0.44
22:BA:752:A:O2'	22:BA:753:A:P	2.75	0.44
25:BD:9:VAL:CG1	25:BD:28:GLU:HB2	2.48	0.44
22:DA:1835:G:N3	22:DA:1836:C:C6	2.86	0.44
1:CA:29:U:H5'	1:CA:296:U:OP1	2.17	0.44
22:BA:323:C:C4	22:BA:333:G:C8	3.05	0.44
28:DG:145:ALA:HA	28:DG:148:ARG:HG2	1.98	0.44
6:CF:81:ASN:HD21	6:CF:83:ALA:HB3	1.83	0.44
40:DS:51:LEU:HD12	40:DS:51:LEU:O	2.18	0.44
30:DI:64:ARG:HB2	30:DI:64:ARG:CZ	2.48	0.44
22:DA:1464:G:N1	22:DA:1465:G:C5	2.86	0.44
22:BA:554:U:C4	22:BA:555:G:C6	3.06	0.44
1:CA:872:A:C5	1:CA:874:G:C8	3.06	0.44
2:CB:144:GLU:HG3	2:CB:148:GLY:HA2	1.99	0.44
6:CF:8:PHE:CE2	6:CF:60:VAL:HB	2.53	0.44
22:BA:540:C:O2'	22:BA:541:A:H5'	2.17	0.44
39:DR:15:SER:OG	39:DR:16:GLU:N	2.49	0.44
34:DM:133:LYS:O	34:DM:134:THR:HB	2.18	0.44
22:BA:1201:U:H2'	22:BA:1202:G:O4'	2.18	0.44
1:AA:966:G:H2'	1:AA:967:C:C6	2.53	0.44
2:AB:14:HIS:O	2:AB:14:HIS:CG	2.71	0.44
9:CI:126:PHE:O	9:CI:126:PHE:CG	2.71	0.44
22:DA:471:A:O5'	22:DA:471:A:H8	2.00	0.44
22:DA:1952:A:OP1	32:DK:42:THR:CG2	2.66	0.44
22:BA:1080:A:C3'	30:BI:126:ARG:HG3	2.48	0.44
24:DC:196:ASN:O	24:DC:197:ALA:CB	2.64	0.44
24:DC:90:ILE:CG2	24:DC:91:ALA:N	2.81	0.44
22:DA:1313:U:HO2'	22:DA:1314:C:H5'	1.82	0.44
1:AA:426:U:HO2'	1:AA:427:U:H5'	1.78	0.44
1:CA:390:U:H2'	1:CA:391:G:O4'	2.17	0.44
22:DA:302:C:O2'	22:DA:303:G:H5'	2.18	0.44
22:DA:128:C:H6	22:DA:128:C:C5'	2.28	0.44
22:DA:1355:G:C6	22:DA:1377:G:C2	3.06	0.44
22:DA:446:G:O4'	22:DA:449:A:C2	2.71	0.44
22:DA:457:A:H2	22:DA:458:G:N2	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:95:TRP:HZ2	2:CB:100:LEU:CD1	2.25	0.44
49:B1:49:LYS:O	49:B1:50:GLU:CB	2.56	0.44
34:DM:33:LEU:HD22	34:DM:128:THR:HB	2.00	0.44
22:DA:137:U:H2'	22:DA:138:U:O4'	2.18	0.44
31:DJ:43:GLU:O	31:DJ:44:TYR:C	2.53	0.44
21:CU:35:GLU:O	21:CU:36:PHE:HD2	1.93	0.44
44:BW:21:GLY:C	44:BW:22:VAL:HG12	2.38	0.44
44:BW:49:ASN:O	44:BW:50:VAL:CG2	2.66	0.44
43:DV:4:ILE:HD12	43:DV:63:ILE:HD11	2.00	0.44
43:DV:89:ILE:CD1	43:DV:91:PHE:CZ	2.95	0.44
34:DM:66:ARG:HD2	34:DM:101:VAL:HG11	1.98	0.44
1:CA:671:G:C6	1:CA:672:U:N3	2.85	0.44
18:CR:59:LYS:O	18:CR:63:TYR:CD1	2.71	0.44
37:DP:88:ARG:NH1	37:DP:112:ARG:NH2	2.53	0.44
22:DA:2618:G:C5	22:DA:2619:C:C5	3.06	0.44
45:BX:38:TRP:HA	45:BX:45:PHE:CD2	2.53	0.44
45:BX:46:VAL:HG11	45:BX:77:TYR:CD1	2.52	0.44
22:DA:189:G:N2	22:DA:208:C:N4	2.66	0.44
22:DA:679:C:C2'	22:DA:680:C:O5'	2.66	0.44
22:BA:1494:A:H2'	22:BA:1495:A:C8	2.53	0.44
22:BA:1496:A:H2'	22:BA:1498:C:N4	2.33	0.44
22:DA:581:C:C2	22:DA:582:A:N7	2.86	0.44
1:AA:486:U:C2'	1:AA:487:A:C5'	2.88	0.44
1:CA:994:A:C6	1:CA:1216:A:C5'	3.01	0.44
19:CS:32:THR:C	19:CS:34:SER:H	2.20	0.44
4:AD:53:GLN:NE2	4:AD:201:GLU:HG2	2.33	0.44
33:DL:132:ARG:O	33:DL:135:ILE:HG22	2.17	0.44
21:AU:27:VAL:O	21:AU:30:GLU:HB3	2.18	0.44
5:CE:73:VAL:CG1	5:CE:143:LEU:HB3	2.48	0.44
22:DA:2060:A:C2'	26:DE:63:LYS:HZ3	2.27	0.44
9:CI:27:ILE:HB	9:CI:34:LEU:CA	2.48	0.44
9:CI:27:ILE:HB	9:CI:34:LEU:HB2	1.99	0.44
22:DA:1565:C:O2'	22:DA:1566:A:O5'	2.32	0.44
47:BZ:9:THR:HG23	47:BZ:9:THR:O	2.14	0.44
26:DE:153:LEU:HD21	26:DE:157:LEU:HG	1.99	0.44
22:DA:2843:G:N2	22:DA:2875:C:C2	2.86	0.44
27:DF:99:PHE:C	27:DF:101:ARG:H	2.20	0.44
1:CA:86:G:C2	1:CA:87:C:C4	3.06	0.44
1:CA:199:A:O2'	1:CA:200:G:P	2.76	0.44
31:DJ:99:ARG:CG	31:DJ:102:GLU:OE2	2.66	0.44
42:BU:39:ASN:HB3	42:BU:62:ALA:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1722:A:C5	22:DA:1739:A:C5	3.06	0.44
22:DA:1558:C:H1'	22:DA:1560:G:C5	2.53	0.44
1:AA:1317:C:OP1	14:AN:20:PHE:HE2	2.01	0.44
22:DA:2741:A:H2'	22:DA:2742:G:C5'	2.46	0.44
6:AF:86:ARG:NH1	6:AF:88:MET:HE3	2.33	0.44
29:DH:9:VAL:HG11	29:DH:12:LEU:CD1	2.48	0.44
22:BA:2093:G:OP1	29:BH:24:GLY:N	2.41	0.44
1:CA:1308:U:H5	13:CM:97:ARG:CZ	2.29	0.44
22:BA:1585:C:C2'	22:BA:1586:A:C5'	2.81	0.44
1:AA:385:C:O2'	1:AA:386:C:H5'	2.18	0.44
22:BA:301:G:O2'	22:BA:302:C:O5'	2.36	0.44
3:CC:5:HIS:NE2	3:CC:183:TYR:CE2	2.86	0.44
40:BS:59:GLU:HA	40:BS:64:ALA:HB1	1.96	0.44
1:CA:1452:C:H4'	1:CA:1453:G:C5'	2.45	0.44
1:CA:1453:G:N2	1:CA:1454:G:C5	2.86	0.44
22:DA:2297:A:C2	22:DA:2298:A:C8	3.06	0.44
1:AA:1444:U:H2'	1:AA:1445:U:C6	2.53	0.44
2:CB:164:ASP:HB2	2:CB:167:HIS:HB3	1.96	0.44
33:DL:29:LYS:O	33:DL:30:THR:OG1	2.34	0.44
23:DB:42:C:N4	27:DF:87:LYS:CD	2.81	0.44
17:AQ:62:GLU:HB2	17:AQ:72:TRP:CE2	2.53	0.44
1:AA:182:A:O2'	1:AA:184:G:N7	2.46	0.44
47:BZ:4:ILE:HG12	47:BZ:37:ARG:O	2.18	0.44
22:DA:56:A:C2	22:DA:115:C:C2	3.06	0.44
13:AM:15:VAL:HG12	13:AM:33:LEU:HD12	1.99	0.44
37:DP:50:ARG:H	37:DP:50:ARG:HG3	1.43	0.44
2:CB:124:THR:HG23	2:CB:125:PHE:H	1.82	0.44
22:DA:1716:U:C4	22:DA:1745:A:N6	2.86	0.44
22:BA:704:G:O2'	22:BA:726:G:C2	2.71	0.44
2:AB:110:ILE:HD11	2:AB:150:ILE:HD13	2.00	0.44
1:CA:771:G:C2	1:CA:809:G:N3	2.86	0.44
22:BA:2755:C:C4	52:B4:19:ARG:NH1	2.85	0.44
3:CC:89:VAL:O	3:CC:93:ILE:HG22	2.17	0.44
37:BP:47:ILE:HA	37:BP:96:LEU:HB2	1.99	0.44
15:AO:23:SER:O	15:AO:25:GLU:N	2.51	0.44
1:AA:233:C:H2'	1:AA:234:C:H6	1.82	0.44
28:DG:35:THR:C	28:DG:36:LEU:HD12	2.39	0.44
22:BA:900:A:C4	22:BA:901:C:C6	3.06	0.44
1:CA:127:G:N2	1:CA:235:C:C2	2.86	0.44
22:BA:1854:A:H2	22:BA:2087:G:N3	2.16	0.44
27:BF:173:ASP:O	27:BF:174:PHE:O	2.36	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:46:THR:HG23	18:CR:51:GLN:HB2	1.99	0.44
38:DQ:43:GLN:NE2	39:DR:77:PHE:HB3	2.32	0.44
22:DA:308:G:C2	22:DA:309:A:C2	3.06	0.44
19:AS:79:TYR:CZ	19:AS:80:ARG:HB2	2.53	0.44
22:BA:396:G:H2'	22:BA:397:U:C6	2.52	0.44
1:AA:1272:G:C2'	1:AA:1273:C:H5'	2.48	0.44
22:DA:3:U:C4	22:DA:4:U:C4	3.06	0.44
1:AA:9:G:C6	1:AA:26:A:N6	2.86	0.44
22:DA:1510:G:O2'	22:DA:1511:G:C8	2.66	0.44
17:AQ:32:ILE:N	17:AQ:32:ILE:HD12	2.33	0.44
22:DA:523:C:O2'	22:DA:524:G:H5'	2.17	0.44
40:DS:27:LYS:O	40:DS:28:LYS:O	2.35	0.44
22:BA:2783:U:H2'	22:BA:2784:U:C6	2.53	0.44
9:CI:127:SER:O	9:CI:128:LYS:HB3	2.18	0.44
30:DI:117:THR:HG22	30:DI:117:THR:O	2.16	0.44
33:BL:48:ARG:HH21	51:B3:3:ILE:CG2	2.31	0.44
1:AA:1452:C:O4'	1:AA:1453:G:C2	2.71	0.44
1:AA:1454:G:H2'	1:AA:1455:G:H8	1.81	0.44
22:BA:1471:G:O2'	22:BA:1472:C:H5'	2.18	0.44
17:AQ:29:LYS:HG3	17:AQ:36:PHE:CZ	2.52	0.44
31:DJ:55:ILE:CG1	31:DJ:55:ILE:O	2.65	0.44
22:DA:1146:C:H42	22:DA:1147:A:N6	2.16	0.44
11:AK:73:VAL:C	11:AK:75:GLU:H	2.20	0.44
22:BA:1376:C:O2'	22:BA:1377:G:H5'	2.17	0.44
23:DB:81:G:C4	23:DB:82:U:C5	3.06	0.44
15:AO:31:LEU:HA	15:AO:31:LEU:HD23	1.74	0.44
1:AA:102:G:C4	1:AA:103:U:C5	3.06	0.44
1:AA:849:G:C6	1:AA:850:U:N3	2.85	0.44
33:BL:75:ALA:HB2	33:BL:105:ILE:CD1	2.48	0.44
11:CK:75:GLU:OE2	11:CK:75:GLU:HA	2.18	0.44
23:DB:104:A:H2'	23:DB:105:G:H5'	2.00	0.44
31:DJ:67:ASN:O	31:DJ:71:ASP:HB2	2.18	0.44
22:BA:1074:G:N3	22:BA:1075:C:C5	2.86	0.43
22:BA:571:U:C5	22:BA:575:A:C5	3.06	0.43
22:BA:668:A:H2'	22:BA:670:A:N6	2.25	0.43
25:BD:149:ASN:O	25:BD:152:PRO:HD2	2.17	0.43
22:DA:2373:G:C6	22:DA:2374:C:C4	3.06	0.43
22:DA:856:G:C2	22:DA:922:C:N3	2.86	0.43
22:DA:1970:A:H5'	22:DA:1971:U:OP1	2.17	0.43
30:DI:76:ALA:HB2	30:DI:131:THR:HB	1.99	0.43
22:DA:295:G:C2	22:DA:296:U:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:3:ARG:O	41:DT:4:GLU:C	2.57	0.43
42:DU:73:ASN:HB3	42:DU:95:PHE:HE2	1.82	0.43
24:BC:257:ARG:HG3	24:BC:269:ARG:HH12	1.83	0.43
24:BC:80:LEU:HA	24:BC:80:LEU:HD23	1.46	0.43
22:DA:126:A:OP2	50:D2:19:ARG:HB2	2.18	0.43
22:DA:1427:A:H4'	22:DA:1428:C:O4'	2.18	0.43
22:DA:162:U:C5'	22:DA:163:C:OP1	2.60	0.43
22:DA:165:A:H2'	22:DA:166:U:C6	2.44	0.43
22:DA:161:A:H2	22:DA:2217:G:H1'	1.82	0.43
22:DA:397:U:OP1	45:DX:30:PRO:CA	2.65	0.43
22:DA:1049:C:C5	22:DA:1050:A:N7	2.85	0.43
2:CB:103:TRP:HA	2:CB:106:VAL:H	1.83	0.43
49:B1:8:ILE:CG2	49:B1:9:LYS:H	2.28	0.43
1:AA:91:U:C2'	1:AA:92:U:O4'	2.65	0.43
22:DA:538:A:N6	22:DA:555:G:O2'	2.51	0.43
31:DJ:45:THR:OG1	31:DJ:48:VAL:CB	2.62	0.43
1:CA:794:A:H8	1:CA:794:A:H5''	1.83	0.43
21:CU:25:ALA:O	21:CU:28:LEU:N	2.47	0.43
22:BA:855:G:N2	44:BW:23:LYS:HB3	2.33	0.43
44:BW:24:ARG:HD3	44:BW:65:LYS:CD	2.48	0.43
44:BW:24:ARG:NE	44:BW:65:LYS:HE2	2.32	0.43
43:DV:40:ILE:HB	43:DV:41:GLU:H	1.58	0.43
37:BP:25:VAL:HG11	37:BP:46:VAL:CG2	2.48	0.43
37:BP:44:GLY:HA3	37:BP:61:ARG:O	2.18	0.43
18:CR:72:ARG:HE	18:CR:72:ARG:N	1.99	0.43
21:AU:10:PRO:C	21:AU:11:PHE:HD2	2.20	0.43
22:DA:1280:G:C6	22:DA:1281:G:N7	2.86	0.43
35:DN:54:LEU:CD1	35:DN:66:ALA:HB2	2.25	0.43
1:AA:1299:A:C5	1:AA:1301:U:C2	3.06	0.43
1:CA:1322:C:O2'	1:CA:1323:G:C5'	2.58	0.43
4:AD:53:GLN:HE21	4:AD:202:LEU:N	2.16	0.43
4:AD:56:GLU:OE2	4:AD:195:ASN:N	2.48	0.43
22:DA:2439:A:C8	22:DA:2586:U:H4'	2.52	0.43
1:AA:920:U:H2'	1:AA:921:U:C6	2.53	0.43
5:CE:79:THR:CA	5:CE:121:ASN:ND2	2.79	0.43
22:DA:1452:G:C5	22:DA:2702:G:N1	2.86	0.43
36:BO:117:PHE:CD1	36:BO:117:PHE:O	2.70	0.43
22:BA:138:U:H3'	22:BA:139:U:C5'	2.47	0.43
22:DA:819:A:H2	22:DA:943:A:O4'	2.01	0.43
22:DA:971:G:O6	22:DA:972:A:C2	2.71	0.43
23:DB:26:C:H1'	23:DB:117:G:H1'	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:528:C:C6	1:AA:528:C:C4'	3.01	0.43
7:CG:30:MET:HE3	7:CG:33:GLY:HA2	2.00	0.43
1:AA:1216:A:OP1	14:AN:4:SER:HB3	2.18	0.43
22:DA:618:G:C2	22:DA:619:G:C1'	3.01	0.43
1:CA:867:G:C5	1:CA:868:C:C5	3.04	0.43
22:DA:931:U:H5	22:DA:1182:G:H21	1.65	0.43
9:AI:40:ARG:C	9:AI:44:ARG:HB3	2.39	0.43
35:BN:24:MET:CG	35:BN:44:LEU:HD22	2.33	0.43
22:BA:1085:A:H3'	22:BA:1086:A:C2	2.53	0.43
10:AJ:16:ARG:O	10:AJ:20:GLN:HG2	2.18	0.43
1:AA:1449:C:C2'	1:AA:1450:U:C5'	2.81	0.43
39:DR:88:GLY:O	39:DR:89:HIS:CB	2.65	0.43
39:DR:68:ARG:HE	39:DR:90:ARG:HG2	1.83	0.43
4:AD:4:LEU:N	4:AD:4:LEU:HD12	2.34	0.43
1:AA:1441:A:N6	1:AA:1461:G:H21	1.91	0.43
1:AA:275:G:C4	1:AA:276:G:C8	3.06	0.43
27:DF:65:LEU:H	27:DF:65:LEU:CD2	2.29	0.43
15:AO:87:ARG:O	15:AO:87:ARG:HG3	2.18	0.43
22:DA:734:A:H2'	22:DA:735:A:O4'	2.18	0.43
3:AC:136:ALA:O	3:AC:140:ALA:HB2	2.17	0.43
1:CA:821:G:H2'	1:CA:822:U:C5	2.52	0.43
22:BA:2637:U:O2'	22:BA:2638:G:H5'	2.17	0.43
22:DA:2275:C:O2'	34:DM:84:LYS:HA	2.17	0.43
34:DM:76:LYS:NZ	34:DM:84:LYS:N	2.55	0.43
1:CA:224:U:O2	1:CA:224:U:H2'	2.18	0.43
2:AB:150:ILE:O	2:AB:151:LYS:C	2.56	0.43
4:CD:84:ASN:HD22	4:CD:85:THR:N	2.13	0.43
22:DA:668:A:C5	22:DA:670:A:N7	2.85	0.43
22:DA:869:G:C6	22:DA:909:A:N6	2.86	0.43
45:BX:60:LYS:O	45:BX:61:LYS:C	2.57	0.43
22:DA:2152:G:N3	22:DA:2152:G:H2'	2.33	0.43
33:BL:62:PRO:HG2	51:B3:24:LYS:HB3	2.00	0.43
33:BL:51:GLU:OE2	33:BL:60:ARG:NH1	2.51	0.43
24:BC:121:ALA:HB3	24:BC:129:LEU:CD2	2.47	0.43
24:BC:131:MET:O	24:BC:132:ARG:C	2.55	0.43
1:CA:702:A:H5'	1:CA:703:G:C8	2.53	0.43
5:CE:157:GLY:HA3	8:CH:63:LYS:NZ	2.33	0.43
26:DE:20:GLY:H	26:DE:110:SER:CB	2.30	0.43
22:BA:1735:A:N3	22:BA:1736:U:C6	2.86	0.43
13:AM:10:ASP:OD2	13:AM:44:ILE:HB	2.18	0.43
22:DA:2579:C:H2'	22:DA:2580:U:O4'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:72:ARG:O	4:CD:75:TYR:HB3	2.18	0.43
3:AC:6:PRO:O	3:AC:10:ARG:HG2	2.18	0.43
31:DJ:36:LEU:HA	31:DJ:36:LEU:HD13	1.88	0.43
28:DG:25:ILE:HG22	28:DG:78:VAL:HG11	1.99	0.43
22:BA:669:G:C5	22:BA:801:G:C6	3.06	0.43
22:BA:1918:A:O2'	22:BA:1919:A:N7	2.51	0.43
27:DF:36:ASN:HB3	27:DF:152:ASP:OD2	2.17	0.43
45:DX:70:LEU:HB3	45:DX:77:TYR:HE2	1.83	0.43
10:AJ:49:PHE:CZ	14:AN:76:PHE:CZ	3.06	0.43
4:CD:137:SER:C	4:CD:181:PHE:HD2	2.20	0.43
1:CA:854:U:H2'	1:CA:855:U:C6	2.54	0.43
22:BA:1857:G:C1'	22:BA:1884:G:N2	2.80	0.43
36:DO:12:THR:HG23	36:DO:16:ARG:NH1	2.29	0.43
25:DD:1:MET:SD	25:DD:100:LEU:HD11	2.58	0.43
25:BD:53:GLY:O	25:BD:54:ALA:HB2	2.18	0.43
22:BA:1566:A:O2'	22:BA:1567:G:H5'	2.18	0.43
1:AA:1131:G:H2'	1:AA:1132:C:O5'	2.16	0.43
22:DA:749:A:H2'	22:DA:750:A:H8	1.82	0.43
22:DA:749:A:C5	22:DA:750:A:N7	2.86	0.43
22:BA:1315:C:C2'	22:BA:1316:U:H5'	2.48	0.43
1:CA:9:G:OP2	5:CE:125:LYS:HG3	2.17	0.43
22:BA:30:G:H2'	22:BA:31:C:C6	2.53	0.43
4:CD:11:SER:HA	4:CD:18:LEU:HG	2.00	0.43
10:CJ:92:LEU:H	10:CJ:92:LEU:HD13	1.82	0.43
27:BF:46:LYS:HE3	27:BF:46:LYS:H	1.82	0.43
7:AG:88:VAL:CG2	7:AG:89:GLU:N	2.81	0.43
31:BJ:49:ASP:OD2	31:BJ:49:ASP:C	2.56	0.43
1:AA:709:U:H2'	1:AA:710:G:C8	2.53	0.43
26:BE:196:VAL:HG13	26:BE:200:LEU:HD22	1.99	0.43
43:BV:29:ILE:O	43:BV:91:PHE:N	2.50	0.43
22:BA:50:U:H4'	22:BA:51:G:OP2	2.18	0.43
22:DA:929:U:H5''	47:DZ:37:ARG:CZ	2.47	0.43
17:CQ:52:CYS:HB2	17:CQ:53:GLY:H	1.66	0.43
22:BA:912:C:H2'	22:BA:913:U:H6	1.83	0.43
1:CA:683:G:H21	11:CK:39:ASN:HD22	1.66	0.43
48:B0:50:GLY:O	48:B0:51:ARG:C	2.56	0.43
7:AG:14:ASP:OD1	7:AG:17:PHE:CD1	2.71	0.43
1:AA:497:G:N2	1:AA:498:A:C6	2.86	0.43
26:DE:124:PHE:CZ	26:DE:141:MET:CE	3.00	0.43
27:DF:23:SER:HB3	27:DF:26:GLN:CB	2.48	0.43
22:BA:749:A:H4'	22:BA:1271:G:N3	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2029:G:H2'	22:BA:2031:A:OP1	2.18	0.43
22:BA:1662:U:H2'	22:BA:1663:G:O4'	2.18	0.43
36:DO:51:ALA:HB3	36:DO:78:VAL:HG22	1.99	0.43
22:DA:927:A:N1	22:DA:928:A:C2	2.86	0.43
39:DR:72:VAL:HG23	39:DR:72:VAL:O	2.18	0.43
1:AA:1168:U:H3'	1:AA:1168:U:OP1	2.18	0.43
31:BJ:42:ALA:O	31:BJ:45:THR:HG22	2.18	0.43
22:BA:2230:G:O3'	45:BX:29:LEU:HD23	2.19	0.43
5:AE:80:LEU:HD23	5:AE:122:VAL:HG12	1.98	0.43
22:BA:571:U:C5	22:BA:575:A:C6	3.06	0.43
22:DA:1799:G:N1	22:DA:1819:A:OP2	2.49	0.43
22:DA:2341:G:H2'	22:DA:2342:C:C5'	2.48	0.43
22:DA:739:A:O2'	22:DA:740:C:C6	2.68	0.43
22:DA:1080:A:H5'	30:DI:133:ARG:NH2	2.32	0.43
48:D0:32:THR:HG21	48:D0:47:TYR:HE2	1.82	0.43
1:AA:1118:U:O2	1:AA:1179:A:C6	2.71	0.43
22:DA:329:G:H1	42:DU:16:LYS:HG2	1.83	0.43
22:DA:79:C:N3	22:DA:107:G:N2	2.55	0.43
22:DA:2217:G:C4	22:DA:2218:G:C8	3.06	0.43
22:DA:2232:C:O5'	22:DA:2232:C:H6	2.00	0.43
22:DA:379:G:C5	22:DA:396:G:C6	3.06	0.43
39:BR:49:ILE:CB	39:BR:53:PHE:N	2.81	0.43
1:CA:413:G:C6	4:CD:32:LYS:CE	2.97	0.43
1:AA:89:U:C2	1:AA:90:C:C5	3.06	0.43
6:CF:3:HIS:CB	6:CF:92:THR:HG23	2.48	0.43
22:DA:1263:U:C1'	48:D0:6:LYS:HE3	2.47	0.43
22:DA:204:A:C4	22:DA:206:U:O4	2.71	0.43
22:DA:584:C:C5	22:DA:585:G:N7	2.87	0.43
1:CA:1261:A:N7	1:CA:1274:A:H2	2.15	0.43
1:CA:963:G:C6	1:CA:973:G:C6	3.06	0.43
1:CA:997:U:HO2'	1:CA:998:C:C5'	2.31	0.43
1:CA:1221:G:O3'	19:CS:76:THR:HB	2.18	0.43
20:AT:8:LYS:CA	20:AT:11:ILE:HG23	2.48	0.43
22:DA:622:G:O2'	22:DA:623:C:C5'	2.66	0.43
1:AA:620:C:H2'	1:AA:621:A:O4'	2.18	0.43
1:CA:765:G:C5	1:CA:812:G:C5	3.06	0.43
22:BA:1869:G:OP2	22:BA:1869:G:H8	2.01	0.43
2:AB:113:LEU:HD11	2:AB:144:GLU:CD	2.38	0.43
5:CE:80:LEU:HD23	5:CE:119:VAL:HG11	2.00	0.43
22:DA:2060:A:C3'	26:DE:63:LYS:NZ	2.81	0.43
22:BA:141:G:H2'	22:BA:142:A:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:57:ALA:O	5:CE:61:LYS:HG3	2.19	0.43
22:DA:1998:A:H2'	22:DA:1999:C:C6	2.51	0.43
22:DA:2680:U:H6	22:DA:2680:U:O5'	2.00	0.43
29:BH:67:ALA:C	29:BH:69:ALA:N	2.71	0.43
27:DF:43:ILE:CG2	27:DF:44:ALA:H	2.23	0.43
1:CA:194:C:C2'	1:CA:195:A:H5'	2.47	0.43
23:DB:6:G:C6	23:DB:115:A:C2	3.06	0.43
23:DB:64:G:C5'	23:DB:65:U:OP2	2.66	0.43
27:BF:3:LEU:HD23	27:BF:100:GLU:CG	2.41	0.43
22:DA:2223:G:C3'	22:DA:2224:G:H5'	2.48	0.43
1:CA:1244:G:C5	1:CA:1245:C:N4	2.87	0.43
37:DP:77:SER:OG	37:DP:79:VAL:HG22	2.18	0.43
14:AN:82:LYS:CE	14:AN:85:GLU:HG3	2.47	0.43
1:AA:1160:G:C2	1:AA:1161:C:C5	3.06	0.43
22:DA:617:G:C4	22:DA:618:G:C8	3.05	0.43
22:DA:2306:C:H5	22:DA:2307:G:N2	2.16	0.43
2:CB:114:LYS:C	2:CB:117:GLU:HG2	2.38	0.43
22:BA:2144:G:H3'	22:BA:2144:G:N3	2.33	0.43
2:CB:160:LEU:HB2	2:CB:182:VAL:CG1	2.48	0.43
1:AA:450:G:C2'	1:AA:451:A:OP1	2.66	0.43
1:AA:984:C:O2'	1:AA:985:C:O5'	2.36	0.43
1:CA:1303:C:O2	1:CA:1303:C:H2'	2.18	0.43
1:AA:1348:U:H4'	9:AI:121:ARG:HG2	2.00	0.43
22:DA:1223:G:N2	22:DA:1226:A:OP2	2.46	0.43
39:DR:89:HIS:CE1	39:DR:91:GLN:HB2	2.52	0.43
1:CA:112:G:H2'	1:CA:113:G:C5'	2.47	0.43
36:DO:31:THR:CG2	36:DO:36:TYR:CE2	2.96	0.43
22:DA:1267:U:OP2	22:DA:2012:G:N1	2.36	0.43
25:BD:89:GLU:HG3	25:BD:94:GLN:OE1	2.18	0.43
14:CN:92:ILE:HA	14:CN:93:PRO:HD3	1.87	0.43
1:AA:570:G:C4	1:AA:571:U:C5	3.06	0.43
44:DW:14:ASP:C	44:DW:16:GLU:H	2.21	0.43
1:CA:729:A:C2'	1:CA:730:G:O5'	2.65	0.43
22:DA:56:A:H1'	22:DA:127:A:C4	2.53	0.43
22:BA:275:C:C4	22:BA:276:U:H6	2.36	0.43
13:AM:15:VAL:HG23	13:AM:16:ILE:HG13	2.00	0.43
1:CA:571:U:C5'	1:CA:572:A:OP2	2.57	0.43
28:DG:117:PRO:CD	28:DG:143:VAL:HG11	2.47	0.43
1:AA:198:G:H2'	1:AA:199:A:C8	2.53	0.43
38:DQ:31:TYR:O	38:DQ:34:ALA:N	2.51	0.43
22:DA:815:C:P	39:DR:85:LYS:HE2	2.58	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:120:THR:CG2	3:CC:187:GLU:O	2.62	0.43
3:AC:5:HIS:HA	3:AC:6:PRO:HD2	1.77	0.43
22:BA:28:A:C5	22:BA:29:U:C5	3.06	0.43
2:AB:21:TYR:O	2:AB:22:TRP:CD1	2.71	0.43
27:DF:35:LEU:HA	27:DF:152:ASP:O	2.18	0.43
22:DA:641:U:C5'	22:DA:642:U:OP2	2.62	0.43
22:BA:1821:A:H8	22:BA:1821:A:O5'	2.01	0.43
22:BA:615:U:H4'	22:BA:616:A:OP2	2.18	0.43
22:DA:1171:G:C2	22:DA:1179:G:C2	3.07	0.43
7:AG:144:ALA:O	7:AG:146:ALA:N	2.48	0.43
22:BA:1789:A:OP2	24:BC:220:ARG:NH1	2.51	0.43
45:BX:12:VAL:CG2	45:BX:28:PHE:HB2	2.48	0.43
50:B2:19:ARG:O	50:B2:23:ALA:HB2	2.18	0.43
1:AA:1028:C:C4	1:AA:1034:G:C6	3.06	0.43
33:BL:113:ALA:O	33:BL:114:GLY:O	2.35	0.43
1:CA:292:G:C5	1:CA:293:G:H1'	2.52	0.43
22:BA:1403:A:H2'	22:BA:1404:C:C6	2.53	0.43
1:CA:1418:A:C2	1:CA:1483:A:C2	3.06	0.43
1:CA:946:A:H2'	1:CA:947:G:C8	2.54	0.43
13:CM:106:ARG:HH21	13:CM:112:ARG:CZ	2.32	0.43
37:DP:105:LYS:HD3	37:DP:108:ARG:CZ	2.48	0.43
1:AA:632:U:H2'	1:AA:633:G:OP1	2.18	0.43
22:DA:519:U:H4'	40:DS:25:ARG:NH2	2.33	0.43
32:BK:35:VAL:HG12	32:BK:36:GLY:H	1.78	0.43
34:BM:100:LYS:HD3	34:BM:100:LYS:HA	1.76	0.43
1:AA:688:G:C5	1:AA:700:G:C2	3.07	0.43
35:BN:87:PHE:CE1	35:BN:116:VAL:HG12	2.52	0.43
35:BN:96:ARG:HG3	35:BN:96:ARG:O	2.15	0.43
39:DR:22:LEU:N	39:DR:22:LEU:HD23	2.33	0.43
1:AA:668:G:O2'	15:AO:45:HIS:HB3	2.18	0.43
52:B4:2:LYS:HB2	52:B4:4:ARG:HD3	2.00	0.43
42:BU:28:LEU:O	42:BU:30:SER:N	2.51	0.43
1:AA:767:A:H2'	1:AA:768:A:C8	2.53	0.43
26:BE:37:ALA:C	26:BE:39:ALA:N	2.71	0.43
1:AA:283:U:C4	1:AA:284:C:C4	3.06	0.43
22:BA:2824:C:C2'	22:BA:2825:G:O5'	2.66	0.43
35:DN:58:ASP:HB3	35:DN:59:SER:H	1.61	0.43
6:AF:41:ASP:C	6:AF:43:GLY:H	2.22	0.43
22:BA:350:G:O2'	22:BA:351:C:H5'	2.18	0.43
22:BA:2855:C:O5'	22:BA:2855:C:H6	2.00	0.43
22:BA:2684:U:H2'	22:BA:2685:G:O5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1122:U:C5	1:CA:1123:U:C5	3.06	0.43
1:AA:773:G:C6	1:AA:774:G:N7	2.86	0.43
22:BA:768:G:C5	22:BA:769:U:C5	3.06	0.43
34:BM:102:LEU:N	34:BM:102:LEU:CD1	2.81	0.43
35:DN:47:VAL:CG1	35:DN:47:VAL:O	2.66	0.43
22:BA:797:G:H2'	22:BA:798:G:O4'	2.19	0.43
10:CJ:29:ALA:HB2	10:CJ:87:LEU:HG	2.00	0.43
22:DA:855:G:N2	44:DW:23:LYS:HG2	2.33	0.43
22:DA:2352:A:N1	44:DW:30:VAL:HG11	2.33	0.43
22:DA:1978:A:H2'	22:DA:1979:U:O4'	2.19	0.43
22:DA:727:A:C6	22:DA:728:G:C6	3.06	0.43
2:AB:15:PHE:HB2	2:AB:39:ILE:HG23	2.00	0.43
35:DN:35:LYS:HG2	35:DN:112:TYR:CZ	2.54	0.43
9:AI:6:TYR:CE2	9:AI:17:ARG:HB2	2.51	0.43
1:CA:517:G:H4'	1:CA:519:C:C5	2.53	0.43
1:CA:536:C:H2'	1:CA:537:G:H8	1.83	0.43
22:DA:89:A:O2'	22:DA:90:U:H5'	2.18	0.43
42:DU:16:LYS:HB3	42:DU:17:ASP:H	1.54	0.43
42:DU:20:LYS:HD3	42:DU:21:ARG:O	2.19	0.43
22:DA:2212:A:C8	22:DA:2214:C:C5	3.06	0.43
22:DA:35:G:HO2'	22:DA:36:G:H8	1.61	0.43
1:CA:1159:U:H5	1:CA:1182:G:O2'	1.99	0.43
41:BT:28:ASN:HB2	41:BT:29:THR:H	1.37	0.43
26:BE:170:ARG:NH1	26:BE:176:ASP:OD2	2.52	0.43
39:DR:49:ILE:CG1	39:DR:49:ILE:O	2.66	0.43
18:CR:66:LEU:HD23	18:CR:66:LEU:N	2.32	0.43
33:DL:56:PRO:CB	33:DL:58:TYR:CE2	3.01	0.43
51:D3:22:LYS:N	51:D3:48:MET:HB3	2.29	0.43
51:D3:51:LYS:O	51:D3:54:LEU:HB3	2.19	0.43
1:AA:258:G:C2	1:AA:259:G:C1'	3.01	0.43
17:AQ:49:ASN:HD22	17:AQ:49:ASN:C	2.20	0.43
20:AT:77:ASN:H	20:AT:77:ASN:HD22	1.65	0.43
20:AT:77:ASN:O	20:AT:81:GLN:HG3	2.17	0.43
26:BE:149:ILE:CD1	26:BE:172:ALA:HA	2.38	0.43
20:AT:82:ILE:HD12	20:AT:83:ASN:HB3	2.01	0.43
22:DA:600:G:O4'	26:DE:100:MET:HE3	2.18	0.43
25:BD:122:VAL:O	25:BD:126:ASN:HA	2.17	0.43
21:AU:24:LYS:CG	21:AU:25:ALA:N	2.81	0.43
7:CG:136:LYS:HD2	7:CG:136:LYS:HA	1.71	0.43
5:CE:45:VAL:CG2	5:CE:46:GLY:N	2.81	0.43
11:AK:125:LYS:C	21:AU:33:ARG:HH12	2.21	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BO:79:ALA:HB2	36:BO:110:ALA:HA	2.00	0.43
47:BZ:15:ARG:HD3	47:BZ:53:MET:SD	2.57	0.43
27:DF:103:ILE:CG1	27:DF:175:PRO:HD3	2.48	0.43
27:DF:102:LEU:C	27:DF:103:ILE:HD12	2.38	0.43
27:DF:111:ARG:CZ	27:DF:113:PHE:CE1	3.01	0.43
1:CA:184:G:C2	1:CA:185:U:N3	2.86	0.43
20:CT:30:PHE:CD2	20:CT:33:LYS:HD2	2.53	0.43
51:D3:3:ILE:CG2	51:D3:4:LYS:N	2.57	0.43
1:CA:249:U:N3	1:CA:276:G:C6	2.86	0.43
1:CA:267:C:H2'	1:CA:268:U:H5'	2.00	0.43
22:DA:1737:G:C5	22:DA:1738:G:N1	2.86	0.43
1:AA:513:C:N3	1:AA:539:A:C2	2.86	0.43
22:DA:1551:A:C5	22:DA:1552:A:C8	3.06	0.43
32:DK:60:ALA:HB1	32:DK:85:VAL:O	2.18	0.43
7:CG:6:ILE:HG13	7:CG:7:GLY:N	2.31	0.43
22:BA:1026:G:H2'	22:BA:1027:A:C8	2.53	0.43
1:AA:1216:A:OP1	14:AN:4:SER:CB	2.66	0.43
1:AA:1162:C:C2	1:AA:1175:G:C2	3.07	0.43
22:DA:956:G:C4'	34:DM:82:MET:HE3	2.49	0.43
22:BA:2107:G:C2'	22:BA:2152:G:OP1	2.66	0.43
1:CA:867:G:C6	1:CA:868:C:N4	2.86	0.43
7:AG:61:PHE:CD1	7:AG:61:PHE:C	2.92	0.43
22:DA:1128:G:O6	22:DA:2491:U:C5	2.71	0.43
13:CM:21:ILE:HD12	13:CM:24:VAL:CG2	2.47	0.43
16:AP:75:ILE:C	16:AP:77:GLU:N	2.71	0.43
1:AA:1150:A:N6	1:AA:1151:A:N6	2.66	0.43
36:DO:14:ALA:O	36:DO:18:LEU:N	2.38	0.43
1:AA:1442:G:H2'	1:AA:1443:C:C6	2.54	0.43
2:CB:195:VAL:HG12	2:CB:197:PHE:C	2.38	0.43
22:DA:279:A:N6	22:DA:361:G:C1'	2.75	0.43
35:DN:62:ASN:O	35:DN:63:ARG:HB3	2.18	0.43
1:AA:184:G:O2'	1:AA:185:U:P	2.77	0.43
22:BA:253:C:OP2	51:B3:4:LYS:NZ	2.47	0.43
1:CA:728:A:C6	1:CA:729:A:C6	3.06	0.43
26:DE:60:TRP:HE3	26:DE:62:GLN:HB2	1.79	0.43
22:BA:782:A:N1	24:BC:224:MET:HE1	2.33	0.43
22:DA:1716:U:N3	22:DA:1745:A:N6	2.66	0.43
1:AA:913:A:HO2'	1:AA:914:A:P	2.41	0.43
13:CM:19:THR:HA	13:CM:25:GLY:O	2.17	0.43
13:CM:19:THR:HG22	13:CM:26:LYS:HA	1.99	0.43
44:BW:9:THR:HG23	44:BW:10:ARG:CG	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:443:C:H6	1:CA:443:C:O5'	2.01	0.43
22:DA:170:U:C4	22:DA:171:U:C5	3.06	0.43
1:AA:1088:G:HO2'	1:AA:1089:G:P	2.40	0.43
1:AA:246:A:C4	1:AA:282:A:N6	2.86	0.43
14:AN:52:ARG:HG3	14:AN:58:ARG:NH1	2.33	0.43
32:BK:10:VAL:HG11	32:BK:16:ALA:CB	2.48	0.43
1:CA:110:C:H2'	1:CA:111:G:O4'	2.17	0.43
1:CA:1462:C:O2'	1:CA:1463:U:H5'	2.18	0.43
1:AA:592:G:C6	1:AA:648:A:C6	3.07	0.43
13:CM:1:ALA:HB3	13:CM:8:ILE:HG23	2.00	0.43
7:AG:96:ASN:N	7:AG:96:ASN:OD1	2.48	0.43
1:AA:932:C:O2	1:AA:932:C:C2'	2.67	0.43
22:DA:1831:G:C6	22:DA:1832:C:C4	3.07	0.43
4:CD:75:TYR:CE2	4:CD:203:TYR:HB2	2.53	0.43
30:BI:3:LYS:HD2	30:BI:4:VAL:H	1.82	0.43
38:BQ:26:ALA:CB	38:BQ:30:VAL:CG2	2.92	0.43
22:DA:187:G:C2'	22:DA:1365:A:H2	2.31	0.43
22:DA:642:U:H3'	22:DA:642:U:H6	1.83	0.43
22:DA:2765:A:H3'	22:DA:2766:A:H5'	2.00	0.43
27:BF:45:ASP:CB	27:BF:48:LEU:HB2	2.41	0.43
22:BA:613:A:O2'	22:BA:614:A:OP1	2.33	0.43
22:BA:1857:G:O2'	22:BA:1858:A:OP2	2.34	0.43
5:CE:148:SER:O	5:CE:151:MET:N	2.47	0.43
7:AG:92:PRO:C	7:AG:93:VAL:HG22	2.37	0.43
22:DA:2:G:C5	22:DA:3:U:C5	3.06	0.43
1:CA:775:G:H2'	1:CA:776:G:H5'	1.98	0.43
26:BE:133:LEU:O	26:BE:136:GLN:HB2	2.17	0.43
46:BY:40:SER:C	46:BY:42:LEU:N	2.72	0.43
1:AA:105:G:H2'	1:AA:106:C:H6	1.79	0.43
22:BA:2704:C:C2'	22:BA:2704:C:O2	2.66	0.43
22:BA:2671:G:C3'	22:BA:2672:U:H5'	2.48	0.43
22:BA:1269:A:H2'	22:BA:1270:C:C6	2.54	0.43
34:BM:97:GLN:HB2	34:BM:98:PRO:CD	2.48	0.43
1:AA:689:C:OP1	11:AK:45:THR:OG1	2.35	0.43
1:AA:1108:G:C5	1:AA:1109:C:C5	3.06	0.43
22:BA:1206:G:H2'	22:BA:1207:C:H6	1.83	0.43
22:DA:1767:G:C2	22:DA:1768:C:C5	3.06	0.43
28:BG:54:ARG:O	28:BG:57:TYR:HB2	2.19	0.43
24:BC:250:GLN:CD	24:BC:250:GLN:N	2.71	0.43
28:DG:10:VAL:HB	28:DG:14:VAL:HG11	2.00	0.43
51:B3:54:LEU:O	51:B3:58:ILE:HG13	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:98:TYR:CE2	37:DP:99:LEU:CD2	3.01	0.43
1:AA:775:G:C2	1:AA:776:G:C4	3.06	0.43
22:DA:841:G:H2'	22:DA:842:U:O4'	2.18	0.43
16:CP:56:ARG:HE	16:CP:59:HIS:CD2	2.36	0.43
25:BD:163:GLY:O	25:BD:164:GLN:C	2.56	0.43
19:AS:66:VAL:C	19:AS:68:HIS:H	2.22	0.43
45:DX:71:ARG:C	45:DX:73:ARG:H	2.21	0.43
22:BA:1972:G:H2'	22:BA:1973:G:H8	1.83	0.43
40:BS:42:LYS:HE2	40:BS:42:LYS:HB2	1.47	0.43
25:BD:177:VAL:O	25:BD:177:VAL:CG2	2.65	0.43
37:BP:9:GLN:C	37:BP:11:GLN:H	2.22	0.43
5:AE:79:THR:HB	5:AE:121:ASN:CG	2.38	0.43
8:AH:48:PHE:HD1	8:AH:48:PHE:N	2.16	0.43
33:BL:77:ILE:O	33:BL:110:VAL:O	2.37	0.43
24:DC:20:ASN:HB2	24:DC:23:LEU:CD2	2.43	0.43
24:DC:24:HIS:ND1	24:DC:25:LYS:N	2.63	0.43
24:DC:250:GLN:HG3	24:DC:254:LYS:CG	2.48	0.43
1:CA:1279:G:C8	1:CA:1282:C:N4	2.86	0.43
22:DA:1341:G:P	22:DA:1397:U:H3	2.41	0.43
1:AA:430:A:N3	1:AA:431:A:C8	2.86	0.43
22:DA:858:G:C5	22:DA:2268:A:N1	2.87	0.43
22:DA:2274:A:C5	22:DA:2276:G:C8	3.07	0.43
22:DA:2276:G:O2'	22:DA:2277:G:H5'	2.18	0.43
22:DA:2341:G:C2'	22:DA:2342:C:C5'	2.96	0.43
22:DA:2342:C:N3	22:DA:2343:U:C2	2.86	0.43
22:DA:741:U:O2'	22:DA:742:A:H5'	2.18	0.43
35:DN:9:GLN:C	35:DN:10:LEU:O	2.54	0.43
9:AI:46:VAL:CG2	9:AI:75:ALA:HB1	2.47	0.43
1:CA:518:C:H4'	1:CA:519:C:O5'	2.19	0.43
3:CC:191:THR:HB	3:CC:192:TYR:CD1	2.54	0.43
22:DA:333:G:O2'	22:DA:334:C:O5'	2.36	0.43
22:DA:68:G:N2	22:DA:74:A:OP2	2.51	0.43
22:DA:91:A:H1'	22:DA:92:U:C6	2.53	0.43
22:DA:1357:C:N4	22:DA:1358:G:C2	2.86	0.43
22:DA:1575:C:C2	22:DA:1576:U:C6	3.07	0.43
22:DA:394:C:H2'	22:DA:395:U:H5'	1.99	0.43
26:DE:53:THR:OG1	26:DE:54:GLY:N	2.49	0.43
1:CA:1179:A:N6	1:CA:1180:A:C6	2.86	0.43
22:DA:137:U:O5'	22:DA:137:U:H6	2.02	0.43
41:BT:29:THR:CB	41:BT:86:THR:HG22	2.47	0.43
1:AA:70:U:N3	1:AA:94:G:C5	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:34:ARG:O	21:CU:35:GLU:O	2.36	0.43
44:BW:39:GLN:CG	44:BW:42:THR:N	2.66	0.43
6:CF:92:THR:C	6:CF:93:LYS:HG2	2.32	0.43
11:CK:92:ARG:HB3	11:CK:93:GLU:H	1.63	0.43
32:DK:69:VAL:HG12	32:DK:70:ARG:N	2.34	0.43
21:AU:7:GLU:HB2	21:AU:11:PHE:CZ	2.52	0.43
51:D3:53:ASP:O	51:D3:54:LEU:C	2.56	0.43
22:DA:1286:A:C5	22:DA:1289:C:N3	2.86	0.43
17:AQ:16:MET:CE	17:AQ:21:VAL:HG12	2.48	0.43
22:BA:1178:C:H2'	22:BA:1179:G:C8	2.53	0.43
1:CA:1046:A:H2'	1:CA:1047:G:O4'	2.18	0.43
1:CA:1268:G:C6	1:CA:1269:A:N6	2.86	0.43
1:CA:1269:A:C2'	1:CA:1270:G:H5'	2.49	0.43
7:CG:78:ARG:CA	7:CG:84:TYR:HB2	2.36	0.43
26:DE:33:VAL:HG12	26:DE:33:VAL:O	2.18	0.43
1:AA:158:G:O2'	1:AA:159:G:H5''	2.18	0.43
25:BD:121:THR:O	25:BD:122:VAL:CB	2.66	0.43
25:DD:149:ASN:HD21	25:DD:150:GLN:HB3	1.83	0.43
41:BT:15:HIS:O	41:BT:17:SER:N	2.51	0.43
41:BT:7:LEU:O	41:BT:7:LEU:HG	2.18	0.43
1:AA:798:U:H2'	1:AA:799:G:O5'	2.18	0.43
28:BG:72:ASN:O	28:BG:76:ILE:CG2	2.47	0.43
7:CG:20:GLU:O	7:CG:23:ALA:HB3	2.17	0.43
9:CI:35:GLU:HA	9:CI:39:GLY:N	2.33	0.43
22:BA:1185:G:H5''	22:BA:1186:G:P	2.58	0.43
29:BH:134:VAL:HG11	29:BH:140:ALA:HB2	2.00	0.43
1:CA:141:G:H2'	1:CA:142:G:H8	1.83	0.43
1:CA:182:A:C2	1:CA:184:G:C5	3.06	0.43
1:CA:92:U:H2'	1:CA:93:U:C5	2.53	0.43
22:DA:1188:U:H2'	22:DA:1189:A:H8	1.83	0.43
22:DA:992:C:H4'	39:DR:74:ILE:HD13	1.98	0.43
22:BA:1462:C:H2'	22:BA:1463:C:C6	2.53	0.43
25:DD:106:LYS:CG	25:DD:206:ALA:HB3	2.48	0.43
23:BB:89:U:H3'	23:BB:90:C:C5'	2.49	0.43
1:AA:565:U:C4	1:AA:566:G:C5	3.05	0.43
22:BA:2151:U:HO2'	22:BA:2152:G:H8	1.63	0.43
29:DH:68:ARG:HG2	29:DH:71:LYS:CD	2.48	0.43
1:AA:1154:G:C2	1:AA:1155:A:C5	3.07	0.43
2:CB:162:VAL:CG2	2:CB:163:ILE:N	2.81	0.43
22:DA:685:A:C2	22:DA:689:A:C6	3.06	0.43
33:DL:29:LYS:O	33:DL:30:THR:CB	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:42:LEU:HD13	3:CC:86:LEU:HD22	2.00	0.43
40:BS:86:MET:HG3	40:BS:88:ARG:HD3	1.99	0.43
24:BC:61:TYR:HA	24:BC:85:ASN:HD21	1.84	0.43
26:DE:60:TRP:CE3	26:DE:62:GLN:CB	2.99	0.43
1:AA:585:G:N2	1:AA:879:C:C4'	2.81	0.43
22:BA:2663:G:C4	22:BA:2664:G:C8	3.06	0.43
1:AA:495:A:N3	1:AA:496:A:C6	2.87	0.43
1:CA:468:A:C4	1:CA:469:C:C5	3.06	0.43
22:DA:590:A:C6	22:DA:668:A:C2	3.07	0.43
1:CA:439:U:H2'	1:CA:440:C:H6	1.81	0.43
33:BL:57:LEU:HD11	33:BL:61:LEU:HD21	2.00	0.43
22:DA:2898:U:H2'	22:DA:2899:A:H8	1.83	0.43
22:BA:1733:G:O2'	22:BA:1734:G:C5'	2.66	0.43
22:DA:1296:G:N2	22:DA:1645:G:C4	2.86	0.43
15:AO:42:PHE:CD1	15:AO:55:LEU:HD22	2.52	0.43
28:BG:68:ARG:O	28:BG:68:ARG:HD2	2.18	0.43
35:BN:69:ARG:HG2	35:BN:69:ARG:H	1.10	0.43
1:CA:126:G:C2'	1:CA:127:G:O5'	2.67	0.43
40:DS:14:ALA:O	40:DS:18:ARG:HB2	2.18	0.43
31:DJ:88:THR:O	31:DJ:92:MET:N	2.49	0.43
23:BB:17:C:H2'	23:BB:18:G:C5'	2.48	0.43
23:BB:71:C:H2'	23:BB:72:G:C5'	2.49	0.43
22:BA:1266:G:N7	40:BS:16:LYS:HE2	2.33	0.43
1:AA:119:A:H5''	1:AA:120:A:O5'	2.19	0.43
1:AA:1491:G:C5'	1:AA:1492:A:OP1	2.66	0.43
22:DA:1249:U:O2'	22:DA:1250:G:OP2	2.27	0.43
31:DJ:1:MET:CE	31:DJ:2:LYS:HZ2	2.32	0.43
22:BA:1759:A:H2'	22:BA:1760:C:C6	2.53	0.43
23:BB:6:G:O2'	23:BB:7:G:H5'	2.17	0.43
47:DZ:11:SER:C	47:DZ:13:ILE:H	2.22	0.43
3:AC:85:LYS:O	3:AC:89:VAL:HG22	2.18	0.43
1:AA:25:C:C2'	1:AA:26:A:O5'	2.66	0.43
22:DA:372:G:P	45:DX:61:LYS:HZ3	2.40	0.43
12:AL:55:ARG:NH1	12:AL:61:GLU:OE1	2.50	0.43
27:BF:88:VAL:HG13	27:BF:90:LEU:CD1	2.49	0.43
1:AA:675:A:H2'	1:AA:676:A:O4'	2.18	0.43
1:CA:1527:U:C2	1:CA:1528:U:C5	3.07	0.43
1:CA:38:G:N1	1:CA:397:A:OP1	2.47	0.43
22:BA:2865:U:C2	22:BA:2866:U:H5	2.36	0.43
22:DA:2395:C:N4	22:DA:2421:G:H1	2.16	0.43
1:CA:1231:G:C4	1:CA:1232:U:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:153:SER:HB3	3:CC:164:THR:HB	2.00	0.43
40:BS:57:ASN:HA	40:BS:57:ASN:HD22	1.61	0.43
36:DO:49:VAL:HG12	36:DO:50:ALA:N	2.33	0.43
45:BX:19:HIS:C	45:BX:21:LEU:N	2.71	0.43
11:AK:26:PHE:CE1	11:AK:88:PRO:CG	3.01	0.43
22:BA:1050:A:C2	22:BA:2751:G:C4	3.06	0.43
1:CA:1235:U:C3'	1:CA:1235:U:C6	3.02	0.43
22:BA:2299:U:H6	22:BA:2299:U:O5'	2.01	0.43
22:BA:1844:C:H3'	22:BA:1844:C:C6	2.54	0.43
28:DG:26:LYS:HD3	28:DG:27:GLY:N	2.32	0.43
28:DG:15:ASP:HB3	28:DG:26:LYS:H	1.83	0.43
31:BJ:37:ARG:HG2	31:BJ:37:ARG:O	2.19	0.43
22:BA:2856:A:C2'	22:BA:2857:G:H5'	2.47	0.43
22:BA:7:G:H2'	22:BA:8:C:C6	2.54	0.43
48:D0:30:ASP:OD2	48:D0:49:ARG:HA	2.19	0.43
22:BA:708:G:N2	22:BA:724:U:H1'	2.34	0.43
25:BD:13:ARG:NE	25:BD:15:PHE:CZ	2.86	0.43
31:BJ:44:TYR:HB2	38:BQ:63:ARG:HG2	2.00	0.43
22:BA:1059:G:H4'	30:BI:116:MET:HE1	2.01	0.43
22:BA:2570:G:C2'	22:BA:2571:U:H5'	2.48	0.43
41:DT:14:PRO:CG	41:DT:15:HIS:H	2.28	0.43
4:AD:109:THR:CG2	4:AD:112:GLU:CB	2.97	0.43
22:DA:2345:G:H4'	22:DA:2346:A:C5'	2.49	0.43
9:AI:78:ILE:O	9:AI:81:GLY:N	2.51	0.43
22:DA:323:C:H3'	26:DE:163:ASN:HD21	1.83	0.43
42:DU:73:ASN:C	42:DU:75:ALA:H	2.22	0.43
22:DA:298:G:OP1	42:DU:83:GLY:HA2	2.18	0.43
51:B3:30:HIS:ND1	51:B3:31:ILE:CG2	2.82	0.43
22:DA:126:A:O5'	50:D2:19:ARG:HG3	2.18	0.43
22:DA:1364:G:H1'	22:DA:1368:G:N2	2.34	0.43
22:DA:1380:G:C2	22:DA:1381:G:C8	3.07	0.43
22:DA:1571:A:H2'	22:DA:1572:A:C8	2.53	0.43
25:BD:98:VAL:O	25:BD:101:PHE:N	2.47	0.43
27:BF:40:GLY:H	27:BF:84:ILE:CD1	2.32	0.43
1:CA:205:A:H2'	1:CA:206:C:C5	2.53	0.43
4:CD:36:ALA:HA	4:CD:41:GLY:C	2.39	0.43
38:DQ:61:ILE:CG1	38:DQ:92:LYS:HD3	2.49	0.43
39:DR:9:GLY:C	39:DR:10:LYS:HD2	2.39	0.43
21:CU:33:ARG:HH22	21:CU:34:ARG:CD	2.31	0.43
38:DQ:87:VAL:CG1	38:DQ:88:GLU:H	2.07	0.43
4:AD:68:GLU:O	4:AD:72:ARG:HG2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:735:C:H2'	1:CA:736:C:H6	1.82	0.43
18:CR:71:ASP:CB	18:CR:72:ARG:HH21	2.31	0.43
22:DA:679:C:O5'	22:DA:679:C:H6	2.01	0.43
17:AQ:48:GLU:OE1	17:AQ:48:GLU:CA	2.64	0.43
1:CA:645:G:C2	1:CA:646:G:C8	3.06	0.43
38:DQ:4:LYS:HE3	38:DQ:7:VAL:HG22	2.00	0.43
1:CA:1381:U:H2'	1:CA:1381:U:O2	2.17	0.43
22:DA:605:G:H2'	22:DA:606:U:C6	2.53	0.43
3:AC:18:ASN:HB3	3:AC:39:ARG:HH12	1.83	0.43
2:AB:113:LEU:HD11	2:AB:144:GLU:OE1	2.18	0.43
22:DA:1019:U:O2'	22:DA:1021:A:N1	2.35	0.43
22:DA:1024:G:O2'	22:DA:1025:G:OP1	2.30	0.43
25:DD:27:ILE:HD12	25:DD:189:VAL:CG2	2.48	0.43
22:BA:1600:C:OP1	41:BT:81:LYS:NZ	2.52	0.43
21:AU:33:ARG:O	21:AU:34:ARG:C	2.57	0.43
33:DL:93:ASN:CG	33:DL:94:THR:H	2.22	0.43
9:CI:27:ILE:HA	9:CI:62:LEU:CB	2.48	0.43
47:BZ:8:GLN:O	47:BZ:10:ARG:N	2.52	0.43
22:DA:1667:G:O2'	22:DA:1668:A:OP2	2.35	0.43
1:CA:86:G:N1	1:CA:87:C:C5	2.87	0.43
1:CA:67:C:OP1	1:CA:199:A:H5''	2.18	0.43
22:DA:992:C:O3'	39:DR:74:ILE:HD13	2.18	0.43
7:CG:27:ASN:O	7:CG:30:MET:HB2	2.18	0.43
1:AA:1162:C:C2'	1:AA:1163:A:H8	2.29	0.43
52:B4:9:LYS:HG3	52:B4:16:ILE:HG13	2.00	0.43
23:BB:90:C:OP1	34:BM:16:ARG:HB3	2.18	0.43
47:DZ:17:PRO:O	47:DZ:21:ALA:HB2	2.18	0.43
24:BC:76:VAL:O	24:BC:77:VAL:C	2.56	0.43
22:DA:1028:A:N6	22:DA:1125:G:H2'	2.34	0.43
29:DH:68:ARG:CB	29:DH:68:ARG:NH1	2.82	0.43
1:AA:1151:A:N6	1:AA:1152:A:H62	2.15	0.43
16:AP:13:LYS:O	16:AP:15:PRO:HD2	2.19	0.43
1:CA:881:G:C4	1:CA:882:C:C6	3.06	0.43
12:CL:9:LYS:HB2	12:CL:9:LYS:HE2	1.69	0.43
22:DA:497:A:H2'	22:DA:498:G:C1'	2.49	0.43
22:DA:2654:A:C4	22:DA:2656:U:C4	3.07	0.43
13:AM:106:ARG:NE	13:AM:112:ARG:HB3	2.34	0.43
22:BA:217:A:P	56:BA:3226:HOH:O	2.76	0.43
22:BA:1946:U:H2'	22:BA:1947:C:C6	2.53	0.43
1:AA:346:G:OP1	37:BP:33:GLU:OE1	2.36	0.43
2:AB:138:ARG:HG3	2:AB:139:GLU:N	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:21:ILE:HD12	13:AM:21:ILE:N	2.33	0.43
13:AM:21:ILE:O	13:AM:24:VAL:HG22	2.18	0.43
28:DG:117:PRO:O	28:DG:118:ALA:C	2.56	0.43
22:BA:527:C:N3	22:BA:2779:U:H2'	2.32	0.43
22:DA:590:A:N6	22:DA:668:A:N1	2.66	0.43
22:DA:987:C:O2'	22:DA:1000:A:N3	2.43	0.43
22:DA:1000:A:C6	22:DA:1001:A:C2	3.06	0.43
22:DA:2142:A:C5	22:DA:2143:C:O2'	2.70	0.43
1:AA:1086:U:O2'	1:AA:1087:G:H5'	2.19	0.43
25:DD:179:ARG:NH2	37:DP:11:GLN:HE21	2.16	0.43
33:BL:61:LEU:HD23	51:B3:13:PHE:CE1	2.54	0.43
24:BC:131:MET:CA	24:BC:134:ILE:HD12	2.39	0.43
22:BA:1416:G:O2'	22:BA:1417:C:P	2.76	0.43
3:AC:147:GLY:CA	3:AC:202:PHE:HB3	2.49	0.43
40:DS:66:ILE:HA	40:DS:69:LEU:HD22	2.01	0.43
22:DA:2436:G:C2'	22:DA:2437:G:H5'	2.48	0.43
1:AA:637:C:H2'	1:AA:638:U:C5'	2.48	0.43
19:AS:62:THR:O	19:AS:63:ASP:C	2.56	0.43
22:DA:1259:G:H2'	22:DA:1260:A:O4'	2.18	0.43
22:BA:384:A:C2'	22:BA:385:C:H5'	2.44	0.43
22:DA:2348:U:O2'	22:DA:2349:G:O5'	2.37	0.43
25:BD:72:GLY:O	25:BD:73:VAL:O	2.36	0.43
20:CT:12:GLN:CG	20:CT:12:GLN:O	2.59	0.43
22:BA:2492:U:HO2'	22:BA:2493:U:H5'	1.82	0.43
10:AJ:80:THR:O	10:AJ:81:GLU:C	2.56	0.43
10:AJ:84:VAL:HG13	10:AJ:85:ASP:N	2.32	0.43
22:BA:63:A:HO2'	22:BA:64:A:H5'	1.82	0.43
34:BM:47:GLU:O	34:BM:48:ALA:C	2.57	0.43
22:BA:1264:A:P	48:B0:15:ARG:HH12	2.42	0.43
51:D3:57:VAL:HG12	51:D3:61:LEU:HD11	2.01	0.43
40:DS:17:VAL:HG11	40:DS:103:ILE:CD1	2.44	0.43
1:AA:1072:G:N1	1:AA:1104:G:C2	2.86	0.43
22:BA:20:C:O2'	22:BA:21:A:H5'	2.18	0.43
22:BA:2752:C:O5'	22:BA:2752:C:H6	2.01	0.43
1:CA:777:A:C2	1:CA:778:G:H1'	2.53	0.43
1:CA:1416:G:H2'	1:CA:1417:G:H5'	2.00	0.43
22:BA:1842:G:H2'	22:BA:1843:C:O4'	2.18	0.43
1:CA:676:A:C2	1:CA:677:U:C4	3.07	0.43
1:AA:418:C:O5'	1:AA:418:C:H6	2.00	0.43
22:BA:1567:G:H2'	24:BC:84:PRO:HG3	1.99	0.43
22:DA:1042:G:C6	22:DA:1043:C:C4	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:107:LEU:HD12	32:BK:107:LEU:HA	1.74	0.43
26:BE:48:THR:N	26:BE:51:GLU:HG3	2.34	0.43
1:AA:1310:G:O2'	1:AA:1311:A:H5'	2.17	0.43
43:BV:65:VAL:O	43:BV:66:ASP:OD1	2.37	0.43
22:DA:516:C:O2'	22:DA:517:C:H5'	2.18	0.43
1:CA:295:C:C4	1:CA:296:U:C5	3.06	0.43
42:BU:27:VAL:CG2	42:BU:28:LEU:N	2.82	0.43
9:CI:87:MET:HG3	9:CI:94:ARG:HE	1.83	0.43
22:DA:531:C:N3	22:DA:563:A:C8	2.87	0.43
22:BA:1281:G:H2'	22:BA:1282:U:C6	2.54	0.43
22:BA:2870:C:C2'	22:BA:2871:U:H5'	2.48	0.43
26:DE:124:PHE:HZ	26:DE:141:MET:CE	2.32	0.43
22:DA:732:C:C4	22:DA:733:G:N7	2.87	0.43
31:BJ:37:ARG:CG	31:BJ:37:ARG:O	2.66	0.43
2:CB:64:GLY:HA2	2:CB:158:ASP:OD2	2.18	0.43
1:CA:1056:U:H5'	3:CC:162:ALA:HB3	1.99	0.43
24:DC:166:ARG:O	24:DC:167:ASP:C	2.55	0.43
50:D2:11:LYS:NZ	56:D2:101:HOH:O	2.51	0.43
22:DA:2153:C:C6	22:DA:2153:C:OP2	2.72	0.43
43:BV:77:VAL:HG13	43:BV:77:VAL:O	2.17	0.43
31:DJ:34:ARG:HE	31:DJ:34:ARG:HB3	1.68	0.43
40:DS:47:VAL:HG23	40:DS:47:VAL:O	2.18	0.43
37:BP:48:ALA:O	37:BP:49:ILE:HG12	2.19	0.43
30:BI:79:LEU:HD21	30:BI:132:ALA:HB1	2.00	0.43
5:AE:94:PHE:C	5:AE:94:PHE:CD1	2.92	0.43
28:BG:84:LYS:HG2	28:BG:85:LYS:N	2.34	0.43
10:CJ:74:VAL:O	10:CJ:75:ASP:CB	2.65	0.43
44:DW:51:GLY:CA	44:DW:59:PHE:O	2.67	0.43
22:DA:1059:G:C6	22:DA:1080:A:N1	2.86	0.43
48:D0:43:THR:OG1	48:D0:47:TYR:HB2	2.19	0.43
1:AA:1138:G:C2	1:AA:1140:C:C4	3.07	0.43
1:AA:1282:C:O2'	1:AA:1283:U:H5'	2.19	0.43
9:AI:8:THR:HG21	9:AI:10:ARG:HH21	1.83	0.43
1:AA:928:G:O2'	1:AA:1533:C:OP1	2.37	0.43
12:CL:106:VAL:HG12	12:CL:109:ARG:HG2	2.00	0.43
22:DA:1208:C:C4	22:DA:1239:G:N1	2.86	0.43
26:DE:130:LYS:H	26:DE:160:ALA:HB2	1.84	0.43
22:DA:58:G:OP1	41:DT:78:SER:HB2	2.18	0.43
42:DU:81:ARG:HD2	42:DU:81:ARG:H	1.81	0.43
46:DY:52:ARG:HA	46:DY:55:THR:HB	2.00	0.43
24:BC:175:LEU:HD12	24:BC:175:LEU:HA	1.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2289:G:O2'	22:BA:2290:G:H5'	2.18	0.43
22:DA:1358:G:N7	22:DA:1371:G:C6	2.87	0.43
1:AA:99:C:C2'	1:AA:100:G:OP2	2.65	0.43
39:DR:9:GLY:C	39:DR:10:LYS:CG	2.87	0.43
39:DR:4:VAL:HA	39:DR:12:HIS:O	2.18	0.43
22:DA:1532:A:C6	22:DA:1533:C:C4	3.06	0.43
44:BW:23:LYS:CD	44:BW:24:ARG:HG3	2.44	0.43
43:DV:28:ALA:HB1	43:DV:89:ILE:HG13	2.00	0.43
21:CU:19:LYS:C	21:CU:21:SER:N	2.72	0.43
37:DP:19:PHE:HE1	37:DP:58:PHE:CZ	2.36	0.43
37:DP:48:ALA:HB3	37:DP:59:THR:HB	2.00	0.43
17:AQ:20:ILE:CA	17:AQ:47:ASP:OD1	2.66	0.43
26:BE:5:LEU:HD21	26:BE:120:VAL:HG22	2.00	0.43
1:CA:1319:A:H5''	19:CS:4:LEU:HD13	1.99	0.43
1:CA:1368:A:C8	9:CI:113:LYS:HD3	2.54	0.43
2:CB:130:LYS:HD3	2:CB:133:ALA:CB	2.47	0.43
22:DA:1142:A:C4	22:DA:1144:A:N7	2.86	0.43
7:CG:42:VAL:C	7:CG:44:SER:H	2.22	0.43
16:CP:20:VAL:HA	16:CP:36:VAL:HB	2.00	0.43
34:BM:1:MET:CE	34:BM:1:MET:CA	2.97	0.43
27:DF:107:VAL:H	27:DF:108:PRO:CD	2.32	0.43
27:DF:101:ARG:HH11	27:DF:138:PRO:CB	2.31	0.43
1:CA:275:G:O2'	1:CA:276:G:H8	2.02	0.43
23:DB:24:G:C8	23:DB:56:G:C5	3.07	0.43
27:BF:102:LEU:HD13	27:BF:102:LEU:C	2.38	0.43
22:DA:1657:U:O2'	25:DD:138:LEU:HD12	2.19	0.43
40:BS:25:ARG:HE	40:BS:73:LYS:HZ1	1.67	0.43
22:DA:1476:U:O2'	22:DA:1477:A:O5'	2.37	0.43
1:CA:133:U:H2'	1:CA:134:G:OP2	2.18	0.43
26:DE:101:TYR:CD2	26:DE:101:TYR:C	2.92	0.43
22:BA:2151:U:O4	22:BA:2152:G:O6	2.37	0.43
24:DC:76:VAL:O	24:DC:93:VAL:O	2.36	0.43
1:AA:949:A:O4'	1:AA:1364:U:C5	2.71	0.43
29:DH:68:ARG:HB3	29:DH:68:ARG:CZ	2.47	0.43
22:BA:1023:U:H5'	22:BA:1023:U:H6	1.79	0.43
1:AA:374:A:C6	1:AA:375:U:C4	3.07	0.43
1:CA:1293:C:C2	1:CA:1294:G:N7	2.86	0.43
39:DR:68:ARG:NE	39:DR:90:ARG:HG2	2.34	0.43
28:DG:93:TYR:N	28:DG:105:SER:O	2.51	0.43
22:BA:659:G:H4'	26:BE:95:LYS:CD	2.48	0.43
2:CB:163:ILE:CG2	2:CB:203:ASP:HA	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:184:C:N3	22:DA:213:A:H2	2.16	0.43
23:DB:34:A:C2'	23:DB:35:C:OP2	2.67	0.43
27:DF:91:ARG:CA	27:DF:95:MET:SD	2.98	0.43
35:DN:60:VAL:O	35:DN:64:ARG:HD2	2.18	0.43
23:BB:45:A:C4	23:BB:46:A:C8	3.07	0.43
22:DA:2850:A:N7	22:DA:2868:A:O2'	2.49	0.43
1:AA:913:A:H4'	1:AA:914:A:O5'	2.17	0.43
13:CM:19:THR:HG22	13:CM:25:GLY:O	2.19	0.43
33:BL:62:PRO:O	51:B3:12:ARG:HG2	2.19	0.43
15:CO:24:THR:O	15:CO:25:GLU:C	2.56	0.43
1:CA:948:C:H5''	13:CM:104:ASN:CB	2.40	0.43
22:DA:2826:A:C2	22:DA:2827:C:C2	3.07	0.43
22:BA:2816:G:H2'	22:BA:2817:U:O5'	2.18	0.43
22:BA:2548:U:C2'	22:BA:2549:G:O5'	2.66	0.43
22:DA:1931:U:HO2'	22:DA:1932:A:H8	1.65	0.43
22:DA:1544:A:C6	22:DA:1545:A:N1	2.86	0.43
3:AC:13:ILE:H	3:AC:13:ILE:HD13	1.84	0.43
27:DF:11:VAL:HG13	27:DF:171:ALA:HB2	2.01	0.43
22:BA:1889:A:H2'	22:BA:1890:A:O4'	2.18	0.43
22:DA:515:A:H2	22:DA:1260:A:N3	2.17	0.43
27:DF:129:MET:CE	27:DF:174:PHE:CE1	3.01	0.43
10:AJ:33:GLY:CA	10:AJ:83:THR:HB	2.48	0.43
1:CA:691:G:H2'	1:CA:692:U:C6	2.54	0.43
1:AA:461:A:C3'	1:AA:461:A:N3	2.76	0.43
23:BB:69:G:C2'	23:BB:70:C:H5'	2.49	0.43
3:CC:20:THR:HG22	3:CC:57:GLU:HG2	2.00	0.43
15:AO:1:SER:O	15:AO:2:LEU:HB2	2.19	0.43
19:AS:79:TYR:C	19:AS:79:TYR:CD2	2.88	0.43
1:CA:718:A:C5'	11:CK:118:ASN:OD1	2.67	0.43
22:BA:464:U:O2'	50:B2:16:HIS:CE1	2.72	0.43
30:DI:32:VAL:HG13	30:DI:58:ILE:HD12	2.00	0.43
1:AA:1358:U:H5	1:AA:1359:C:N3	2.15	0.43
31:BJ:142:ILE:HG22	31:BJ:142:ILE:OXT	2.19	0.43
7:AG:69:ARG:HG3	7:AG:95:ARG:CG	2.49	0.43
22:BA:1680:U:C2'	22:BA:1681:G:H5'	2.49	0.43
22:DA:519:U:H4'	40:DS:25:ARG:HH21	1.82	0.43
1:AA:991:U:C5'	1:AA:992:U:OP1	2.66	0.43
39:DR:22:LEU:HD12	39:DR:25:LEU:HD21	2.01	0.43
1:CA:552:U:O2'	1:CA:553:A:H5'	2.18	0.43
31:BJ:101:ILE:O	31:BJ:105:VAL:HG13	2.19	0.43
12:AL:75:GLU:OE1	12:AL:75:GLU:HA	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:113:LYS:HD3	3:AC:184:ASN:CG	2.39	0.43
3:AC:63:ILE:O	3:AC:98:ALA:HA	2.18	0.43
25:BD:25:THR:HG22	25:BD:27:ILE:HG13	2.00	0.43
22:BA:695:G:C2	22:BA:696:G:C8	3.07	0.43
22:DA:543:G:C2	22:DA:551:G:C5	3.06	0.43
1:AA:230:G:H5''	16:AP:31:ARG:NH2	2.33	0.43
1:AA:607:A:H2'	1:AA:608:A:C8	2.54	0.43
54:BA:3136:ERY:H321	54:BA:3136:ERY:H8	1.58	0.43
22:DA:841:G:O2'	22:DA:842:U:H5'	2.18	0.43
22:BA:1007:C:H5''	31:BJ:37:ARG:HH21	1.83	0.43
22:DA:969:G:N2	22:DA:985:C:OP1	2.52	0.43
22:BA:191:A:H2'	22:BA:192:C:C6	2.54	0.43
27:BF:103:ILE:H	27:BF:103:ILE:HG12	1.56	0.43
27:DF:119:LYS:HD3	27:DF:119:LYS:O	2.18	0.43
42:DU:48:VAL:HA	42:DU:49:PRO:HD3	1.82	0.43
22:BA:968:C:O2'	22:BA:969:G:H5'	2.18	0.43
22:BA:1689:A:O2'	22:BA:1690:A:H5'	2.19	0.43
22:BA:2830:C:O3'	25:BD:56:LYS:NZ	2.52	0.43
37:BP:50:ARG:O	37:BP:51:ASN:HB2	2.17	0.43
1:CA:1140:C:O2'	1:CA:1141:C:C6	2.66	0.43
9:CI:30:ASN:OD1	9:CI:65:THR:HG23	2.19	0.43
1:AA:411:A:N6	1:AA:413:G:H21	2.14	0.43
22:DA:2385:C:O2'	22:DA:2386:A:O5'	2.36	0.43
22:DA:2331:G:O2'	44:DW:40:ARG:HG2	2.18	0.43
22:DA:1275:A:C8	35:DN:16:HIS:CD2	3.07	0.43
35:DN:33:ILE:CD1	35:DN:118:ARG:NH2	2.82	0.43
1:AA:1283:U:O2'	1:AA:1284:C:C5'	2.67	0.43
1:AA:1533:C:C2'	1:AA:1534:A:H5''	2.48	0.43
22:DA:300:A:C2'	22:DA:301:G:C5'	2.97	0.43
22:DA:300:A:C5	22:DA:334:C:C4'	3.01	0.43
26:DE:133:LEU:C	26:DE:133:LEU:CD2	2.87	0.43
24:BC:255:LYS:O	24:BC:256:THR:CB	2.67	0.43
39:BR:47:VAL:HG12	39:BR:54:VAL:HG11	2.01	0.43
22:DA:2748:A:C6	22:DA:2749:A:C6	3.07	0.43
34:DM:46:ILE:HG12	34:DM:46:ILE:H	1.44	0.43
41:BT:29:THR:CG2	41:BT:86:THR:CG2	2.87	0.43
26:BE:176:ASP:C	26:BE:176:ASP:OD1	2.57	0.43
22:BA:2364:C:C2'	22:BA:2365:G:H5'	2.48	0.43
22:BA:2366:A:C2	22:BA:2367:G:H1'	2.54	0.43
34:DM:101:VAL:HG13	34:DM:101:VAL:O	2.19	0.43
45:BX:44:ARG:HH21	45:BX:46:VAL:CG1	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1307:A:C2'	22:DA:1308:A:O5'	2.66	0.43
1:AA:257:G:H2'	1:AA:258:G:O5'	2.19	0.43
17:AQ:12:VAL:CG1	17:AQ:13:SER:N	2.52	0.43
17:AQ:18:LYS:O	17:AQ:47:ASP:OD2	2.36	0.43
17:AQ:20:ILE:HD12	17:AQ:20:ILE:HA	1.63	0.43
17:AQ:73:THR:HG22	17:AQ:74:LEU:HD12	2.01	0.43
1:CA:645:G:O2'	1:CA:646:G:H5'	2.18	0.43
26:BE:108:ILE:CD1	26:BE:180:LEU:CB	2.88	0.43
1:CA:935:A:O2'	1:CA:936:C:H6	2.00	0.43
3:AC:38:VAL:CG2	3:AC:56:ILE:HD11	2.49	0.43
25:BD:117:GLY:O	25:BD:118:PHE:CD1	2.71	0.43
37:DP:22:GLY:HA3	37:DP:91:VAL:HG21	1.99	0.43
37:DP:22:GLY:O	37:DP:89:GLY:HA3	2.19	0.43
22:DA:274:C:O2'	22:DA:275:C:C5'	2.65	0.43
29:BH:68:ARG:NH2	29:BH:69:ALA:HA	2.33	0.43
27:DF:111:ARG:NH1	27:DF:113:PHE:HE1	2.15	0.43
1:CA:182:A:C2	1:CA:184:G:C6	3.06	0.43
13:AM:25:GLY:O	13:AM:27:THR:N	2.52	0.43
22:BA:729:G:C2'	22:BA:1775:U:H1'	2.48	0.43
1:CA:265:G:O2'	1:CA:266:G:H5'	2.19	0.43
23:DB:64:G:C5	23:DB:65:U:C5	3.07	0.43
27:BF:131:VAL:O	27:BF:132:ARG:C	2.57	0.43
22:DA:1655:A:O2'	22:DA:1656:C:C5'	2.67	0.43
25:DD:137:SER:CB	25:DD:138:LEU:CD2	2.95	0.43
22:DA:1441:G:N3	22:DA:1551:A:C2	2.86	0.43
1:CA:1003:G:N2	1:CA:1005:A:C5'	2.80	0.43
2:CB:151:LYS:HG3	2:CB:152:ASP:H	1.82	0.43
22:DA:843:G:C6	22:DA:844:A:N6	2.87	0.43
1:AA:976:G:N1	1:AA:1363:A:C2	2.87	0.43
1:CA:121:U:H3'	1:CA:121:U:P	2.58	0.43
22:BA:1084:A:C6	22:BA:1085:A:N6	2.87	0.43
2:AB:95:TRP:CZ2	2:AB:100:LEU:HB2	2.54	0.43
1:CA:723:U:H6	1:CA:723:U:H3'	1.83	0.43
14:CN:87:ALA:HB2	14:CN:95:LEU:HD23	2.00	0.43
1:CA:728:A:C6	1:CA:729:A:N6	2.86	0.43
24:BC:33:LEU:HD21	24:BC:62:ARG:CD	2.39	0.43
22:BA:277:G:H4'	22:BA:278:A:C8	2.52	0.43
22:DA:791:C:N4	22:DA:794:A:H1'	2.33	0.43
12:AL:111:GLN:O	12:AL:112:ALA:HB3	2.19	0.43
22:DA:2864:G:H2'	22:DA:2865:U:O4'	2.18	0.43
28:BG:59:ASP:O	28:BG:60:GLY:O	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:496:A:O2'	1:CA:497:G:C8	2.67	0.43
4:CD:115:GLN:HG3	4:CD:119:HIS:CE1	2.54	0.43
22:DA:154:U:H2'	22:DA:155:A:O4'	2.18	0.43
11:AK:58:THR:CB	11:AK:59:PRO:HD2	2.46	0.43
22:BA:2222:C:H2'	22:BA:2223:G:O5'	2.18	0.43
22:BA:1753:G:OP1	37:BP:92:ARG:HD3	2.18	0.43
37:DP:9:GLN:HB3	37:DP:12:MET:CE	2.48	0.43
13:AM:10:ASP:O	13:AM:11:HIS:HB2	2.18	0.43
15:AO:15:GLY:O	15:AO:17:ASP:N	2.43	0.43
22:DA:283:G:N2	22:DA:358:U:C2	2.87	0.43
33:DL:73:ILE:O	33:DL:105:ILE:HD12	2.18	0.43
3:AC:5:HIS:CG	14:AN:88:MET:HB3	2.54	0.43
22:BA:640:C:C2'	22:BA:641:U:O5'	2.67	0.43
1:AA:1016:A:H2'	1:AA:1017:U:O4'	2.19	0.43
22:BA:747:U:H2'	22:BA:2613:U:O4	2.18	0.43
30:BI:56:VAL:CG2	30:BI:68:PHE:HB2	2.49	0.43
49:D1:10:LEU:HD13	49:D1:10:LEU:N	2.34	0.43
1:CA:1077:G:C6	1:CA:1081:A:N1	2.87	0.43
1:AA:748:G:O6	1:AA:749:A:N6	2.51	0.43
33:BL:55:MET:HE2	33:BL:56:PRO:HD2	2.00	0.43
22:BA:64:A:N1	22:BA:91:A:N6	2.67	0.43
4:AD:160:LEU:CD2	4:AD:160:LEU:N	2.80	0.43
1:CA:258:G:O3'	20:CT:35:TYR:OH	2.36	0.43
22:BA:2109:U:O4	22:BA:2110:G:C4	2.71	0.43
38:BQ:89:ILE:O	38:BQ:90:ASP:CB	2.63	0.43
10:AJ:88:MET:HB3	10:AJ:89:ARG:NH1	2.33	0.43
38:BQ:35:PHE:C	38:BQ:37:ALA:N	2.72	0.43
1:CA:1336:C:O2'	1:CA:1337:G:C5	2.71	0.43
3:AC:57:GLU:CG	3:AC:64:ARG:HB3	2.49	0.43
22:DA:545:U:C6	22:DA:547:A:H5'	2.54	0.43
13:AM:84:CYS:O	13:AM:88:LEU:CD1	2.66	0.43
1:CA:708:C:H4'	11:CK:38:GLY:HA3	2.01	0.43
22:BA:414:C:O2'	22:BA:415:A:H5'	2.17	0.43
34:DM:21:ALA:HB2	34:DM:98:PRO:O	2.18	0.43
18:AR:42:ARG:HG3	18:AR:43:ILE:CD1	2.49	0.43
2:AB:161:PHE:HD1	2:AB:183:PHE:HB2	1.84	0.43
22:BA:666:A:H4'	33:BL:48:ARG:NE	2.31	0.43
1:AA:1451:U:C5'	1:AA:1452:C:H5	2.31	0.43
22:BA:2076:U:O2	22:BA:2076:U:O4'	2.36	0.43
19:AS:14:LEU:HB2	19:AS:32:THR:HG21	2.01	0.43
27:BF:46:LYS:CD	27:BF:46:LYS:N	2.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2350:C:C2'	22:BA:2351:G:H5'	2.48	0.43
22:BA:2665:A:H2	22:BA:2666:C:C2	2.35	0.43
22:BA:2459:A:C8	22:BA:2459:A:O5'	2.72	0.43
6:AF:98:GLU:O	6:AF:99:ALA:HB3	2.18	0.43
2:AB:79:VAL:HA	2:AB:213:LEU:HD21	1.99	0.43
22:BA:553:G:N7	22:BA:554:U:C5	2.87	0.43
30:BI:59:THR:HG22	30:BI:61:TYR:CE2	2.53	0.43
41:BT:67:VAL:HG23	41:BT:68:LYS:N	2.33	0.43
1:AA:230:G:H5''	16:AP:31:ARG:HH21	1.84	0.43
22:BA:2611:C:H5'	54:BA:3136:ERY:H301	2.01	0.43
15:CO:10:ILE:HA	15:CO:13:GLU:HB2	2.00	0.43
22:DA:1320:C:HO2'	22:DA:1321:A:H8	1.67	0.43
3:CC:142:ARG:HG2	3:CC:143:LEU:HD12	2.00	0.43
40:BS:19:LEU:O	48:B0:21:LEU:HD12	2.18	0.43
24:BC:137:GLY:N	24:BC:163:ILE:O	2.51	0.43
1:AA:2:A:C6	1:AA:3:A:N1	2.86	0.43
22:BA:2049:G:N2	22:BA:2620:C:C2	2.87	0.43
51:B3:15:LYS:HE2	51:B3:19:GLY:HA2	2.01	0.43
22:BA:2256:G:O2'	22:BA:2257:U:H5'	2.18	0.43
35:BN:4:ARG:HA	35:BN:4:ARG:HD2	1.90	0.43
42:BU:4:ILE:O	42:BU:4:ILE:HG22	2.15	0.43
22:BA:1330:C:O2'	22:BA:1331:G:H5'	2.18	0.43
22:DA:2064:C:O3'	22:DA:2251:G:N2	2.52	0.43
22:DA:1219:U:O2'	22:DA:1220:G:H5'	2.18	0.43
1:AA:1246:A:C6	1:AA:1292:G:C6	3.07	0.43
22:BA:998:C:H2'	22:BA:999:U:O5'	2.19	0.43
22:DA:1389:G:O2'	22:DA:1390:U:H5'	2.17	0.43
27:BF:35:LEU:CD2	27:BF:153:ILE:CG2	2.97	0.43
1:CA:377:G:O2'	1:CA:378:G:H5'	2.19	0.43
22:DA:916:G:O2'	22:DA:917:A:O5'	2.34	0.43
9:AI:8:THR:O	9:AI:81:GLY:HA3	2.19	0.43
10:AJ:47:GLU:OE2	14:AN:75:LYS:NZ	2.44	0.43
22:DA:92:U:O2'	22:DA:93:G:O4'	2.36	0.43
1:AA:70:U:O2'	1:AA:71:A:N7	2.51	0.43
2:AB:9:LEU:CD2	2:AB:11:ALA:CB	2.92	0.43
18:CR:63:TYR:CD2	18:CR:69:TYR:OH	2.72	0.43
22:DA:1130:U:O2'	22:DA:1131:G:N7	2.49	0.43
22:BA:1829:A:N3	24:BC:14:HIS:HE1	2.16	0.43
22:DA:191:A:HO2'	22:DA:192:C:H5'	1.83	0.43
22:DA:2077:A:OP1	22:DA:2238:G:N1	2.52	0.43
22:DA:2234:G:C4	22:DA:2235:G:C8	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1252:G:C2	38:DQ:32:ARG:HG2	2.53	0.43
22:DA:480:A:H2'	22:DA:480:A:N3	2.34	0.43
1:CA:1214:C:H3'	1:CA:1215:G:C5'	2.49	0.43
1:CA:1314:C:H2'	1:CA:1315:U:O4'	2.17	0.43
4:AD:84:ASN:C	4:AD:84:ASN:ND2	2.72	0.43
20:AT:4:LYS:O	20:AT:6:ALA:N	2.52	0.43
22:DA:622:G:O2'	22:DA:623:C:H5'	2.18	0.43
33:DL:4:ASN:HD22	33:DL:4:ASN:HA	1.53	0.43
25:BD:124:ARG:HG2	25:BD:125:TRP:CD1	2.54	0.43
29:DH:5:LEU:HA	29:DH:36:ALA:HB2	2.00	0.43
47:DZ:19:HIS:HD2	47:DZ:52:PHE:HZ	1.67	0.43
22:DA:1121:C:H2'	22:DA:1122:G:O4'	2.19	0.43
11:AK:125:LYS:O	11:AK:126:ARG:CB	2.66	0.43
36:BO:75:GLY:CA	36:BO:106:LEU:HD13	2.43	0.43
22:DA:1565:C:H5''	24:DC:17:LYS:HE2	2.01	0.43
22:DA:1998:A:C4	22:DA:1999:C:C6	3.06	0.43
29:BH:67:ALA:O	29:BH:69:ALA:N	2.41	0.43
24:DC:184:GLU:C	24:DC:186:ASP:H	2.20	0.43
8:AH:75:GLN:CA	8:AH:75:GLN:OE1	2.64	0.43
22:DA:943:A:H2'	22:DA:944:C:O5'	2.18	0.43
22:DA:1731:G:N3	22:DA:1733:G:N7	2.67	0.43
27:BF:59:ILE:HD13	27:BF:137:PHE:CE2	2.54	0.43
22:DA:2092:U:H4'	22:DA:2093:G:C5'	2.45	0.43
1:AA:1321:U:O3'	19:AS:77:ARG:NH2	2.51	0.43
14:AN:46:LYS:C	14:AN:48:GLN:H	2.21	0.43
16:CP:1:MET:C	16:CP:1:MET:HE2	2.39	0.43
52:B4:9:LYS:HE2	52:B4:9:LYS:CA	2.49	0.43
4:AD:97:LEU:HD23	4:AD:117:VAL:HG21	1.99	0.43
4:AD:151:GLN:H	4:AD:154:VAL:HG12	1.82	0.43
22:DA:1910:G:H1	22:DA:1920:C:N4	2.17	0.43
6:AF:50:PRO:HD3	18:AR:73:HIS:HB3	2.01	0.43
22:BA:2822:G:P	25:BD:115:GLY:HA3	2.59	0.43
1:AA:373:A:N3	1:AA:374:A:C8	2.86	0.43
1:AA:617:G:H2'	1:AA:618:C:O5'	2.19	0.43
3:CC:179:ALA:HB1	3:CC:202:PHE:CD1	2.53	0.43
1:AA:1442:G:C6	1:AA:1443:C:C4	3.06	0.43
27:DF:122:ASP:CB	27:DF:126:ASN:ND2	2.82	0.43
22:DA:1270:C:N3	22:DA:1648:U:C5	2.87	0.43
22:DA:2011:U:H2'	22:DA:2012:G:O4'	2.19	0.43
11:CK:81:LEU:HD11	11:CK:104:PHE:HD2	1.70	0.43
22:DA:1753:G:H2'	22:DA:1754:A:O5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:815:A:C2	1:AA:1529:G:C4	3.06	0.43
1:AA:184:G:N3	1:AA:185:U:C6	2.87	0.43
1:AA:184:G:O2'	1:AA:185:U:C5'	2.67	0.43
22:BA:153:U:C2'	22:BA:154:U:C5'	2.95	0.43
1:AA:585:G:N2	1:AA:879:C:O4'	2.52	0.43
28:DG:82:PHE:HB3	28:DG:140:ILE:HD11	2.00	0.43
36:DO:22:GLY:O	36:DO:23:ALA:HB3	2.19	0.43
46:BY:23:ARG:O	46:BY:24:GLU:C	2.57	0.43
22:BA:2187:U:C2	22:BA:2188:U:C5	3.07	0.43
1:CA:443:C:C6	1:CA:443:C:H3'	2.54	0.43
1:CA:444:G:C2	1:CA:445:G:C4	3.06	0.43
14:AN:60:ARG:O	14:AN:61:ASN:CB	2.54	0.43
18:AR:39:VAL:HG12	18:AR:44:THR:HG23	2.00	0.43
22:DA:2551:C:C4	22:DA:2552:U:C4	3.07	0.43
22:DA:2552:U:O2	22:DA:2554:U:C5'	2.59	0.43
22:DA:871:U:OP1	34:DM:4:PRO:HA	2.19	0.43
13:CM:47:LEU:HD21	13:CM:52:ILE:HG22	2.01	0.43
1:CA:159:G:C5'	1:CA:160:A:OP2	2.66	0.43
22:BA:1733:G:N3	22:BA:1734:G:C8	2.86	0.43
42:BU:17:ASP:O	42:BU:18:LYS:C	2.56	0.43
15:AO:24:THR:O	15:AO:25:GLU:C	2.57	0.43
27:DF:8:LYS:HG3	27:DF:12:VAL:HG21	2.00	0.43
22:BA:637:A:H4'	22:BA:638:G:O5'	2.18	0.43
1:CA:634:C:N4	1:CA:635:A:N6	2.66	0.43
1:CA:647:C:C2	1:CA:648:A:C8	3.07	0.43
1:AA:831:A:OP1	2:AB:20:ARG:HG3	2.19	0.43
4:AD:188:SER:O	4:AD:190:LEU:N	2.43	0.43
22:BA:1802:A:N1	22:BA:1822:C:H1'	2.34	0.43
25:BD:71:ALA:O	25:BD:73:VAL:N	2.52	0.43
26:DE:146:VAL:O	26:DE:167:VAL:HA	2.18	0.43
10:AJ:80:THR:HG22	10:AJ:82:LYS:H	1.83	0.43
30:DI:132:ALA:HA	30:DI:137:LEU:HD12	2.01	0.43
22:BA:65:U:N3	22:BA:66:C:C5	2.87	0.43
1:CA:317:U:H2'	1:CA:318:G:H8	1.83	0.43
38:DQ:43:GLN:O	38:DQ:44:TYR:C	2.57	0.43
22:DA:1002:G:H2'	22:DA:1003:G:O4'	2.19	0.43
44:DW:72:GLY:HA3	44:DW:78:PHE:HE2	1.83	0.43
31:DJ:1:MET:SD	31:DJ:2:LYS:NZ	2.92	0.43
22:BA:860:U:C2'	22:BA:861:A:O5'	2.67	0.43
8:CH:37:ASN:HA	8:CH:48:PHE:CE1	2.45	0.43
1:AA:737:C:H2'	1:AA:738:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1265:A:O4'	22:BA:1267:U:C6	2.72	0.43
29:BH:74:ALA:O	29:BH:75:LEU:HD12	2.18	0.43
22:DA:1681:G:O2'	22:DA:1762:A:O2'	2.26	0.43
31:BJ:140:LEU:HD13	31:BJ:141:ASP:N	2.33	0.43
20:AT:61:ALA:HB2	20:AT:66:ILE:CG2	2.49	0.43
25:BD:16:THR:HG1	25:BD:18:ASP:CG	2.22	0.43
22:BA:2641:G:OP1	31:BJ:76:HIS:CE1	2.69	0.43
22:BA:1406:U:HO2'	22:BA:1407:G:H8	1.66	0.43
13:AM:65:GLU:OE1	13:AM:65:GLU:HA	2.18	0.43
22:DA:560:C:H2'	22:DA:561:G:C5'	2.49	0.43
39:BR:68:ARG:HH11	39:BR:90:ARG:HH11	1.65	0.43
7:CG:12:LEU:HD13	7:CG:12:LEU:N	2.34	0.43
1:AA:102:G:H2'	1:AA:103:U:H6	1.82	0.43
22:BA:1520:U:H6	22:BA:1520:U:O5'	2.01	0.43
22:BA:2:G:O2'	22:BA:3:U:H5'	2.18	0.43
22:DA:900:A:H2'	22:DA:901:C:C6	2.53	0.43
20:CT:32:LYS:O	20:CT:36:ALA:HB3	2.19	0.43
22:DA:1959:G:H2'	22:DA:1960:A:O4'	2.18	0.43
25:BD:13:ARG:HD2	37:BP:55:HIS:CE1	2.54	0.43
45:BX:51:SER:O	45:BX:54:GLY:N	2.52	0.43
5:AE:100:GLU:HB2	5:AE:103:GLY:N	2.33	0.43
22:DA:1819:A:O4'	22:DA:1821:A:C5	2.71	0.43
24:DC:77:VAL:CG2	24:DC:113:ASP:H	2.31	0.43
24:DC:86:ARG:HD2	24:DC:90:ILE:CD1	2.46	0.43
41:DT:60:THR:O	41:DT:61:LEU:HB3	2.18	0.43
22:DA:2335:A:C4	22:DA:2337:G:N7	2.86	0.43
22:DA:2335:A:OP1	36:DO:13:ARG:HD2	2.17	0.43
7:CG:91:ARG:CZ	7:CG:92:PRO:HD2	2.49	0.43
22:DA:2839:G:C2	22:DA:2880:C:C4	3.06	0.43
22:DA:109:C:H2'	22:DA:110:G:O5'	2.18	0.43
22:DA:1203:U:C2	22:DA:1204:A:C6	3.06	0.43
22:DA:95:A:C2'	22:DA:96:C:H5''	2.39	0.43
22:BA:1799:G:C2	24:BC:153:LEU:CD2	3.02	0.43
49:B1:6:GLU:O	49:B1:23:THR:HA	2.19	0.43
22:DA:118:A:P	22:DA:119:A:H5''	2.59	0.43
28:DG:137:LYS:C	28:DG:139:VAL:H	2.22	0.43
1:CA:204:G:H2'	1:CA:205:A:H8	1.83	0.43
22:DA:141:G:HO2'	22:DA:142:A:P	2.41	0.43
1:AA:205:A:N7	1:AA:206:C:C4	2.87	0.43
4:CD:29:THR:CG2	4:CD:30:LYS:HD3	2.44	0.43
1:AA:79:G:N2	1:AA:91:U:O4	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1528:A:H2'	22:DA:1529:G:O4'	2.19	0.43
22:BA:2364:C:O2'	22:BA:2365:G:H5'	2.19	0.43
37:DP:23:ASP:O	37:DP:24:THR:CG2	2.67	0.43
22:DA:250:G:N1	22:DA:251:A:C2	2.87	0.43
17:AQ:55:GLY:HA3	17:AQ:82:VAL:CG1	2.47	0.43
1:CA:597:G:N7	1:CA:598:U:C5	2.87	0.43
8:CH:30:LYS:O	8:CH:33:VAL:N	2.51	0.43
8:CH:78:SER:HG	8:CH:123:GLU:HG3	1.83	0.43
22:DA:506:G:H4'	22:DA:507:A:C5'	2.46	0.43
1:CA:994:A:H62	1:CA:1216:A:H5'	1.81	0.43
1:CA:1319:A:OP1	19:CS:4:LEU:HD22	2.18	0.43
7:CG:77:ARG:HD3	7:CG:77:ARG:HA	1.87	0.43
19:CS:39:ILE:HG13	19:CS:39:ILE:O	2.19	0.43
1:AA:865:A:C4	1:AA:866:C:C5	3.07	0.43
22:DA:2513:A:H2	25:DD:148:GLN:HE21	1.65	0.43
22:DA:1870:C:C5'	22:DA:1871:A:H2	1.98	0.43
35:DN:37:THR:HA	35:DN:110:MET:CE	2.49	0.43
2:CB:73:ARG:HG3	2:CB:74:ALA:H	1.82	0.43
47:DZ:53:MET:O	47:DZ:54:VAL:CG1	2.57	0.43
21:AU:40:PRO:HA	21:AU:43:GLU:HB2	2.00	0.43
29:BH:90:LEU:HD22	29:BH:123:ARG:CA	2.45	0.43
2:AB:116:LEU:HB3	2:AB:140:LEU:HD21	2.00	0.43
25:DD:33:ARG:NH2	25:DD:51:THR:HG22	2.33	0.43
37:DP:91:VAL:HG11	37:DP:96:LEU:HD21	2.00	0.43
22:BA:141:G:H5'	22:BA:142:A:C8	2.54	0.43
22:DA:1662:U:O2	22:DA:1662:U:H2'	2.18	0.43
1:CA:1458:G:O3'	20:CT:22:SER:HA	2.19	0.43
1:CA:181:A:O2'	1:CA:182:A:O5'	2.35	0.43
22:DA:1593:A:C2	22:DA:1594:U:C2	3.06	0.43
1:CA:99:C:HO2'	1:CA:100:G:H8	1.66	0.43
24:DC:144:GLU:HG3	24:DC:151:GLY:CA	2.49	0.43
22:BA:729:G:C4	22:BA:1775:U:C2	3.07	0.43
1:CA:273:U:O2'	1:CA:274:A:H5'	2.19	0.43
1:AA:414:A:C4	1:AA:415:A:N7	2.87	0.43
23:DB:20:G:N2	23:DB:64:G:H1'	2.34	0.43
22:DA:2195:U:C5	22:DA:2196:C:H5	2.36	0.43
22:DA:2199:A:N7	22:DA:2225:A:C6	2.86	0.43
22:DA:2414:G:H2'	22:DA:2415:G:C5'	2.48	0.43
7:CG:35:LYS:HB3	7:CG:35:LYS:HZ3	1.82	0.43
9:CI:59:LYS:HB3	9:CI:59:LYS:HE2	1.68	0.43
22:BA:2107:G:O6	22:BA:2183:A:C6	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:867:G:N3	1:CA:868:C:C6	2.87	0.43
20:CT:64:GLY:O	20:CT:67:HIS:HB2	2.19	0.43
10:AJ:20:GLN:NE2	10:AJ:20:GLN:CA	2.79	0.43
22:BA:1588:G:C2	22:BA:1589:U:C5	3.07	0.43
22:BA:302:C:O2'	22:BA:303:G:H5'	2.18	0.43
3:CC:129:PHE:CD2	3:CC:130:ARG:N	2.87	0.43
3:CC:131:ARG:O	3:CC:135:ARG:HB2	2.18	0.43
1:AA:1442:G:H2'	1:AA:1443:C:H6	1.82	0.43
43:DV:29:ILE:C	43:DV:29:ILE:CD1	2.87	0.43
23:DB:34:A:N6	23:DB:44:G:C1'	2.81	0.43
25:DD:124:ARG:NH1	25:DD:125:TRP:HZ2	2.15	0.43
22:BA:216:A:C4	22:BA:217:A:C8	3.07	0.43
1:AA:1458:G:H5''	20:AT:25:SER:HB3	2.00	0.43
33:DL:124:GLY:N	33:DL:143:GLU:OE2	2.52	0.43
17:CQ:47:ASP:HB3	17:CQ:74:LEU:HB3	2.00	0.43
1:AA:753:A:H4'	1:AA:754:C:O5'	2.19	0.43
1:CA:21:G:H1'	1:CA:914:A:H61	1.84	0.43
38:BQ:25:GLY:O	38:BQ:29:ARG:HG3	2.19	0.43
44:DW:9:THR:HG23	44:DW:10:ARG:H	1.79	0.43
2:AB:153:MET:O	2:AB:155:GLY:N	2.49	0.43
22:BA:2443:C:O2'	22:BA:2444:G:H5'	2.18	0.43
22:BA:10:A:C5	22:BA:2800:A:C6	3.06	0.43
1:AA:27:G:H2'	1:AA:28:A:H8	1.84	0.43
22:DA:2674:G:H4'	32:DK:30:ARG:HD2	2.01	0.43
22:BA:2813:A:C2	22:BA:2887:A:N6	2.73	0.43
22:DA:487:C:H2'	22:DA:488:G:O4'	2.19	0.43
22:BA:480:A:OP2	42:BU:43:LYS:HD2	2.18	0.43
1:AA:868:C:H2'	1:AA:869:G:H5'	2.01	0.43
1:CA:289:G:C2	1:CA:290:C:C4	3.06	0.43
19:CS:14:LEU:HD22	19:CS:37:SER:OG	2.19	0.43
22:BA:616:A:H4'	26:BE:101:TYR:CZ	2.54	0.43
22:BA:1691:C:H2'	22:BA:1692:U:O5'	2.19	0.43
22:DA:10:A:O2'	22:DA:11:C:H5'	2.19	0.43
34:DM:107:GLY:O	34:DM:108:VAL:HB	2.18	0.43
13:CM:85:TYR:HE2	13:CM:96:VAL:HG11	1.80	0.43
22:BA:2019:A:H4'	38:BQ:33:VAL:CG2	2.48	0.43
1:AA:139:A:N7	1:AA:140:U:H5	2.16	0.43
22:BA:1161:C:C1'	39:BR:8:GLY:O	2.63	0.43
22:DA:548:G:C5'	22:DA:549:G:H5'	2.48	0.43
30:DI:98:GLY:O	30:DI:99:LYS:HD2	2.19	0.43
22:BA:2672:U:H2'	22:BA:2673:G:C5'	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2079:U:C2	22:BA:2080:A:C8	3.07	0.43
30:DI:89:SER:HB2	30:DI:97:VAL:HG21	2.00	0.43
1:AA:358:U:C2'	1:AA:359:G:O5'	2.66	0.43
3:CC:161:ILE:HD13	3:CC:161:ILE:O	2.18	0.43
25:BD:139:SER:HA	25:BD:142:VAL:CG1	2.49	0.43
22:BA:1848:A:O2'	22:BA:1849:G:C5'	2.67	0.43
50:D2:10:LEU:HD21	50:D2:14:ARG:HH11	1.84	0.43
1:CA:1527:U:H2'	1:CA:1528:U:C6	2.52	0.43
30:DI:13:ALA:C	30:DI:15:GLY:H	2.22	0.43
28:BG:123:GLU:CD	28:BG:124:CYS:N	2.72	0.43
22:BA:1216:G:H2'	22:BA:1217:U:H6	1.83	0.43
32:BK:51:LYS:O	32:BK:51:LYS:NZ	2.52	0.43
33:BL:79:LEU:HD13	33:BL:116:VAL:CG1	2.49	0.43
22:DA:435:C:C5	22:DA:436:C:C5	3.07	0.43
22:BA:1007:C:H5''	31:BJ:37:ARG:NH2	2.33	0.43
35:BN:93:GLY:C	35:BN:95:THR:H	2.21	0.43
42:DU:102:ILE:OXT	42:DU:102:ILE:HG23	2.17	0.43
4:CD:163:GLN:CA	4:CD:163:GLN:HE21	2.31	0.43
1:CA:398:U:H2'	1:CA:398:U:O2	2.19	0.43
27:DF:160:LYS:HD3	27:DF:161:SER:N	2.33	0.43
1:AA:540:G:H2'	1:AA:541:G:H8	1.84	0.43
37:BP:9:GLN:C	37:BP:11:GLN:N	2.72	0.43
22:BA:1062:G:N1	22:BA:1077:A:C6	2.87	0.43
22:BA:1079:C:C4	22:BA:1080:A:N7	2.87	0.43
4:AD:7:LYS:NZ	4:AD:21:LYS:CG	2.81	0.43
4:AD:26:ALA:O	4:AD:27:ILE:C	2.56	0.43
1:CA:58:C:C2'	1:CA:59:A:O5'	2.66	0.43
48:D0:27:LEU:HD12	48:D0:38:LEU:HD23	2.00	0.43
9:AI:5:TYR:CE1	9:AI:88:GLU:OE2	2.72	0.43
12:CL:97:VAL:O	12:CL:98:ARG:C	2.57	0.43
22:DA:301:G:O3'	42:DU:81:ARG:NH1	2.48	0.43
22:DA:82:U:C2	22:DA:83:A:C8	3.07	0.43
26:DE:134:LEU:CA	26:DE:137:LYS:HB2	2.49	0.43
42:DU:14:THR:CG2	42:DU:15:GLY:N	2.64	0.43
42:DU:9:GLU:OE2	42:DU:23:LYS:HG2	2.18	0.43
24:BC:257:ARG:CG	24:BC:269:ARG:NH2	2.73	0.43
38:DQ:115:ALA:O	38:DQ:116:LEU:C	2.58	0.43
22:DA:219:A:C5	22:DA:220:G:C5	3.07	0.43
45:DX:27:ARG:HG2	45:DX:27:ARG:O	2.19	0.43
22:DA:455:C:H42	22:DA:473:G:C5'	2.31	0.43
22:DA:2757:A:C2	22:DA:2758:A:C8	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:45:THR:HG23	31:DJ:48:VAL:O	2.19	0.43
44:BW:16:GLU:HA	44:BW:16:GLU:OE2	2.18	0.43
44:BW:39:GLN:HE21	44:BW:42:THR:HB	1.84	0.43
44:BW:42:THR:HG23	44:BW:43:LYS:HZ2	1.84	0.43
34:DM:66:ARG:NH2	34:DM:104:GLU:OE2	2.46	0.43
1:CA:672:U:H2'	1:CA:673:A:C8	2.54	0.43
11:CK:28:ASN:CG	11:CK:56:LYS:HE2	2.40	0.43
18:CR:59:LYS:HA	18:CR:62:ARG:HD2	2.00	0.43
22:DA:2056:G:N2	22:DA:2057:G:N9	2.66	0.43
33:DL:57:LEU:HA	33:DL:60:ARG:CG	2.49	0.43
22:DA:581:C:H6	22:DA:581:C:O5'	2.02	0.43
26:BE:3:LEU:O	26:BE:11:ALA:HA	2.18	0.43
1:CA:935:A:C6	1:CA:936:C:N4	2.87	0.43
9:CI:117:LEU:CD2	9:CI:123:ARG:CD	2.97	0.43
14:CN:8:ARG:HD2	14:CN:12:ARG:NH2	2.33	0.43
11:AK:21:HIS:O	11:AK:31:VAL:HA	2.18	0.43
1:AA:1124:G:O2'	10:AJ:40:ILE:CD1	2.67	0.43
22:DA:2060:A:H3'	26:DE:63:LYS:HZ3	1.83	0.43
22:DA:2683:C:H42	22:DA:2727:A:H1'	1.84	0.43
32:DK:17:ARG:O	32:DK:45:GLU:HB3	2.19	0.43
1:CA:102:G:C2	1:CA:103:U:C2	3.07	0.43
22:DA:245:G:OP2	33:DL:67:THR:CG2	2.67	0.43
42:BU:38:ILE:HG22	42:BU:39:ASN:H	1.79	0.43
27:BF:98:PHE:HA	27:BF:101:ARG:HG3	2.00	0.43
27:BF:132:ARG:O	27:BF:133:GLU:CB	2.53	0.43
27:BF:134:GLN:HE21	27:BF:134:GLN:CA	2.32	0.43
27:BF:3:LEU:HD13	27:BF:3:LEU:HA	1.68	0.43
22:DA:2201:G:C6	22:DA:2223:G:C2	3.07	0.43
22:DA:2200:C:N4	22:DA:2224:G:H21	2.14	0.43
22:DA:1439:A:H1'	22:DA:1553:A:H61	1.84	0.43
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.54	0.43
1:CA:1249:C:H2'	1:CA:1250:A:C5'	2.35	0.43
10:AJ:51:VAL:HB	14:AN:80:ARG:CB	2.31	0.43
25:DD:172:VAL:CG2	25:DD:194:PRO:CD	2.97	0.43
7:CG:71:THR:CG2	7:CG:72:VAL:N	2.82	0.43
34:BM:15:GLY:O	34:BM:16:ARG:HD3	2.19	0.43
22:DA:2307:G:N7	22:DA:2312:U:C5	2.87	0.43
1:AA:949:A:O4'	1:AA:1364:U:H5	2.01	0.43
1:AA:975:A:C4'	1:AA:976:G:H5''	2.33	0.43
1:AA:826:C:H5'	8:AH:12:ARG:NH2	2.31	0.43
16:AP:73:ALA:O	16:AP:77:GLU:CB	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:23:SER:HB3	15:CO:26:VAL:CG2	2.49	0.43
36:DO:58:ILE:N	36:DO:58:ILE:HD12	2.33	0.43
1:CA:560:A:N7	1:CA:566:G:C4	2.87	0.43
6:CF:54:LEU:HD11	6:CF:56:LYS:O	2.16	0.43
35:DN:83:LEU:CD1	35:DN:86:ARG:HH21	2.32	0.43
29:DH:62:LEU:C	29:DH:64:ALA:H	2.22	0.43
2:CB:128:LEU:HD22	2:CB:132:GLU:CG	2.48	0.43
1:CA:927:G:C2	1:CA:1391:U:O2	2.72	0.43
1:CA:927:G:N2	1:CA:1391:U:H1'	2.34	0.43
34:DM:29:GLY:CA	34:DM:64:TRP:HZ3	2.32	0.43
22:BA:273:G:O2'	22:BA:274:C:H5'	2.19	0.43
28:DG:85:LYS:HD3	28:DG:164:ALA:O	2.18	0.43
22:BA:528:A:N1	22:BA:2042:A:H2'	2.34	0.43
9:AI:60:LEU:CD2	9:AI:60:LEU:N	2.82	0.43
22:BA:372:G:H5''	45:BX:60:LYS:HE3	2.00	0.43
25:DD:113:SER:HB3	25:DD:168:GLU:H	1.83	0.43
2:CB:146:SER:HB2	2:CB:147:LEU:CD1	2.40	0.43
1:CA:685:G:O2'	1:CA:686:U:H5'	2.19	0.43
36:BO:48:LEU:N	36:BO:48:LEU:HD23	2.34	0.43
22:DA:2824:C:OP2	22:DA:2825:G:N2	2.52	0.43
1:AA:514:C:C2'	1:AA:515:G:H5'	2.49	0.43
47:BZ:2:LYS:C	47:BZ:3:THR:CG2	2.87	0.43
10:AJ:63:ASP:HB3	10:AJ:65:TYR:CE2	2.54	0.43
31:DJ:51:GLY:CA	31:DJ:121:LYS:HE3	2.48	0.43
1:CA:711:G:HO2'	1:CA:712:A:H5'	1.82	0.43
34:BM:6:ARG:HD2	34:BM:8:LYS:NZ	2.34	0.43
22:BA:2414:G:N2	33:BL:66:PHE:CE2	2.86	0.43
48:B0:48:TYR:O	48:B0:49:ARG:HB2	2.18	0.43
12:CL:72:ASN:ND2	12:CL:72:ASN:H	2.10	0.43
15:AO:73:ASP:CB	15:AO:76:ARG:HG3	2.49	0.43
22:BA:1570:A:C6	22:BA:1571:A:C6	3.06	0.43
26:BE:153:LEU:HB3	26:BE:171:ASP:HB2	2.00	0.43
22:DA:2468:A:O2'	22:DA:2469:A:O5'	2.37	0.43
13:CM:113:LYS:HD3	13:CM:113:LYS:C	2.39	0.43
22:BA:917:A:C2'	22:BA:918:A:H5'	2.49	0.43
1:AA:600:A:H2'	1:AA:601:G:C8	2.54	0.43
4:CD:170:LEU:HD12	4:CD:170:LEU:O	2.18	0.43
23:BB:116:G:H4'	36:BO:54:VAL:O	2.18	0.43
22:DA:545:U:C3'	22:DA:545:U:C6	3.01	0.43
22:DA:2638:G:H2'	22:DA:2775:G:N2	2.34	0.43
32:BK:24:VAL:CG1	32:BK:30:ARG:HD2	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1413:A:H2'	1:CA:1414:U:C6	2.53	0.43
1:CA:929:G:C6	1:CA:930:C:C4	3.07	0.43
27:BF:52:ALA:CB	27:BF:149:ARG:HD3	2.49	0.43
22:BA:1849:G:H2'	22:BA:1850:G:C8	2.53	0.43
43:BV:65:VAL:O	43:BV:65:VAL:HG22	2.19	0.43
22:DA:430:A:OP2	22:DA:431:U:H5	2.02	0.43
27:DF:72:SER:HA	27:DF:79:ARG:HA	2.00	0.43
5:AE:82:HIS:HB2	5:AE:83:PRO:HD2	2.01	0.43
12:CL:101:LEU:HB3	12:CL:102:ASP:H	1.72	0.43
23:DB:21:G:C2'	23:DB:22:U:H5'	2.48	0.43
31:BJ:97:PRO:O	31:BJ:99:ARG:N	2.52	0.43
3:AC:149:LYS:HG3	3:AC:200:TRP:HE3	1.84	0.43
22:BA:1834:U:H2'	22:BA:1834:U:O2	2.19	0.43
17:CQ:7:LEU:N	17:CQ:7:LEU:HD22	2.34	0.43
22:BA:2840:C:H2'	22:BA:2841:C:C6	2.53	0.43
22:BA:1488:C:H2'	22:BA:1489:C:C6	2.54	0.43
22:DA:2080:A:C2	22:DA:2241:A:C2	3.07	0.43
22:DA:732:C:N4	22:DA:733:G:C5	2.87	0.43
22:BA:2620:C:H2'	22:BA:2621:G:O4'	2.19	0.43
29:BH:22:LYS:O	29:BH:23:ALA:C	2.57	0.43
22:DA:1045:C:H4'	22:DA:1047:G:C4	2.54	0.43
22:BA:1060:U:C1'	22:BA:1062:G:H5'	2.49	0.42
22:DA:1819:A:C1'	22:DA:1821:A:C6	3.01	0.42
24:DC:35:LYS:CB	24:DC:35:LYS:NZ	2.75	0.42
1:CA:1138:G:C2'	1:CA:1139:G:OP1	2.66	0.42
1:CA:1133:G:N2	1:CA:1142:G:C5	2.87	0.42
41:DT:20:ALA:CB	41:DT:31:VAL:HG21	2.44	0.42
41:DT:40:LYS:HE2	41:DT:58:VAL:O	2.19	0.42
4:AD:22:SER:O	4:AD:23:GLY:C	2.57	0.42
1:CA:376:G:O3'	16:CP:5:ARG:NH1	2.49	0.42
16:CP:75:ILE:CA	16:CP:78:VAL:HG23	2.49	0.42
22:DA:2337:G:N3	22:DA:2337:G:C2'	2.82	0.42
22:DA:2390:U:OP2	51:D3:34:LYS:HE2	2.18	0.42
44:DW:18:LYS:O	44:DW:20:LEU:HD11	2.19	0.42
22:DA:1055:G:C2'	22:DA:1056:G:H5'	2.48	0.42
1:AA:1260:G:O5'	1:AA:1284:C:H4'	2.19	0.42
1:AA:1530:G:O2'	1:AA:1531:A:H5'	2.18	0.42
1:AA:927:G:N2	1:AA:1391:U:H1'	2.34	0.42
22:DA:323:C:O4'	22:DA:323:C:O2	2.36	0.42
22:DA:347:A:N6	22:DA:348:A:N6	2.67	0.42
26:DE:128:ALA:HA	26:DE:156:ASN:ND2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1817:G:OP1	24:BC:86:ARG:NH2	2.52	0.42
22:DA:1568:G:O2'	22:DA:1569:A:OP2	2.29	0.42
22:DA:179:C:H2'	22:DA:180:G:O4'	2.19	0.42
22:DA:395:U:HO2'	22:DA:396:G:P	2.41	0.42
22:DA:446:G:H4'	22:DA:447:A:OP1	2.19	0.42
22:DA:2748:A:N9	22:DA:2757:A:N6	2.67	0.42
1:CA:1073:U:N3	1:CA:1074:G:N7	2.67	0.42
1:CA:1074:G:H4'	2:CB:102:ASN:HB2	2.00	0.42
34:DM:72:PRO:O	34:DM:73:ILE:HB	2.19	0.42
4:CD:27:ILE:O	4:CD:28:ASP:HB3	2.19	0.42
1:AA:79:G:C6	1:AA:80:A:C5	3.06	0.42
1:AA:94:G:C4'	1:AA:95:C:H5''	2.49	0.42
31:DJ:5:THR:HG23	31:DJ:7:LYS:HE2	2.00	0.42
38:DQ:61:ILE:H	38:DQ:61:ILE:HD12	1.84	0.42
43:DV:27:PRO:O	43:DV:88:HIS:HA	2.17	0.42
22:DA:2023:C:O2'	22:DA:2024:G:P	2.76	0.42
22:DA:2235:G:C4	22:DA:2236:U:C5	3.07	0.42
22:BA:1190:G:OP1	33:BL:32:GLY:HA2	2.18	0.42
17:AQ:80:LYS:CB	17:AQ:80:LYS:NZ	2.77	0.42
1:CA:599:C:H4'	8:CH:121:GLY:C	2.40	0.42
22:DA:627:A:H8	33:DL:78:ARG:NH1	2.17	0.42
4:AD:129:VAL:HG11	4:AD:134:TYR:HB3	2.00	0.42
1:AA:1080:A:OP1	5:AE:51:LYS:CE	2.64	0.42
23:DB:93:C:O2'	23:DB:94:A:H5'	2.19	0.42
22:DA:1142:A:N9	22:DA:1144:A:N7	2.66	0.42
1:AA:842:U:C3'	1:AA:843:U:C5'	2.80	0.42
22:DA:2694:G:H2'	22:DA:2695:U:H6	1.84	0.42
22:DA:2698:U:C2	22:DA:2699:C:C5	3.07	0.42
29:BH:110:VAL:HG23	29:BH:111:ALA:N	2.33	0.42
22:BA:1340:U:H3'	41:BT:61:LEU:HD22	1.99	0.42
21:AU:36:PHE:O	21:AU:37:TYR:CB	2.66	0.42
7:CG:59:GLU:HB2	7:CG:62:GLU:HB2	2.01	0.42
25:DD:53:GLY:O	25:DD:76:GLY:HA2	2.18	0.42
22:BA:910:A:C6	22:BA:911:A:C6	3.06	0.42
32:DK:17:ARG:N	32:DK:45:GLU:HG2	2.33	0.42
22:DA:1593:A:C6	22:DA:1594:U:N3	2.87	0.42
1:AA:874:G:C6	1:AA:875:U:C4	3.07	0.42
22:BA:729:G:H4'	22:BA:763:G:H5'	2.01	0.42
2:AB:162:VAL:HG22	2:AB:184:ALA:HB2	2.00	0.42
23:DB:30:C:C2	23:DB:31:C:O4'	2.72	0.42
23:DB:55:U:H1'	27:DF:25:MET:CE	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:57:VAL:C	32:BK:58:LEU:HD23	2.40	0.42
25:DD:109:VAL:O	25:DD:109:VAL:HG12	2.18	0.42
22:BA:1324:G:C4	22:BA:1328:A:N6	2.87	0.42
22:DA:1766:G:C6	22:DA:1987:A:N1	2.87	0.42
1:AA:1234:C:H5'	1:AA:1365:G:OP1	2.19	0.42
33:BL:80:SER:C	33:BL:81:ASP:O	2.56	0.42
22:BA:2328:A:C2'	22:BA:2329:U:H6	2.16	0.42
1:AA:599:C:H5''	8:AH:87:ARG:HA	2.00	0.42
22:BA:1056:G:C4'	22:BA:1086:A:H8	2.32	0.42
20:CT:64:GLY:O	20:CT:65:LEU:C	2.57	0.42
29:BH:3:VAL:HB	29:BH:37:VAL:O	2.19	0.42
29:BH:42:LYS:O	29:BH:46:PHE:HB2	2.19	0.42
42:DU:58:VAL:HG12	42:DU:59:GLU:N	2.34	0.42
22:BA:302:C:H2'	22:BA:303:G:H8	1.84	0.42
1:CA:322:C:C2	1:CA:332:G:N2	2.87	0.42
40:BS:59:GLU:CA	40:BS:64:ALA:HB2	2.44	0.42
22:DA:2654:A:N6	22:DA:2667:C:N4	2.66	0.42
1:CA:826:C:C2'	1:CA:826:C:O2	2.67	0.42
23:DB:75:G:H1'	43:DV:29:ILE:HG12	2.00	0.42
27:DF:122:ASP:HB3	27:DF:123:GLY:H	1.61	0.42
34:BM:80:VAL:HG22	34:BM:81:ARG:N	2.32	0.42
34:BM:80:VAL:HG22	34:BM:81:ARG:O	2.19	0.42
33:DL:28:GLY:O	33:DL:29:LYS:HB3	2.18	0.42
30:BI:19:PRO:HB2	30:BI:22:PRO:HD2	2.01	0.42
27:DF:60:SER:C	27:DF:62:GLN:N	2.68	0.42
1:CA:1393:U:C3'	1:CA:1393:U:H6	2.29	0.42
24:BC:29:PHE:CE2	24:BC:31:PRO:CG	3.00	0.42
22:DA:675:A:N6	22:DA:676:A:N6	2.67	0.42
22:BA:2661:G:H2'	22:BA:2662:A:O5'	2.19	0.42
1:CA:847:G:C2	1:CA:848:C:C2	3.06	0.42
22:BA:2330:G:H8	22:BA:2330:G:OP2	2.02	0.42
22:DA:265:A:C6	22:DA:428:A:C8	3.06	0.42
1:AA:1004:A:C6	1:AA:1005:A:C4	3.07	0.42
30:DI:101:SER:C	30:DI:103:ALA:H	2.22	0.42
22:DA:2550:G:N2	22:DA:2559:C:C2	2.87	0.42
3:AC:156:LEU:HA	3:AC:195:ILE:HD11	2.01	0.42
34:DM:2:LEU:O	34:DM:3:GLN:HB3	2.19	0.42
22:DA:2563:U:C1'	22:DA:2566:A:N6	2.82	0.42
22:DA:2674:G:H4'	32:DK:30:ARG:HG2	2.01	0.42
36:BO:65:THR:O	36:BO:66:GLY:C	2.57	0.42
22:DA:1526:C:C4	22:DA:1527:G:C6	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:85:TYR:CD2	8:AH:123:GLU:HB2	2.54	0.42
22:BA:640:C:H2'	22:BA:641:U:C6	2.54	0.42
3:CC:11:LEU:C	3:CC:13:ILE:N	2.73	0.42
23:BB:32:U:O2'	23:BB:33:G:H5'	2.18	0.42
1:AA:859:G:OP2	1:AA:869:G:N1	2.51	0.42
42:BU:86:PHE:CE1	42:BU:101:THR:HG21	2.54	0.42
22:DA:2541:A:C2	22:DA:2765:A:N6	2.84	0.42
22:DA:2370:G:C6	22:DA:2371:G:C5	3.07	0.42
26:DE:146:VAL:HG12	26:DE:167:VAL:CG2	2.46	0.42
37:DP:49:ILE:HG22	37:DP:95:LYS:HZ1	1.82	0.42
1:CA:1228:C:O2'	1:CA:1229:A:H8	2.02	0.42
34:DM:114:ARG:HA	34:DM:130:PHE:HE1	1.78	0.42
30:DI:20:SER:N	30:DI:21:PRO:HD2	2.34	0.42
22:DA:1249:U:P	22:DA:1249:U:H3'	2.59	0.42
45:BX:1:SER:O	45:BX:3:VAL:N	2.52	0.42
22:DA:1751:U:O4'	22:DA:2860:A:C2	2.72	0.42
22:BA:625:G:H2'	22:BA:626:A:O5'	2.19	0.42
38:BQ:35:PHE:CE1	38:BQ:39:ILE:CD1	3.02	0.42
4:CD:167:PRO:CG	4:CD:170:LEU:HD11	2.49	0.42
1:CA:178:C:C2	1:CA:179:A:C8	3.07	0.42
1:AA:1112:C:C4	3:AC:177:LEU:HD22	2.54	0.42
1:AA:420:U:C2'	1:AA:421:U:C5'	2.96	0.42
22:BA:2890:G:O5'	22:BA:2890:G:H8	2.02	0.42
26:BE:48:THR:C	26:BE:50:ALA:N	2.72	0.42
25:BD:9:VAL:HG22	25:BD:26:VAL:CB	2.48	0.42
22:DA:121:G:N3	22:DA:121:G:H2'	2.34	0.42
1:AA:657:U:O2	15:AO:21:THR:HG23	2.18	0.42
22:BA:1242:U:H2'	22:BA:1243:C:C6	2.54	0.42
22:DA:1498:C:H2'	22:DA:1499:C:C6	2.53	0.42
22:BA:31:C:O2'	22:BA:1238:G:H5'	2.19	0.42
47:DZ:8:GLN:O	47:DZ:9:THR:HG23	2.19	0.42
10:CJ:90:LEU:CD2	10:CJ:90:LEU:O	2.67	0.42
22:BA:1246:A:H2'	22:BA:1247:A:O5'	2.19	0.42
22:BA:1952:A:C6	22:BA:1953:A:N1	2.87	0.42
3:AC:79:LYS:HE3	3:AC:79:LYS:CA	2.49	0.42
46:BY:20:ASN:HB3	46:BY:50:VAL:HG23	2.01	0.42
9:CI:90:ASP:OD1	9:CI:92:SER:N	2.52	0.42
1:CA:1475:G:O2'	1:CA:1476:A:H5'	2.19	0.42
7:AG:106:ALA:HB1	7:AG:132:THR:HB	2.01	0.42
22:BA:2418:A:N7	56:BA:3664:HOH:O	2.37	0.42
1:AA:895:G:C5	1:AA:896:C:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:786:G:N2	1:CA:787:A:H1'	2.34	0.42
22:BA:1824:G:C6	22:BA:1825:U:C4	3.07	0.42
22:BA:209:C:C2'	22:BA:210:C:H5'	2.49	0.42
50:D2:11:LYS:HB3	50:D2:11:LYS:HE2	1.81	0.42
35:BN:85:PRO:HA	35:BN:88:ALA:HB2	2.00	0.42
22:BA:2205:A:C6	22:BA:2206:C:C4	3.07	0.42
22:DA:609:A:H2'	22:DA:610:C:O4'	2.19	0.42
6:AF:22:ILE:O	6:AF:26:THR:HG23	2.19	0.42
50:B2:43:THR:O	50:B2:44:VAL:HG22	2.19	0.42
22:BA:1041:G:O2'	22:BA:1042:G:H5'	2.19	0.42
37:DP:7:LEU:O	37:DP:7:LEU:HD12	2.18	0.42
22:BA:1075:C:H2'	22:BA:1076:C:C6	2.53	0.42
22:BA:2231:U:OP1	45:BX:29:LEU:HD23	2.19	0.42
33:BL:28:GLY:O	33:BL:29:LYS:O	2.37	0.42
4:CD:187:ARG:C	4:CD:189:ASP:N	2.72	0.42
1:CA:1281:C:C5'	1:CA:1282:C:C5	2.99	0.42
22:DA:1342:A:H3'	22:DA:1343:G:H5''	1.99	0.42
22:DA:1788:C:H5'	24:DC:223:ALA:HB1	1.99	0.42
22:DA:2887:A:O2'	48:D0:26:SER:HB3	2.19	0.42
48:D0:42:ILE:CD1	48:D0:48:TYR:CD2	3.02	0.42
22:DA:2839:G:H21	35:DN:92:GLY:HA3	1.83	0.42
1:AA:1129:C:H5''	9:AI:17:ARG:CZ	2.44	0.42
1:AA:1256:A:C1'	1:AA:1258:G:C6	2.99	0.42
22:DA:303:G:O2'	22:DA:304:U:O5'	2.37	0.42
26:DE:127:GLU:H	26:DE:127:GLU:CD	2.23	0.42
26:DE:126:VAL:HG13	26:DE:127:GLU:N	2.34	0.42
26:DE:162:ARG:C	26:DE:164:LEU:N	2.71	0.42
46:DY:2:LYS:HB2	46:DY:4:LYS:HD3	2.01	0.42
22:DA:76:C:O3'	46:DY:52:ARG:HG2	2.18	0.42
22:DA:2211:A:C4'	22:DA:2211:A:OP2	2.61	0.42
22:DA:2216:G:C4	22:DA:2217:G:C8	3.07	0.42
22:DA:455:C:C5	22:DA:472:A:N3	2.88	0.42
34:DM:45:GLN:OE1	34:DM:125:PRO:HG3	2.19	0.42
1:AA:462:G:N7	1:AA:463:U:C5	2.87	0.42
4:CD:1:ALA:O	4:CD:2:ARG:C	2.56	0.42
39:DR:5:PHE:O	39:DR:11:GLN:HA	2.19	0.42
11:CK:125:LYS:HB3	11:CK:126:ARG:H	1.47	0.42
12:AL:42:LYS:O	12:AL:43:LYS:C	2.57	0.42
22:BA:855:G:H21	44:BW:23:LYS:HB3	1.83	0.42
44:BW:22:VAL:CG2	44:BW:23:LYS:N	2.82	0.42
6:CF:90:MET:CE	18:CR:60:ARG:NH1	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:8:ASN:N	21:AU:8:ASN:HD22	2.17	0.42
22:DA:2056:G:N2	48:D0:1:ALA:H1	2.13	0.42
40:DS:32:ALA:O	40:DS:33:LEU:CB	2.58	0.42
22:DA:1285:A:C2'	22:DA:1286:A:H5''	2.45	0.42
1:CA:1215:G:N3	1:CA:1216:A:C8	2.87	0.42
1:CA:934:C:C4'	1:CA:935:A:OP1	2.62	0.42
1:CA:996:A:C6	1:CA:1046:A:H4'	2.54	0.42
14:CN:20:PHE:HE1	14:CN:54:SER:HB2	1.84	0.42
4:AD:18:LEU:HD22	4:AD:63:ILE:HB	2.00	0.42
20:AT:5:SER:OG	20:AT:6:ALA:N	2.50	0.42
22:DA:602:A:C4'	22:DA:604:G:O3'	2.63	0.42
22:DA:622:G:HO2'	22:DA:623:C:H6	1.59	0.42
22:BA:1654:A:H4'	25:BD:118:PHE:HZ	1.80	0.42
1:AA:13:U:O2'	1:AA:14:U:H5'	2.19	0.42
5:CE:81:GLN:HB3	5:CE:82:HIS:H	1.63	0.42
22:DA:1142:A:C4	22:DA:1144:A:C8	3.07	0.42
31:DJ:25:LEU:CD2	31:DJ:26:GLY:N	2.75	0.42
1:AA:842:U:C6	1:AA:843:U:H4'	2.54	0.42
2:CB:35:ASN:O	2:CB:37:VAL:HG12	2.19	0.42
5:CE:14:LEU:HD12	5:CE:15:ILE:H	1.83	0.42
32:DK:16:ALA:HB3	32:DK:46:ALA:H	1.81	0.42
25:DD:116:LYS:HD3	35:DN:1:MET:CE	2.49	0.42
27:DF:43:ILE:HG12	27:DF:77:LYS:CG	2.49	0.42
1:CA:184:G:O2'	1:CA:185:U:C6	2.63	0.42
1:CA:197:A:O2'	1:CA:198:G:C8	2.72	0.42
1:CA:77:A:C2	1:CA:93:U:N3	2.87	0.42
22:DA:822:G:C5'	56:DA:3358:HOH:O	2.66	0.42
22:DA:838:C:C2'	22:DA:839:U:C5'	2.97	0.42
23:DB:62:C:H2'	23:DB:63:C:O4'	2.18	0.42
1:AA:973:G:H2'	1:AA:974:A:OP1	2.19	0.42
27:BF:131:VAL:HG11	27:BF:151:LEU:HD11	2.01	0.42
40:BS:50:VAL:HG12	40:BS:105:VAL:HB	2.01	0.42
22:DA:1304:A:O2'	22:DA:1305:C:P	2.76	0.42
22:DA:1435:G:N1	22:DA:1558:C:N4	2.63	0.42
1:CA:1243:C:C2	1:CA:1244:G:N7	2.87	0.42
14:AN:27:LYS:CA	14:AN:30:ILE:HB	2.50	0.42
9:CI:51:LEU:HD11	9:CI:82:ILE:HG22	2.00	0.42
14:AN:68:ARG:HA	14:AN:69:PRO:HD3	1.74	0.42
25:DD:106:LYS:CB	25:DD:206:ALA:H	2.31	0.42
52:B4:16:ILE:CD1	52:B4:25:VAL:HG22	2.48	0.42
5:CE:11:GLN:HB3	5:CE:116:VAL:HB	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2305:U:H5	22:DA:2312:U:C4	2.37	0.42
22:DA:2314:A:N3	22:DA:2315:G:C8	2.87	0.42
42:BU:25:LYS:HD2	42:BU:25:LYS:HA	1.85	0.42
1:AA:949:A:H2'	1:AA:950:U:H5'	2.00	0.42
22:BA:547:A:C8	22:BA:548:G:N3	2.87	0.42
22:BA:1054:A:H3'	22:BA:1055:G:H8	1.84	0.42
22:BA:1101:U:C4	22:BA:1102:C:C5	3.07	0.42
6:AF:51:ILE:CG2	6:AF:51:ILE:O	2.67	0.42
1:CA:1308:U:OP2	13:CM:97:ARG:HD3	2.18	0.42
22:DA:1162:G:H21	39:DR:91:GLN:NE2	2.17	0.42
1:CA:1452:C:C4'	1:CA:1453:G:O5'	2.50	0.42
28:DG:105:SER:C	28:DG:106:LEU:HD23	2.40	0.42
34:BM:78:LEU:HD23	34:BM:79:ALA:CA	2.49	0.42
22:DA:1754:A:C8	37:DP:93:LYS:NZ	2.79	0.42
22:DA:1967:C:C6	22:DA:1967:C:C4'	3.02	0.42
22:BA:418:C:H2'	22:BA:419:U:O4'	2.18	0.42
32:BK:113:MET:O	32:BK:114:LYS:C	2.57	0.42
22:DA:806:C:H2'	22:DA:807:U:C6	2.54	0.42
46:BY:36:GLN:O	46:BY:37:LEU:HB3	2.20	0.42
1:AA:754:C:H3'	1:AA:755:G:C5'	2.49	0.42
22:BA:356:G:O2'	22:BA:357:C:H5'	2.19	0.42
35:BN:16:HIS:O	35:BN:16:HIS:CD2	2.71	0.42
1:CA:495:A:N1	1:CA:496:A:N6	2.67	0.42
20:CT:3:ILE:H	20:CT:3:ILE:HD12	1.84	0.42
22:BA:2795:C:O2'	22:BA:2796:U:H5'	2.19	0.42
1:CA:704:A:C2'	1:CA:705:G:C8	3.02	0.42
1:AA:556:C:H2'	1:AA:557:G:O4'	2.19	0.42
1:AA:1433:A:N7	1:AA:1468:A:C6	2.87	0.42
22:DA:1973:G:C5	22:DA:1974:C:C4	3.07	0.42
22:BA:1731:G:C6	22:BA:1733:G:C6	3.06	0.42
22:BA:1738:G:O2'	22:BA:1739:A:P	2.76	0.42
22:BA:1737:G:H5''	22:BA:1738:G:OP2	2.19	0.42
22:DA:1525:A:C6	22:DA:1526:C:N3	2.87	0.42
26:BE:76:PRO:HA	26:BE:82:GLY:HA3	2.01	0.42
22:DA:187:G:O2'	22:DA:1365:A:C2	2.71	0.42
21:CU:9:GLU:HB3	21:CU:10:PRO:HD2	1.98	0.42
40:BS:5:ALA:CB	40:BS:54:ALA:HB2	2.45	0.42
2:CB:59:ILE:HA	2:CB:62:ARG:CD	2.42	0.42
11:CK:35:ASP:O	11:CK:37:GLN:N	2.53	0.42
28:BG:71:LEU:HA	28:BG:71:LEU:HD13	1.83	0.42
3:CC:88:LYS:HA	3:CC:91:ALA:HB3	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:137:SER:O	4:CD:140:ASP:HB2	2.19	0.42
15:CO:42:PHE:HZ	15:CO:51:SER:HB2	1.85	0.42
22:BA:2485:G:C5'	34:BM:45:GLN:NE2	2.82	0.42
35:BN:38:LEU:C	35:BN:38:LEU:HD12	2.37	0.42
22:BA:1115:G:O2'	22:BA:1116:G:H5''	2.19	0.42
1:AA:766:A:C2	1:AA:814:A:C2	3.07	0.42
19:CS:62:THR:CG2	19:CS:63:ASP:N	2.82	0.42
22:DA:2464:G:C2	22:DA:2465:C:H1'	2.54	0.42
22:BA:608:A:C6	22:BA:609:A:C6	3.07	0.42
1:CA:1336:C:O2'	1:CA:1337:G:C4	2.69	0.42
22:DA:2810:A:H2'	22:DA:2811:G:O4'	2.19	0.42
22:BA:1486:U:H2'	22:BA:1487:U:C6	2.54	0.42
22:BA:1652:A:OP1	35:BN:8:ARG:NH2	2.53	0.42
1:AA:53:A:H2'	1:AA:54:C:O5'	2.19	0.42
39:BR:58:VAL:HG12	39:BR:102:SER:CB	2.45	0.42
22:DA:1043:C:C4	22:DA:1044:C:C5	3.07	0.42
22:DA:1297:C:C6	22:DA:1297:C:H3'	2.54	0.42
22:BA:753:A:H2'	22:BA:754:U:C6	2.54	0.42
22:BA:1848:A:H2'	22:BA:1849:G:H8	1.84	0.42
1:AA:657:U:C2'	1:AA:658:C:H5'	2.49	0.42
22:BA:1506:U:H6	22:BA:1506:U:H3'	1.83	0.42
22:BA:319:G:C8	22:BA:333:G:N2	2.87	0.42
1:AA:341:C:H2'	1:AA:342:C:C6	2.52	0.42
1:AA:578:C:C5'	56:AA:1741:HOH:O	2.67	0.42
11:AK:69:CYS:O	11:AK:73:VAL:HG21	2.19	0.42
22:BA:1782:U:O4'	22:BA:2609:U:C2	2.72	0.42
11:CK:115:ILE:HA	11:CK:116:PRO:HD2	1.86	0.42
11:CK:13:LYS:O	11:CK:14:GLN:O	2.36	0.42
22:BA:2733:A:O5'	22:BA:2733:A:H8	2.02	0.42
13:CM:105:ALA:CB	13:CM:109:LYS:HD3	2.49	0.42
42:BU:97:SER:O	42:BU:98:ASN:CG	2.57	0.42
1:CA:489:C:O2'	1:CA:490:C:H5'	2.18	0.42
1:CA:490:C:OP1	4:CD:145:ARG:NH2	2.52	0.42
1:CA:603:U:H2'	1:CA:604:G:H8	1.84	0.42
22:BA:820:A:H2'	22:BA:821:A:O4'	2.18	0.42
13:CM:5:GLY:O	13:CM:6:ILE:HD12	2.19	0.42
22:BA:2645:G:H4'	22:BA:2646:C:OP2	2.18	0.42
52:B4:1:MET:HE2	52:B4:34:LYS:HG2	2.00	0.42
26:BE:88:ARG:HB3	26:BE:89:PRO:HD2	2.01	0.42
1:AA:334:C:O5'	1:AA:334:C:H6	2.02	0.42
22:DA:1164:C:C6	22:DA:1164:C:H3'	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:51:GLN:HB3	38:BQ:51:GLN:HE21	1.69	0.42
38:BQ:94:LEU:HA	38:BQ:94:LEU:HD13	1.29	0.42
22:BA:1059:G:C5	22:BA:1060:U:C4	3.08	0.42
8:AH:48:PHE:HA	8:AH:60:LEU:HD23	2.01	0.42
22:DA:1343:G:C4	22:DA:1344:U:C5	3.07	0.42
22:DA:2286:G:H5''	22:DA:2287:A:H1'	2.01	0.42
22:DA:860:U:O2'	22:DA:861:A:C5'	2.67	0.42
22:DA:2333:A:P	44:DW:76:ARG:HH12	2.42	0.42
22:DA:1790:C:O2'	24:DC:207:ALA:CB	2.54	0.42
22:DA:703:U:H2'	22:DA:704:G:O4'	2.19	0.42
22:DA:729:G:C4	22:DA:1775:U:C2	3.07	0.42
22:DA:291:G:C5	22:DA:292:U:C4	3.08	0.42
22:DA:291:G:N1	22:DA:350:G:C5	2.88	0.42
22:DA:333:G:C2	22:DA:334:C:C5	3.07	0.42
22:BA:2286:G:H5''	22:BA:2287:A:O4'	2.19	0.42
22:DA:1363:C:O2	22:DA:1363:C:H2'	2.20	0.42
25:BD:101:PHE:O	25:BD:102:ALA:C	2.57	0.42
34:DM:1:MET:O	34:DM:43:ALA:HB1	2.18	0.42
1:AA:203:G:C2	1:AA:215:C:C4	3.07	0.42
22:DA:1912:A:N7	22:DA:1917:U:O4	2.52	0.42
25:BD:103:ASP:CG	25:BD:104:VAL:H	2.22	0.42
38:DQ:63:ARG:HG2	38:DQ:63:ARG:H	1.57	0.42
44:BW:19:ARG:NH1	44:BW:22:VAL:CG1	2.79	0.42
10:CJ:15:HIS:CE1	10:CJ:68:ARG:CD	2.92	0.42
37:DP:19:PHE:HE1	37:DP:58:PHE:CE2	2.37	0.42
22:DA:2614:A:C4'	22:DA:2615:U:OP1	2.65	0.42
22:DA:677:A:C6	22:DA:678:C:C4	3.07	0.42
29:DH:147:VAL:O	29:DH:148:ALA:CB	2.67	0.42
26:BE:175:ILE:CG2	26:BE:175:ILE:O	2.65	0.42
14:CN:55:SER:HB3	14:CN:58:ARG:HG2	2.01	0.42
22:DA:604:G:O6	22:DA:625:G:C6	2.72	0.42
21:AU:25:ALA:O	21:AU:29:ALA:HB3	2.19	0.42
22:DA:2571:U:N3	22:DA:2574:G:C8	2.87	0.42
1:AA:1124:G:C2'	1:AA:1145:A:N6	2.81	0.42
22:DA:2721:A:H2'	22:DA:2722:G:O4'	2.20	0.42
22:BA:1013:C:H2'	22:BA:1014:A:C8	2.53	0.42
27:DF:82:TYR:HA	27:DF:83:PRO:HD2	1.84	0.42
20:CT:26:MET:HE2	20:CT:26:MET:O	2.20	0.42
1:CA:91:U:C2	1:CA:92:U:C5	3.07	0.42
8:AH:100:ILE:HD12	8:AH:128:VAL:HB	2.02	0.42
1:CA:252:U:H6	1:CA:252:U:C5'	2.29	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:276:G:O2'	1:CA:277:C:O5'	2.36	0.42
27:DF:25:MET:C	27:DF:27:VAL:N	2.72	0.42
22:DA:1300:G:H5''	22:DA:1301:A:C5'	2.48	0.42
22:DA:1438:U:O4	22:DA:1552:A:C2	2.72	0.42
1:AA:1173:U:H2'	1:AA:1174:G:C8	2.55	0.42
35:BN:101:GLY:H	48:B0:41:HIS:HD2	1.67	0.42
1:CA:867:G:N3	1:CA:868:C:C5	2.87	0.42
22:DA:2448:A:H61	33:DL:36:LYS:NZ	2.17	0.42
4:AD:151:GLN:O	4:AD:153:ARG:N	2.52	0.42
20:CT:61:ALA:CA	20:CT:67:HIS:HA	2.49	0.42
22:BA:1586:A:C8	22:BA:1587:G:C8	3.07	0.42
1:CA:1302:C:C2'	1:CA:1303:C:O5'	2.68	0.42
1:CA:1449:C:H2'	1:CA:1450:U:C6	2.54	0.42
22:DA:465:G:N2	22:DA:684:G:H1'	2.34	0.42
1:AA:880:C:P	12:AL:4:ASN:HD22	2.42	0.42
1:AA:224:U:H2'	1:AA:225:C:H6	1.83	0.42
1:AA:393:A:H2'	1:AA:394:G:H8	1.85	0.42
1:CA:728:A:C2'	1:CA:729:A:H5'	2.49	0.42
22:BA:2015:A:C4	48:B0:2:VAL:CG2	3.03	0.42
22:BA:2013:A:C2	40:BS:88:ARG:NH1	2.86	0.42
24:BC:29:PHE:O	24:BC:30:ALA:C	2.57	0.42
24:BC:33:LEU:HA	24:BC:33:LEU:HD23	1.63	0.42
22:DA:674:G:O4'	26:DE:69:ARG:HG2	2.19	0.42
22:DA:674:G:C4'	26:DE:69:ARG:CG	2.95	0.42
2:CB:122:ASP:OD1	2:CB:124:THR:HG22	2.19	0.42
28:DG:166:GLU:N	28:DG:166:GLU:OE1	2.53	0.42
1:AA:35:G:H2'	1:AA:36:C:C6	2.53	0.42
46:BY:17:GLU:HB2	46:BY:53:VAL:HG11	2.01	0.42
1:CA:495:A:C2	1:CA:496:A:N6	2.88	0.42
11:AK:60:PHE:CD2	11:AK:60:PHE:C	2.92	0.42
22:DA:2551:C:H2'	22:DA:2552:U:C6	2.55	0.42
1:AA:926:G:C6	1:AA:1505:G:C6	3.08	0.42
1:AA:1468:A:C3'	1:AA:1469:C:C5'	2.97	0.42
22:DA:2901:C:H2'	22:DA:2901:C:O2	2.19	0.42
30:BI:53:PRO:HB2	30:BI:74:PRO:CG	2.49	0.42
15:AO:41:HIS:HD2	15:AO:42:PHE:CE2	2.37	0.42
15:AO:15:GLY:C	15:AO:17:ASP:N	2.72	0.42
35:BN:72:ASP:OD1	35:BN:75:ILE:HG23	2.18	0.42
22:BA:283:G:C5	22:BA:284:U:C5	3.07	0.42
40:DS:66:ILE:N	40:DS:66:ILE:HD13	2.34	0.42
20:CT:42:ASP:O	20:CT:44:ALA:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:7:GLY:HA2	35:DN:46:ARG:NH1	2.34	0.42
22:BA:2085:U:C2'	22:BA:2086:U:H5'	2.50	0.42
22:BA:2087:G:H2'	22:BA:2088:A:H8	1.84	0.42
22:BA:1916:A:H2'	22:BA:1917:U:O4'	2.19	0.42
22:DA:2348:U:H2'	22:DA:2349:G:H8	1.84	0.42
22:DA:2368:C:O2'	22:DA:2369:A:H5'	2.19	0.42
22:BA:289:G:C5	22:BA:290:U:C4	3.07	0.42
22:BA:229:C:H2'	22:BA:230:G:O4'	2.19	0.42
33:BL:55:MET:HE2	33:BL:56:PRO:CD	2.49	0.42
1:CA:316:C:H42	1:CA:337:G:H1	1.66	0.42
34:BM:46:ILE:CD1	34:BM:47:GLU:N	2.80	0.42
22:DA:1857:G:H1'	22:DA:1884:G:H22	1.83	0.42
1:AA:771:G:C5	1:AA:772:U:C5	3.08	0.42
31:BJ:20:ALA:O	31:BJ:21:THR:O	2.37	0.42
31:DJ:1:MET:HE3	31:DJ:2:LYS:O	2.19	0.42
18:AR:33:THR:OG1	18:AR:34:GLU:N	2.52	0.42
22:BA:447:A:C2	22:BA:454:A:H2'	2.55	0.42
19:CS:46:LEU:N	19:CS:46:LEU:HD23	2.27	0.42
10:AJ:88:MET:CE	10:AJ:89:ARG:NH1	2.82	0.42
36:BO:85:LYS:HB2	36:BO:87:ILE:HD11	2.02	0.42
22:DA:2812:G:N1	22:DA:2813:A:C4	2.87	0.42
22:BA:1045:C:H3'	22:BA:1046:A:H5'	1.99	0.42
22:DA:953:G:H2'	22:DA:954:G:C5'	2.48	0.42
22:DA:2046:G:OP1	48:D0:11:LYS:HE3	2.20	0.42
22:DA:1512:C:HO2'	22:DA:1513:U:C4'	2.31	0.42
1:CA:694:A:H2'	1:CA:695:A:C5'	2.49	0.42
22:BA:1229:C:C2	22:BA:1230:A:C8	3.07	0.42
22:BA:588:U:H1'	26:BE:85:PHE:CG	2.54	0.42
32:BK:98:ARG:C	32:BK:99:ILE:HD13	2.39	0.42
22:BA:2591:C:P	24:BC:237:ARG:HG3	2.59	0.42
22:DA:1836:C:C2'	22:DA:1836:C:O2	2.66	0.42
7:AG:51:GLN:C	7:AG:53:SER:H	2.23	0.42
22:DA:1423:G:O2'	22:DA:1499:C:H1'	2.19	0.42
27:BF:88:VAL:CG1	27:BF:90:LEU:HD13	2.50	0.42
1:AA:712:A:H2'	1:AA:713:G:O4'	2.19	0.42
22:BA:1114:C:H2'	22:BA:1114:C:O2	2.18	0.42
4:CD:59:LYS:O	4:CD:63:ILE:HG13	2.18	0.42
1:CA:525:C:O2'	1:CA:526:C:H5'	2.20	0.42
22:BA:183:C:O2	22:BA:432:A:H2	2.02	0.42
31:BJ:53:TYR:CE1	31:BJ:121:LYS:HG2	2.53	0.42
1:AA:191:G:H2'	1:AA:192:A:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:3:SER:OG	15:CO:6:ALA:CB	2.68	0.42
1:CA:1115:U:C6	1:CA:1115:U:H3'	2.54	0.42
1:AA:783:C:O5'	1:AA:783:C:H6	2.02	0.42
32:BK:27:GLY:O	32:BK:28:SER:C	2.56	0.42
7:AG:14:ASP:OD1	7:AG:17:PHE:HB2	2.19	0.42
22:DA:2083:G:H2'	22:DA:2084:C:C5'	2.49	0.42
22:DA:2364:C:C2'	22:DA:2365:G:H5'	2.49	0.42
22:BA:2536:G:C6	22:BA:2537:U:C4	3.07	0.42
22:DA:732:C:H2'	22:DA:733:G:O4'	2.19	0.42
45:DX:47:THR:O	45:DX:48:LEU:HD23	2.20	0.42
1:AA:1113:C:H2'	1:AA:1114:C:H6	1.83	0.42
4:CD:16:THR:HG22	4:CD:17:ASP:N	2.34	0.42
1:AA:800:G:O5'	1:AA:800:G:H8	2.03	0.42
16:AP:76:LYS:HE2	16:AP:76:LYS:HA	2.01	0.42
3:CC:60:ALA:O	3:CC:61:LYS:HB2	2.18	0.42
1:AA:1176:A:H2'	1:AA:1177:G:C8	2.54	0.42
22:BA:1074:G:C2'	22:BA:1075:C:H6	2.32	0.42
24:DC:250:GLN:HG3	24:DC:254:LYS:HG3	2.00	0.42
41:DT:18:GLU:O	41:DT:22:THR:HG23	2.20	0.42
1:AA:428:G:N9	1:AA:430:A:N7	2.67	0.42
26:DE:199:MET:CE	26:DE:200:LEU:CD2	2.97	0.42
1:CA:355:C:H4'	1:CA:388:G:O2'	2.20	0.42
22:DA:855:G:C2	44:DW:23:LYS:HG2	2.55	0.42
22:DA:1060:U:H4'	22:DA:1061:U:H2'	1.91	0.42
22:DA:1074:G:P	22:DA:1074:G:H8	2.42	0.42
22:DA:2837:A:O2'	22:DA:2838:G:O4'	2.29	0.42
35:DN:28:LEU:CD2	35:DN:115:LEU:HD21	2.14	0.42
1:CA:518:C:C6	1:CA:530:G:C5	3.08	0.42
1:CA:537:G:H2'	1:CA:538:G:C8	2.54	0.42
22:DA:301:G:C5	22:DA:302:C:N4	2.87	0.42
22:DA:85:G:C8	42:DU:6:ARG:NH1	2.85	0.42
22:DA:1362:C:N3	22:DA:1363:C:C5	2.88	0.42
22:DA:1809:A:C2	22:DA:1810:A:C6	3.06	0.42
1:CA:212:G:N2	1:CA:213:G:C8	2.88	0.42
34:DM:17:ASN:C	34:DM:18:ARG:HG2	2.39	0.42
1:AA:208:U:H3	1:AA:212:G:H21	1.64	0.42
4:CD:27:ILE:O	4:CD:28:ASP:CB	2.67	0.42
39:DR:9:GLY:C	39:DR:10:LYS:HG3	2.38	0.42
44:BW:18:LYS:HD2	44:BW:36:ILE:HD11	2.01	0.42
32:DK:34:GLY:O	32:DK:35:VAL:CG2	2.67	0.42
32:DK:62:VAL:HG12	32:DK:63:VAL:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1324:G:N2	22:DA:1328:A:N1	2.67	0.42
1:AA:251:G:C6	1:AA:266:G:O6	2.71	0.42
1:AA:1299:A:HO2'	1:AA:1301:U:H6	1.60	0.42
1:CA:645:G:C4	1:CA:646:G:C8	3.08	0.42
22:DA:478:A:N1	22:DA:480:A:C5	2.88	0.42
1:CA:962:C:O2'	1:CA:963:G:O5'	2.36	0.42
1:CA:982:U:C1'	1:CA:983:A:C8	2.98	0.42
7:CG:77:ARG:O	7:CG:84:TYR:HB3	2.19	0.42
33:DL:81:ASP:C	33:DL:82:LEU:HD12	2.40	0.42
1:AA:864:A:C2'	1:AA:865:A:C8	3.03	0.42
1:CA:900:A:H2'	1:CA:901:A:C8	2.55	0.42
11:AK:85:VAL:HG11	11:AK:92:ARG:NH1	2.34	0.42
22:DA:2453:A:O5'	22:DA:2453:A:H8	2.02	0.42
22:DA:2513:A:C4	22:DA:2514:U:C5	3.07	0.42
22:DA:2513:A:C5	22:DA:2514:U:C5	3.07	0.42
5:CE:80:LEU:HD21	5:CE:143:LEU:CD2	2.50	0.42
41:BT:54:GLU:CB	41:BT:88:LYS:HB2	2.49	0.42
37:DP:91:VAL:CG2	37:DP:109:ILE:HD13	2.50	0.42
1:CA:197:A:N6	1:CA:221:C:C4'	2.81	0.42
1:CA:69:G:N2	1:CA:71:A:N6	2.68	0.42
12:AL:24:GLU:O	12:AL:25:ALA:C	2.55	0.42
1:CA:251:G:C2	1:CA:266:G:C6	3.08	0.42
23:DB:20:G:C4	23:DB:64:G:N2	2.88	0.42
22:DA:1740:G:H2'	22:DA:1741:C:O4'	2.18	0.42
25:DD:94:GLN:O	25:DD:95:SER:C	2.57	0.42
22:DA:2093:G:N3	22:DA:2094:A:N7	2.68	0.42
32:DK:61:VAL:HG11	32:DK:112:PHE:CE2	2.54	0.42
32:DK:22:ILE:HG13	32:DK:40:LYS:O	2.19	0.42
1:CA:14:U:O2'	1:CA:15:G:H3'	2.19	0.42
22:DA:845:A:C2	22:DA:847:U:C2	3.07	0.42
22:DA:2462:C:H2'	22:DA:2463:C:C6	2.54	0.42
4:CD:77:GLU:HG3	4:CD:81:LEU:HD12	1.90	0.42
26:BE:137:LYS:O	26:BE:141:MET:HG3	2.19	0.42
22:DA:1867:G:C2	22:DA:1868:C:C2	3.07	0.42
22:DA:415:A:C2	22:DA:2409:G:C5	3.07	0.42
1:AA:1046:A:C2'	1:AA:1047:G:C5'	2.98	0.42
30:BI:49:GLU:HG2	30:BI:50:LYS:H	1.83	0.42
3:CC:183:TYR:CE1	3:CC:200:TRP:CE2	3.07	0.42
23:DB:7:G:H5'	36:DO:29:HIS:CE1	2.54	0.42
28:DG:157:LYS:C	28:DG:159:LYS:N	2.73	0.42
6:CF:11:HIS:CE1	6:CF:13:ASP:HB2	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:37:C:H2'	23:DB:38:C:C5'	2.49	0.42
27:DF:57:ALA:HA	27:DF:60:SER:HB3	2.01	0.42
3:CC:87:ARG:HG2	3:CC:100:ILE:HG21	2.01	0.42
7:AG:119:LEU:O	7:AG:122:GLU:N	2.50	0.42
22:DA:56:A:C6	22:DA:57:C:N3	2.88	0.42
22:BA:2770:G:H5''	22:BA:2771:C:OP2	2.20	0.42
22:BA:2531:A:H5'	28:BG:156:TYR:CZ	2.54	0.42
35:BN:10:LEU:HA	35:BN:10:LEU:HD12	1.75	0.42
1:CA:570:G:H2'	1:CA:571:U:C6	2.55	0.42
1:AA:198:G:C6	1:AA:220:G:N3	2.87	0.42
1:CA:223:A:C6	1:CA:224:U:C4	3.06	0.42
22:BA:2777:G:C8	22:BA:2777:G:O5'	2.73	0.42
22:DA:170:U:C5	22:DA:171:U:C5	3.07	0.42
22:DA:903:C:H2'	22:DA:904:G:C8	2.54	0.42
22:DA:2790:U:H4'	22:DA:2892:G:O2'	2.19	0.42
1:CA:164:G:C2'	1:CA:165:G:H5'	2.50	0.42
13:AM:9:PRO:O	13:AM:10:ASP:HB2	2.19	0.42
22:BA:915:C:H6	22:BA:915:C:C5'	2.24	0.42
1:AA:155:A:H2'	1:AA:156:C:H6	1.84	0.42
6:AF:8:PHE:CA	6:AF:87:SER:HB2	2.49	0.42
38:BQ:77:LYS:HE2	38:BQ:116:LEU:HD23	2.02	0.42
3:CC:11:LEU:C	3:CC:13:ILE:H	2.23	0.42
1:CA:922:G:H2'	1:CA:923:A:H8	1.79	0.42
22:DA:2636:C:H4'	25:DD:81:GLU:CD	2.38	0.42
1:AA:473:U:C2	1:AA:474:G:N7	2.87	0.42
22:BA:1693:U:O5'	22:BA:1694:C:H5	2.01	0.42
1:CA:953:G:C6	1:CA:954:G:C6	3.06	0.42
1:AA:69:G:H2'	1:AA:69:G:N3	2.35	0.42
1:AA:665:A:C2	1:AA:732:C:C4	3.07	0.42
1:AA:766:A:N3	1:AA:814:A:C2	2.87	0.42
19:CS:62:THR:CG2	19:CS:64:GLU:HG3	2.49	0.42
22:BA:2454:G:C5	22:BA:2455:G:C8	3.07	0.42
1:CA:1432:G:H2'	1:CA:1467:C:H42	1.84	0.42
1:CA:1483:A:O5'	1:CA:1483:A:H8	2.02	0.42
15:AO:68:TYR:CE2	15:AO:72:LYS:HG3	2.54	0.42
37:DP:113:LEU:CD2	37:DP:113:LEU:C	2.85	0.42
1:AA:39:G:N3	1:AA:40:C:C6	2.88	0.42
22:BA:2136:G:N3	22:BA:2137:U:C4	2.87	0.42
1:AA:688:G:C4	1:AA:700:G:N2	2.88	0.42
1:CA:696:A:H8	1:CA:696:A:O5'	2.02	0.42
39:BR:3:ALA:HB3	39:BR:59:ILE:HD11	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1136:C:O2	1:AA:1136:C:C3'	2.67	0.42
22:BA:792:A:H3'	22:BA:793:A:H5'	2.01	0.42
22:BA:569:U:H1'	22:BA:947:A:O4'	2.20	0.42
22:DA:2511:U:O5'	22:DA:2511:U:H6	2.02	0.42
22:BA:1848:A:H2'	22:BA:1849:G:C8	2.55	0.42
22:BA:1317:G:C2	22:BA:1336:A:C2	3.08	0.42
33:DL:76:GLU:O	33:DL:76:GLU:CG	2.67	0.42
5:AE:82:HIS:CE1	8:AH:95:MET:HE2	2.53	0.42
22:BA:2275:C:O2'	34:BM:84:LYS:HA	2.19	0.42
1:AA:1045:C:OP2	1:AA:1045:C:C6	2.72	0.42
31:BJ:49:ASP:OD2	31:BJ:49:ASP:O	2.37	0.42
1:CA:43:C:H3'	1:CA:43:C:C6	2.55	0.42
25:DD:130:GLN:O	25:DD:131:ASP:C	2.57	0.42
22:BA:736:C:N3	22:BA:737:C:C5	2.88	0.42
22:BA:164:C:H2'	22:BA:165:A:O4'	2.19	0.42
4:CD:94:GLU:OE1	4:CD:103:ARG:NE	2.51	0.42
36:DO:49:VAL:O	36:DO:50:ALA:HB2	2.19	0.42
1:AA:102:G:C2	1:AA:103:U:C5	3.06	0.42
1:AA:1421:G:C6	1:AA:1422:G:N7	2.88	0.42
4:CD:146:GLU:N	4:CD:146:GLU:CD	2.72	0.42
23:BB:57:A:O2'	23:BB:58:A:H5'	2.19	0.42
1:AA:1478:U:H2'	1:AA:1479:C:C6	2.54	0.42
42:DU:102:ILE:HD12	42:DU:102:ILE:HA	1.92	0.42
27:DF:160:LYS:H	27:DF:160:LYS:HG3	1.69	0.42
22:BA:295:G:C2	22:BA:296:U:C6	3.08	0.42
31:DJ:77:HIS:CD2	31:DJ:77:HIS:O	2.73	0.42
25:BD:178:VAL:O	25:BD:178:VAL:CG1	2.68	0.42
24:DC:19:VAL:HG12	24:DC:19:VAL:O	2.19	0.42
1:CA:1236:A:H2'	1:CA:1237:C:C6	2.55	0.42
9:AI:34:LEU:HD11	9:AI:47:VAL:HG21	2.01	0.42
22:BA:1097:U:O2	30:BI:8:VAL:HG12	2.19	0.42
5:AE:139:THR:O	5:AE:142:GLY:N	2.52	0.42
5:AE:95:MET:CE	5:AE:114:LEU:HD13	2.50	0.42
25:BD:150:GLN:HG3	25:BD:151:THR:N	2.22	0.42
4:CD:90:LEU:N	4:CD:90:LEU:HD22	2.34	0.42
22:DA:1340:U:O2'	22:DA:1341:G:P	2.78	0.42
22:DA:1346:G:H1	22:DA:1600:C:H42	1.66	0.42
1:AA:435:A:H2'	1:AA:436:C:H5'	2.01	0.42
44:DW:18:LYS:NZ	44:DW:18:LYS:HA	2.35	0.42
44:DW:20:LEU:CD1	44:DW:20:LEU:N	2.76	0.42
22:DA:728:G:O2'	22:DA:730:A:H8	2.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1077:A:C2'	22:DA:1078:U:O5'	2.66	0.42
30:DI:51:GLY:O	30:DI:52:LEU:HB2	2.19	0.42
48:D0:54:ILE:HB	48:D0:55:ALA:H	1.61	0.42
22:DA:1653:G:O6	35:DN:10:LEU:O	2.38	0.42
35:DN:99:LYS:HG2	35:DN:99:LYS:H	1.65	0.42
1:AA:1129:C:H2'	1:AA:1139:G:N7	2.35	0.42
22:DA:52:A:C2	22:DA:179:C:O4'	2.65	0.42
1:CA:1072:G:C6	1:CA:1073:U:C4	3.07	0.42
45:DX:58:ILE:HG12	45:DX:66:VAL:CG2	2.46	0.42
12:AL:42:LYS:HE2	12:AL:43:LYS:HE3	2.02	0.42
44:BW:39:GLN:HE21	44:BW:42:THR:CG2	2.31	0.42
43:DV:21:ARG:HD3	43:DV:87:GLN:HG2	2.00	0.42
22:DA:529:A:C8	22:DA:2042:A:N1	2.88	0.42
29:BH:4:ILE:HG12	29:BH:18:GLN:HE22	1.82	0.42
22:DA:1615:C:C6	22:DA:1617:C:C5	3.08	0.42
8:CH:75:GLN:O	8:CH:126:CYS:HB2	2.19	0.42
22:DA:2503:A:C4'	22:DA:2504:U:OP1	2.60	0.42
1:CA:983:A:HO2'	1:CA:984:C:H5'	1.82	0.42
14:CN:30:ILE:O	14:CN:30:ILE:HG22	2.19	0.42
19:CS:35:ARG:HB3	19:CS:50:VAL:HB	2.01	0.42
19:CS:52:ASN:O	19:CS:54:ARG:HD3	2.19	0.42
22:BA:2430:A:C3'	22:BA:2431:U:C5'	2.97	0.42
51:D3:18:LYS:CE	51:D3:19:GLY:H	2.32	0.42
22:DA:387:U:C4'	22:DA:388:G:H5"	2.50	0.42
31:DJ:80:HIS:N	31:DJ:80:HIS:ND1	2.67	0.42
11:AK:124:LYS:HE2	11:AK:125:LYS:N	2.34	0.42
28:BG:73:SER:HA	28:BG:76:ILE:HG23	2.00	0.42
36:BO:88:LYS:HE3	36:BO:116:GLN:NE2	2.34	0.42
1:CA:82:G:C2'	1:CA:83:C:H4'	2.44	0.42
12:AL:80:LEU:HB2	12:AL:101:LEU:HD22	2.01	0.42
22:DA:1157:G:H2'	22:DA:1158:C:H6	1.79	0.42
32:BK:43:ILE:HD12	32:BK:52:VAL:HG23	2.01	0.42
1:CA:1250:A:N6	1:CA:1251:A:C6	2.87	0.42
1:CA:1352:C:O2	1:CA:1371:G:C2	2.72	0.42
7:CG:4:ARG:CD	7:CG:5:VAL:N	2.79	0.42
9:CI:59:LYS:HE3	9:CI:60:LEU:HD11	2.01	0.42
1:AA:1049:U:O4	14:AN:1:ALA:HB1	2.19	0.42
14:AN:1:ALA:O	14:AN:2:LYS:CB	2.67	0.42
14:AN:80:ARG:NH1	14:AN:81:ILE:HG12	2.35	0.42
7:CG:72:VAL:HG12	7:CG:144:ALA:CB	2.50	0.42
22:DA:960:A:H2'	22:DA:962:G:C5'	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:931:U:H4'	22:DA:932:U:OP1	2.17	0.42
23:DB:85:G:O2'	23:DB:86:G:H5'	2.18	0.42
1:AA:1154:G:C2	1:AA:1155:A:C8	3.07	0.42
29:BH:2:GLN:O	29:BH:3:VAL:CG2	2.54	0.42
4:CD:69:ARG:HG3	4:CD:69:ARG:NH1	2.13	0.42
27:BF:72:SER:N	27:BF:80:GLN:HB2	2.32	0.42
22:DA:227:A:O2'	22:DA:228:C:C5'	2.68	0.42
22:DA:2410:G:C2	22:DA:2411:A:H1'	2.54	0.42
1:AA:993:G:N2	1:AA:996:A:N6	2.67	0.42
25:BD:62:LYS:CB	25:BD:63:PRO:HD3	2.45	0.42
3:CC:137:VAL:HG13	3:CC:148:ILE:HG21	2.01	0.42
37:BP:95:LYS:CG	37:BP:97:TYR:CZ	2.96	0.42
11:CK:74:LYS:HD2	11:CK:104:PHE:CE1	2.55	0.42
35:DN:83:LEU:HG	35:DN:86:ARG:HH21	1.84	0.42
22:DA:1753:G:C2	22:DA:1756:G:C2	3.08	0.42
1:AA:640:A:O2'	8:AH:106:SER:HB2	2.20	0.42
29:DH:37:VAL:CG2	29:DH:38:PRO:CD	2.96	0.42
24:BC:28:PRO:HB2	24:BC:29:PHE:H	1.56	0.42
22:BA:271:G:C4	22:BA:272:A:N7	2.88	0.42
13:AM:19:THR:CA	13:AM:24:VAL:HG23	2.39	0.42
1:AA:110:C:O2'	1:AA:111:G:C5'	2.68	0.42
12:AL:72:ASN:O	12:AL:73:LEU:O	2.38	0.42
12:AL:73:LEU:HD11	12:AL:79:ILE:CG2	2.49	0.42
9:AI:62:LEU:N	9:AI:62:LEU:CD2	2.83	0.42
22:DA:1950:G:H1	22:DA:1954:G:H2'	1.84	0.42
11:AK:61:ALA:O	11:AK:64:VAL:HG13	2.19	0.42
22:DA:2143:C:H5''	22:DA:2144:G:N7	2.34	0.42
22:DA:2149:U:C5	22:DA:2150:C:H5	2.38	0.42
36:DO:82:ALA:HB3	36:DO:115:LEU:HD12	2.01	0.42
1:CA:1461:G:C5	1:CA:1462:C:C4	3.07	0.42
13:CM:53:ASP:HA	13:CM:56:ARG:CZ	2.49	0.42
15:AO:55:LEU:HD21	22:BA:715:A:C2	2.54	0.42
15:AO:20:ASP:CG	15:AO:23:SER:HB2	2.40	0.42
22:DA:285:G:C6	22:DA:286:U:C4	3.06	0.42
1:CA:635:A:H2'	1:CA:636:U:C6	2.54	0.42
22:BA:2087:G:H2'	22:BA:2088:A:C8	2.54	0.42
2:AB:20:ARG:O	2:AB:22:TRP:N	2.52	0.42
36:BO:43:ASN:ND2	36:BO:46:GLU:HG2	2.27	0.42
1:AA:748:G:C6	1:AA:749:A:C5	3.07	0.42
1:CA:854:U:H2'	1:CA:855:U:H6	1.85	0.42
22:DA:2889:C:C4	22:DA:2890:G:C6	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:3:TYR:CZ	4:CD:5:GLY:HA3	2.55	0.42
1:AA:1492:A:C2'	1:AA:1493:A:O5'	2.67	0.42
1:AA:1103:C:H2'	1:AA:1104:G:O5'	2.18	0.42
35:DN:65:LEU:H	35:DN:65:LEU:CD1	2.30	0.42
22:BA:1996:C:OP1	32:BK:31:ARG:NH2	2.51	0.42
26:BE:12:LEU:O	26:BE:13:THR:CB	2.65	0.42
38:BQ:27:ARG:CG	38:BQ:27:ARG:NH1	2.83	0.42
8:CH:34:ALA:O	8:CH:38:VAL:HG23	2.19	0.42
22:BA:1402:U:C6	22:BA:1402:U:H3'	2.55	0.42
1:AA:702:A:C4	22:BA:1847:A:C2	3.06	0.42
48:D0:11:LYS:HD2	48:D0:14:MET:HB2	2.01	0.42
20:CT:57:VAL:CG1	20:CT:71:ALA:HB2	2.47	0.42
3:CC:4:VAL:HG11	3:CC:9:ILE:HD13	2.02	0.42
31:BJ:7:LYS:HA	31:BJ:8:PRO:HD3	1.86	0.42
43:BV:35:GLU:HG3	43:BV:93:ARG:HD3	2.00	0.42
22:DA:540:C:H2'	22:DA:541:A:C8	2.55	0.42
25:BD:9:VAL:HG22	25:BD:26:VAL:HG12	2.01	0.42
2:AB:60:ALA:HB2	2:AB:220:VAL:HG12	2.01	0.42
15:AO:44:GLU:OE2	15:AO:45:HIS:CE1	2.72	0.42
1:CA:414:A:HO2'	1:CA:415:A:C4'	2.32	0.42
22:BA:423:A:H5''	22:BA:424:G:C5'	2.50	0.42
22:BA:1610:A:H5'	22:BA:1610:A:H8	1.84	0.42
24:DC:38:LYS:HE3	24:DC:38:LYS:HB3	1.82	0.42
22:DA:2526:G:O2'	52:D4:34:LYS:HE3	2.19	0.42
22:BA:2262:U:H5'	22:BA:2387:U:O2	2.19	0.42
22:BA:1744:A:H2'	22:BA:1744:A:N3	2.34	0.42
47:BZ:29:ARG:O	47:BZ:30:ARG:HG3	2.19	0.42
15:AO:57:ARG:CB	15:AO:57:ARG:HH11	2.32	0.42
22:BA:920:A:OP1	47:BZ:18:LYS:HE3	2.19	0.42
2:AB:172:ILE:O	2:AB:175:ALA:N	2.53	0.42
12:CL:120:ARG:HG2	12:CL:121:PRO:O	2.19	0.42
26:BE:134:LEU:HD12	26:BE:138:LEU:HG	2.02	0.42
22:DA:1895:C:C2	22:DA:1896:G:C8	3.06	0.42
22:DA:1889:A:C2	22:DA:1890:A:C4	3.07	0.42
22:BA:828:U:O4	22:BA:2247:A:H1'	2.19	0.42
26:DE:180:LEU:HD23	26:DE:180:LEU:N	2.34	0.42
22:DA:601:C:H6	22:DA:601:C:O5'	2.03	0.42
36:DO:54:VAL:HG22	36:DO:54:VAL:O	2.19	0.42
1:CA:657:U:H6	1:CA:657:U:O5'	2.03	0.42
22:DA:1460:U:OP2	22:DA:1460:U:C6	2.72	0.42
25:BD:15:PHE:N	37:BP:11:GLN:NE2	2.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1074:G:O2'	22:BA:1075:C:H5'	2.19	0.42
5:AE:114:LEU:HD21	5:AE:122:VAL:HG23	1.96	0.42
5:AE:93:VAL:HG13	5:AE:94:PHE:N	2.35	0.42
22:BA:571:U:C4	22:BA:2030:A:C6	3.07	0.42
22:BA:2032:G:N7	56:BA:3536:HOH:O	2.37	0.42
22:BA:568:U:P	33:BL:36:LYS:HE3	2.60	0.42
22:DA:1800:C:H5''	24:DC:145:MET:CE	2.49	0.42
24:DC:250:GLN:HB2	24:DC:254:LYS:CG	2.50	0.42
28:BG:171:LYS:CD	28:BG:172:GLU:H	2.32	0.42
1:CA:1151:A:H2'	1:CA:1152:A:C8	2.50	0.42
1:CA:1255:G:H21	1:CA:1258:G:H22	1.67	0.42
22:DA:2282:G:H1'	22:DA:2390:U:C5	2.55	0.42
22:DA:2285:C:H2'	22:DA:2286:G:H5''	2.01	0.42
1:AA:1119:C:OP1	9:AI:84:ARG:NH2	2.53	0.42
22:DA:296:U:H2'	22:DA:297:G:C8	2.55	0.42
22:DA:64:A:H2'	22:DA:65:U:O4'	2.19	0.42
26:DE:127:GLU:OE2	26:DE:133:LEU:CD2	2.67	0.42
22:DA:61:C:H5'	46:DY:43:LEU:HB2	2.01	0.42
22:DA:1809:A:N3	22:DA:1810:A:N7	2.68	0.42
26:DE:47:LYS:O	26:DE:86:ALA:HB2	2.19	0.42
22:DA:2745:C:H41	22:DA:2755:C:H4'	1.85	0.42
1:CA:1084:G:C6	1:CA:1085:U:C4	3.07	0.42
22:DA:136:G:N2	22:DA:144:A:C2	2.88	0.42
13:AM:90:HIS:HA	13:AM:108:ARG:NH2	2.34	0.42
31:DJ:41:LYS:HE3	31:DJ:50:THR:O	2.19	0.42
22:DA:1540:G:O2'	22:DA:1541:C:O5'	2.37	0.42
1:AA:397:A:C6	1:AA:548:G:N7	2.88	0.42
28:BG:93:TYR:O	28:BG:105:SER:O	2.37	0.42
10:AJ:35:GLN:HA	10:AJ:35:GLN:NE2	2.31	0.42
1:CA:671:G:C2	1:CA:672:U:C2	3.08	0.42
37:DP:20:ARG:HG2	37:DP:112:ARG:HH12	1.84	0.42
22:DA:202:U:H3'	22:DA:203:A:C8	2.54	0.42
22:DA:204:A:H4'	22:DA:205:G:O5'	2.19	0.42
22:DA:800:A:C4'	22:DA:801:G:O5'	2.64	0.42
32:DK:71:ARG:O	32:DK:72:PRO:C	2.57	0.42
22:DA:2376:A:N3	36:DO:99:TYR:CE2	2.88	0.42
8:CH:124:ILE:CG2	8:CH:127:TYR:HE1	2.31	0.42
8:CH:127:TYR:N	8:CH:127:TYR:CD1	2.87	0.42
22:DA:479:A:H1'	22:DA:480:A:H5''	2.02	0.42
38:DQ:6:GLY:N	38:DQ:9:ALA:HB3	2.33	0.42
12:AL:49:ARG:CG	12:AL:89:LEU:HD21	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:952:U:C5	13:CM:102:LYS:NZ	2.87	0.42
1:CA:959:A:H2'	1:CA:960:U:O5'	2.19	0.42
1:AA:1080:A:O3'	5:AE:20:VAL:HG21	2.20	0.42
22:BA:1868:C:H2'	22:BA:1869:G:O4'	2.19	0.42
22:BA:1827:U:O2'	22:BA:1828:G:H5'	2.20	0.42
47:DZ:6:ILE:HG22	47:DZ:7:THR:N	2.34	0.42
22:DA:1025:G:H1'	22:DA:1135:C:O4'	2.19	0.42
31:DJ:30:THR:HG23	31:DJ:31:GLU:N	2.33	0.42
1:AA:846:G:O2'	1:AA:847:G:H5'	2.20	0.42
22:DA:2291:U:C2	22:DA:2292:U:C5	3.08	0.42
5:CE:133:ILE:HG13	5:CE:134:ASN:N	2.30	0.42
22:DA:1661:G:C6	22:DA:1662:U:C5	3.07	0.42
27:DF:111:ARG:HE	27:DF:111:ARG:N	2.18	0.42
27:DF:47:LYS:HD2	27:DF:47:LYS:N	2.34	0.42
1:CA:1201:A:H4'	1:CA:1203:C:OP2	2.19	0.42
1:CA:72:A:N6	1:CA:73:C:N4	2.68	0.42
12:AL:24:GLU:CB	12:AL:26:CYS:SG	2.90	0.42
23:DB:109:A:O2'	23:DB:110:C:C5'	2.68	0.42
23:DB:11:C:C4	23:DB:12:C:C5	3.07	0.42
23:DB:17:C:O2'	23:DB:18:G:H8	2.00	0.42
22:DA:1738:G:O2'	22:DA:1739:A:P	2.77	0.42
27:BF:136:ILE:HG12	27:BF:136:ILE:H	1.34	0.42
22:DA:1442:U:C4	22:DA:1443:U:C4	3.07	0.42
1:AA:958:A:N1	19:AS:53:GLY:HA3	2.35	0.42
22:DA:618:G:C2	22:DA:619:G:C4	3.08	0.42
22:DA:2308:G:H2'	22:DA:2309:A:OP1	2.19	0.42
22:DA:962:G:O2'	22:DA:963:U:C5'	2.68	0.42
43:DV:56:PHE:CD1	43:DV:56:PHE:C	2.93	0.42
34:BM:124:LEU:HA	34:BM:124:LEU:HD23	1.82	0.42
29:DH:68:ARG:HD3	29:DH:71:LYS:CB	2.49	0.42
22:BA:2821:A:H2'	22:BA:2822:G:H8	1.84	0.42
22:BA:1141:U:H5'	22:BA:1142:A:O4'	2.19	0.42
4:CD:176:LYS:CD	4:CD:176:LYS:O	2.68	0.42
1:CA:326:G:H5'	1:CA:327:A:OP2	2.20	0.42
22:DA:2653:U:C4	22:DA:2654:A:N6	2.87	0.42
28:DG:157:LYS:HB2	28:DG:157:LYS:HE2	1.90	0.42
1:AA:595:A:C6	1:AA:641:U:C5	3.08	0.42
22:DA:674:G:H2'	22:DA:804:A:H61	1.85	0.42
22:BA:1431:A:C2'	22:BA:1432:G:O5'	2.67	0.42
22:BA:1507:C:C5	22:BA:1508:A:H2	2.38	0.42
22:BA:2103:C:C2'	22:BA:2104:C:C5'	2.96	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DW:9:THR:CG2	44:DW:10:ARG:HG3	2.40	0.42
4:CD:141:VAL:HG22	4:CD:180:THR:OG1	2.19	0.42
38:DQ:42:GLY:HA3	39:DR:75:VAL:HG21	2.01	0.42
1:AA:1052:U:H5''	1:AA:1053:G:OP2	2.19	0.42
1:AA:1054:C:H5''	1:AA:1196:A:O2'	2.19	0.42
22:DA:1824:G:OP1	24:DC:52:HIS:CE1	2.73	0.42
11:AK:98:ALA:O	11:AK:102:ALA:HB2	2.20	0.42
22:BA:1753:G:H5''	37:BP:92:ARG:HE	1.84	0.42
31:DJ:129:GLU:OE1	31:DJ:129:GLU:N	2.53	0.42
7:AG:25:PHE:HD1	7:AG:100:MET:HB3	1.85	0.42
22:DA:1974:C:H2'	22:DA:1975:G:C8	2.52	0.42
47:BZ:2:LYS:O	47:BZ:3:THR:CG2	2.67	0.42
11:AK:91:GLY:O	11:AK:95:THR:HB	2.19	0.42
6:AF:8:PHE:HD2	6:AF:8:PHE:H	1.66	0.42
22:BA:2471:A:C2'	22:BA:2472:G:H5'	2.48	0.42
22:BA:2212:A:H4'	22:BA:2213:U:OP1	2.20	0.42
8:CH:100:ILE:CD1	8:CH:100:ILE:C	2.76	0.42
22:BA:2415:G:C4	22:BA:2416:C:C5	3.08	0.42
42:BU:73:ASN:ND2	42:BU:75:ALA:HB3	2.34	0.42
22:DA:2828:G:O2'	22:DA:2829:A:H5'	2.19	0.42
7:CG:16:LYS:HG2	9:CI:45:MET:SD	2.59	0.42
15:CO:35:ILE:HG23	15:CO:55:LEU:HD11	2.01	0.42
10:AJ:28:THR:O	10:AJ:32:THR:HG22	2.20	0.42
10:AJ:33:GLY:HA3	10:AJ:83:THR:OG1	2.18	0.42
1:AA:279:A:H5''	1:AA:281:G:C4'	2.50	0.42
1:AA:120:A:C6	1:AA:122:G:C6	3.07	0.42
13:CM:84:CYS:HB2	19:CS:73:PHE:CE1	2.55	0.42
22:BA:1373:A:O5'	22:BA:1373:A:H8	2.03	0.42
22:BA:1374:G:O2'	22:BA:1375:U:H5'	2.19	0.42
22:DA:2048:G:C6	22:DA:2049:G:C5	3.08	0.42
22:DA:2187:U:N3	22:DA:2188:U:C5	2.88	0.42
22:DA:372:G:P	45:DX:61:LYS:HZ1	2.42	0.42
22:BA:1539:U:H2'	22:BA:1540:G:C8	2.47	0.42
4:CD:118:SER:O	4:CD:130:ASN:HB2	2.20	0.42
22:DA:755:U:O2'	22:DA:756:A:H5'	2.20	0.42
22:BA:916:G:H8	22:BA:916:G:O5'	2.02	0.42
22:BA:1091:G:O2'	22:BA:1092:C:C5'	2.68	0.42
22:DA:1423:G:H8	22:DA:1423:G:O5'	2.01	0.42
1:CA:552:U:H2'	1:CA:553:A:C8	2.52	0.42
6:CF:81:ASN:O	6:CF:82:ASP:C	2.58	0.42
28:BG:54:ARG:HG3	28:BG:57:TYR:HD1	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:5:LEU:CD1	26:DE:10:SER:HB2	2.50	0.42
22:BA:1922:G:H2'	22:BA:1923:U:O4'	2.19	0.42
24:DC:124:LYS:HZ3	24:DC:124:LYS:HB3	1.85	0.42
24:BC:216:ARG:CB	24:BC:217:PRO:HD2	2.49	0.42
1:AA:1416:G:C2	1:AA:1485:U:O2	2.73	0.42
22:DA:1411:U:H2'	22:DA:1412:U:C6	2.54	0.42
20:CT:16:ALA:O	20:CT:20:ASN:ND2	2.53	0.42
22:DA:2157:G:OP2	22:DA:2157:G:N2	2.52	0.42
16:CP:8:ARG:HB3	16:CP:28:ARG:NH1	2.34	0.42
22:BA:2832:U:O2'	22:BA:2833:U:P	2.77	0.42
37:BP:57:ALA:HA	37:BP:75:THR:CG2	2.50	0.42
31:BJ:110:PRO:C	31:BJ:111:LYS:HD2	2.40	0.42
8:AH:65:PHE:O	8:AH:66:GLN:O	2.37	0.42
22:BA:2569:G:C2	22:BA:2570:G:C8	3.08	0.42
22:DA:1312:U:N3	22:DA:1603:A:C5	2.87	0.42
22:DA:1386:C:HO2'	22:DA:1387:A:H8	1.64	0.42
22:DA:2264:C:C2	22:DA:2277:G:N2	2.88	0.42
22:DA:2330:G:H2'	22:DA:2331:G:C5'	2.49	0.42
22:DA:704:G:C2'	22:DA:726:G:N2	2.73	0.42
24:DC:6:LYS:HA	24:DC:7:PRO:HD3	1.89	0.42
22:DA:1080:A:C2	22:DA:1081:U:N3	2.88	0.42
22:DA:301:G:N3	22:DA:302:C:C4	2.87	0.42
46:DY:28:LEU:HD23	46:DY:42:LEU:CD1	2.49	0.42
22:DA:1351:C:H2'	22:DA:1352:U:O4'	2.19	0.42
22:DA:1361:G:H2'	22:DA:1362:C:O5'	2.19	0.42
22:DA:33:C:H4'	22:DA:34:U:OP1	2.19	0.42
26:DE:55:SER:OG	26:DE:56:GLY:N	2.53	0.42
4:CD:2:ARG:NE	4:CD:114:ARG:HG2	2.34	0.42
22:DA:998:C:OP2	38:DQ:57:ARG:NH2	2.52	0.42
39:DR:51:VAL:HB	39:DR:52:PRO:CD	2.50	0.42
22:DA:1535:A:C5'	22:DA:1536:C:OP2	2.68	0.42
22:DA:2039:U:H2'	22:DA:2040:G:C8	2.54	0.42
29:BH:32:PRO:HB3	45:BX:38:TRP:CG	2.55	0.42
22:DA:2392:A:H2	33:DL:55:MET:HG2	1.78	0.42
22:DA:1290:C:C2	22:DA:1291:C:C6	3.08	0.42
8:CH:6:ILE:HG21	8:CH:76:ARG:CZ	2.49	0.42
22:DA:2504:U:C6	22:DA:2504:U:C3'	3.02	0.42
22:DA:478:A:C2	22:DA:480:A:N9	2.88	0.42
1:AA:523:A:C2	1:AA:527:G:C6	3.07	0.42
22:BA:1170:C:N4	22:BA:1180:U:C2	2.87	0.42
1:CA:951:G:H1'	1:CA:970:C:O2'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:994:A:O2'	1:CA:995:C:C5'	2.68	0.42
4:AD:89:LEU:CD2	4:AD:199:ILE:CD1	2.92	0.42
11:AK:92:ARG:O	11:AK:92:ARG:HG2	2.20	0.42
1:AA:1141:C:C2	1:AA:1142:G:N7	2.88	0.42
22:DA:1020:A:H5''	22:DA:1021:A:OP1	2.19	0.42
22:DA:1139:G:C2'	22:DA:1140:C:C5'	2.98	0.42
56:AA:1813:HOH:O	11:AK:125:LYS:HE2	2.20	0.42
33:DL:96:LYS:O	33:DL:98:ALA:N	2.53	0.42
33:DL:96:LYS:C	33:DL:98:ALA:N	2.73	0.42
16:CP:60:TRP:O	16:CP:61:VAL:C	2.56	0.42
22:DA:2589:A:C2	22:DA:2590:A:C5	3.08	0.42
9:CI:25:GLY:C	9:CI:62:LEU:HD23	2.39	0.42
22:BA:141:G:H5''	22:BA:142:A:C8	2.55	0.42
29:BH:132:PHE:CD2	29:BH:133:GLN:N	2.87	0.42
27:DF:110:ILE:CD1	27:DF:110:ILE:H	2.29	0.42
27:DF:42:ALA:HA	27:DF:48:LEU:HD21	2.01	0.42
31:BJ:17:VAL:HG13	31:BJ:55:ILE:CG1	2.50	0.42
1:CA:1203:C:O2	1:CA:1203:C:H2'	2.20	0.42
27:BF:4:HIS:CD2	27:BF:96:TRP:NE1	2.88	0.42
24:DC:183:VAL:CG1	24:DC:185:ALA:H	2.32	0.42
22:DA:1734:G:C2'	22:DA:1735:A:C8	2.98	0.42
22:DA:1654:A:O2'	22:DA:1655:A:C8	2.48	0.42
22:DA:1438:U:N3	22:DA:1555:G:N1	2.68	0.42
32:DK:87:LEU:HA	32:DK:95:ILE:H	1.85	0.42
1:CA:1287:A:C2	1:CA:1288:A:C2	3.07	0.42
22:BA:1327:A:C8	22:BA:1327:A:H3'	2.55	0.42
22:DA:2307:G:C8	22:DA:2312:U:C5	3.08	0.42
22:DA:2805:C:H2'	22:DA:2806:C:C6	2.51	0.42
1:CA:866:C:C5	1:CA:867:G:H1'	2.54	0.42
1:CA:1517:G:H1'	22:DA:1919:A:O3'	2.20	0.42
35:BN:28:LEU:O	35:BN:32:GLU:N	2.47	0.42
6:AF:85:ILE:O	6:AF:86:ARG:C	2.58	0.42
1:AA:626:G:H2'	1:AA:627:G:O4'	2.20	0.42
26:DE:119:ILE:CG1	26:DE:119:ILE:O	2.67	0.42
28:DG:104:LEU:HB3	28:DG:106:LEU:CD2	2.42	0.42
1:CA:562:U:H1'	12:CL:11:ARG:HD2	2.01	0.42
22:DA:793:A:H8	22:DA:793:A:OP2	2.02	0.42
6:CF:56:LYS:O	6:CF:57:ALA:HB2	2.19	0.42
23:DB:45:A:HO2'	23:DB:46:A:H8	1.59	0.42
22:DA:2849:U:OP2	37:DP:92:ARG:HG3	2.18	0.42
1:AA:366:A:H4'	1:AA:367:U:OP1	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1747:U:HO2'	22:BA:1748:C:H5'	1.80	0.42
1:CA:1393:U:O2'	1:CA:1394:A:H3'	2.19	0.42
22:BA:782:A:N1	24:BC:224:MET:CE	2.83	0.42
12:AL:98:ARG:HD2	12:AL:103:CYS:SG	2.59	0.42
22:DA:668:A:N7	22:DA:670:A:C8	2.87	0.42
22:DA:370:G:H8	22:DA:370:G:O5'	2.03	0.42
1:AA:1002:G:N3	1:AA:1003:G:HI'	2.34	0.42
46:BY:17:GLU:HG3	46:BY:18:LEU:H	1.78	0.42
22:BA:372:G:N2	22:BA:400:G:H2'	2.35	0.42
1:CA:444:G:N2	1:CA:445:G:C4	2.88	0.42
24:BC:133:ASN:C	24:BC:134:ILE:HG13	2.40	0.42
22:DA:1833:C:N4	22:DA:1834:U:C4	2.87	0.42
22:BA:532:A:C8	22:BA:2021:C:C6	3.07	0.42
4:CD:156:ALA:O	4:CD:159:GLU:OE2	2.37	0.42
1:AA:828:U:C6	1:AA:828:U:C3'	3.03	0.42
48:B0:42:ILE:HD12	48:B0:48:TYR:HB2	2.00	0.42
26:DE:146:VAL:CG1	26:DE:167:VAL:HG23	2.45	0.42
1:CA:1104:G:C4	1:CA:1105:A:C8	3.07	0.42
15:CO:52:ARG:HH11	22:DA:715:A:H61	1.68	0.42
22:BA:90:U:C4	22:BA:91:A:C5	3.07	0.42
22:BA:1858:A:C2'	22:BA:1859:U:C6	3.02	0.42
30:DI:27:LEU:HD13	30:DI:32:VAL:HG21	2.00	0.42
1:CA:554:A:H2'	1:CA:555:U:C6	2.54	0.42
22:BA:851:C:H2'	22:BA:852:U:O5'	2.19	0.42
1:CA:292:G:N2	1:CA:308:C:O2	2.38	0.42
26:DE:52:VAL:O	26:DE:74:LYS:CE	2.68	0.42
46:BY:2:LYS:HE3	46:BY:52:ARG:CZ	2.49	0.42
33:DL:14:LYS:NZ	33:DL:14:LYS:HB3	2.35	0.42
49:B1:16:THR:CB	49:B1:41:VAL:HG21	2.49	0.42
22:DA:1511:G:O2'	22:DA:1512:C:P	2.78	0.42
1:AA:419:C:C2'	1:AA:420:U:H5'	2.49	0.42
37:DP:97:TYR:O	37:DP:100:ARG:HG3	2.20	0.42
39:DR:19:THR:CG2	39:DR:20:VAL:N	2.79	0.42
3:AC:125:ARG:O	3:AC:126:ARG:HB2	2.20	0.42
22:BA:2599:G:H2'	22:BA:2600:A:H5'	2.00	0.42
22:DA:1768:C:C2	22:DA:1769:U:C6	3.07	0.42
15:CO:83:ARG:CG	15:CO:83:ARG:O	2.66	0.42
22:BA:319:G:N9	22:BA:333:G:N2	2.67	0.42
43:DV:50:MET:HB3	43:DV:50:MET:HE3	1.85	0.42
1:CA:688:G:C6	1:CA:700:G:C6	3.07	0.42
28:BG:123:GLU:CD	28:BG:124:CYS:H	2.22	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:691:C:H2'	22:BA:692:C:H6	1.85	0.42
1:CA:833:G:C6	1:CA:834:U:C4	3.08	0.42
1:CA:1478:U:H2'	1:CA:1479:C:C6	2.55	0.42
22:DA:2065:C:O2'	22:DA:2449:U:N3	2.52	0.42
1:AA:577:G:C4'	1:AA:816:A:H2'	2.49	0.42
25:BD:85:ALA:O	25:BD:86:GLU:HG2	2.19	0.42
22:DA:2692:G:H2'	22:DA:2693:G:C8	2.55	0.42
24:BC:116:GLN:O	24:BC:127:ASN:HB3	2.19	0.42
22:BA:259:G:C2'	22:BA:260:G:H5'	2.49	0.42
34:BM:96:ILE:HD11	34:BM:126:ILE:CD1	2.49	0.42
22:DA:2564:A:OP1	22:DA:2648:G:H4'	2.19	0.42
1:CA:1426:G:H2'	1:CA:1427:C:O4'	2.19	0.42
23:DB:81:G:C6	23:DB:82:U:C4	3.08	0.42
1:CA:805:C:H2'	1:CA:806:C:C6	2.54	0.42
22:BA:2716:C:O2'	22:BA:2717:C:H5'	2.20	0.42
22:BA:1824:G:C5	22:BA:1825:U:C5	3.08	0.42
1:AA:832:G:N2	1:AA:833:G:H1'	2.35	0.42
1:AA:1477:U:H2'	1:AA:1478:U:C6	2.55	0.42
2:CB:187:ASP:C	2:CB:189:ASN:H	2.22	0.42
22:DA:1117:C:O5'	22:DA:1117:C:H6	2.03	0.42
22:DA:1860:G:H2'	22:DA:1861:G:O4'	2.20	0.42
37:BP:53:GLY:C	37:BP:55:HIS:N	2.71	0.42
1:CA:239:U:C6	1:CA:239:U:C5'	2.92	0.42
38:BQ:52:ARG:HH11	38:BQ:52:ARG:HD2	1.62	0.42
22:BA:1074:G:N3	22:BA:1075:C:C6	2.88	0.42
12:CL:42:LYS:CG	12:CL:43:LYS:H	2.16	0.42
5:AE:113:VAL:HG13	5:AE:114:LEU:H	1.85	0.42
22:BA:587:C:C6	22:BA:671:C:H1'	2.54	0.42
33:BL:127:VAL:HG22	33:BL:128:THR:O	2.20	0.42
24:DC:156:SER:O	24:DC:194:VAL:HG11	2.20	0.42
1:CA:1134:G:C2	1:CA:1141:C:N3	2.88	0.42
22:DA:1605:C:H5'	22:DA:1610:A:N6	2.35	0.42
41:DT:22:THR:O	41:DT:23:ALA:C	2.58	0.42
16:CP:5:ARG:O	16:CP:19:VAL:HA	2.20	0.42
22:DA:2265:U:C4	22:DA:2266:A:C6	3.08	0.42
22:DA:2345:G:C8	22:DA:2381:A:C2	3.08	0.42
22:DA:856:G:C2	22:DA:922:C:C2	3.08	0.42
2:AB:44:LYS:O	2:AB:48:MET:HB2	2.18	0.42
22:DA:1064:C:C6	22:DA:1065:U:C5	3.08	0.42
22:DA:1098:A:O2'	30:DI:6:ALA:HB1	2.20	0.42
35:DN:9:GLN:HG2	35:DN:10:LEU:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:41:PRO:HD3	12:CL:49:ARG:HD3	2.02	0.42
12:CL:98:ARG:NH2	12:CL:106:VAL:HG22	2.34	0.42
22:DA:1210:G:H5''	22:DA:1211:C:C3'	2.40	0.42
22:DA:291:G:C2	22:DA:350:G:C5	3.07	0.42
22:DA:82:U:C2'	22:DA:83:A:C5'	2.87	0.42
22:DA:76:C:P	46:DY:48:ARG:HG2	2.60	0.42
22:DA:1807:G:C4	22:DA:1809:A:OP2	2.72	0.42
45:DX:10:ARG:HB3	45:DX:11:PRO:CD	2.47	0.42
45:DX:32:LEU:N	45:DX:32:LEU:CD2	2.81	0.42
1:CA:1084:G:C5	1:CA:1085:U:C5	3.07	0.42
1:AA:204:G:N2	1:AA:465:A:C8	2.88	0.42
1:CA:404:G:P	4:CD:2:ARG:NH1	2.93	0.42
45:DX:57:VAL:C	45:DX:59:ASP:N	2.73	0.42
21:CU:36:PHE:CB	21:CU:40:PRO:HD3	2.47	0.42
22:DA:1534:U:H1'	22:DA:1538:G:N2	2.34	0.42
44:BW:22:VAL:O	44:BW:23:LYS:C	2.57	0.42
45:BX:40:GLU:HG3	45:BX:43:LYS:HZ2	1.83	0.42
22:DA:2350:C:H2'	22:DA:2351:G:C5'	2.50	0.42
22:DA:2377:A:N6	22:DA:2378:A:N6	2.68	0.42
17:AQ:46:HIS:HB3	17:AQ:73:THR:HA	2.02	0.42
1:AA:1303:C:O2'	1:AA:1304:G:H8	2.01	0.42
12:AL:41:PRO:HA	12:AL:88:ASP:O	2.19	0.42
35:BN:76:VAL:O	35:BN:79:LEU:O	2.38	0.42
38:BQ:4:LYS:O	38:BQ:5:ARG:HB3	2.20	0.42
1:CA:1342:C:H2'	1:CA:1343:G:H8	1.84	0.42
1:CA:959:A:N6	1:CA:1222:G:H4'	2.34	0.42
7:CG:77:ARG:O	7:CG:84:TYR:CB	2.67	0.42
10:CJ:53:ILE:HG22	10:CJ:62:ARG:H	1.85	0.42
1:CA:577:G:C8	1:CA:816:A:N1	2.88	0.42
22:BA:1875:G:C2'	22:BA:1876:A:OP2	2.68	0.42
22:DA:2574:G:C5	22:DA:2575:C:C5	3.08	0.42
1:AA:1142:G:H2'	1:AA:1143:G:C8	2.54	0.42
47:DZ:23:LEU:HD12	47:DZ:28:LEU:CD2	2.46	0.42
5:CE:28:ARG:CG	5:CE:29:ILE:N	2.70	0.42
31:DJ:25:LEU:O	31:DJ:27:ARG:N	2.48	0.42
1:AA:845:A:C8	1:AA:845:A:C3'	3.03	0.42
41:BT:54:GLU:HB2	41:BT:88:LYS:HB2	2.02	0.42
1:AA:693:G:H2'	1:AA:694:A:H8	1.84	0.42
11:AK:109:ILE:CG2	21:AU:16:ARG:NE	2.75	0.42
18:AR:71:ASP:OD1	21:AU:3:ILE:HG21	2.18	0.42
35:DN:1:MET:CE	35:DN:3:HIS:CE1	3.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:26:MET:CE	20:CT:26:MET:C	2.87	0.42
22:DA:838:C:H2'	22:DA:839:U:H5'	1.99	0.42
1:AA:972:C:O2'	1:AA:973:G:P	2.77	0.42
22:DA:1801:A:C8	22:DA:2203:U:C6	3.08	0.42
22:DA:1474:U:H3'	22:DA:1474:U:C6	2.55	0.42
22:DA:1474:U:C3'	22:DA:1475:G:H5'	2.50	0.42
22:DA:1557:C:H2'	22:DA:1558:C:C5	2.55	0.42
25:DD:15:PHE:CE2	37:DP:77:SER:HA	2.54	0.42
1:AA:1317:C:O2'	14:AN:48:GLN:HG2	2.19	0.42
1:CA:131:A:C2	1:CA:132:C:N3	2.87	0.42
1:AA:1202:U:C5	1:AA:1203:C:C4	3.07	0.42
1:AA:1216:A:C2	1:AA:1217:C:C4	3.07	0.42
21:AU:13:VAL:CG1	21:AU:15:LEU:CG	2.91	0.42
22:DA:2313:C:O2'	22:DA:2314:A:C5'	2.68	0.42
13:CM:11:HIS:NE2	13:CM:43:LYS:HD2	2.35	0.42
18:AR:50:TYR:O	18:AR:51:GLN:C	2.58	0.42
15:CO:23:SER:HB3	15:CO:26:VAL:HG23	2.01	0.42
22:BA:332:A:C2	22:BA:335:C:C5	3.08	0.42
22:BA:1885:A:H2'	22:BA:1886:U:O4'	2.18	0.42
22:DA:1162:G:N2	39:DR:89:HIS:HE1	2.17	0.42
4:CD:176:LYS:HG3	4:CD:178:GLU:HB3	1.98	0.42
22:DA:2657:A:C2	22:DA:2658:C:H1'	2.55	0.42
2:CB:185:ILE:CG2	2:CB:199:ILE:CD1	2.98	0.42
14:CN:87:ALA:CB	14:CN:95:LEU:HD23	2.50	0.42
25:DD:127:PHE:CE2	25:DD:160:LYS:HD2	2.55	0.42
29:DH:117:LEU:HD22	29:DH:122:LEU:HD12	2.01	0.42
20:AT:29:THR:O	20:AT:33:LYS:HE2	2.19	0.42
22:BA:227:A:C6	22:BA:2407:A:C8	3.08	0.42
1:CA:443:C:C2'	1:CA:444:G:H5'	2.50	0.42
28:BG:66:THR:O	28:BG:69:ALA:N	2.53	0.42
22:DA:155:A:C2	22:DA:172:A:N1	2.88	0.42
22:DA:2145:C:H2'	22:DA:2146:C:H3'	2.02	0.42
22:DA:1976:U:O2	22:DA:1976:U:H2'	2.20	0.42
29:DH:1:MET:HE3	29:DH:1:MET:HB2	1.91	0.42
29:DH:1:MET:CE	29:DH:23:ALA:CB	2.98	0.42
13:AM:44:ILE:HA	13:AM:47:LEU:HB2	2.02	0.42
22:DA:282:A:N1	22:DA:283:G:C6	2.88	0.42
3:AC:7:ASN:OD1	3:AC:15:LYS:HG2	2.19	0.42
37:BP:59:THR:HG23	37:BP:72:VAL:CG1	2.49	0.42
1:AA:1016:A:C8	1:AA:1017:U:C1'	2.97	0.42
22:BA:877:A:N6	22:BA:899:A:N6	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:46:GLU:O	39:BR:46:GLU:OE1	2.38	0.42
20:CT:84:LYS:HB2	20:CT:84:LYS:NZ	2.34	0.42
22:DA:2520:C:C2'	22:DA:2521:C:H6	2.32	0.42
19:CS:10:ILE:CG2	19:CS:14:LEU:HD11	2.50	0.42
22:DA:2643:G:C2'	22:DA:2644:G:H5'	2.49	0.42
39:DR:43:ASN:HD22	39:DR:44:GLY:H	1.62	0.42
22:BA:2729:G:HO2'	22:BA:2730:C:H5'	1.84	0.42
51:B3:21:PHE:HB2	51:B3:49:VAL:HG13	2.01	0.42
1:CA:291:U:H2'	1:CA:292:G:O5'	2.20	0.42
1:CA:777:A:C2	1:CA:778:G:C1'	3.03	0.42
22:BA:681:G:C2'	22:BA:682:G:O5'	2.67	0.42
22:BA:947:A:H2'	22:BA:948:C:C6	2.55	0.42
29:DH:73:ASN:C	29:DH:75:LEU:N	2.73	0.42
22:BA:1637:A:H2'	22:BA:1638:C:O4'	2.20	0.42
22:BA:182:A:H2'	22:BA:183:C:C6	2.55	0.42
49:D1:39:ASP:HA	49:D1:40:PRO:HD3	1.77	0.42
1:AA:191:G:C4	1:AA:192:A:C8	3.08	0.42
1:AA:5:U:H3'	1:AA:5:U:P	2.60	0.42
34:DM:53:MET:HB2	34:DM:120:ALA:CB	2.50	0.42
35:BN:18:GLN:NE2	35:BN:22:ARG:HH12	2.17	0.42
2:CB:116:LEU:CB	2:CB:140:LEU:HD13	2.50	0.42
1:AA:441:A:C5'	1:AA:442:G:OP2	2.66	0.42
15:CO:75:ALA:O	15:CO:79:GLN:HB2	2.19	0.42
22:BA:381:G:OP1	45:BX:17:ARG:NH2	2.44	0.42
11:AK:116:PRO:C	11:AK:118:ASN:H	2.22	0.42
48:D0:22:THR:OG1	48:D0:23:ALA:N	2.52	0.42
26:BE:123:LYS:HA	26:BE:123:LYS:HD3	1.94	0.42
36:BO:94:ARG:HG3	36:BO:94:ARG:H	1.43	0.42
1:CA:551:U:C6	1:CA:551:U:H3'	2.54	0.42
22:BA:336:C:O2'	22:BA:337:C:H5'	2.20	0.42
1:CA:239:U:H6	1:CA:239:U:C4'	2.33	0.42
38:BQ:91:ARG:NH1	39:BR:10:LYS:HB3	2.35	0.42
5:AE:134:ASN:O	5:AE:137:ARG:HB3	2.18	0.42
5:AE:158:LYS:HE2	8:AH:63:LYS:HZ3	1.83	0.42
43:BV:80:HIS:CD2	43:BV:83:LYS:HB2	2.55	0.42
22:DA:1345:C:H6	22:DA:1345:C:H2'	1.69	0.42
41:DT:11:LEU:HD23	41:DT:32:LEU:CD1	2.49	0.42
4:AD:25:ARG:H	4:AD:25:ARG:HG3	1.56	0.42
22:DA:1055:G:C4	22:DA:1056:G:H8	2.37	0.42
9:AI:65:THR:O	9:AI:66:VAL:HB	2.19	0.42
22:DA:1206:G:C2	22:DA:1207:C:C2	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1206:G:H2'	22:DA:1207:C:C6	2.54	0.42
22:DA:305:C:C1'	22:DA:313:G:N2	2.82	0.42
22:DA:315:G:H2'	22:DA:316:C:O4'	2.20	0.42
51:B3:31:ILE:O	51:B3:31:ILE:CG1	2.67	0.42
22:DA:2214:C:H2'	22:DA:2215:C:C5	2.54	0.42
28:DG:60:GLY:O	28:DG:61:TRP:HB2	2.18	0.42
1:CA:1184:G:O2'	1:CA:1185:G:C5'	2.68	0.42
45:DX:52:ALA:O	45:DX:53:LYS:CB	2.65	0.42
22:DA:1152:C:HO2'	38:DQ:75:TYR:HE2	1.68	0.42
22:DA:537:G:C2	22:DA:555:G:C2	3.08	0.42
38:DQ:91:ARG:CZ	39:DR:11:GLN:H	2.33	0.42
38:BQ:69:ARG:CZ	38:BQ:69:ARG:HB2	2.44	0.42
22:DA:1534:U:C2'	22:DA:1536:C:O2	2.63	0.42
22:BA:923:G:N2	44:BW:23:LYS:CE	2.83	0.42
4:AD:68:GLU:O	4:AD:69:ARG:C	2.58	0.42
31:BJ:72:LYS:HB3	31:BJ:89:PHE:HB2	2.02	0.42
18:CR:39:VAL:HA	18:CR:40:PRO:HD3	1.84	0.42
32:DK:78:ARG:HH22	37:DP:72:VAL:HG11	1.85	0.42
9:AI:32:ARG:HG2	9:AI:36:GLN:CG	2.45	0.42
22:DA:2051:A:C4'	25:DD:146:ILE:HG23	2.50	0.42
22:DA:2428:G:C2	33:DL:54:GLN:NE2	2.88	0.42
22:DA:1283:G:H22	22:DA:1286:A:H5'	1.84	0.42
22:DA:1307:A:C2'	22:DA:1308:A:C5'	2.98	0.42
1:CA:1315:U:C4	1:CA:1316:G:C6	3.08	0.42
1:CA:978:A:C6	1:CA:1318:A:C6	3.08	0.42
19:CS:57:VAL:HA	19:CS:58:PRO:HD2	1.82	0.42
1:CA:1318:A:H4'	19:CS:9:PHE:CE1	2.54	0.42
4:AD:60:VAL:CA	4:AD:63:ILE:CG2	2.97	0.42
22:DA:2440:C:O2'	22:DA:2441:U:P	2.76	0.42
22:BA:1654:A:O3'	25:BD:118:PHE:CE2	2.72	0.42
22:DA:2446:G:C3'	22:DA:2447:G:H5''	2.49	0.42
35:DN:110:MET:HE2	35:DN:110:MET:HA	2.02	0.42
22:DA:1141:U:O2	22:DA:1142:A:N6	2.52	0.42
29:BH:96:THR:O	29:BH:97:ARG:CG	2.45	0.42
7:CG:55:LYS:N	7:CG:55:LYS:HD2	2.34	0.42
22:DA:1566:A:C5'	24:DC:213:ARG:NH1	2.82	0.42
22:BA:974:G:N3	22:BA:1186:G:N2	2.67	0.42
22:DA:2516:A:C2	22:DA:2569:G:N3	2.88	0.42
26:DE:153:LEU:HD23	26:DE:154:ASP:O	2.20	0.42
22:DA:2690:U:O4	35:DN:5:LYS:HE2	2.20	0.42
1:CA:149:A:N6	1:CA:174:A:N6	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:198:G:O2'	1:CA:199:A:O5'	2.32	0.42
8:AH:10:LEU:HA	8:AH:10:LEU:HD23	1.64	0.42
14:AN:15:LEU:O	14:AN:17:ASP:N	2.53	0.42
27:BF:151:LEU:H	27:BF:151:LEU:HD12	1.85	0.42
1:CA:1250:A:C8	1:CA:1287:A:N7	2.88	0.42
1:CA:1249:C:C2'	1:CA:1250:A:H5''	2.37	0.42
1:CA:1350:A:C2	7:CG:33:GLY:HA3	2.55	0.42
9:CI:58:GLU:HG3	9:CI:59:LYS:N	2.34	0.42
22:DA:2305:U:H5	22:DA:2312:U:N3	2.18	0.42
22:DA:1125:G:O5'	22:DA:1125:G:H8	2.03	0.42
18:AR:36:GLY:O	18:AR:62:ARG:NH2	2.52	0.42
1:AA:1381:U:O2'	1:AA:1382:C:C6	2.61	0.42
1:AA:626:G:C4	1:AA:627:G:C8	3.08	0.42
29:DH:132:PHE:CE1	29:DH:133:GLN:O	2.73	0.42
39:DR:68:ARG:HD2	39:DR:92:TRP:CH2	2.55	0.42
22:DA:224:U:C4	22:DA:225:C:C5	3.08	0.42
3:CC:134:LYS:HD3	3:CC:138:GLN:OE1	2.19	0.42
36:DO:15:ARG:HG2	36:DO:93:ASP:OD1	2.19	0.42
1:CA:667:G:N1	1:CA:740:U:C2	2.88	0.42
7:CG:102:TRP:C	7:CG:104:VAL:H	2.22	0.42
15:CO:44:GLU:O	15:CO:45:HIS:C	2.57	0.42
35:DN:72:ASP:OD1	35:DN:75:ILE:CG2	2.65	0.42
22:DA:1754:A:N1	22:DA:1755:A:C2	2.88	0.42
22:DA:1506:U:H2'	22:DA:1507:C:O4'	2.19	0.42
20:AT:71:ALA:O	20:AT:75:LYS:HG2	2.20	0.42
22:BA:1943:U:O2	22:BA:1943:U:O4'	2.38	0.42
22:BA:242:G:C8	51:B3:4:LYS:HG2	2.55	0.42
22:BA:153:U:C2'	22:BA:154:U:O5'	2.67	0.42
22:DA:57:C:HO2'	41:DT:36:LYS:HE2	1.81	0.42
22:DA:1446:C:N4	22:DA:1447:C:N4	2.68	0.42
1:CA:914:A:O2'	1:CA:915:A:O4'	2.38	0.42
38:DQ:15:LYS:CD	38:DQ:19:GLN:HE21	2.32	0.42
4:CD:195:ASN:O	4:CD:197:HIS:N	2.53	0.42
1:CA:1309:G:H1'	13:CM:72:ILE:HD11	2.01	0.42
9:AI:62:LEU:HD23	9:AI:62:LEU:H	1.85	0.42
1:CA:1515:G:H2'	1:CA:1516:G:H8	1.84	0.42
1:CA:443:C:H2'	1:CA:444:G:H5'	2.01	0.42
3:CC:93:ILE:O	3:CC:93:ILE:CG1	2.68	0.42
14:AN:9:GLU:OE2	14:AN:60:ARG:HB3	2.20	0.42
24:BC:181:ARG:HG2	24:BC:182:LYS:O	2.20	0.42
1:AA:28:A:C2	1:AA:29:U:C2	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:162:A:H3'	1:CA:163:C:H6	1.84	0.42
22:BA:2887:A:C5	22:BA:2888:C:C5	3.08	0.42
39:DR:62:GLU:CD	39:DR:97:LYS:HD2	2.40	0.42
36:BO:31:THR:O	36:BO:32:PRO:C	2.57	0.42
22:DA:352:A:C6	22:DA:353:C:C2	3.08	0.42
22:DA:1525:A:N7	22:DA:1526:C:C5	2.88	0.42
22:BA:640:C:H2'	22:BA:641:U:O5'	2.19	0.42
22:DA:1366:A:H2'	22:DA:1367:A:O4'	2.20	0.42
25:DD:39:ASP:CG	25:DD:40:LEU:H	2.23	0.42
9:CI:37:TYR:CD2	9:CI:37:TYR:N	2.87	0.42
4:CD:148:ALA:CB	4:CD:151:GLN:NE2	2.83	0.42
39:BR:61:ALA:HA	39:BR:99:THR:HG23	2.02	0.42
1:CA:922:G:C2	1:CA:923:A:C4	3.08	0.42
22:DA:2519:U:N1	22:DA:2542:A:N6	2.67	0.42
22:BA:262:A:H5'	22:BA:610:C:O2'	2.19	0.42
37:DP:31:VAL:CG1	37:DP:38:ARG:HG2	2.49	0.42
23:BB:71:C:C2'	23:BB:72:G:H5'	2.49	0.42
22:DA:443:A:H61	26:DE:36:ALA:CB	2.30	0.42
15:CO:2:LEU:HD12	15:CO:2:LEU:HA	1.92	0.42
22:BA:2109:U:C2'	22:BA:2110:G:H5'	2.49	0.42
1:AA:1031:C:C2'	1:AA:1032:G:OP2	2.68	0.42
22:BA:1381:G:O2'	22:BA:1572:A:N1	2.47	0.42
31:BJ:36:LEU:HD12	31:BJ:36:LEU:HA	1.51	0.42
22:BA:94:A:H2'	22:BA:95:A:O4'	2.20	0.42
2:AB:71:THR:O	2:AB:72:LYS:O	2.36	0.42
22:DA:439:A:H2'	22:DA:440:C:O4'	2.20	0.42
1:AA:1084:G:C6	1:AA:1085:U:C4	3.08	0.42
50:B2:18:PHE:CE1	50:B2:22:MET:HG2	2.55	0.42
1:AA:1112:C:N4	3:AC:177:LEU:HD22	2.34	0.42
22:BA:1878:G:C6	22:BA:1879:C:N3	2.88	0.42
39:BR:36:ALA:N	39:BR:37:GLU:OE2	2.53	0.42
1:CA:929:G:C4	1:CA:930:C:C6	3.07	0.42
22:DA:1835:G:C6	22:DA:1836:C:C5	3.07	0.42
1:CA:384:G:H2'	1:CA:385:C:C6	2.54	0.42
22:BA:1506:U:C6	22:BA:1506:U:H3'	2.55	0.42
1:CA:748:G:N1	1:CA:749:A:C5	2.88	0.42
22:DA:2185:U:H6	22:DA:2185:U:O5'	2.03	0.42
1:CA:42:G:O2'	1:CA:43:C:H5'	2.20	0.42
22:BA:2318:G:C5	22:BA:2319:G:C6	3.08	0.42
22:BA:157:C:C3'	22:BA:157:C:C6	3.02	0.42
1:AA:782:A:H2'	1:AA:783:C:C5'	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:2:VAL:CG1	16:CP:65:ALA:CB	2.98	0.42
15:AO:3:SER:O	15:AO:7:THR:HG23	2.20	0.42
1:CA:123:U:OP1	1:CA:311:C:O2'	2.37	0.42
22:BA:321:U:OP1	26:BE:130:LYS:HE3	2.19	0.42
22:DA:2820:A:C6	25:DD:197:THR:HB	2.55	0.42
22:BA:2607:G:H2'	22:BA:2608:G:O4'	2.19	0.42
24:DC:132:ARG:HG3	24:DC:132:ARG:O	2.18	0.42
22:DA:1220:G:H1	22:DA:1229:C:H42	1.66	0.42
3:AC:23:ALA:HB1	3:AC:27:GLU:HG2	2.01	0.42
22:BA:2627:G:H2'	22:BA:2628:C:C6	2.54	0.42
1:CA:1505:G:H2'	1:CA:1505:G:H8	1.68	0.42
8:CH:10:LEU:HD23	8:CH:10:LEU:N	2.35	0.42
27:DF:24:VAL:HG12	27:DF:24:VAL:O	2.19	0.42
32:BK:23:LYS:HE3	32:BK:23:LYS:HB2	1.96	0.42
19:AS:54:ARG:HG3	19:AS:54:ARG:H	1.66	0.42
21:CU:20:ARG:N	21:CU:20:ARG:HD3	2.32	0.42
22:DA:1850:G:C2	22:DA:1893:C:O2	2.73	0.42
22:BA:1074:G:C2	22:BA:1075:C:C5	3.07	0.42
5:AE:80:LEU:HD12	5:AE:146:MET:HE3	1.99	0.42
22:DA:1803:A:O2'	22:DA:1804:C:C4'	2.67	0.42
28:BG:155:PRO:O	28:BG:171:LYS:N	2.52	0.42
1:CA:1284:C:O5'	1:CA:1285:A:H5''	2.19	0.42
22:DA:1314:C:OP1	22:DA:1332:G:H5''	2.20	0.42
49:D1:33:LEU:N	49:D1:51:ALA:HB3	2.30	0.42
22:DA:2341:G:H2'	22:DA:2342:C:O4'	2.20	0.42
22:DA:1774:C:O2	24:DC:10:PRO:HB2	2.20	0.42
35:DN:100:CYS:SG	35:DN:101:GLY:N	2.93	0.42
1:AA:1129:C:O2'	1:AA:1130:A:N7	2.49	0.42
1:CA:505:G:C5	1:CA:535:A:C2	3.08	0.42
22:DA:64:A:C2	22:DA:65:U:C2	3.08	0.42
46:DY:21:LEU:CD2	46:DY:25:GLN:NE2	2.83	0.42
22:DA:1362:C:N3	22:DA:1363:C:C6	2.88	0.42
22:DA:1372:U:C2'	22:DA:1373:A:C8	2.97	0.42
22:DA:1808:A:N7	45:DX:27:ARG:NH1	2.67	0.42
1:CA:1071:C:C4'	5:CE:53:ARG:NH1	2.79	0.42
22:DA:136:G:H1	22:DA:143:C:N4	2.16	0.42
1:AA:1228:C:O2'	1:AA:1229:A:O4'	2.36	0.42
4:CD:107:GLY:HA2	4:CD:112:GLU:OE2	2.20	0.42
45:DX:57:VAL:HG13	45:DX:58:ILE:N	2.35	0.42
45:DX:58:ILE:CG1	45:DX:66:VAL:HG21	2.46	0.42
25:BD:106:LYS:O	25:BD:107:VAL:HB	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:97:G:O2'	1:AA:98:A:C5'	2.68	0.42
28:BG:93:TYR:HA	28:BG:93:TYR:HD2	1.67	0.42
37:BP:19:PHE:CD2	37:BP:19:PHE:N	2.86	0.42
32:BK:80:ASP:OD2	37:BP:61:ARG:NH1	2.53	0.42
29:DH:120:GLY:O	29:DH:121:VAL:CB	2.67	0.42
18:CR:64:LEU:HB2	18:CR:66:LEU:HG	2.01	0.42
22:DA:2040:G:C2'	22:DA:2041:U:H5'	2.50	0.42
40:DS:82:MET:CE	40:DS:84:ARG:HH12	2.33	0.42
40:DS:95:ARG:O	40:DS:96:ILE:CG2	2.58	0.42
22:DA:2234:G:C6	22:DA:2235:G:C8	3.08	0.42
22:DA:2238:G:H5'	22:DA:2239:G:OP1	2.18	0.42
22:DA:1307:A:HO2'	22:DA:1308:A:H5'	1.83	0.42
1:AA:267:C:C6	1:AA:268:U:H5	2.37	0.42
17:AQ:47:ASP:C	17:AQ:51:GLU:OE2	2.59	0.42
8:CH:28:SER:HB3	8:CH:56:PRO:HB2	2.02	0.42
29:DH:89:LYS:HB2	29:DH:90:LEU:H	1.68	0.42
1:AA:487:A:C2'	1:AA:488:C:C5'	2.98	0.42
1:CA:1268:G:C5	1:CA:1269:A:N6	2.88	0.42
1:CA:1367:C:O2'	1:CA:1368:A:O4'	2.38	0.42
1:CA:994:A:C6	1:CA:1216:A:H5''	2.54	0.42
1:AA:1144:G:H2'	1:AA:1145:A:O4'	2.20	0.42
5:CE:80:LEU:O	5:CE:80:LEU:HD13	2.20	0.42
1:CA:545:C:H2'	1:CA:546:A:H5'	2.01	0.42
22:DA:1451:C:H4'	22:DA:1452:G:O5'	2.20	0.42
22:DA:2735:G:C4	22:DA:2736:A:C8	3.07	0.42
22:BA:247:G:H4'	22:BA:386:G:C6	2.54	0.42
2:AB:86:CYS:HB2	2:AB:88:GLN:HG3	2.02	0.42
24:BC:229:HIS:HE1	24:BC:231:HIS:ND1	2.16	0.42
11:AK:109:ILE:C	21:AU:5:VAL:HG23	2.41	0.42
22:BA:958:U:H5''	34:BM:14:LYS:HZ2	1.85	0.42
22:DA:271:G:C2	22:DA:367:G:C4	3.08	0.42
22:DA:1998:A:O2'	22:DA:1999:C:H5'	2.20	0.42
22:DA:2688:G:H1'	22:DA:2721:A:H61	1.82	0.42
32:DK:16:ALA:HB1	32:DK:45:GLU:HG2	2.01	0.42
29:BH:65:ALA:O	29:BH:68:ARG:N	2.45	0.42
29:BH:68:ARG:NH1	29:BH:140:ALA:CB	2.83	0.42
1:CA:182:A:C4	1:CA:184:G:C8	3.07	0.42
27:BF:8:LYS:HA	27:BF:12:VAL:CG1	2.49	0.42
1:CA:82:G:N7	1:CA:89:U:C4	2.87	0.42
1:CA:95:C:O2	1:CA:95:C:H2'	2.19	0.42
1:CA:251:G:C2	1:CA:266:G:O6	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:275:G:O2'	1:CA:276:G:C5'	2.68	0.42
36:DO:41:ALA:O	36:DO:43:ASN:N	2.46	0.42
27:BF:134:GLN:C	27:BF:136:ILE:N	2.72	0.42
22:BA:1459:G:C6	22:BA:1461:C:C4	3.08	0.42
22:DA:1004:U:H4'	22:DA:1010:A:C6	2.54	0.42
1:AA:977:A:C3'	1:AA:1362:A:N6	2.76	0.42
7:CG:4:ARG:CG	7:CG:5:VAL:N	2.82	0.42
52:B4:9:LYS:O	52:B4:9:LYS:HE2	2.19	0.42
22:DA:2306:C:OP2	22:DA:2307:G:H5'	2.20	0.42
22:DA:963:U:H2'	22:DA:964:C:C6	2.55	0.42
22:DA:2805:C:C4	22:DA:2806:C:C5	3.08	0.42
1:CA:865:A:H2'	1:CA:866:C:O4'	2.20	0.42
22:DA:1168:G:C2	22:DA:1182:G:N3	2.88	0.42
22:DA:1127:A:N7	22:DA:2488:G:O2'	2.47	0.42
8:AH:87:ARG:O	8:AH:88:LYS:CB	2.66	0.42
29:DH:68:ARG:CD	29:DH:71:LYS:CD	2.93	0.42
34:DM:100:LYS:HD3	34:DM:100:LYS:HA	1.87	0.42
1:AA:617:G:N1	1:AA:618:C:C5	2.88	0.42
1:AA:982:U:C2	1:AA:983:A:C6	3.07	0.42
1:AA:1191:A:H2'	1:AA:1192:C:C6	2.55	0.42
22:DA:1193:G:C2	22:DA:1194:A:C4	3.08	0.42
22:DA:1195:G:O2'	22:DA:1226:A:N1	2.37	0.42
22:DA:418:C:H2'	22:DA:419:U:O4'	2.20	0.42
22:BA:1934:C:C2'	22:BA:1935:G:O5'	2.68	0.42
22:BA:1974:C:C2'	22:BA:1975:G:O5'	2.67	0.42
2:CB:162:VAL:HG22	2:CB:163:ILE:N	2.35	0.42
1:CA:558:G:H2'	1:CA:559:A:H2	1.85	0.42
22:DA:279:A:N1	22:DA:361:G:O2'	2.52	0.42
22:DA:2705:A:C2'	22:DA:2706:A:H5'	2.50	0.42
22:BA:84:A:N1	22:BA:98:G:O2'	2.29	0.42
22:DA:1686:C:H2'	22:DA:1687:G:O4'	2.20	0.42
3:CC:84:GLU:HA	3:CC:87:ARG:HB2	2.02	0.42
26:BE:23:PHE:CZ	26:BE:28:VAL:HG11	2.54	0.42
22:BA:2531:A:C5	22:BA:2532:G:N7	2.88	0.42
1:AA:198:G:C4	1:AA:199:A:C8	3.07	0.42
1:CA:1310:G:C6	1:CA:1311:A:C6	3.08	0.42
9:AI:23:GLY:N	9:AI:60:LEU:HA	2.24	0.42
1:CA:1515:G:H2'	1:CA:1516:G:C8	2.55	0.42
22:DA:1936:A:H2	22:DA:1943:U:O4	2.02	0.42
37:BP:96:LEU:HD12	37:BP:96:LEU:HA	1.62	0.42
1:CA:1364:U:O2	1:CA:1364:U:O4'	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:701:U:O2'	1:CA:702:A:OP2	2.29	0.42
22:DA:2823:A:C6	22:DA:2824:C:C4	3.08	0.42
1:AA:935:A:N6	7:AG:2:ARG:HD2	2.35	0.42
22:DA:1197:G:H2'	22:DA:1198:U:C6	2.55	0.42
22:BA:915:C:O2	23:BB:100:G:H4'	2.20	0.42
39:BR:60:LYS:HB2	39:BR:100:GLY:CA	2.50	0.42
34:BM:8:LYS:CE	34:BM:8:LYS:HA	2.39	0.42
30:BI:56:VAL:CG2	30:BI:57:VAL:N	2.83	0.42
2:CB:59:ILE:HD12	2:CB:60:ALA:N	2.35	0.42
22:BA:1820:U:N3	24:BC:197:ALA:HA	2.35	0.42
7:CG:16:LYS:HB3	7:CG:16:LYS:NZ	2.35	0.42
1:CA:1018:G:H2'	1:CA:1019:A:O5'	2.19	0.42
22:DA:1179:G:C6	22:DA:1180:U:C4	3.08	0.42
1:CA:317:U:N3	1:CA:337:G:C2	2.88	0.42
34:BM:42:THR:HG23	34:BM:45:GLN:OE1	2.20	0.42
1:CA:967:C:O5'	1:CA:967:C:H6	2.03	0.42
1:CA:659:U:C6	1:CA:660:C:H5	2.38	0.42
22:BA:2454:G:C4	22:BA:2455:G:C8	3.08	0.42
1:AA:770:C:O2'	1:AA:771:G:H5'	2.20	0.42
1:AA:809:G:C2'	1:AA:810:C:H5'	2.50	0.42
22:DA:1378:A:O2'	22:DA:1379:U:O5'	2.38	0.42
33:BL:92:LEU:HA	33:BL:125:LEU:CD2	2.48	0.42
26:BE:72:SER:C	26:BE:74:LYS:N	2.71	0.42
7:AG:74:VAL:CB	7:AG:85:GLN:HE21	2.33	0.42
22:DA:2482:A:H2'	22:DA:2483:C:C6	2.54	0.42
18:CR:21:ASP:CG	18:CR:23:LYS:HE3	2.40	0.42
2:CB:8:MET:CE	2:CB:9:LEU:HD23	2.50	0.42
12:CL:71:HIS:ND1	12:CL:73:LEU:N	2.59	0.42
27:DF:127:TYR:CD2	27:DF:176:PHE:HE2	2.38	0.42
22:BA:1759:A:C2	22:BA:1760:C:C2	3.07	0.42
22:DA:1421:G:C8	22:DA:1421:G:OP2	2.66	0.42
25:DD:208:LYS:O	25:DD:209:ALA:HB3	2.20	0.42
43:BV:26:PHE:HB2	43:BV:27:PRO:HD3	2.01	0.42
39:BR:36:ALA:HA	39:BR:58:VAL:HG23	2.01	0.42
1:AA:1377:A:O2'	7:AG:1:PRO:HB3	2.19	0.42
22:DA:553:G:C6	22:DA:554:U:N3	2.88	0.42
25:DD:36:GLN:NE2	25:DD:38:LYS:NZ	2.66	0.42
43:BV:46:LYS:O	43:BV:50:MET:HG3	2.20	0.42
7:CG:34:LYS:HB2	7:CG:34:LYS:HZ2	1.85	0.42
28:BG:124:CYS:HA	28:BG:129:GLU:O	2.20	0.42
22:BA:2343:U:H2'	22:BA:2344:U:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2765:A:C2'	22:BA:2765:A:N3	2.83	0.42
22:BA:51:G:H4'	22:BA:52:A:H5'	2.02	0.42
15:AO:3:SER:HB3	15:AO:6:ALA:HB2	2.02	0.42
13:AM:52:ILE:HG23	13:AM:53:ASP:N	2.34	0.42
22:BA:1411:U:H2'	22:BA:1412:U:O4'	2.20	0.42
22:BA:470:A:H61	41:BT:72:GLN:HE22	1.68	0.42
22:DA:1465:G:C6	22:DA:1466:U:C4	3.07	0.42
40:DS:3:THR:HG21	40:DS:57:ASN:C	2.40	0.42
19:AS:40:PHE:CB	19:AS:42:ASN:ND2	2.83	0.42
23:DB:95:U:H2'	23:DB:96:G:C8	2.55	0.42
1:AA:1511:G:C6	1:AA:1512:U:C4	3.08	0.42
16:AP:39:PHE:CG	16:AP:74:LEU:HD11	2.55	0.42
1:CA:827:U:H2'	1:CA:870:U:O4	2.20	0.42
26:BE:178:VAL:O	26:BE:181:ILE:N	2.47	0.42
46:BY:28:LEU:HD23	46:BY:28:LEU:HA	1.64	0.42
22:BA:966:G:C5	22:BA:967:U:C4	3.08	0.42
24:BC:146:LYS:O	24:BC:147:PRO:C	2.57	0.42
38:BQ:94:LEU:O	38:BQ:96:ASP:N	2.51	0.41
45:BX:29:LEU:HD22	45:BX:29:LEU:N	2.35	0.41
24:DC:109:LEU:O	24:DC:110:LYS:C	2.58	0.41
1:CA:1278:G:C8	1:CA:1278:G:OP2	2.73	0.41
1:CA:1150:A:H1'	1:CA:1280:A:N6	2.35	0.41
10:CJ:38:GLY:HA2	10:CJ:39:PRO:HD2	1.85	0.41
1:CA:1279:G:C5'	10:CJ:9:ARG:HH22	2.26	0.41
22:DA:1345:C:HO2'	22:DA:1346:G:P	2.42	0.41
22:DA:856:G:H1	22:DA:921:C:N4	2.15	0.41
44:DW:67:LYS:HZ3	44:DW:67:LYS:HB3	1.85	0.41
22:DA:1085:A:H2'	22:DA:1086:A:N3	2.35	0.41
30:DI:92:PRO:O	30:DI:93:ASN:CB	2.68	0.41
48:D0:42:ILE:HD13	48:D0:48:TYR:CG	2.54	0.41
35:DN:97:ILE:O	35:DN:112:TYR:O	2.38	0.41
22:DA:2882:A:O2'	35:DN:97:ILE:HD11	2.20	0.41
1:AA:1532:U:O5'	1:AA:1532:U:H6	2.03	0.41
22:DA:310:A:C8	22:DA:312:G:C6	3.08	0.41
22:DA:84:A:H2	22:DA:98:G:N3	2.18	0.41
22:DA:61:C:C2	22:DA:94:A:C2	3.08	0.41
46:DY:28:LEU:HD22	46:DY:28:LEU:O	2.19	0.41
22:DA:1355:G:C6	22:DA:1377:G:N2	2.88	0.41
22:DA:160:A:C6	22:DA:161:A:C6	3.07	0.41
22:DA:218:A:O2'	22:DA:219:A:C5'	2.68	0.41
26:DE:57:LYS:HZ2	26:DE:58:LYS:H	1.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:111:LYS:HE3	39:BR:50:GLY:HA2	1.95	0.41
38:BQ:111:LYS:NZ	39:BR:50:GLY:HA2	2.35	0.41
34:DM:73:ILE:HG21	34:DM:91:TYR:CZ	2.55	0.41
26:BE:176:ASP:CG	26:BE:179:SER:HG	2.23	0.41
2:AB:9:LEU:HB2	2:AB:42:LEU:HD13	2.02	0.41
22:DA:1530:G:H8	22:DA:1530:G:OP2	2.03	0.41
43:DV:48:MET:O	43:DV:51:GLN:HG3	2.20	0.41
22:DA:1262:A:C6	22:DA:1263:U:C2	3.08	0.41
22:DA:200:U:H2'	22:DA:201:C:C6	2.55	0.41
22:DA:204:A:OP1	22:DA:206:U:H1'	2.20	0.41
22:DA:650:C:C1'	51:D3:22:LYS:HZ1	2.33	0.41
22:DA:2376:A:H2	36:DO:92:PHE:CD2	2.38	0.41
22:BA:1491:G:C6	22:BA:1500:G:C2	3.08	0.41
22:DA:28:A:H8	22:DA:28:A:O5'	2.03	0.41
1:CA:1215:G:C2	1:CA:1216:A:N7	2.87	0.41
10:CJ:52:LEU:CG	10:CJ:62:ARG:HG2	2.50	0.41
14:CN:55:SER:HB3	14:CN:58:ARG:HD2	2.02	0.41
4:AD:14:GLU:HB3	4:AD:59:LYS:HG3	2.02	0.41
22:DA:603:A:H4'	22:DA:604:G:C5'	2.48	0.41
5:CE:28:ARG:CZ	5:CE:29:ILE:O	2.68	0.41
11:AK:126:ARG:N	21:AU:33:ARG:NH1	2.67	0.41
11:AK:126:ARG:CB	21:AU:33:ARG:NH1	2.52	0.41
22:DA:2516:A:H2'	22:DA:2517:C:O4'	2.20	0.41
22:DA:2687:U:C2'	22:DA:2687:U:O2	2.68	0.41
1:CA:184:G:O2'	1:CA:185:U:O5'	2.38	0.41
22:DA:491:G:O2'	22:DA:492:A:C5'	2.68	0.41
22:DA:241:A:N6	22:DA:256:A:C8	2.88	0.41
1:CA:253:A:N1	1:CA:254:G:C5	2.88	0.41
22:DA:818:G:H5'	22:DA:839:U:OP1	2.20	0.41
23:DB:25:U:H2'	23:DB:26:C:H5'	2.01	0.41
23:DB:109:A:C5	23:DB:110:C:C4	3.08	0.41
23:DB:11:C:H3'	23:DB:12:C:H5'	2.01	0.41
1:CA:132:C:HO2'	1:CA:133:U:C5'	2.33	0.41
14:AN:80:ARG:HH11	14:AN:80:ARG:HG3	1.85	0.41
2:AB:209:VAL:CG2	2:AB:210:THR:H	2.02	0.41
52:B4:14:CYS:HA	52:B4:26:ILE:O	2.19	0.41
23:BB:91:C:OP2	34:BM:18:ARG:HG2	2.20	0.41
1:CA:16:A:O2'	1:CA:17:U:H5'	2.20	0.41
1:CA:864:A:C2	1:CA:917:G:N3	2.88	0.41
35:BN:31:HIS:O	35:BN:33:ILE:N	2.49	0.41
4:CD:43:ARG:C	4:CD:45:PRO:HD3	2.40	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:79:ALA:O	4:CD:80:ARG:O	2.38	0.41
1:AA:1381:U:O2'	1:AA:1382:C:O5'	2.38	0.41
1:AA:373:A:C2	1:AA:374:A:C8	3.08	0.41
12:CL:6:LEU:HA	12:CL:9:LYS:O	2.20	0.41
22:BA:1885:A:O2'	22:BA:1886:U:C5'	2.68	0.41
4:CD:176:LYS:O	4:CD:176:LYS:CG	2.68	0.41
1:CA:587:G:H4'	8:CH:3:GLN:HA	2.01	0.41
22:DA:776:G:H4'	22:DA:777:G:O5'	2.20	0.41
13:CM:75:SER:HB2	13:CM:79:LEU:CD1	2.49	0.41
23:DB:38:C:C2'	23:DB:39:A:H5'	2.50	0.41
27:DF:1:ALA:HA	27:DF:97:GLU:CB	2.50	0.41
1:CA:1499:A:HO2'	1:CA:1500:A:H5'	1.81	0.41
1:AA:756:C:H2'	1:AA:757:U:O4'	2.20	0.41
22:BA:1430:G:H2'	22:BA:1431:A:H5'	1.99	0.41
24:BC:57:HIS:ND1	24:BC:58:LYS:N	2.65	0.41
22:BA:2065:C:H2'	22:BA:2066:C:C6	2.55	0.41
40:DS:4:ILE:HD12	40:DS:5:ALA:CA	2.49	0.41
1:AA:143:A:H2	1:AA:220:G:H1	1.68	0.41
1:CA:1169:A:O2'	1:CA:1170:A:C5'	2.68	0.41
22:BA:2800:A:C3'	22:BA:2801:G:H5'	2.50	0.41
1:CA:702:A:C8	1:CA:702:A:OP1	2.70	0.41
3:AC:133:MET:CE	3:AC:167:TYR:HB2	2.48	0.41
28:BG:10:VAL:HB	28:BG:14:VAL:CG2	2.50	0.41
22:DA:1833:C:C4	22:DA:1834:U:O4	2.73	0.41
22:DA:1968:G:H5'	56:DA:3481:HOH:O	2.20	0.41
14:AN:96:LYS:HD2	14:AN:97:LYS:O	2.19	0.41
31:DJ:51:GLY:HA3	31:DJ:121:LYS:HE3	2.02	0.41
39:DR:101:ILE:O	39:DR:102:SER:C	2.58	0.41
22:BA:479:A:C2	22:BA:480:A:C4	3.08	0.41
1:AA:457:G:C6	1:AA:458:U:C4	3.08	0.41
4:AD:67:LEU:HD23	4:AD:67:LEU:HA	1.82	0.41
22:BA:398:C:C3'	22:BA:398:C:C6	3.02	0.41
2:CB:112:ARG:O	2:CB:112:ARG:CG	2.65	0.41
44:DW:77:LYS:O	44:DW:78:PHE:CD2	2.73	0.41
30:DI:27:LEU:HD12	30:DI:27:LEU:C	2.40	0.41
22:DA:2:G:C6	22:DA:3:U:O4	2.73	0.41
3:AC:57:GLU:O	3:AC:59:PRO:CD	2.68	0.41
1:AA:1111:A:C2	3:AC:176:THR:HG23	2.55	0.41
22:DA:1480:C:C2	22:DA:1481:U:C6	3.07	0.41
22:DA:1512:C:O2'	22:DA:1513:U:C4'	2.68	0.41
26:BE:48:THR:H	26:BE:51:GLU:HG3	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2601:C:H4'	22:DA:2602:A:OP2	2.18	0.41
1:CA:448:A:C8	1:CA:487:A:C6	3.08	0.41
32:BK:4:GLU:O	32:BK:5:GLN:CB	2.68	0.41
1:AA:711:G:H2'	1:AA:712:A:H5'	2.00	0.41
22:BA:323:C:N4	22:BA:333:G:N7	2.68	0.41
42:BU:82:VAL:HG12	42:BU:83:GLY:N	2.34	0.41
22:BA:2555:U:C6	22:BA:2556:C:C6	3.08	0.41
43:DV:2:PHE:CD1	43:DV:50:MET:HE3	2.55	0.41
34:DM:116:ALA:C	34:DM:118:LYS:N	2.73	0.41
42:BU:64:ILE:HG23	42:BU:64:ILE:O	2.19	0.41
1:AA:404:G:H2'	1:AA:405:U:O4'	2.19	0.41
9:AI:112:ARG:NH2	10:AJ:64:GLN:HE22	2.16	0.41
22:BA:912:C:C6	22:BA:913:U:H5	2.37	0.41
22:BA:1520:U:C2'	22:BA:1521:G:O5'	2.67	0.41
45:BX:27:ARG:HH11	45:BX:27:ARG:HD3	1.73	0.41
1:CA:603:U:H2'	1:CA:604:G:C8	2.55	0.41
22:BA:149:A:C5	22:BA:150:U:C5	3.08	0.41
1:CA:905:U:C5	1:CA:906:A:N7	2.88	0.41
1:AA:741:G:H2'	1:AA:742:G:O4'	2.20	0.41
43:BV:14:LYS:HD2	56:BV:101:HOH:O	2.20	0.41
22:BA:54:G:C5	22:BA:55:G:C8	3.07	0.41
8:AH:2:MET:H	8:AH:2:MET:HG3	1.58	0.41
22:DA:633:A:H8	22:DA:633:A:O5'	2.02	0.41
1:AA:1135:U:OP2	1:AA:1135:U:H6	2.02	0.41
22:BA:1314:C:H2'	22:BA:1314:C:O2	2.20	0.41
22:BA:1615:C:C5	22:BA:1617:C:C4	3.07	0.41
25:BD:12:THR:HG22	25:BD:24:VAL:CG2	2.50	0.41
22:BA:995:C:P	38:BQ:52:ARG:NH1	2.93	0.41
31:BJ:42:ALA:O	31:BJ:43:GLU:C	2.58	0.41
30:BI:123:ALA:C	30:BI:125:THR:N	2.72	0.41
24:DC:196:ASN:OD1	24:DC:199:HIS:HB2	2.20	0.41
10:CJ:102:LEU:HD13	10:CJ:102:LEU:C	2.41	0.41
10:CJ:5:ARG:NH1	10:CJ:7:ARG:HH12	2.18	0.41
1:CA:356:A:C2	1:CA:368:U:O2	2.73	0.41
1:CA:376:G:H5''	16:CP:5:ARG:HD2	2.01	0.41
1:CA:367:U:C6	1:CA:394:G:N2	2.88	0.41
49:D1:6:GLU:OE1	49:D1:52:LYS:HD3	2.19	0.41
22:DA:1102:C:OP2	22:DA:1102:C:H6	2.03	0.41
48:D0:27:LEU:H	48:D0:27:LEU:HD22	1.85	0.41
35:DN:9:GLN:O	35:DN:17:ARG:HD3	2.20	0.41
1:AA:1126:U:O2	1:AA:1280:A:H5'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:93:LEU:HD12	9:AI:94:ARG:H	1.85	0.41
22:DA:310:A:N1	22:DA:330:A:C5	2.88	0.41
22:DA:149:A:H2'	22:DA:150:U:H5'	2.01	0.41
22:DA:1809:A:H2'	22:DA:1810:A:C8	2.55	0.41
22:DA:45:G:H2'	22:DA:215:G:C5	2.54	0.41
22:DA:396:G:C2'	22:DA:397:U:H5'	2.45	0.41
22:DA:54:G:C5	22:DA:55:G:C8	3.08	0.41
22:DA:37:C:C6	22:DA:37:C:C3'	3.03	0.41
22:DA:444:C:O2'	22:DA:445:C:P	2.77	0.41
1:CA:1067:A:O3'	1:CA:1094:G:H5'	2.20	0.41
1:CA:1100:C:OP2	2:CB:94:ARG:HD2	2.21	0.41
1:CA:206:C:C6	1:CA:206:C:C3'	3.03	0.41
44:BW:39:GLN:O	44:BW:41:GLY:CA	2.68	0.41
18:CR:31:TYR:C	18:CR:32:ILE:CG2	2.88	0.41
21:CU:3:ILE:CG2	21:CU:18:PHE:CD1	3.00	0.41
32:DK:11:ALA:HB1	32:DK:64:ARG:NH1	2.33	0.41
22:DA:2037:A:H2'	22:DA:2038:G:C8	2.55	0.41
22:BA:1795:C:C2	22:BA:1796:U:C6	3.07	0.41
22:DA:192:C:H6	22:DA:192:C:O5'	2.03	0.41
22:DA:802:A:O2'	22:DA:803:U:C5'	2.52	0.41
17:AQ:74:LEU:HD13	17:AQ:74:LEU:C	2.40	0.41
1:AA:486:U:H2'	1:AA:487:A:H8	1.84	0.41
1:CA:1384:C:H2'	1:CA:1385:G:C8	2.55	0.41
19:CS:4:LEU:HB3	19:CS:5:LYS:H	1.54	0.41
33:DL:110:VAL:HG23	33:DL:126:ARG:O	2.19	0.41
1:AA:918:A:O2'	1:AA:919:A:H5'	2.20	0.41
5:AE:32:PHE:O	5:AE:51:LYS:HB2	2.20	0.41
5:CE:96:GLN:N	5:CE:123:LEU:O	2.42	0.41
35:DN:38:LEU:CB	35:DN:39:PRO:HD3	2.35	0.41
1:CA:544:G:H2'	1:CA:545:C:O5'	2.20	0.41
22:DA:1429:G:C2	22:DA:1430:G:N7	2.87	0.41
41:BT:43:ILE:CG1	41:BT:43:ILE:O	2.69	0.41
22:DA:1783:A:C2	22:DA:2588:G:O4'	2.73	0.41
5:CE:35:LEU:HD11	5:CE:136:VAL:CG1	2.33	0.41
7:AG:23:ALA:O	7:AG:26:VAL:HG23	2.19	0.41
1:CA:82:G:C6	1:CA:89:U:C5	3.08	0.41
1:AA:872:A:C8	1:AA:874:G:C8	3.08	0.41
1:CA:247:G:C6	1:CA:278:G:C2	3.08	0.41
7:CG:116:ALA:HA	7:CG:120:ALA:HB2	2.01	0.41
14:AN:63:CYS:HB2	14:AN:79:SER:OG	2.21	0.41
1:CA:17:U:O2	1:CA:18:C:C6	2.72	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2486:C:H2'	22:DA:2487:G:O5'	2.20	0.41
13:CM:12:LYS:HB3	13:CM:17:ALA:CB	2.47	0.41
1:AA:624:C:C4	1:AA:625:U:C4	3.07	0.41
22:DA:237:C:H2'	22:DA:238:C:O5'	2.20	0.41
1:CA:279:A:H5'	1:CA:280:C:H3'	1.94	0.41
1:CA:1449:C:C5	1:CA:1450:U:C4	3.08	0.41
1:CA:1452:C:HO2'	1:CA:1453:G:P	2.43	0.41
1:AA:1461:G:H2'	1:AA:1462:C:H6	1.84	0.41
15:CO:38:LEU:O	15:CO:38:LEU:HD12	2.20	0.41
22:BA:1965:C:H5''	22:BA:1965:C:H6	1.85	0.41
14:CN:89:ARG:HG3	14:CN:91:GLU:HG2	1.94	0.41
26:DE:114:ARG:C	26:DE:116:ASP:H	2.23	0.41
9:AI:129:ARG:HA	9:AI:129:ARG:CZ	2.50	0.41
28:DG:18:ILE:CD1	28:DG:42:VAL:CG1	2.95	0.41
22:BA:2663:G:C2'	22:BA:2664:G:H8	2.33	0.41
22:DA:590:A:C5	22:DA:591:U:C5	3.07	0.41
22:DA:425:G:C2	22:DA:426:C:C4	3.08	0.41
22:DA:1956:U:HO2'	22:DA:1957:C:H5'	1.81	0.41
28:BG:4:ALA:HB2	28:BG:65:GLY:CA	2.50	0.41
17:CQ:62:GLU:N	17:CQ:72:TRP:CE3	2.88	0.41
1:CA:1171:A:C2	1:CA:1172:C:C2	3.08	0.41
4:CD:116:LEU:HA	4:CD:116:LEU:HD13	1.82	0.41
22:BA:2794:C:C2	22:BA:2795:C:C5	3.08	0.41
6:AF:92:THR:HB	6:AF:93:LYS:H	1.61	0.41
1:AA:1401:G:C2	1:AA:1402:C:H1'	2.55	0.41
22:DA:870:U:O2'	34:DM:4:PRO:HB3	2.21	0.41
22:DA:2776:A:C6	22:DA:2782:G:H1'	2.56	0.41
5:CE:157:GLY:CA	8:CH:63:LYS:HZ1	2.33	0.41
1:CA:158:G:C6	1:CA:164:G:C5	3.08	0.41
29:BH:78:VAL:HG11	29:BH:145:ASN:HB2	2.00	0.41
29:BH:79:THR:HG22	29:BH:80:ILE:HG12	2.02	0.41
22:DA:287:G:N1	22:DA:354:A:C6	2.88	0.41
1:AA:233:C:C2	1:AA:234:C:C5	3.08	0.41
1:AA:1386:G:N3	1:AA:1387:G:C8	2.88	0.41
8:AH:85:TYR:HE2	8:AH:123:GLU:OE2	2.03	0.41
4:AD:172:VAL:CG1	4:AD:173:ASP:H	2.24	0.41
22:DA:2595:G:C6	22:DA:2599:G:C6	3.07	0.41
34:BM:6:ARG:CB	34:BM:6:ARG:CZ	2.98	0.41
30:BI:58:ILE:HG22	30:BI:60:VAL:CG2	2.50	0.41
22:BA:480:A:H3'	22:BA:481:G:H5''	2.02	0.41
22:BA:1839:G:H2'	22:BA:1840:G:H8	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:642:U:C6	22:DA:642:U:C3'	3.03	0.41
22:BA:612:G:H2'	22:BA:614:A:C8	2.55	0.41
37:DP:31:VAL:C	37:DP:32:VAL:HG12	2.40	0.41
4:CD:127:ARG:CG	4:CD:127:ARG:NH1	2.81	0.41
2:CB:191:ASP:C	2:CB:193:ASP:N	2.73	0.41
7:AG:145:GLU:HA	7:AG:148:LYS:HB2	2.01	0.41
22:BA:439:A:C8	22:BA:439:A:H3'	2.55	0.41
7:AG:79:VAL:CG1	7:AG:80:GLY:N	2.74	0.41
22:DA:269:C:C2	22:DA:270:A:C8	3.08	0.41
7:AG:74:VAL:HG21	7:AG:85:GLN:HE21	1.84	0.41
22:DA:2482:A:H2'	22:DA:2483:C:H6	1.85	0.41
1:CA:305:G:H8	1:CA:305:G:OP2	2.03	0.41
22:BA:1402:U:C6	22:BA:1402:U:C3'	3.03	0.41
27:BF:121:PHE:CB	27:BF:162:ASP:OD2	2.67	0.41
13:AM:70:ARG:HD3	27:BF:142:TYR:CE1	2.56	0.41
22:BA:2507:C:C2	22:BA:2508:G:C8	3.09	0.41
1:CA:1111:A:H3'	1:CA:1111:A:C8	2.55	0.41
31:BJ:76:HIS:CD2	31:BJ:85:LYS:HB2	2.55	0.41
22:BA:323:C:N4	22:BA:333:G:C5	2.88	0.41
1:CA:992:U:H1'	1:CA:993:G:C2	2.55	0.41
1:CA:1277:C:H6	1:CA:1277:C:H3'	1.85	0.41
20:CT:11:ILE:C	20:CT:13:SER:N	2.73	0.41
22:BA:1410:G:C2	22:BA:1593:A:N3	2.88	0.41
1:AA:55:A:C5	1:AA:56:U:C6	3.08	0.41
22:BA:1522:A:HO2'	22:BA:1523:U:P	2.39	0.41
7:CG:12:LEU:N	7:CG:12:LEU:CD1	2.84	0.41
31:DJ:12:LYS:HB2	31:DJ:13:ARG:H	1.72	0.41
47:DZ:38:GLU:CD	47:DZ:39:ASP:H	2.23	0.41
22:BA:2824:C:O5'	22:BA:2824:C:H6	2.03	0.41
1:AA:1077:G:C6	1:AA:1081:A:C6	3.08	0.41
48:B0:51:ARG:HB2	48:B0:51:ARG:HE	1.61	0.41
33:BL:73:ILE:C	33:BL:105:ILE:HD13	2.41	0.41
22:BA:1445:G:H2'	22:BA:1446:C:C6	2.55	0.41
22:BA:174:U:H2'	22:BA:175:G:O4'	2.20	0.41
1:AA:564:C:P	12:AL:11:ARG:HE	2.43	0.41
22:BA:2766:A:C2	22:BA:2767:C:C6	3.08	0.41
6:CF:47:LEU:CD1	6:CF:51:ILE:HD12	2.50	0.41
30:BI:115:ASP:OD1	30:BI:115:ASP:C	2.59	0.41
5:AE:155:LYS:NZ	5:AE:156:ARG:HG3	2.35	0.41
39:BR:81:LYS:O	39:BR:82:HIS:C	2.58	0.41
22:DA:1399:C:O2'	22:DA:1400:U:C5'	2.63	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1784:A:P	56:DA:3678:HOH:O	2.78	0.41
42:DU:96:LYS:O	42:DU:97:SER:CB	2.61	0.41
1:AA:207:C:H2'	1:AA:207:C:O2	2.19	0.41
1:CA:1497:G:H2'	1:CA:1498:U:O5'	2.21	0.41
4:CD:32:LYS:O	4:CD:33:ILE:CG2	2.55	0.41
21:CU:36:PHE:HB3	21:CU:40:PRO:CD	2.50	0.41
37:BP:21:PRO:HA	37:BP:46:VAL:CG1	2.50	0.41
37:DP:16:VAL:CG1	37:DP:19:PHE:HE2	2.32	0.41
45:BX:44:ARG:HG3	45:BX:45:PHE:N	2.35	0.41
40:DS:41:LYS:C	40:DS:43:ALA:N	2.70	0.41
1:AA:267:C:C6	1:AA:268:U:C5	3.09	0.41
17:AQ:11:VAL:O	17:AQ:12:VAL:HB	2.20	0.41
1:CA:1217:C:H6	1:CA:1217:C:H2'	1.62	0.41
22:DA:599:A:N3	22:DA:659:G:C2	2.88	0.41
26:DE:25:GLU:O	26:DE:28:VAL:HG22	2.20	0.41
33:DL:112:LEU:HD23	33:DL:112:LEU:H	1.85	0.41
22:BA:2307:G:C2	22:BA:2311:A:N7	2.88	0.41
5:CE:45:VAL:O	5:CE:71:ILE:HG22	2.19	0.41
47:DZ:16:LEU:O	47:DZ:20:LYS:HG3	2.20	0.41
22:DA:2677:G:H2'	22:DA:2678:C:H6	1.84	0.41
48:B0:39:ARG:HG2	48:B0:40:HIS:CE1	2.52	0.41
11:AK:125:LYS:C	21:AU:33:ARG:HH22	2.22	0.41
41:BT:2:ILE:HB	41:BT:3:ARG:CZ	2.50	0.41
22:DA:271:G:C2	22:DA:367:G:N3	2.88	0.41
32:DK:16:ALA:CB	32:DK:45:GLU:CG	2.96	0.41
29:BH:131:SER:O	29:BH:132:PHE:HB3	2.21	0.41
27:DF:102:LEU:O	27:DF:103:ILE:HB	2.19	0.41
1:CA:101:A:C5	1:CA:102:G:C8	3.08	0.41
1:CA:71:A:C6	1:CA:100:G:N7	2.88	0.41
1:CA:64:G:N7	1:CA:99:C:C4	2.87	0.41
1:CA:276:G:O2'	1:CA:277:C:C5'	2.68	0.41
22:DA:988:A:H2	22:DA:989:G:C2	2.35	0.41
22:DA:990:A:O2'	22:DA:991:C:H5''	2.19	0.41
1:AA:414:A:C2'	1:AA:415:A:C8	2.87	0.41
23:DB:28:C:H2'	23:DB:29:A:O4'	2.19	0.41
23:DB:64:G:C6	23:DB:65:U:C4	3.07	0.41
42:BU:11:ILE:HG13	42:BU:21:ARG:HG3	2.02	0.41
42:BU:5:ARG:O	42:BU:6:ARG:C	2.58	0.41
22:DA:2202:U:C5'	22:DA:2203:U:OP1	2.67	0.41
22:BA:1460:U:H3'	22:BA:1461:C:H5'	2.02	0.41
25:DD:16:THR:OG1	25:DD:17:GLU:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:957:U:C2	1:AA:959:A:OP2	2.74	0.41
1:CA:1250:A:C6	1:CA:1251:A:C5	3.07	0.41
1:CA:1004:A:C4	1:CA:1026:G:N7	2.89	0.41
22:BA:1324:G:H1'	22:BA:1616:A:N6	2.35	0.41
22:DA:2312:U:C5'	27:DF:70:ARG:NH1	2.83	0.41
41:BT:50:LEU:HD23	46:BY:26:PHE:CD1	2.56	0.41
20:CT:63:LYS:O	20:CT:63:LYS:HG3	2.20	0.41
16:AP:36:VAL:HG13	16:AP:36:VAL:O	2.20	0.41
18:AR:19:GLU:CD	18:AR:50:TYR:HD1	2.23	0.41
22:DA:415:A:O2'	22:DA:1865:U:C5'	2.68	0.41
1:AA:1336:C:O2'	1:AA:1337:G:P	2.78	0.41
22:DA:2296:U:H4'	22:DA:2297:A:OP1	2.19	0.41
22:DA:688:U:H1'	22:DA:786:C:O2'	2.20	0.41
22:DA:686:U:C6	22:DA:788:A:C2	3.08	0.41
2:AB:101:THR:HG22	2:AB:174:GLU:CD	2.38	0.41
27:DF:65:LEU:CG	27:DF:67:THR:CG2	2.99	0.41
35:DN:60:VAL:O	35:DN:64:ARG:CD	2.68	0.41
35:DN:67:PHE:CD1	35:DN:67:PHE:C	2.94	0.41
17:AQ:60:ILE:HG22	17:AQ:72:TRP:HE3	1.80	0.41
29:DH:40:THR:O	29:DH:41:LYS:HB2	2.20	0.41
2:CB:128:LEU:HB3	2:CB:131:LYS:CB	2.38	0.41
13:AM:15:VAL:CA	13:AM:33:LEU:CD1	2.94	0.41
1:AA:109:A:C6	1:AA:326:G:C6	3.08	0.41
1:CA:885:G:O2'	1:CA:886:G:H5'	2.20	0.41
39:BR:66:HIS:ND1	39:BR:94:THR:CG2	2.83	0.41
13:CM:69:ARG:HA	13:CM:72:ILE:CG2	2.50	0.41
41:BT:5:GLU:OE1	46:BY:22:LEU:HD22	2.20	0.41
38:DQ:20:ALA:O	38:DQ:23:TYR:CD1	2.73	0.41
38:DQ:31:TYR:C	38:DQ:31:TYR:CD2	2.93	0.41
22:DA:1936:A:H5''	22:DA:1937:A:C5'	2.50	0.41
22:BA:2800:A:H3'	22:BA:2801:G:H5'	2.01	0.41
24:BC:172:THR:HA	24:BC:182:LYS:HA	2.02	0.41
22:DA:2630:G:C8	22:DA:2894:G:C8	3.07	0.41
32:DK:27:GLY:O	32:DK:29:HIS:N	2.53	0.41
15:AO:20:ASP:OD2	15:AO:23:SER:HB2	2.20	0.41
22:DA:2579:C:O2	22:DA:2579:C:C2'	2.68	0.41
22:DA:1905:C:H2'	22:DA:1930:G:C8	2.54	0.41
49:B1:46:VAL:CG1	49:B1:47:ILE:N	2.81	0.41
22:BA:901:C:H2'	22:BA:902:C:C6	2.50	0.41
13:AM:30:LYS:O	13:AM:34:ALA:HB3	2.20	0.41
1:AA:862:C:O2'	1:AA:863:U:H5'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:716:A:H2'	22:DA:717:C:C5'	2.46	0.41
22:BA:287:G:C2	22:BA:354:A:C2	3.07	0.41
25:BD:73:VAL:CG2	25:BD:74:GLU:H	2.29	0.41
27:BF:106:ALA:CA	27:BF:108:PRO:HD2	2.50	0.41
18:CR:46:THR:HG23	18:CR:46:THR:O	2.20	0.41
24:BC:7:PRO:HB3	24:BC:13:ARG:HB2	2.01	0.41
30:DI:20:SER:H	30:DI:21:PRO:HD3	1.86	0.41
22:DA:270:A:C2	22:DA:369:U:H4'	2.54	0.41
26:DE:6:LYS:HG2	26:DE:7:ASP:OD1	2.21	0.41
28:BG:115:GLN:CD	28:BG:115:GLN:N	2.68	0.41
1:AA:550:G:C6	1:AA:551:U:C4	3.07	0.41
22:BA:2075:U:H2'	22:BA:2238:G:H22	1.82	0.41
39:BR:37:GLU:O	39:BR:37:GLU:OE1	2.38	0.41
1:AA:1451:U:O5'	1:AA:1452:C:C5	2.74	0.41
24:BC:236:GLY:O	24:BC:237:ARG:HB2	2.20	0.41
22:BA:1638:C:N4	22:BA:1639:C:C4	2.88	0.41
22:DA:430:A:H2'	22:DA:431:U:H5'	2.01	0.41
25:DD:36:GLN:NE2	25:DD:38:LYS:HZ1	2.17	0.41
1:CA:835:U:H3'	1:CA:835:U:C6	2.55	0.41
16:AP:40:ASN:HA	16:AP:41:PRO:HD2	1.77	0.41
22:BA:648:G:O2'	22:BA:2351:G:OP1	2.16	0.41
6:CF:21:MET:HA	6:CF:24:ARG:NH2	2.35	0.41
26:DE:115:GLN:O	26:DE:117:ARG:N	2.53	0.41
6:AF:97:THR:CG2	6:AF:98:GLU:N	2.83	0.41
6:AF:99:ALA:O	6:AF:100:SER:CB	2.66	0.41
11:CK:85:VAL:HG12	11:CK:86:LYS:N	2.36	0.41
22:DA:1691:C:N4	22:DA:1692:U:C4	2.88	0.41
1:CA:470:C:O5'	1:CA:470:C:H6	2.04	0.41
29:DH:103:VAL:C	29:DH:105:ALA:N	2.73	0.41
45:BX:21:LEU:HD23	45:BX:21:LEU:HA	1.70	0.41
22:BA:171:U:H2'	22:BA:172:A:C8	2.55	0.41
1:AA:1058:G:H2'	1:AA:1059:C:H6	1.85	0.41
9:AI:41:GLU:HB3	9:AI:42:THR:H	1.59	0.41
22:BA:1313:U:H4'	22:BA:1332:G:H4'	2.02	0.41
22:BA:2611:C:H6	22:BA:2611:C:C5'	2.34	0.41
26:DE:124:PHE:HZ	26:DE:141:MET:HE1	1.85	0.41
22:BA:2698:U:H2'	22:BA:2699:C:C6	2.55	0.41
22:BA:350:G:C2'	22:BA:351:C:H5'	2.50	0.41
22:BA:2854:G:H2'	22:BA:2855:C:C6	2.56	0.41
22:DA:2064:C:H1'	22:DA:2450:A:C6	2.56	0.41
1:AA:739:C:H2'	1:AA:740:U:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:17:VAL:HG22	5:AE:18:ASN:N	2.35	0.41
22:BA:2842:G:C4	22:BA:2876:G:N2	2.89	0.41
30:BI:93:ASN:OD1	30:BI:136:GLY:HA2	2.21	0.41
22:BA:2700:A:N1	22:BA:2708:G:C6	2.89	0.41
27:BF:47:LYS:NZ	27:BF:47:LYS:CB	2.83	0.41
6:CF:33:GLU:N	6:CF:33:GLU:CD	2.74	0.41
16:CP:9:HIS:HB3	16:CP:10:GLY:H	1.66	0.41
22:BA:2284:A:C2'	22:BA:2285:C:H5'	2.50	0.41
22:BA:2007:U:H2'	22:BA:2008:C:C6	2.54	0.41
37:BP:53:GLY:O	37:BP:54:LEU:C	2.59	0.41
1:CA:237:G:C2'	1:CA:238:A:H5'	2.51	0.41
22:BA:1070:A:N3	30:BI:9:LYS:CG	2.83	0.41
8:AH:112:ASP:O	8:AH:113:ARG:C	2.58	0.41
22:BA:2052:A:H2'	22:BA:2053:G:H8	1.86	0.41
1:CA:370:C:C3'	1:CA:371:A:H5'	2.48	0.41
1:CA:62:U:C4'	1:CA:378:G:N2	2.83	0.41
22:DA:728:G:C4	22:DA:730:A:C8	3.08	0.41
30:DI:52:LEU:HD11	30:DI:78:LEU:CD2	2.50	0.41
30:DI:78:LEU:C	30:DI:80:LYS:H	2.23	0.41
35:DN:31:HIS:C	35:DN:33:ILE:N	2.74	0.41
1:AA:1118:U:O2'	1:AA:1119:C:H5'	2.20	0.41
1:AA:1258:G:O2'	1:AA:1259:C:P	2.77	0.41
12:CL:29:LYS:HB2	12:CL:81:ILE:HG22	2.01	0.41
22:DA:139:U:C4	41:DT:1:MET:N	2.85	0.41
22:DA:301:G:O2'	22:DA:302:C:P	2.78	0.41
22:DA:297:G:C2	22:DA:342:A:C2	3.09	0.41
41:DT:7:LEU:C	41:DT:9:LYS:H	2.24	0.41
22:DA:1810:A:C2'	22:DA:1811:G:O4'	2.65	0.41
22:DA:2209:G:C6	22:DA:2210:U:C4	3.07	0.41
22:DA:1373:A:C4'	22:DA:2212:A:H1'	2.50	0.41
22:DA:469:G:OP2	26:DE:54:GLY:O	2.39	0.41
22:DA:2753:A:O2'	22:DA:2754:U:C5'	2.68	0.41
22:DA:2751:G:H5'	28:DG:2:ARG:HH21	1.85	0.41
1:CA:1093:A:H2'	1:CA:1095:U:C6	2.56	0.41
1:CA:1157:A:C2	1:CA:1181:G:C8	3.09	0.41
1:AA:211:G:C5	1:AA:212:G:H1'	2.55	0.41
1:AA:467:U:H2'	1:AA:467:U:H6	1.68	0.41
22:DA:1539:U:O2'	22:DA:1540:G:P	2.78	0.41
43:DV:69:GLU:HG2	43:DV:70:ILE:H	1.84	0.41
18:CR:62:ARG:HD3	18:CR:69:TYR:CE2	2.55	0.41
25:DD:146:ILE:HG13	25:DD:155:VAL:CG2	2.40	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2392:A:O3'	51:D3:26:ALA:HB1	2.19	0.41
17:AQ:78:VAL:C	17:AQ:79:GLU:HG3	2.41	0.41
22:DA:511:U:H5'	22:DA:1236:G:OP1	2.21	0.41
22:DA:583:G:C6	22:DA:584:C:C4	3.08	0.41
35:BN:55:ALA:HA	35:BN:80:PHE:CE1	2.55	0.41
1:CA:985:C:O2'	1:CA:986:U:C6	2.67	0.41
19:CS:54:ARG:CG	19:CS:55:GLN:N	2.82	0.41
26:DE:24:ASN:HB3	26:DE:27:LEU:HB3	2.03	0.41
1:AA:922:G:N2	1:AA:1396:A:C5	2.88	0.41
11:AK:22:ILE:HG22	11:AK:31:VAL:HG13	2.02	0.41
32:BK:71:ARG:HB2	32:BK:72:PRO:CD	2.22	0.41
33:DL:100:ILE:O	33:DL:100:ILE:HG23	2.20	0.41
33:DL:100:ILE:O	33:DL:101:ILE:HG12	2.21	0.41
36:BO:78:VAL:CG2	36:BO:79:ALA:N	2.83	0.41
22:DA:2874:C:O2'	22:DA:2875:C:C5'	2.69	0.41
6:AF:6:ILE:HB	6:AF:62:MET:HB3	2.01	0.41
22:DA:663:G:O6	22:DA:664:G:O6	2.39	0.41
1:CA:247:G:C6	1:CA:278:G:N1	2.88	0.41
22:DA:976:G:O2'	22:DA:977:G:H5'	2.20	0.41
22:DA:1655:A:C5'	25:DD:118:PHE:CE1	3.03	0.41
32:BK:20:MET:O	32:BK:41:ILE:HD12	2.20	0.41
22:DA:1555:G:HO2'	22:DA:1556:C:H5'	1.82	0.41
22:DA:1004:U:C4'	22:DA:1010:A:C6	3.03	0.41
1:CA:1348:U:OP1	9:CI:111:GLU:N	2.51	0.41
7:CG:4:ARG:HE	7:CG:6:ILE:HA	1.84	0.41
7:CG:7:GLY:O	7:CG:8:GLN:CB	2.68	0.41
22:DA:2307:G:O2'	22:DA:2308:G:C8	2.69	0.41
42:BU:36:GLU:HG3	42:BU:36:GLU:O	2.20	0.41
13:CM:16:ILE:CD1	13:CM:16:ILE:N	2.81	0.41
22:BA:1082:U:C4	22:BA:1083:U:N3	2.87	0.41
29:BH:27:ARG:HD3	29:BH:27:ARG:HA	1.85	0.41
42:DU:60:LYS:CE	42:DU:60:LYS:HA	2.50	0.41
22:DA:814:C:C2	22:DA:1194:A:C2	3.08	0.41
4:AD:114:ARG:O	4:AD:115:GLN:C	2.59	0.41
22:BA:1274:A:N3	22:BA:1297:C:H1'	2.35	0.41
22:BA:602:A:C2	22:BA:656:G:C5	3.09	0.41
1:CA:825:A:C5	1:CA:826:C:C5	3.09	0.41
27:DF:67:THR:HG23	27:DF:86:CYS:HA	2.00	0.41
12:AL:2:THR:HB	12:AL:5:GLN:H	1.85	0.41
22:DA:2356:U:C5'	44:DW:16:GLU:HG3	2.51	0.41
22:BA:1905:C:H4'	22:BA:1929:G:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:61:VAL:CG1	29:DH:62:LEU:N	2.77	0.41
22:BA:2013:A:OP1	40:BS:96:ILE:HA	2.20	0.41
22:BA:153:U:H2'	22:BA:154:U:C5'	2.50	0.41
26:BE:111:GLU:HG2	26:BE:114:ARG:NH1	2.35	0.41
37:BP:33:GLU:OE2	37:BP:38:ARG:NH1	2.54	0.41
22:BA:407:G:C2'	22:BA:408:G:H5'	2.50	0.41
28:DG:122:ALA:CB	28:DG:132:LEU:HA	2.49	0.41
1:AA:199:A:C2	1:AA:200:G:C4	3.08	0.41
22:DA:2868:A:O2'	22:DA:2869:G:H5'	2.21	0.41
1:AA:1061:G:C5	1:AA:1197:A:C2	3.09	0.41
1:AA:1171:A:C2	1:AA:1172:C:C2	3.09	0.41
37:BP:91:VAL:O	37:BP:92:ARG:HG2	2.21	0.41
1:AA:1399:C:C4	1:AA:1502:A:C2	3.08	0.41
1:AA:243:A:C6	1:AA:246:A:N7	2.89	0.41
22:BA:1378:A:H4'	22:BA:1379:U:OP1	2.20	0.41
23:BB:49:C:H6	23:BB:49:C:O5'	2.03	0.41
22:DA:289:G:N3	22:DA:352:A:C2	2.89	0.41
22:DA:352:A:C4	22:DA:353:C:C1'	3.02	0.41
22:DA:287:G:C6	22:DA:354:A:C6	3.09	0.41
35:BN:67:PHE:CE2	35:BN:71:ARG:NH1	2.89	0.41
1:AA:307:C:O5'	1:AA:307:C:H6	2.03	0.41
22:BA:872:U:H2'	22:BA:873:C:H6	1.85	0.41
22:BA:2209:G:C6	22:BA:2210:U:C4	3.09	0.41
1:AA:868:C:H2'	1:AA:869:G:O4'	2.21	0.41
22:BA:287:G:C4	22:BA:354:A:C2	3.08	0.41
22:BA:288:U:C2'	22:BA:289:G:H5'	2.50	0.41
22:DA:1179:G:C2	22:DA:1180:U:N1	2.88	0.41
23:BB:16:G:C5	23:BB:69:G:C2	3.08	0.41
38:DQ:44:TYR:O	38:DQ:45:ALA:C	2.59	0.41
1:AA:123:U:H2'	1:AA:124:C:C6	2.55	0.41
22:DA:1298:C:C5	22:DA:1643:G:N2	2.88	0.41
26:DE:136:GLN:OE1	26:DE:136:GLN:HA	2.19	0.41
1:CA:659:U:C6	1:CA:660:C:C5	3.09	0.41
46:BY:39:GLN:O	46:BY:42:LEU:HB2	2.20	0.41
2:AB:71:THR:CG2	2:AB:72:LYS:N	2.83	0.41
2:AB:94:ARG:HD3	2:AB:94:ARG:HA	1.81	0.41
25:BD:16:THR:OG1	25:BD:18:ASP:OD1	2.32	0.41
22:BA:1845:G:C2'	22:BA:1846:G:C5'	2.98	0.41
4:AD:124:VAL:HG23	4:AD:125:ASN:N	2.34	0.41
22:DA:736:C:C4	22:DA:737:C:C5	3.09	0.41
28:BG:39:ALA:HB1	28:BG:57:TYR:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:202:ILE:HD12	25:DD:202:ILE:H	1.85	0.41
1:AA:778:G:H2'	1:AA:779:C:H5'	2.02	0.41
22:BA:2665:A:C2	22:BA:2666:C:C2	3.08	0.41
11:AK:70:ALA:O	11:AK:73:VAL:HG22	2.20	0.41
1:AA:709:U:H2'	1:AA:710:G:H8	1.86	0.41
11:CK:22:ILE:HD11	11:CK:31:VAL:HG22	2.02	0.41
32:BK:13:ASN:C	32:BK:15:GLY:H	2.23	0.41
22:BA:2811:G:H2'	22:BA:2812:G:O4'	2.21	0.41
1:AA:11:G:H2'	1:AA:12:U:C6	2.54	0.41
11:AK:96:ILE:O	11:AK:97:ARG:C	2.59	0.41
14:AN:10:VAL:O	14:AN:14:ALA:HB2	2.21	0.41
1:CA:787:A:O2'	1:CA:788:U:H5'	2.21	0.41
1:CA:683:G:C2	1:CA:684:U:C2	3.08	0.41
22:BA:2874:C:H2'	22:BA:2875:C:C6	2.54	0.41
9:CI:79:ARG:O	9:CI:83:THR:HG22	2.20	0.41
22:BA:797:G:N7	56:BA:3320:HOH:O	2.37	0.41
22:DA:2157:G:C2	22:DA:2157:G:OP2	2.73	0.41
1:AA:1483:A:H2'	1:AA:1484:C:O4'	2.20	0.41
1:CA:680:C:H2'	1:CA:681:A:H8	1.85	0.41
3:AC:32:LEU:HD13	3:AC:32:LEU:HA	1.91	0.41
24:BC:32:LEU:HA	24:BC:32:LEU:HD23	1.76	0.41
37:DP:65:ASN:HD22	37:DP:65:ASN:N	2.18	0.41
2:AB:103:TRP:CZ2	2:AB:154:GLY:HA2	2.55	0.41
1:AA:1267:C:H2'	1:AA:1268:G:H5'	2.02	0.41
37:BP:50:ARG:HG2	37:BP:56:SER:HA	2.01	0.41
5:AE:121:ASN:HD22	5:AE:122:VAL:H	1.69	0.41
22:DA:1803:A:H2'	22:DA:1804:C:C6	2.55	0.41
26:DE:109:LEU:O	26:DE:112:LEU:CB	2.68	0.41
22:DA:2336:A:H1'	22:DA:2385:C:H5''	2.02	0.41
22:DA:2388:A:H5'	22:DA:2389:G:OP2	2.20	0.41
44:DW:39:GLN:CG	44:DW:42:THR:HB	2.45	0.41
44:DW:54:ARG:O	44:DW:56:HIS:N	2.53	0.41
22:DA:729:G:C2'	22:DA:729:G:N3	2.83	0.41
1:AA:1258:G:O2'	1:AA:1259:C:O5'	2.38	0.41
11:CK:33:ILE:HG13	11:CK:69:CYS:SG	2.60	0.41
22:DA:302:C:O2'	22:DA:303:G:O5'	2.38	0.41
42:DU:6:ARG:O	42:DU:24:VAL:HG11	2.21	0.41
22:DA:2217:G:C2'	22:DA:2218:G:H8	2.32	0.41
45:DX:8:GLY:O	45:DX:10:ARG:HG3	2.20	0.41
3:CC:136:ALA:CA	3:CC:139:ASN:HD21	2.33	0.41
39:BR:5:PHE:HA	39:BR:39:LEU:CD2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:53:PRO:HG3	28:DG:61:TRP:CE2	2.56	0.41
1:CA:1494:G:C6	1:CA:1495:U:C4	3.08	0.41
38:DQ:91:ARG:CZ	38:DQ:93:ILE:HG21	2.51	0.41
21:CU:29:ALA:C	21:CU:32:ARG:HB2	2.41	0.41
21:CU:41:THR:O	21:CU:45:LYS:HB3	2.20	0.41
37:BP:111:GLU:O	37:BP:113:LEU:HD22	2.20	0.41
22:DA:2023:C:O2'	22:DA:2024:G:C5'	2.68	0.41
22:BA:866:A:C3'	22:BA:866:A:C8	3.03	0.41
33:DL:56:PRO:HD2	33:DL:59:ARG:HD3	2.01	0.41
22:BA:1187:G:H5''	39:BR:83:TYR:CE2	2.56	0.41
22:DA:1324:G:H1'	22:DA:1616:A:H62	1.72	0.41
1:CA:593:U:C4	1:CA:594:U:C4	3.09	0.41
1:CA:644:U:O2'	1:CA:645:G:H5'	2.20	0.41
22:DA:1234:U:H2'	22:DA:1235:G:O4'	2.20	0.41
1:CA:1211:U:O2'	1:CA:1213:A:C2	2.71	0.41
1:CA:1219:A:C5	1:CA:1220:G:C8	3.08	0.41
20:AT:82:ILE:HD12	20:AT:82:ILE:C	2.41	0.41
33:DL:120:VAL:CG1	33:DL:121:THR:N	2.83	0.41
4:AD:134:TYR:C	4:AD:134:TYR:CD2	2.93	0.41
29:DH:4:ILE:O	29:DH:36:ALA:HB1	2.20	0.41
22:DA:1139:G:C2'	22:DA:1140:C:O5'	2.68	0.41
21:AU:3:ILE:N	21:AU:19:LYS:HZ1	2.18	0.41
9:CI:27:ILE:HD13	9:CI:62:LEU:CG	2.51	0.41
9:CI:29:ILE:HA	9:CI:64:ILE:O	2.20	0.41
27:DF:102:LEU:HD22	27:DF:102:LEU:N	2.36	0.41
1:CA:73:C:O2'	1:CA:74:A:C8	2.72	0.41
12:AL:24:GLU:CD	12:AL:29:LYS:NZ	2.74	0.41
22:DA:492:A:C2	40:DS:49:LYS:HE2	2.55	0.41
22:BA:764:A:H3'	22:BA:765:C:H5'	2.02	0.41
1:CA:247:G:N2	1:CA:248:C:C2	2.88	0.41
1:CA:274:A:O2'	1:CA:275:G:H8	2.04	0.41
38:DQ:46:TYR:HB2	38:DQ:49:ARG:HH21	1.85	0.41
23:DB:15:A:OP1	23:DB:108:A:H5'	2.20	0.41
10:AJ:56:HIS:HD2	10:AJ:57:VAL:CG1	2.28	0.41
27:BF:98:PHE:O	27:BF:98:PHE:CD2	2.74	0.41
22:DA:1553:A:N7	22:DA:1555:G:C5	2.88	0.41
1:AA:1312:G:N2	1:AA:1313:U:C2	2.88	0.41
1:CA:1004:A:C2	1:CA:1026:G:C5	3.09	0.41
22:BA:1126:A:H4'	22:BA:1127:A:H5''	2.03	0.41
1:AA:1117:A:N1	1:AA:1184:G:C6	2.88	0.41
22:BA:2151:U:C5	22:BA:2152:G:N7	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:94:GLU:HG3	4:AD:99:ASN:HD21	1.83	0.41
10:AJ:41:PRO:O	10:AJ:42:LEU:CB	2.65	0.41
10:AJ:41:PRO:HG2	10:AJ:42:LEU:H	1.86	0.41
1:AA:625:U:O2'	1:AA:626:G:C5'	2.68	0.41
1:CA:509:A:OP1	4:CD:50:TYR:CD2	2.73	0.41
15:CO:23:SER:O	15:CO:26:VAL:HB	2.21	0.41
1:AA:87:C:HO2'	1:AA:88:U:C4'	2.33	0.41
22:DA:1196:C:C1'	22:DA:1226:A:C4	3.02	0.41
22:DA:234:U:C4'	22:DA:234:U:C6	3.04	0.41
22:DA:406:G:O2'	22:DA:407:G:H8	2.04	0.41
1:CA:756:C:C2'	1:CA:757:U:O5'	2.67	0.41
22:DA:686:U:N3	50:D2:12:ARG:HB2	2.17	0.41
22:BA:83:A:N6	22:BA:101:A:C5	2.89	0.41
3:CC:46:LEU:HD11	3:CC:86:LEU:HD13	2.01	0.41
37:BP:37:LYS:HD3	37:BP:37:LYS:H	1.85	0.41
22:BA:785:G:C6	22:BA:786:C:C4	3.08	0.41
1:AA:653:U:H2'	1:AA:653:U:H6	1.65	0.41
22:BA:1508:A:O2'	22:BA:1509:A:H8	2.02	0.41
44:DW:43:LYS:HD2	44:DW:79:ILE:CD1	2.39	0.41
22:DA:2865:U:C5	22:DA:2866:U:C2	3.08	0.41
9:AI:21:LYS:O	9:AI:61:ASP:N	2.47	0.41
22:DA:867:C:O2'	22:DA:868:U:C5'	2.68	0.41
22:DA:1824:G:OP2	22:DA:1824:G:C8	2.73	0.41
22:DA:2151:U:C2	22:DA:2152:G:N7	2.88	0.41
1:AA:1087:G:C2	1:AA:1088:G:C5	3.09	0.41
22:DA:2776:A:N1	22:DA:2782:G:H1'	2.36	0.41
22:DA:2825:G:H3'	22:DA:2826:A:C8	2.52	0.41
22:BA:1733:G:C2	22:BA:1734:G:C8	3.09	0.41
22:DA:1833:C:C6	22:DA:1834:U:C5	3.08	0.41
22:BA:2259:U:C6	22:BA:2427:C:C4	3.09	0.41
22:DA:1846:G:H5''	22:DA:1847:A:OP2	2.20	0.41
39:DR:1:MET:CE	39:DR:1:MET:HA	2.51	0.41
6:AF:8:PHE:CE2	6:AF:60:VAL:CG1	3.03	0.41
22:BA:869:G:C4'	34:BM:8:LYS:HD3	2.49	0.41
22:BA:1918:A:C3'	22:BA:1920:C:H41	2.33	0.41
22:DA:1413:A:H2'	22:DA:1414:C:C5	2.52	0.41
22:DA:2366:A:C2	22:DA:2367:G:H1'	2.56	0.41
22:BA:2808:G:O2'	22:BA:2809:A:P	2.78	0.41
1:CA:315:A:H5''	1:CA:317:U:OP2	2.20	0.41
22:DA:1598:A:N1	22:DA:1599:U:C2	2.88	0.41
4:AD:159:GLU:C	4:AD:161:ALA:N	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:112:LYS:HZ1	30:DI:128:ILE:HD12	1.84	0.41
22:DA:308:G:C6	22:DA:501:A:C4	3.08	0.41
2:CB:30:ILE:HD11	2:CB:188:THR:HG22	2.01	0.41
22:BA:1858:A:H62	22:BA:1884:G:H1'	1.86	0.41
30:DI:23:VAL:O	30:DI:25:PRO:HD2	2.20	0.41
1:CA:675:A:H1'	11:CK:117:HIS:ND1	2.36	0.41
1:CA:715:A:C2'	1:CA:716:A:H5'	2.50	0.41
22:DA:2468:A:O2'	22:DA:2469:A:P	2.79	0.41
22:DA:2469:A:C2	22:DA:2482:A:H1'	2.54	0.41
22:DA:2469:A:H2'	22:DA:2470:G:O5'	2.19	0.41
22:BA:1386:C:H5''	22:BA:1396:U:O2	2.21	0.41
36:BO:49:VAL:CG1	36:BO:50:ALA:N	2.82	0.41
4:CD:169:TRP:O	4:CD:182:LYS:HB3	2.21	0.41
27:BF:16:MET:O	27:BF:20:ASN:CA	2.65	0.41
22:BA:1359:A:N7	22:BA:1373:A:C2	2.89	0.41
22:BA:93:G:O2'	22:BA:94:A:C5'	2.67	0.41
18:CR:28:LEU:O	18:CR:30:ASN:N	2.54	0.41
1:CA:877:G:O2'	1:CA:878:A:H5'	2.20	0.41
1:CA:145:G:C2	1:CA:146:G:C8	3.08	0.41
1:CA:618:C:H3'	1:CA:619:U:C5'	2.50	0.41
33:DL:21:ARG:CZ	33:DL:21:ARG:HB3	2.49	0.41
2:AB:49:PHE:C	2:AB:52:ALA:H	2.23	0.41
3:AC:125:ARG:O	3:AC:126:ARG:HB3	2.20	0.41
1:AA:20:U:C2'	1:AA:21:G:H5'	2.49	0.41
27:DF:71:LYS:HG3	27:DF:73:VAL:H	1.86	0.41
7:AG:7:GLY:O	7:AG:8:GLN:CB	2.68	0.41
22:BA:182:A:C6	22:BA:183:C:C4	3.08	0.41
24:DC:44:ASN:C	24:DC:46:GLY:H	2.24	0.41
35:BN:74:GLU:O	35:BN:77:ALA:HB3	2.20	0.41
2:AB:123:GLY:O	2:AB:125:PHE:CD2	2.72	0.41
22:BA:310:A:O2'	22:BA:311:A:O5'	2.36	0.41
1:CA:311:C:C3'	1:CA:311:C:C6	3.02	0.41
28:BG:159:LYS:HE2	28:BG:159:LYS:HB3	1.86	0.41
1:AA:1418:A:C2	1:AA:1483:A:C2	3.09	0.41
26:BE:40:ARG:HD2	26:BE:92:HIS:ND1	2.35	0.41
15:CO:18:ALA:O	15:CO:19:ASN:HB3	2.19	0.41
22:BA:2701:U:H2'	22:BA:2702:G:OP1	2.20	0.41
22:BA:2527:C:C2'	22:BA:2528:U:H5'	2.51	0.41
49:D1:19:PHE:N	49:D1:19:PHE:CD1	2.88	0.41
33:BL:3:LEU:HD23	33:BL:3:LEU:HA	1.49	0.41
14:CN:41:TRP:HB3	14:CN:44:VAL:CG2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:51:GLN:O	38:BQ:52:ARG:C	2.58	0.41
22:BA:1078:U:H5''	22:BA:1079:C:O5'	2.20	0.41
22:DA:1821:A:H5'	24:DC:156:SER:OG	2.20	0.41
22:DA:1821:A:O5'	22:DA:1821:A:H8	2.04	0.41
22:DA:2206:C:C2	22:DA:2207:C:C6	3.09	0.41
24:DC:181:ARG:HH11	24:DC:265:PHE:HD1	1.64	0.41
1:CA:1134:G:N1	1:CA:1141:C:N4	2.68	0.41
10:CJ:84:VAL:CG2	10:CJ:85:ASP:N	2.60	0.41
4:AD:12:ARG:HG2	4:AD:33:ILE:HD12	2.02	0.41
1:CA:392:C:H2'	1:CA:393:A:C8	2.53	0.41
22:DA:915:C:O2'	22:DA:916:G:C5'	2.56	0.41
44:DW:80:SER:O	44:DW:81:ILE:HG22	2.21	0.41
22:DA:1784:A:H4'	22:DA:1785:A:C5'	2.44	0.41
22:DA:728:G:C2	22:DA:730:A:C5	3.09	0.41
22:DA:1090:A:C2	22:DA:1091:G:C1'	3.03	0.41
48:D0:42:ILE:HD12	48:D0:48:TYR:CD2	2.56	0.41
9:AI:90:ASP:OD2	9:AI:92:SER:HB3	2.21	0.41
22:DA:109:C:O2	22:DA:109:C:H2'	2.21	0.41
42:DU:39:ASN:ND2	42:DU:63:ALA:C	2.74	0.41
22:DA:2210:U:HO2'	22:DA:2211:A:P	2.44	0.41
22:DA:46:G:N2	22:DA:47:C:C6	2.88	0.41
22:DA:1808:A:N6	45:DX:27:ARG:CD	2.84	0.41
22:DA:2756:U:H1'	22:DA:2757:A:H5'	2.01	0.41
1:CA:204:G:C4	1:CA:205:A:C8	3.09	0.41
22:DA:136:G:O5'	22:DA:136:G:H8	2.03	0.41
13:AM:94:LEU:CB	13:AM:95:PRO:HD2	2.49	0.41
1:AA:74:A:C2	1:AA:75:G:C5	3.09	0.41
31:DJ:40:HIS:HE1	31:DJ:52:ASP:OD1	2.04	0.41
38:DQ:57:ARG:C	38:DQ:59:LEU:N	2.73	0.41
38:BQ:65:ASN:HD22	38:BQ:69:ARG:HH22	1.52	0.41
21:CU:41:THR:O	21:CU:45:LYS:CB	2.68	0.41
39:DR:38:VAL:O	39:DR:53:PHE:HA	2.21	0.41
10:CJ:10:LEU:HB2	10:CJ:72:ARG:HB2	2.02	0.41
32:DK:119:ALA:O	32:DK:120:PRO:C	2.59	0.41
22:DA:2050:C:O2'	25:DD:146:ILE:HG21	2.21	0.41
22:DA:678:C:H2'	22:DA:679:C:H6	1.69	0.41
22:DA:1607:C:H1'	22:DA:1621:U:C4	2.55	0.41
1:CA:643:C:C5'	8:CH:31:LEU:HD13	2.49	0.41
26:BE:177:PRO:O	26:BE:180:LEU:HB2	2.19	0.41
1:CA:1315:U:C6	1:CA:1316:G:N7	2.89	0.41
1:CA:983:A:HO2'	1:CA:984:C:C5'	2.32	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:13:VAL:HA	14:CN:59:GLN:NE2	2.36	0.41
1:AA:865:A:H2	1:AA:918:A:H4'	1.85	0.41
1:AA:1021:A:H2'	1:AA:1022:A:H5'	1.95	0.41
7:CG:74:VAL:H	7:CG:140:VAL:CG1	2.34	0.41
10:AJ:40:ILE:O	10:AJ:72:ARG:HA	2.20	0.41
25:DD:4:LEU:HB3	25:DD:32:ASN:HD21	1.86	0.41
9:CI:27:ILE:HG21	9:CI:34:LEU:HA	2.03	0.41
22:BA:740:C:H2'	22:BA:740:C:O2	2.19	0.41
22:DA:1662:U:H3	22:DA:1998:A:H61	1.67	0.41
25:DD:116:LYS:HD3	35:DN:1:MET:HE2	2.03	0.41
31:BJ:17:VAL:HG13	31:BJ:55:ILE:HG12	2.03	0.41
27:BF:6:TYR:O	27:BF:10:GLU:O	2.39	0.41
1:CA:93:U:HO2'	1:CA:95:C:H5	1.64	0.41
1:CA:70:U:C2	1:CA:94:G:C5	3.09	0.41
24:DC:184:GLU:C	24:DC:186:ASP:N	2.74	0.41
22:DA:974:G:OP1	22:DA:1187:G:H4'	2.20	0.41
22:DA:975:A:C2	22:DA:976:G:N9	2.88	0.41
1:AA:511:C:H2'	1:AA:534:U:O2	2.20	0.41
22:BA:1459:G:H8	22:BA:1459:G:H2'	1.71	0.41
22:DA:1627:G:C6	22:DA:1640:A:N7	2.88	0.41
32:DK:107:LEU:O	32:DK:112:PHE:HB2	2.21	0.41
1:AA:978:A:C2	1:AA:1318:A:C4	3.08	0.41
14:AN:27:LYS:HA	14:AN:30:ILE:CG2	2.50	0.41
1:AA:1160:G:C2	1:AA:1161:C:C6	3.08	0.41
23:BB:90:C:C4'	23:BB:90:C:C6	3.03	0.41
22:DA:843:G:H2'	22:DA:844:A:H8	1.85	0.41
31:BJ:65:THR:HG23	31:BJ:66:GLY:N	2.36	0.41
1:AA:371:A:C2	1:AA:372:C:C5	3.09	0.41
22:BA:1585:C:O5'	22:BA:1585:C:H6	2.03	0.41
33:BL:112:LEU:HD12	33:BL:130:GLY:CA	2.36	0.41
1:AA:1210:C:C2'	1:AA:1211:U:C5'	2.84	0.41
30:BI:49:GLU:HG2	30:BI:50:LYS:N	2.35	0.41
1:CA:322:C:H41	1:CA:328:C:H6	1.61	0.41
3:CC:135:ARG:C	3:CC:137:VAL:N	2.74	0.41
22:DA:2662:A:H2'	22:DA:2663:G:C5'	2.51	0.41
1:CA:557:G:C5	1:CA:558:G:C6	3.09	0.41
1:CA:1375:A:O2'	7:CG:101:ARG:NH2	2.53	0.41
1:AA:439:U:H2'	1:AA:440:C:H6	1.85	0.41
1:AA:439:U:O4'	4:AD:118:SER:O	2.39	0.41
22:DA:587:C:C5	22:DA:671:C:O2	2.73	0.41
23:DB:45:A:C5'	27:DF:91:ARG:HD2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:87:ARG:O	15:AO:88:ARG:C	2.59	0.41
22:DA:1707:G:C5	22:DA:1756:G:C6	3.09	0.41
47:BZ:33:HIS:O	47:BZ:34:THR:HB	2.20	0.41
1:CA:728:A:N6	1:CA:729:A:N6	2.68	0.41
23:BB:46:A:C4	23:BB:47:C:C6	3.09	0.41
22:BA:782:A:C6	24:BC:224:MET:HE1	2.56	0.41
22:BA:278:A:C2	22:BA:362:A:N7	2.89	0.41
13:AM:18:LEU:HA	13:AM:18:LEU:HD13	1.91	0.41
13:AM:21:ILE:H	13:AM:21:ILE:HD12	1.85	0.41
2:AB:132:GLU:O	2:AB:136:ARG:CB	2.56	0.41
1:CA:913:A:H4'	1:CA:914:A:C4'	2.50	0.41
28:DG:85:LYS:O	28:DG:86:LEU:HB2	2.21	0.41
22:DA:1712:U:C5	22:DA:1713:A:C4	3.09	0.41
36:BO:40:ILE:CG1	36:BO:47:VAL:HG12	2.41	0.41
1:AA:178:C:H2'	1:AA:179:A:O4'	2.20	0.41
17:CQ:59:GLU:HG3	17:CQ:75:VAL:HG22	2.03	0.41
1:CA:445:G:N3	1:CA:446:G:C8	2.89	0.41
5:CE:38:VAL:HG23	5:CE:66:ALA:HB1	2.02	0.41
22:DA:2148:G:O2'	22:DA:2149:U:C5	2.74	0.41
2:CB:147:LEU:N	2:CB:147:LEU:CD1	2.84	0.41
23:BB:88:C:H6	23:BB:88:C:C5'	2.24	0.41
1:AA:935:A:N3	1:AA:936:C:C6	2.88	0.41
22:BA:1720:U:H5''	22:BA:1721:G:OP2	2.20	0.41
22:DA:1197:G:O2'	22:DA:1198:U:H5'	2.19	0.41
15:AO:42:PHE:CE1	15:AO:55:LEU:HB2	2.55	0.41
1:AA:520:A:N7	1:AA:521:G:C8	2.88	0.41
28:DG:8:VAL:HG11	28:DG:49:LEU:HD23	2.01	0.41
27:DF:13:LYS:N	27:DF:13:LYS:HD2	2.35	0.41
1:AA:1219:A:C6	1:AA:1220:G:C6	3.08	0.41
30:BI:78:LEU:HD13	30:BI:108:ILE:CG2	2.46	0.41
30:BI:41:PHE:CE2	30:BI:45:THR:HG21	2.56	0.41
30:BI:57:VAL:HG12	30:BI:58:ILE:N	2.35	0.41
1:AA:858:G:N7	1:AA:869:G:N7	2.69	0.41
18:CR:51:GLN:HA	18:CR:51:GLN:OE1	2.20	0.41
22:BA:60:G:O2'	22:BA:61:C:P	2.78	0.41
34:BM:46:ILE:HD12	34:BM:47:GLU:CA	2.51	0.41
1:CA:968:A:C4	1:CA:1062:U:H4'	2.53	0.41
1:CA:966:G:O2'	1:CA:967:C:H5'	2.20	0.41
22:BA:1996:C:OP1	32:BK:31:ARG:NE	2.51	0.41
31:DJ:86:GLN:O	31:DJ:87:ALA:HB3	2.17	0.41
26:DE:72:SER:C	26:DE:74:LYS:H	2.24	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:19:PHE:O	27:BF:20:ASN:C	2.58	0.41
22:DA:2107:G:C2	22:DA:2108:A:C5	3.09	0.41
22:BA:404:A:C8	22:BA:406:G:C6	3.08	0.41
1:AA:39:G:C4	1:AA:40:C:C6	3.08	0.41
43:BV:26:PHE:HB2	43:BV:27:PRO:HD2	2.02	0.41
1:AA:418:C:H2'	1:AA:419:C:C6	2.55	0.41
1:CA:619:U:H3	4:CD:131:ILE:HD11	1.85	0.41
32:BK:99:ILE:HG22	32:BK:100:PHE:N	2.36	0.41
34:DM:63:ILE:CD1	34:DM:105:MET:HE2	2.50	0.41
30:DI:116:MET:HB3	30:DI:117:THR:H	1.58	0.41
2:AB:49:PHE:O	2:AB:52:ALA:N	2.53	0.41
22:BA:2599:G:O2'	22:BA:2600:A:H5'	2.20	0.41
22:BA:977:G:N3	22:BA:1001:A:H2	2.18	0.41
22:DA:1500:G:C2	22:DA:1501:G:C8	3.09	0.41
1:CA:60:A:HO2'	1:CA:61:G:P	2.44	0.41
12:CL:17:LYS:HD3	12:CL:17:LYS:N	2.33	0.41
1:AA:1012:A:C6	1:AA:1013:G:C6	3.08	0.41
1:AA:941:G:C2	1:AA:942:G:H1'	2.55	0.41
22:DA:1623:G:C6	22:DA:1624:U:C5	3.08	0.41
14:CN:65:GLN:HA	14:CN:65:GLN:NE2	2.36	0.41
30:BI:111:THR:O	30:BI:113:ALA:N	2.47	0.41
28:DG:11:PRO:HD2	28:DG:14:VAL:HG11	2.02	0.41
29:DH:49:ALA:O	29:DH:53:GLU:HB2	2.21	0.41
22:BA:1344:U:H2'	22:BA:1345:C:OP1	2.21	0.41
22:BA:1824:G:H2'	22:BA:1825:U:C6	2.55	0.41
32:DK:10:VAL:O	32:DK:10:VAL:HG12	2.20	0.41
22:BA:2255:G:C2'	22:BA:2256:G:H5'	2.51	0.41
34:DM:74:THR:HG22	34:DM:88:ASN:C	2.41	0.41
22:BA:2432:A:N1	45:BX:20:ALA:HA	2.36	0.41
22:BA:2095:A:H2'	22:BA:2096:C:C6	2.55	0.41
1:CA:1428:A:H2'	1:CA:1429:A:O4'	2.20	0.41
22:BA:2720:U:C4	22:BA:2872:A:N1	2.88	0.41
22:BA:995:C:P	38:BQ:52:ARG:HH11	2.43	0.41
45:BX:30:PRO:C	45:BX:32:LEU:HD13	2.40	0.41
5:AE:108:GLY:O	5:AE:109:ALA:HB3	2.20	0.41
41:DT:10:VAL:CG2	41:DT:11:LEU:H	2.23	0.41
41:DT:34:VAL:CG1	41:DT:34:VAL:O	2.61	0.41
1:CA:369:G:OP2	1:CA:388:G:C2	2.74	0.41
22:DA:2338:C:H6	22:DA:2338:C:H2'	1.56	0.41
22:DA:1776:G:C2	22:DA:1789:A:N3	2.89	0.41
24:DC:221:GLY:C	24:DC:223:ALA:N	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:743:A:OP1	25:DD:135:GLY:HA2	2.20	0.41
22:DA:1079:C:N4	22:DA:1088:A:C2	2.88	0.41
22:DA:1084:A:H2'	22:DA:1085:A:C5'	2.47	0.41
30:DI:54:ILE:HA	30:DI:55:PRO:HD2	1.89	0.41
12:CL:56:LEU:HB2	12:CL:58:ASN:OD1	2.20	0.41
22:DA:1206:G:O2'	22:DA:1207:C:H6	2.03	0.41
22:DA:1207:C:O2'	22:DA:1208:C:C6	2.56	0.41
22:DA:301:G:C8	22:DA:334:C:O2	2.74	0.41
22:DA:342:A:C2'	22:DA:343:C:O5'	2.69	0.41
46:DY:57:LEU:CD1	46:DY:60:LYS:CE	2.98	0.41
22:DA:1357:C:C2'	22:DA:1358:G:H5'	2.51	0.41
22:DA:396:G:O2'	22:DA:397:U:H6	2.02	0.41
22:DA:36:G:C2	22:DA:445:C:C4	3.08	0.41
22:DA:2753:A:O2'	22:DA:2754:U:O4'	2.37	0.41
34:DM:17:ASN:HB2	34:DM:38:ARG:HH12	1.86	0.41
34:DM:71:LYS:HA	34:DM:72:PRO:HD3	1.62	0.41
1:CA:1409:C:H5'	22:DA:1916:A:N1	2.36	0.41
1:AA:75:G:N1	1:AA:96:U:C4	2.88	0.41
38:DQ:88:GLU:CD	38:DQ:88:GLU:O	2.59	0.41
44:BW:46:ALA:HB3	44:BW:79:ILE:C	2.40	0.41
37:BP:85:VAL:HG12	37:BP:86:LYS:H	1.86	0.41
22:BA:1792:G:C2'	22:BA:1793:C:H5'	2.51	0.41
45:BX:67:LEU:O	45:BX:69:GLU:O	2.38	0.41
22:DA:2235:G:C5	22:DA:2236:U:C5	3.09	0.41
40:DS:36:LEU:O	40:DS:39:THR:OG1	2.39	0.41
22:DA:1292:G:H2'	22:DA:1293:C:C6	2.55	0.41
22:DA:1255:U:H6	26:DE:68:ALA:HB2	1.85	0.41
1:CA:1219:A:OP1	14:CN:52:ARG:CG	2.57	0.41
4:AD:83:GLY:O	4:AD:84:ASN:C	2.58	0.41
4:AD:90:LEU:HD21	4:AD:194:ILE:HD12	2.02	0.41
22:DA:605:G:N3	22:DA:657:U:O2'	2.51	0.41
22:DA:600:G:N2	22:DA:605:G:O3'	2.53	0.41
22:DA:635:C:OP2	33:DL:126:ARG:NH1	2.50	0.41
22:DA:627:A:H3'	33:DL:78:ARG:HH12	1.86	0.41
1:AA:1078:U:H3'	1:AA:1078:U:C6	2.55	0.41
22:BA:1876:A:O2'	22:BA:1877:A:H5'	2.21	0.41
22:BA:264:C:O2'	22:BA:265:A:H3'	2.20	0.41
39:DR:33:VAL:O	39:DR:61:ALA:HB3	2.20	0.41
41:BT:38:ALA:HB3	41:BT:81:LYS:HE2	2.03	0.41
16:CP:4:ILE:CG2	16:CP:57:ILE:HD11	2.31	0.41
22:DA:2291:U:O5'	22:DA:2291:U:H6	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:137:U:OP2	22:BA:137:U:C5	2.74	0.41
22:DA:2876:G:O2'	22:DA:2877:G:O4'	2.33	0.41
22:DA:595:C:O2	22:DA:663:G:C2	2.73	0.41
17:CQ:16:MET:HB2	17:CQ:19:SER:O	2.21	0.41
23:DB:66:A:C2	23:DB:108:A:C2	3.09	0.41
27:BF:105:ILE:O	27:BF:109:ARG:HD3	2.20	0.41
22:DA:1299:G:C5'	22:DA:1301:A:O4'	2.69	0.41
2:AB:13:VAL:CG2	2:AB:207:ARG:NH2	2.81	0.41
7:CG:71:THR:CG2	7:CG:72:VAL:HG23	2.32	0.41
1:AA:567:G:O2'	1:AA:568:G:O5'	2.31	0.41
22:BA:2152:G:HO2'	22:BA:2153:C:C4'	2.30	0.41
1:AA:950:U:H4'	1:AA:971:G:C2	2.55	0.41
22:BA:548:G:C4'	22:BA:549:G:H5'	2.50	0.41
22:BA:1083:U:H3'	22:BA:1083:U:H6	1.85	0.41
22:DA:404:A:H4'	22:DA:405:U:C5'	2.47	0.41
22:DA:406:G:H1	22:DA:421:C:H42	1.68	0.41
1:CA:663:A:C2'	1:CA:664:G:C5'	2.96	0.41
22:BA:604:G:H2'	22:BA:605:G:H8	1.85	0.41
2:CB:184:ALA:C	2:CB:199:ILE:HG12	2.37	0.41
1:CA:587:G:OP1	8:CH:80:PRO:HB3	2.21	0.41
1:AA:579:A:C4	1:AA:580:C:C5	3.09	0.41
22:DA:689:A:C2	22:DA:779:U:O4'	2.74	0.41
22:DA:788:A:H5''	22:DA:789:A:OP1	2.20	0.41
22:DA:2627:G:H2'	22:DA:2628:C:C6	2.56	0.41
22:DA:279:A:N6	22:DA:280:U:H3	2.19	0.41
22:DA:672:C:C4'	22:DA:672:C:C6	3.03	0.41
37:DP:92:ARG:O	37:DP:93:LYS:CB	2.67	0.41
1:AA:570:G:H1'	1:AA:820:U:C4	2.55	0.41
1:AA:880:C:H2'	1:AA:881:G:C8	2.56	0.41
13:AM:106:ARG:HH11	13:AM:106:ARG:HA	1.85	0.41
25:DD:34:VAL:CG2	25:DD:92:VAL:O	2.68	0.41
22:DA:1507:C:C5'	22:DA:1508:A:OP2	2.66	0.41
1:AA:224:U:N3	1:AA:225:C:C5	2.89	0.41
33:DL:91:ASP:O	33:DL:92:LEU:C	2.58	0.41
22:BA:2771:C:H2'	22:BA:2772:C:H6	1.85	0.41
24:BC:33:LEU:HA	24:BC:61:TYR:O	2.21	0.41
1:AA:345:C:OP1	37:BP:36:LYS:HE2	2.21	0.41
26:DE:69:ARG:O	26:DE:70:SER:CB	2.65	0.41
1:AA:587:G:C2	1:AA:755:G:C5	3.08	0.41
22:BA:276:U:C2'	22:BA:277:G:O5'	2.69	0.41
24:DC:30:ALA:O	24:DC:32:LEU:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:115:GLN:HG2	28:DG:116:LEU:H	1.82	0.41
4:CD:198:LEU:HD23	4:CD:198:LEU:HA	1.60	0.41
15:AO:84:LEU:HA	15:AO:84:LEU:HD12	1.80	0.41
22:DA:999:U:H2'	22:DA:1000:A:C5'	2.47	0.41
14:CN:27:LYS:O	14:CN:45:LEU:HD21	2.21	0.41
22:DA:533:G:O2'	22:DA:534:U:H5'	2.20	0.41
1:CA:443:C:C3'	1:CA:443:C:C6	3.03	0.41
22:DA:2559:C:H2'	22:DA:2560:A:C8	2.56	0.41
22:DA:2900:A:N6	22:DA:2901:C:N4	2.68	0.41
32:BK:61:VAL:HG22	32:BK:112:PHE:CZ	2.56	0.41
45:DX:19:HIS:O	45:DX:21:LEU:N	2.44	0.41
25:DD:110:THR:HG23	25:DD:171:THR:N	2.36	0.41
7:AG:98:LEU:HD22	7:AG:102:TRP:CZ2	2.55	0.41
23:BB:66:A:HO2'	23:BB:67:G:P	2.43	0.41
30:DI:105:LEU:HD11	30:DI:129:GLU:HG2	2.02	0.41
1:AA:858:G:C2'	1:AA:859:G:H5'	2.50	0.41
3:CC:125:ARG:O	3:CC:126:ARG:HB2	2.20	0.41
14:CN:50:LEU:N	14:CN:51:PRO:CD	2.83	0.41
22:DA:308:G:O6	22:DA:309:A:N6	2.53	0.41
35:BN:38:LEU:HB3	35:BN:39:PRO:CD	2.46	0.41
22:BA:1387:A:C2	22:BA:1401:G:C2	3.09	0.41
4:CD:167:PRO:HB3	4:CD:169:TRP:CH2	2.55	0.41
1:AA:552:U:H2'	1:AA:553:A:C8	2.56	0.41
25:DD:161:MET:O	25:DD:162:ALA:O	2.39	0.41
25:BD:8:LYS:HB2	25:BD:201:LEU:HD22	2.00	0.41
17:AQ:30:HIS:ND1	17:AQ:31:PRO:HD2	2.34	0.41
1:AA:131:A:O2'	1:AA:132:C:O4'	2.31	0.41
22:DA:2602:A:OP1	22:DA:2602:A:H2'	2.21	0.41
22:BA:983:A:N6	22:BA:984:A:C2	2.88	0.41
22:DA:1099:G:C6	22:DA:1100:C:C2	3.08	0.41
1:AA:718:A:C8	11:AK:117:HIS:HB3	2.56	0.41
22:BA:1225:G:C6	22:BA:1226:A:N6	2.87	0.41
13:CM:36:ALA:HB2	13:CM:55:LEU:HD21	2.02	0.41
14:CN:65:GLN:CA	14:CN:65:GLN:HE21	2.32	0.41
27:BF:21:TYR:CD1	27:BF:26:GLN:HG2	2.56	0.41
32:DK:121:GLU:O	32:DK:122:VAL:C	2.58	0.41
54:BA:3136:ERY:O13	54:BA:3136:ERY:H343	2.21	0.41
22:BA:2031:A:C6	22:BA:2498:C:H1'	2.56	0.41
22:BA:1444:G:H2'	22:BA:1445:G:O4'	2.21	0.41
6:CF:47:LEU:HD13	6:CF:51:ILE:HD12	2.02	0.41
15:CO:68:TYR:C	15:CO:70:LYS:N	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:30:LEU:HA	15:CO:30:LEU:HD23	1.78	0.41
1:AA:1165:U:C5	1:AA:1166:G:N7	2.88	0.41
5:AE:109:ALA:HB1	5:AE:136:VAL:HG12	2.03	0.41
24:DC:80:LEU:CD1	24:DC:80:LEU:N	2.83	0.41
22:DA:1342:A:OP1	41:DT:59:ASN:HB3	2.21	0.41
26:DE:187:VAL:HG12	26:DE:188:MET:N	2.36	0.41
44:DW:45:HIS:O	44:DW:46:ALA:CB	2.65	0.41
44:DW:82:GLU:O	44:DW:83:ALA:C	2.59	0.41
22:DA:729:G:HO2'	22:DA:1775:U:H1'	1.86	0.41
24:DC:221:GLY:HA2	24:DC:224:MET:CE	2.50	0.41
22:DA:2887:A:C1'	48:D0:39:ARG:HH22	2.25	0.41
1:AA:1284:C:C5	1:AA:1285:A:N7	2.89	0.41
46:DY:39:GLN:O	46:DY:42:LEU:HB2	2.20	0.41
46:DY:52:ARG:C	46:DY:54:LYS:N	2.74	0.41
22:DA:117:G:C2	22:DA:119:A:N6	2.89	0.41
45:DX:29:LEU:CB	45:DX:30:PRO:CD	2.95	0.41
39:BR:52:PRO:O	39:BR:53:PHE:CB	2.69	0.41
1:CA:1094:G:O2'	1:CA:1095:U:OP2	2.31	0.41
2:CB:95:TRP:CZ3	2:CB:170:ILE:HG22	2.55	0.41
1:CA:1409:C:H6	1:CA:1409:C:O5'	2.03	0.41
1:CA:408:A:C6	1:CA:409:U:C4	3.09	0.41
4:CD:36:ALA:CA	4:CD:41:GLY:HA3	2.51	0.41
44:BW:25:PHE:C	44:BW:27:GLY:H	2.24	0.41
6:CF:90:MET:HE3	18:CR:60:ARG:NH1	2.36	0.41
37:DP:46:VAL:HG12	37:DP:46:VAL:O	2.20	0.41
22:DA:2235:G:C4	22:DA:2236:U:C6	3.09	0.41
22:DA:193:U:H4'	22:DA:802:A:O2'	2.20	0.41
22:DA:2359:C:H4'	51:D3:53:ASP:OD1	2.20	0.41
22:DA:1308:A:N6	22:DA:1309:G:C6	2.89	0.41
1:CA:1226:C:H5	13:CM:101:THR:C	2.24	0.41
1:CA:1382:C:O2'	1:CA:1383:C:H6	2.03	0.41
1:CA:976:G:O2'	1:CA:1362:A:N6	2.54	0.41
1:CA:978:A:O2'	1:CA:979:C:C5'	2.64	0.41
1:CA:996:A:O2'	1:CA:997:U:H6	1.96	0.41
22:DA:604:G:O2'	22:DA:605:G:C8	2.46	0.41
22:BA:1999:C:O2	22:BA:2687:U:O2'	2.37	0.41
25:BD:117:GLY:C	25:BD:118:PHE:CD1	2.94	0.41
1:AA:16:A:H4'	5:AE:21:SER:H	1.86	0.41
39:DR:33:VAL:CG2	39:DR:61:ALA:HB3	2.51	0.41
41:BT:30:ILE:HG12	41:BT:32:LEU:HD21	2.02	0.41
22:DA:2030:A:N3	22:DA:2499:C:H5''	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:16:ARG:CG	21:AU:19:LYS:HG2	2.51	0.41
36:BO:105:ALA:O	36:BO:107:ALA:N	2.51	0.41
41:BT:1:MET:HB2	41:BT:1:MET:HE2	1.86	0.41
6:AF:40:GLU:HB2	6:AF:42:TRP:NE1	2.36	0.41
1:CA:193:C:O2'	1:CA:194:C:H5'	2.20	0.41
22:DA:943:A:C2'	22:DA:944:C:O5'	2.69	0.41
38:DQ:46:TYR:HA	38:DQ:49:ARG:NE	2.36	0.41
23:DB:11:C:C3'	23:DB:12:C:H5''	2.51	0.41
1:AA:529:G:H4'	1:AA:533:A:C2	2.55	0.41
22:DA:1476:U:H3	22:DA:1515:A:H62	1.68	0.41
22:DA:1878:G:H2'	22:DA:1879:C:O4'	2.20	0.41
1:AA:1316:G:C5'	1:AA:1317:C:OP2	2.68	0.41
1:CA:1251:A:H2'	1:CA:1369:C:O2'	2.21	0.41
9:CI:51:LEU:C	9:CI:53:LEU:N	2.73	0.41
1:AA:1160:G:N2	1:AA:1161:C:N1	2.69	0.41
22:DA:607:U:H5	22:DA:619:G:C6	2.36	0.41
24:BC:77:VAL:CG2	24:BC:111:ALA:HA	2.47	0.41
1:AA:1355:G:HO2'	1:AA:1356:G:H5'	1.83	0.41
8:AH:87:ARG:O	8:AH:121:GLY:CA	2.67	0.41
6:AF:50:PRO:O	6:AF:51:ILE:C	2.59	0.41
29:DH:8:LYS:HB3	29:DH:15:LEU:CD1	2.50	0.41
22:DA:183:C:N4	22:DA:184:C:C4	2.89	0.41
27:DF:94:ARG:HA	27:DF:94:ARG:HD3	1.83	0.41
3:CC:17:TRP:HZ2	14:CN:94:GLY:O	2.03	0.41
22:DA:1455:G:N3	22:DA:1456:G:C8	2.89	0.41
29:DH:41:LYS:C	29:DH:44:ILE:HG12	2.41	0.41
24:BC:29:PHE:CZ	24:BC:31:PRO:HG2	2.53	0.41
22:DA:2442:C:O2'	22:DA:2443:C:H5'	2.20	0.41
1:CA:913:A:HO2'	1:CA:914:A:P	2.44	0.41
28:DG:83:THR:HB	28:DG:84:LYS:H	1.75	0.41
22:BA:2105:U:H2'	22:BA:2106:U:C6	2.55	0.41
1:AA:914:A:C4	1:AA:915:A:N7	2.89	0.41
24:BC:181:ARG:HH21	24:BC:181:ARG:HG2	1.86	0.41
33:BL:63:LYS:HA	51:B3:12:ARG:HG3	2.02	0.41
1:AA:1399:C:C2	1:AA:1401:G:C5	3.09	0.41
22:BA:1731:G:C4	22:BA:1733:G:C8	3.09	0.41
13:AM:1:ALA:O	13:AM:9:PRO:HD2	2.21	0.41
1:AA:519:C:O2'	1:AA:520:A:C5'	2.69	0.41
22:DA:289:G:N1	22:DA:352:A:C6	2.89	0.41
22:DA:1524:G:C2	22:DA:1525:A:C4	3.09	0.41
1:AA:596:A:C2	1:AA:597:G:C8	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:627:A:C4	22:BA:637:A:N7	2.88	0.41
22:DA:2477:U:O4	52:D4:10:LEU:HD22	2.21	0.41
11:CK:19:VAL:CG1	11:CK:20:ALA:N	2.84	0.41
22:BA:286:U:H2'	22:BA:287:G:C8	2.55	0.41
1:CA:1012:A:C5	1:CA:1013:G:N7	2.88	0.41
22:BA:1692:U:H2'	22:BA:1694:C:C5	2.56	0.41
22:BA:314:C:C2'	22:BA:315:G:H5'	2.50	0.41
22:BA:369:U:O2'	22:BA:370:G:OP2	2.38	0.41
51:B3:21:PHE:N	51:B3:48:MET:HE1	2.35	0.41
43:BV:51:GLN:NE2	43:BV:51:GLN:O	2.54	0.41
1:CA:776:G:H2'	1:CA:777:A:OP2	2.21	0.41
1:CA:945:G:C6	1:CA:946:A:N7	2.89	0.41
22:DA:1417:C:O2'	22:DA:1418:G:C8	2.72	0.41
7:AG:69:ARG:CG	7:AG:95:ARG:HG2	2.50	0.41
22:BA:1759:A:H8	22:BA:2696:U:H1'	1.84	0.41
3:AC:86:LEU:O	3:AC:89:VAL:HG23	2.20	0.41
48:D0:11:LYS:HD2	48:D0:11:LYS:HA	1.64	0.41
30:DI:97:VAL:HG12	30:DI:97:VAL:O	2.21	0.41
22:DA:121:G:C2	22:DA:131:A:C6	3.09	0.41
22:DA:749:A:N3	22:DA:750:A:C8	2.89	0.41
2:AB:53:LEU:HD12	2:AB:219:THR:HG21	2.02	0.41
1:CA:552:U:C2	1:CA:553:A:C8	3.09	0.41
48:B0:24:VAL:O	48:B0:25:THR:HG23	2.21	0.41
22:BA:1247:A:C2	22:BA:1249:U:C6	3.08	0.41
25:DD:61:THR:HB	25:DD:63:PRO:HD2	2.01	0.41
49:D1:12:SER:HA	49:D1:48:TYR:CE1	2.55	0.41
41:DT:24:MET:HA	41:DT:24:MET:HE3	2.01	0.41
22:BA:157:C:C2'	22:BA:158:U:O5'	2.68	0.41
22:BA:157:C:H3'	22:BA:157:C:C6	2.55	0.41
22:BA:117:G:C6	22:BA:119:A:C6	3.09	0.41
1:CA:773:G:N2	1:CA:806:C:O2	2.42	0.41
22:BA:2838:G:C6	22:BA:2839:G:C5	3.09	0.41
1:AA:1425:U:O2	1:AA:1476:A:C2	2.74	0.41
22:BA:2684:U:C2'	22:BA:2685:G:O5'	2.68	0.41
33:BL:49:GLY:O	33:BL:50:PHE:C	2.59	0.41
1:CA:1208:C:H2'	1:CA:1209:C:O4'	2.20	0.41
17:AQ:64:ARG:HD3	17:AQ:64:ARG:H	1.85	0.41
17:CQ:51:GLU:HG2	17:CQ:51:GLU:H	1.59	0.41
36:DO:63:LYS:HD3	36:DO:63:LYS:C	2.41	0.41
22:BA:2370:G:H2'	22:BA:2371:G:O4'	2.21	0.41
39:BR:26:ASP:O	39:BR:27:ILE:C	2.59	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:134:THR:HG23	34:BM:136:MET:H	1.86	0.41
25:BD:12:THR:HG23	25:BD:13:ARG:H	1.79	0.41
22:BA:1063:G:P	30:BI:76:ALA:CB	2.96	0.41
5:AE:94:PHE:CE1	5:AE:96:GLN:HG2	2.56	0.41
5:AE:156:ARG:HH22	8:AH:113:ARG:HH12	1.68	0.41
25:BD:149:ASN:CG	25:BD:150:GLN:N	2.71	0.41
22:DA:1799:G:OP1	24:DC:257:ARG:NH1	2.54	0.41
28:BG:84:LYS:H	28:BG:84:LYS:HE2	1.81	0.41
1:CA:1284:C:OP2	1:CA:1285:A:H3'	2.20	0.41
22:DA:1342:A:C5	22:DA:1397:U:C6	3.09	0.41
1:AA:432:A:H2'	1:AA:433:G:H5'	2.01	0.41
26:DE:199:MET:HE2	26:DE:200:LEU:CD2	2.51	0.41
16:AP:20:VAL:CG2	16:AP:21:VAL:N	2.83	0.41
1:CA:368:U:H6	1:CA:368:U:H2'	1.63	0.41
1:CA:371:A:O2'	1:CA:372:C:C5'	2.49	0.41
1:CA:393:A:H2'	1:CA:394:G:O4'	2.20	0.41
1:CA:373:A:N3	1:CA:482:A:C6	2.89	0.41
1:CA:374:A:OP1	1:CA:452:A:N1	2.54	0.41
22:DA:952:G:H1	22:DA:965:C:H42	1.68	0.41
22:DA:855:G:N3	44:DW:23:LYS:HG2	2.36	0.41
22:DA:2290:G:N1	22:DA:2343:U:O2	2.53	0.41
22:DA:2338:C:O2'	22:DA:2339:C:P	2.79	0.41
22:DA:2373:G:C6	22:DA:2381:A:N1	2.89	0.41
22:DA:1055:G:H2'	22:DA:1056:G:H5'	2.01	0.41
22:DA:1080:A:C5'	30:DI:133:ARG:HH21	2.30	0.41
22:DA:1273:U:H4'	22:DA:1275:A:P	2.61	0.41
35:DN:14:SER:O	35:DN:17:ARG:N	2.54	0.41
1:AA:1255:G:N1	1:AA:1279:G:C8	2.89	0.41
9:AI:90:ASP:C	9:AI:92:SER:H	2.23	0.41
9:AI:90:ASP:OD1	9:AI:92:SER:HB3	2.20	0.41
11:CK:69:CYS:O	11:CK:73:VAL:HG21	2.21	0.41
1:CA:1206:G:O2'	3:CC:192:TYR:HA	2.21	0.41
22:DA:100:U:O2'	22:DA:101:A:C4	2.71	0.41
22:DA:77:G:OP1	46:DY:52:ARG:CD	2.69	0.41
22:DA:92:U:C2'	22:DA:93:G:O4'	2.69	0.41
26:DE:129:PRO:HG3	26:DE:159:LEU:HD23	2.03	0.41
42:DU:16:LYS:HA	42:DU:16:LYS:HD3	1.78	0.41
24:BC:104:LEU:HD13	24:BC:104:LEU:HA	1.76	0.41
49:B1:7:LYS:CA	49:B1:23:THR:HG22	2.41	0.41
22:DA:1362:C:N4	22:DA:1363:C:C5	2.89	0.41
22:DA:442:G:C6	22:DA:444:C:N4	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:447:A:C2	22:DA:454:A:C8	3.09	0.41
22:DA:2756:U:C4'	22:DA:2757:A:O5'	2.65	0.41
49:B1:24:LYS:HE3	49:B1:26:LYS:HA	2.03	0.41
1:AA:1227:A:N3	1:AA:1227:A:C2'	2.70	0.41
1:AA:1308:U:OP1	13:AM:95:PRO:HA	2.20	0.41
1:AA:205:A:C8	1:AA:206:C:C5	3.09	0.41
22:DA:995:C:O2'	38:DQ:93:ILE:HD12	2.21	0.41
39:DR:49:ILE:HD13	39:DR:53:PHE:H	1.86	0.41
39:DR:39:LEU:C	39:DR:49:ILE:HG23	2.41	0.41
22:BA:2332:C:H5''	22:BA:2333:A:P	2.61	0.41
1:AA:544:G:C6	1:AA:545:C:C4	3.09	0.41
43:DV:73:LYS:HB3	43:DV:92:VAL:CG2	2.51	0.41
43:DV:44:HIS:CE1	43:DV:85:LYS:HD3	2.56	0.41
10:AJ:35:GLN:HB3	10:AJ:36:VAL:H	1.62	0.41
1:CA:733:G:O2'	1:CA:734:G:C5'	2.68	0.41
18:CR:63:TYR:CE2	18:CR:69:TYR:OH	2.73	0.41
14:CN:100:TRP:CD1	14:CN:100:TRP:C	2.93	0.41
22:DA:527:C:C4	22:DA:2779:U:C6	3.09	0.41
22:DA:2041:U:H2'	22:DA:2042:A:C8	2.55	0.41
22:DA:558:U:OP1	31:DJ:113:PRO:HB2	2.21	0.41
40:DS:95:ARG:HG3	40:DS:97:LEU:HD22	2.02	0.41
22:BA:1792:G:OP1	24:BC:203:VAL:O	2.39	0.41
22:BA:1711:A:H2'	22:BA:1712:U:C6	2.55	0.41
29:BH:9:VAL:O	29:BH:10:ALA:O	2.39	0.41
45:BX:40:GLU:C	45:BX:43:LYS:H	2.23	0.41
22:DA:188:G:C2'	22:DA:189:G:C5'	2.95	0.41
22:DA:197:A:N7	22:DA:2430:A:C4	2.88	0.41
22:DA:669:G:C2	22:DA:801:G:C6	3.09	0.41
22:DA:1292:G:C6	22:DA:1293:C:N4	2.89	0.41
22:DA:1286:A:C6	22:DA:1329:U:C2	3.09	0.41
22:DA:1613:G:H3'	22:DA:1614:A:C5'	2.51	0.41
22:DA:1606:C:O2'	22:DA:1607:C:P	2.79	0.41
1:AA:263:A:H2'	1:AA:264:C:H5	1.74	0.41
17:AQ:74:LEU:CD1	17:AQ:74:LEU:C	2.89	0.41
8:CH:57:GLU:CG	8:CH:58:LEU:H	2.33	0.41
22:DA:511:U:C5'	22:DA:1235:G:H4'	2.49	0.41
22:DA:28:A:C6	22:DA:29:U:C2	3.09	0.41
22:DA:475:C:C5	22:DA:476:G:C6	3.09	0.41
22:DA:584:C:H2'	22:DA:585:G:H8	1.85	0.41
1:CA:597:G:N2	1:CA:644:U:C2	2.89	0.41
22:BA:1179:G:C6	22:BA:1180:U:C1'	2.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:4:LYS:CE	38:BQ:8:ILE:HG23	2.51	0.41
1:CA:1368:A:N7	9:CI:113:LYS:HD3	2.36	0.41
4:AD:57:LYS:HD2	4:AD:57:LYS:C	2.41	0.41
1:CA:981:U:O4	1:CA:1222:G:O6	2.39	0.41
9:CI:112:ARG:O	9:CI:114:LYS:HG3	2.21	0.41
3:AC:55:VAL:HG12	3:AC:56:ILE:N	2.36	0.41
1:AA:620:C:C5	4:AD:131:ILE:HG12	2.56	0.41
22:DA:1993:U:H4'	25:DD:133:THR:HG21	2.02	0.41
2:CB:206:ILE:C	2:CB:208:ALA:H	2.24	0.41
31:DJ:25:LEU:CB	31:DJ:62:VAL:CG2	2.99	0.41
47:DZ:6:ILE:HD11	47:DZ:47:ILE:HD11	1.97	0.41
22:DA:1006:C:C2	22:DA:1138:G:C2	3.08	0.41
22:DA:2731:G:H5''	22:DA:2732:G:OP2	2.21	0.41
22:DA:1429:G:N3	22:DA:1430:G:C8	2.88	0.41
41:BT:54:GLU:HB3	41:BT:88:LYS:HG3	2.02	0.41
2:AB:86:CYS:HB2	2:AB:88:GLN:CD	2.41	0.41
33:DL:93:ASN:O	33:DL:94:THR:HB	2.21	0.41
31:DJ:17:VAL:CG1	31:DJ:18:VAL:N	2.83	0.41
22:DA:2454:G:C2	22:DA:2499:C:C2	3.09	0.41
41:DT:27:SER:O	41:DT:28:ASN:CB	2.69	0.41
41:DT:28:ASN:O	41:DT:29:THR:HG23	2.20	0.41
11:AK:109:ILE:O	21:AU:5:VAL:HG23	2.20	0.41
22:DA:1663:G:O2'	22:DA:1664:A:H8	1.95	0.41
22:DA:1665:A:H2'	22:DA:1666:G:C5'	2.51	0.41
22:DA:1666:G:O3'	32:DK:6:THR:HA	2.21	0.41
22:DA:1999:C:OP1	22:DA:2724:U:H5'	2.20	0.41
22:BA:1011:G:H5''	38:BQ:76:SER:HG	1.86	0.41
27:DF:45:ASP:C	27:DF:47:LYS:N	2.73	0.41
27:DF:59:ILE:HG23	27:DF:137:PHE:CE1	2.51	0.41
1:CA:86:G:N2	1:CA:87:C:C4	2.89	0.41
6:AF:40:GLU:CB	6:AF:42:TRP:HE1	2.32	0.41
1:CA:182:A:O2'	1:CA:183:C:C2'	2.68	0.41
22:DA:818:G:H2'	22:DA:819:A:H5''	2.02	0.41
2:AB:184:ALA:HB3	2:AB:195:VAL:HG11	2.03	0.41
23:DB:24:G:C8	23:DB:24:G:OP2	2.74	0.41
23:DB:18:G:C4	23:DB:67:G:N1	2.89	0.41
22:DA:1739:A:O2'	22:DA:1740:G:O5'	2.39	0.41
27:BF:100:GLU:HG2	27:BF:104:THR:HG1	1.79	0.41
22:BA:1460:U:C3'	22:BA:1461:C:C5'	2.99	0.41
32:BK:40:LYS:NZ	32:BK:89:ASN:HD21	2.19	0.41
1:CA:1239:A:H1'	1:CA:1241:G:C5	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:D3:38:LYS:O	51:D3:41:ARG:N	2.54	0.41
1:AA:1319:A:C6	1:AA:1323:G:C4	3.08	0.41
19:AS:4:LEU:O	19:AS:5:LYS:CB	2.69	0.41
19:AS:55:GLN:NE2	19:AS:56:HIS:N	2.69	0.41
7:CG:4:ARG:CZ	7:CG:6:ILE:CG2	2.99	0.41
1:CA:1348:U:O3'	9:CI:121:ARG:HB2	2.21	0.41
9:CI:51:LEU:CD1	9:CI:82:ILE:CG2	2.99	0.41
22:BA:1125:G:O5'	22:BA:1125:G:H8	2.04	0.41
14:AN:79:SER:O	14:AN:80:ARG:C	2.59	0.41
14:AN:81:ILE:O	14:AN:85:GLU:HG2	2.20	0.41
1:AA:1157:A:H4'	1:AA:1158:C:H5''	2.03	0.41
52:B4:15:LYS:HE3	52:B4:15:LYS:HB3	1.90	0.41
22:BA:1287:A:C5'	35:BN:103:ARG:HD2	2.37	0.41
2:CB:151:LYS:CG	2:CB:152:ASP:N	2.83	0.41
22:BA:2138:G:C5	22:BA:2154:A:C6	3.08	0.41
1:CA:155:A:C6	1:CA:156:C:C4	3.09	0.41
1:AA:949:A:C2'	1:AA:950:U:C5'	2.98	0.41
22:DA:2741:A:C8	22:DA:2742:G:C8	3.09	0.41
13:CM:16:ILE:O	13:CM:16:ILE:CG2	2.68	0.41
22:BA:1057:A:C2	22:BA:1082:U:N3	2.88	0.41
1:AA:1155:A:C2'	1:AA:1156:G:H5'	2.51	0.41
1:AA:481:G:H3'	1:AA:481:G:H8	1.85	0.41
1:AA:453:G:C6	1:AA:454:G:C6	3.09	0.41
1:AA:384:G:C5	1:AA:385:C:C4	3.09	0.41
1:CA:113:G:H1'	1:CA:353:A:O2'	2.21	0.41
22:DA:1867:G:H2'	22:DA:1868:C:C6	2.56	0.41
1:CA:246:A:N6	1:CA:281:G:N3	2.57	0.41
30:BI:50:LYS:HE2	30:BI:50:LYS:HB2	1.88	0.41
1:CA:321:A:N7	1:CA:328:C:C2	2.89	0.41
1:CA:332:G:O2'	1:CA:333:U:H5'	2.21	0.41
36:DO:62:LEU:C	36:DO:62:LEU:HD13	2.41	0.41
2:CB:202:ASN:HB3	2:CB:203:ASP:H	1.66	0.41
1:CA:27:G:C5	1:CA:557:G:C2	3.09	0.41
1:CA:940:C:H3'	1:CA:940:C:C6	2.56	0.41
26:BE:43:THR:O	26:BE:43:THR:OG1	2.39	0.41
22:BA:37:C:O2'	26:BE:45:ALA:CB	2.69	0.41
22:DA:277:G:O2'	22:DA:278:A:C4	2.74	0.41
21:CU:14:ALA:O	21:CU:15:LEU:O	2.38	0.41
35:DN:82:GLU:O	35:DN:86:ARG:HG3	2.21	0.41
1:CA:455:G:O6	1:CA:456:A:N6	2.54	0.41
25:DD:125:TRP:CE3	25:DD:160:LYS:HD3	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1967:C:C6	22:DA:1967:C:C5'	2.92	0.41
1:AA:368:U:O2'	1:AA:369:G:P	2.78	0.41
1:AA:369:G:C5	1:AA:393:A:C2	3.09	0.41
17:CQ:45:VAL:HG12	17:CQ:74:LEU:N	2.36	0.41
15:AO:26:VAL:HG12	15:AO:30:LEU:HD11	1.94	0.41
22:BA:1413:A:H2'	22:BA:1414:C:O4'	2.20	0.41
23:BB:46:A:C4	23:BB:47:C:C5	3.08	0.41
22:BA:784:G:H5'	24:BC:225:ASN:OD1	2.21	0.41
8:AH:1:SER:C	8:AH:3:GLN:H	2.24	0.41
22:DA:2492:U:C2'	22:DA:2493:U:H6	2.26	0.41
22:BA:1509:A:O2'	22:BA:1510:G:H5'	2.21	0.41
22:DA:2103:C:O2'	22:DA:2104:C:H5'	2.20	0.41
28:DG:162:ARG:NH1	28:DG:168:VAL:HG11	2.36	0.41
28:DG:130:ILE:CG2	28:DG:132:LEU:HD11	2.46	0.41
28:DG:143:VAL:HA	28:DG:146:ASP:OD2	2.21	0.41
22:BA:2063:C:O2	22:BA:2451:A:C2	2.74	0.41
1:AA:66:A:H5''	1:AA:67:C:OP2	2.21	0.41
1:AA:179:A:H2'	1:AA:180:U:H5'	2.03	0.41
4:CD:195:ASN:O	4:CD:198:LEU:N	2.54	0.41
14:CN:31:SER:OG	14:CN:45:LEU:CD1	2.69	0.41
22:BA:372:G:O4'	45:BX:60:LYS:CE	2.60	0.41
4:CD:125:ASN:HA	4:CD:125:ASN:HD22	1.55	0.41
36:BO:15:ARG:CG	36:BO:15:ARG:HH11	2.20	0.41
22:DA:158:U:H2'	22:DA:158:U:O2	2.20	0.41
1:AA:1197:A:C5'	1:AA:1197:A:H8	2.33	0.41
1:AA:1055:A:C5	1:AA:1206:G:C2	3.08	0.41
22:DA:2151:U:C2	22:DA:2152:G:C8	3.09	0.41
22:BA:2068:U:C4'	22:BA:2068:U:C6	3.04	0.41
1:AA:352:C:C6	1:AA:352:C:C5'	3.02	0.41
31:BJ:13:ARG:HD3	31:BJ:13:ARG:HA	1.93	0.41
22:BA:1417:C:O2'	22:BA:1418:G:C5'	2.60	0.41
28:BG:142:GLN:O	28:BG:145:ALA:HB3	2.21	0.41
13:AM:10:ASP:O	13:AM:11:HIS:CB	2.68	0.41
22:DA:2508:G:H3'	22:DA:2508:G:C8	2.55	0.41
22:DA:351:C:N4	22:DA:352:A:N6	2.69	0.41
22:DA:1467:U:C2'	22:DA:1468:U:H5'	2.45	0.41
35:BN:70:THR:O	35:BN:71:ARG:C	2.58	0.41
28:DG:22:VAL:HG13	28:DG:36:LEU:HD12	2.03	0.41
9:CI:14:SER:HA	9:CI:68:GLY:O	2.21	0.41
37:BP:17:PRO:HD2	37:BP:83:ILE:HG23	2.02	0.41
6:AF:55:HIS:ND1	6:AF:55:HIS:N	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2471:A:C6	22:BA:2472:G:C4	3.08	0.41
37:BP:67:GLU:CG	37:BP:68:GLY:H	2.24	0.41
14:AN:86:ALA:O	14:AN:91:GLU:CB	2.63	0.41
22:DA:383:C:C2'	22:DA:384:A:OP1	2.69	0.41
1:AA:868:C:C2'	1:AA:869:G:H5'	2.50	0.41
22:BA:1839:G:C6	22:BA:1927:A:C5	3.08	0.41
22:BA:2296:U:H4'	22:BA:2297:A:OP1	2.21	0.41
9:CI:52:GLU:HA	9:CI:52:GLU:OE2	2.20	0.41
19:CS:38:THR:HB	19:CS:69:LYS:CE	2.51	0.41
28:BG:29:ASN:O	28:BG:78:VAL:HG12	2.21	0.41
22:DA:771:G:H2'	22:DA:772:C:C5'	2.51	0.41
22:BA:2808:G:N1	22:BA:2891:U:C5	2.88	0.41
1:CA:317:U:H2'	1:CA:318:G:C8	2.56	0.41
1:AA:1368:A:C2'	1:AA:1369:C:H5'	2.50	0.41
22:BA:2397:G:C2	22:BA:2420:C:C2	3.09	0.41
22:BA:1858:A:N6	22:BA:1884:G:H1'	2.36	0.41
22:DA:1856:U:O4	22:DA:1857:G:C2	2.73	0.41
1:AA:1103:C:C6	1:AA:1103:C:C3'	3.04	0.41
7:AG:80:GLY:C	7:AG:82:SER:N	2.74	0.41
1:CA:1335:U:H5''	1:CA:1336:C:H5'	2.03	0.41
3:AC:59:PRO:O	3:AC:60:ALA:O	2.38	0.41
1:AA:551:U:C6	1:AA:551:U:C3'	3.03	0.41
22:DA:438:G:H2'	22:DA:439:A:O4'	2.21	0.41
22:BA:2293:G:H2'	22:BA:2294:G:O4'	2.21	0.41
1:CA:861:G:C5	1:CA:862:C:C5	3.09	0.41
22:DA:1680:U:O2'	22:DA:1763:G:N7	2.42	0.41
22:BA:1565:C:O2'	22:BA:1566:A:P	2.79	0.41
1:AA:359:G:H2'	1:AA:360:G:O5'	2.21	0.41
22:DA:16:C:N4	22:DA:524:G:H1	2.19	0.41
22:DA:1297:C:C3'	22:DA:1297:C:C6	3.04	0.41
1:AA:132:C:H5''	20:AT:68:LYS:HD2	2.01	0.41
22:BA:563:A:C4	22:BA:2018:G:C2	3.09	0.41
22:BA:1384:A:H1'	22:BA:1405:U:O4'	2.20	0.41
22:BA:1090:A:C2	22:BA:1091:G:C8	3.09	0.41
22:DA:21:A:H2'	22:DA:22:C:C6	2.56	0.41
22:BA:976:G:C2	22:BA:977:G:C8	3.08	0.41
22:DA:559:G:H8	22:DA:559:G:O5'	2.03	0.41
1:CA:1527:U:N3	1:CA:1528:U:C5	2.89	0.41
28:BG:96:ALA:HB3	28:BG:103:ASN:HB2	2.02	0.41
28:BG:96:ALA:HB3	28:BG:103:ASN:CB	2.51	0.41
22:BA:1260:A:C6	22:BA:1261:C:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:941:G:C2'	1:AA:942:G:O5'	2.68	0.41
1:AA:57:G:C6	1:AA:58:C:N3	2.89	0.41
42:BU:64:ILE:CG2	42:BU:64:ILE:O	2.69	0.41
49:D1:12:SER:CA	49:D1:48:TYR:CE1	3.03	0.41
9:CI:85:ALA:HA	9:CI:88:GLU:OE1	2.20	0.41
1:CA:1115:U:C3'	1:CA:1115:U:C6	3.04	0.41
26:DE:88:ARG:HB3	26:DE:89:PRO:CD	2.50	0.41
36:DO:80:GLU:O	36:DO:84:GLU:N	2.54	0.41
22:BA:1909:C:C2'	22:BA:1910:G:H5'	2.51	0.41
24:DC:124:LYS:NZ	24:DC:124:LYS:CB	2.84	0.41
16:CP:2:VAL:CG1	16:CP:65:ALA:HB2	2.51	0.41
26:DE:117:ARG:HG2	26:DE:184:ASP:O	2.21	0.41
51:B3:25:HIS:HB3	51:B3:43:LEU:CD2	2.51	0.41
22:BA:9:G:H2'	22:BA:2629:U:O4	2.20	0.41
2:AB:81:ASP:OD1	2:AB:82:ALA:N	2.53	0.41
22:DA:1465:G:C5	22:DA:1466:U:C4	3.08	0.41
22:BA:2263:C:H2'	22:BA:2264:C:C6	2.55	0.41
1:CA:580:C:H2'	1:CA:581:G:O4'	2.21	0.41
22:BA:2797:U:O2'	22:BA:2798:U:P	2.79	0.41
1:AA:849:G:N1	1:AA:850:U:C2	2.89	0.41
4:CD:145:ARG:HG3	4:CD:146:GLU:H	1.86	0.41
22:BA:2639:A:O3'	31:BJ:96:ARG:NH1	2.54	0.41
22:DA:1216:G:H2'	22:DA:1217:U:H5'	2.03	0.41
22:DA:901:C:H2'	22:DA:902:C:H6	1.86	0.41
39:BR:27:ILE:HG12	39:BR:27:ILE:H	1.73	0.41
1:AA:891:U:H3'	56:AA:1764:HOH:O	2.20	0.41
2:CB:169:HIS:O	2:CB:173:LYS:HE3	2.21	0.41
3:AC:53:ARG:O	3:AC:68:HIS:HB2	2.21	0.41
3:CC:124:GLU:CD	3:CC:124:GLU:N	2.74	0.41
22:BA:522:A:C6	22:BA:523:C:C4	3.09	0.41
1:CA:611:C:C5	1:CA:612:C:C5	3.09	0.41
22:BA:2027:G:H2'	22:BA:2028:U:H6	1.86	0.41
30:BI:130:GLY:HA2	30:BI:133:ARG:HB3	2.01	0.41
22:DA:1129:A:C4	22:DA:2570:G:H1'	2.56	0.41
22:BA:2735:G:C6	22:BA:2736:A:C5	3.08	0.41
39:BR:20:VAL:HG21	39:BR:22:LEU:HD21	2.03	0.41
37:BP:50:ARG:CG	37:BP:56:SER:HA	2.51	0.41
22:BA:1080:A:C4'	30:BI:126:ARG:HG3	2.51	0.41
5:AE:148:SER:HA	5:AE:149:PRO:HD2	1.78	0.41
22:BA:2489:U:C4	22:BA:2490:G:C6	3.09	0.41
22:DA:1338:G:O2'	22:DA:1392:A:N6	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:43:ILE:O	41:DT:47:VAL:HG22	2.21	0.41
46:DY:27:ASN:HD22	46:DY:27:ASN:HA	1.75	0.41
1:AA:430:A:C4	1:AA:431:A:H8	2.37	0.41
26:DE:147:LEU:C	26:DE:147:LEU:HD13	2.41	0.41
1:CA:355:C:H2'	1:CA:356:A:O4'	2.21	0.41
1:CA:391:G:C6	1:CA:392:C:N3	2.89	0.41
22:DA:2345:G:C4	22:DA:2381:A:C2	3.09	0.41
22:DA:2397:G:C2	22:DA:2420:C:C2	3.09	0.41
22:DA:1785:A:N3	22:DA:1787:A:C8	2.89	0.41
22:DA:704:G:H1'	22:DA:727:A:H61	1.85	0.41
22:DA:704:G:N3	22:DA:726:G:C2	2.89	0.41
1:AA:1256:A:N9	1:AA:1258:G:C6	2.89	0.41
22:DA:324:A:C2	22:DA:325:G:C1'	2.96	0.41
22:DA:324:A:N3	22:DA:325:G:C1'	2.82	0.41
22:DA:88:G:C6	22:DA:89:A:N7	2.89	0.41
22:DA:1361:G:C6	22:DA:1362:C:C4	3.09	0.41
22:DA:2232:C:P	45:DX:26:ARG:HH12	2.43	0.41
27:BF:43:ILE:CG2	27:BF:82:TYR:HE1	2.27	0.41
22:DA:1051:G:H5'	22:DA:2752:C:H1'	2.03	0.41
1:CA:1157:A:H1'	1:CA:1181:G:C2	2.56	0.41
41:BT:22:THR:C	41:BT:25:GLU:H	2.21	0.41
37:BP:24:THR:HB	37:BP:87:ARG:HB3	2.03	0.41
4:CD:57:LYS:HE3	4:CD:61:ARG:HD3	2.02	0.41
4:CD:89:LEU:HD21	4:CD:199:ILE:CD1	2.48	0.41
6:CF:59:TYR:CE2	18:CR:66:LEU:CD2	3.02	0.41
22:DA:2392:A:OP1	51:D3:30:HIS:HB2	2.21	0.41
22:DA:1324:G:O2'	22:DA:1616:A:N1	2.54	0.41
1:AA:256:U:O2'	1:AA:257:G:H5'	2.21	0.41
20:AT:84:LYS:HD2	20:AT:84:LYS:O	2.21	0.41
1:AA:1299:A:O2'	1:AA:1300:G:H4'	2.20	0.41
22:DA:510:C:O2'	22:DA:511:U:C5'	2.68	0.41
26:BE:6:LYS:HG2	26:BE:7:ASP:H	1.84	0.41
1:CA:1266:G:C3'	1:CA:1266:G:C8	3.05	0.41
1:CA:951:G:O2'	1:CA:952:U:C5'	2.65	0.41
14:CN:80:ARG:HG2	14:CN:81:ILE:H	1.86	0.41
20:AT:43:LYS:HE2	20:AT:86:ALA:HB2	2.03	0.41
22:DA:1244:A:O2'	26:DE:29:HIS:HE1	2.04	0.41
22:DA:637:A:P	33:DL:112:LEU:HD22	2.60	0.41
1:AA:1078:U:C5	1:AA:1079:G:N7	2.89	0.41
1:AA:1078:U:C3'	1:AA:1078:U:C6	3.04	0.41
1:CA:814:A:C8	1:CA:816:A:C8	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:14:ASP:CB	10:AJ:17:LEU:CB	2.84	0.41
22:BA:221:A:C8	22:BA:266:G:O6	2.73	0.41
22:BA:388:G:N7	22:BA:390:U:H2'	2.35	0.41
46:BY:7:ARG:H	46:BY:60:LYS:NZ	2.19	0.41
18:AR:35:SER:HA	18:AR:71:ASP:CB	2.37	0.41
24:DC:212:TRP:HD1	24:DC:212:TRP:C	2.24	0.41
22:BA:142:A:H2'	22:BA:143:C:C6	2.56	0.41
32:DK:8:LEU:C	32:DK:9:ASN:HD22	2.24	0.41
31:BJ:130:HIS:HD2	31:BJ:132:HIS:N	2.14	0.41
8:AH:125:ILE:HG22	8:AH:126:CYS:N	2.36	0.41
1:CA:249:U:O2	1:CA:249:U:H2'	2.21	0.41
17:CQ:66:LEU:O	17:CQ:67:SER:HB3	2.21	0.41
22:DA:971:G:OP1	22:DA:989:G:N1	2.53	0.41
14:AN:15:LEU:HA	14:AN:18:LYS:CD	2.51	0.41
23:DB:66:A:OP2	23:DB:108:A:N6	2.54	0.41
22:DA:1733:G:C2	22:DA:1734:G:C8	3.09	0.41
32:BK:60:ALA:HB1	32:BK:84:CYS:HB2	2.03	0.41
22:DA:1474:U:H3'	22:DA:1474:U:H6	1.86	0.41
22:DA:1435:G:C2	22:DA:1558:C:N4	2.88	0.41
1:AA:1322:C:O2'	1:AA:1323:G:P	2.79	0.41
1:AA:1203:C:O2'	1:AA:1204:A:O4'	2.33	0.41
22:BA:2140:G:C5	22:BA:2152:G:N2	2.89	0.41
22:DA:569:U:C5'	22:DA:821:A:C2	3.04	0.41
22:BA:543:G:C2	22:BA:544:C:H1'	2.55	0.41
22:BA:1056:G:O2'	22:BA:1086:A:H8	2.03	0.41
4:AD:31:CYS:SG	4:AD:32:LYS:N	2.94	0.41
22:DA:1941:C:H2'	22:DA:1942:C:C6	2.56	0.41
22:BA:302:C:HO2'	22:BA:303:G:H8	1.68	0.41
22:DA:404:A:N1	22:DA:421:C:N3	2.69	0.41
22:DA:2321:U:H3'	22:DA:2321:U:O2	2.20	0.41
1:AA:1460:C:C2'	1:AA:1461:G:O5'	2.69	0.41
27:DF:122:ASP:CB	27:DF:126:ASN:CB	2.94	0.41
22:DA:808:G:O2'	22:DA:1254:A:H4'	2.21	0.41
12:AL:1:ALA:HB3	12:AL:5:GLN:OE1	2.21	0.41
17:AQ:22:VAL:CG2	17:AQ:45:VAL:HG21	2.51	0.41
22:BA:1930:G:N2	22:BA:1968:G:H2'	2.36	0.41
1:AA:369:G:OP2	1:AA:388:G:N1	2.41	0.41
1:AA:879:C:C6	1:AA:879:C:C3'	3.04	0.41
22:BA:1507:C:N3	22:BA:1508:A:C2	2.89	0.41
1:CA:821:G:O2'	1:CA:822:U:C5'	2.69	0.41
28:DG:162:ARG:NH1	28:DG:168:VAL:HG21	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:6:LYS:HZ3	40:DS:104:THR:HG23	1.85	0.41
44:BW:37:VAL:CG1	44:BW:38:ARG:H	2.30	0.41
24:BC:66:PHE:O	24:BC:150:GLY:O	2.39	0.41
1:AA:538:G:OP2	12:AL:111:GLN:HB2	2.21	0.41
1:CA:224:U:C2'	1:CA:224:U:O2	2.69	0.41
22:DA:986:C:C4	22:DA:987:C:C5	3.09	0.41
1:CA:1309:G:H2'	1:CA:1310:G:C8	2.55	0.41
17:CQ:73:THR:HG23	17:CQ:73:THR:O	2.21	0.41
1:CA:1513:A:O2'	1:CA:1514:G:H5'	2.20	0.41
38:DQ:42:GLY:O	39:DR:75:VAL:HG23	2.21	0.41
22:DA:170:U:C6	22:DA:171:U:C5	3.03	0.41
22:DA:170:U:O5'	22:DA:170:U:H6	2.04	0.41
22:DA:1943:U:H4'	22:DA:1944:U:O5'	2.21	0.41
47:DZ:15:ARG:CD	47:DZ:15:ARG:H	2.32	0.41
33:BL:57:LEU:CD2	51:B3:53:ASP:HB3	2.51	0.41
1:CA:704:A:C2	1:CA:705:G:C4	3.09	0.41
1:AA:1473:G:C2'	1:AA:1474:U:C5'	2.99	0.41
32:DK:27:GLY:N	32:DK:30:ARG:HD3	2.36	0.41
1:AA:1343:G:C5	1:AA:1344:C:C4	3.09	0.41
15:AO:41:HIS:HD2	15:AO:42:PHE:CD2	2.38	0.41
8:AH:85:TYR:C	8:AH:86:LYS:HD2	2.42	0.41
22:BA:1438:U:HO2'	22:BA:1439:A:H5'	1.85	0.41
1:CA:124:C:H2'	1:CA:125:U:O5'	2.21	0.41
21:CU:11:PHE:O	21:CU:11:PHE:HD1	2.04	0.41
22:BA:870:U:C4	22:BA:871:U:C5	3.09	0.41
1:AA:829:G:O2'	1:AA:830:G:H5'	2.20	0.41
22:BA:1840:G:C6	22:BA:1841:U:C4	3.09	0.41
34:BM:42:THR:OG1	34:BM:45:GLN:CG	2.66	0.41
22:BA:346:A:C2	22:BA:347:A:C1'	3.02	0.41
26:BE:60:TRP:HD1	26:BE:61:ARG:O	2.04	0.41
5:CE:19:ARG:HG3	5:CE:32:PHE:CD1	2.56	0.41
22:BA:2728:U:C2'	22:BA:2729:G:H5''	2.51	0.41
52:D4:3:VAL:HG23	52:D4:4:ARG:N	2.36	0.41
1:AA:506:G:C5	1:AA:507:C:C4	3.09	0.41
17:CQ:29:LYS:N	17:CQ:36:PHE:CE1	2.89	0.41
2:CB:10:LYS:C	2:CB:12:GLY:H	2.25	0.41
1:CA:1161:C:HO2'	1:CA:1162:C:C5'	2.34	0.41
22:DA:1587:G:H21	22:DA:1588:G:H1'	1.86	0.41
22:BA:1624:U:H2'	22:BA:1625:C:C6	2.46	0.41
22:DA:2048:G:H2'	22:DA:2049:G:O5'	2.21	0.41
1:AA:327:A:HO2'	1:AA:329:A:H5''	1.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:72:ASP:O	6:CF:75:GLU:N	2.53	0.41
18:AR:42:ARG:O	18:AR:43:ILE:HD13	2.20	0.41
36:DO:24:THR:H	36:DO:90:VAL:CG1	2.34	0.41
22:BA:1609:A:O2'	22:BA:1610:A:C5'	2.66	0.41
22:BA:1241:A:O2'	22:BA:1242:U:H5'	2.21	0.41
30:DI:82:ALA:HB3	30:DI:100:ILE:HD12	2.02	0.41
10:CJ:17:LEU:HD23	10:CJ:96:VAL:CG1	2.49	0.41
20:CT:11:ILE:H	20:CT:11:ILE:HG13	1.48	0.41
31:BJ:38:GLY:C	31:BJ:40:HIS:H	2.24	0.41
22:BA:58:G:N2	22:BA:70:G:C5	2.89	0.41
31:BJ:15:TRP:HA	31:BJ:53:TYR:O	2.21	0.41
11:CK:86:LYS:HA	11:CK:113:THR:OG1	2.21	0.41
22:DA:718:A:H3'	22:DA:719:C:C5'	2.51	0.41
23:BB:20:G:C4	23:BB:64:G:N2	2.89	0.41
1:AA:284:C:H2'	1:AA:285:C:C6	2.56	0.41
22:BA:238:C:C6	22:BA:238:C:C3'	3.03	0.41
22:DA:682:G:H5'	50:D2:26:ASN:OD1	2.21	0.41
22:DA:543:G:N2	22:DA:551:G:C5	2.89	0.41
22:BA:306:U:H5''	22:BA:307:G:OP2	2.21	0.41
8:AH:20:ASN:HA	8:AH:64:TYR:CE2	2.56	0.41
4:CD:48:SER:O	4:CD:49:ASP:C	2.58	0.41
45:BX:63:ILE:HG13	45:BX:63:ILE:H	1.49	0.41
22:BA:1647:U:OP2	22:BA:1647:U:H3'	2.20	0.41
21:AU:44:ARG:HD2	21:AU:44:ARG:N	2.35	0.41
1:AA:890:G:O2'	1:AA:906:A:N6	2.54	0.41
5:AE:96:GLN:HE21	5:AE:97:PRO:CD	2.31	0.40
33:BL:100:ILE:CD1	33:BL:101:ILE:HD13	2.48	0.40
33:BL:95:LEU:HD22	33:BL:100:ILE:CG1	2.51	0.40
22:DA:1812:U:H2'	22:DA:1813:G:C8	2.56	0.40
1:CA:1281:C:H5''	1:CA:1282:C:C5	2.36	0.40
34:BM:33:LEU:CD2	34:BM:128:THR:HB	2.51	0.40
16:CP:72:ALA:HA	16:CP:75:ILE:HD12	2.02	0.40
22:DA:2319:G:O2'	22:DA:2320:U:O5'	2.38	0.40
22:DA:2323:G:N2	22:DA:2335:A:H2	2.17	0.40
22:DA:2335:A:O2'	22:DA:2336:A:O5'	2.38	0.40
22:DA:919:U:C4	22:DA:920:A:N7	2.89	0.40
22:DA:1829:A:N6	22:DA:1977:A:N6	2.69	0.40
2:AB:48:MET:HA	2:AB:48:MET:HE3	2.03	0.40
30:DI:76:ALA:O	30:DI:135:MET:CE	2.69	0.40
22:DA:1070:A:H61	30:DI:8:VAL:HB	1.85	0.40
22:DA:2817:U:O2'	22:DA:2882:A:H2	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1126:U:O2'	1:AA:1127:G:H5'	2.21	0.40
1:AA:1283:U:O2'	1:AA:1284:C:O5'	2.39	0.40
11:CK:69:CYS:O	11:CK:69:CYS:SG	2.79	0.40
1:CA:531:U:H5''	1:CA:532:A:P	2.61	0.40
22:DA:1209:U:O3'	22:DA:1212:G:H5'	2.21	0.40
22:DA:78:U:O2'	22:DA:79:C:H6	2.03	0.40
22:DA:83:A:C2	22:DA:84:A:N6	2.89	0.40
42:DU:91:LYS:O	42:DU:92:VAL:CG2	2.63	0.40
24:BC:115:ILE:HD12	24:BC:115:ILE:HA	1.89	0.40
24:BC:161:VAL:CG2	24:BC:175:LEU:HD12	2.51	0.40
24:BC:193:GLU:O	24:BC:194:VAL:C	2.60	0.40
50:D2:18:PHE:O	50:D2:19:ARG:C	2.58	0.40
2:CB:100:LEU:O	2:CB:103:TRP:HE3	2.03	0.40
34:DM:42:THR:CG2	34:DM:43:ALA:N	2.83	0.40
13:AM:89:ARG:HH11	13:AM:94:LEU:CB	2.34	0.40
39:DR:52:PRO:O	39:DR:53:PHE:CB	2.68	0.40
43:DV:9:ARG:HG2	43:DV:39:ALA:C	2.41	0.40
43:DV:82:TYR:CD2	43:DV:82:TYR:N	2.89	0.40
6:CF:9:MET:HE2	6:CF:59:TYR:CE2	2.56	0.40
52:D4:7:VAL:CG2	52:D4:25:VAL:HG23	2.50	0.40
22:DA:206:U:O2'	22:DA:207:A:C5'	2.62	0.40
22:DA:2077:A:C2	22:DA:2078:C:C2	3.09	0.40
22:DA:2075:U:C4	22:DA:2238:G:C5	3.09	0.40
1:AA:250:A:O4'	1:AA:252:U:C6	2.75	0.40
17:AQ:16:MET:O	17:AQ:17:GLU:C	2.59	0.40
1:AA:254:G:OP1	17:AQ:68:LYS:O	2.38	0.40
22:DA:477:A:N3	22:DA:478:A:C8	2.89	0.40
26:BE:119:ILE:HD11	26:BE:187:VAL:HG23	1.97	0.40
26:BE:119:ILE:O	26:BE:119:ILE:HG12	2.22	0.40
1:CA:1046:A:H2'	1:CA:1047:G:C8	2.52	0.40
10:CJ:52:LEU:CD2	10:CJ:59:LYS:HA	2.48	0.40
19:CS:35:ARG:NH2	19:CS:51:HIS:CD2	2.83	0.40
4:AD:59:LYS:O	4:AD:62:ARG:N	2.54	0.40
33:DL:144:GLU:HG3	33:DL:144:GLU:O	2.21	0.40
1:AA:1079:G:N1	1:AA:1080:A:C6	2.89	0.40
11:AK:113:THR:HA	11:AK:114:PRO:HD3	1.81	0.40
1:AA:1124:G:O2'	10:AJ:40:ILE:HD13	2.20	0.40
5:CE:96:GLN:CD	5:CE:97:PRO:HD2	2.41	0.40
41:BT:38:ALA:HB1	41:BT:43:ILE:HG22	2.04	0.40
7:CG:22:LEU:C	7:CG:22:LEU:CD2	2.89	0.40
41:DT:85:VAL:C	41:DT:86:THR:HG23	2.41	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:87:LEU:HD23	41:DT:87:LEU:C	2.39	0.40
46:BY:57:LEU:H	46:BY:60:LYS:HB2	1.86	0.40
22:DA:2875:C:O2'	22:DA:2876:G:C5'	2.69	0.40
1:CA:73:C:C2	1:CA:74:A:N7	2.89	0.40
8:AH:78:SER:CB	8:AH:84:ILE:H	2.34	0.40
22:DA:241:A:C1'	22:DA:243:U:C5	3.00	0.40
23:DB:18:G:H2'	23:DB:19:C:C6	2.55	0.40
1:AA:1312:G:C2	1:AA:1313:U:C2	3.08	0.40
1:CA:1348:U:OP1	9:CI:110:VAL:HA	2.21	0.40
1:AA:1049:U:O2'	1:AA:1050:G:P	2.79	0.40
1:AA:1049:U:C1'	1:AA:1201:A:N7	2.83	0.40
1:CA:918:A:H2'	1:CA:919:A:C8	2.56	0.40
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.56	0.40
4:AD:146:GLU:HB3	4:AD:147:LYS:NZ	2.36	0.40
22:BA:1058:U:C1'	30:BI:117:THR:HG21	2.51	0.40
6:AF:49:TYR:C	6:AF:49:TYR:CD2	2.94	0.40
34:DM:99:GLY:O	34:DM:100:LYS:C	2.60	0.40
22:DA:1225:G:C2	22:DA:1226:A:N1	2.89	0.40
22:DA:2407:A:O2'	22:DA:2408:U:C5'	2.66	0.40
22:DA:406:G:H1	22:DA:421:C:N4	2.19	0.40
17:AQ:27:PHE:C	17:AQ:28:VAL:CG1	2.89	0.40
12:AL:33:CYS:H	12:AL:54:VAL:HA	1.86	0.40
22:BA:847:U:C6	22:BA:847:U:H5''	2.55	0.40
1:CA:567:G:C2'	1:CA:568:G:O5'	2.69	0.40
1:CA:940:C:H3'	1:CA:940:C:H6	1.86	0.40
7:CG:98:LEU:HB3	7:CG:102:TRP:CZ2	2.56	0.40
2:AB:101:THR:HB	2:AB:174:GLU:HG3	2.03	0.40
22:BA:960:A:H2'	22:BA:962:G:H5'	2.02	0.40
22:DA:734:A:C8	22:DA:735:A:C8	3.08	0.40
29:DH:65:ALA:O	29:DH:66:ASN:C	2.59	0.40
3:AC:134:LYS:HG2	3:AC:138:GLN:NE2	2.37	0.40
2:CB:127:LYS:HE3	2:CB:132:GLU:CG	2.42	0.40
40:BS:45:VAL:CG2	40:BS:46:LEU:N	2.82	0.40
25:BD:186:LEU:HD11	37:BP:3:ILE:CD1	2.51	0.40
2:AB:89:PHE:CE1	2:AB:153:MET:CG	3.03	0.40
22:DA:2191:A:C5'	22:DA:2192:U:P	3.08	0.40
35:BN:36:THR:HG23	35:BN:37:THR:N	2.35	0.40
23:BB:10:G:C2'	23:BB:11:C:H5'	2.51	0.40
22:BA:2799:A:C6	22:BA:2801:G:C5	3.09	0.40
22:BA:1719:G:C5	22:BA:1720:U:C5	3.09	0.40
36:BO:31:THR:HG22	36:BO:34:HIS:C	2.38	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1335:C:H2'	22:DA:1336:A:H1'	2.01	0.40
22:BA:322:A:C4	22:BA:340:A:C2	3.09	0.40
9:CI:37:TYR:HD2	9:CI:37:TYR:N	2.19	0.40
42:BU:85:ARG:HE	42:BU:85:ARG:HB2	1.62	0.40
22:DA:2369:A:C2	22:DA:2370:G:C4	3.09	0.40
4:CD:3:TYR:CD2	4:CD:4:LEU:N	2.90	0.40
22:DA:1249:U:H3'	22:DA:1249:U:OP1	2.21	0.40
26:BE:74:LYS:O	26:BE:75:SER:C	2.59	0.40
1:CA:1434:A:H2'	1:CA:1435:G:O4'	2.21	0.40
1:CA:320:A:C2	1:CA:334:C:C2	3.08	0.40
22:DA:954:G:C5	22:DA:955:U:C5	3.09	0.40
2:CB:221:ARG:HG3	2:CB:222:GLU:H	1.86	0.40
1:CA:929:G:H2'	1:CA:930:C:C6	2.53	0.40
1:AA:697:U:H2'	1:AA:698:G:H5'	2.03	0.40
2:AB:52:ALA:O	2:AB:56:LEU:CB	2.69	0.40
1:AA:943:U:C2'	1:AA:944:G:H5'	2.49	0.40
15:AO:81:ILE:O	15:AO:82:GLU:C	2.58	0.40
22:DA:2576:G:H5''	22:DA:2578:G:N7	2.35	0.40
1:AA:764:C:O2'	1:AA:765:G:H5'	2.21	0.40
23:BB:81:G:H2'	23:BB:82:U:H5'	2.04	0.40
1:AA:11:G:O2'	1:AA:12:U:H5'	2.21	0.40
2:AB:168:GLU:O	2:AB:169:HIS:C	2.59	0.40
41:BT:67:VAL:C	41:BT:68:LYS:CD	2.90	0.40
41:BT:67:VAL:CG2	41:BT:68:LYS:N	2.83	0.40
50:B2:1:MET:HE3	50:B2:2:LYS:H	1.85	0.40
22:BA:2299:U:O2'	22:BA:2300:C:H5'	2.21	0.40
22:BA:760:G:C2'	22:BA:761:A:H5'	2.51	0.40
1:CA:905:U:H5''	1:CA:906:A:P	2.60	0.40
8:AH:40:LYS:C	8:AH:42:GLU:H	2.24	0.40
1:CA:1436:U:H2'	1:CA:1437:A:H8	1.85	0.40
22:BA:496:G:C5	22:BA:497:A:C8	3.09	0.40
1:AA:774:G:C4	1:AA:775:G:C8	3.10	0.40
22:BA:1176:U:H2'	22:BA:1177:G:C4	2.56	0.40
8:CH:103:VAL:O	8:CH:109:VAL:HA	2.21	0.40
6:AF:29:ILE:HG22	6:AF:30:THR:N	2.34	0.40
25:BD:193:VAL:HB	25:BD:194:PRO:HD2	2.03	0.40
22:BA:1894:C:O5'	22:BA:1894:C:H6	2.04	0.40
22:DA:1505:A:H8	22:DA:1505:A:O5'	2.04	0.40
7:CG:85:GLN:HE21	7:CG:85:GLN:HB3	1.59	0.40
31:BJ:119:PHE:CD1	31:BJ:119:PHE:C	2.95	0.40
4:AD:102:TYR:CD2	4:AD:102:TYR:C	2.95	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:77:GLY:O	3:CC:79:LYS:N	2.54	0.40
47:BZ:39:ASP:OD1	47:BZ:44:ARG:NE	2.41	0.40
37:BP:50:ARG:HG3	37:BP:50:ARG:H	1.50	0.40
38:BQ:91:ARG:NE	38:BQ:93:ILE:HG21	2.35	0.40
5:AE:96:GLN:O	5:AE:122:VAL:HA	2.21	0.40
25:BD:150:GLN:HE21	25:BD:150:GLN:HB2	1.72	0.40
22:DA:1800:C:C2	22:DA:1802:A:N7	2.90	0.40
22:DA:1816:C:HO2'	22:DA:1817:G:P	2.44	0.40
1:CA:1134:G:C6	1:CA:1141:C:N4	2.90	0.40
1:AA:428:G:C4	1:AA:430:A:N7	2.89	0.40
22:DA:2386:A:O2'	22:DA:2387:U:C6	2.71	0.40
22:DA:1791:A:C2'	22:DA:1792:G:H5'	2.51	0.40
22:DA:764:A:H3'	22:DA:765:C:H5'	2.03	0.40
22:DA:2838:G:O2'	35:DN:45:ARG:NH1	2.55	0.40
35:DN:16:HIS:HE1	35:DN:20:MET:HE2	1.86	0.40
35:DN:99:LYS:O	48:D0:41:HIS:HB2	2.21	0.40
1:AA:1256:A:N3	1:AA:1258:G:O6	2.54	0.40
1:CA:502:A:C4'	1:CA:550:G:H4'	2.50	0.40
22:DA:299:A:H2	22:DA:319:G:N3	2.20	0.40
22:DA:335:C:O2'	22:DA:336:C:O5'	2.39	0.40
22:DA:89:A:C2	22:DA:90:U:N3	2.89	0.40
22:DA:93:G:HO2'	22:DA:94:A:H8	1.69	0.40
24:BC:159:THR:HG1	24:BC:194:VAL:HG11	1.86	0.40
25:BD:3:GLY:C	25:BD:4:LEU:HD12	2.41	0.40
26:DE:59:PRO:HB2	26:DE:67:ARG:HH22	1.85	0.40
38:BQ:88:GLU:CD	38:BQ:88:GLU:O	2.59	0.40
22:DA:1112:G:H2'	22:DA:1113:U:C6	2.55	0.40
22:DA:2757:A:OP1	52:D4:20:ASP:CA	2.69	0.40
34:DM:38:ARG:CZ	34:DM:38:ARG:HB3	2.51	0.40
34:DM:73:ILE:CG2	34:DM:91:TYR:CE1	3.03	0.40
1:AA:217:C:C2'	1:AA:218:U:H5'	2.50	0.40
1:AA:468:A:C2'	1:AA:469:C:C5'	2.98	0.40
1:AA:203:G:H5'	1:AA:468:A:H8	1.85	0.40
1:CA:1405:G:C8	1:CA:1405:G:C3'	3.05	0.40
29:DH:24:GLY:O	29:DH:26:ALA:N	2.54	0.40
1:AA:77:A:N6	1:AA:90:C:C5	2.87	0.40
38:DQ:82:LEU:O	38:DQ:85:ALA:HB3	2.21	0.40
39:DR:49:ILE:CD1	39:DR:53:PHE:H	2.35	0.40
22:BA:2331:G:C5	22:BA:2332:C:C4	3.10	0.40
6:CF:41:ASP:C	6:CF:41:ASP:OD2	2.59	0.40
37:DP:24:THR:CA	37:DP:44:GLY:O	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2615:U:N3	48:D0:3:GLN:HA	2.35	0.40
22:DA:529:A:OP2	31:DJ:113:PRO:HG3	2.21	0.40
22:DA:669:G:H2'	22:DA:669:G:N3	2.37	0.40
1:AA:257:G:C2	1:AA:258:G:C5	3.09	0.40
17:AQ:12:VAL:HG12	17:AQ:21:VAL:O	2.20	0.40
1:CA:594:U:H2'	1:CA:595:A:O4'	2.21	0.40
1:CA:1266:G:N1	1:CA:1270:G:C6	2.89	0.40
1:CA:1272:G:C2'	1:CA:1273:C:H5'	2.51	0.40
1:CA:970:C:C5'	1:CA:971:G:OP1	2.64	0.40
33:DL:128:THR:CG2	33:DL:129:LYS:N	2.84	0.40
33:DL:135:ILE:HG23	33:DL:136:GLU:H	1.86	0.40
1:AA:158:G:C2'	1:AA:159:G:H5''	2.50	0.40
3:AC:37:LYS:HE3	3:AC:37:LYS:HB2	1.88	0.40
1:AA:923:A:H1'	1:AA:1398:A:N3	2.36	0.40
1:CA:764:C:C2'	1:CA:765:G:C5'	2.81	0.40
22:DA:388:G:H8	22:DA:388:G:H2'	1.74	0.40
5:CE:98:ALA:HB2	5:CE:123:LEU:HG	2.03	0.40
2:AB:86:CYS:H	2:AB:88:GLN:NE2	2.19	0.40
2:AB:130:LYS:HA	2:AB:130:LYS:CE	2.51	0.40
47:BZ:9:THR:HG21	47:BZ:53:MET:C	2.41	0.40
37:DP:109:ILE:HB	37:DP:110:LYS:H	1.74	0.40
27:DF:52:ALA:CB	27:DF:149:ARG:HE	2.34	0.40
1:CA:142:G:C5	1:CA:143:A:C8	3.09	0.40
1:CA:149:A:N1	1:CA:150:U:C2	2.89	0.40
8:AH:79:ARG:CB	8:AH:80:PRO:HD2	2.48	0.40
22:DA:940:G:O5'	22:DA:940:G:H8	2.04	0.40
23:DB:68:C:O2'	23:DB:69:G:C5'	2.69	0.40
32:DK:59:LYS:HE3	32:DK:89:ASN:CG	2.41	0.40
7:CG:114:SER:O	7:CG:118:ARG:HG3	2.21	0.40
14:AN:42:ASN:ND2	14:AN:46:LYS:NZ	2.65	0.40
22:DA:2308:G:C2'	22:DA:2309:A:OP1	2.70	0.40
22:BA:2140:G:H2'	22:BA:2141:G:C8	2.55	0.40
22:BA:2150:C:O2'	22:BA:2151:U:O5'	2.39	0.40
16:AP:75:ILE:O	16:AP:77:GLU:N	2.54	0.40
16:AP:77:GLU:C	16:AP:79:ASN:N	2.73	0.40
39:DR:68:ARG:CZ	39:DR:90:ARG:HG2	2.50	0.40
22:DA:1862:G:O2'	22:DA:1863:G:H5'	2.21	0.40
22:DA:415:A:H8	22:DA:415:A:O5'	2.04	0.40
1:CA:283:U:C2'	1:CA:284:C:H5'	2.52	0.40
36:DO:2:ASP:O	36:DO:4:LYS:N	2.55	0.40
22:DA:2663:G:H2'	22:DA:2664:G:O5'	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:11:ARG:HD3	12:CL:11:ARG:HA	1.89	0.40
26:BE:46:GLN:HE21	26:BE:87:ALA:H	1.69	0.40
27:DF:123:GLY:H	27:DF:126:ASN:HD22	1.68	0.40
22:BA:2496:C:H5''	34:BM:82:MET:HG3	2.03	0.40
27:DF:65:LEU:HD21	27:DF:87:LYS:N	2.36	0.40
1:AA:148:G:C2'	1:AA:149:A:O5'	2.69	0.40
22:DA:1707:G:H2'	22:DA:1707:G:N3	2.36	0.40
3:CC:86:LEU:O	3:CC:90:VAL:HG13	2.21	0.40
22:DA:734:A:O2'	22:DA:1635:A:H4'	2.21	0.40
29:DH:62:LEU:C	29:DH:64:ALA:N	2.75	0.40
40:BS:96:ILE:HD12	40:BS:97:LEU:N	2.34	0.40
50:D2:45:SER:O	50:D2:46:LYS:HD2	2.21	0.40
22:DA:2069:G:C2'	22:DA:2070:A:H5'	2.52	0.40
1:AA:878:A:H4'	8:AH:3:GLN:NE2	2.36	0.40
22:BA:1429:G:O2'	22:BA:1430:G:C5'	2.57	0.40
29:DH:94:ILE:HD12	29:DH:98:ASP:OD1	2.21	0.40
29:BH:82:SER:O	29:BH:83:LYS:HD3	2.20	0.40
22:BA:409:G:C2'	22:BA:410:G:C5'	3.00	0.40
28:DG:120:ILE:CD1	28:DG:132:LEU:HB3	2.51	0.40
22:DA:2869:G:C5	22:DA:2870:C:C4	3.09	0.40
39:BR:25:LEU:HD12	39:BR:25:LEU:HA	1.86	0.40
22:DA:867:C:O2'	22:DA:868:U:C6	2.40	0.40
17:CQ:61:ARG:C	17:CQ:72:TRP:CE3	2.94	0.40
27:DF:147:ARG:C	27:DF:148:VAL:HG13	2.41	0.40
1:CA:1460:C:H2'	1:CA:1461:G:O4'	2.21	0.40
1:AA:929:G:C6	1:AA:930:C:C4	3.09	0.40
28:BG:15:ASP:O	28:BG:16:VAL:CB	2.69	0.40
23:BB:25:U:H2'	23:BB:26:C:C6	2.56	0.40
29:BH:81:ALA:CB	29:BH:145:ASN:O	2.69	0.40
22:DA:357:C:N3	22:DA:358:U:C5	2.89	0.40
30:BI:41:PHE:N	30:BI:68:PHE:HZ	2.19	0.40
49:D1:10:LEU:HD22	49:D1:20:TYR:HB3	2.01	0.40
1:AA:188:C:O2	1:AA:188:C:C2'	2.70	0.40
11:CK:15:VAL:HG12	11:CK:17:ASP:N	2.35	0.40
42:BU:86:PHE:HB2	42:BU:92:VAL:HB	2.02	0.40
3:CC:88:LYS:O	3:CC:92:ASP:HB2	2.21	0.40
15:CO:55:LEU:C	15:CO:57:ARG:H	2.24	0.40
15:AO:73:ASP:O	15:AO:74:VAL:C	2.60	0.40
15:AO:74:VAL:O	15:AO:75:ALA:C	2.59	0.40
38:DQ:41:ALA:O	38:DQ:45:ALA:HB2	2.21	0.40
22:BA:396:G:H1'	45:BX:28:PHE:HB3	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:69:LEU:CD1	15:CO:77:TYR:HB2	2.51	0.40
22:BA:2454:G:C5	22:BA:2455:G:N7	2.89	0.40
1:AA:1032:G:C2	1:AA:1033:G:C1'	3.04	0.40
22:DA:2522:U:C3'	22:DA:2522:U:C6	3.05	0.40
7:AG:74:VAL:HG21	7:AG:143:MET:HG2	2.02	0.40
22:BA:77:G:N2	22:BA:110:G:H1'	2.36	0.40
22:BA:1359:A:OP1	56:BA:3615:HOH:O	2.22	0.40
33:DL:14:LYS:O	33:DL:15:ALA:O	2.40	0.40
1:AA:1084:G:C4	1:AA:1085:U:C4	3.09	0.40
22:BA:2315:G:C4	22:BA:2316:G:C8	3.09	0.40
1:CA:1191:A:OP1	3:CC:2:GLN:NE2	2.54	0.40
1:CA:1190:G:OP1	3:CC:3:LYS:HA	2.21	0.40
22:BA:858:G:C5	22:BA:2268:A:C2	3.08	0.40
1:AA:937:A:C2	1:AA:1379:G:O6	2.75	0.40
25:BD:9:VAL:HG22	25:BD:10:GLY:H	1.86	0.40
22:DA:377:G:O6	22:DA:378:C:N4	2.54	0.40
42:BU:3:LYS:O	42:BU:82:VAL:HG21	2.22	0.40
28:DG:38:ASP:O	28:DG:39:ALA:CB	2.69	0.40
22:BA:832:U:H2'	22:BA:833:A:H8	1.85	0.40
25:DD:61:THR:O	25:DD:64:GLU:N	2.54	0.40
1:AA:1513:A:H2'	1:AA:1514:G:C8	2.56	0.40
1:AA:768:A:H2'	1:AA:769:G:O4'	2.20	0.40
49:D1:12:SER:HA	49:D1:48:TYR:CD1	2.56	0.40
22:BA:1442:U:O5'	22:BA:1442:U:H6	2.04	0.40
16:CP:12:LYS:O	16:CP:13:LYS:CB	2.68	0.40
22:DA:929:U:H1'	47:DZ:25:GLY:O	2.21	0.40
22:DA:2029:G:N2	22:DA:2033:A:C5	2.90	0.40
1:CA:399:G:C6	1:CA:400:C:N4	2.90	0.40
22:BA:149:A:H2'	22:BA:150:U:C6	2.56	0.40
22:DA:978:G:C6	22:DA:979:A:C5	3.09	0.40
22:BA:1444:G:N2	22:BA:1548:A:C4	2.90	0.40
14:CN:41:TRP:HB3	14:CN:44:VAL:HG23	2.03	0.40
35:BN:42:LYS:O	35:BN:45:ARG:HG3	2.21	0.40
22:BA:457:A:O4'	22:BA:459:U:C6	2.74	0.40
1:AA:838:G:H2'	1:AA:839:C:H6	1.87	0.40
22:BA:49:A:N6	22:BA:177:G:C4	2.88	0.40
13:AM:103:THR:HG22	13:AM:104:ASN:H	1.86	0.40
1:CA:600:A:P	8:CH:87:ARG:HG2	2.62	0.40
22:BA:2518:A:H2'	22:BA:2518:A:N3	2.36	0.40
8:AH:33:VAL:HG12	8:AH:34:ALA:N	2.35	0.40
22:BA:2190:G:H2'	22:BA:2191:A:H8	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BX:51:SER:O	45:BX:52:ALA:C	2.57	0.40
5:AE:112:ALA:O	5:AE:115:GLU:N	2.54	0.40
5:AE:139:THR:HG23	5:AE:140:ILE:H	1.86	0.40
5:AE:76:ASN:ND2	5:AE:76:ASN:C	2.74	0.40
8:AH:66:GLN:C	8:AH:68:LYS:H	2.25	0.40
22:DA:1813:G:N2	24:DC:50:THR:CG2	2.84	0.40
22:DA:1804:C:H42	22:DA:1814:G:N2	2.16	0.40
22:DA:2205:A:N3	22:DA:2206:C:C6	2.89	0.40
24:DC:172:THR:HA	24:DC:182:LYS:HA	2.04	0.40
1:CA:1130:A:C6	1:CA:1131:G:N7	2.90	0.40
9:CI:30:ASN:C	9:CI:32:ARG:H	2.24	0.40
22:DA:1386:C:O2'	22:DA:1387:A:O5'	2.39	0.40
41:DT:60:THR:HB	41:DT:61:LEU:H	1.74	0.40
22:DA:2333:A:N1	22:DA:2335:A:N6	2.69	0.40
22:DA:2331:G:C6	22:DA:2385:C:N4	2.89	0.40
44:DW:23:LYS:CG	44:DW:24:ARG:N	2.79	0.40
44:DW:67:LYS:CB	44:DW:80:SER:HB2	2.52	0.40
22:DA:1793:C:N4	56:DA:3764:HOH:O	2.54	0.40
22:DA:2815:C:C2'	22:DA:2816:G:O4'	2.65	0.40
35:DN:33:ILE:HD11	35:DN:118:ARG:HH21	1.87	0.40
12:CL:85:ARG:HH12	12:CL:87:LYS:CB	2.35	0.40
22:DA:100:U:N1	22:DA:100:U:OP1	2.54	0.40
22:DA:1208:C:N3	22:DA:1209:U:C5	2.89	0.40
46:DY:17:GLU:HG3	46:DY:53:VAL:CG1	2.41	0.40
50:D2:31:LEU:O	50:D2:34:ARG:HB2	2.20	0.40
22:DA:55:G:N2	22:DA:116:C:C2	2.89	0.40
22:DA:35:G:N2	22:DA:450:G:H1'	2.36	0.40
22:DA:460:A:OP2	50:D2:41:ARG:NH1	2.48	0.40
22:DA:2753:A:O2'	22:DA:2754:U:H5'	2.22	0.40
1:AA:1331:G:O2'	1:AA:1332:A:P	2.79	0.40
1:CA:408:A:N6	1:CA:409:U:C4	2.89	0.40
1:CA:405:U:O4	4:CD:1:ALA:HB1	2.19	0.40
1:CA:790:A:C6	1:CA:791:G:C5	3.09	0.40
39:DR:39:LEU:CD2	39:DR:39:LEU:N	2.83	0.40
43:DV:79:ARG:CB	43:DV:79:ARG:NH1	2.84	0.40
43:DV:83:LYS:HA	43:DV:84:PRO:HD3	1.85	0.40
11:CK:111:ASP:H	21:CU:3:ILE:N	2.20	0.40
7:AG:12:LEU:CD2	7:AG:12:LEU:N	2.66	0.40
10:CJ:66:GLU:CG	14:CN:100:TRP:CZ3	3.02	0.40
22:DA:2015:A:C2	48:D0:2:VAL:CG1	3.05	0.40
22:DA:2023:C:O2'	22:DA:2024:G:O5'	2.39	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:16:GLY:C	29:BH:51:ARG:HH21	2.25	0.40
22:BA:866:A:O2'	22:BA:867:C:H5'	2.21	0.40
22:DA:188:G:C6	22:DA:189:G:C4	3.10	0.40
22:DA:1331:G:C4	22:DA:1333:G:C8	3.09	0.40
22:DA:477:A:C5	22:DA:478:A:N7	2.90	0.40
22:BA:1179:G:N7	22:BA:1180:U:C1'	2.85	0.40
1:CA:1213:A:N7	1:CA:1215:G:C5	2.90	0.40
1:CA:1217:C:O2'	1:CA:1218:C:C6	2.38	0.40
19:CS:77:ARG:O	19:CS:77:ARG:HG3	2.20	0.40
22:DA:1199:U:O2'	22:DA:1200:C:H5'	2.22	0.40
25:DD:9:VAL:CG1	25:DD:26:VAL:HG12	2.51	0.40
25:DD:9:VAL:O	25:DD:9:VAL:CG2	2.69	0.40
22:BA:1866:A:C6	22:BA:1876:A:N7	2.90	0.40
22:DA:2061:G:C8	22:DA:2501:C:H4'	2.56	0.40
5:CE:80:LEU:HD22	5:CE:80:LEU:HA	1.89	0.40
22:BA:221:A:N1	22:BA:265:A:O2'	2.45	0.40
22:DA:1011:G:O2'	22:DA:1012:U:P	2.80	0.40
11:AK:124:LYS:NZ	21:AU:34:ARG:HD2	2.36	0.40
22:BA:1011:G:P	38:BQ:76:SER:HG	2.43	0.40
27:DF:45:ASP:O	27:DF:47:LYS:HD3	2.21	0.40
1:CA:141:G:O2'	1:CA:142:G:H5'	2.21	0.40
1:CA:174:A:H2'	1:CA:174:A:N3	2.35	0.40
1:CA:74:A:N6	1:CA:97:G:O6	2.54	0.40
8:AH:17:GLN:O	8:AH:18:ALA:C	2.59	0.40
8:AH:17:GLN:CD	8:AH:69:ALA:HB1	2.41	0.40
22:BA:729:G:O2'	22:BA:1775:U:H1'	2.20	0.40
23:DB:54:G:H21	27:DF:25:MET:HE2	1.84	0.40
27:BF:104:THR:HG22	27:BF:105:ILE:HG22	2.04	0.40
25:DD:94:GLN:O	25:DD:94:GLN:CG	2.69	0.40
22:DA:1654:A:H1'	25:DD:118:PHE:CB	2.52	0.40
40:BS:50:VAL:O	40:BS:51:LEU:C	2.59	0.40
1:CA:1245:C:HO2'	1:CA:1246:A:H8	0.72	0.40
51:D3:41:ARG:HD2	51:D3:41:ARG:C	2.41	0.40
31:BJ:88:THR:HG23	31:BJ:90:GLU:HG3	2.03	0.40
1:AA:1316:G:C5	1:AA:1318:A:OP2	2.74	0.40
14:AN:40:ARG:HH12	14:AN:44:VAL:CB	2.34	0.40
2:AB:13:VAL:HG23	2:AB:207:ARG:HH22	1.84	0.40
6:AF:51:ILE:O	6:AF:52:ASN:CB	2.70	0.40
29:BH:2:GLN:HA	29:BH:20:ASN:HA	2.03	0.40
4:CD:150:LYS:CD	4:CD:150:LYS:N	2.82	0.40
1:AA:483:C:H2'	1:AA:484:G:N7	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:375:U:OP1	16:AP:70:ARG:HD3	2.21	0.40
1:AA:1069:C:C4	1:AA:1070:U:C5	3.10	0.40
22:DA:227:A:H4'	22:DA:228:C:OP1	2.22	0.40
22:DA:229:C:O2'	22:DA:230:G:O5'	2.33	0.40
22:DA:410:G:N2	22:DA:418:C:O2	2.55	0.40
22:DA:2298:A:C2	22:DA:2299:U:C2	3.09	0.40
1:AA:1441:A:N7	1:AA:1442:G:N7	2.69	0.40
22:DA:2656:U:O2'	22:DA:2657:A:H5'	2.21	0.40
7:CG:98:LEU:HB3	7:CG:102:TRP:CH2	2.56	0.40
35:DN:63:ARG:HD2	35:DN:80:PHE:CD2	2.56	0.40
22:DA:674:G:H4'	26:DE:69:ARG:CB	2.50	0.40
22:BA:2531:A:H4'	28:BG:156:TYR:CE1	2.57	0.40
29:BH:82:SER:OG	29:BH:144:VAL:HG11	2.21	0.40
28:DG:162:ARG:C	28:DG:163:TYR:CD2	2.91	0.40
22:DA:2853:C:H2'	22:DA:2854:G:C8	2.56	0.40
22:DA:2191:A:C5'	22:DA:2192:U:OP2	2.57	0.40
22:DA:425:G:N1	22:DA:426:C:C4	2.90	0.40
1:AA:1409:C:H2'	1:AA:1410:A:H8	1.85	0.40
46:BY:22:LEU:O	46:BY:23:ARG:O	2.40	0.40
36:BO:15:ARG:NE	36:BO:93:ASP:OD1	2.49	0.40
23:BB:10:G:H2'	23:BB:11:C:H5'	2.03	0.40
1:CA:159:G:N2	1:CA:161:A:H3'	2.36	0.40
7:AG:28:ILE:CG2	7:AG:104:VAL:HG21	2.52	0.40
22:BA:2887:A:C2'	22:BA:2887:A:N3	2.75	0.40
36:BO:33:ARG:HG2	36:BO:34:HIS:CE1	2.57	0.40
34:BM:54:THR:HG22	34:BM:55:ARG:N	2.36	0.40
1:AA:232:G:C2'	1:AA:233:C:C5'	2.97	0.40
30:BI:52:LEU:HD11	30:BI:81:LYS:HE2	2.03	0.40
45:DX:76:LYS:O	45:DX:77:TYR:CG	2.75	0.40
37:DP:32:VAL:HG13	37:DP:32:VAL:O	2.21	0.40
27:BF:173:ASP:O	27:BF:174:PHE:C	2.60	0.40
22:BA:346:A:C2'	22:BA:347:A:O5'	2.70	0.40
22:DA:1857:G:C4	22:DA:1884:G:N1	2.90	0.40
1:AA:766:A:C4	1:AA:814:A:C2	3.09	0.40
9:AI:19:PHE:HD2	9:AI:63:TYR:CD1	2.36	0.40
30:DI:57:VAL:CG1	30:DI:58:ILE:N	2.83	0.40
1:CA:302:G:N3	1:CA:556:C:H4'	2.36	0.40
1:AA:600:A:C2	1:AA:639:G:C4	3.09	0.40
1:CA:1483:A:C8	1:CA:1484:C:C6	3.09	0.40
37:DP:103:THR:O	37:DP:106:ALA:HB3	2.22	0.40
3:AC:49:ALA:O	3:AC:50:SER:C	2.59	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:83:ASP:HA	24:BC:84:PRO:HD3	1.72	0.40
1:AA:1309:G:C2'	1:AA:1310:G:H5'	2.51	0.40
3:CC:176:THR:HG21	3:CC:178:ARG:HE	1.86	0.40
1:AA:21:G:N2	1:AA:22:G:C6	2.89	0.40
3:CC:58:ARG:HA	3:CC:59:PRO:HD2	1.84	0.40
1:CA:748:G:C2	1:CA:749:A:C5	3.10	0.40
18:AR:22:TYR:HA	18:AR:57:ALA:HB1	2.02	0.40
7:CG:32:ASP:HB2	7:CG:34:LYS:HD3	2.03	0.40
22:DA:826:U:O2'	33:DL:53:GLY:HA3	2.22	0.40
22:BA:1606:C:C2'	22:BA:1607:C:OP2	2.68	0.40
22:BA:813:U:H2'	22:BA:814:C:H6	1.86	0.40
26:BE:124:PHE:C	26:BE:124:PHE:HD1	2.24	0.40
1:AA:402:G:C5	1:AA:403:C:C5	3.10	0.40
1:AA:660:C:OP2	15:AO:4:THR:HG21	2.21	0.40
51:B3:51:LYS:HZ1	51:B3:54:LEU:HD23	1.86	0.40
1:CA:579:A:H2'	1:CA:580:C:C6	2.56	0.40
1:AA:1422:G:C2	1:AA:1423:G:C8	3.09	0.40
22:BA:342:A:C2	22:BA:343:C:H1'	2.57	0.40
22:DA:2364:C:O2'	22:DA:2365:G:H5'	2.21	0.40
22:DA:1896:G:H2'	22:DA:1896:G:N3	2.36	0.40
24:DC:132:ARG:HA	24:DC:166:ARG:HH22	1.86	0.40
22:BA:55:G:C2	22:BA:56:A:C8	3.09	0.40
1:AA:1115:U:C2	1:AA:1116:U:C5	3.09	0.40
20:AT:23:ARG:N	20:AT:23:ARG:HD2	2.36	0.40
35:BN:83:LEU:HA	35:BN:83:LEU:HD12	1.72	0.40
4:AD:165:GLU:H	4:AD:165:GLU:HG3	1.59	0.40
18:CR:34:GLU:HA	18:CR:34:GLU:OE1	2.21	0.40
22:DA:2646:C:H6	22:DA:2646:C:H5'	1.85	0.40
22:BA:2902:C:O2'	22:BA:2903:U:H5'	2.21	0.40
47:BZ:20:LYS:O	47:BZ:21:ALA:C	2.60	0.40
50:D2:43:THR:C	50:D2:44:VAL:HG22	2.41	0.40
22:BA:1009:A:P	31:BJ:39:LYS:HZ1	2.44	0.40
5:AE:89:THR:HG21	5:AE:134:ASN:ND2	2.35	0.40
8:AH:45:ILE:HA	8:AH:63:LYS:CG	2.49	0.40
22:BA:571:U:N3	22:BA:2030:A:C2	2.89	0.40
22:DA:1816:C:O2'	22:DA:1817:G:P	2.79	0.40
28:BG:84:LYS:CE	28:BG:84:LYS:N	2.74	0.40
26:DE:105:LEU:O	26:DE:109:LEU:HB2	2.22	0.40
1:CA:373:A:C2	1:CA:374:A:N7	2.90	0.40
22:DA:2267:A:H8	22:DA:2267:A:H2'	1.49	0.40
22:DA:1059:G:O2'	30:DI:131:THR:HG21	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1118:U:O4'	1:AA:1179:A:H1'	2.20	0.40
1:CA:36:C:H5''	12:CL:119:LYS:HA	2.04	0.40
22:DA:102:U:H3	46:DY:2:LYS:HB3	1.86	0.40
22:DA:108:G:C4	22:DA:109:C:C5	3.10	0.40
22:DA:1203:U:N3	22:DA:1204:A:N6	2.68	0.40
22:DA:1209:U:O2'	22:DA:1237:A:N6	2.47	0.40
26:DE:134:LEU:CA	26:DE:137:LYS:CB	2.97	0.40
46:DY:20:ASN:HD22	46:DY:50:VAL:CG2	2.01	0.40
22:DA:1574:C:O5'	22:DA:1574:C:C6	2.58	0.40
22:DA:45:G:H3'	22:DA:215:G:C8	2.57	0.40
45:DX:10:ARG:CB	45:DX:11:PRO:HD2	2.43	0.40
28:BG:139:VAL:HG12	28:BG:140:ILE:N	2.35	0.40
2:CB:103:TRP:O	2:CB:103:TRP:CD1	2.74	0.40
21:CU:28:LEU:O	21:CU:29:ALA:C	2.59	0.40
22:DA:1529:G:O6	22:DA:1543:G:N2	2.54	0.40
22:BA:855:G:N2	44:BW:23:LYS:CB	2.84	0.40
44:BW:24:ARG:HD3	44:BW:65:LYS:HD3	2.04	0.40
10:CJ:68:ARG:H	10:CJ:68:ARG:HG2	1.68	0.40
6:CF:93:LYS:O	6:CF:94:HIS:HB3	2.22	0.40
18:CR:54:LEU:HG	18:CR:58:ILE:HD11	2.02	0.40
6:CF:88:MET:CE	18:CR:64:LEU:HD11	2.50	0.40
37:DP:48:ALA:O	37:DP:58:PHE:HA	2.22	0.40
25:DD:146:ILE:HD11	25:DD:155:VAL:CG2	2.52	0.40
40:DS:84:ARG:O	40:DS:95:ARG:O	2.39	0.40
29:BH:33:GLN:HE21	29:BH:33:GLN:HB2	1.70	0.40
22:DA:2238:G:H4'	22:DA:2239:G:OP1	2.22	0.40
1:AA:251:G:C2	1:AA:266:G:C5	3.08	0.40
20:AT:77:ASN:H	20:AT:77:ASN:ND2	2.19	0.40
22:DA:1252:G:C4	22:DA:1253:A:C2	3.09	0.40
38:DQ:9:ALA:C	38:DQ:11:ALA:N	2.73	0.40
26:BE:172:ALA:O	26:BE:175:ILE:CG2	2.69	0.40
1:CA:975:A:C2	1:CA:1365:G:N2	2.89	0.40
20:AT:9:ARG:NH1	20:AT:12:GLN:NE2	2.70	0.40
22:DA:602:A:N3	22:DA:656:G:C2	2.90	0.40
33:DL:3:LEU:HD12	33:DL:4:ASN:CA	2.51	0.40
22:DA:2586:U:O2'	22:DA:2587:A:C5'	2.68	0.40
22:BA:1872:A:HO2'	22:BA:1873:G:C4'	2.34	0.40
11:AK:85:VAL:HG11	11:AK:92:ARG:HG3	2.03	0.40
22:DA:2501:C:P	56:DA:3557:HOH:O	2.79	0.40
10:AJ:73:LEU:O	10:AJ:74:VAL:CB	2.69	0.40
5:CE:94:PHE:O	5:CE:124:ALA:HA	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:95:MET:HA	5:CE:123:LEU:O	2.22	0.40
36:BO:4:LYS:HD3	36:BO:7:ARG:NH2	2.37	0.40
24:BC:229:HIS:HD2	24:BC:246:PRO:CB	2.34	0.40
2:AB:140:LEU:O	2:AB:142:LYS:N	2.54	0.40
22:DA:2590:A:O3'	24:DC:237:ARG:CD	2.65	0.40
46:BY:56:LEU:HA	46:BY:59:GLU:HG3	2.02	0.40
22:BA:1131:G:C4	31:BJ:77:HIS:ND1	2.89	0.40
5:CE:14:LEU:HA	5:CE:36:THR:HG22	2.03	0.40
22:DA:1665:A:H2'	22:DA:1666:G:H5'	2.02	0.40
22:DA:2873:A:C4'	35:DN:6:SER:HB2	2.51	0.40
27:DF:136:ILE:CG2	27:DF:142:TYR:CD1	3.05	0.40
1:CA:1200:C:O2'	1:CA:1201:A:OP2	2.32	0.40
1:CA:80:A:C5	1:CA:81:A:H1'	2.57	0.40
1:CA:90:C:H2'	1:CA:91:U:C5	2.56	0.40
1:CA:277:C:C5	1:CA:278:G:N7	2.90	0.40
38:DQ:46:TYR:HA	38:DQ:49:ARG:NH2	2.36	0.40
23:DB:66:A:N6	23:DB:107:G:C8	2.89	0.40
22:DA:1656:C:H2'	22:DA:1657:U:C5'	2.50	0.40
22:DA:1475:G:O2'	22:DA:1476:U:P	2.80	0.40
22:DA:413:C:O3'	22:DA:1880:U:H4'	2.21	0.40
1:AA:978:A:OP1	1:AA:980:C:N4	2.54	0.40
22:DA:2308:G:O6	22:DA:2311:A:N7	2.55	0.40
24:DC:95:TYR:C	24:DC:97:ASP:N	2.74	0.40
1:CA:865:A:H5'	1:CA:1078:U:C5	2.56	0.40
1:CA:864:A:C5	1:CA:865:A:C6	3.09	0.40
29:BH:40:THR:O	29:BH:41:LYS:HB2	2.22	0.40
1:AA:1221:G:H2'	1:AA:1222:G:H8	1.86	0.40
22:DA:1941:C:C6	22:DA:1965:C:C4	3.09	0.40
22:DA:225:C:N4	22:DA:419:U:O2'	2.37	0.40
1:CA:322:C:O2'	20:CT:17:ARG:HG3	2.22	0.40
1:AA:1461:G:C5	1:AA:1462:C:C5	3.10	0.40
22:DA:2652:C:H2'	22:DA:2653:U:O4'	2.21	0.40
22:BA:603:A:C8	22:BA:655:A:C6	3.09	0.40
1:CA:567:G:H1'	56:CA:1819:HOH:O	2.22	0.40
22:DA:690:G:H1'	22:DA:779:U:O3'	2.20	0.40
1:AA:438:U:C6	1:AA:494:G:O6	2.75	0.40
22:DA:1649:G:H2'	22:DA:1650:A:C8	2.56	0.40
25:BD:90:PHE:C	25:BD:92:VAL:N	2.73	0.40
35:DN:57:THR:O	35:DN:80:PHE:CD1	2.74	0.40
1:AA:819:A:C4'	1:AA:820:U:OP2	2.67	0.40
1:CA:729:A:C5	1:CA:730:G:N7	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:640:A:O2'	8:AH:107:LYS:NZ	2.54	0.40
1:AA:585:G:N2	1:AA:878:A:O2'	2.55	0.40
24:DC:30:ALA:N	24:DC:31:PRO:HD2	2.34	0.40
40:DS:4:ILE:CD1	40:DS:5:ALA:N	2.73	0.40
22:DA:1712:U:H2'	22:DA:1713:A:N7	2.36	0.40
44:BW:37:VAL:CG1	44:BW:38:ARG:N	2.84	0.40
45:BX:60:LYS:O	45:BX:62:GLY:N	2.55	0.40
20:CT:4:LYS:HB3	20:CT:4:LYS:HE3	1.57	0.40
1:CA:948:C:C5	13:CM:104:ASN:OD1	2.75	0.40
1:AA:244:U:H4'	1:AA:245:U:C5'	2.51	0.40
13:CM:3:ILE:HG23	13:CM:56:ARG:CD	2.50	0.40
36:BO:30:ARG:HG3	36:BO:102:ARG:NH1	2.37	0.40
22:DA:1107:G:C5	22:DA:1108:U:C5	3.09	0.40
22:BA:308:G:C4	22:BA:501:A:C8	3.09	0.40
45:BX:65:THR:O	45:BX:68:ALA:CB	2.63	0.40
1:AA:596:A:H5'	1:AA:596:A:H8	1.83	0.40
22:BA:1436:G:H2'	22:BA:1437:C:O5'	2.22	0.40
30:BI:56:VAL:HG22	30:BI:68:PHE:HB2	2.03	0.40
49:D1:20:TYR:HE2	49:D1:37:LYS:NZ	2.17	0.40
49:D1:10:LEU:HD12	49:D1:50:GLU:O	2.22	0.40
8:CH:100:ILE:HD12	8:CH:101:ALA:N	2.35	0.40
22:BA:503:A:C2	22:BA:505:A:C4	3.10	0.40
35:BN:97:ILE:HG22	35:BN:98:LEU:N	2.36	0.40
24:BC:87:SER:HB2	24:BC:199:HIS:CD2	2.56	0.40
22:BA:611:C:O2'	22:BA:612:G:H5'	2.21	0.40
1:CA:1076:U:N3	1:CA:1082:A:C2	2.90	0.40
20:CT:9:ARG:CD	20:CT:12:GLN:NE2	2.84	0.40
3:AC:190:THR:C	3:AC:192:TYR:H	2.25	0.40
22:BA:679:C:H2'	22:BA:680:C:C6	2.56	0.40
15:CO:69:LEU:HD12	15:CO:77:TYR:HA	2.02	0.40
4:AD:88:ASN:HA	4:AD:91:ALA:CB	2.48	0.40
51:B3:49:VAL:HG23	51:B3:50:SER:O	2.21	0.40
1:CA:461:A:N3	1:CA:461:A:C2'	2.80	0.40
1:CA:1161:C:O2'	1:CA:1162:C:C5'	2.69	0.40
1:AA:417:G:C6	1:AA:418:C:N4	2.90	0.40
1:AA:131:A:C2	1:AA:132:C:C4	3.09	0.40
3:AC:21:TRP:CD1	3:AC:58:ARG:HG2	2.57	0.40
5:AE:48:GLY:HA3	5:AE:65:LYS:HB2	2.02	0.40
22:BA:563:A:C6	22:BA:564:C:C4	3.09	0.40
22:DA:910:A:N6	34:DM:11:LYS:O	2.54	0.40
43:BV:65:VAL:O	43:BV:65:VAL:HG23	2.19	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DV:50:MET:O	43:DV:53:LYS:N	2.50	0.40
22:DA:1709:U:H2'	22:DA:1710:G:H8	1.85	0.40
22:DA:825:A:C6	22:DA:826:U:N3	2.89	0.40
1:CA:1477:U:C2	1:CA:1478:U:C5	3.09	0.40
22:BA:233:A:O2'	22:BA:234:U:H5'	2.21	0.40
1:AA:582:C:C4	1:AA:583:A:N7	2.90	0.40
8:CH:111:THR:HG22	8:CH:112:ASP:N	2.36	0.40
36:DO:80:GLU:O	36:DO:84:GLU:HB2	2.22	0.40
22:BA:260:G:H2'	22:BA:261:G:O5'	2.22	0.40
22:BA:535:G:C2	22:BA:559:G:C5	3.10	0.40
22:DA:1465:G:C4	22:DA:1466:U:C6	3.10	0.40
33:BL:79:LEU:HD23	33:BL:79:LEU:HA	1.70	0.40
22:BA:240:C:H2'	22:BA:241:A:C8	2.56	0.40
24:DC:74:PRO:HA	24:DC:116:GLN:HG3	2.02	0.40
22:BA:291:G:H1'	22:BA:350:G:N2	2.37	0.40
22:BA:2096:C:O2	22:BA:2096:C:H2'	2.20	0.40
22:DA:2646:C:C5'	22:DA:2646:C:H6	2.34	0.40
28:BG:90:GLY:O	28:BG:91:VAL:C	2.59	0.40
1:AA:445:G:N3	1:AA:445:G:H2'	2.36	0.40
15:CO:87:ARG:HD2	15:CO:87:ARG:HA	1.76	0.40
31:DJ:24:THR:HG22	31:DJ:24:THR:O	2.21	0.40
35:BN:23:ASN:H	35:BN:23:ASN:ND2	2.19	0.40
22:BA:2845:U:O3'	37:BP:52:ARG:NH1	2.54	0.40
22:DA:2204:G:OP2	24:DC:149:LYS:CD	2.61	0.40
16:CP:6:LEU:HB2	16:CP:17:TYR:CB	2.49	0.40
22:DA:740:C:H5'	22:DA:1784:A:C3'	2.51	0.40
22:DA:1054:A:C2	22:DA:1106:G:C2	3.09	0.40
22:DA:1070:A:H61	30:DI:8:VAL:CB	2.34	0.40
22:DA:1080:A:N3	22:DA:1081:U:C6	2.89	0.40
30:DI:4:VAL:HG22	30:DI:5:GLN:N	2.36	0.40
22:DA:2818:U:OP2	35:DN:42:LYS:NZ	2.54	0.40
1:AA:1256:A:C6	1:AA:1278:G:C2	3.09	0.40
9:AI:25:GLY:N	9:AI:58:GLU:HA	2.36	0.40
22:DA:301:G:C6	22:DA:317:G:C6	3.10	0.40
22:DA:69:C:H2'	22:DA:70:G:C8	2.56	0.40
42:DU:90:LYS:CB	42:DU:92:VAL:CG1	3.00	0.40
22:BA:1797:G:C5	22:BA:1798:U:C5	3.10	0.40
22:DA:217:A:O2'	22:DA:218:A:H5'	2.21	0.40
22:DA:48:G:N3	22:DA:48:G:H2'	2.36	0.40
22:DA:54:G:O5'	22:DA:54:G:H8	2.05	0.40
28:BG:140:ILE:HD12	28:BG:141:GLY:H	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2750:A:HO2'	22:DA:2751:G:P	2.44	0.40
1:CA:1097:C:C2	1:CA:1098:C:C6	3.10	0.40
22:DA:138:U:H2'	22:DA:140:C:C1'	2.49	0.40
1:AA:214:C:C6	1:AA:215:C:C5	3.09	0.40
1:AA:464:U:C6	1:AA:466:A:OP2	2.74	0.40
1:AA:202:G:O2'	1:AA:468:A:C8	2.70	0.40
1:CA:1494:G:C2	1:CA:1495:U:C6	3.09	0.40
1:AA:76:G:C2'	1:AA:76:G:N3	2.82	0.40
22:DA:2616:C:O2'	22:DA:2617:U:O5'	2.26	0.40
29:BH:12:LEU:HB2	29:BH:19:VAL:HG11	2.03	0.40
22:DA:204:A:C4	22:DA:206:U:C4	3.09	0.40
40:DS:20:VAL:CG1	40:DS:43:ALA:CB	2.86	0.40
22:BA:1498:C:C2'	22:BA:1499:C:H6	2.30	0.40
1:AA:1241:G:N2	1:AA:1242:G:C5	2.90	0.40
8:CH:68:LYS:CD	8:CH:69:ALA:N	2.71	0.40
22:DA:476:G:N2	22:DA:478:A:H2'	2.36	0.40
26:BE:3:LEU:HD12	26:BE:14:VAL:HG11	2.03	0.40
1:CA:1357:A:C5	1:CA:1358:U:C4	3.10	0.40
1:CA:1363:A:C6	1:CA:1365:G:C6	3.09	0.40
1:CA:963:G:O2'	1:CA:964:A:O5'	2.40	0.40
9:CI:118:ARG:HG3	9:CI:124:PRO:HG3	2.04	0.40
1:CA:1367:C:H5'	10:CJ:62:ARG:NH1	2.36	0.40
4:AD:56:GLU:O	4:AD:60:VAL:HG23	2.22	0.40
1:AA:157:U:O2	1:AA:165:G:C2	2.74	0.40
3:AC:55:VAL:O	3:AC:56:ILE:HG13	2.21	0.40
22:BA:2307:G:H1'	22:BA:2308:G:C5	2.57	0.40
19:AS:45:GLY:N	19:AS:61:VAL:CG2	2.72	0.40
22:DA:2573:C:OP1	22:DA:2575:C:OP2	2.40	0.40
25:DD:149:ASN:OD1	25:DD:150:GLN:N	2.50	0.40
1:AA:1141:C:C2	1:AA:1142:G:C8	3.10	0.40
22:DA:2681:C:H4'	22:DA:2682:A:O5'	2.22	0.40
41:BT:34:VAL:O	41:BT:35:ALA:O	2.39	0.40
21:AU:33:ARG:CD	21:AU:34:ARG:HG3	2.50	0.40
21:AU:34:ARG:C	21:AU:36:PHE:H	2.24	0.40
16:CP:60:TRP:O	16:CP:63:GLN:N	2.55	0.40
11:AK:109:ILE:HG22	11:AK:110:THR:N	2.37	0.40
31:BJ:54:ILE:C	31:BJ:54:ILE:CD1	2.86	0.40
6:AF:38:ARG:HH11	6:AF:61:LEU:HD21	1.83	0.40
27:BF:5:ASP:O	27:BF:8:LYS:HG2	2.21	0.40
1:CA:103:U:H2'	1:CA:104:G:H8	1.87	0.40
1:CA:71:A:C2	1:CA:72:A:N7	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:56:LEU:C	12:AL:58:ASN:N	2.73	0.40
17:CQ:46:HIS:HB3	17:CQ:66:LEU:HD13	2.03	0.40
22:DA:1442:U:N3	22:DA:1443:U:C4	2.90	0.40
1:CA:1245:C:O2'	1:CA:1246:A:O5'	2.39	0.40
1:AA:957:U:H4'	19:AS:78:THR:OG1	2.21	0.40
7:CG:8:GLN:CD	7:CG:9:ARG:H	2.24	0.40
1:AA:1117:A:O3'	9:AI:105:ARG:NE	2.55	0.40
22:BA:1627:G:C2	22:BA:1628:G:N7	2.90	0.40
1:AA:1234:C:C2'	1:AA:1235:U:C5'	2.90	0.40
22:BA:2821:A:H2'	22:BA:2822:G:C8	2.57	0.40
1:AA:384:G:C6	1:AA:385:C:N3	2.89	0.40
29:BH:50:ARG:C	29:BH:52:ALA:N	2.75	0.40
22:DA:497:A:H3'	22:DA:498:G:H8	1.87	0.40
22:DA:1225:G:C6	22:DA:1226:A:N6	2.89	0.40
22:DA:228:C:N3	22:DA:418:C:O4'	2.54	0.40
22:DA:415:A:C5	22:DA:416:U:C4	3.09	0.40
1:AA:1442:G:C4	1:AA:1443:C:C5	3.08	0.40
22:BA:846:U:C2'	22:BA:847:U:OP2	2.69	0.40
22:DA:278:A:N1	22:DA:362:A:C8	2.90	0.40
25:BD:92:VAL:O	25:BD:94:GLN:N	2.55	0.40
23:DB:34:A:H2'	23:DB:35:C:OP2	2.22	0.40
22:DA:1706:C:O2'	22:DA:1707:G:OP1	2.35	0.40
29:DH:37:VAL:HG22	29:DH:38:PRO:HD2	2.04	0.40
37:BP:33:GLU:OE1	37:BP:34:GLY:N	2.55	0.40
2:AB:36:LYS:O	2:AB:37:VAL:HB	2.21	0.40
22:BA:274:C:H2'	22:BA:275:C:O4'	2.22	0.40
35:BN:12:ARG:HD3	35:BN:16:HIS:CD2	2.57	0.40
24:DC:71:ASP:O	24:DC:73:ILE:HG12	2.21	0.40
1:AA:198:G:N1	1:AA:220:G:C4	2.89	0.40
1:AA:36:C:H4'	12:AL:118:VAL:O	2.21	0.40
22:DA:2852:G:H2'	22:DA:2853:C:C6	2.57	0.40
1:AA:1169:A:O2'	1:AA:1170:A:O4'	2.40	0.40
37:BP:91:VAL:O	37:BP:92:ARG:C	2.60	0.40
1:AA:243:A:H5''	1:AA:244:U:OP1	2.21	0.40
1:AA:242:G:C2	1:AA:245:U:C4	3.09	0.40
1:CA:110:C:O2'	1:CA:111:G:C5'	2.69	0.40
7:AG:28:ILE:HG22	7:AG:104:VAL:HG21	2.03	0.40
32:BK:88:ASN:HB3	32:BK:92:GLU:O	2.20	0.40
26:DE:20:GLY:H	26:DE:110:SER:HB3	1.87	0.40
12:CL:35:ARG:HA	12:CL:35:ARG:HD3	1.85	0.40
22:DA:2581:G:C5'	22:DA:2582:G:OP1	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1931:U:O2'	22:DA:1932:A:H5'	2.20	0.40
22:BA:1439:A:C2	22:BA:1553:A:C4	3.09	0.40
1:CA:126:G:H5''	1:CA:634:C:O2	2.21	0.40
25:DD:40:LEU:HA	25:DD:44:GLY:CA	2.46	0.40
1:AA:1014:A:H5''	19:AS:13:HIS:CB	2.51	0.40
31:BJ:114:LEU:C	31:BJ:114:LEU:HD23	2.41	0.40
27:BF:107:VAL:N	27:BF:108:PRO:HD2	2.34	0.40
10:AJ:82:LYS:O	10:AJ:86:ALA:N	2.54	0.40
6:AF:9:MET:HE2	6:AF:59:TYR:CD2	2.57	0.40
44:BW:67:LYS:O	44:BW:68:PHE:CB	2.59	0.40
22:BA:294:A:C6	22:BA:345:A:N3	2.90	0.40
22:DA:958:U:H3	34:DM:16:ARG:HB2	1.86	0.40
22:BA:379:G:N1	22:BA:396:G:C6	2.90	0.40
17:CQ:30:HIS:CG	17:CQ:31:PRO:CD	3.05	0.40
51:B3:21:PHE:N	51:B3:48:MET:CE	2.81	0.40
1:AA:509:A:H5'	4:AD:50:TYR:CE2	2.57	0.40
31:BJ:31:GLU:CG	31:BJ:142:ILE:HD12	2.50	0.40
37:DP:105:LYS:HD3	37:DP:105:LYS:HA	1.90	0.40
27:BF:162:ASP:OD1	27:BF:162:ASP:N	2.54	0.40
18:CR:27:THR:O	18:CR:30:ASN:HB3	2.21	0.40
2:AB:71:THR:HG21	2:AB:94:ARG:HA	2.04	0.40
22:DA:661:A:H2'	22:DA:662:G:O4'	2.22	0.40
43:BV:6:ALA:CB	43:BV:40:ILE:CG2	3.00	0.40
1:CA:1189:U:H5''	3:CC:4:VAL:HG11	2.03	0.40
1:CA:486:U:O2	1:CA:486:U:C2'	2.69	0.40
25:BD:142:VAL:HG23	25:BD:143:PRO:HD2	2.03	0.40
22:DA:756:A:H2'	22:DA:757:G:O5'	2.21	0.40
22:DA:540:C:H2'	22:DA:541:A:H8	1.86	0.40
1:AA:909:A:H2'	1:AA:910:C:O5'	2.21	0.40
22:BA:2506:U:O2'	22:BA:2507:C:H5'	2.21	0.40
1:AA:698:G:H2'	1:AA:699:C:O4'	2.22	0.40
22:BA:1091:G:O2'	22:BA:1092:C:H5'	2.22	0.40
22:BA:1316:U:H2'	22:BA:1317:G:C8	2.56	0.40
15:AO:85:GLY:O	15:AO:86:LEU:HB3	2.21	0.40
27:DF:3:LEU:HG	27:DF:100:GLU:CD	2.40	0.40
4:AD:175:GLY:C	4:AD:176:LYS:HD3	2.42	0.40
31:DJ:16:TYR:HB2	31:DJ:54:ILE:CD1	2.52	0.40
46:BY:16:THR:O	46:BY:19:LEU:HB2	2.21	0.40
26:BE:106:LYS:HD2	26:BE:200:LEU:HB3	2.04	0.40
16:CP:2:VAL:HG13	16:CP:65:ALA:CA	2.51	0.40
3:CC:163:ARG:O	3:CC:164:THR:CB	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:155:LYS:NZ	8:CH:72:GLU:CG	2.84	0.40
22:BA:2436:G:N3	22:BA:2598:A:H2	2.18	0.40
22:DA:1724:G:H3'	22:DA:1725:U:C6	2.57	0.40
48:D0:29:VAL:CG2	48:D0:34:GLY:HA2	2.52	0.40
4:CD:146:GLU:N	4:CD:146:GLU:OE1	2.55	0.40
22:BA:2098:U:C4	22:BA:2099:U:C4	3.09	0.40
22:BA:2839:G:OP1	35:BN:46:ARG:HD2	2.22	0.40
1:AA:832:G:C2	1:AA:833:G:C8	3.10	0.40
27:DF:160:LYS:HB2	27:DF:160:LYS:HE2	1.93	0.40
23:BB:42:C:C5	27:BF:65:LEU:HD22	2.56	0.40
43:DV:65:VAL:HG22	43:DV:65:VAL:O	2.21	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:138:U:O4	22:DA:305:C:OP1[3_545]	2.02	0.18

## 5.3 Torsion angles ⓘ

### 5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AB	216/218 (99%)	133 (62%)	51 (24%)	32 (15%)	0	1
2	CB	216/218 (99%)	158 (73%)	38 (18%)	20 (9%)	1	4
3	AC	204/206 (99%)	144 (71%)	36 (18%)	24 (12%)	0	2
3	CC	204/206 (99%)	138 (68%)	47 (23%)	19 (9%)	1	4
4	AD	203/205 (99%)	127 (63%)	43 (21%)	33 (16%)	0	0
4	CD	203/205 (99%)	138 (68%)	40 (20%)	25 (12%)	0	2
5	AE	148/150 (99%)	97 (66%)	28 (19%)	23 (16%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
5	CE	148/150 (99%)	111 (75%)	21 (14%)	16 (11%)	0	3
6	AF	98/100 (98%)	71 (72%)	15 (15%)	12 (12%)	0	2
6	CF	98/100 (98%)	66 (67%)	19 (19%)	13 (13%)	0	1
7	AG	149/151 (99%)	100 (67%)	37 (25%)	12 (8%)	1	6
7	CG	148/151 (98%)	96 (65%)	38 (26%)	14 (10%)	1	4
8	AH	127/129 (98%)	101 (80%)	15 (12%)	11 (9%)	1	5
8	CH	127/129 (98%)	96 (76%)	23 (18%)	8 (6%)	2	10
9	AI	125/127 (98%)	81 (65%)	28 (22%)	16 (13%)	0	1
9	CI	125/127 (98%)	84 (67%)	32 (26%)	9 (7%)	1	7
10	AJ	96/98 (98%)	69 (72%)	10 (10%)	17 (18%)	0	0
10	CJ	96/98 (98%)	61 (64%)	21 (22%)	14 (15%)	0	1
11	AK	115/117 (98%)	80 (70%)	20 (17%)	15 (13%)	0	1
11	CK	115/117 (98%)	87 (76%)	16 (14%)	12 (10%)	1	3
12	AL	121/123 (98%)	88 (73%)	21 (17%)	12 (10%)	1	4
12	CL	121/123 (98%)	84 (69%)	24 (20%)	13 (11%)	0	3
13	AM	112/114 (98%)	83 (74%)	19 (17%)	10 (9%)	1	5
13	CM	112/114 (98%)	62 (55%)	37 (33%)	13 (12%)	0	2
14	AN	92/100 (92%)	60 (65%)	18 (20%)	14 (15%)	0	0
14	CN	91/100 (91%)	57 (63%)	26 (29%)	8 (9%)	1	5
15	AO	86/88 (98%)	59 (69%)	19 (22%)	8 (9%)	1	4
15	CO	86/88 (98%)	53 (62%)	30 (35%)	3 (4%)	4	24
16	AP	80/82 (98%)	59 (74%)	12 (15%)	9 (11%)	0	2
16	CP	79/82 (96%)	48 (61%)	23 (29%)	8 (10%)	1	4
17	AQ	78/80 (98%)	48 (62%)	24 (31%)	6 (8%)	1	6
17	CQ	78/80 (98%)	59 (76%)	11 (14%)	8 (10%)	1	4
18	AR	53/55 (96%)	40 (76%)	10 (19%)	3 (6%)	2	12
18	CR	53/55 (96%)	33 (62%)	17 (32%)	3 (6%)	2	12
19	AS	77/79 (98%)	51 (66%)	15 (20%)	11 (14%)	0	1
19	CS	77/79 (98%)	46 (60%)	24 (31%)	7 (9%)	1	5
20	AT	83/85 (98%)	57 (69%)	21 (25%)	5 (6%)	2	11
20	CT	83/85 (98%)	52 (63%)	21 (25%)	10 (12%)	0	2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
21	AU	49/51 (96%)	25 (51%)	12 (24%)	12 (24%)	0	0
21	CU	49/51 (96%)	20 (41%)	13 (26%)	16 (33%)	0	0
24	BC	269/271 (99%)	197 (73%)	46 (17%)	26 (10%)	1	4
24	DC	269/271 (99%)	174 (65%)	64 (24%)	31 (12%)	0	2
25	BD	207/209 (99%)	141 (68%)	32 (16%)	34 (16%)	0	0
25	DD	207/209 (99%)	131 (63%)	41 (20%)	35 (17%)	0	0
26	BE	199/201 (99%)	144 (72%)	35 (18%)	20 (10%)	1	4
26	DE	199/201 (99%)	115 (58%)	54 (27%)	30 (15%)	0	0
27	BF	176/178 (99%)	124 (70%)	36 (20%)	16 (9%)	1	5
27	DF	176/178 (99%)	87 (49%)	58 (33%)	31 (18%)	0	0
28	BG	174/176 (99%)	111 (64%)	38 (22%)	25 (14%)	0	1
28	DG	174/176 (99%)	99 (57%)	40 (23%)	35 (20%)	0	0
29	BH	147/149 (99%)	62 (42%)	50 (34%)	35 (24%)	0	0
29	DH	147/149 (99%)	70 (48%)	54 (37%)	23 (16%)	0	0
30	BI	139/141 (99%)	84 (60%)	41 (30%)	14 (10%)	1	4
30	DI	139/141 (99%)	75 (54%)	48 (34%)	16 (12%)	0	2
31	BJ	140/142 (99%)	104 (74%)	24 (17%)	12 (9%)	1	5
31	DJ	140/142 (99%)	92 (66%)	28 (20%)	20 (14%)	0	1
32	BK	120/122 (98%)	89 (74%)	17 (14%)	14 (12%)	0	2
32	DK	120/122 (98%)	76 (63%)	17 (14%)	27 (22%)	0	0
33	BL	141/143 (99%)	100 (71%)	30 (21%)	11 (8%)	1	6
33	DL	141/143 (99%)	77 (55%)	44 (31%)	20 (14%)	0	1
34	BM	134/136 (98%)	96 (72%)	18 (13%)	20 (15%)	0	1
34	DM	134/136 (98%)	90 (67%)	26 (19%)	18 (13%)	0	1
35	BN	118/120 (98%)	91 (77%)	16 (14%)	11 (9%)	1	4
35	DN	118/120 (98%)	74 (63%)	25 (21%)	19 (16%)	0	0
36	BO	114/116 (98%)	85 (75%)	18 (16%)	11 (10%)	1	4
36	DO	114/116 (98%)	74 (65%)	30 (26%)	10 (9%)	1	5
37	BP	112/114 (98%)	78 (70%)	20 (18%)	14 (12%)	0	1
37	DP	112/114 (98%)	60 (54%)	31 (28%)	21 (19%)	0	0
38	BQ	115/117 (98%)	100 (87%)	7 (6%)	8 (7%)	1	8

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
38	DQ	115/117 (98%)	75 (65%)	27 (24%)	13 (11%)	0	2
39	BR	101/103 (98%)	76 (75%)	14 (14%)	11 (11%)	0	3
39	DR	101/103 (98%)	64 (63%)	24 (24%)	13 (13%)	0	1
40	BS	108/110 (98%)	89 (82%)	14 (13%)	5 (5%)	3	17
40	DS	108/110 (98%)	72 (67%)	25 (23%)	11 (10%)	1	4
41	BT	91/93 (98%)	49 (54%)	26 (29%)	16 (18%)	0	0
41	DT	91/93 (98%)	41 (45%)	26 (29%)	24 (26%)	0	0
42	BU	100/102 (98%)	66 (66%)	16 (16%)	18 (18%)	0	0
42	DU	100/102 (98%)	52 (52%)	22 (22%)	26 (26%)	0	0
43	BV	92/94 (98%)	75 (82%)	15 (16%)	2 (2%)	8	36
43	DV	92/94 (98%)	60 (65%)	24 (26%)	8 (9%)	1	5
44	BW	77/79 (98%)	31 (40%)	22 (29%)	24 (31%)	0	0
44	DW	77/79 (98%)	30 (39%)	25 (32%)	22 (29%)	0	0
45	BX	75/77 (97%)	58 (77%)	10 (13%)	7 (9%)	1	4
45	DX	75/77 (97%)	44 (59%)	20 (27%)	11 (15%)	0	1
46	BY	61/63 (97%)	38 (62%)	15 (25%)	8 (13%)	0	1
46	DY	61/63 (97%)	40 (66%)	16 (26%)	5 (8%)	1	6
47	BZ	56/58 (97%)	47 (84%)	5 (9%)	4 (7%)	1	8
47	DZ	56/58 (97%)	31 (55%)	20 (36%)	5 (9%)	1	5
48	B0	54/56 (96%)	41 (76%)	9 (17%)	4 (7%)	1	7
48	D0	54/56 (96%)	33 (61%)	16 (30%)	5 (9%)	1	4
49	B1	48/50 (96%)	37 (77%)	6 (12%)	5 (10%)	1	3
49	D1	48/50 (96%)	35 (73%)	8 (17%)	5 (10%)	1	3
50	B2	44/46 (96%)	37 (84%)	7 (16%)	0	100	100
50	D2	44/46 (96%)	29 (66%)	10 (23%)	5 (11%)	0	2
51	B3	62/64 (97%)	53 (86%)	5 (8%)	4 (6%)	1	9
51	D3	62/64 (97%)	42 (68%)	12 (19%)	8 (13%)	0	1
52	B4	36/38 (95%)	24 (67%)	9 (25%)	3 (8%)	1	6
52	D4	36/38 (95%)	21 (58%)	9 (25%)	6 (17%)	0	0
All	All	11241/11452 (98%)	7412 (66%)	2420 (22%)	1409 (12%)	0	1

All (1409) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	21	TYR
2	AB	33	ALA
2	AB	37	VAL
2	AB	72	LYS
2	AB	75	ALA
2	AB	119	GLN
2	AB	150	ILE
3	AC	16	PRO
3	AC	17	TRP
3	AC	60	ALA
3	AC	126	ARG
3	AC	165	GLU
3	AC	192	TYR
3	AC	205	GLU
4	AD	24	VAL
4	AD	25	ARG
4	AD	26	ALA
4	AD	28	ASP
4	AD	29	THR
4	AD	32	LYS
4	AD	33	ILE
4	AD	34	GLU
4	AD	36	ALA
4	AD	147	LYS
4	AD	152	SER
4	AD	159	GLU
4	AD	172	VAL
4	AD	173	ASP
4	AD	191	SER
4	AD	192	ALA
5	AE	97	PRO
5	AE	110	MET
5	AE	137	ARG
5	AE	153	ALA
6	AF	91	ARG
7	AG	93	VAL
8	AH	48	PHE
8	AH	49	LYS
8	AH	66	GLN
8	AH	88	LYS
9	AI	8	THR
9	AI	40	ARG
9	AI	43	ALA

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Mol	Chain	Res	Type
9	AI	71	ILE
9	AI	119	LYS
9	AI	128	LYS
10	AJ	57	VAL
10	AJ	101	SER
11	AK	46	ALA
11	AK	126	ARG
12	AL	23	LEU
12	AL	43	LYS
12	AL	73	LEU
12	AL	75	GLU
12	AL	88	ASP
13	AM	2	ARG
13	AM	46	GLU
14	AN	27	LYS
14	AN	33	VAL
14	AN	51	PRO
14	AN	52	ARG
15	AO	17	ASP
15	AO	24	THR
15	AO	72	LYS
16	AP	11	ALA
16	AP	80	LYS
17	AQ	12	VAL
17	AQ	50	ASN
17	AQ	52	CYS
17	AQ	75	VAL
18	AR	47	ARG
19	AS	27	LYS
20	AT	3	ILE
20	AT	67	HIS
21	AU	11	PHE
21	AU	12	ASP
21	AU	23	GLU
24	BC	77	VAL
24	BC	104	LEU
24	BC	105	ALA
24	BC	142	ASN
24	BC	239	PHE
25	BD	43	ASP
25	BD	73	VAL
25	BD	92	VAL

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Mol	Chain	Res	Type
25	BD	99	GLU
25	BD	103	ASP
25	BD	122	VAL
26	BE	6	LYS
26	BE	8	ALA
26	BE	62	GLN
26	BE	69	ARG
26	BE	79	ARG
26	BE	175	ILE
27	BF	11	VAL
27	BF	61	GLY
27	BF	134	GLN
27	BF	174	PHE
27	BF	175	PRO
28	BG	8	VAL
28	BG	28	LYS
28	BG	31	GLU
28	BG	38	ASP
28	BG	44	HIS
28	BG	45	ALA
28	BG	61	TRP
28	BG	84	LYS
28	BG	118	ALA
28	BG	170	THR
29	BH	10	ALA
29	BH	11	ASN
29	BH	14	SER
29	BH	15	LEU
29	BH	23	ALA
29	BH	28	ASN
29	BH	32	PRO
29	BH	33	GLN
29	BH	81	ALA
29	BH	83	LYS
30	BI	65	SER
30	BI	92	PRO
31	BJ	13	ARG
31	BJ	21	THR
31	BJ	41	LYS
31	BJ	45	THR
31	BJ	73	VAL
31	BJ	81	ILE

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Mol	Chain	Res	Type
32	BK	49	ARG
32	BK	71	ARG
32	BK	108	ARG
33	BL	66	PHE
33	BL	88	GLY
34	BM	35	ALA
34	BM	36	VAL
34	BM	56	ALA
34	BM	69	PRO
35	BN	11	ASN
35	BN	80	PHE
35	BN	102	PHE
36	BO	3	LYS
36	BO	57	ALA
36	BO	58	ILE
37	BP	15	ASP
37	BP	20	ARG
37	BP	25	VAL
37	BP	33	GLU
37	BP	93	LYS
37	BP	105	LYS
38	BQ	90	ASP
38	BQ	91	ARG
39	BR	27	ILE
39	BR	55	ASP
39	BR	91	GLN
40	BS	14	ALA
41	BT	27	SER
41	BT	29	THR
41	BT	35	ALA
41	BT	36	LYS
41	BT	69	ARG
41	BT	86	THR
41	BT	89	GLU
42	BU	6	ARG
42	BU	16	LYS
42	BU	18	LYS
42	BU	29	SER
42	BU	51	LEU
42	BU	88	ASP
43	BV	69	GLU
44	BW	9	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
44	BW	10	ARG
44	BW	18	LYS
44	BW	23	LYS
44	BW	30	VAL
44	BW	40	ARG
44	BW	47	GLY
44	BW	50	VAL
44	BW	51	GLY
45	BX	53	LYS
46	BY	22	LEU
46	BY	23	ARG
46	BY	24	GLU
48	B0	51	ARG
48	B0	54	ILE
49	B1	16	THR
52	B4	4	ARG
2	CB	81	ASP
2	CB	102	ASN
2	CB	129	THR
3	CC	59	PRO
3	CC	164	THR
3	CC	180	ASP
3	CC	205	GLU
4	CD	24	VAL
4	CD	26	ALA
4	CD	35	GLN
4	CD	39	GLN
4	CD	80	ARG
4	CD	191	SER
4	CD	192	ALA
5	CE	31	SER
5	CE	69	ASN
5	CE	75	LEU
6	CF	82	ASP
6	CF	98	GLU
6	CF	99	ALA
7	CG	8	GLN
7	CG	29	LEU
7	CG	30	MET
7	CG	31	VAL
7	CG	52	ARG
8	CH	29	SER

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Mol	Chain	Res	Type
8	CH	30	LYS
8	CH	58	LEU
8	CH	82	LEU
9	CI	11	ARG
9	CI	54	VAL
9	CI	71	ILE
10	CJ	44	THR
10	CJ	46	LYS
10	CJ	87	LEU
11	CK	14	GLN
11	CK	88	PRO
11	CK	90	PRO
11	CK	118	ASN
11	CK	126	ARG
11	CK	127	ARG
12	CL	25	ALA
12	CL	43	LYS
12	CL	47	ALA
13	CM	4	ALA
14	CN	21	ALA
14	CN	95	LEU
16	CP	31	ARG
16	CP	63	GLN
17	CQ	52	CYS
17	CQ	68	LYS
20	CT	3	ILE
20	CT	43	LYS
20	CT	61	ALA
20	CT	65	LEU
20	CT	82	ILE
21	CU	4	LYS
21	CU	9	GLU
21	CU	15	LEU
21	CU	23	GLU
21	CU	32	ARG
21	CU	34	ARG
21	CU	35	GLU
21	CU	36	PHE
21	CU	38	GLU
21	CU	43	GLU
24	DC	9	SER
24	DC	28	PRO

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Mol	Chain	Res	Type
24	DC	43	ASN
24	DC	45	ASN
24	DC	94	LEU
24	DC	141	HIS
24	DC	237	ARG
24	DC	269	ARG
25	DD	14	ILE
25	DD	43	ASP
25	DD	74	GLU
25	DD	95	SER
25	DD	102	ALA
25	DD	118	PHE
25	DD	119	ALA
25	DD	150	GLN
25	DD	162	ALA
25	DD	174	SER
25	DD	194	PRO
26	DE	24	ASN
26	DE	41	GLN
26	DE	62	GLN
26	DE	71	GLY
26	DE	99	LYS
26	DE	116	ASP
26	DE	127	GLU
27	DF	10	GLU
27	DF	12	VAL
27	DF	32	LYS
27	DF	36	ASN
27	DF	41	GLU
27	DF	76	PHE
27	DF	112	ASP
27	DF	113	PHE
27	DF	116	LEU
27	DF	137	PHE
28	DG	39	ALA
28	DG	49	LEU
28	DG	59	ASP
28	DG	83	THR
28	DG	86	LEU
28	DG	93	TYR
28	DG	118	ALA
28	DG	165	ASP

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Mol	Chain	Res	Type
29	DH	9	VAL
29	DH	10	ALA
29	DH	61	VAL
29	DH	66	ASN
29	DH	72	ILE
29	DH	76	GLU
29	DH	97	ARG
29	DH	98	ASP
29	DH	102	ALA
30	DI	9	LYS
30	DI	22	PRO
30	DI	69	VAL
30	DI	140	GLU
31	DJ	45	THR
31	DJ	81	ILE
31	DJ	83	GLY
31	DJ	87	ALA
31	DJ	95	ARG
32	DK	2	ILE
32	DK	3	GLN
32	DK	16	ALA
32	DK	18	ARG
32	DK	29	HIS
32	DK	49	ARG
32	DK	71	ARG
32	DK	93	GLN
32	DK	110	GLU
32	DK	119	ALA
32	DK	120	PRO
33	DL	4	ASN
33	DL	66	PHE
33	DL	85	VAL
33	DL	89	VAL
33	DL	100	ILE
33	DL	101	ILE
34	DM	2	LEU
34	DM	14	LYS
34	DM	69	PRO
34	DM	77	PRO
34	DM	135	VAL
35	DN	2	ARG
35	DN	104	ALA

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Mol	Chain	Res	Type
36	DO	8	ILE
36	DO	90	VAL
37	DP	25	VAL
37	DP	50	ARG
37	DP	51	ASN
37	DP	83	ILE
37	DP	94	ALA
37	DP	108	ARG
37	DP	112	ARG
38	DQ	4	LYS
38	DQ	5	ARG
39	DR	3	ALA
39	DR	98	ILE
40	DS	28	LYS
40	DS	40	ASN
41	DT	14	PRO
41	DT	15	HIS
41	DT	20	ALA
41	DT	29	THR
41	DT	39	THR
42	DU	8	ASP
42	DU	41	VAL
42	DU	65	GLN
42	DU	92	VAL
42	DU	96	LYS
42	DU	97	SER
43	DV	56	PHE
44	DW	9	THR
44	DW	25	PHE
44	DW	30	VAL
44	DW	33	GLY
44	DW	34	SER
44	DW	35	ILE
44	DW	46	ALA
45	DX	21	LEU
45	DX	34	SER
46	DY	22	LEU
46	DY	46	VAL
47	DZ	4	ILE
47	DZ	13	ILE
48	D0	32	THR
49	D1	4	ILE

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Mol	Chain	Res	Type
50	D2	24	THR
50	D2	40	ALA
51	D3	3	ILE
51	D3	29	ARG
51	D3	51	LYS
52	D4	20	ASP
2	AB	17	HIS
2	AB	18	GLN
2	AB	20	ARG
2	AB	40	ILE
2	AB	44	LYS
2	AB	63	LYS
2	AB	96	LEU
2	AB	125	PHE
2	AB	133	ALA
2	AB	169	HIS
2	AB	209	VAL
2	AB	210	THR
2	AB	219	THR
3	AC	148	ILE
4	AD	23	GLY
4	AD	35	GLN
4	AD	124	VAL
4	AD	132	ALA
4	AD	167	PRO
4	AD	174	ALA
4	AD	195	ASN
4	AD	196	GLU
4	AD	197	HIS
5	AE	11	GLN
5	AE	50	GLY
5	AE	75	LEU
5	AE	103	GLY
5	AE	108	GLY
5	AE	112	ALA
5	AE	113	VAL
5	AE	121	ASN
5	AE	157	GLY
6	AF	54	LEU
6	AF	69	GLU
6	AF	86	ARG
7	AG	8	GLN

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Mol	Chain	Res	Type
7	AG	79	VAL
7	AG	84	TYR
8	AH	2	MET
8	AH	74	ILE
9	AI	30	ASN
10	AJ	34	ALA
10	AJ	61	ALA
10	AJ	74	VAL
10	AJ	92	LEU
11	AK	88	PRO
11	AK	102	ALA
12	AL	33	CYS
12	AL	117	GLY
12	AL	122	LYS
13	AM	6	ILE
13	AM	104	ASN
13	AM	113	LYS
14	AN	22	LYS
14	AN	41	TRP
14	AN	43	ALA
14	AN	80	ARG
15	AO	74	VAL
15	AO	85	GLY
16	AP	24	SER
17	AQ	67	SER
19	AS	79	TYR
20	AT	5	SER
21	AU	8	ASN
21	AU	35	GLU
21	AU	37	TYR
24	BC	110	LYS
24	BC	120	ASP
24	BC	121	ALA
24	BC	140	VAL
24	BC	196	ASN
24	BC	243	PRO
24	BC	255	LYS
25	BD	54	ALA
25	BD	71	ALA
25	BD	72	GLY
25	BD	93	GLY
25	BD	104	VAL

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Mol	Chain	Res	Type
25	BD	106	LYS
25	BD	118	PHE
25	BD	144	GLY
25	BD	145	SER
25	BD	183	GLU
25	BD	184	ARG
25	BD	191	GLY
26	BE	46	GLN
26	BE	153	LEU
27	BF	111	ARG
27	BF	128	SER
28	BG	9	VAL
28	BG	30	GLY
28	BG	60	GLY
28	BG	164	ALA
28	BG	168	VAL
29	BH	3	VAL
29	BH	13	GLY
29	BH	29	PHE
29	BH	34	GLY
29	BH	35	LYS
29	BH	89	LYS
29	BH	97	ARG
29	BH	107	GLY
29	BH	111	ALA
29	BH	121	VAL
29	BH	131	SER
29	BH	138	VAL
30	BI	30	GLN
30	BI	105	LEU
32	BK	3	GLN
32	BK	13	ASN
32	BK	35	VAL
32	BK	48	PRO
32	BK	72	PRO
33	BL	15	ALA
33	BL	29	LYS
33	BL	69	ARG
33	BL	82	LEU
33	BL	111	ILE
33	BL	114	GLY
34	BM	2	LEU

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Mol	Chain	Res	Type
34	BM	14	LYS
34	BM	54	THR
34	BM	55	ARG
34	BM	73	ILE
34	BM	110	GLU
35	BN	2	ARG
35	BN	118	ARG
35	BN	119	SER
36	BO	22	GLY
36	BO	59	ALA
36	BO	100	HIS
36	BO	112	GLU
37	BP	54	LEU
37	BP	92	ARG
37	BP	103	THR
37	BP	104	GLY
37	BP	113	LEU
38	BQ	5	ARG
38	BQ	86	SER
38	BQ	88	GLU
39	BR	29	THR
39	BR	64	VAL
40	BS	3	THR
41	BT	16	VAL
42	BU	38	ILE
42	BU	50	ALA
42	BU	92	VAL
42	BU	97	SER
44	BW	12	GLY
44	BW	48	ALA
44	BW	52	CYS
44	BW	70	VAL
44	BW	77	LYS
45	BX	2	ARG
46	BY	36	GLN
47	BZ	3	THR
48	B0	34	GLY
49	B1	4	ILE
51	B3	27	ASN
2	CB	26	MET
2	CB	73	ARG
2	CB	84	LEU

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Mol	Chain	Res	Type
2	CB	148	GLY
2	CB	177	ASN
2	CB	203	ASP
2	CB	218	ALA
3	CC	24	ASN
3	CC	63	ILE
3	CC	87	ARG
3	CC	130	ARG
3	CC	136	ALA
3	CC	140	ALA
3	CC	178	ARG
4	CD	2	ARG
4	CD	79	ALA
4	CD	107	GLY
4	CD	187	ARG
5	CE	68	ARG
5	CE	74	ALA
5	CE	77	ASN
5	CE	89	THR
5	CE	104	ILE
5	CE	108	GLY
5	CE	144	GLU
6	CF	44	ARG
6	CF	68	GLN
6	CF	92	THR
7	CG	36	SER
7	CG	62	GLU
7	CG	113	LYS
8	CH	2	MET
8	CH	57	GLU
8	CH	119	GLY
9	CI	44	ARG
9	CI	52	GLU
9	CI	58	GLU
9	CI	119	LYS
10	CJ	34	ALA
10	CJ	57	VAL
10	CJ	74	VAL
10	CJ	93	ALA
11	CK	70	ALA
11	CK	91	GLY
12	CL	7	VAL

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Mol	Chain	Res	Type
12	CL	16	ALA
12	CL	33	CYS
12	CL	85	ARG
12	CL	98	ARG
13	CM	11	HIS
13	CM	65	GLU
14	CN	53	ASP
14	CN	60	ARG
14	CN	99	SER
15	CO	6	ALA
16	CP	46	LYS
17	CQ	69	THR
18	CR	72	ARG
19	CS	4	LEU
19	CS	46	LEU
20	CT	12	GLN
21	CU	7	GLU
21	CU	8	ASN
21	CU	11	PHE
21	CU	26	GLY
24	DC	3	VAL
24	DC	36	ASN
24	DC	121	ALA
24	DC	123	ILE
24	DC	140	VAL
24	DC	195	GLY
24	DC	217	PRO
24	DC	232	GLY
24	DC	238	ASN
25	DD	31	ALA
25	DD	93	GLY
25	DD	113	SER
25	DD	143	PRO
25	DD	164	GLN
25	DD	170	VAL
25	DD	175	LEU
26	DE	7	ASP
26	DE	45	ALA
26	DE	55	SER
26	DE	61	ARG
26	DE	98	LYS
26	DE	126	VAL

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Mol	Chain	Res	Type
26	DE	148	ILE
26	DE	153	LEU
26	DE	163	ASN
26	DE	187	VAL
26	DE	188	MET
27	DF	8	LYS
27	DF	37	MET
27	DF	42	ALA
27	DF	43	ILE
27	DF	67	THR
27	DF	86	CYS
27	DF	114	ARG
27	DF	122	ASP
27	DF	133	GLU
27	DF	136	ILE
27	DF	138	PRO
27	DF	141	ASP
27	DF	145	VAL
27	DF	148	VAL
28	DG	9	VAL
28	DG	85	LYS
28	DG	91	VAL
28	DG	95	ALA
28	DG	125	PRO
28	DG	149	ALA
28	DG	164	ALA
29	DH	3	VAL
29	DH	39	ALA
29	DH	86	ASP
29	DH	99	ILE
29	DH	143	ILE
29	DH	144	VAL
30	DI	23	VAL
30	DI	62	ALA
30	DI	119	ALA
31	DJ	72	LYS
31	DJ	84	ILE
32	DK	35	VAL
32	DK	46	ALA
32	DK	88	ASN
32	DK	98	ARG
32	DK	104	THR

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Mol	Chain	Res	Type
33	DL	15	ALA
33	DL	42	SER
33	DL	82	LEU
33	DL	96	LYS
33	DL	99	ASN
33	DL	111	ILE
34	DM	16	ARG
34	DM	35	ALA
34	DM	111	GLU
34	DM	132	THR
35	DN	10	LEU
35	DN	15	SER
35	DN	29	VAL
35	DN	61	ALA
35	DN	71	ARG
35	DN	82	GLU
35	DN	102	PHE
35	DN	105	GLY
36	DO	3	LYS
36	DO	72	ALA
37	DP	63	ILE
37	DP	93	LYS
37	DP	104	GLY
38	DQ	23	TYR
38	DQ	32	ARG
38	DQ	86	SER
38	DQ	87	VAL
39	DR	40	MET
39	DR	57	GLY
39	DR	89	HIS
40	DS	33	LEU
40	DS	72	THR
41	DT	47	VAL
41	DT	53	VAL
41	DT	68	LYS
41	DT	74	ILE
41	DT	88	LYS
42	DU	6	ARG
42	DU	34	ILE
42	DU	40	LEU
42	DU	54	PRO
42	DU	82	VAL

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Mol	Chain	Res	Type
42	DU	87	GLU
42	DU	88	ASP
42	DU	89	GLY
42	DU	99	SER
43	DV	79	ARG
44	DW	10	ARG
44	DW	26	GLY
44	DW	39	GLN
44	DW	44	PHE
44	DW	49	ASN
44	DW	57	THR
44	DW	71	LYS
44	DW	78	PHE
45	DX	2	ARG
45	DX	63	ILE
48	D0	54	ILE
49	D1	35	LEU
49	D1	36	LYS
51	D3	22	LYS
51	D3	39	ARG
52	D4	3	VAL
2	AB	22	TRP
2	AB	41	ASN
2	AB	71	THR
2	AB	73	ARG
2	AB	148	GLY
3	AC	11	LEU
3	AC	50	SER
3	AC	62	SER
3	AC	145	ALA
4	AD	22	SER
4	AD	31	CYS
4	AD	148	ALA
4	AD	165	GLU
4	AD	189	ASP
5	AE	23	THR
5	AE	25	LYS
5	AE	44	ARG
5	AE	98	ALA
5	AE	156	ARG
6	AF	53	LYS
6	AF	92	THR

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Mol	Chain	Res	Type
6	AF	94	HIS
7	AG	129	ASN
7	AG	130	LYS
7	AG	147	ASN
9	AI	38	PHE
9	AI	56	MET
9	AI	88	GLU
9	AI	90	ASP
9	AI	120	ALA
10	AJ	81	GLU
11	AK	40	ALA
11	AK	51	PHE
13	AM	3	ILE
13	AM	4	ALA
14	AN	14	ALA
14	AN	16	ALA
14	AN	61	ASN
14	AN	91	GLU
15	AO	2	LEU
15	AO	16	ARG
16	AP	76	LYS
18	AR	33	THR
19	AS	4	LEU
19	AS	5	LYS
19	AS	26	ASP
19	AS	42	ASN
21	AU	25	ALA
24	BC	28	PRO
24	BC	64	VAL
24	BC	256	THR
25	BD	11	MET
25	BD	91	THR
25	BD	169	ARG
25	BD	173	GLN
25	BD	175	LEU
25	BD	192	ALA
26	BE	71	GLY
26	BE	83	VAL
26	BE	86	ALA
26	BE	197	GLU
27	BF	20	ASN
27	BF	113	PHE

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Mol	Chain	Res	Type
27	BF	127	TYR
27	BF	132	ARG
27	BF	149	ARG
28	BG	7	PRO
28	BG	53	PRO
29	BH	12	LEU
29	BH	125	THR
29	BH	135	HIS
30	BI	59	THR
31	BJ	44	TYR
31	BJ	98	GLU
31	BJ	125	TYR
32	BK	16	ALA
33	BL	41	ARG
34	BM	78	LEU
34	BM	84	LYS
34	BM	111	GLU
35	BN	32	GLU
35	BN	117	ASP
36	BO	60	GLU
36	BO	77	ALA
38	BQ	85	ALA
38	BQ	101	ASP
39	BR	98	ILE
40	BS	64	ALA
40	BS	95	ARG
40	BS	96	ILE
41	BT	38	ALA
41	BT	49	LYS
41	BT	55	VAL
41	BT	68	LYS
41	BT	70	HIS
41	BT	84	TYR
42	BU	45	GLN
42	BU	87	GLU
44	BW	14	ASP
44	BW	25	PHE
44	BW	39	GLN
44	BW	41	GLY
45	BX	34	SER
45	BX	61	LYS
45	BX	69	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
45	BX	76	LYS
46	BY	9	LYS
46	BY	17	GLU
46	BY	37	LEU
48	B0	35	GLU
49	B1	50	GLU
49	B1	51	ALA
51	B3	31	ILE
52	B4	16	ILE
2	CB	86	CYS
2	CB	128	LEU
2	CB	150	ILE
2	CB	176	ASN
2	CB	205	ALA
3	CC	78	LYS
4	CD	29	THR
4	CD	33	ILE
4	CD	40	HIS
4	CD	119	HIS
4	CD	188	SER
5	CE	38	VAL
6	CF	86	ARG
7	CG	10	LYS
7	CG	59	GLU
8	CH	34	ALA
10	CJ	35	GLN
10	CJ	82	LYS
11	CK	16	SER
11	CK	92	ARG
13	CM	14	ALA
13	CM	45	SER
13	CM	49	GLU
13	CM	76	ILE
13	CM	93	GLY
14	CN	69	PRO
16	CP	47	GLU
16	CP	78	VAL
17	CQ	79	GLU
19	CS	7	GLY
20	CT	62	ALA
24	DC	13	ARG
24	DC	59	GLN

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Mol	Chain	Res	Type
24	DC	196	ASN
24	DC	239	PHE
24	DC	256	THR
25	DD	11	MET
25	DD	44	GLY
25	DD	99	GLU
25	DD	107	VAL
25	DD	112	THR
25	DD	114	LYS
25	DD	136	ASN
25	DD	169	ARG
25	DD	182	ALA
26	DE	165	HIS
26	DE	166	LYS
26	DE	172	ALA
26	DE	174	GLY
27	DF	31	GLU
27	DF	120	SER
28	DG	11	PRO
28	DG	45	ALA
28	DG	80	GLU
28	DG	159	LYS
28	DG	169	ARG
29	DH	25	TYR
29	DH	53	GLU
29	DH	121	VAL
30	DI	19	PRO
30	DI	51	GLY
30	DI	87	SER
30	DI	116	MET
31	DJ	25	LEU
31	DJ	43	GLU
31	DJ	56	VAL
31	DJ	74	TYR
31	DJ	113	PRO
31	DJ	125	TYR
32	DK	5	GLN
32	DK	14	SER
32	DK	92	GLU
32	DK	103	VAL
33	DL	28	GLY
33	DL	93	ASN

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Mol	Chain	Res	Type
34	DM	72	PRO
34	DM	95	LEU
34	DM	127	LYS
35	DN	13	ASN
35	DN	32	GLU
35	DN	85	PRO
35	DN	91	ALA
36	DO	60	GLU
36	DO	65	THR
36	DO	107	ALA
37	DP	23	ASP
37	DP	56	SER
38	DQ	45	ALA
38	DQ	58	GLN
38	DQ	88	GLU
39	DR	55	ASP
39	DR	91	GLN
40	DS	3	THR
40	DS	50	VAL
40	DS	61	ASN
41	DT	19	LYS
41	DT	66	LYS
41	DT	86	THR
42	DU	35	VAL
42	DU	95	PHE
42	DU	101	THR
43	DV	55	GLU
43	DV	57	TYR
44	DW	53	GLY
44	DW	55	ASP
44	DW	83	ALA
45	DX	25	LYS
46	DY	2	LYS
46	DY	9	LYS
46	DY	37	LEU
47	DZ	38	GLU
48	D0	26	SER
48	D0	55	ALA
49	D1	51	ALA
50	D2	8	SER
51	D3	38	LYS
2	AB	141	GLU

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Mol	Chain	Res	Type
3	AC	65	VAL
3	AC	106	ARG
3	AC	139	ASN
4	AD	6	PRO
4	AD	166	LYS
5	AE	74	ALA
5	AE	77	ASN
6	AF	39	LEU
6	AF	51	ILE
6	AF	56	LYS
6	AF	63	ASN
7	AG	112	ASP
8	AH	47	ASP
8	AH	77	VAL
9	AI	12	LYS
10	AJ	35	GLN
10	AJ	36	VAL
10	AJ	41	PRO
10	AJ	62	ARG
10	AJ	75	ASP
11	AK	13	LYS
11	AK	16	SER
11	AK	97	ARG
11	AK	124	LYS
12	AL	57	THR
13	AM	26	LYS
13	AM	84	CYS
14	AN	2	LYS
16	AP	42	ILE
19	AS	3	SER
19	AS	48	ILE
19	AS	63	ASP
20	AT	17	ARG
20	AT	72	ALA
21	AU	36	PHE
24	BC	109	LEU
24	BC	157	ALA
24	BC	230	PRO
24	BC	235	GLU
24	BC	248	GLY
25	BD	53	GLY
25	BD	86	GLU

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Mol	Chain	Res	Type
25	BD	107	VAL
25	BD	170	VAL
25	BD	182	ALA
26	BE	9	GLN
26	BE	67	ARG
26	BE	70	SER
27	BF	133	GLU
29	BH	8	LYS
29	BH	9	VAL
29	BH	25	TYR
30	BI	6	ALA
30	BI	83	ALA
30	BI	89	SER
32	BK	14	SER
32	BK	93	GLN
32	BK	119	ALA
34	BM	51	ARG
34	BM	53	MET
34	BM	58	LYS
34	BM	60	GLN
34	BM	77	PRO
34	BM	134	THR
37	BP	65	ASN
37	BP	86	LYS
38	BQ	87	VAL
39	BR	65	ALA
41	BT	20	ALA
41	BT	21	SER
42	BU	26	ASN
42	BU	83	GLY
42	BU	85	ARG
42	BU	101	THR
44	BW	22	VAL
44	BW	33	GLY
44	BW	74	LYS
44	BW	76	ARG
47	BZ	34	THR
49	B1	15	GLY
52	B4	8	LYS
2	CB	179	GLY
2	CB	188	THR
3	CC	128	MET

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Mol	Chain	Res	Type
3	CC	173	PRO
4	CD	4	LEU
4	CD	9	LYS
4	CD	32	LYS
4	CD	47	LEU
6	CF	18	VAL
6	CF	63	ASN
7	CG	99	ALA
9	CI	55	ASP
11	CK	36	ARG
12	CL	5	GLN
12	CL	97	VAL
13	CM	42	VAL
13	CM	77	LYS
15	CO	13	GLU
15	CO	45	HIS
16	CP	64	GLY
17	CQ	12	VAL
18	CR	56	ARG
18	CR	70	THR
19	CS	3	SER
20	CT	24	ARG
20	CT	67	HIS
21	CU	30	GLU
24	DC	34	GLU
24	DC	37	SER
24	DC	69	ASN
24	DC	98	GLY
25	DD	134	HIS
25	DD	197	THR
26	DE	69	ARG
26	DE	73	ILE
26	DE	96	VAL
26	DE	132	LYS
27	DF	70	ARG
27	DF	94	ARG
28	DG	123	GLU
28	DG	136	ASP
28	DG	166	GLU
28	DG	174	LYS
29	DH	134	VAL
30	DI	14	ALA

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Mol	Chain	Res	Type
30	DI	30	GLN
30	DI	83	ALA
31	DJ	13	ARG
31	DJ	44	TYR
31	DJ	112	GLY
32	DK	17	ARG
32	DK	89	ASN
32	DK	108	ARG
34	DM	117	PHE
35	DN	80	PHE
35	DN	90	ARG
37	DP	32	VAL
37	DP	33	GLU
37	DP	42	PHE
37	DP	113	LEU
38	DQ	91	ARG
39	DR	43	ASN
39	DR	90	ARG
41	DT	4	GLU
41	DT	8	LEU
41	DT	11	LEU
41	DT	50	LEU
41	DT	84	TYR
42	DU	17	ASP
42	DU	33	VAL
42	DU	44	HIS
42	DU	52	ASN
42	DU	67	SER
44	DW	16	GLU
44	DW	18	LYS
44	DW	36	ILE
45	DX	40	GLU
45	DX	76	LYS
48	D0	40	HIS
50	D2	9	VAL
52	D4	8	LYS
2	AB	42	LEU
2	AB	154	GLY
2	AB	157	PRO
3	AC	14	VAL
3	AC	21	TRP
3	AC	35	ASP

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Mol	Chain	Res	Type
3	AC	36	PHE
3	AC	107	LYS
3	AC	186	SER
6	AF	99	ALA
8	AH	41	GLU
8	AH	95	MET
9	AI	31	GLN
9	AI	32	ARG
10	AJ	42	LEU
11	AK	14	GLN
12	AL	24	GLU
12	AL	77	SER
13	AM	9	PRO
15	AO	45	HIS
16	AP	79	ASN
19	AS	8	PRO
21	AU	24	LYS
21	AU	26	GLY
24	BC	40	GLY
24	BC	135	PRO
24	BC	204	LEU
26	BE	96	VAL
26	BE	116	ASP
26	BE	188	MET
27	BF	2	LYS
28	BG	16	VAL
28	BG	33	THR
28	BG	94	ARG
28	BG	97	VAL
29	BH	31	VAL
29	BH	40	THR
29	BH	53	GLU
29	BH	91	PHE
29	BH	124	THR
29	BH	137	GLU
30	BI	3	LYS
30	BI	20	SER
31	BJ	14	ASP
32	BK	73	ASP
33	BL	19	LEU
35	BN	41	ALA
35	BN	42	LYS

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Mol	Chain	Res	Type
36	BO	89	ASP
37	BP	51	ASN
39	BR	40	MET
42	BU	53	GLN
45	BX	17	ARG
47	BZ	39	ASP
51	B3	22	LYS
2	CB	72	LYS
2	CB	208	ALA
3	CC	155	ARG
4	CD	27	ILE
4	CD	34	GLU
4	CD	37	PRO
5	CE	119	VAL
6	CF	22	ILE
9	CI	50	PRO
10	CJ	36	VAL
10	CJ	41	PRO
10	CJ	75	ASP
12	CL	34	THR
12	CL	76	HIS
13	CM	46	GLU
16	CP	49	GLY
16	CP	79	ASN
17	CQ	67	SER
17	CQ	76	ARG
19	CS	49	ALA
19	CS	79	TYR
20	CT	72	ALA
21	CU	10	PRO
24	DC	2	VAL
24	DC	31	PRO
24	DC	64	VAL
24	DC	96	LYS
25	DD	109	VAL
25	DD	156	PHE
26	DE	46	GLN
27	DF	40	GLY
28	DG	46	ASP
28	DG	150	TYR
28	DG	155	PRO
28	DG	170	THR

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Mol	Chain	Res	Type
29	DH	15	LEU
30	DI	64	ARG
31	DJ	12	LYS
31	DJ	42	ALA
32	DK	48	PRO
32	DK	72	PRO
33	DL	19	LEU
33	DL	41	ARG
33	DL	97	ALA
34	DM	70	ASP
34	DM	73	ILE
35	DN	3	HIS
35	DN	59	SER
35	DN	72	ASP
37	DP	20	ARG
37	DP	24	THR
37	DP	66	GLY
37	DP	92	ARG
39	DR	2	TYR
40	DS	10	ALA
41	DT	33	LYS
41	DT	56	GLU
41	DT	61	LEU
43	DV	84	PRO
45	DX	27	ARG
45	DX	69	GLU
50	D2	39	ARG
51	D3	6	VAL
51	D3	54	LEU
52	D4	16	ILE
52	D4	37	GLN
2	AB	211	LEU
3	AC	191	THR
5	AE	148	SER
7	AG	52	ARG
8	AH	26	MET
9	AI	66	VAL
10	AJ	93	ALA
11	AK	77	GLY
16	AP	9	HIS
16	AP	13	LYS
18	AR	54	LEU

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Mol	Chain	Res	Type
21	AU	9	GLU
24	BC	30	ALA
24	BC	37	SER
24	BC	69	ASN
25	BD	95	SER
25	BD	109	VAL
25	BD	159	LYS
27	BF	83	PRO
30	BI	7	TYR
31	BJ	65	THR
32	BK	46	ALA
36	BO	66	GLY
39	BR	53	PHE
44	BW	68	PHE
44	BW	78	PHE
2	CB	163	ILE
3	CC	65	VAL
4	CD	166	LYS
5	CE	81	GLN
5	CE	111	ARG
10	CJ	62	ARG
14	CN	55	SER
19	CS	54	ARG
25	DD	2	ILE
25	DD	9	VAL
25	DD	151	THR
26	DE	13	THR
26	DE	136	GLN
27	DF	88	VAL
28	DG	3	VAL
28	DG	8	VAL
28	DG	152	ARG
29	DH	148	ALA
31	DJ	79	GLY
33	DL	5	THR
37	DP	109	ILE
39	DR	56	GLY
40	DS	74	ILE
41	DT	28	ASN
41	DT	38	ALA
42	DU	12	VAL
42	DU	14	THR

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Mol	Chain	Res	Type
43	DV	22	ALA
43	DV	46	LYS
44	DW	24	ARG
45	DX	58	ILE
47	DZ	27	GLY
2	AB	70	GLY
10	AJ	33	GLY
16	AP	78	VAL
17	AQ	11	VAL
29	BH	103	VAL
30	BI	97	VAL
31	BJ	124	VAL
33	BL	87	GLY
34	BM	26	VAL
39	BR	49	ILE
42	BU	54	PRO
3	CC	100	ILE
5	CE	29	ILE
6	CF	51	ILE
7	CG	68	VAL
13	CM	111	PRO
27	DF	82	TYR
28	DG	92	GLY
28	DG	117	PRO
29	DH	126	GLY
29	DH	147	VAL
32	DK	50	GLY
32	DK	63	VAL
34	DM	36	VAL
38	DQ	7	VAL
49	D1	30	PRO
52	D4	23	ILE
2	AB	200	PRO
3	AC	93	ILE
4	AD	44	LYS
5	AE	104	ILE
5	AE	149	PRO
7	AG	6	ILE
10	AJ	39	PRO
11	AK	73	VAL
19	AS	44	ILE
26	BE	177	PRO

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Mol	Chain	Res	Type
27	BF	150	GLY
28	BG	167	VAL
46	BY	46	VAL
47	BZ	35	VAL
51	B3	6	VAL
3	CC	12	GLY
3	CC	54	ILE
5	CE	43	GLY
6	CF	64	VAL
7	CG	13	PRO
13	CM	50	GLY
14	CN	56	PRO
24	DC	150	GLY
26	DE	129	PRO
28	DG	97	VAL
30	DI	8	VAL
36	DO	87	ILE
40	DS	29	VAL
40	DS	96	ILE
45	DX	50	VAL
47	DZ	54	VAL
7	AG	5	VAL
7	AG	7	GLY
12	AL	41	PRO
25	BD	151	THR
28	BG	78	VAL
28	BG	153	PRO
30	BI	23	VAL
43	BV	67	GLY
6	CF	85	ILE
11	CK	73	VAL
12	CL	86	VAL
17	CQ	31	PRO
28	DG	16	VAL
33	DL	114	GLY
34	DM	87	GLY
34	DM	125	PRO
38	DQ	6	GLY
42	DU	64	ILE
43	DV	40	ILE
10	AJ	100	ILE
11	AK	38	GLY

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Mol	Chain	Res	Type
11	AK	89	GLY
14	AN	44	VAL
25	BD	63	PRO
26	BE	73	ILE
30	BI	31	GLY
35	BN	101	GLY
39	BR	100	GLY
4	CD	101	VAL
7	CG	134	VAL
10	CJ	38	GLY
25	DD	22	ILE
33	DL	88	GLY
36	DO	42	PRO
38	DQ	39	ILE
39	DR	27	ILE
41	DT	71	GLY
3	AC	59	PRO
21	AU	52	VAL
28	BG	91	VAL
31	DJ	46	PRO
36	DO	27	VAL
39	DR	52	PRO

### 5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AB	180/180 (100%)	142 (79%)	38 (21%)	1	6
2	CB	180/180 (100%)	154 (86%)	26 (14%)	4	17
3	AC	170/170 (100%)	136 (80%)	34 (20%)	1	7
3	CC	170/170 (100%)	153 (90%)	17 (10%)	9	34
4	AD	172/172 (100%)	138 (80%)	34 (20%)	1	7
4	CD	172/172 (100%)	131 (76%)	41 (24%)	1	3
5	AE	113/113 (100%)	77 (68%)	36 (32%)	0	0

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
5	CE	113/113 (100%)	89 (79%)	24 (21%)	1	6
6	AF	87/87 (100%)	71 (82%)	16 (18%)	2	9
6	CF	87/87 (100%)	73 (84%)	14 (16%)	3	13
7	AG	124/124 (100%)	111 (90%)	13 (10%)	8	31
7	CG	123/124 (99%)	101 (82%)	22 (18%)	2	10
8	AH	104/104 (100%)	83 (80%)	21 (20%)	1	7
8	CH	104/104 (100%)	91 (88%)	13 (12%)	6	22
9	AI	105/105 (100%)	82 (78%)	23 (22%)	1	5
9	CI	105/105 (100%)	89 (85%)	16 (15%)	3	14
10	AJ	86/86 (100%)	70 (81%)	16 (19%)	2	9
10	CJ	86/86 (100%)	73 (85%)	13 (15%)	3	15
11	AK	90/90 (100%)	73 (81%)	17 (19%)	2	8
11	CK	90/90 (100%)	79 (88%)	11 (12%)	6	24
12	AL	103/103 (100%)	76 (74%)	27 (26%)	0	2
12	CL	103/103 (100%)	78 (76%)	25 (24%)	1	3
13	AM	92/92 (100%)	84 (91%)	8 (9%)	13	44
13	CM	91/92 (99%)	81 (89%)	10 (11%)	8	30
14	AN	79/83 (95%)	71 (90%)	8 (10%)	9	33
14	CN	79/83 (95%)	69 (87%)	10 (13%)	5	22
15	AO	76/76 (100%)	59 (78%)	17 (22%)	1	4
15	CO	76/76 (100%)	69 (91%)	7 (9%)	11	40
16	AP	65/65 (100%)	54 (83%)	11 (17%)	2	11
16	CP	65/65 (100%)	50 (77%)	15 (23%)	1	4
17	AQ	74/74 (100%)	60 (81%)	14 (19%)	2	8
17	CQ	74/74 (100%)	62 (84%)	12 (16%)	3	12
18	AR	48/48 (100%)	44 (92%)	4 (8%)	14	46
18	CR	48/48 (100%)	40 (83%)	8 (17%)	3	11
19	AS	70/70 (100%)	63 (90%)	7 (10%)	9	34
19	CS	70/70 (100%)	64 (91%)	6 (9%)	13	45
20	AT	65/65 (100%)	48 (74%)	17 (26%)	0	2
20	CT	65/65 (100%)	52 (80%)	13 (20%)	1	7

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
21	AU	44/44 (100%)	36 (82%)	8 (18%)	2	9
21	CU	44/44 (100%)	29 (66%)	15 (34%)	0	0
24	BC	216/216 (100%)	170 (79%)	46 (21%)	1	6
24	DC	216/216 (100%)	178 (82%)	38 (18%)	2	10
25	BD	164/164 (100%)	133 (81%)	31 (19%)	2	8
25	DD	164/164 (100%)	131 (80%)	33 (20%)	1	7
26	BE	165/165 (100%)	111 (67%)	54 (33%)	0	0
26	DE	165/165 (100%)	143 (87%)	22 (13%)	5	20
27	BF	148/149 (99%)	116 (78%)	32 (22%)	1	5
27	DF	149/149 (100%)	124 (83%)	25 (17%)	2	11
28	BG	137/137 (100%)	106 (77%)	31 (23%)	1	4
28	DG	137/137 (100%)	117 (85%)	20 (15%)	4	16
29	BH	114/114 (100%)	96 (84%)	18 (16%)	3	13
29	DH	114/114 (100%)	90 (79%)	24 (21%)	1	6
30	BI	109/109 (100%)	91 (84%)	18 (16%)	3	12
30	DI	109/109 (100%)	103 (94%)	6 (6%)	27	63
31	BJ	116/116 (100%)	92 (79%)	24 (21%)	1	6
31	DJ	116/116 (100%)	101 (87%)	15 (13%)	5	21
32	BK	103/103 (100%)	77 (75%)	26 (25%)	1	2
32	DK	103/103 (100%)	84 (82%)	19 (18%)	2	9
33	BL	102/102 (100%)	82 (80%)	20 (20%)	1	7
33	DL	102/102 (100%)	89 (87%)	13 (13%)	5	22
34	BM	109/109 (100%)	81 (74%)	28 (26%)	0	2
34	DM	109/109 (100%)	98 (90%)	11 (10%)	9	33
35	BN	100/100 (100%)	82 (82%)	18 (18%)	2	10
35	DN	100/100 (100%)	85 (85%)	15 (15%)	3	15
36	BO	86/86 (100%)	67 (78%)	19 (22%)	1	5
36	DO	86/86 (100%)	79 (92%)	7 (8%)	15	47
37	BP	99/99 (100%)	66 (67%)	33 (33%)	0	0
37	DP	99/99 (100%)	88 (89%)	11 (11%)	8	29
38	BQ	89/89 (100%)	68 (76%)	21 (24%)	1	3

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
38	DQ	89/89 (100%)	69 (78%)	20 (22%)	1	4
39	BR	84/84 (100%)	66 (79%)	18 (21%)	1	5
39	DR	84/84 (100%)	69 (82%)	15 (18%)	2	10
40	BS	93/93 (100%)	72 (77%)	21 (23%)	1	4
40	DS	93/93 (100%)	72 (77%)	21 (23%)	1	4
41	BT	80/80 (100%)	53 (66%)	27 (34%)	0	0
41	DT	80/80 (100%)	75 (94%)	5 (6%)	22	58
42	BU	83/83 (100%)	66 (80%)	17 (20%)	1	6
42	DU	83/83 (100%)	72 (87%)	11 (13%)	5	20
43	BV	78/78 (100%)	62 (80%)	16 (20%)	1	6
43	DV	78/78 (100%)	66 (85%)	12 (15%)	3	14
44	BW	59/59 (100%)	38 (64%)	21 (36%)	0	0
44	DW	59/59 (100%)	45 (76%)	14 (24%)	1	3
45	BX	67/67 (100%)	51 (76%)	16 (24%)	1	3
45	DX	67/67 (100%)	55 (82%)	12 (18%)	2	10
46	BY	55/55 (100%)	42 (76%)	13 (24%)	1	3
46	DY	55/55 (100%)	51 (93%)	4 (7%)	17	52
47	BZ	48/48 (100%)	35 (73%)	13 (27%)	0	1
47	DZ	48/48 (100%)	38 (79%)	10 (21%)	1	6
48	B0	47/47 (100%)	39 (83%)	8 (17%)	2	11
48	D0	47/47 (100%)	38 (81%)	9 (19%)	2	8
49	B1	45/45 (100%)	37 (82%)	8 (18%)	2	10
49	D1	45/45 (100%)	38 (84%)	7 (16%)	3	14
50	B2	38/38 (100%)	27 (71%)	11 (29%)	0	1
50	D2	38/38 (100%)	33 (87%)	5 (13%)	5	20
51	B3	51/51 (100%)	42 (82%)	9 (18%)	2	10
51	D3	51/51 (100%)	37 (72%)	14 (28%)	0	1
52	B4	34/34 (100%)	28 (82%)	6 (18%)	2	10
52	D4	34/34 (100%)	30 (88%)	4 (12%)	6	25
All	All	9331/9342 (100%)	7599 (81%)	1732 (19%)	2	9

All (1732) residues with a non-rotameric sidechain are listed below:



Mol	Chain	Res	Type
2	AB	10	LYS
2	AB	13	VAL
2	AB	15	PHE
2	AB	19	THR
2	AB	20	ARG
2	AB	22	TRP
2	AB	26	MET
2	AB	36	LYS
2	AB	38	HIS
2	AB	48	MET
2	AB	57	ASN
2	AB	67	LEU
2	AB	73	ARG
2	AB	81	ASP
2	AB	87	ASP
2	AB	88	GLN
2	AB	90	PHE
2	AB	94	ARG
2	AB	100	LEU
2	AB	102	ASN
2	AB	108	GLN
2	AB	112	ARG
2	AB	119	GLN
2	AB	122	ASP
2	AB	124	THR
2	AB	128	LEU
2	AB	130	LYS
2	AB	136	ARG
2	AB	138	ARG
2	AB	143	LEU
2	AB	156	LEU
2	AB	158	ASP
2	AB	170	ILE
2	AB	193	ASP
2	AB	206	ILE
2	AB	211	LEU
2	AB	219	THR
2	AB	221	ARG
3	AC	2	GLN
3	AC	13	ILE
3	AC	15	LYS
3	AC	17	TRP
3	AC	22	PHE

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Mol	Chain	Res	Type
3	AC	24	ASN
3	AC	25	THR
3	AC	26	LYS
3	AC	27	GLU
3	AC	32	LEU
3	AC	35	ASP
3	AC	36	PHE
3	AC	42	LEU
3	AC	50	SER
3	AC	54	ILE
3	AC	58	ARG
3	AC	69	THR
3	AC	79	LYS
3	AC	89	VAL
3	AC	99	GLN
3	AC	102	ILE
3	AC	106	ARG
3	AC	133	MET
3	AC	139	ASN
3	AC	143	LEU
3	AC	148	ILE
3	AC	150	VAL
3	AC	165	GLU
3	AC	166	TRP
3	AC	177	LEU
3	AC	184	ASN
3	AC	186	SER
3	AC	189	HIS
3	AC	199	VAL
4	AD	19	PHE
4	AD	21	LYS
4	AD	25	ARG
4	AD	30	LYS
4	AD	31	CYS
4	AD	47	LEU
4	AD	52	VAL
4	AD	54	LEU
4	AD	55	ARG
4	AD	57	LYS
4	AD	63	ILE
4	AD	69	ARG
4	AD	84	ASN

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Mol	Chain	Res	Type
4	AD	88	ASN
4	AD	89	LEU
4	AD	92	LEU
4	AD	101	VAL
4	AD	102	TYR
4	AD	115	GLN
4	AD	122	ILE
4	AD	127	ARG
4	AD	131	ILE
4	AD	145	ARG
4	AD	147	LYS
4	AD	153	ARG
4	AD	160	LEU
4	AD	162	GLU
4	AD	163	GLN
4	AD	165	GLU
4	AD	166	LYS
4	AD	170	LEU
4	AD	193	ASP
4	AD	199	ILE
4	AD	205	LYS
5	AE	9	GLU
5	AE	10	LEU
5	AE	11	GLN
5	AE	14	LEU
5	AE	18	ASN
5	AE	24	VAL
5	AE	25	LYS
5	AE	29	ILE
5	AE	31	SER
5	AE	37	VAL
5	AE	42	ASN
5	AE	47	PHE
5	AE	53	ARG
5	AE	59	ILE
5	AE	68	ARG
5	AE	75	LEU
5	AE	76	ASN
5	AE	79	THR
5	AE	81	GLN
5	AE	92	ARG
5	AE	93	VAL

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Mol	Chain	Res	Type
5	AE	95	MET
5	AE	96	GLN
5	AE	113	VAL
5	AE	116	VAL
5	AE	119	VAL
5	AE	121	ASN
5	AE	123	LEU
5	AE	135	VAL
5	AE	136	VAL
5	AE	139	THR
5	AE	140	ILE
5	AE	141	ASP
5	AE	152	VAL
5	AE	155	LYS
5	AE	156	ARG
6	AF	7	VAL
6	AF	14	GLN
6	AF	15	SER
6	AF	17	GLN
6	AF	24	ARG
6	AF	36	ILE
6	AF	54	LEU
6	AF	55	HIS
6	AF	64	VAL
6	AF	68	GLN
6	AF	69	GLU
6	AF	77	THR
6	AF	84	VAL
6	AF	86	ARG
6	AF	89	VAL
6	AF	93	LYS
7	AG	3	ARG
7	AG	4	ARG
7	AG	8	GLN
7	AG	12	LEU
7	AG	22	LEU
7	AG	26	VAL
7	AG	37	THR
7	AG	47	GLU
7	AG	72	VAL
7	AG	93	VAL
7	AG	121	ASN

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Mol	Chain	Res	Type
7	AG	123	LEU
7	AG	143	MET
8	AH	12	ARG
8	AH	21	LYS
8	AH	24	VAL
8	AH	41	GLU
8	AH	48	PHE
8	AH	50	VAL
8	AH	54	THR
8	AH	58	LEU
8	AH	66	GLN
8	AH	72	GLU
8	AH	76	ARG
8	AH	82	LEU
8	AH	86	LYS
8	AH	89	ASP
8	AH	90	GLU
8	AH	98	LEU
8	AH	103	VAL
8	AH	106	SER
8	AH	110	MET
8	AH	120	LEU
8	AH	124	ILE
9	AI	13	SER
9	AI	21	LYS
9	AI	27	ILE
9	AI	29	ILE
9	AI	37	TYR
9	AI	44	ARG
9	AI	47	VAL
9	AI	48	ARG
9	AI	56	MET
9	AI	60	LEU
9	AI	62	LEU
9	AI	64	ILE
9	AI	67	LYS
9	AI	84	ARG
9	AI	86	LEU
9	AI	87	MET
9	AI	93	LEU
9	AI	105	ARG
9	AI	106	ASP

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Mol	Chain	Res	Type
9	AI	110	VAL
9	AI	115	VAL
9	AI	126	PHE
9	AI	128	LYS
10	AJ	6	ILE
10	AJ	7	ARG
10	AJ	8	ILE
10	AJ	17	LEU
10	AJ	19	ASP
10	AJ	22	THR
10	AJ	35	GLN
10	AJ	48	ARG
10	AJ	59	LYS
10	AJ	63	ASP
10	AJ	70	HIS
10	AJ	73	LEU
10	AJ	84	VAL
10	AJ	87	LEU
10	AJ	89	ARG
10	AJ	98	VAL
11	AK	15	VAL
11	AK	17	ASP
11	AK	30	ILE
11	AK	45	THR
11	AK	51	PHE
11	AK	55	ARG
11	AK	57	SER
11	AK	64	VAL
11	AK	78	ILE
11	AK	82	GLU
11	AK	96	ILE
11	AK	100	ASN
11	AK	106	ILE
11	AK	124	LYS
11	AK	125	LYS
11	AK	127	ARG
11	AK	128	VAL
12	AL	6	LEU
12	AL	9	LYS
12	AL	13	ARG
12	AL	17	LYS
12	AL	18	SER

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Mol	Chain	Res	Type
12	AL	26	CYS
12	AL	32	VAL
12	AL	33	CYS
12	AL	35	ARG
12	AL	40	THR
12	AL	43	LYS
12	AL	45	ASN
12	AL	49	ARG
12	AL	51	VAL
12	AL	57	THR
12	AL	63	THR
12	AL	64	SER
12	AL	66	ILE
12	AL	72	ASN
12	AL	73	LEU
12	AL	82	ARG
12	AL	87	LYS
12	AL	88	ASP
12	AL	89	LEU
12	AL	96	THR
12	AL	101	LEU
12	AL	109	ARG
13	AM	3	ILE
13	AM	6	ILE
13	AM	7	ASN
13	AM	18	LEU
13	AM	47	LEU
13	AM	71	GLU
13	AM	100	ARG
13	AM	103	THR
14	AN	17	ASP
14	AN	27	LYS
14	AN	58	ARG
14	AN	59	GLN
14	AN	83	VAL
14	AN	84	ARG
14	AN	88	MET
14	AN	96	LYS
15	AO	5	GLU
15	AO	7	THR
15	AO	10	ILE
15	AO	16	ARG

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Mol	Chain	Res	Type
15	AO	21	THR
15	AO	30	LEU
15	AO	38	LEU
15	AO	39	GLN
15	AO	47	LYS
15	AO	56	LEU
15	AO	57	ARG
15	AO	60	SER
15	AO	63	ARG
15	AO	65	LEU
15	AO	78	THR
15	AO	82	GLU
15	AO	86	LEU
16	AP	1	MET
16	AP	3	THR
16	AP	6	LEU
16	AP	19	VAL
16	AP	28	ARG
16	AP	29	ASN
16	AP	46	LYS
16	AP	55	ASP
16	AP	63	GLN
16	AP	68	SER
16	AP	77	GLU
17	AQ	3	LYS
17	AQ	8	GLN
17	AQ	16	MET
17	AQ	20	ILE
17	AQ	21	VAL
17	AQ	37	ILE
17	AQ	48	GLU
17	AQ	49	ASN
17	AQ	51	GLU
17	AQ	54	ILE
17	AQ	64	ARG
17	AQ	74	LEU
17	AQ	75	VAL
17	AQ	80	LYS
18	AR	28	LEU
18	AR	33	THR
18	AR	60	ARG
18	AR	70	THR

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Mol	Chain	Res	Type
19	AS	20	LYS
19	AS	42	ASN
19	AS	54	ARG
19	AS	55	GLN
19	AS	60	PHE
19	AS	64	GLU
19	AS	79	TYR
20	AT	2	ASN
20	AT	4	LYS
20	AT	7	LYS
20	AT	11	ILE
20	AT	17	ARG
20	AT	26	MET
20	AT	27	MET
20	AT	33	LYS
20	AT	35	TYR
20	AT	38	ILE
20	AT	42	ASP
20	AT	48	LYS
20	AT	53	MET
20	AT	65	LEU
20	AT	75	LYS
20	AT	77	ASN
20	AT	84	LYS
21	AU	4	LYS
21	AU	5	VAL
21	AU	15	LEU
21	AU	18	PHE
21	AU	27	VAL
21	AU	31	VAL
21	AU	39	LYS
21	AU	42	THR
24	BC	2	VAL
24	BC	3	VAL
24	BC	8	THR
24	BC	12	ARG
24	BC	17	LYS
24	BC	18	VAL
24	BC	20	ASN
24	BC	35	LYS
24	BC	38	LYS
24	BC	43	ASN

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Mol	Chain	Res	Type
24	BC	49	THR
24	BC	69	ASN
24	BC	70	LYS
24	BC	73	ILE
24	BC	76	VAL
24	BC	77	VAL
24	BC	79	ARG
24	BC	85	ASN
24	BC	90	ILE
24	BC	93	VAL
24	BC	103	ILE
24	BC	104	LEU
24	BC	109	LEU
24	BC	114	GLN
24	BC	115	ILE
24	BC	119	VAL
24	BC	120	ASP
24	BC	123	ILE
24	BC	142	ASN
24	BC	152	GLN
24	BC	155	ARG
24	BC	172	THR
24	BC	173	LEU
24	BC	175	LEU
24	BC	176	ARG
24	BC	193	GLU
24	BC	202	ARG
24	BC	203	VAL
24	BC	212	TRP
24	BC	216	ARG
24	BC	227	VAL
24	BC	243	PRO
24	BC	250	GLN
24	BC	252	LYS
24	BC	254	LYS
24	BC	257	ARG
25	BD	9	VAL
25	BD	12	THR
25	BD	13	ARG
25	BD	16	THR
25	BD	25	THR
25	BD	43	ASP

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Mol	Chain	Res	Type
25	BD	46	ARG
25	BD	64	GLU
25	BD	70	LYS
25	BD	73	VAL
25	BD	89	GLU
25	BD	90	PHE
25	BD	91	THR
25	BD	98	VAL
25	BD	105	LYS
25	BD	106	LYS
25	BD	114	LYS
25	BD	118	PHE
25	BD	124	ARG
25	BD	142	VAL
25	BD	150	GLN
25	BD	151	THR
25	BD	159	LYS
25	BD	170	VAL
25	BD	176	ASP
25	BD	183	GLU
25	BD	186	LEU
25	BD	197	THR
25	BD	201	LEU
25	BD	203	VAL
25	BD	207	VAL
26	BE	12	LEU
26	BE	18	THR
26	BE	24	ASN
26	BE	32	VAL
26	BE	41	GLN
26	BE	43	THR
26	BE	44	ARG
26	BE	46	GLN
26	BE	51	GLU
26	BE	55	SER
26	BE	61	ARG
26	BE	62	GLN
26	BE	63	LYS
26	BE	65	THR
26	BE	69	ARG
26	BE	70	SER
26	BE	77	ILE

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Mol	Chain	Res	Type
26	BE	78	TRP
26	BE	80	SER
26	BE	88	ARG
26	BE	90	GLN
26	BE	91	ASP
26	BE	107	SER
26	BE	108	ILE
26	BE	109	LEU
26	BE	110	SER
26	BE	113	VAL
26	BE	116	ASP
26	BE	118	LEU
26	BE	119	ILE
26	BE	121	VAL
26	BE	123	LYS
26	BE	124	PHE
26	BE	125	SER
26	BE	127	GLU
26	BE	132	LYS
26	BE	136	GLN
26	BE	145	ASP
26	BE	146	VAL
26	BE	147	LEU
26	BE	148	ILE
26	BE	149	ILE
26	BE	153	LEU
26	BE	159	LEU
26	BE	163	ASN
26	BE	167	VAL
26	BE	169	VAL
26	BE	170	ARG
26	BE	171	ASP
26	BE	175	ILE
26	BE	178	VAL
26	BE	186	VAL
26	BE	198	GLU
26	BE	200	LEU
27	BF	3	LEU
27	BF	8	LYS
27	BF	9	ASP
27	BF	12	VAL
27	BF	17	THR

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Mol	Chain	Res	Type
27	BF	18	GLU
27	BF	24	VAL
27	BF	27	VAL
27	BF	34	THR
27	BF	35	LEU
27	BF	36	ASN
27	BF	37	MET
27	BF	46	LYS
27	BF	56	LEU
27	BF	65	LEU
27	BF	80	GLN
27	BF	88	VAL
27	BF	90	LEU
27	BF	103	ILE
27	BF	105	ILE
27	BF	107	VAL
27	BF	109	ARG
27	BF	111	ARG
27	BF	114	ARG
27	BF	132	ARG
27	BF	134	GLN
27	BF	136	ILE
27	BF	151	LEU
27	BF	153	ILE
27	BF	154	THR
27	BF	162	ASP
27	BF	166	ARG
28	BG	3	VAL
28	BG	7	PRO
28	BG	8	VAL
28	BG	18	ILE
28	BG	34	ARG
28	BG	35	THR
28	BG	40	VAL
28	BG	50	THR
28	BG	55	ASP
28	BG	59	ASP
28	BG	68	ARG
28	BG	76	ILE
28	BG	78	VAL
28	BG	80	GLU
28	BG	84	LYS

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Mol	Chain	Res	Type
28	BG	86	LEU
28	BG	93	TYR
28	BG	101	VAL
28	BG	103	ASN
28	BG	105	SER
28	BG	116	LEU
28	BG	120	ILE
28	BG	123	GLU
28	BG	132	LEU
28	BG	138	GLN
28	BG	140	ILE
28	BG	142	GLN
28	BG	159	LYS
28	BG	165	ASP
28	BG	170	THR
28	BG	174	LYS
29	BH	2	GLN
29	BH	6	LEU
29	BH	12	LEU
29	BH	14	SER
29	BH	18	GLN
29	BH	28	ASN
29	BH	31	VAL
29	BH	43	ASN
29	BH	50	ARG
29	BH	54	LEU
29	BH	62	LEU
29	BH	68	ARG
29	BH	75	LEU
29	BH	83	LYS
29	BH	96	THR
29	BH	104	THR
29	BH	130	VAL
29	BH	135	HIS
30	BI	2	LYS
30	BI	10	LEU
30	BI	11	GLN
30	BI	12	VAL
30	BI	23	VAL
30	BI	30	GLN
30	BI	37	PHE
30	BI	39	LYS

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Mol	Chain	Res	Type
30	BI	49	GLU
30	BI	61	TYR
30	BI	71	LYS
30	BI	81	LYS
30	BI	86	LYS
30	BI	95	ASP
30	BI	107	GLU
30	BI	124	MET
30	BI	126	ARG
30	BI	135	MET
31	BJ	1	MET
31	BJ	2	LYS
31	BJ	3	THR
31	BJ	17	VAL
31	BJ	24	THR
31	BJ	25	LEU
31	BJ	30	THR
31	BJ	36	LEU
31	BJ	40	HIS
31	BJ	41	LYS
31	BJ	44	TYR
31	BJ	54	ILE
31	BJ	55	ILE
31	BJ	57	LEU
31	BJ	64	VAL
31	BJ	72	LYS
31	BJ	78	THR
31	BJ	85	LYS
31	BJ	90	GLU
31	BJ	103	ILE
31	BJ	111	LYS
31	BJ	129	GLU
31	BJ	135	GLN
31	BJ	140	LEU
32	BK	8	LEU
32	BK	13	ASN
32	BK	18	ARG
32	BK	21	CYS
32	BK	23	LYS
32	BK	30	ARG
32	BK	39	ILE
32	BK	45	GLU

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Mol	Chain	Res	Type
32	BK	47	ILE
32	BK	51	LYS
32	BK	52	VAL
32	BK	54	LYS
32	BK	57	VAL
32	BK	58	LEU
32	BK	63	VAL
32	BK	67	LYS
32	BK	73	ASP
32	BK	77	ILE
32	BK	92	GLU
32	BK	93	GLN
32	BK	95	ILE
32	BK	105	ARG
32	BK	108	ARG
32	BK	111	LYS
32	BK	114	LYS
32	BK	118	LEU
33	BL	3	LEU
33	BL	4	ASN
33	BL	6	LEU
33	BL	19	LEU
33	BL	27	LEU
33	BL	30	THR
33	BL	39	LYS
33	BL	48	ARG
33	BL	55	MET
33	BL	61	LEU
33	BL	66	PHE
33	BL	74	THR
33	BL	85	VAL
33	BL	93	ASN
33	BL	94	THR
33	BL	101	ILE
33	BL	110	VAL
33	BL	111	ILE
33	BL	118	THR
33	BL	127	VAL
34	BM	2	LEU
34	BM	3	GLN
34	BM	5	LYS
34	BM	8	LYS

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Mol	Chain	Res	Type
34	BM	10	ARG
34	BM	13	HIS
34	BM	14	LYS
34	BM	24	THR
34	BM	27	SER
34	BM	33	LEU
34	BM	36	VAL
34	BM	51	ARG
34	BM	57	VAL
34	BM	60	GLN
34	BM	70	ASP
34	BM	72	PRO
34	BM	75	GLU
34	BM	80	VAL
34	BM	90	GLU
34	BM	95	LEU
34	BM	96	ILE
34	BM	97	GLN
34	BM	100	LYS
34	BM	110	GLU
34	BM	115	GLU
34	BM	129	THR
34	BM	131	VAL
34	BM	134	THR
35	BN	10	LEU
35	BN	14	SER
35	BN	18	GLN
35	BN	31	HIS
35	BN	33	ILE
35	BN	35	LYS
35	BN	38	LEU
35	BN	51	LEU
35	BN	65	LEU
35	BN	69	ARG
35	BN	71	ARG
35	BN	75	ILE
35	BN	83	LEU
35	BN	86	ARG
35	BN	95	THR
35	BN	109	PRO
35	BN	117	ASP
35	BN	118	ARG

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Mol	Chain	Res	Type
36	BO	2	ASP
36	BO	4	LYS
36	BO	9	ARG
36	BO	16	ARG
36	BO	17	LYS
36	BO	18	LEU
36	BO	58	ILE
36	BO	80	GLU
36	BO	81	ARG
36	BO	83	LEU
36	BO	84	GLU
36	BO	89	ASP
36	BO	94	ARG
36	BO	100	HIS
36	BO	103	VAL
36	BO	106	LEU
36	BO	111	ARG
36	BO	115	LEU
36	BO	116	GLN
37	BP	3	ILE
37	BP	6	GLN
37	BP	7	LEU
37	BP	9	GLN
37	BP	14	GLN
37	BP	16	VAL
37	BP	18	SER
37	BP	19	PHE
37	BP	20	ARG
37	BP	24	THR
37	BP	28	LYS
37	BP	35	SER
37	BP	36	LYS
37	BP	37	LYS
37	BP	38	ARG
37	BP	39	LEU
37	BP	40	GLN
37	BP	52	ARG
37	BP	56	SER
37	BP	61	ARG
37	BP	64	SER
37	BP	69	VAL
37	BP	75	THR

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Mol	Chain	Res	Type
37	BP	80	VAL
37	BP	83	ILE
37	BP	85	VAL
37	BP	87	ARG
37	BP	91	VAL
37	BP	92	ARG
37	BP	95	LYS
37	BP	96	LEU
37	BP	99	LEU
37	BP	109	ILE
38	BQ	2	ARG
38	BQ	8	ILE
38	BQ	10	ARG
38	BQ	17	LEU
38	BQ	29	ARG
38	BQ	40	LYS
38	BQ	43	GLN
38	BQ	50	ARG
38	BQ	58	GLN
38	BQ	59	LEU
38	BQ	63	ARG
38	BQ	65	ASN
38	BQ	69	ARG
38	BQ	73	ILE
38	BQ	87	VAL
38	BQ	88	GLU
38	BQ	89	ILE
38	BQ	94	LEU
38	BQ	96	ASP
38	BQ	97	ILE
38	BQ	106	THR
39	BR	1	MET
39	BR	10	LYS
39	BR	18	GLN
39	BR	37	GLU
39	BR	39	LEU
39	BR	45	GLU
39	BR	46	GLU
39	BR	47	VAL
39	BR	48	LYS
39	BR	51	VAL
39	BR	54	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
39	BR	55	ASP
39	BR	72	VAL
39	BR	74	ILE
39	BR	94	THR
39	BR	97	LYS
39	BR	99	THR
39	BR	102	SER
40	BS	1	MET
40	BS	4	ILE
40	BS	7	HIS
40	BS	24	ILE
40	BS	29	VAL
40	BS	30	SER
40	BS	33	LEU
40	BS	37	THR
40	BS	41	LYS
40	BS	42	LYS
40	BS	45	VAL
40	BS	47	VAL
40	BS	48	LYS
40	BS	66	ILE
40	BS	69	LEU
40	BS	73	LYS
40	BS	74	ILE
40	BS	76	VAL
40	BS	88	ARG
40	BS	96	ILE
40	BS	101	SER
41	BT	2	ILE
41	BT	3	ARG
41	BT	4	GLU
41	BT	17	SER
41	BT	18	GLU
41	BT	28	ASN
41	BT	29	THR
41	BT	30	ILE
41	BT	32	LEU
41	BT	36	LYS
41	BT	37	ASP
41	BT	43	ILE
41	BT	48	GLN
41	BT	50	LEU

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Mol	Chain	Res	Type
41	BT	54	GLU
41	BT	58	VAL
41	BT	61	LEU
41	BT	64	LYS
41	BT	67	VAL
41	BT	68	LYS
41	BT	69	ARG
41	BT	73	ARG
41	BT	74	ILE
41	BT	77	ARG
41	BT	82	LYS
41	BT	89	GLU
41	BT	93	LEU
42	BU	4	ILE
42	BU	5	ARG
42	BU	8	ASP
42	BU	10	VAL
42	BU	14	THR
42	BU	18	LYS
42	BU	29	SER
42	BU	30	SER
42	BU	33	VAL
42	BU	42	LYS
42	BU	43	LYS
42	BU	52	ASN
42	BU	61	GLU
42	BU	67	SER
42	BU	71	ILE
42	BU	86	PHE
42	BU	102	ILE
43	BV	1	MET
43	BV	3	THR
43	BV	5	ASN
43	BV	10	LYS
43	BV	12	GLN
43	BV	20	LEU
43	BV	29	ILE
43	BV	35	GLU
43	BV	41	GLU
43	BV	42	LEU
43	BV	46	LYS
43	BV	51	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
43	BV	55	GLU
43	BV	60	VAL
43	BV	65	VAL
43	BV	84	PRO
44	BW	13	ARG
44	BW	14	ASP
44	BW	15	SER
44	BW	16	GLU
44	BW	19	ARG
44	BW	22	VAL
44	BW	23	LYS
44	BW	24	ARG
44	BW	25	PHE
44	BW	28	GLU
44	BW	31	LEU
44	BW	38	ARG
44	BW	40	ARG
44	BW	42	THR
44	BW	45	HIS
44	BW	49	ASN
44	BW	54	ARG
44	BW	58	LEU
44	BW	67	LYS
44	BW	76	ARG
44	BW	77	LYS
45	BX	10	ARG
45	BX	17	ARG
45	BX	19	HIS
45	BX	24	THR
45	BX	26	ARG
45	BX	27	ARG
45	BX	29	LEU
45	BX	34	SER
45	BX	39	VAL
45	BX	46	VAL
45	BX	47	THR
45	BX	58	ILE
45	BX	65	THR
45	BX	70	LEU
45	BX	73	ARG
45	BX	77	TYR
46	BY	14	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
46	BY	16	THR
46	BY	19	LEU
46	BY	21	LEU
46	BY	22	LEU
46	BY	29	ARG
46	BY	39	GLN
46	BY	42	LEU
46	BY	47	ARG
46	BY	55	THR
46	BY	56	LEU
46	BY	57	LEU
46	BY	59	GLU
47	BZ	2	LYS
47	BZ	3	THR
47	BZ	8	GLN
47	BZ	9	THR
47	BZ	15	ARG
47	BZ	23	LEU
47	BZ	24	LEU
47	BZ	31	ILE
47	BZ	37	ARG
47	BZ	43	ILE
47	BZ	44	ARG
47	BZ	54	VAL
47	BZ	56	VAL
48	B0	2	VAL
48	B0	5	ASN
48	B0	9	ARG
48	B0	17	SER
48	B0	25	THR
48	B0	26	SER
48	B0	28	SER
48	B0	39	ARG
49	B1	9	LYS
49	B1	21	THR
49	B1	29	LYS
49	B1	33	LEU
49	B1	35	LEU
49	B1	41	VAL
49	B1	42	VAL
49	B1	45	HIS
50	B2	1	MET

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Mol	Chain	Res	Type
50	B2	3	ARG
50	B2	9	VAL
50	B2	12	ARG
50	B2	21	ARG
50	B2	22	MET
50	B2	26	ASN
50	B2	39	ARG
50	B2	42	LEU
50	B2	43	THR
50	B2	44	VAL
51	B3	5	THR
51	B3	7	ARG
51	B3	29	ARG
51	B3	30	HIS
51	B3	31	ILE
51	B3	49	VAL
51	B3	51	LYS
51	B3	54	LEU
51	B3	56	LEU
52	B4	4	ARG
52	B4	9	LYS
52	B4	13	ASN
52	B4	14	CYS
52	B4	20	ASP
52	B4	27	CYS
2	CB	8	MET
2	CB	14	HIS
2	CB	21	TYR
2	CB	22	TRP
2	CB	26	MET
2	CB	31	PHE
2	CB	34	ARG
2	CB	36	LYS
2	CB	39	ILE
2	CB	46	VAL
2	CB	69	VAL
2	CB	84	LEU
2	CB	88	GLN
2	CB	103	TRP
2	CB	124	THR
2	CB	125	PHE
2	CB	131	LYS

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Mol	Chain	Res	Type
2	CB	147	LEU
2	CB	164	ASP
2	CB	166	ASP
2	CB	177	ASN
2	CB	182	VAL
2	CB	191	ASP
2	CB	196	ASP
2	CB	204	ASP
2	CB	212	TYR
3	CC	26	LYS
3	CC	30	ASP
3	CC	35	ASP
3	CC	41	TYR
3	CC	53	ARG
3	CC	58	ARG
3	CC	106	ARG
3	CC	123	LEU
3	CC	126	ARG
3	CC	134	LYS
3	CC	139	ASN
3	CC	152	VAL
3	CC	161	ILE
3	CC	164	THR
3	CC	166	TRP
3	CC	178	ARG
3	CC	185	THR
4	CD	2	ARG
4	CD	8	LEU
4	CD	12	ARG
4	CD	20	LEU
4	CD	21	LYS
4	CD	24	VAL
4	CD	25	ARG
4	CD	30	LYS
4	CD	34	GLU
4	CD	55	ARG
4	CD	57	LYS
4	CD	62	ARG
4	CD	69	ARG
4	CD	80	ARG
4	CD	84	ASN
4	CD	96	ARG

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Mol	Chain	Res	Type
4	CD	106	PHE
4	CD	116	LEU
4	CD	119	HIS
4	CD	125	ASN
4	CD	127	ARG
4	CD	128	VAL
4	CD	137	SER
4	CD	142	VAL
4	CD	144	ILE
4	CD	146	GLU
4	CD	147	LYS
4	CD	151	GLN
4	CD	152	SER
4	CD	153	ARG
4	CD	160	LEU
4	CD	163	GLN
4	CD	170	LEU
4	CD	172	VAL
4	CD	183	ARG
4	CD	184	LYS
4	CD	190	LEU
4	CD	195	ASN
4	CD	199	ILE
4	CD	200	VAL
4	CD	204	SER
5	CE	11	GLN
5	CE	13	LYS
5	CE	18	ASN
5	CE	25	LYS
5	CE	33	THR
5	CE	35	LEU
5	CE	45	VAL
5	CE	59	ILE
5	CE	73	VAL
5	CE	75	LEU
5	CE	76	ASN
5	CE	80	LEU
5	CE	84	VAL
5	CE	87	VAL
5	CE	95	MET
5	CE	100	GLU
5	CE	104	ILE

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Mol	Chain	Res	Type
5	CE	119	VAL
5	CE	131	ASN
5	CE	133	ILE
5	CE	136	VAL
5	CE	137	ARG
5	CE	140	ILE
5	CE	144	GLU
6	CF	7	VAL
6	CF	10	VAL
6	CF	33	GLU
6	CF	38	ARG
6	CF	44	ARG
6	CF	54	LEU
6	CF	56	LYS
6	CF	61	LEU
6	CF	72	ASP
6	CF	81	ASN
6	CF	85	ILE
6	CF	86	ARG
6	CF	89	VAL
6	CF	98	GLU
7	CG	3	ARG
7	CG	5	VAL
7	CG	6	ILE
7	CG	10	LYS
7	CG	12	LEU
7	CG	16	LYS
7	CG	49	LEU
7	CG	51	GLN
7	CG	55	LYS
7	CG	56	SER
7	CG	57	GLU
7	CG	58	LEU
7	CG	65	LEU
7	CG	66	GLU
7	CG	75	LYS
7	CG	78	ARG
7	CG	100	MET
7	CG	119	LEU
7	CG	123	LEU
7	CG	137	ARG
7	CG	139	ASP

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Mol	Chain	Res	Type
7	CG	148	LYS
8	CH	12	ARG
8	CH	25	THR
8	CH	37	ASN
8	CH	42	GLU
8	CH	50	VAL
8	CH	59	GLU
8	CH	76	ARG
8	CH	82	LEU
8	CH	84	ILE
8	CH	89	ASP
8	CH	93	LYS
8	CH	110	MET
8	CH	128	VAL
9	CI	3	ASN
9	CI	4	GLN
9	CI	5	TYR
9	CI	37	TYR
9	CI	45	MET
9	CI	46	VAL
9	CI	53	LEU
9	CI	54	VAL
9	CI	60	LEU
9	CI	63	TYR
9	CI	83	THR
9	CI	87	MET
9	CI	93	LEU
9	CI	105	ARG
9	CI	125	GLN
9	CI	129	ARG
10	CJ	5	ARG
10	CJ	11	LYS
10	CJ	15	HIS
10	CJ	32	THR
10	CJ	48	ARG
10	CJ	50	THR
10	CJ	59	LYS
10	CJ	67	ILE
10	CJ	69	THR
10	CJ	75	ASP
10	CJ	82	LYS
10	CJ	87	LEU

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Mol	Chain	Res	Type
10	CJ	92	LEU
11	CK	12	ARG
11	CK	22	ILE
11	CK	27	ASN
11	CK	39	ASN
11	CK	73	VAL
11	CK	78	ILE
11	CK	81	LEU
11	CK	92	ARG
11	CK	95	THR
11	CK	105	ARG
11	CK	117	HIS
12	CL	3	VAL
12	CL	5	GLN
12	CL	6	LEU
12	CL	9	LYS
12	CL	14	LYS
12	CL	17	LYS
12	CL	18	SER
12	CL	19	ASN
12	CL	28	GLN
12	CL	38	THR
12	CL	39	THR
12	CL	40	THR
12	CL	48	LEU
12	CL	49	ARG
12	CL	57	THR
12	CL	72	ASN
12	CL	77	SER
12	CL	81	ILE
12	CL	82	ARG
12	CL	88	ASP
12	CL	96	THR
12	CL	102	ASP
12	CL	107	LYS
12	CL	113	ARG
12	CL	120	ARG
13	CM	12	LYS
13	CM	24	VAL
13	CM	28	ARG
13	CM	32	ILE
13	CM	53	ASP

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Mol	Chain	Res	Type
13	CM	77	LYS
13	CM	91	ARG
13	CM	92	ARG
13	CM	100	ARG
13	CM	113	LYS
14	CN	3	GLN
14	CN	27	LYS
14	CN	41	TRP
14	CN	52	ARG
14	CN	53	ASP
14	CN	61	ASN
14	CN	65	GLN
14	CN	72	PHE
14	CN	81	ILE
14	CN	96	LYS
15	CO	16	ARG
15	CO	34	GLN
15	CO	38	LEU
15	CO	39	GLN
15	CO	45	HIS
15	CO	79	GLN
15	CO	80	LEU
16	CP	1	MET
16	CP	4	ILE
16	CP	6	LEU
16	CP	17	TYR
16	CP	19	VAL
16	CP	25	ARG
16	CP	29	ASN
16	CP	32	PHE
16	CP	35	ARG
16	CP	36	VAL
16	CP	46	LYS
16	CP	54	LEU
16	CP	55	ASP
16	CP	56	ARG
16	CP	57	ILE
17	CQ	3	LYS
17	CQ	6	THR
17	CQ	7	LEU
17	CQ	20	ILE
17	CQ	27	PHE

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Mol	Chain	Res	Type
17	CQ	32	ILE
17	CQ	37	ILE
17	CQ	39	ARG
17	CQ	42	LYS
17	CQ	43	LEU
17	CQ	51	GLU
17	CQ	80	LYS
18	CR	25	ILE
18	CR	30	ASN
18	CR	32	ILE
18	CR	47	ARG
18	CR	49	LYS
18	CR	58	ILE
18	CR	67	LEU
18	CR	72	ARG
19	CS	5	LYS
19	CS	10	ILE
19	CS	11	ASP
19	CS	42	ASN
19	CS	52	ASN
19	CS	54	ARG
20	CT	11	ILE
20	CT	12	GLN
20	CT	26	MET
20	CT	30	PHE
20	CT	35	TYR
20	CT	47	GLN
20	CT	53	MET
20	CT	68	LYS
20	CT	69	ASN
20	CT	73	ARG
20	CT	74	HIS
20	CT	78	LEU
20	CT	82	ILE
21	CU	4	LYS
21	CU	11	PHE
21	CU	13	VAL
21	CU	16	ARG
21	CU	17	ARG
21	CU	18	PHE
21	CU	27	VAL
21	CU	28	LEU

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Mol	Chain	Res	Type
21	CU	32	ARG
21	CU	36	PHE
21	CU	37	TYR
21	CU	39	LYS
21	CU	43	GLU
21	CU	50	SER
21	CU	53	LYS
24	DC	2	VAL
24	DC	18	VAL
24	DC	23	LEU
24	DC	35	LYS
24	DC	43	ASN
24	DC	44	ASN
24	DC	49	THR
24	DC	51	ARG
24	DC	53	ILE
24	DC	57	HIS
24	DC	62	ARG
24	DC	63	ILE
24	DC	77	VAL
24	DC	97	ASP
24	DC	102	TYR
24	DC	117	SER
24	DC	124	LYS
24	DC	136	VAL
24	DC	152	GLN
24	DC	156	SER
24	DC	171	VAL
24	DC	172	THR
24	DC	173	LEU
24	DC	174	ARG
24	DC	183	VAL
24	DC	186	ASP
24	DC	187	CYS
24	DC	188	ARG
24	DC	190	THR
24	DC	196	ASN
24	DC	203	VAL
24	DC	212	TRP
24	DC	220	ARG
24	DC	228	ASP
24	DC	235	GLU

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Mol	Chain	Res	Type
24	DC	256	THR
24	DC	260	LYS
24	DC	269	ARG
25	DD	12	THR
25	DD	16	THR
25	DD	24	VAL
25	DD	32	ASN
25	DD	33	ARG
25	DD	38	LYS
25	DD	48	ILE
25	DD	55	LYS
25	DD	56	LYS
25	DD	58	ASN
25	DD	62	LYS
25	DD	79	LEU
25	DD	81	GLU
25	DD	96	ILE
25	DD	98	VAL
25	DD	106	LYS
25	DD	110	THR
25	DD	113	SER
25	DD	121	THR
25	DD	129	THR
25	DD	131	ASP
25	DD	138	LEU
25	DD	139	SER
25	DD	140	HIS
25	DD	141	ARG
25	DD	148	GLN
25	DD	150	GLN
25	DD	159	LYS
25	DD	168	GLU
25	DD	173	GLN
25	DD	189	VAL
25	DD	193	VAL
25	DD	203	VAL
26	DE	44	ARG
26	DE	53	THR
26	DE	57	LYS
26	DE	61	ARG
26	DE	63	LYS
26	DE	67	ARG

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Mol	Chain	Res	Type
26	DE	69	ARG
26	DE	77	ILE
26	DE	78	TRP
26	DE	84	THR
26	DE	88	ARG
26	DE	92	HIS
26	DE	101	TYR
26	DE	108	ILE
26	DE	117	ARG
26	DE	126	VAL
26	DE	139	LYS
26	DE	149	ILE
26	DE	157	LEU
26	DE	163	ASN
26	DE	164	LEU
26	DE	166	LYS
27	DF	9	ASP
27	DF	33	ILE
27	DF	47	LYS
27	DF	48	LEU
27	DF	49	LEU
27	DF	71	LYS
27	DF	77	LYS
27	DF	94	ARG
27	DF	97	GLU
27	DF	110	ILE
27	DF	111	ARG
27	DF	113	PHE
27	DF	119	LYS
27	DF	134	GLN
27	DF	135	ILE
27	DF	139	GLU
27	DF	142	TYR
27	DF	147	ARG
27	DF	148	VAL
27	DF	151	LEU
27	DF	160	LYS
27	DF	166	ARG
27	DF	169	LEU
27	DF	172	PHE
27	DF	177	ARG
28	DG	2	ARG

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Mol	Chain	Res	Type
28	DG	18	ILE
28	DG	19	ASN
28	DG	21	GLN
28	DG	34	ARG
28	DG	35	THR
28	DG	41	GLU
28	DG	51	PHE
28	DG	71	LEU
28	DG	72	ASN
28	DG	84	LYS
28	DG	86	LEU
28	DG	93	TYR
28	DG	109	SER
28	DG	120	ILE
28	DG	132	LEU
28	DG	162	ARG
28	DG	163	TYR
28	DG	166	GLU
28	DG	176	LYS
29	DH	8	LYS
29	DH	15	LEU
29	DH	22	LYS
29	DH	25	TYR
29	DH	27	ARG
29	DH	28	ASN
29	DH	50	ARG
29	DH	54	LEU
29	DH	57	LYS
29	DH	58	LEU
29	DH	62	LEU
29	DH	66	ASN
29	DH	68	ARG
29	DH	71	LYS
29	DH	76	GLU
29	DH	86	ASP
29	DH	90	LEU
29	DH	91	PHE
29	DH	98	ASP
29	DH	103	VAL
29	DH	109	GLU
29	DH	119	ASN
29	DH	132	PHE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
29	DH	144	VAL
30	DI	16	MET
30	DI	30	GLN
30	DI	58	ILE
30	DI	68	PHE
30	DI	72	THR
30	DI	93	ASN
31	DJ	2	LYS
31	DJ	3	THR
31	DJ	25	LEU
31	DJ	36	LEU
31	DJ	43	GLU
31	DJ	47	HIS
31	DJ	57	LEU
31	DJ	70	THR
31	DJ	72	LYS
31	DJ	80	HIS
31	DJ	95	ARG
31	DJ	106	LYS
31	DJ	129	GLU
31	DJ	138	GLN
31	DJ	139	VAL
32	DK	2	ILE
32	DK	7	MET
32	DK	13	ASN
32	DK	25	LEU
32	DK	35	VAL
32	DK	39	ILE
32	DK	49	ARG
32	DK	52	VAL
32	DK	54	LYS
32	DK	65	THR
32	DK	71	ARG
32	DK	73	ASP
32	DK	77	ILE
32	DK	79	PHE
32	DK	103	VAL
32	DK	104	THR
32	DK	105	ARG
32	DK	107	LEU
32	DK	111	LYS
33	DL	3	LEU

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Mol	Chain	Res	Type
33	DL	4	ASN
33	DL	18	ARG
33	DL	47	ARG
33	DL	48	ARG
33	DL	68	SER
33	DL	69	ARG
33	DL	79	LEU
33	DL	99	ASN
33	DL	103	ILE
33	DL	111	ILE
33	DL	112	LEU
33	DL	141	LYS
34	DM	8	LYS
34	DM	38	ARG
34	DM	46	ILE
34	DM	47	GLU
34	DM	78	LEU
34	DM	89	VAL
34	DM	95	LEU
34	DM	96	ILE
34	DM	105	MET
34	DM	115	GLU
34	DM	119	LEU
35	DN	10	LEU
35	DN	14	SER
35	DN	18	GLN
35	DN	29	VAL
35	DN	33	ILE
35	DN	34	ILE
35	DN	54	LEU
35	DN	62	ASN
35	DN	63	ARG
35	DN	69	ARG
35	DN	71	ARG
35	DN	75	ILE
35	DN	90	ARG
35	DN	94	TYR
35	DN	114	GLU
36	DO	17	LYS
36	DO	31	THR
36	DO	68	LYS
36	DO	90	VAL

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Mol	Chain	Res	Type
36	DO	108	ASP
36	DO	115	LEU
36	DO	117	PHE
37	DP	3	ILE
37	DP	6	GLN
37	DP	13	LYS
37	DP	31	VAL
37	DP	52	ARG
37	DP	67	GLU
37	DP	83	ILE
37	DP	86	LYS
37	DP	95	LYS
37	DP	96	LEU
37	DP	101	GLU
38	DQ	3	VAL
38	DQ	8	ILE
38	DQ	10	ARG
38	DQ	12	ARG
38	DQ	13	HIS
38	DQ	15	LYS
38	DQ	16	ILE
38	DQ	35	PHE
38	DQ	43	GLN
38	DQ	46	TYR
38	DQ	47	ARG
38	DQ	49	ARG
38	DQ	54	ARG
38	DQ	57	ARG
38	DQ	63	ARG
38	DQ	69	ARG
38	DQ	79	ILE
38	DQ	90	ASP
38	DQ	93	ILE
38	DQ	96	ASP
39	DR	10	LYS
39	DR	13	ARG
39	DR	22	LEU
39	DR	37	GLU
39	DR	39	LEU
39	DR	48	LYS
39	DR	66	HIS
39	DR	70	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
39	DR	75	VAL
39	DR	80	ARG
39	DR	81	LYS
39	DR	86	GLN
39	DR	89	HIS
39	DR	90	ARG
39	DR	93	PHE
40	DS	4	ILE
40	DS	6	LYS
40	DS	23	LEU
40	DS	31	GLN
40	DS	33	LEU
40	DS	35	ILE
40	DS	39	THR
40	DS	46	LEU
40	DS	47	VAL
40	DS	65	ASP
40	DS	66	ILE
40	DS	68	ASP
40	DS	70	LYS
40	DS	72	THR
40	DS	76	VAL
40	DS	77	ASP
40	DS	84	ARG
40	DS	85	ILE
40	DS	86	MET
40	DS	88	ARG
40	DS	108	SER
41	DT	9	LYS
41	DT	12	ARG
41	DT	18	GLU
41	DT	39	THR
41	DT	54	GLU
42	DU	13	LEU
42	DU	20	LYS
42	DU	21	ARG
42	DU	40	LEU
42	DU	41	VAL
42	DU	42	LYS
42	DU	45	GLN
42	DU	71	ILE
42	DU	85	ARG

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Mol	Chain	Res	Type
42	DU	94	PHE
42	DU	95	PHE
43	DV	26	PHE
43	DV	40	ILE
43	DV	41	GLU
43	DV	45	ASP
43	DV	51	GLN
43	DV	57	TYR
43	DV	61	LEU
43	DV	65	VAL
43	DV	70	ILE
43	DV	73	LYS
43	DV	76	ASP
43	DV	90	ASP
44	DW	18	LYS
44	DW	20	LEU
44	DW	22	VAL
44	DW	23	LYS
44	DW	30	VAL
44	DW	40	ARG
44	DW	44	PHE
44	DW	58	LEU
44	DW	67	LYS
44	DW	68	PHE
44	DW	76	ARG
44	DW	77	LYS
44	DW	80	SER
44	DW	81	ILE
45	DX	5	GLN
45	DX	6	VAL
45	DX	26	ARG
45	DX	29	LEU
45	DX	31	ASN
45	DX	44	ARG
45	DX	47	THR
45	DX	53	LYS
45	DX	57	VAL
45	DX	63	ILE
45	DX	73	ARG
45	DX	77	TYR
46	DY	1	MET
46	DY	4	LYS

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Mol	Chain	Res	Type
46	DY	28	LEU
46	DY	43	LEU
47	DZ	15	ARG
47	DZ	16	LEU
47	DZ	19	HIS
47	DZ	24	LEU
47	DZ	28	LEU
47	DZ	29	ARG
47	DZ	30	ARG
47	DZ	34	THR
47	DZ	53	MET
47	DZ	54	VAL
48	D0	5	ASN
48	D0	9	ARG
48	D0	22	THR
48	D0	27	LEU
48	D0	35	GLU
48	D0	41	HIS
48	D0	45	ASP
48	D0	48	TYR
48	D0	49	ARG
49	D1	10	LEU
49	D1	20	TYR
49	D1	35	LEU
49	D1	44	GLN
49	D1	45	HIS
49	D1	47	ILE
49	D1	50	GLU
50	D2	5	PHE
50	D2	8	SER
50	D2	26	ASN
50	D2	33	ARG
50	D2	46	LYS
51	D3	12	ARG
51	D3	14	LYS
51	D3	27	ASN
51	D3	29	ARG
51	D3	30	HIS
51	D3	33	THR
51	D3	34	LYS
51	D3	41	ARG
51	D3	46	LYS

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Mol	Chain	Res	Type
51	D3	48	MET
51	D3	49	VAL
51	D3	51	LYS
51	D3	56	LEU
51	D3	61	LEU
52	D4	2	LYS
52	D4	9	LYS
52	D4	15	LYS
52	D4	17	VAL

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (360) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	57	ASN
2	AB	102	ASN
2	AB	108	GLN
2	AB	119	GLN
2	AB	169	HIS
2	AB	176	ASN
3	AC	5	HIS
3	AC	24	ASN
3	AC	68	HIS
3	AC	138	GLN
3	AC	139	ASN
3	AC	184	ASN
4	AD	53	GLN
4	AD	58	GLN
4	AD	73	ASN
4	AD	84	ASN
4	AD	163	GLN
5	AE	11	GLN
5	AE	42	ASN
5	AE	72	ASN
5	AE	76	ASN
5	AE	77	ASN
5	AE	81	GLN
5	AE	88	HIS
5	AE	96	GLN
5	AE	121	ASN
6	AF	11	HIS
6	AF	46	GLN
6	AF	68	GLN

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Mol	Chain	Res	Type
7	AG	85	GLN
7	AG	121	ASN
8	AH	3	GLN
8	AH	15	ASN
8	AH	17	GLN
8	AH	20	ASN
8	AH	117	GLN
9	AI	4	GLN
9	AI	74	GLN
9	AI	80	HIS
9	AI	125	GLN
10	AJ	20	GLN
10	AJ	35	GLN
10	AJ	56	HIS
10	AJ	99	GLN
11	AK	21	HIS
11	AK	108	ASN
11	AK	118	ASN
12	AL	4	ASN
12	AL	45	ASN
12	AL	58	ASN
13	AM	7	ASN
13	AM	90	HIS
14	AN	34	ASN
14	AN	42	ASN
14	AN	61	ASN
15	AO	19	ASN
15	AO	36	ASN
15	AO	45	HIS
15	AO	61	GLN
16	AP	9	HIS
16	AP	18	GLN
16	AP	26	ASN
16	AP	29	ASN
16	AP	59	HIS
16	AP	63	GLN
17	AQ	8	GLN
17	AQ	44	HIS
17	AQ	46	HIS
17	AQ	49	ASN
18	AR	53	GLN
19	AS	13	HIS

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Mol	Chain	Res	Type
19	AS	42	ASN
19	AS	55	GLN
20	AT	47	GLN
20	AT	54	GLN
20	AT	60	GLN
20	AT	74	HIS
20	AT	77	ASN
21	AU	8	ASN
24	BC	14	HIS
24	BC	20	ASN
24	BC	59	GLN
24	BC	89	ASN
24	BC	114	GLN
24	BC	141	HIS
24	BC	142	ASN
24	BC	152	GLN
24	BC	199	HIS
24	BC	229	HIS
24	BC	238	ASN
24	BC	242	HIS
24	BC	250	GLN
25	BD	32	ASN
25	BD	42	ASN
25	BD	49	GLN
25	BD	126	ASN
25	BD	130	GLN
25	BD	150	GLN
26	BE	24	ASN
26	BE	29	HIS
26	BE	30	GLN
26	BE	41	GLN
26	BE	46	GLN
26	BE	62	GLN
26	BE	97	ASN
26	BE	136	GLN
27	BF	4	HIS
27	BF	22	ASN
27	BF	26	GLN
27	BF	134	GLN
28	BG	72	ASN
28	BG	100	ASN
28	BG	103	ASN

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Mol	Chain	Res	Type
29	BH	18	GLN
29	BH	20	ASN
29	BH	33	GLN
29	BH	43	ASN
29	BH	145	ASN
30	BI	5	GLN
30	BI	30	GLN
30	BI	110	GLN
31	BJ	40	HIS
31	BJ	58	ASN
31	BJ	76	HIS
31	BJ	77	HIS
31	BJ	130	HIS
32	BK	3	GLN
32	BK	5	GLN
32	BK	88	ASN
32	BK	89	ASN
33	BL	4	ASN
33	BL	54	GLN
33	BL	93	ASN
33	BL	104	GLN
34	BM	3	GLN
34	BM	88	ASN
35	BN	9	GLN
35	BN	11	ASN
35	BN	18	GLN
35	BN	62	ASN
35	BN	73	ASN
35	BN	107	ASN
36	BO	19	GLN
36	BO	34	HIS
36	BO	38	GLN
36	BO	98	GLN
36	BO	116	GLN
37	BP	9	GLN
37	BP	11	GLN
37	BP	40	GLN
37	BP	65	ASN
37	BP	74	GLN
38	BQ	43	GLN
38	BQ	51	GLN
38	BQ	55	GLN

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Mol	Chain	Res	Type
38	BQ	65	ASN
39	BR	18	GLN
39	BR	43	ASN
40	BS	15	GLN
40	BS	40	ASN
40	BS	57	ASN
40	BS	61	ASN
41	BT	48	GLN
41	BT	72	GLN
41	BT	91	GLN
42	BU	52	ASN
42	BU	65	GLN
42	BU	73	ASN
43	BV	5	ASN
43	BV	44	HIS
43	BV	80	HIS
43	BV	88	HIS
44	BW	39	GLN
45	BX	5	GLN
45	BX	22	ASN
46	BY	15	ASN
46	BY	20	ASN
46	BY	27	ASN
46	BY	41	HIS
46	BY	58	ASN
48	B0	3	GLN
48	B0	4	GLN
48	B0	41	HIS
50	B2	6	GLN
50	B2	13	ASN
50	B2	16	HIS
51	B3	27	ASN
51	B3	30	HIS
52	B4	13	ASN
52	B4	35	GLN
52	B4	37	GLN
2	CB	18	GLN
2	CB	38	HIS
2	CB	119	GLN
2	CB	145	ASN
2	CB	167	HIS
2	CB	176	ASN

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Mol	Chain	Res	Type
2	CB	177	ASN
3	CC	2	GLN
3	CC	18	ASN
3	CC	31	ASN
3	CC	139	ASN
3	CC	184	ASN
4	CD	40	HIS
4	CD	70	GLN
4	CD	73	ASN
4	CD	84	ASN
4	CD	115	GLN
4	CD	119	HIS
4	CD	125	ASN
4	CD	163	GLN
5	CE	11	GLN
5	CE	60	GLN
5	CE	76	ASN
5	CE	77	ASN
5	CE	121	ASN
5	CE	131	ASN
6	CF	11	HIS
6	CF	14	GLN
6	CF	17	GLN
6	CF	37	HIS
6	CF	58	HIS
6	CF	81	ASN
7	CG	67	ASN
7	CG	85	GLN
8	CH	17	GLN
8	CH	37	ASN
9	CI	3	ASN
9	CI	4	GLN
9	CI	49	GLN
9	CI	74	GLN
9	CI	109	GLN
9	CI	125	GLN
10	CJ	15	HIS
10	CJ	35	GLN
10	CJ	70	HIS
11	CK	21	HIS
11	CK	27	ASN
11	CK	39	ASN

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Mol	Chain	Res	Type
12	CL	5	GLN
12	CL	19	ASN
12	CL	72	ASN
12	CL	74	GLN
12	CL	111	GLN
13	CM	90	HIS
13	CM	104	ASN
14	CN	65	GLN
15	CO	27	GLN
16	CP	18	GLN
16	CP	26	ASN
16	CP	59	HIS
16	CP	63	GLN
17	CQ	49	ASN
18	CR	30	ASN
19	CS	13	HIS
19	CS	51	HIS
19	CS	52	ASN
19	CS	56	HIS
20	CT	12	GLN
20	CT	51	ASN
20	CT	60	GLN
20	CT	69	ASN
20	CT	74	HIS
24	DC	14	HIS
24	DC	20	ASN
24	DC	57	HIS
24	DC	85	ASN
24	DC	116	GLN
24	DC	141	HIS
24	DC	152	GLN
24	DC	196	ASN
25	DD	36	GLN
25	DD	49	GLN
25	DD	67	HIS
25	DD	136	ASN
25	DD	140	HIS
25	DD	150	GLN
25	DD	173	GLN
26	DE	29	HIS
26	DE	30	GLN
27	DF	126	ASN

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Mol	Chain	Res	Type
28	DG	19	ASN
28	DG	37	ASN
28	DG	138	GLN
28	DG	142	GLN
29	DH	2	GLN
29	DH	66	ASN
30	DI	93	ASN
30	DI	106	GLN
31	DJ	40	HIS
31	DJ	77	HIS
31	DJ	136	GLN
31	DJ	138	GLN
32	DK	3	GLN
32	DK	9	ASN
32	DK	13	ASN
32	DK	89	ASN
33	DL	4	ASN
33	DL	54	GLN
34	DM	13	HIS
35	DN	3	HIS
35	DN	11	ASN
35	DN	16	HIS
35	DN	23	ASN
35	DN	73	ASN
36	DO	29	HIS
36	DO	34	HIS
36	DO	38	GLN
37	DP	2	ASN
37	DP	6	GLN
37	DP	9	GLN
37	DP	11	GLN
37	DP	65	ASN
37	DP	74	GLN
38	DQ	19	GLN
38	DQ	43	GLN
38	DQ	70	GLN
38	DQ	71	ASN
38	DQ	80	ASN
39	DR	6	GLN
39	DR	43	ASN
39	DR	82	HIS
39	DR	86	GLN

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Mol	Chain	Res	Type
39	DR	87	GLN
39	DR	91	GLN
40	DS	31	GLN
40	DS	57	ASN
41	DT	15	HIS
41	DT	48	GLN
41	DT	70	HIS
41	DT	91	GLN
41	DT	92	ASN
42	DU	39	ASN
42	DU	45	GLN
42	DU	52	ASN
42	DU	53	GLN
42	DU	68	ASN
43	DV	24	ASN
43	DV	51	GLN
43	DV	80	HIS
43	DV	88	HIS
44	DW	56	HIS
45	DX	15	ASN
45	DX	22	ASN
45	DX	31	ASN
45	DX	35	HIS
46	DY	15	ASN
46	DY	20	ASN
46	DY	41	HIS
47	DZ	19	HIS
48	D0	3	GLN
48	D0	5	ASN
48	D0	41	HIS
49	D1	44	GLN
50	D2	6	GLN
50	D2	26	ASN
50	D2	29	GLN
51	D3	30	HIS
51	D3	42	HIS
52	D4	37	GLN

### 5.3.3 RNA ⓘ

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1532/1533 (99%)	518 (33%)	236 (15%)
1	CA	1529/1533 (99%)	572 (37%)	242 (15%)
22	BA	2850/2904 (98%)	913 (32%)	429 (15%)
22	DA	2839/2904 (97%)	1105 (38%)	498 (17%)
23	BB	117/118 (99%)	34 (29%)	17 (14%)
23	DB	116/118 (98%)	44 (37%)	16 (13%)
All	All	8983/9110 (98%)	3186 (35%)	1438 (16%)

All (3186) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	5	U
1	AA	6	G
1	AA	7	A
1	AA	8	A
1	AA	9	G
1	AA	13	U
1	AA	14	U
1	AA	22	G
1	AA	31	G
1	AA	32	A
1	AA	33	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	55	A
1	AA	61	G
1	AA	63	C
1	AA	65	A
1	AA	66	A
1	AA	67	C
1	AA	70	U
1	AA	71	A
1	AA	72	A
1	AA	73	C
1	AA	74	A
1	AA	75	G
1	AA	76	G
1	AA	77	A

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Mol	Chain	Res	Type
1	AA	79	G
1	AA	82	G
1	AA	83	C
1	AA	85	U
1	AA	86	G
1	AA	87	C
1	AA	88	U
1	AA	89	U
1	AA	90	C
1	AA	91	U
1	AA	92	U
1	AA	93	U
1	AA	94	G
1	AA	95	C
1	AA	97	G
1	AA	98	A
1	AA	109	A
1	AA	110	C
1	AA	111	G
1	AA	116	A
1	AA	117	G
1	AA	120	A
1	AA	121	U
1	AA	122	G
1	AA	127	G
1	AA	129	A
1	AA	130	A
1	AA	131	A
1	AA	132	C
1	AA	140	U
1	AA	141	G
1	AA	142	G
1	AA	143	A
1	AA	151	A
1	AA	159	G
1	AA	163	C
1	AA	164	G
1	AA	166	U
1	AA	174	A
1	AA	175	C
1	AA	181	A
1	AA	182	A

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Mol	Chain	Res	Type
1	AA	183	C
1	AA	185	U
1	AA	186	C
1	AA	197	A
1	AA	198	G
1	AA	199	A
1	AA	200	G
1	AA	202	G
1	AA	205	A
1	AA	208	U
1	AA	209	U
1	AA	210	C
1	AA	211	G
1	AA	212	G
1	AA	214	C
1	AA	243	A
1	AA	244	U
1	AA	245	U
1	AA	247	G
1	AA	250	A
1	AA	251	G
1	AA	252	U
1	AA	253	A
1	AA	258	G
1	AA	266	G
1	AA	267	C
1	AA	268	U
1	AA	274	A
1	AA	275	G
1	AA	276	G
1	AA	279	A
1	AA	280	C
1	AA	285	C
1	AA	289	G
1	AA	305	G
1	AA	306	A
1	AA	307	C
1	AA	315	A
1	AA	316	C
1	AA	328	C
1	AA	329	A
1	AA	330	C

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Mol	Chain	Res	Type
1	AA	331	G
1	AA	332	G
1	AA	344	A
1	AA	345	C
1	AA	346	G
1	AA	347	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	365	U
1	AA	366	A
1	AA	367	U
1	AA	368	U
1	AA	369	G
1	AA	373	A
1	AA	374	A
1	AA	382	A
1	AA	384	G
1	AA	385	C
1	AA	388	G
1	AA	389	A
1	AA	390	U
1	AA	392	C
1	AA	398	U
1	AA	401	C
1	AA	406	G
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	415	A
1	AA	421	U
1	AA	422	C
1	AA	423	G
1	AA	424	G
1	AA	428	G
1	AA	429	U
1	AA	430	A
1	AA	431	A
1	AA	439	U
1	AA	440	C
1	AA	451	A

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Mol	Chain	Res	Type
1	AA	452	A
1	AA	453	G
1	AA	456	A
1	AA	458	U
1	AA	459	A
1	AA	461	A
1	AA	462	G
1	AA	463	U
1	AA	464	U
1	AA	466	A
1	AA	467	U
1	AA	468	A
1	AA	469	C
1	AA	470	C
1	AA	476	U
1	AA	478	A
1	AA	481	G
1	AA	482	A
1	AA	484	G
1	AA	485	U
1	AA	486	U
1	AA	487	A
1	AA	488	C
1	AA	489	C
1	AA	490	C
1	AA	496	A
1	AA	497	G
1	AA	498	A
1	AA	499	A
1	AA	500	G
1	AA	501	C
1	AA	508	U
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	512	U
1	AA	513	C
1	AA	514	C
1	AA	517	G
1	AA	518	C
1	AA	519	C
1	AA	520	A

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Mol	Chain	Res	Type
1	AA	522	C
1	AA	527	G
1	AA	532	A
1	AA	534	U
1	AA	535	A
1	AA	536	C
1	AA	537	G
1	AA	546	A
1	AA	548	G
1	AA	549	C
1	AA	550	G
1	AA	552	U
1	AA	556	C
1	AA	557	G
1	AA	559	A
1	AA	560	A
1	AA	562	U
1	AA	563	A
1	AA	564	C
1	AA	566	G
1	AA	567	G
1	AA	570	G
1	AA	572	A
1	AA	573	A
1	AA	575	G
1	AA	576	C
1	AA	577	G
1	AA	588	G
1	AA	595	A
1	AA	596	A
1	AA	597	G
1	AA	615	G
1	AA	620	C
1	AA	642	A
1	AA	643	C
1	AA	652	U
1	AA	653	U
1	AA	654	G
1	AA	655	A
1	AA	663	A
1	AA	665	A
1	AA	682	G

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Mol	Chain	Res	Type
1	AA	688	G
1	AA	689	C
1	AA	695	A
1	AA	701	U
1	AA	702	A
1	AA	703	G
1	AA	704	A
1	AA	705	G
1	AA	717	U
1	AA	718	A
1	AA	719	C
1	AA	721	G
1	AA	722	G
1	AA	723	U
1	AA	731	G
1	AA	748	G
1	AA	752	G
1	AA	753	A
1	AA	754	C
1	AA	755	G
1	AA	777	A
1	AA	782	A
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	795	C
1	AA	809	G
1	AA	813	U
1	AA	814	A
1	AA	815	A
1	AA	816	A
1	AA	817	C
1	AA	818	G
1	AA	828	U
1	AA	829	G
1	AA	832	G
1	AA	841	C
1	AA	843	U
1	AA	845	A
1	AA	846	G
1	AA	849	G
1	AA	859	G

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Mol	Chain	Res	Type
1	AA	871	U
1	AA	874	G
1	AA	875	U
1	AA	885	G
1	AA	889	A
1	AA	890	G
1	AA	910	C
1	AA	913	A
1	AA	914	A
1	AA	915	A
1	AA	920	U
1	AA	926	G
1	AA	927	G
1	AA	932	C
1	AA	934	C
1	AA	935	A
1	AA	936	C
1	AA	942	G
1	AA	960	U
1	AA	961	U
1	AA	962	C
1	AA	966	G
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	972	C
1	AA	973	G
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	978	A
1	AA	979	C
1	AA	982	U
1	AA	983	A
1	AA	984	C
1	AA	985	C
1	AA	989	U
1	AA	992	U
1	AA	993	G
1	AA	994	A
1	AA	995	C

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Mol	Chain	Res	Type
1	AA	1003	G
1	AA	1004	A
1	AA	1008	U
1	AA	1018	G
1	AA	1022	A
1	AA	1026	G
1	AA	1028	C
1	AA	1030	U
1	AA	1031	C
1	AA	1032	G
1	AA	1033	G
1	AA	1034	G
1	AA	1037	C
1	AA	1050	G
1	AA	1051	C
1	AA	1053	G
1	AA	1054	C
1	AA	1055	A
1	AA	1064	G
1	AA	1065	U
1	AA	1066	C
1	AA	1068	G
1	AA	1069	C
1	AA	1070	U
1	AA	1078	U
1	AA	1079	G
1	AA	1085	U
1	AA	1086	U
1	AA	1088	G
1	AA	1089	G
1	AA	1090	U
1	AA	1091	U
1	AA	1092	A
1	AA	1094	G
1	AA	1095	U
1	AA	1096	C
1	AA	1101	A
1	AA	1102	A
1	AA	1103	C
1	AA	1104	G
1	AA	1113	C
1	AA	1124	G

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Mol	Chain	Res	Type
1	AA	1125	U
1	AA	1126	U
1	AA	1127	G
1	AA	1128	C
1	AA	1129	C
1	AA	1130	A
1	AA	1131	G
1	AA	1133	G
1	AA	1135	U
1	AA	1137	C
1	AA	1138	G
1	AA	1140	C
1	AA	1141	C
1	AA	1142	G
1	AA	1143	G
1	AA	1144	G
1	AA	1145	A
1	AA	1151	A
1	AA	1152	A
1	AA	1153	G
1	AA	1154	G
1	AA	1158	C
1	AA	1159	U
1	AA	1160	G
1	AA	1161	C
1	AA	1162	C
1	AA	1163	A
1	AA	1167	A
1	AA	1168	U
1	AA	1169	A
1	AA	1170	A
1	AA	1178	G
1	AA	1181	G
1	AA	1182	G
1	AA	1183	U
1	AA	1184	G
1	AA	1185	G
1	AA	1190	G
1	AA	1191	A
1	AA	1192	C
1	AA	1196	A
1	AA	1197	A

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Mol	Chain	Res	Type
1	AA	1198	G
1	AA	1200	C
1	AA	1201	A
1	AA	1202	U
1	AA	1203	C
1	AA	1212	U
1	AA	1213	A
1	AA	1215	G
1	AA	1216	A
1	AA	1224	U
1	AA	1225	A
1	AA	1226	C
1	AA	1227	A
1	AA	1228	C
1	AA	1229	A
1	AA	1238	A
1	AA	1239	A
1	AA	1240	U
1	AA	1241	G
1	AA	1242	G
1	AA	1256	A
1	AA	1259	C
1	AA	1260	G
1	AA	1275	A
1	AA	1278	G
1	AA	1279	G
1	AA	1280	A
1	AA	1282	C
1	AA	1283	U
1	AA	1284	C
1	AA	1285	A
1	AA	1286	U
1	AA	1287	A
1	AA	1293	C
1	AA	1299	A
1	AA	1301	U
1	AA	1303	C
1	AA	1304	G
1	AA	1305	G
1	AA	1315	U
1	AA	1316	G
1	AA	1317	C

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Mol	Chain	Res	Type
1	AA	1318	A
1	AA	1319	A
1	AA	1320	C
1	AA	1321	U
1	AA	1322	C
1	AA	1323	G
1	AA	1324	A
1	AA	1325	C
1	AA	1332	A
1	AA	1333	A
1	AA	1337	G
1	AA	1338	G
1	AA	1346	A
1	AA	1348	U
1	AA	1349	A
1	AA	1353	G
1	AA	1362	A
1	AA	1364	U
1	AA	1365	G
1	AA	1370	G
1	AA	1379	G
1	AA	1380	U
1	AA	1381	U
1	AA	1382	C
1	AA	1394	A
1	AA	1395	C
1	AA	1396	A
1	AA	1397	C
1	AA	1398	A
1	AA	1399	C
1	AA	1400	C
1	AA	1402	C
1	AA	1411	C
1	AA	1414	U
1	AA	1432	G
1	AA	1433	A
1	AA	1441	A
1	AA	1446	A
1	AA	1448	C
1	AA	1449	C
1	AA	1451	U
1	AA	1452	C

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Mol	Chain	Res	Type
1	AA	1453	G
1	AA	1454	G
1	AA	1455	G
1	AA	1469	C
1	AA	1470	U
1	AA	1491	G
1	AA	1492	A
1	AA	1494	G
1	AA	1497	G
1	AA	1498	U
1	AA	1499	A
1	AA	1502	A
1	AA	1503	A
1	AA	1505	G
1	AA	1506	U
1	AA	1507	A
1	AA	1508	A
1	AA	1509	C
1	AA	1517	G
1	AA	1522	U
1	AA	1526	G
1	AA	1528	U
1	AA	1529	G
1	AA	1530	G
1	AA	1531	A
1	AA	1532	U
22	BA	10	A
22	BA	13	A
22	BA	14	A
22	BA	15	G
22	BA	23	G
22	BA	27	G
22	BA	28	A
22	BA	31	C
22	BA	34	U
22	BA	35	G
22	BA	36	G
22	BA	39	G
22	BA	42	A
22	BA	43	G
22	BA	45	G
22	BA	46	G

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Mol	Chain	Res	Type
22	BA	49	A
22	BA	50	U
22	BA	52	A
22	BA	53	A
22	BA	58	G
22	BA	61	C
22	BA	63	A
22	BA	64	A
22	BA	70	G
22	BA	71	A
22	BA	74	A
22	BA	75	G
22	BA	76	C
22	BA	78	U
22	BA	82	U
22	BA	84	A
22	BA	85	G
22	BA	86	G
22	BA	92	U
22	BA	93	G
22	BA	101	A
22	BA	118	A
22	BA	119	A
22	BA	120	U
22	BA	121	G
22	BA	126	A
22	BA	127	A
22	BA	128	C
22	BA	131	A
22	BA	134	G
22	BA	137	U
22	BA	138	U
22	BA	139	U
22	BA	140	C
22	BA	141	G
22	BA	142	A
22	BA	143	C
22	BA	144	A
22	BA	145	C
22	BA	147	C
22	BA	162	U
22	BA	163	C

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Mol	Chain	Res	Type
22	BA	164	C
22	BA	165	A
22	BA	166	U
22	BA	196	A
22	BA	197	A
22	BA	198	C
22	BA	199	A
22	BA	200	U
22	BA	204	A
22	BA	205	G
22	BA	206	U
22	BA	207	A
22	BA	214	G
22	BA	216	A
22	BA	221	A
22	BA	222	A
22	BA	223	A
22	BA	224	U
22	BA	225	C
22	BA	226	A
22	BA	227	A
22	BA	228	C
22	BA	230	G
22	BA	231	A
22	BA	232	G
22	BA	233	A
22	BA	239	C
22	BA	241	A
22	BA	242	G
22	BA	243	U
22	BA	244	A
22	BA	248	G
22	BA	249	C
22	BA	250	G
22	BA	255	A
22	BA	265	A
22	BA	266	G
22	BA	267	C
22	BA	268	C
22	BA	271	G
22	BA	272	A
22	BA	273	G

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Mol	Chain	Res	Type
22	BA	274	C
22	BA	276	U
22	BA	279	A
22	BA	281	C
22	BA	285	G
22	BA	291	G
22	BA	299	A
22	BA	301	G
22	BA	302	C
22	BA	303	G
22	BA	306	U
22	BA	310	A
22	BA	312	G
22	BA	313	G
22	BA	322	A
22	BA	329	G
22	BA	330	A
22	BA	331	C
22	BA	341	C
22	BA	346	A
22	BA	347	A
22	BA	349	U
22	BA	353	C
22	BA	359	G
22	BA	361	G
22	BA	369	U
22	BA	370	G
22	BA	371	A
22	BA	372	G
22	BA	373	U
22	BA	375	G
22	BA	383	C
22	BA	386	G
22	BA	387	U
22	BA	388	G
22	BA	389	G
22	BA	391	A
22	BA	396	G
22	BA	399	U
22	BA	404	A
22	BA	405	U
22	BA	406	G

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Mol	Chain	Res	Type
22	BA	411	G
22	BA	412	A
22	BA	413	C
22	BA	422	A
22	BA	423	A
22	BA	424	G
22	BA	425	G
22	BA	435	C
22	BA	439	A
22	BA	440	C
22	BA	443	A
22	BA	446	G
22	BA	447	A
22	BA	452	G
22	BA	454	A
22	BA	455	C
22	BA	457	A
22	BA	459	U
22	BA	460	A
22	BA	474	G
22	BA	475	C
22	BA	476	G
22	BA	479	A
22	BA	480	A
22	BA	481	G
22	BA	482	A
22	BA	489	G
22	BA	490	C
22	BA	491	G
22	BA	492	A
22	BA	504	A
22	BA	505	A
22	BA	507	A
22	BA	508	A
22	BA	509	C
22	BA	510	C
22	BA	512	G
22	BA	513	A
22	BA	514	A
22	BA	522	A
22	BA	528	A
22	BA	529	A

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Mol	Chain	Res	Type
22	BA	530	G
22	BA	531	C
22	BA	532	A
22	BA	533	G
22	BA	538	A
22	BA	544	C
22	BA	546	U
22	BA	547	A
22	BA	548	G
22	BA	549	G
22	BA	550	C
22	BA	555	G
22	BA	556	A
22	BA	563	A
22	BA	571	U
22	BA	572	A
22	BA	573	U
22	BA	574	A
22	BA	575	A
22	BA	581	C
22	BA	582	A
22	BA	586	A
22	BA	587	C
22	BA	588	U
22	BA	604	G
22	BA	605	G
22	BA	613	A
22	BA	614	A
22	BA	615	U
22	BA	621	A
22	BA	626	A
22	BA	627	A
22	BA	628	G
22	BA	631	A
22	BA	637	A
22	BA	638	G
22	BA	641	U
22	BA	645	C
22	BA	646	U
22	BA	647	G
22	BA	648	G
22	BA	651	G

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Mol	Chain	Res	Type
22	BA	653	U
22	BA	654	A
22	BA	655	A
22	BA	656	G
22	BA	664	G
22	BA	685	A
22	BA	686	U
22	BA	698	C
22	BA	705	A
22	BA	727	A
22	BA	728	G
22	BA	729	G
22	BA	730	A
22	BA	738	G
22	BA	740	C
22	BA	747	U
22	BA	748	G
22	BA	755	U
22	BA	762	U
22	BA	763	G
22	BA	764	A
22	BA	765	C
22	BA	774	G
22	BA	775	G
22	BA	776	G
22	BA	782	A
22	BA	784	G
22	BA	785	G
22	BA	788	A
22	BA	789	A
22	BA	791	C
22	BA	792	A
22	BA	801	G
22	BA	803	U
22	BA	805	G
22	BA	806	C
22	BA	812	C
22	BA	819	A
22	BA	822	G
22	BA	827	U
22	BA	828	U
22	BA	829	A

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Mol	Chain	Res	Type
22	BA	830	G
22	BA	836	G
22	BA	845	A
22	BA	846	U
22	BA	847	U
22	BA	848	C
22	BA	852	U
22	BA	858	G
22	BA	859	G
22	BA	860	U
22	BA	861	A
22	BA	865	C
22	BA	866	A
22	BA	867	C
22	BA	876	C
22	BA	877	A
22	BA	878	A
22	BA	879	G
22	BA	885	C
22	BA	896	A
22	BA	897	C
22	BA	910	A
22	BA	914	G
22	BA	915	C
22	BA	916	G
22	BA	932	U
22	BA	933	A
22	BA	934	U
22	BA	941	A
22	BA	945	A
22	BA	946	C
22	BA	955	U
22	BA	956	G
22	BA	958	U
22	BA	959	A
22	BA	961	C
22	BA	962	G
22	BA	974	G
22	BA	977	G
22	BA	983	A
22	BA	985	C
22	BA	989	G

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Mol	Chain	Res	Type
22	BA	990	A
22	BA	991	C
22	BA	995	C
22	BA	996	A
22	BA	997	G
22	BA	1009	A
22	BA	1011	G
22	BA	1012	U
22	BA	1013	C
22	BA	1020	A
22	BA	1021	A
22	BA	1022	G
22	BA	1023	U
22	BA	1024	G
22	BA	1025	G
22	BA	1026	G
22	BA	1027	A
22	BA	1033	U
22	BA	1034	G
22	BA	1040	A
22	BA	1044	C
22	BA	1045	C
22	BA	1046	A
22	BA	1047	G
22	BA	1057	A
22	BA	1060	U
22	BA	1061	U
22	BA	1062	G
22	BA	1063	G
22	BA	1064	C
22	BA	1065	U
22	BA	1066	U
22	BA	1070	A
22	BA	1071	G
22	BA	1073	A
22	BA	1074	G
22	BA	1075	C
22	BA	1078	U
22	BA	1080	A
22	BA	1081	U
22	BA	1083	U
22	BA	1084	A

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Mol	Chain	Res	Type
22	BA	1088	A
22	BA	1098	A
22	BA	1111	A
22	BA	1112	G
22	BA	1115	G
22	BA	1120	G
22	BA	1128	G
22	BA	1129	A
22	BA	1130	U
22	BA	1132	U
22	BA	1133	A
22	BA	1135	C
22	BA	1136	G
22	BA	1139	G
22	BA	1142	A
22	BA	1144	A
22	BA	1145	C
22	BA	1151	A
22	BA	1154	G
22	BA	1156	A
22	BA	1157	G
22	BA	1158	C
22	BA	1162	G
22	BA	1172	C
22	BA	1175	A
22	BA	1176	U
22	BA	1180	U
22	BA	1181	U
22	BA	1185	G
22	BA	1186	G
22	BA	1189	A
22	BA	1190	G
22	BA	1204	A
22	BA	1205	A
22	BA	1206	G
22	BA	1210	G
22	BA	1213	A
22	BA	1238	G
22	BA	1247	A
22	BA	1248	G
22	BA	1249	U
22	BA	1250	G

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Mol	Chain	Res	Type
22	BA	1251	C
22	BA	1253	A
22	BA	1254	A
22	BA	1255	U
22	BA	1256	G
22	BA	1262	A
22	BA	1266	G
22	BA	1271	G
22	BA	1272	A
22	BA	1273	U
22	BA	1276	A
22	BA	1284	A
22	BA	1287	A
22	BA	1288	G
22	BA	1289	C
22	BA	1290	C
22	BA	1297	C
22	BA	1300	G
22	BA	1301	A
22	BA	1303	G
22	BA	1319	C
22	BA	1320	C
22	BA	1321	A
22	BA	1324	G
22	BA	1325	U
22	BA	1327	A
22	BA	1328	A
22	BA	1329	U
22	BA	1330	C
22	BA	1336	A
22	BA	1340	U
22	BA	1341	G
22	BA	1343	G
22	BA	1344	U
22	BA	1345	C
22	BA	1349	C
22	BA	1350	C
22	BA	1352	U
22	BA	1356	G
22	BA	1360	G
22	BA	1365	A
22	BA	1368	G

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Mol	Chain	Res	Type
22	BA	1377	G
22	BA	1378	A
22	BA	1379	U
22	BA	1380	G
22	BA	1383	A
22	BA	1386	C
22	BA	1395	A
22	BA	1397	U
22	BA	1398	C
22	BA	1399	C
22	BA	1403	A
22	BA	1407	G
22	BA	1415	U
22	BA	1416	G
22	BA	1417	C
22	BA	1418	G
22	BA	1419	A
22	BA	1420	A
22	BA	1421	G
22	BA	1422	G
22	BA	1425	G
22	BA	1427	A
22	BA	1428	C
22	BA	1429	G
22	BA	1434	A
22	BA	1435	G
22	BA	1436	G
22	BA	1440	U
22	BA	1452	G
22	BA	1453	A
22	BA	1455	G
22	BA	1459	G
22	BA	1460	U
22	BA	1461	C
22	BA	1462	C
22	BA	1463	C
22	BA	1475	G
22	BA	1476	U
22	BA	1477	A
22	BA	1482	G
22	BA	1490	A
22	BA	1491	G

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Mol	Chain	Res	Type
22	BA	1492	G
22	BA	1494	A
22	BA	1495	A
22	BA	1497	U
22	BA	1498	C
22	BA	1499	C
22	BA	1504	A
22	BA	1507	C
22	BA	1509	A
22	BA	1510	G
22	BA	1511	G
22	BA	1512	C
22	BA	1515	A
22	BA	1522	A
22	BA	1523	U
22	BA	1527	G
22	BA	1528	A
22	BA	1533	C
22	BA	1534	U
22	BA	1535	A
22	BA	1536	C
22	BA	1537	G
22	BA	1538	G
22	BA	1540	G
22	BA	1554	U
22	BA	1555	G
22	BA	1558	C
22	BA	1559	U
22	BA	1564	C
22	BA	1566	A
22	BA	1569	A
22	BA	1574	C
22	BA	1578	U
22	BA	1581	G
22	BA	1583	A
22	BA	1584	U
22	BA	1585	C
22	BA	1588	G
22	BA	1603	A
22	BA	1606	C
22	BA	1607	C
22	BA	1608	A

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Mol	Chain	Res	Type
22	BA	1609	A
22	BA	1610	A
22	BA	1613	G
22	BA	1615	C
22	BA	1616	A
22	BA	1627	G
22	BA	1628	G
22	BA	1634	A
22	BA	1635	A
22	BA	1639	C
22	BA	1647	U
22	BA	1648	U
22	BA	1649	G
22	BA	1651	G
22	BA	1652	A
22	BA	1654	A
22	BA	1674	G
22	BA	1675	C
22	BA	1695	G
22	BA	1696	G
22	BA	1698	A
22	BA	1699	G
22	BA	1700	A
22	BA	1701	A
22	BA	1707	G
22	BA	1708	C
22	BA	1713	A
22	BA	1714	U
22	BA	1715	G
22	BA	1716	U
22	BA	1717	A
22	BA	1720	U
22	BA	1729	U
22	BA	1730	C
22	BA	1732	C
22	BA	1733	G
22	BA	1734	G
22	BA	1735	A
22	BA	1736	U
22	BA	1737	G
22	BA	1738	G
22	BA	1739	A

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Mol	Chain	Res	Type
22	BA	1740	G
22	BA	1744	A
22	BA	1754	A
22	BA	1755	A
22	BA	1758	U
22	BA	1759	A
22	BA	1760	C
22	BA	1764	C
22	BA	1769	U
22	BA	1773	A
22	BA	1776	G
22	BA	1782	U
22	BA	1783	A
22	BA	1785	A
22	BA	1786	A
22	BA	1787	A
22	BA	1788	C
22	BA	1791	A
22	BA	1798	U
22	BA	1799	G
22	BA	1800	C
22	BA	1801	A
22	BA	1802	A
22	BA	1807	G
22	BA	1808	A
22	BA	1815	A
22	BA	1816	C
22	BA	1817	G
22	BA	1819	A
22	BA	1821	A
22	BA	1829	A
22	BA	1838	C
22	BA	1839	G
22	BA	1848	A
22	BA	1849	G
22	BA	1857	G
22	BA	1858	A
22	BA	1859	U
22	BA	1866	A
22	BA	1867	G
22	BA	1871	A
22	BA	1872	A

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Mol	Chain	Res	Type
22	BA	1873	G
22	BA	1885	A
22	BA	1886	U
22	BA	1900	A
22	BA	1906	G
22	BA	1907	G
22	BA	1913	A
22	BA	1914	C
22	BA	1918	A
22	BA	1919	A
22	BA	1920	C
22	BA	1926	U
22	BA	1927	A
22	BA	1929	G
22	BA	1930	G
22	BA	1931	U
22	BA	1932	A
22	BA	1935	G
22	BA	1936	A
22	BA	1937	A
22	BA	1938	A
22	BA	1941	C
22	BA	1943	U
22	BA	1944	U
22	BA	1945	G
22	BA	1946	U
22	BA	1955	U
22	BA	1960	A
22	BA	1962	C
22	BA	1963	U
22	BA	1964	G
22	BA	1966	A
22	BA	1967	C
22	BA	1968	G
22	BA	1970	A
22	BA	1971	U
22	BA	1972	G
22	BA	1975	G
22	BA	1979	U
22	BA	1980	G
22	BA	1981	A
22	BA	1986	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	BA	1991	U
22	BA	1993	U
22	BA	1996	C
22	BA	1997	C
22	BA	2011	U
22	BA	2022	U
22	BA	2023	C
22	BA	2030	A
22	BA	2031	A
22	BA	2032	G
22	BA	2033	A
22	BA	2036	C
22	BA	2043	C
22	BA	2049	G
22	BA	2051	A
22	BA	2052	A
22	BA	2055	C
22	BA	2056	G
22	BA	2060	A
22	BA	2061	G
22	BA	2062	A
22	BA	2063	C
22	BA	2064	C
22	BA	2068	U
22	BA	2069	G
22	BA	2072	C
22	BA	2086	U
22	BA	2092	U
22	BA	2093	G
22	BA	2104	C
22	BA	2106	U
22	BA	2107	G
22	BA	2109	U
22	BA	2110	G
22	BA	2134	A
22	BA	2135	A
22	BA	2136	G
22	BA	2137	U
22	BA	2138	G
22	BA	2140	G
22	BA	2143	C
22	BA	2144	G

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Mol	Chain	Res	Type
22	BA	2145	C
22	BA	2147	A
22	BA	2148	G
22	BA	2149	U
22	BA	2150	C
22	BA	2155	U
22	BA	2156	G
22	BA	2180	U
22	BA	2181	U
22	BA	2183	A
22	BA	2184	A
22	BA	2190	G
22	BA	2197	U
22	BA	2198	A
22	BA	2199	A
22	BA	2200	C
22	BA	2203	U
22	BA	2204	G
22	BA	2210	U
22	BA	2211	A
22	BA	2212	A
22	BA	2214	C
22	BA	2215	C
22	BA	2225	A
22	BA	2226	C
22	BA	2230	G
22	BA	2238	G
22	BA	2239	G
22	BA	2243	U
22	BA	2248	C
22	BA	2250	G
22	BA	2258	C
22	BA	2259	U
22	BA	2262	U
22	BA	2267	A
22	BA	2268	A
22	BA	2269	G
22	BA	2273	A
22	BA	2275	C
22	BA	2276	G
22	BA	2278	A
22	BA	2283	C

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Mol	Chain	Res	Type
22	BA	2284	A
22	BA	2286	G
22	BA	2287	A
22	BA	2296	U
22	BA	2297	A
22	BA	2305	U
22	BA	2307	G
22	BA	2308	G
22	BA	2309	A
22	BA	2310	C
22	BA	2312	U
22	BA	2320	U
22	BA	2321	U
22	BA	2322	A
22	BA	2325	G
22	BA	2326	C
22	BA	2327	A
22	BA	2330	G
22	BA	2333	A
22	BA	2334	U
22	BA	2335	A
22	BA	2336	A
22	BA	2337	G
22	BA	2338	C
22	BA	2344	U
22	BA	2345	G
22	BA	2347	C
22	BA	2353	G
22	BA	2358	A
22	BA	2361	G
22	BA	2383	G
22	BA	2385	C
22	BA	2389	G
22	BA	2392	A
22	BA	2402	U
22	BA	2403	C
22	BA	2406	A
22	BA	2407	A
22	BA	2408	U
22	BA	2418	A
22	BA	2423	U
22	BA	2424	C

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Mol	Chain	Res	Type
22	BA	2425	A
22	BA	2426	A
22	BA	2427	C
22	BA	2428	G
22	BA	2429	G
22	BA	2430	A
22	BA	2431	U
22	BA	2432	A
22	BA	2435	A
22	BA	2439	A
22	BA	2440	C
22	BA	2441	U
22	BA	2447	G
22	BA	2448	A
22	BA	2459	A
22	BA	2460	U
22	BA	2468	A
22	BA	2469	A
22	BA	2476	A
22	BA	2477	U
22	BA	2482	A
22	BA	2490	G
22	BA	2491	U
22	BA	2497	A
22	BA	2501	C
22	BA	2502	G
22	BA	2503	A
22	BA	2504	U
22	BA	2505	G
22	BA	2507	C
22	BA	2508	G
22	BA	2515	C
22	BA	2518	A
22	BA	2520	C
22	BA	2525	G
22	BA	2529	G
22	BA	2542	A
22	BA	2547	A
22	BA	2550	G
22	BA	2554	U
22	BA	2566	A
22	BA	2567	G

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Mol	Chain	Res	Type
22	BA	2572	A
22	BA	2573	C
22	BA	2574	G
22	BA	2576	G
22	BA	2580	U
22	BA	2582	G
22	BA	2585	U
22	BA	2586	U
22	BA	2603	G
22	BA	2604	U
22	BA	2609	U
22	BA	2610	C
22	BA	2611	C
22	BA	2613	U
22	BA	2615	U
22	BA	2616	C
22	BA	2621	G
22	BA	2622	U
22	BA	2623	G
22	BA	2629	U
22	BA	2630	G
22	BA	2632	A
22	BA	2638	G
22	BA	2639	A
22	BA	2646	C
22	BA	2652	C
22	BA	2654	A
22	BA	2655	G
22	BA	2656	U
22	BA	2657	A
22	BA	2660	A
22	BA	2662	A
22	BA	2663	G
22	BA	2669	G
22	BA	2672	U
22	BA	2673	G
22	BA	2674	G
22	BA	2680	U
22	BA	2681	C
22	BA	2682	A
22	BA	2689	U
22	BA	2690	U

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Mol	Chain	Res	Type
22	BA	2712	C
22	BA	2713	U
22	BA	2714	G
22	BA	2716	C
22	BA	2724	U
22	BA	2726	A
22	BA	2727	A
22	BA	2729	G
22	BA	2730	C
22	BA	2731	G
22	BA	2732	G
22	BA	2733	A
22	BA	2743	U
22	BA	2748	A
22	BA	2750	A
22	BA	2751	G
22	BA	2756	U
22	BA	2757	A
22	BA	2758	A
22	BA	2765	A
22	BA	2771	C
22	BA	2777	G
22	BA	2778	A
22	BA	2779	U
22	BA	2781	A
22	BA	2791	G
22	BA	2798	U
22	BA	2799	A
22	BA	2800	A
22	BA	2801	G
22	BA	2806	C
22	BA	2808	G
22	BA	2809	A
22	BA	2820	A
22	BA	2821	A
22	BA	2825	G
22	BA	2832	U
22	BA	2833	U
22	BA	2835	A
22	BA	2836	U
22	BA	2848	G
22	BA	2849	U

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Mol	Chain	Res	Type
22	BA	2861	U
22	BA	2862	G
22	BA	2866	U
22	BA	2867	G
22	BA	2873	A
22	BA	2874	C
22	BA	2879	A
22	BA	2880	C
22	BA	2883	A
22	BA	2884	U
22	BA	2886	A
22	BA	2890	G
22	BA	2893	A
22	BA	2894	G
22	BA	2895	G
23	BB	9	G
23	BB	12	C
23	BB	13	G
23	BB	15	A
23	BB	16	G
23	BB	24	G
23	BB	25	U
23	BB	26	C
23	BB	35	C
23	BB	37	C
23	BB	40	U
23	BB	41	G
23	BB	42	C
23	BB	43	C
23	BB	44	G
23	BB	45	A
23	BB	46	A
23	BB	52	A
23	BB	53	A
23	BB	56	G
23	BB	57	A
23	BB	58	A
23	BB	66	A
23	BB	67	G
23	BB	74	U
23	BB	84	G
23	BB	87	U

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Mol	Chain	Res	Type
23	BB	88	C
23	BB	89	U
23	BB	90	C
23	BB	91	C
23	BB	93	C
23	BB	99	A
23	BB	109	A
1	CA	6	G
1	CA	7	A
1	CA	9	G
1	CA	13	U
1	CA	14	U
1	CA	15	G
1	CA	16	A
1	CA	17	U
1	CA	31	G
1	CA	32	A
1	CA	33	A
1	CA	39	G
1	CA	40	C
1	CA	45	G
1	CA	47	C
1	CA	48	C
1	CA	51	A
1	CA	52	C
1	CA	53	A
1	CA	61	G
1	CA	65	A
1	CA	66	A
1	CA	67	C
1	CA	68	G
1	CA	70	U
1	CA	71	A
1	CA	72	A
1	CA	73	C
1	CA	74	A
1	CA	75	G
1	CA	76	G
1	CA	77	A
1	CA	80	A
1	CA	81	A
1	CA	82	G

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Mol	Chain	Res	Type
1	CA	83	C
1	CA	85	U
1	CA	86	G
1	CA	87	C
1	CA	88	U
1	CA	89	U
1	CA	90	C
1	CA	92	U
1	CA	93	U
1	CA	94	G
1	CA	95	C
1	CA	96	U
1	CA	98	A
1	CA	110	C
1	CA	115	G
1	CA	116	A
1	CA	119	A
1	CA	120	A
1	CA	121	U
1	CA	122	G
1	CA	130	A
1	CA	131	A
1	CA	132	C
1	CA	141	G
1	CA	143	A
1	CA	144	G
1	CA	155	A
1	CA	160	A
1	CA	164	G
1	CA	173	U
1	CA	174	A
1	CA	175	C
1	CA	178	C
1	CA	181	A
1	CA	182	A
1	CA	184	G
1	CA	185	U
1	CA	198	G
1	CA	199	A
1	CA	200	G
1	CA	201	G
1	CA	206	C

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Mol	Chain	Res	Type
1	CA	207	C
1	CA	208	U
1	CA	209	U
1	CA	210	C
1	CA	211	G
1	CA	212	G
1	CA	213	G
1	CA	214	C
1	CA	239	U
1	CA	240	G
1	CA	241	G
1	CA	243	A
1	CA	244	U
1	CA	245	U
1	CA	246	A
1	CA	247	G
1	CA	248	C
1	CA	249	U
1	CA	250	A
1	CA	251	G
1	CA	252	U
1	CA	253	A
1	CA	266	G
1	CA	267	C
1	CA	268	U
1	CA	275	G
1	CA	276	G
1	CA	277	C
1	CA	278	G
1	CA	280	C
1	CA	282	A
1	CA	283	U
1	CA	289	G
1	CA	294	U
1	CA	298	A
1	CA	300	A
1	CA	301	G
1	CA	305	G
1	CA	306	A
1	CA	307	C
1	CA	315	A
1	CA	316	C

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Mol	Chain	Res	Type
1	CA	317	U
1	CA	321	A
1	CA	327	A
1	CA	328	C
1	CA	329	A
1	CA	330	C
1	CA	331	G
1	CA	332	G
1	CA	338	A
1	CA	344	A
1	CA	345	C
1	CA	346	G
1	CA	347	G
1	CA	348	G
1	CA	349	A
1	CA	351	G
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	367	U
1	CA	369	G
1	CA	371	A
1	CA	372	C
1	CA	373	A
1	CA	374	A
1	CA	375	U
1	CA	381	C
1	CA	382	A
1	CA	383	A
1	CA	384	G
1	CA	389	A
1	CA	390	U
1	CA	396	C
1	CA	397	A
1	CA	398	U
1	CA	406	G
1	CA	411	A
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	415	A
1	CA	421	U

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Mol	Chain	Res	Type
1	CA	422	C
1	CA	423	G
1	CA	424	G
1	CA	425	G
1	CA	428	G
1	CA	429	U
1	CA	430	A
1	CA	435	A
1	CA	438	U
1	CA	439	U
1	CA	440	C
1	CA	448	A
1	CA	452	A
1	CA	453	G
1	CA	454	G
1	CA	456	A
1	CA	457	G
1	CA	458	U
1	CA	459	A
1	CA	461	A
1	CA	462	G
1	CA	463	U
1	CA	464	U
1	CA	466	A
1	CA	467	U
1	CA	468	A
1	CA	469	C
1	CA	474	G
1	CA	476	U
1	CA	478	A
1	CA	479	U
1	CA	481	G
1	CA	482	A
1	CA	483	C
1	CA	484	G
1	CA	485	U
1	CA	486	U
1	CA	487	A
1	CA	496	A
1	CA	497	G
1	CA	499	A
1	CA	500	G

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Mol	Chain	Res	Type
1	CA	501	C
1	CA	505	G
1	CA	508	U
1	CA	509	A
1	CA	511	C
1	CA	512	U
1	CA	513	C
1	CA	514	C
1	CA	516	U
1	CA	517	G
1	CA	518	C
1	CA	519	C
1	CA	520	A
1	CA	521	G
1	CA	527	G
1	CA	530	G
1	CA	531	U
1	CA	532	A
1	CA	533	A
1	CA	534	U
1	CA	535	A
1	CA	536	C
1	CA	537	G
1	CA	545	C
1	CA	548	G
1	CA	559	A
1	CA	560	A
1	CA	562	U
1	CA	563	A
1	CA	564	C
1	CA	565	U
1	CA	566	G
1	CA	567	G
1	CA	568	G
1	CA	572	A
1	CA	573	A
1	CA	575	G
1	CA	576	C
1	CA	577	G
1	CA	578	C
1	CA	596	A
1	CA	597	G

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Mol	Chain	Res	Type
1	CA	617	G
1	CA	642	A
1	CA	643	C
1	CA	644	U
1	CA	653	U
1	CA	654	G
1	CA	655	A
1	CA	665	A
1	CA	688	G
1	CA	689	C
1	CA	695	A
1	CA	700	G
1	CA	701	U
1	CA	702	A
1	CA	703	G
1	CA	704	A
1	CA	717	U
1	CA	719	C
1	CA	721	G
1	CA	722	G
1	CA	723	U
1	CA	728	A
1	CA	730	G
1	CA	731	G
1	CA	733	G
1	CA	734	G
1	CA	735	C
1	CA	748	G
1	CA	753	A
1	CA	754	C
1	CA	755	G
1	CA	756	C
1	CA	757	U
1	CA	765	G
1	CA	776	G
1	CA	777	A
1	CA	781	A
1	CA	782	A
1	CA	784	A
1	CA	785	G
1	CA	792	A
1	CA	793	U

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Mol	Chain	Res	Type
1	CA	794	A
1	CA	795	C
1	CA	803	G
1	CA	812	G
1	CA	813	U
1	CA	815	A
1	CA	816	A
1	CA	817	C
1	CA	818	G
1	CA	821	G
1	CA	828	U
1	CA	829	G
1	CA	841	C
1	CA	842	U
1	CA	843	U
1	CA	844	G
1	CA	845	A
1	CA	846	G
1	CA	847	G
1	CA	849	G
1	CA	870	U
1	CA	871	U
1	CA	874	G
1	CA	875	U
1	CA	885	G
1	CA	886	G
1	CA	889	A
1	CA	890	G
1	CA	891	U
1	CA	892	A
1	CA	899	C
1	CA	906	A
1	CA	914	A
1	CA	915	A
1	CA	922	G
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	936	C
1	CA	937	A
1	CA	938	A

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Mol	Chain	Res	Type
1	CA	942	G
1	CA	945	G
1	CA	960	U
1	CA	961	U
1	CA	962	C
1	CA	963	G
1	CA	964	A
1	CA	966	G
1	CA	968	A
1	CA	969	A
1	CA	970	C
1	CA	971	G
1	CA	972	C
1	CA	974	A
1	CA	975	A
1	CA	976	G
1	CA	978	A
1	CA	980	C
1	CA	981	U
1	CA	982	U
1	CA	983	A
1	CA	985	C
1	CA	986	U
1	CA	987	G
1	CA	990	C
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	995	C
1	CA	996	A
1	CA	997	U
1	CA	998	C
1	CA	1000	A
1	CA	1004	A
1	CA	1006	G
1	CA	1016	A
1	CA	1019	A
1	CA	1020	G
1	CA	1022	A
1	CA	1026	G
1	CA	1029	U
1	CA	1031	C

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Mol	Chain	Res	Type
1	CA	1032	G
1	CA	1036	A
1	CA	1037	C
1	CA	1049	U
1	CA	1050	G
1	CA	1051	C
1	CA	1052	U
1	CA	1053	G
1	CA	1054	C
1	CA	1055	A
1	CA	1064	G
1	CA	1065	U
1	CA	1066	C
1	CA	1067	A
1	CA	1068	G
1	CA	1085	U
1	CA	1086	U
1	CA	1087	G
1	CA	1088	G
1	CA	1089	G
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1102	A
1	CA	1103	C
1	CA	1113	C
1	CA	1124	G
1	CA	1125	U
1	CA	1127	G
1	CA	1128	C
1	CA	1129	C
1	CA	1130	A
1	CA	1131	G
1	CA	1136	C
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1140	C
1	CA	1141	C
1	CA	1142	G
1	CA	1143	G
1	CA	1144	G

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Mol	Chain	Res	Type
1	CA	1145	A
1	CA	1146	A
1	CA	1147	C
1	CA	1148	U
1	CA	1149	C
1	CA	1151	A
1	CA	1152	A
1	CA	1153	G
1	CA	1158	C
1	CA	1159	U
1	CA	1160	G
1	CA	1161	C
1	CA	1162	C
1	CA	1167	A
1	CA	1168	U
1	CA	1169	A
1	CA	1170	A
1	CA	1176	A
1	CA	1178	G
1	CA	1181	G
1	CA	1183	U
1	CA	1184	G
1	CA	1185	G
1	CA	1190	G
1	CA	1191	A
1	CA	1192	C
1	CA	1193	G
1	CA	1196	A
1	CA	1197	A
1	CA	1198	G
1	CA	1200	C
1	CA	1201	A
1	CA	1202	U
1	CA	1203	C
1	CA	1211	U
1	CA	1212	U
1	CA	1213	A
1	CA	1214	C
1	CA	1215	G
1	CA	1216	A
1	CA	1217	C
1	CA	1218	C

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Mol	Chain	Res	Type
1	CA	1219	A
1	CA	1222	G
1	CA	1224	U
1	CA	1225	A
1	CA	1226	C
1	CA	1227	A
1	CA	1228	C
1	CA	1229	A
1	CA	1230	C
1	CA	1231	G
1	CA	1232	U
1	CA	1238	A
1	CA	1240	U
1	CA	1241	G
1	CA	1243	C
1	CA	1246	A
1	CA	1250	A
1	CA	1251	A
1	CA	1256	A
1	CA	1257	A
1	CA	1258	G
1	CA	1260	G
1	CA	1266	G
1	CA	1273	C
1	CA	1278	G
1	CA	1279	G
1	CA	1280	A
1	CA	1281	C
1	CA	1282	C
1	CA	1283	U
1	CA	1284	C
1	CA	1285	A
1	CA	1286	U
1	CA	1287	A
1	CA	1288	A
1	CA	1289	A
1	CA	1290	G
1	CA	1294	G
1	CA	1295	U
1	CA	1297	G
1	CA	1299	A
1	CA	1300	G

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Mol	Chain	Res	Type
1	CA	1301	U
1	CA	1302	C
1	CA	1303	C
1	CA	1305	G
1	CA	1312	G
1	CA	1316	G
1	CA	1317	C
1	CA	1320	C
1	CA	1322	C
1	CA	1323	G
1	CA	1324	A
1	CA	1332	A
1	CA	1333	A
1	CA	1338	G
1	CA	1346	A
1	CA	1349	A
1	CA	1350	A
1	CA	1359	C
1	CA	1362	A
1	CA	1364	U
1	CA	1365	G
1	CA	1368	A
1	CA	1370	G
1	CA	1378	C
1	CA	1379	G
1	CA	1381	U
1	CA	1382	C
1	CA	1383	C
1	CA	1384	C
1	CA	1395	C
1	CA	1396	A
1	CA	1397	C
1	CA	1398	A
1	CA	1400	C
1	CA	1406	U
1	CA	1411	C
1	CA	1419	G
1	CA	1429	A
1	CA	1431	A
1	CA	1432	G
1	CA	1441	A
1	CA	1442	G

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Mol	Chain	Res	Type
1	CA	1446	A
1	CA	1447	A
1	CA	1448	C
1	CA	1449	C
1	CA	1450	U
1	CA	1451	U
1	CA	1452	C
1	CA	1453	G
1	CA	1454	G
1	CA	1455	G
1	CA	1456	A
1	CA	1491	G
1	CA	1493	A
1	CA	1494	G
1	CA	1495	U
1	CA	1497	G
1	CA	1498	U
1	CA	1499	A
1	CA	1500	A
1	CA	1501	C
1	CA	1502	A
1	CA	1503	A
1	CA	1505	G
1	CA	1507	A
1	CA	1517	G
1	CA	1519	A
1	CA	1520	C
1	CA	1528	U
1	CA	1529	G
1	CA	1530	G
1	CA	1531	A
1	CA	1532	U
1	CA	1534	A
22	DA	13	A
22	DA	14	A
22	DA	15	G
22	DA	16	C
22	DA	26	G
22	DA	27	G
22	DA	29	U
22	DA	30	G
22	DA	34	U

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Mol	Chain	Res	Type
22	DA	35	G
22	DA	36	G
22	DA	37	C
22	DA	39	G
22	DA	46	G
22	DA	49	A
22	DA	50	U
22	DA	52	A
22	DA	53	A
22	DA	61	C
22	DA	62	U
22	DA	64	A
22	DA	70	G
22	DA	71	A
22	DA	74	A
22	DA	75	G
22	DA	76	C
22	DA	77	G
22	DA	78	U
22	DA	79	C
22	DA	83	A
22	DA	84	A
22	DA	85	G
22	DA	86	G
22	DA	87	U
22	DA	88	G
22	DA	91	A
22	DA	92	U
22	DA	93	G
22	DA	94	A
22	DA	96	C
22	DA	100	U
22	DA	101	A
22	DA	102	U
22	DA	104	A
22	DA	105	C
22	DA	110	G
22	DA	118	A
22	DA	119	A
22	DA	120	U
22	DA	121	G
22	DA	122	G

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Mol	Chain	Res	Type
22	DA	123	G
22	DA	126	A
22	DA	128	C
22	DA	129	C
22	DA	130	C
22	DA	134	G
22	DA	139	U
22	DA	140	C
22	DA	141	G
22	DA	142	A
22	DA	144	A
22	DA	145	C
22	DA	155	A
22	DA	156	A
22	DA	160	A
22	DA	162	U
22	DA	163	C
22	DA	164	C
22	DA	165	A
22	DA	166	U
22	DA	177	G
22	DA	180	G
22	DA	181	A
22	DA	196	A
22	DA	197	A
22	DA	198	C
22	DA	199	A
22	DA	200	U
22	DA	201	C
22	DA	204	A
22	DA	205	G
22	DA	206	U
22	DA	207	A
22	DA	208	C
22	DA	216	A
22	DA	217	A
22	DA	218	A
22	DA	222	A
22	DA	223	A
22	DA	224	U
22	DA	227	A
22	DA	228	C

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Mol	Chain	Res	Type
22	DA	229	C
22	DA	230	G
22	DA	231	A
22	DA	232	G
22	DA	233	A
22	DA	234	U
22	DA	235	U
22	DA	241	A
22	DA	242	G
22	DA	243	U
22	DA	244	A
22	DA	245	G
22	DA	248	G
22	DA	249	C
22	DA	250	G
22	DA	251	A
22	DA	255	A
22	DA	256	A
22	DA	264	C
22	DA	265	A
22	DA	266	G
22	DA	271	G
22	DA	272	A
22	DA	273	G
22	DA	274	C
22	DA	275	C
22	DA	277	G
22	DA	278	A
22	DA	281	C
22	DA	284	U
22	DA	285	G
22	DA	294	A
22	DA	295	G
22	DA	299	A
22	DA	301	G
22	DA	302	C
22	DA	303	G
22	DA	304	U
22	DA	305	C
22	DA	311	A
22	DA	312	G
22	DA	313	G

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Mol	Chain	Res	Type
22	DA	314	C
22	DA	322	A
22	DA	323	C
22	DA	324	A
22	DA	325	G
22	DA	329	G
22	DA	330	A
22	DA	334	C
22	DA	335	C
22	DA	336	C
22	DA	337	C
22	DA	343	C
22	DA	349	U
22	DA	351	C
22	DA	353	C
22	DA	354	A
22	DA	362	A
22	DA	367	G
22	DA	371	A
22	DA	372	G
22	DA	374	A
22	DA	375	G
22	DA	376	G
22	DA	383	C
22	DA	385	C
22	DA	386	G
22	DA	387	U
22	DA	388	G
22	DA	391	A
22	DA	392	U
22	DA	393	C
22	DA	395	U
22	DA	396	G
22	DA	397	U
22	DA	398	C
22	DA	399	U
22	DA	401	A
22	DA	404	A
22	DA	405	U
22	DA	406	G
22	DA	407	G
22	DA	411	G

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Mol	Chain	Res	Type
22	DA	412	A
22	DA	413	C
22	DA	421	C
22	DA	424	G
22	DA	430	A
22	DA	436	C
22	DA	443	A
22	DA	444	C
22	DA	445	C
22	DA	446	G
22	DA	447	A
22	DA	450	G
22	DA	451	U
22	DA	455	C
22	DA	456	C
22	DA	457	A
22	DA	459	U
22	DA	460	A
22	DA	461	C
22	DA	462	C
22	DA	475	C
22	DA	476	G
22	DA	477	A
22	DA	478	A
22	DA	479	A
22	DA	480	A
22	DA	481	G
22	DA	485	C
22	DA	488	G
22	DA	490	C
22	DA	491	G
22	DA	492	A
22	DA	493	G
22	DA	498	G
22	DA	502	A
22	DA	504	A
22	DA	505	A
22	DA	507	A
22	DA	509	C
22	DA	510	C
22	DA	511	U
22	DA	512	G

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Mol	Chain	Res	Type
22	DA	528	A
22	DA	529	A
22	DA	530	G
22	DA	531	C
22	DA	532	A
22	DA	533	G
22	DA	534	U
22	DA	535	G
22	DA	544	C
22	DA	545	U
22	DA	546	U
22	DA	547	A
22	DA	548	G
22	DA	549	G
22	DA	554	U
22	DA	562	U
22	DA	563	A
22	DA	567	U
22	DA	571	U
22	DA	572	A
22	DA	573	U
22	DA	574	A
22	DA	575	A
22	DA	576	U
22	DA	586	A
22	DA	588	U
22	DA	589	U
22	DA	590	A
22	DA	603	A
22	DA	604	G
22	DA	605	G
22	DA	606	U
22	DA	608	A
22	DA	610	C
22	DA	613	A
22	DA	614	A
22	DA	615	U
22	DA	616	A
22	DA	617	G
22	DA	618	G
22	DA	619	G
22	DA	621	A

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Mol	Chain	Res	Type
22	DA	622	G
22	DA	623	C
22	DA	627	A
22	DA	628	G
22	DA	629	G
22	DA	637	A
22	DA	638	G
22	DA	639	U
22	DA	645	C
22	DA	646	U
22	DA	653	U
22	DA	654	A
22	DA	655	A
22	DA	656	G
22	DA	657	U
22	DA	663	G
22	DA	668	A
22	DA	669	G
22	DA	671	C
22	DA	672	C
22	DA	686	U
22	DA	687	C
22	DA	688	U
22	DA	699	A
22	DA	705	A
22	DA	717	C
22	DA	726	G
22	DA	727	A
22	DA	728	G
22	DA	729	G
22	DA	730	A
22	DA	739	A
22	DA	740	C
22	DA	741	U
22	DA	747	U
22	DA	749	A
22	DA	751	A
22	DA	753	A
22	DA	763	G
22	DA	764	A
22	DA	765	C
22	DA	766	U

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Mol	Chain	Res	Type
22	DA	775	G
22	DA	776	G
22	DA	777	G
22	DA	778	G
22	DA	779	U
22	DA	781	A
22	DA	782	A
22	DA	783	A
22	DA	784	G
22	DA	785	G
22	DA	789	A
22	DA	790	U
22	DA	791	C
22	DA	792	A
22	DA	793	A
22	DA	794	A
22	DA	798	G
22	DA	800	A
22	DA	801	G
22	DA	802	A
22	DA	803	U
22	DA	805	G
22	DA	806	C
22	DA	807	U
22	DA	812	C
22	DA	819	A
22	DA	827	U
22	DA	828	U
22	DA	829	A
22	DA	830	G
22	DA	831	G
22	DA	832	U
22	DA	846	U
22	DA	847	U
22	DA	857	G
22	DA	858	G
22	DA	859	G
22	DA	860	U
22	DA	861	A
22	DA	862	G
22	DA	866	A
22	DA	867	C

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Mol	Chain	Res	Type
22	DA	868	U
22	DA	869	G
22	DA	875	G
22	DA	877	A
22	DA	878	A
22	DA	902	C
22	DA	903	C
22	DA	910	A
22	DA	912	C
22	DA	914	G
22	DA	915	C
22	DA	916	G
22	DA	917	A
22	DA	918	A
22	DA	922	C
22	DA	932	U
22	DA	933	A
22	DA	934	U
22	DA	935	C
22	DA	941	A
22	DA	944	C
22	DA	946	C
22	DA	947	A
22	DA	958	U
22	DA	959	A
22	DA	960	A
22	DA	961	C
22	DA	962	G
22	DA	963	U
22	DA	973	A
22	DA	974	G
22	DA	975	A
22	DA	976	G
22	DA	977	G
22	DA	982	C
22	DA	983	A
22	DA	984	A
22	DA	985	C
22	DA	989	G
22	DA	990	A
22	DA	991	C
22	DA	992	C

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Mol	Chain	Res	Type
22	DA	995	C
22	DA	996	A
22	DA	1008	A
22	DA	1009	A
22	DA	1010	A
22	DA	1011	G
22	DA	1012	U
22	DA	1013	C
22	DA	1020	A
22	DA	1021	A
22	DA	1022	G
22	DA	1023	U
22	DA	1024	G
22	DA	1025	G
22	DA	1026	G
22	DA	1027	A
22	DA	1028	A
22	DA	1033	U
22	DA	1034	G
22	DA	1035	U
22	DA	1044	C
22	DA	1045	C
22	DA	1046	A
22	DA	1051	G
22	DA	1052	C
22	DA	1055	G
22	DA	1056	G
22	DA	1057	A
22	DA	1060	U
22	DA	1061	U
22	DA	1063	G
22	DA	1064	C
22	DA	1065	U
22	DA	1066	U
22	DA	1068	G
22	DA	1070	A
22	DA	1071	G
22	DA	1072	C
22	DA	1073	A
22	DA	1074	G
22	DA	1075	C
22	DA	1076	C

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Mol	Chain	Res	Type
22	DA	1077	A
22	DA	1078	U
22	DA	1079	C
22	DA	1080	A
22	DA	1081	U
22	DA	1082	U
22	DA	1083	U
22	DA	1088	A
22	DA	1089	A
22	DA	1091	G
22	DA	1097	U
22	DA	1100	C
22	DA	1103	A
22	DA	1111	A
22	DA	1112	G
22	DA	1113	U
22	DA	1114	C
22	DA	1115	G
22	DA	1116	G
22	DA	1126	A
22	DA	1127	A
22	DA	1128	G
22	DA	1129	A
22	DA	1130	U
22	DA	1131	G
22	DA	1132	U
22	DA	1133	A
22	DA	1134	A
22	DA	1135	C
22	DA	1136	G
22	DA	1139	G
22	DA	1142	A
22	DA	1144	A
22	DA	1156	A
22	DA	1157	G
22	DA	1158	C
22	DA	1163	G
22	DA	1169	A
22	DA	1172	C
22	DA	1174	U
22	DA	1176	U
22	DA	1193	G

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Mol	Chain	Res	Type
22	DA	1204	A
22	DA	1205	A
22	DA	1206	G
22	DA	1207	C
22	DA	1208	C
22	DA	1209	U
22	DA	1211	C
22	DA	1213	A
22	DA	1214	A
22	DA	1227	G
22	DA	1231	U
22	DA	1235	G
22	DA	1236	G
22	DA	1237	A
22	DA	1238	G
22	DA	1241	A
22	DA	1242	U
22	DA	1246	A
22	DA	1247	A
22	DA	1248	G
22	DA	1249	U
22	DA	1250	G
22	DA	1253	A
22	DA	1255	U
22	DA	1256	G
22	DA	1257	C
22	DA	1258	U
22	DA	1262	A
22	DA	1265	A
22	DA	1266	G
22	DA	1267	U
22	DA	1268	A
22	DA	1271	G
22	DA	1272	A
22	DA	1273	U
22	DA	1274	A
22	DA	1275	A
22	DA	1276	A
22	DA	1277	G
22	DA	1286	A
22	DA	1287	A
22	DA	1288	G

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Mol	Chain	Res	Type
22	DA	1290	C
22	DA	1291	C
22	DA	1292	G
22	DA	1300	G
22	DA	1301	A
22	DA	1304	A
22	DA	1305	C
22	DA	1306	C
22	DA	1311	G
22	DA	1313	U
22	DA	1317	G
22	DA	1318	U
22	DA	1321	A
22	DA	1324	G
22	DA	1325	U
22	DA	1326	U
22	DA	1327	A
22	DA	1328	A
22	DA	1329	U
22	DA	1330	C
22	DA	1331	G
22	DA	1332	G
22	DA	1333	G
22	DA	1334	G
22	DA	1336	A
22	DA	1337	G
22	DA	1340	U
22	DA	1341	G
22	DA	1342	A
22	DA	1343	G
22	DA	1345	C
22	DA	1346	G
22	DA	1347	A
22	DA	1349	C
22	DA	1352	U
22	DA	1359	A
22	DA	1365	A
22	DA	1368	G
22	DA	1374	G
22	DA	1379	U
22	DA	1380	G
22	DA	1382	G

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Mol	Chain	Res	Type
22	DA	1383	A
22	DA	1385	A
22	DA	1386	C
22	DA	1387	A
22	DA	1388	G
22	DA	1389	G
22	DA	1390	U
22	DA	1391	U
22	DA	1397	U
22	DA	1398	C
22	DA	1399	C
22	DA	1400	U
22	DA	1401	G
22	DA	1402	U
22	DA	1403	A
22	DA	1404	C
22	DA	1416	G
22	DA	1417	C
22	DA	1418	G
22	DA	1419	A
22	DA	1421	G
22	DA	1427	A
22	DA	1428	C
22	DA	1430	G
22	DA	1431	A
22	DA	1435	G
22	DA	1438	U
22	DA	1444	G
22	DA	1452	G
22	DA	1453	A
22	DA	1455	G
22	DA	1456	G
22	DA	1457	U
22	DA	1459	G
22	DA	1460	U
22	DA	1461	C
22	DA	1462	C
22	DA	1476	U
22	DA	1477	A
22	DA	1478	G
22	DA	1482	G
22	DA	1483	G

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Mol	Chain	Res	Type
22	DA	1484	U
22	DA	1490	A
22	DA	1491	G
22	DA	1492	G
22	DA	1493	C
22	DA	1494	A
22	DA	1497	U
22	DA	1498	C
22	DA	1499	C
22	DA	1503	A
22	DA	1504	A
22	DA	1507	C
22	DA	1508	A
22	DA	1509	A
22	DA	1510	G
22	DA	1511	G
22	DA	1512	C
22	DA	1513	U
22	DA	1520	U
22	DA	1522	A
22	DA	1524	G
22	DA	1526	C
22	DA	1530	G
22	DA	1531	C
22	DA	1532	A
22	DA	1534	U
22	DA	1535	A
22	DA	1536	C
22	DA	1537	G
22	DA	1538	G
22	DA	1539	U
22	DA	1540	G
22	DA	1541	C
22	DA	1542	U
22	DA	1554	U
22	DA	1555	G
22	DA	1556	C
22	DA	1558	C
22	DA	1559	U
22	DA	1560	G
22	DA	1561	C
22	DA	1564	C

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Mol	Chain	Res	Type
22	DA	1565	C
22	DA	1567	G
22	DA	1568	G
22	DA	1569	A
22	DA	1570	A
22	DA	1583	A
22	DA	1584	U
22	DA	1585	C
22	DA	1586	A
22	DA	1587	G
22	DA	1600	C
22	DA	1603	A
22	DA	1604	C
22	DA	1607	C
22	DA	1608	A
22	DA	1610	A
22	DA	1611	C
22	DA	1612	C
22	DA	1613	G
22	DA	1615	C
22	DA	1616	A
22	DA	1618	A
22	DA	1627	G
22	DA	1628	G
22	DA	1633	G
22	DA	1635	A
22	DA	1636	U
22	DA	1640	A
22	DA	1641	A
22	DA	1646	C
22	DA	1647	U
22	DA	1648	U
22	DA	1649	G
22	DA	1653	G
22	DA	1654	A
22	DA	1655	A
22	DA	1656	C
22	DA	1663	G
22	DA	1664	A
22	DA	1665	A
22	DA	1667	G
22	DA	1668	A

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Mol	Chain	Res	Type
22	DA	1669	A
22	DA	1670	C
22	DA	1671	U
22	DA	1673	G
22	DA	1674	G
22	DA	1675	C
22	DA	1676	A
22	DA	1682	G
22	DA	1683	U
22	DA	1694	C
22	DA	1695	G
22	DA	1696	G
22	DA	1698	A
22	DA	1699	G
22	DA	1700	A
22	DA	1701	A
22	DA	1707	G
22	DA	1713	A
22	DA	1714	U
22	DA	1715	G
22	DA	1717	A
22	DA	1718	G
22	DA	1722	A
22	DA	1723	G
22	DA	1728	C
22	DA	1729	U
22	DA	1730	C
22	DA	1731	G
22	DA	1732	C
22	DA	1733	G
22	DA	1734	G
22	DA	1735	A
22	DA	1736	U
22	DA	1739	A
22	DA	1740	G
22	DA	1744	A
22	DA	1750	G
22	DA	1758	U
22	DA	1759	A
22	DA	1760	C
22	DA	1764	C
22	DA	1772	A

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Mol	Chain	Res	Type
22	DA	1773	A
22	DA	1776	G
22	DA	1780	A
22	DA	1781	U
22	DA	1782	U
22	DA	1783	A
22	DA	1785	A
22	DA	1786	A
22	DA	1787	A
22	DA	1788	C
22	DA	1794	A
22	DA	1800	C
22	DA	1802	A
22	DA	1803	A
22	DA	1804	C
22	DA	1808	A
22	DA	1809	A
22	DA	1810	A
22	DA	1811	G
22	DA	1815	A
22	DA	1816	C
22	DA	1817	G
22	DA	1818	U
22	DA	1820	U
22	DA	1821	A
22	DA	1822	C
22	DA	1824	G
22	DA	1827	U
22	DA	1829	A
22	DA	1832	C
22	DA	1838	C
22	DA	1839	G
22	DA	1840	G
22	DA	1847	A
22	DA	1848	A
22	DA	1857	G
22	DA	1858	A
22	DA	1859	U
22	DA	1870	C
22	DA	1875	G
22	DA	1877	A
22	DA	1884	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	DA	1889	A
22	DA	1901	A
22	DA	1902	C
22	DA	1903	G
22	DA	1906	G
22	DA	1913	A
22	DA	1914	C
22	DA	1915	U
22	DA	1919	A
22	DA	1920	C
22	DA	1927	A
22	DA	1930	G
22	DA	1931	U
22	DA	1932	A
22	DA	1937	A
22	DA	1938	A
22	DA	1939	U
22	DA	1941	C
22	DA	1942	C
22	DA	1943	U
22	DA	1944	U
22	DA	1945	G
22	DA	1946	U
22	DA	1955	U
22	DA	1956	U
22	DA	1963	U
22	DA	1964	G
22	DA	1966	A
22	DA	1967	C
22	DA	1968	G
22	DA	1970	A
22	DA	1971	U
22	DA	1972	G
22	DA	1973	G
22	DA	1975	G
22	DA	1981	A
22	DA	1982	U
22	DA	1989	G
22	DA	1991	U
22	DA	1993	U
22	DA	1994	C
22	DA	1996	C

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Mol	Chain	Res	Type
22	DA	1997	C
22	DA	1998	A
22	DA	2002	G
22	DA	2020	A
22	DA	2021	C
22	DA	2022	U
22	DA	2023	C
22	DA	2024	G
22	DA	2030	A
22	DA	2031	A
22	DA	2032	G
22	DA	2033	A
22	DA	2035	G
22	DA	2036	C
22	DA	2037	A
22	DA	2043	C
22	DA	2049	G
22	DA	2052	A
22	DA	2055	C
22	DA	2056	G
22	DA	2060	A
22	DA	2061	G
22	DA	2062	A
22	DA	2063	C
22	DA	2064	C
22	DA	2068	U
22	DA	2069	G
22	DA	2079	U
22	DA	2080	A
22	DA	2083	G
22	DA	2092	U
22	DA	2093	G
22	DA	2094	A
22	DA	2095	A
22	DA	2096	C
22	DA	2104	C
22	DA	2108	A
22	DA	2109	U
22	DA	2110	G
22	DA	2134	A
22	DA	2135	A
22	DA	2136	G

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Mol	Chain	Res	Type
22	DA	2137	U
22	DA	2138	G
22	DA	2139	U
22	DA	2143	C
22	DA	2144	G
22	DA	2145	C
22	DA	2147	A
22	DA	2150	C
22	DA	2151	U
22	DA	2152	G
22	DA	2153	C
22	DA	2154	A
22	DA	2156	G
22	DA	2157	G
22	DA	2180	U
22	DA	2181	U
22	DA	2183	A
22	DA	2191	A
22	DA	2192	U
22	DA	2194	U
22	DA	2199	A
22	DA	2203	U
22	DA	2204	G
22	DA	2210	U
22	DA	2211	A
22	DA	2212	A
22	DA	2213	U
22	DA	2214	C
22	DA	2215	C
22	DA	2216	G
22	DA	2217	G
22	DA	2218	G
22	DA	2225	A
22	DA	2226	C
22	DA	2227	A
22	DA	2231	U
22	DA	2238	G
22	DA	2239	G
22	DA	2243	U
22	DA	2249	U
22	DA	2250	G
22	DA	2259	U

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Mol	Chain	Res	Type
22	DA	2260	C
22	DA	2266	A
22	DA	2267	A
22	DA	2268	A
22	DA	2273	A
22	DA	2275	C
22	DA	2276	G
22	DA	2277	G
22	DA	2279	G
22	DA	2283	C
22	DA	2284	A
22	DA	2286	G
22	DA	2289	G
22	DA	2297	A
22	DA	2298	A
22	DA	2299	U
22	DA	2300	C
22	DA	2301	C
22	DA	2305	U
22	DA	2306	C
22	DA	2307	G
22	DA	2308	G
22	DA	2309	A
22	DA	2310	C
22	DA	2311	A
22	DA	2312	U
22	DA	2313	C
22	DA	2314	A
22	DA	2315	G
22	DA	2320	U
22	DA	2321	U
22	DA	2324	U
22	DA	2325	G
22	DA	2326	C
22	DA	2334	U
22	DA	2335	A
22	DA	2336	A
22	DA	2337	G
22	DA	2338	C
22	DA	2339	C
22	DA	2340	A
22	DA	2345	G

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Mol	Chain	Res	Type
22	DA	2347	C
22	DA	2348	U
22	DA	2349	G
22	DA	2350	C
22	DA	2358	A
22	DA	2361	G
22	DA	2379	G
22	DA	2382	G
22	DA	2383	G
22	DA	2384	U
22	DA	2385	C
22	DA	2386	A
22	DA	2387	U
22	DA	2388	A
22	DA	2390	U
22	DA	2392	A
22	DA	2402	U
22	DA	2405	G
22	DA	2406	A
22	DA	2407	A
22	DA	2409	G
22	DA	2410	G
22	DA	2424	C
22	DA	2425	A
22	DA	2426	A
22	DA	2427	C
22	DA	2428	G
22	DA	2429	G
22	DA	2430	A
22	DA	2431	U
22	DA	2435	A
22	DA	2439	A
22	DA	2440	C
22	DA	2441	U
22	DA	2447	G
22	DA	2448	A
22	DA	2452	C
22	DA	2459	A
22	DA	2460	U
22	DA	2469	A
22	DA	2475	C
22	DA	2476	A

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Mol	Chain	Res	Type
22	DA	2484	G
22	DA	2490	G
22	DA	2491	U
22	DA	2492	U
22	DA	2493	U
22	DA	2494	G
22	DA	2497	A
22	DA	2498	C
22	DA	2499	C
22	DA	2502	G
22	DA	2503	A
22	DA	2504	U
22	DA	2505	G
22	DA	2518	A
22	DA	2520	C
22	DA	2521	C
22	DA	2529	G
22	DA	2534	A
22	DA	2542	A
22	DA	2543	G
22	DA	2544	G
22	DA	2547	A
22	DA	2554	U
22	DA	2567	G
22	DA	2569	G
22	DA	2573	C
22	DA	2574	G
22	DA	2577	A
22	DA	2578	G
22	DA	2579	C
22	DA	2581	G
22	DA	2582	G
22	DA	2583	G
22	DA	2585	U
22	DA	2586	U
22	DA	2589	A
22	DA	2602	A
22	DA	2603	G
22	DA	2610	C
22	DA	2611	C
22	DA	2612	C
22	DA	2613	U

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Mol	Chain	Res	Type
22	DA	2614	A
22	DA	2615	U
22	DA	2616	C
22	DA	2617	U
22	DA	2629	U
22	DA	2630	G
22	DA	2632	A
22	DA	2639	A
22	DA	2640	G
22	DA	2646	C
22	DA	2654	A
22	DA	2655	G
22	DA	2656	U
22	DA	2657	A
22	DA	2658	C
22	DA	2664	G
22	DA	2667	C
22	DA	2668	G
22	DA	2669	G
22	DA	2670	A
22	DA	2682	A
22	DA	2683	C
22	DA	2690	U
22	DA	2691	C
22	DA	2692	G
22	DA	2713	U
22	DA	2714	G
22	DA	2715	C
22	DA	2718	G
22	DA	2725	A
22	DA	2726	A
22	DA	2727	A
22	DA	2728	U
22	DA	2731	G
22	DA	2732	G
22	DA	2736	A
22	DA	2748	A
22	DA	2750	A
22	DA	2751	G
22	DA	2753	A
22	DA	2754	U
22	DA	2756	U

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Mol	Chain	Res	Type
22	DA	2757	A
22	DA	2758	A
22	DA	2765	A
22	DA	2766	A
22	DA	2777	G
22	DA	2778	A
22	DA	2779	U
22	DA	2791	G
22	DA	2796	U
22	DA	2799	A
22	DA	2800	A
22	DA	2801	G
22	DA	2803	G
22	DA	2808	G
22	DA	2820	A
22	DA	2822	G
22	DA	2826	A
22	DA	2833	U
22	DA	2834	G
22	DA	2835	A
22	DA	2836	U
22	DA	2837	A
22	DA	2838	G
22	DA	2848	G
22	DA	2850	A
22	DA	2851	A
22	DA	2861	U
22	DA	2866	U
22	DA	2867	G
22	DA	2868	A
22	DA	2869	G
22	DA	2872	A
22	DA	2873	A
22	DA	2874	C
22	DA	2875	C
22	DA	2876	G
22	DA	2877	G
22	DA	2878	U
22	DA	2879	A
22	DA	2880	C
22	DA	2881	U
22	DA	2883	A

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Mol	Chain	Res	Type
22	DA	2894	G
22	DA	2895	G
22	DA	2896	C
22	DA	2903	U
23	DB	12	C
23	DB	13	G
23	DB	14	U
23	DB	15	A
23	DB	16	G
23	DB	17	C
23	DB	18	G
23	DB	23	G
23	DB	24	G
23	DB	25	U
23	DB	30	C
23	DB	31	C
23	DB	35	C
23	DB	36	C
23	DB	40	U
23	DB	41	G
23	DB	42	C
23	DB	43	C
23	DB	44	G
23	DB	45	A
23	DB	46	A
23	DB	47	C
23	DB	48	U
23	DB	57	A
23	DB	58	A
23	DB	59	A
23	DB	63	C
23	DB	64	G
23	DB	65	U
23	DB	66	A
23	DB	67	G
23	DB	68	C
23	DB	69	G
23	DB	70	C
23	DB	87	U
23	DB	88	C
23	DB	89	U
23	DB	90	C

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Mol	Chain	Res	Type
23	DB	91	C
23	DB	99	A
23	DB	109	A
23	DB	110	C
23	DB	111	U
23	DB	112	G

All (1438) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	7	A
1	AA	13	U
1	AA	14	U
1	AA	30	U
1	AA	32	A
1	AA	47	C
1	AA	52	C
1	AA	60	A
1	AA	61	G
1	AA	64	G
1	AA	66	A
1	AA	71	A
1	AA	72	A
1	AA	74	A
1	AA	87	C
1	AA	91	U
1	AA	93	U
1	AA	94	G
1	AA	95	C
1	AA	97	G
1	AA	109	A
1	AA	110	C
1	AA	115	G
1	AA	119	A
1	AA	121	U
1	AA	122	G
1	AA	129	A
1	AA	131	A
1	AA	141	G
1	AA	173	U
1	AA	174	A
1	AA	180	U

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Mol	Chain	Res	Type
1	AA	185	U
1	AA	197	A
1	AA	198	G
1	AA	199	A
1	AA	243	A
1	AA	246	A
1	AA	247	G
1	AA	250	A
1	AA	251	G
1	AA	252	U
1	AA	257	G
1	AA	266	G
1	AA	267	C
1	AA	274	A
1	AA	275	G
1	AA	279	A
1	AA	305	G
1	AA	306	A
1	AA	327	A
1	AA	330	C
1	AA	331	G
1	AA	344	A
1	AA	345	C
1	AA	346	G
1	AA	351	G
1	AA	352	C
1	AA	366	A
1	AA	368	U
1	AA	372	C
1	AA	373	A
1	AA	388	G
1	AA	389	A
1	AA	411	A
1	AA	414	A
1	AA	421	U
1	AA	424	G
1	AA	428	G
1	AA	429	U
1	AA	430	A
1	AA	438	U
1	AA	439	U
1	AA	451	A

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Mol	Chain	Res	Type
1	AA	452	A
1	AA	462	G
1	AA	463	U
1	AA	466	A
1	AA	468	A
1	AA	469	C
1	AA	484	G
1	AA	486	U
1	AA	487	A
1	AA	488	C
1	AA	495	A
1	AA	496	A
1	AA	497	G
1	AA	499	A
1	AA	500	G
1	AA	501	C
1	AA	508	U
1	AA	509	A
1	AA	511	C
1	AA	512	U
1	AA	517	G
1	AA	519	C
1	AA	531	U
1	AA	534	U
1	AA	535	A
1	AA	536	C
1	AA	537	G
1	AA	547	A
1	AA	548	G
1	AA	559	A
1	AA	563	A
1	AA	566	G
1	AA	575	G
1	AA	577	G
1	AA	595	A
1	AA	596	A
1	AA	642	A
1	AA	652	U
1	AA	654	G
1	AA	686	U
1	AA	688	G
1	AA	701	U

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Mol	Chain	Res	Type
1	AA	704	A
1	AA	717	U
1	AA	718	A
1	AA	721	G
1	AA	722	G
1	AA	752	G
1	AA	754	C
1	AA	755	G
1	AA	792	A
1	AA	794	A
1	AA	812	G
1	AA	813	U
1	AA	815	A
1	AA	816	A
1	AA	817	C
1	AA	870	U
1	AA	874	G
1	AA	884	U
1	AA	889	A
1	AA	913	A
1	AA	914	A
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	961	U
1	AA	965	U
1	AA	968	A
1	AA	969	A
1	AA	972	C
1	AA	974	A
1	AA	976	G
1	AA	977	A
1	AA	978	A
1	AA	982	U
1	AA	984	C
1	AA	991	U
1	AA	994	A
1	AA	1031	C
1	AA	1049	U
1	AA	1050	G
1	AA	1053	G
1	AA	1064	G

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Mol	Chain	Res	Type
1	AA	1066	C
1	AA	1068	G
1	AA	1085	U
1	AA	1087	G
1	AA	1088	G
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1102	A
1	AA	1126	U
1	AA	1127	G
1	AA	1130	A
1	AA	1131	G
1	AA	1136	C
1	AA	1142	G
1	AA	1152	A
1	AA	1153	G
1	AA	1157	A
1	AA	1162	C
1	AA	1168	U
1	AA	1169	A
1	AA	1181	G
1	AA	1184	G
1	AA	1190	G
1	AA	1191	A
1	AA	1196	A
1	AA	1197	A
1	AA	1200	C
1	AA	1201	A
1	AA	1202	U
1	AA	1203	C
1	AA	1215	G
1	AA	1224	U
1	AA	1228	C
1	AA	1239	A
1	AA	1241	G
1	AA	1258	G
1	AA	1259	C
1	AA	1278	G
1	AA	1282	C
1	AA	1283	U
1	AA	1284	C

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Mol	Chain	Res	Type
1	AA	1298	U
1	AA	1303	C
1	AA	1304	G
1	AA	1319	A
1	AA	1320	C
1	AA	1322	C
1	AA	1323	G
1	AA	1331	G
1	AA	1332	A
1	AA	1336	C
1	AA	1337	G
1	AA	1345	U
1	AA	1348	U
1	AA	1349	A
1	AA	1365	G
1	AA	1380	U
1	AA	1381	U
1	AA	1382	C
1	AA	1394	A
1	AA	1395	C
1	AA	1396	A
1	AA	1398	A
1	AA	1399	C
1	AA	1432	G
1	AA	1447	A
1	AA	1448	C
1	AA	1451	U
1	AA	1453	G
1	AA	1454	G
1	AA	1498	U
1	AA	1502	A
1	AA	1505	G
1	AA	1506	U
1	AA	1507	A
1	AA	1528	U
1	AA	1531	A
22	BA	13	A
22	BA	14	A
22	BA	27	G
22	BA	33	C
22	BA	34	U
22	BA	35	G

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Mol	Chain	Res	Type
22	BA	36	G
22	BA	49	A
22	BA	52	A
22	BA	60	G
22	BA	62	U
22	BA	63	A
22	BA	70	G
22	BA	73	A
22	BA	74	A
22	BA	75	G
22	BA	84	A
22	BA	85	G
22	BA	91	A
22	BA	92	U
22	BA	100	U
22	BA	119	A
22	BA	125	A
22	BA	126	A
22	BA	137	U
22	BA	143	C
22	BA	144	A
22	BA	162	U
22	BA	164	C
22	BA	165	A
22	BA	177	G
22	BA	196	A
22	BA	199	A
22	BA	204	A
22	BA	206	U
22	BA	215	G
22	BA	221	A
22	BA	223	A
22	BA	227	A
22	BA	229	C
22	BA	232	G
22	BA	238	C
22	BA	239	C
22	BA	241	A
22	BA	243	U
22	BA	249	C
22	BA	265	A
22	BA	266	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	BA	271	G
22	BA	273	G
22	BA	301	G
22	BA	302	C
22	BA	310	A
22	BA	312	G
22	BA	321	U
22	BA	324	A
22	BA	345	A
22	BA	346	A
22	BA	369	U
22	BA	373	U
22	BA	386	G
22	BA	388	G
22	BA	390	U
22	BA	403	U
22	BA	404	A
22	BA	411	G
22	BA	412	A
22	BA	413	C
22	BA	421	C
22	BA	422	A
22	BA	434	U
22	BA	435	C
22	BA	442	G
22	BA	443	A
22	BA	446	G
22	BA	454	A
22	BA	459	U
22	BA	474	G
22	BA	475	C
22	BA	479	A
22	BA	480	A
22	BA	481	G
22	BA	482	A
22	BA	489	G
22	BA	491	G
22	BA	503	A
22	BA	506	G
22	BA	507	A
22	BA	509	C
22	BA	512	G

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Mol	Chain	Res	Type
22	BA	513	A
22	BA	527	C
22	BA	529	A
22	BA	531	C
22	BA	555	G
22	BA	571	U
22	BA	572	A
22	BA	573	U
22	BA	587	C
22	BA	603	A
22	BA	604	G
22	BA	613	A
22	BA	620	G
22	BA	627	A
22	BA	637	A
22	BA	645	C
22	BA	654	A
22	BA	655	A
22	BA	669	G
22	BA	683	U
22	BA	685	A
22	BA	704	G
22	BA	726	G
22	BA	727	A
22	BA	729	G
22	BA	746	U
22	BA	747	U
22	BA	753	A
22	BA	762	U
22	BA	763	G
22	BA	764	A
22	BA	765	C
22	BA	774	G
22	BA	788	A
22	BA	790	U
22	BA	800	A
22	BA	802	A
22	BA	805	G
22	BA	829	A
22	BA	846	U
22	BA	847	U
22	BA	858	G

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Mol	Chain	Res	Type
22	BA	860	U
22	BA	865	C
22	BA	866	A
22	BA	914	G
22	BA	915	C
22	BA	931	U
22	BA	933	A
22	BA	934	U
22	BA	945	A
22	BA	946	C
22	BA	957	C
22	BA	958	U
22	BA	961	C
22	BA	973	A
22	BA	984	A
22	BA	988	A
22	BA	990	A
22	BA	995	C
22	BA	996	A
22	BA	1008	A
22	BA	1009	A
22	BA	1011	G
22	BA	1013	C
22	BA	1020	A
22	BA	1021	A
22	BA	1022	G
22	BA	1023	U
22	BA	1025	G
22	BA	1026	G
22	BA	1033	U
22	BA	1045	C
22	BA	1046	A
22	BA	1048	A
22	BA	1060	U
22	BA	1062	G
22	BA	1063	G
22	BA	1074	G
22	BA	1112	G
22	BA	1116	G
22	BA	1128	G
22	BA	1135	C
22	BA	1141	U

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Mol	Chain	Res	Type
22	BA	1150	C
22	BA	1151	A
22	BA	1157	G
22	BA	1204	A
22	BA	1206	G
22	BA	1210	G
22	BA	1213	A
22	BA	1236	G
22	BA	1247	A
22	BA	1249	U
22	BA	1250	G
22	BA	1254	A
22	BA	1255	U
22	BA	1267	U
22	BA	1275	A
22	BA	1276	A
22	BA	1286	A
22	BA	1287	A
22	BA	1288	G
22	BA	1289	C
22	BA	1300	G
22	BA	1303	G
22	BA	1311	G
22	BA	1320	C
22	BA	1321	A
22	BA	1324	G
22	BA	1327	A
22	BA	1329	U
22	BA	1330	C
22	BA	1340	U
22	BA	1343	G
22	BA	1359	A
22	BA	1360	G
22	BA	1378	A
22	BA	1379	U
22	BA	1386	C
22	BA	1396	U
22	BA	1398	C
22	BA	1403	A
22	BA	1407	G
22	BA	1416	G
22	BA	1417	C

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Mol	Chain	Res	Type
22	BA	1419	A
22	BA	1421	G
22	BA	1427	A
22	BA	1429	G
22	BA	1434	A
22	BA	1435	G
22	BA	1451	C
22	BA	1455	G
22	BA	1458	U
22	BA	1459	G
22	BA	1461	C
22	BA	1475	G
22	BA	1476	U
22	BA	1490	A
22	BA	1491	G
22	BA	1493	C
22	BA	1494	A
22	BA	1497	U
22	BA	1498	C
22	BA	1508	A
22	BA	1510	G
22	BA	1522	A
22	BA	1535	A
22	BA	1537	G
22	BA	1554	U
22	BA	1555	G
22	BA	1558	C
22	BA	1565	C
22	BA	1602	U
22	BA	1603	A
22	BA	1606	C
22	BA	1615	C
22	BA	1626	A
22	BA	1627	G
22	BA	1634	A
22	BA	1644	C
22	BA	1647	U
22	BA	1653	G
22	BA	1654	A
22	BA	1674	G
22	BA	1675	C
22	BA	1693	U

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Mol	Chain	Res	Type
22	BA	1695	G
22	BA	1698	A
22	BA	1700	A
22	BA	1706	C
22	BA	1707	G
22	BA	1713	A
22	BA	1714	U
22	BA	1716	U
22	BA	1717	A
22	BA	1732	C
22	BA	1734	G
22	BA	1735	A
22	BA	1738	G
22	BA	1739	A
22	BA	1757	A
22	BA	1759	A
22	BA	1782	U
22	BA	1784	A
22	BA	1786	A
22	BA	1787	A
22	BA	1799	G
22	BA	1808	A
22	BA	1815	A
22	BA	1816	C
22	BA	1818	U
22	BA	1838	C
22	BA	1847	A
22	BA	1848	A
22	BA	1857	G
22	BA	1858	A
22	BA	1865	U
22	BA	1866	A
22	BA	1870	C
22	BA	1871	A
22	BA	1872	A
22	BA	1884	G
22	BA	1885	A
22	BA	1900	A
22	BA	1918	A
22	BA	1919	A
22	BA	1920	C
22	BA	1929	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	BA	1931	U
22	BA	1936	A
22	BA	1941	C
22	BA	1942	C
22	BA	1943	U
22	BA	1945	G
22	BA	1954	G
22	BA	1962	C
22	BA	1963	U
22	BA	1965	C
22	BA	1966	A
22	BA	1967	C
22	BA	1970	A
22	BA	1971	U
22	BA	1980	G
22	BA	1993	U
22	BA	1996	C
22	BA	1997	C
22	BA	2023	C
22	BA	2030	A
22	BA	2035	G
22	BA	2036	C
22	BA	2051	A
22	BA	2060	A
22	BA	2063	C
22	BA	2068	U
22	BA	2092	U
22	BA	2093	G
22	BA	2137	U
22	BA	2146	C
22	BA	2197	U
22	BA	2199	A
22	BA	2200	C
22	BA	2210	U
22	BA	2214	C
22	BA	2225	A
22	BA	2238	G
22	BA	2249	U
22	BA	2250	G
22	BA	2258	C
22	BA	2267	A
22	BA	2275	C

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Mol	Chain	Res	Type
22	BA	2282	G
22	BA	2283	C
22	BA	2286	G
22	BA	2296	U
22	BA	2297	A
22	BA	2307	G
22	BA	2309	A
22	BA	2311	A
22	BA	2319	G
22	BA	2321	U
22	BA	2324	U
22	BA	2325	G
22	BA	2326	C
22	BA	2327	A
22	BA	2333	A
22	BA	2335	A
22	BA	2337	G
22	BA	2344	U
22	BA	2382	G
22	BA	2383	G
22	BA	2391	G
22	BA	2392	A
22	BA	2405	G
22	BA	2407	A
22	BA	2423	U
22	BA	2425	A
22	BA	2427	C
22	BA	2430	A
22	BA	2431	U
22	BA	2439	A
22	BA	2440	C
22	BA	2450	A
22	BA	2458	G
22	BA	2459	A
22	BA	2468	A
22	BA	2490	G
22	BA	2503	A
22	BA	2517	C
22	BA	2520	C
22	BA	2541	A
22	BA	2543	G
22	BA	2566	A

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Mol	Chain	Res	Type
22	BA	2572	A
22	BA	2573	C
22	BA	2581	G
22	BA	2602	A
22	BA	2603	G
22	BA	2609	U
22	BA	2611	C
22	BA	2615	U
22	BA	2629	U
22	BA	2638	G
22	BA	2645	G
22	BA	2654	A
22	BA	2656	U
22	BA	2662	A
22	BA	2672	U
22	BA	2673	G
22	BA	2681	C
22	BA	2689	U
22	BA	2712	C
22	BA	2725	A
22	BA	2727	A
22	BA	2728	U
22	BA	2729	G
22	BA	2732	G
22	BA	2750	A
22	BA	2752	C
22	BA	2756	U
22	BA	2757	A
22	BA	2777	G
22	BA	2778	A
22	BA	2781	A
22	BA	2790	U
22	BA	2791	G
22	BA	2797	U
22	BA	2800	A
22	BA	2808	G
22	BA	2820	A
22	BA	2832	U
22	BA	2835	A
22	BA	2848	G
22	BA	2866	U
22	BA	2873	A

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Mol	Chain	Res	Type
22	BA	2879	A
22	BA	2893	A
22	BA	2894	G
23	BB	12	C
23	BB	14	U
23	BB	16	G
23	BB	24	G
23	BB	25	U
23	BB	40	U
23	BB	42	C
23	BB	44	G
23	BB	45	A
23	BB	52	A
23	BB	56	G
23	BB	57	A
23	BB	66	A
23	BB	87	U
23	BB	90	C
23	BB	108	A
23	BB	109	A
1	CA	6	G
1	CA	9	G
1	CA	13	U
1	CA	14	U
1	CA	15	G
1	CA	30	U
1	CA	32	A
1	CA	47	C
1	CA	52	C
1	CA	60	A
1	CA	61	G
1	CA	66	A
1	CA	68	G
1	CA	70	U
1	CA	71	A
1	CA	74	A
1	CA	83	C
1	CA	86	G
1	CA	92	U
1	CA	93	U
1	CA	94	G
1	CA	95	C

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Mol	Chain	Res	Type
1	CA	109	A
1	CA	110	C
1	CA	115	G
1	CA	119	A
1	CA	130	A
1	CA	131	A
1	CA	132	C
1	CA	173	U
1	CA	174	A
1	CA	181	A
1	CA	184	G
1	CA	197	A
1	CA	199	A
1	CA	200	G
1	CA	209	U
1	CA	213	G
1	CA	214	C
1	CA	240	G
1	CA	243	A
1	CA	245	U
1	CA	247	G
1	CA	248	C
1	CA	251	G
1	CA	252	U
1	CA	274	A
1	CA	277	C
1	CA	279	A
1	CA	282	A
1	CA	305	G
1	CA	306	A
1	CA	315	A
1	CA	316	C
1	CA	327	A
1	CA	328	C
1	CA	330	C
1	CA	331	G
1	CA	344	A
1	CA	347	G
1	CA	348	G
1	CA	351	G
1	CA	352	C
1	CA	366	A

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Mol	Chain	Res	Type
1	CA	368	U
1	CA	369	G
1	CA	372	C
1	CA	373	A
1	CA	374	A
1	CA	382	A
1	CA	388	G
1	CA	389	A
1	CA	411	A
1	CA	414	A
1	CA	421	U
1	CA	423	G
1	CA	424	G
1	CA	428	G
1	CA	429	U
1	CA	430	A
1	CA	439	U
1	CA	451	A
1	CA	452	A
1	CA	453	G
1	CA	481	G
1	CA	482	A
1	CA	484	G
1	CA	486	U
1	CA	495	A
1	CA	496	A
1	CA	497	G
1	CA	499	A
1	CA	500	G
1	CA	508	U
1	CA	511	C
1	CA	512	U
1	CA	517	G
1	CA	519	C
1	CA	520	A
1	CA	531	U
1	CA	532	A
1	CA	534	U
1	CA	535	A
1	CA	536	C
1	CA	547	A
1	CA	548	G

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Mol	Chain	Res	Type
1	CA	559	A
1	CA	563	A
1	CA	564	C
1	CA	566	G
1	CA	567	G
1	CA	575	G
1	CA	577	G
1	CA	595	A
1	CA	596	A
1	CA	641	U
1	CA	642	A
1	CA	643	C
1	CA	652	U
1	CA	654	G
1	CA	686	U
1	CA	688	G
1	CA	701	U
1	CA	704	A
1	CA	718	A
1	CA	721	G
1	CA	722	G
1	CA	733	G
1	CA	734	G
1	CA	753	A
1	CA	755	G
1	CA	792	A
1	CA	794	A
1	CA	815	A
1	CA	816	A
1	CA	817	C
1	CA	821	G
1	CA	870	U
1	CA	874	G
1	CA	884	U
1	CA	885	G
1	CA	889	A
1	CA	891	U
1	CA	913	A
1	CA	914	A
1	CA	934	C
1	CA	937	A
1	CA	941	G

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Mol	Chain	Res	Type
1	CA	960	U
1	CA	962	C
1	CA	963	G
1	CA	969	A
1	CA	974	A
1	CA	978	A
1	CA	980	C
1	CA	982	U
1	CA	986	U
1	CA	992	U
1	CA	996	A
1	CA	997	U
1	CA	1049	U
1	CA	1051	C
1	CA	1052	U
1	CA	1064	G
1	CA	1066	C
1	CA	1067	A
1	CA	1068	G
1	CA	1085	U
1	CA	1086	U
1	CA	1087	G
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1102	A
1	CA	1124	G
1	CA	1127	G
1	CA	1128	C
1	CA	1138	G
1	CA	1139	G
1	CA	1141	C
1	CA	1143	G
1	CA	1145	A
1	CA	1146	A
1	CA	1148	U
1	CA	1151	A
1	CA	1152	A
1	CA	1157	A
1	CA	1158	C
1	CA	1160	G
1	CA	1161	C

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Mol	Chain	Res	Type
1	CA	1167	A
1	CA	1169	A
1	CA	1181	G
1	CA	1184	G
1	CA	1190	G
1	CA	1191	A
1	CA	1200	C
1	CA	1201	A
1	CA	1202	U
1	CA	1218	C
1	CA	1224	U
1	CA	1227	A
1	CA	1230	C
1	CA	1245	C
1	CA	1256	A
1	CA	1257	A
1	CA	1278	G
1	CA	1282	C
1	CA	1283	U
1	CA	1284	C
1	CA	1285	A
1	CA	1288	A
1	CA	1289	A
1	CA	1298	U
1	CA	1302	C
1	CA	1331	G
1	CA	1332	A
1	CA	1345	U
1	CA	1348	U
1	CA	1349	A
1	CA	1367	C
1	CA	1380	U
1	CA	1381	U
1	CA	1383	C
1	CA	1394	A
1	CA	1395	C
1	CA	1396	A
1	CA	1398	A
1	CA	1399	C
1	CA	1447	A
1	CA	1449	C
1	CA	1450	U

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Mol	Chain	Res	Type
1	CA	1452	C
1	CA	1453	G
1	CA	1455	G
1	CA	1498	U
1	CA	1499	A
1	CA	1502	A
1	CA	1505	G
1	CA	1507	A
1	CA	1528	U
1	CA	1531	A
22	DA	13	A
22	DA	14	A
22	DA	15	G
22	DA	33	C
22	DA	35	G
22	DA	49	A
22	DA	52	A
22	DA	70	G
22	DA	73	A
22	DA	78	U
22	DA	84	A
22	DA	86	G
22	DA	87	U
22	DA	91	A
22	DA	92	U
22	DA	93	G
22	DA	101	A
22	DA	103	A
22	DA	104	A
22	DA	105	C
22	DA	119	A
22	DA	121	G
22	DA	122	G
22	DA	125	A
22	DA	128	C
22	DA	129	C
22	DA	141	G
22	DA	144	A
22	DA	162	U
22	DA	163	C
22	DA	164	C
22	DA	196	A

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Mol	Chain	Res	Type
22	DA	197	A
22	DA	200	U
22	DA	204	A
22	DA	206	U
22	DA	207	A
22	DA	215	G
22	DA	217	A
22	DA	218	A
22	DA	221	A
22	DA	222	A
22	DA	223	A
22	DA	227	A
22	DA	229	C
22	DA	230	G
22	DA	231	A
22	DA	232	G
22	DA	234	U
22	DA	235	U
22	DA	241	A
22	DA	243	U
22	DA	244	A
22	DA	249	C
22	DA	250	G
22	DA	271	G
22	DA	273	G
22	DA	274	C
22	DA	301	G
22	DA	304	U
22	DA	312	G
22	DA	321	U
22	DA	324	A
22	DA	329	G
22	DA	335	C
22	DA	336	C
22	DA	370	G
22	DA	374	A
22	DA	375	G
22	DA	386	G
22	DA	388	G
22	DA	390	U
22	DA	391	A
22	DA	392	U

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Mol	Chain	Res	Type
22	DA	395	U
22	DA	397	U
22	DA	398	C
22	DA	404	A
22	DA	406	G
22	DA	407	G
22	DA	411	G
22	DA	412	A
22	DA	413	C
22	DA	442	G
22	DA	445	C
22	DA	449	A
22	DA	454	A
22	DA	459	U
22	DA	474	G
22	DA	476	G
22	DA	477	A
22	DA	478	A
22	DA	479	A
22	DA	480	A
22	DA	485	C
22	DA	489	G
22	DA	492	A
22	DA	503	A
22	DA	505	A
22	DA	510	C
22	DA	527	C
22	DA	528	A
22	DA	530	G
22	DA	533	G
22	DA	571	U
22	DA	572	A
22	DA	573	U
22	DA	575	A
22	DA	587	C
22	DA	588	U
22	DA	603	A
22	DA	604	G
22	DA	605	G
22	DA	615	U
22	DA	618	G
22	DA	620	G

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Mol	Chain	Res	Type
22	DA	621	A
22	DA	622	G
22	DA	627	A
22	DA	628	G
22	DA	637	A
22	DA	638	G
22	DA	655	A
22	DA	656	G
22	DA	670	A
22	DA	672	C
22	DA	685	A
22	DA	687	C
22	DA	704	G
22	DA	705	A
22	DA	726	G
22	DA	727	A
22	DA	739	A
22	DA	740	C
22	DA	749	A
22	DA	762	U
22	DA	763	G
22	DA	765	C
22	DA	775	G
22	DA	777	G
22	DA	778	G
22	DA	782	A
22	DA	783	A
22	DA	788	A
22	DA	800	A
22	DA	802	A
22	DA	806	C
22	DA	829	A
22	DA	831	G
22	DA	858	G
22	DA	860	U
22	DA	861	A
22	DA	865	C
22	DA	868	U
22	DA	913	U
22	DA	915	C
22	DA	916	G
22	DA	931	U

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Mol	Chain	Res	Type
22	DA	933	A
22	DA	934	U
22	DA	945	A
22	DA	946	C
22	DA	947	A
22	DA	957	C
22	DA	958	U
22	DA	959	A
22	DA	961	C
22	DA	962	G
22	DA	973	A
22	DA	976	G
22	DA	982	C
22	DA	983	A
22	DA	989	G
22	DA	990	A
22	DA	991	C
22	DA	1008	A
22	DA	1009	A
22	DA	1011	G
22	DA	1013	C
22	DA	1020	A
22	DA	1021	A
22	DA	1023	U
22	DA	1024	G
22	DA	1025	G
22	DA	1026	G
22	DA	1027	A
22	DA	1033	U
22	DA	1034	G
22	DA	1051	G
22	DA	1060	U
22	DA	1064	C
22	DA	1065	U
22	DA	1069	A
22	DA	1077	A
22	DA	1078	U
22	DA	1081	U
22	DA	1110	G
22	DA	1112	G
22	DA	1126	A
22	DA	1129	A

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Mol	Chain	Res	Type
22	DA	1130	U
22	DA	1135	C
22	DA	1136	G
22	DA	1141	U
22	DA	1144	A
22	DA	1156	A
22	DA	1157	G
22	DA	1204	A
22	DA	1206	G
22	DA	1207	C
22	DA	1208	C
22	DA	1210	G
22	DA	1213	A
22	DA	1236	G
22	DA	1247	A
22	DA	1249	U
22	DA	1252	G
22	DA	1254	A
22	DA	1255	U
22	DA	1256	G
22	DA	1265	A
22	DA	1267	U
22	DA	1272	A
22	DA	1276	A
22	DA	1289	C
22	DA	1291	C
22	DA	1300	G
22	DA	1303	G
22	DA	1305	C
22	DA	1312	U
22	DA	1313	U
22	DA	1325	U
22	DA	1327	A
22	DA	1328	A
22	DA	1329	U
22	DA	1333	G
22	DA	1340	U
22	DA	1346	G
22	DA	1347	A
22	DA	1385	A
22	DA	1386	C
22	DA	1389	G

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Mol	Chain	Res	Type
22	DA	1397	U
22	DA	1398	C
22	DA	1399	C
22	DA	1400	U
22	DA	1401	G
22	DA	1402	U
22	DA	1415	U
22	DA	1417	C
22	DA	1418	G
22	DA	1419	A
22	DA	1427	A
22	DA	1430	G
22	DA	1451	C
22	DA	1455	G
22	DA	1456	G
22	DA	1460	U
22	DA	1475	G
22	DA	1476	U
22	DA	1483	G
22	DA	1489	C
22	DA	1491	G
22	DA	1492	G
22	DA	1497	U
22	DA	1498	C
22	DA	1508	A
22	DA	1510	G
22	DA	1512	C
22	DA	1536	C
22	DA	1540	G
22	DA	1541	C
22	DA	1554	U
22	DA	1555	G
22	DA	1558	C
22	DA	1560	G
22	DA	1565	C
22	DA	1569	A
22	DA	1602	U
22	DA	1603	A
22	DA	1606	C
22	DA	1611	C
22	DA	1612	C
22	DA	1615	C

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Mol	Chain	Res	Type
22	DA	1619	G
22	DA	1626	A
22	DA	1627	G
22	DA	1634	A
22	DA	1635	A
22	DA	1647	U
22	DA	1648	U
22	DA	1653	G
22	DA	1654	A
22	DA	1655	A
22	DA	1664	A
22	DA	1667	G
22	DA	1669	A
22	DA	1674	G
22	DA	1675	C
22	DA	1681	G
22	DA	1682	G
22	DA	1693	U
22	DA	1695	G
22	DA	1698	A
22	DA	1700	A
22	DA	1706	C
22	DA	1713	A
22	DA	1717	A
22	DA	1721	G
22	DA	1722	A
22	DA	1731	G
22	DA	1733	G
22	DA	1735	A
22	DA	1738	G
22	DA	1739	A
22	DA	1758	U
22	DA	1759	A
22	DA	1780	A
22	DA	1782	U
22	DA	1784	A
22	DA	1785	A
22	DA	1786	A
22	DA	1787	A
22	DA	1799	G
22	DA	1803	A
22	DA	1808	A

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Mol	Chain	Res	Type
22	DA	1809	A
22	DA	1810	A
22	DA	1815	A
22	DA	1817	G
22	DA	1821	A
22	DA	1828	G
22	DA	1838	C
22	DA	1839	G
22	DA	1858	A
22	DA	1900	A
22	DA	1901	A
22	DA	1913	A
22	DA	1915	U
22	DA	1918	A
22	DA	1919	A
22	DA	1929	G
22	DA	1931	U
22	DA	1936	A
22	DA	1941	C
22	DA	1943	U
22	DA	1945	G
22	DA	1954	G
22	DA	1956	U
22	DA	1962	C
22	DA	1963	U
22	DA	1965	C
22	DA	1967	C
22	DA	1972	G
22	DA	1980	G
22	DA	1981	A
22	DA	1982	U
22	DA	1992	G
22	DA	1993	U
22	DA	1996	C
22	DA	1997	C
22	DA	2021	C
22	DA	2023	C
22	DA	2024	G
22	DA	2030	A
22	DA	2036	C
22	DA	2051	A
22	DA	2060	A

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Mol	Chain	Res	Type
22	DA	2062	A
22	DA	2063	C
22	DA	2067	G
22	DA	2068	U
22	DA	2092	U
22	DA	2094	A
22	DA	2095	A
22	DA	2133	G
22	DA	2137	U
22	DA	2143	C
22	DA	2150	C
22	DA	2151	U
22	DA	2179	C
22	DA	2197	U
22	DA	2199	A
22	DA	2210	U
22	DA	2214	C
22	DA	2217	G
22	DA	2225	A
22	DA	2226	C
22	DA	2238	G
22	DA	2239	G
22	DA	2249	U
22	DA	2258	C
22	DA	2259	U
22	DA	2266	A
22	DA	2267	A
22	DA	2275	C
22	DA	2276	G
22	DA	2282	G
22	DA	2283	C
22	DA	2286	G
22	DA	2288	A
22	DA	2289	G
22	DA	2296	U
22	DA	2298	A
22	DA	2299	U
22	DA	2300	C
22	DA	2311	A
22	DA	2314	A
22	DA	2319	G
22	DA	2320	U

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Mol	Chain	Res	Type
22	DA	2324	U
22	DA	2325	G
22	DA	2334	U
22	DA	2337	G
22	DA	2340	A
22	DA	2344	U
22	DA	2347	C
22	DA	2348	U
22	DA	2382	G
22	DA	2383	G
22	DA	2384	U
22	DA	2386	A
22	DA	2387	U
22	DA	2391	G
22	DA	2406	A
22	DA	2407	A
22	DA	2425	A
22	DA	2428	G
22	DA	2439	A
22	DA	2440	C
22	DA	2447	G
22	DA	2450	A
22	DA	2458	G
22	DA	2459	A
22	DA	2468	A
22	DA	2469	A
22	DA	2490	G
22	DA	2492	U
22	DA	2497	A
22	DA	2498	C
22	DA	2502	G
22	DA	2503	A
22	DA	2504	U
22	DA	2520	C
22	DA	2542	A
22	DA	2543	G
22	DA	2566	A
22	DA	2573	C
22	DA	2581	G
22	DA	2582	G
22	DA	2601	C
22	DA	2603	G

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Mol	Chain	Res	Type
22	DA	2611	C
22	DA	2613	U
22	DA	2615	U
22	DA	2616	C
22	DA	2638	G
22	DA	2645	G
22	DA	2646	C
22	DA	2654	A
22	DA	2656	U
22	DA	2657	A
22	DA	2666	C
22	DA	2669	G
22	DA	2681	C
22	DA	2682	A
22	DA	2689	U
22	DA	2691	C
22	DA	2712	C
22	DA	2725	A
22	DA	2727	A
22	DA	2750	A
22	DA	2752	C
22	DA	2753	A
22	DA	2756	U
22	DA	2757	A
22	DA	2758	A
22	DA	2776	A
22	DA	2777	G
22	DA	2778	A
22	DA	2781	A
22	DA	2798	U
22	DA	2800	A
22	DA	2832	U
22	DA	2836	U
22	DA	2837	A
22	DA	2850	A
22	DA	2866	U
22	DA	2868	A
22	DA	2873	A
22	DA	2874	C
22	DA	2875	C
22	DA	2876	G
22	DA	2877	G

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Mol	Chain	Res	Type
22	DA	2879	A
22	DA	2880	C
22	DA	2893	A
22	DA	2895	G
23	DB	12	C
23	DB	13	G
23	DB	16	G
23	DB	18	G
23	DB	45	A
23	DB	46	A
23	DB	56	G
23	DB	58	A
23	DB	66	A
23	DB	68	C
23	DB	69	G
23	DB	87	U
23	DB	90	C
23	DB	108	A
23	DB	110	C
23	DB	111	U

## 5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

Of 364 ligands modelled in this entry, 363 are monoatomic - leaving 1 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
54	ERY	BA	3136	-	53,53,53	0.74	0	82,82,82	1.65	16 (19%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the chemical component dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
54	ERY	BA	3136	-	-	0/72/107/107	0/3/3/3

There are no bond length outliers.

All (16) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	BA	3136	ERY	C25-C24-C23	-4.98	102.77	110.03
54	BA	3136	ERY	O7-C5-C6	-4.70	100.45	106.44
54	BA	3136	ERY	C3-C2-C1	-3.52	102.98	109.86
54	BA	3136	ERY	O2-C1-O1	-3.22	117.27	123.89
54	BA	3136	ERY	C15-C16-C17	-3.05	103.99	107.81
54	BA	3136	ERY	C32-C6-C7	-2.94	106.24	111.05
54	BA	3136	ERY	C27-C26-C25	-2.91	108.53	113.38
54	BA	3136	ERY	O3-C14-C15	-2.78	104.40	108.99
54	BA	3136	ERY	O6-C17-C18	-2.74	104.83	109.28
54	BA	3136	ERY	O3-C3-C4	-2.43	105.13	108.19
54	BA	3136	ERY	O3-C3-C2	-2.26	106.88	111.10
54	BA	3136	ERY	O2-C13-C12	-2.17	103.58	107.23
54	BA	3136	ERY	C16-C17-C18	-2.04	107.81	111.01
54	BA	3136	ERY	C28-N1-C24	2.00	118.89	113.09
54	BA	3136	ERY	C32-C6-C5	2.18	114.14	110.24
54	BA	3136	ERY	C19-C16-C17	2.35	116.17	111.14

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
54	BA	3136	ERY	4	0

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95<sup>th</sup> percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	AA	1533/1533 (100%)	-0.56	17 (1%) 82 66	21, 74, 188, 404	0
1	CA	1530/1533 (99%)	0.05	46 (3%) 54 29	38, 102, 287, 422	0
2	AB	218/218 (100%)	1.63	73 (33%) 0 0	72, 142, 202, 237	0
2	CB	218/218 (100%)	1.62	72 (33%) 0 0	98, 165, 222, 272	0
3	AC	206/206 (100%)	0.69	24 (11%) 6 2	54, 101, 149, 187	0
3	CC	206/206 (100%)	1.19	50 (24%) 1 0	80, 139, 210, 243	0
4	AD	205/205 (100%)	-0.04	8 (3%) 43 21	38, 80, 182, 310	0
4	CD	205/205 (100%)	-0.25	1 (0%) 91 83	29, 54, 103, 236	0
5	AE	150/150 (100%)	-0.08	3 (2%) 68 46	37, 70, 136, 207	0
5	CE	150/150 (100%)	0.36	3 (2%) 68 46	38, 87, 150, 253	0
6	AF	100/100 (100%)	-0.16	0 100 100	43, 85, 149, 174	0
6	CF	100/100 (100%)	0.05	4 (4%) 42 20	58, 109, 180, 202	0
7	AG	151/151 (100%)	0.26	9 (5%) 25 10	82, 155, 235, 286	0
7	CG	150/151 (99%)	2.39	69 (46%) 0 0	112, 196, 246, 272	0
8	AH	129/129 (100%)	-0.02	4 (3%) 52 28	41, 69, 120, 203	0
8	CH	129/129 (100%)	0.67	14 (10%) 7 2	52, 107, 161, 197	0
9	AI	127/127 (100%)	0.92	17 (13%) 4 2	68, 153, 256, 288	0
9	CI	127/127 (100%)	1.90	49 (38%) 0 0	102, 200, 285, 325	0
10	AJ	98/98 (100%)	0.65	18 (18%) 2 1	60, 119, 200, 251	0
10	CJ	98/98 (100%)	2.89	58 (59%) 0 0	102, 192, 267, 283	0
11	AK	117/117 (100%)	0.68	12 (10%) 9 3	38, 104, 176, 222	0
11	CK	117/117 (100%)	0.30	4 (3%) 49 24	53, 102, 161, 200	0
12	AL	123/123 (100%)	-0.33	2 (1%) 74 55	16, 49, 111, 187	0
12	CL	123/123 (100%)	0.22	3 (2%) 62 39	41, 81, 128, 173	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	AM	114/114 (100%)	0.49	13 (11%) 7 2	69, 139, 213, 258	0
13	CM	114/114 (100%)	2.36	61 (53%) 0 0	190, 427, 522, 545	0
14	AN	96/100 (96%)	0.40	6 (6%) 23 9	68, 111, 199, 266	0
14	CN	95/100 (95%)	2.15	44 (46%) 0 0	112, 209, 319, 350	0
15	AO	88/88 (100%)	-0.40	0 100 100	34, 70, 111, 172	0
15	CO	88/88 (100%)	-0.12	1 (1%) 82 66	68, 112, 187, 286	0
16	AP	82/82 (100%)	0.73	10 (12%) 5 2	45, 68, 174, 288	0
16	CP	81/82 (98%)	0.75	10 (12%) 5 2	46, 97, 157, 229	0
17	AQ	80/80 (100%)	0.43	7 (8%) 12 4	35, 71, 134, 209	0
17	CQ	80/80 (100%)	0.85	12 (15%) 3 1	47, 103, 151, 188	0
18	AR	55/55 (100%)	0.13	3 (5%) 29 12	50, 80, 154, 211	0
18	CR	55/55 (100%)	-0.05	2 (3%) 46 23	51, 87, 157, 235	0
19	AS	79/79 (100%)	1.57	28 (35%) 0 0	81, 150, 212, 259	0
19	CS	79/79 (100%)	2.93	46 (58%) 0 0	217, 411, 508, 531	0
20	AT	85/85 (100%)	-0.31	0 100 100	35, 69, 129, 176	0
20	CT	85/85 (100%)	0.85	12 (14%) 4 2	66, 130, 204, 226	0
21	AU	51/51 (100%)	1.74	20 (39%) 0 0	90, 146, 226, 252	0
21	CU	51/51 (100%)	0.59	7 (13%) 4 2	54, 109, 189, 269	0
22	BA	2854/2904 (98%)	-0.48	39 (1%) 78 60	6, 25, 148, 390	0
22	DA	2841/2904 (97%)	0.25	96 (3%) 49 24	55, 116, 270, 526	0
23	BB	118/118 (100%)	-0.64	0 100 100	12, 40, 73, 109	0
23	DB	117/118 (99%)	-0.11	2 (1%) 73 52	88, 164, 221, 243	0
24	BC	271/271 (100%)	-0.35	6 (2%) 65 42	8, 35, 82, 192	0
24	DC	271/271 (100%)	0.56	25 (9%) 11 4	42, 95, 151, 215	0
25	BD	209/209 (100%)	-0.44	0 100 100	6, 21, 69, 179	0
25	DD	209/209 (100%)	0.77	28 (13%) 4 2	55, 115, 199, 284	0
26	BE	201/201 (100%)	-0.43	0 100 100	7, 36, 86, 151	0
26	DE	201/201 (100%)	1.62	67 (33%) 0 0	61, 235, 398, 470	0
27	BF	178/178 (100%)	-0.02	3 (1%) 73 52	21, 63, 136, 167	0
27	DF	178/178 (100%)	2.25	90 (50%) 0 0	142, 219, 259, 301	0
28	BG	176/176 (100%)	-0.01	2 (1%) 82 66	20, 61, 131, 192	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
28	DG	176/176 (100%)	1.54	54 (30%) 1 0	88, 239, 337, 389	0
29	BH	149/149 (100%)	3.09	64 (42%) 0 0	40, 171, 260, 304	0
29	DH	149/149 (100%)	2.65	63 (42%) 0 0	68, 188, 268, 298	0
30	BI	141/141 (100%)	2.45	63 (44%) 0 0	170, 245, 289, 301	0
30	DI	141/141 (100%)	3.24	97 (68%) 0 0	178, 312, 349, 370	0
31	BJ	142/142 (100%)	-0.55	1 (0%) 89 78	7, 16, 60, 137	0
31	DJ	142/142 (100%)	0.47	9 (6%) 23 9	50, 106, 169, 198	0
32	BK	122/122 (100%)	-0.39	1 (0%) 87 75	11, 24, 69, 242	0
32	DK	122/122 (100%)	0.62	13 (10%) 8 3	59, 97, 147, 210	0
33	BL	143/143 (100%)	-0.47	0 100 100	6, 30, 71, 123	0
33	DL	143/143 (100%)	1.37	31 (21%) 1 0	59, 164, 279, 354	0
34	BM	136/136 (100%)	-0.54	0 100 100	7, 22, 59, 147	0
34	DM	136/136 (100%)	0.82	17 (12%) 5 2	37, 112, 192, 250	0
35	BN	120/120 (100%)	-0.54	0 100 100	8, 17, 40, 149	0
35	DN	120/120 (100%)	1.42	32 (26%) 1 0	63, 131, 211, 305	0
36	BO	116/116 (100%)	-0.34	0 100 100	21, 41, 72, 113	0
36	DO	116/116 (100%)	1.50	33 (28%) 1 0	106, 172, 240, 273	0
37	BP	114/114 (100%)	-0.43	1 (0%) 85 72	12, 32, 87, 176	0
37	DP	114/114 (100%)	0.86	16 (14%) 4 2	50, 110, 175, 196	0
38	BQ	117/117 (100%)	-0.62	1 (0%) 85 72	6, 15, 39, 225	0
38	DQ	117/117 (100%)	0.95	19 (16%) 3 1	65, 113, 193, 331	0
39	BR	103/103 (100%)	-0.53	1 (0%) 84 69	6, 26, 67, 184	0
39	DR	103/103 (100%)	1.98	45 (43%) 0 0	73, 144, 238, 305	0
40	BS	110/110 (100%)	-0.56	0 100 100	7, 15, 48, 172	0
40	DS	110/110 (100%)	1.52	39 (35%) 0 0	71, 132, 214, 254	0
41	BT	93/93 (100%)	-0.00	3 (3%) 51 27	13, 43, 123, 233	0
41	DT	93/93 (100%)	2.43	48 (51%) 0 0	124, 265, 379, 423	0
42	BU	102/102 (100%)	-0.19	2 (1%) 68 46	21, 45, 131, 240	0
42	DU	102/102 (100%)	3.19	63 (61%) 0 0	148, 305, 420, 554	0
43	BV	94/94 (100%)	-0.29	0 100 100	14, 38, 78, 135	0
43	DV	94/94 (100%)	1.01	18 (19%) 2 1	88, 136, 193, 236	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
44	BW	79/79 (100%)	-0.13	2 (2%) 61 37	13, 29, 98, 213	0
44	DW	79/79 (100%)	2.15	35 (44%) 0 0	73, 169, 279, 323	0
45	BX	77/77 (100%)	-0.57	0 100 100	13, 37, 77, 108	0
45	DX	77/77 (100%)	0.80	11 (14%) 4 2	62, 118, 215, 280	0
46	BY	63/63 (100%)	-0.12	1 (1%) 74 55	27, 59, 126, 209	0
46	DY	63/63 (100%)	1.65	18 (28%) 1 0	152, 379, 492, 508	0
47	BZ	58/58 (100%)	-0.60	0 100 100	9, 16, 47, 61	0
47	DZ	58/58 (100%)	0.48	5 (8%) 13 4	68, 143, 251, 271	0
48	B0	56/56 (100%)	-0.68	0 100 100	6, 18, 71, 138	0
48	D0	56/56 (100%)	1.47	17 (30%) 1 0	63, 144, 246, 262	0
49	B1	50/50 (100%)	0.15	3 (6%) 25 10	27, 47, 93, 115	0
49	D1	50/50 (100%)	1.61	15 (30%) 1 0	97, 154, 208, 231	0
50	B2	46/46 (100%)	-0.54	0 100 100	10, 19, 43, 195	0
50	D2	46/46 (100%)	1.29	8 (17%) 2 1	59, 119, 184, 211	0
51	B3	64/64 (100%)	-0.53	0 100 100	8, 22, 38, 65	0
51	D3	64/64 (100%)	1.15	12 (18%) 2 1	64, 122, 197, 255	0
52	B4	38/38 (100%)	0.31	2 (5%) 30 13	25, 49, 94, 97	0
52	D4	38/38 (100%)	3.16	26 (68%) 0 0	87, 173, 235, 241	0
All	All	20434/20562 (99%)	0.33	2089 (10%) 9 3	6, 93, 274, 554	0

All (2089) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
29	DH	92	GLY	21.5
29	DH	124	THR	18.6
29	DH	91	PHE	16.6
29	BH	122	LEU	16.2
29	BH	118	PRO	16.1
16	AP	81	ALA	15.9
29	BH	93	SER	14.9
29	BH	123	ARG	14.3
46	DY	63	ALA	14.3
29	BH	84	ALA	13.4
19	CS	28	LYS	13.4
29	DH	93	SER	12.9
27	DF	129	MET	12.8

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Mol	Chain	Res	Type	RSRZ
41	DT	15	HIS	12.6
22	BA	138	U	12.5
14	CN	33	VAL	12.3
30	BI	67	THR	12.3
42	DU	35	VAL	12.1
30	BI	13	ALA	12.0
29	BH	85	GLY	11.8
29	BH	125	THR	11.7
29	BH	90	LEU	11.0
1	CA	209	U	11.0
42	DU	76	THR	11.0
29	DH	87	GLU	10.9
29	BH	117	LEU	10.9
9	CI	127	SER	10.8
33	DL	144	GLU	10.8
29	DH	105	ALA	10.6
7	CG	65	LEU	10.6
17	AQ	82	VAL	10.6
29	BH	119	ASN	10.5
10	CJ	76	ILE	10.5
46	DY	62	GLY	10.4
10	CJ	74	VAL	10.3
29	DH	131	SER	10.3
29	DH	86	ASP	10.2
29	DH	123	ARG	10.1
28	DG	8	VAL	10.0
27	DF	10	GLU	9.9
22	BA	2147	A	9.8
29	BH	80	ILE	9.8
30	BI	2	LYS	9.8
29	BH	92	GLY	9.6
29	DH	88	GLY	9.6
42	DU	77	GLY	9.6
30	DI	58	ILE	9.6
29	BH	88	GLY	9.4
22	BA	2154	A	9.4
19	CS	29	PRO	9.4
52	D4	33	HIS	9.3
30	DI	120	ASP	9.3
29	BH	124	THR	9.3
30	DI	51	GLY	9.3
10	CJ	71	LEU	9.2

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Mol	Chain	Res	Type	RSRZ
7	CG	87	PRO	9.2
27	DF	105	ILE	9.2
29	DH	127	GLU	9.0
49	D1	35	LEU	9.0
29	BH	79	THR	9.0
29	BH	128	HIS	8.9
10	CJ	72	ARG	8.9
29	BH	91	PHE	8.8
29	BH	145	ASN	8.8
29	BH	143	ILE	8.7
29	DH	125	THR	8.7
10	CJ	8	ILE	8.7
10	CJ	75	ASP	8.5
42	DU	86	PHE	8.5
29	DH	85	GLY	8.4
10	CJ	99	GLN	8.4
30	BI	46	ASP	8.4
29	BH	98	ASP	8.3
7	CG	64	ALA	8.3
30	DI	93	ASN	8.3
52	D4	1	MET	8.3
29	DH	126	GLY	8.3
42	DU	50	ALA	8.2
16	AP	82	ALA	8.2
41	DT	2	ILE	8.2
13	CM	94	LEU	8.2
29	BH	73	ASN	8.1
29	BH	105	ALA	8.1
29	DH	119	ASN	8.1
42	DU	87	GLU	8.1
22	BA	2179	C	8.1
10	CJ	7	ARG	8.1
22	DA	2146	C	8.0
29	BH	86	ASP	8.0
29	DH	145	ASN	8.0
41	DT	34	VAL	8.0
42	DU	12	VAL	7.9
41	DT	55	VAL	7.9
1	CA	461	A	7.9
9	CI	42	THR	7.9
27	DF	9	ASP	7.9
52	D4	10	LEU	7.8

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Mol	Chain	Res	Type	RSRZ
28	DG	7	PRO	7.8
29	BH	74	ALA	7.8
29	BH	120	GLY	7.8
10	CJ	10	LEU	7.8
30	BI	52	LEU	7.7
29	BH	148	ALA	7.7
29	DH	89	LYS	7.7
30	BI	132	ALA	7.7
22	BA	2143	C	7.6
30	DI	15	GLY	7.6
9	AI	89	TYR	7.6
9	CI	66	VAL	7.5
29	BH	121	VAL	7.5
29	BH	147	VAL	7.5
29	DH	106	ALA	7.5
22	DA	2799	A	7.5
30	DI	43	ALA	7.5
25	DD	186	LEU	7.5
26	DE	144	GLU	7.4
29	DH	143	ILE	7.4
7	CG	71	THR	7.4
41	DT	3	ARG	7.4
16	CP	47	GLU	7.4
30	BI	21	PRO	7.4
26	DE	122	GLU	7.3
26	DE	119	ILE	7.3
30	DI	119	ALA	7.3
1	CA	210	C	7.3
30	BI	16	MET	7.2
30	DI	57	VAL	7.2
42	DU	37	GLY	7.2
10	CJ	91	ASP	7.2
7	CG	150	PHE	7.2
44	DW	21	GLY	7.1
7	CG	69	ARG	7.1
9	AI	42	THR	7.1
22	BA	2146	C	7.0
39	DR	96	VAL	7.0
7	CG	132	THR	7.0
13	CM	93	GLY	6.9
19	AS	38	THR	6.9
30	BI	77	VAL	6.9

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Mol	Chain	Res	Type	RSRZ
29	BH	131	SER	6.9
19	CS	73	PHE	6.9
7	CG	58	LEU	6.9
29	BH	89	LYS	6.9
42	DU	2	ALA	6.9
29	BH	149	GLU	6.9
29	DH	90	LEU	6.9
14	CN	32	ASP	6.9
30	DI	5	GLN	6.9
30	DI	66	PHE	6.9
19	CS	23	GLU	6.9
22	DA	139	U	6.9
7	CG	151	ALA	6.8
22	BA	2138	G	6.8
7	CG	72	VAL	6.8
29	DH	146	VAL	6.8
46	DY	21	LEU	6.8
7	CG	7	GLY	6.8
19	CS	36	ARG	6.8
37	DP	109	ILE	6.8
29	DH	133	GLN	6.7
14	CN	52	ARG	6.7
22	DA	613	A	6.7
30	BI	68	PHE	6.7
30	BI	12	VAL	6.7
42	DU	97	SER	6.7
52	D4	9	LYS	6.7
2	AB	26	MET	6.7
29	BH	113	SER	6.6
29	BH	126	GLY	6.6
29	DH	120	GLY	6.6
30	BI	3	LYS	6.6
14	CN	34	ASN	6.6
46	DY	36	GLN	6.5
30	DI	125	THR	6.5
30	BI	66	PHE	6.5
27	DF	94	ARG	6.5
39	DR	52	PRO	6.5
22	DA	1536	C	6.5
30	BI	86	LYS	6.5
9	CI	16	ALA	6.5
10	CJ	101	SER	6.5

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Mol	Chain	Res	Type	RSRZ
8	CH	129	ALA	6.4
42	DU	75	ALA	6.4
29	BH	116	ARG	6.4
30	DI	122	GLU	6.4
19	CS	38	THR	6.4
19	CS	65	MET	6.4
42	DU	80	ASP	6.4
33	DL	92	LEU	6.4
13	CM	54	THR	6.4
19	CS	24	SER	6.3
29	BH	134	VAL	6.3
30	DI	50	LYS	6.3
30	DI	97	VAL	6.3
44	DW	51	GLY	6.2
22	DA	1172	C	6.2
42	DU	36	GLU	6.2
19	CS	12	LEU	6.2
27	DF	141	ASP	6.2
30	DI	4	VAL	6.1
7	CG	75	LYS	6.1
16	AP	80	LYS	6.1
42	DU	30	SER	6.1
2	AB	28	PRO	6.1
29	DH	128	HIS	6.1
36	DO	61	GLN	6.1
30	DI	68	PHE	6.1
9	CI	15	ALA	6.1
10	CJ	11	LYS	6.1
7	CG	38	ALA	6.1
30	DI	121	ILE	6.1
39	DR	103	ALA	6.0
30	DI	95	ASP	6.0
35	DN	29	VAL	6.0
48	D0	56	LYS	6.0
49	D1	52	LYS	6.0
22	BA	2180	U	6.0
9	CI	57	VAL	5.9
4	AD	27	ILE	5.9
1	CA	1534	A	5.9
42	DU	19	GLY	5.9
14	CN	53	ASP	5.9
13	CM	111	PRO	5.9

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Mol	Chain	Res	Type	RSRZ
7	CG	70	PRO	5.9
41	DT	83	ALA	5.9
7	CG	143	MET	5.9
19	CS	30	LEU	5.9
29	DH	112	LYS	5.9
27	DF	117	SER	5.8
9	CI	67	LYS	5.8
13	CM	105	ALA	5.8
22	BA	2155	U	5.8
3	AC	98	ALA	5.8
19	CS	47	THR	5.8
10	CJ	73	LEU	5.8
22	BA	2144	G	5.8
14	CN	48	GLN	5.8
39	DR	22	LEU	5.8
46	DY	24	GLU	5.8
2	AB	27	LYS	5.8
10	AJ	102	LEU	5.8
13	CM	31	ALA	5.8
29	DH	121	VAL	5.8
14	CN	49	THR	5.8
1	CA	1224	U	5.8
22	DA	1535	A	5.7
10	CJ	6	ILE	5.7
44	DW	42	THR	5.7
36	DO	64	TYR	5.7
2	CB	129	THR	5.7
9	AI	38	PHE	5.7
2	CB	106	VAL	5.7
27	DF	127	TYR	5.7
22	DA	1537	G	5.7
1	AA	1030	U	5.7
33	DL	88	GLY	5.7
28	DG	32	LEU	5.6
7	CG	102	TRP	5.6
21	CU	8	ASN	5.6
13	CM	80	MET	5.6
39	DR	50	GLY	5.6
42	DU	27	VAL	5.6
19	CS	66	VAL	5.6
13	CM	114	PRO	5.6
2	CB	147	LEU	5.6

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Mol	Chain	Res	Type	RSRZ
51	D3	20	GLY	5.6
19	CS	79	TYR	5.6
30	DI	21	PRO	5.6
35	DN	113	ILE	5.5
27	DF	155	ILE	5.5
1	CA	1271	A	5.5
22	BA	139	U	5.5
27	DF	31	GLU	5.5
30	DI	65	SER	5.5
28	DG	85	LYS	5.5
29	DH	118	PRO	5.5
19	CS	60	PHE	5.5
29	BH	87	GLU	5.5
42	DU	85	ARG	5.5
7	CG	53	SER	5.5
2	AB	29	PHE	5.5
29	DH	129	GLU	5.5
28	DG	33	THR	5.4
30	DI	46	ASP	5.4
1	CA	211	G	5.4
7	CG	106	ALA	5.4
30	DI	83	ALA	5.4
42	DU	51	LEU	5.4
26	DE	148	ILE	5.4
30	DI	22	PRO	5.4
35	DN	63	ARG	5.4
29	BH	71	LYS	5.4
3	CC	143	LEU	5.3
30	DI	67	THR	5.3
30	DI	123	ALA	5.3
36	DO	63	LYS	5.3
42	DU	13	LEU	5.3
41	DT	36	LYS	5.3
30	BI	139	VAL	5.3
42	DU	79	ALA	5.3
30	BI	60	VAL	5.3
9	CI	56	MET	5.3
22	DA	1075	C	5.3
13	CM	97	ARG	5.3
30	DI	140	GLU	5.3
39	DR	63	VAL	5.3
22	DA	137	U	5.3

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Mol	Chain	Res	Type	RSRZ
28	DG	51	PHE	5.2
3	AC	64	ARG	5.2
22	BA	1175	A	5.2
9	CI	3	ASN	5.2
40	DS	48	LYS	5.2
2	AB	220	VAL	5.2
26	DE	127	GLU	5.2
26	DE	175	ILE	5.2
41	DT	32	LEU	5.2
28	DG	61	TRP	5.2
33	DL	101	ILE	5.2
1	AA	86	G	5.2
38	DQ	36	GLN	5.2
10	AJ	101	SER	5.2
13	CM	38	ILE	5.2
36	DO	51	ALA	5.2
16	AP	47	GLU	5.1
33	DL	82	LEU	5.1
19	CS	26	ASP	5.1
2	CB	146	SER	5.1
52	D4	15	LYS	5.1
30	DI	2	LYS	5.1
52	D4	35	GLN	5.1
27	DF	130	GLY	5.1
39	DR	87	GLN	5.1
42	DU	78	LYS	5.1
9	AI	129	ARG	5.1
11	AK	18	GLY	5.1
19	CS	25	GLY	5.1
41	DT	35	ALA	5.1
30	BI	78	LEU	5.1
26	DE	12	LEU	5.1
33	DL	108	ALA	5.1
43	DV	42	LEU	5.1
7	CG	136	LYS	5.1
30	DI	47	SER	5.1
30	DI	138	VAL	5.1
14	AN	30	ILE	5.1
42	DU	4	ILE	5.1
19	AS	14	LEU	5.0
48	D0	26	SER	5.0
26	DE	121	VAL	5.0

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Mol	Chain	Res	Type	RSRZ
29	DH	142	VAL	5.0
42	DU	42	LYS	5.0
47	DZ	33	HIS	5.0
40	DS	40	ASN	5.0
2	AB	66	ILE	5.0
41	DT	72	GLN	5.0
19	CS	64	GLU	5.0
32	DK	69	VAL	5.0
27	DF	110	ILE	5.0
44	DW	62	ALA	5.0
29	BH	146	VAL	5.0
39	DR	20	VAL	5.0
42	DU	38	ILE	5.0
10	CJ	80	THR	5.0
29	DH	82	SER	5.0
18	AR	19	GLU	5.0
34	DM	17	ASN	5.0
27	DF	11	VAL	5.0
2	CB	39	ILE	5.0
7	CG	149	ALA	5.0
42	DU	11	ILE	5.0
30	DI	12	VAL	5.0
7	CG	86	VAL	4.9
10	CJ	26	VAL	4.9
35	DN	24	MET	4.9
36	DO	52	SER	4.9
30	BI	47	SER	4.9
26	DE	128	ALA	4.9
30	BI	22	PRO	4.9
22	BA	2110	G	4.9
22	BA	2139	U	4.9
27	DF	114	ARG	4.9
28	DG	83	THR	4.9
30	BI	42	ASN	4.9
39	DR	26	ASP	4.9
27	DF	115	GLY	4.9
30	DI	56	VAL	4.9
7	CG	13	PRO	4.9
2	AB	186	VAL	4.9
7	CG	90	VAL	4.9
30	DI	17	ALA	4.9
41	DT	33	LYS	4.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
30	BI	33	ASN	4.8
19	CS	58	PRO	4.8
26	DE	147	LEU	4.8
22	BA	2142	A	4.8
35	DN	46	ARG	4.8
36	DO	56	LYS	4.8
28	DG	102	ILE	4.8
46	DY	37	LEU	4.8
22	BA	2150	C	4.8
2	AB	38	HIS	4.8
14	CN	62	ARG	4.8
29	BH	81	ALA	4.8
27	DF	152	ASP	4.8
19	CS	59	VAL	4.8
30	DI	55	PRO	4.8
22	DA	2107	G	4.8
19	CS	13	HIS	4.8
22	DA	1077	A	4.8
26	DE	104	ALA	4.8
13	CM	62	PHE	4.8
28	DG	104	LEU	4.8
30	BI	98	GLY	4.8
2	AB	67	LEU	4.8
29	DH	74	ALA	4.7
26	DE	164	LEU	4.7
2	CB	148	GLY	4.7
7	CG	85	GLN	4.7
2	AB	135	MET	4.7
42	DU	5	ARG	4.7
41	DT	58	VAL	4.7
29	DH	73	ASN	4.7
26	DE	180	LEU	4.7
13	CM	74	MET	4.7
13	CM	67	ASP	4.7
10	CJ	40	ILE	4.7
27	DF	153	ILE	4.7
29	BH	78	VAL	4.7
41	BT	16	VAL	4.7
14	AN	20	PHE	4.7
29	BH	94	ILE	4.7
28	DG	81	GLY	4.7
44	DW	29	SER	4.7

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Mol	Chain	Res	Type	RSRZ
10	CJ	39	PRO	4.7
29	DH	84	ALA	4.7
30	DI	61	TYR	4.7
3	AC	63	ILE	4.7
39	DR	88	GLY	4.7
33	DL	5	THR	4.6
25	DD	26	VAL	4.6
7	CG	88	VAL	4.6
10	CJ	63	ASP	4.6
19	CS	37	SER	4.6
30	BI	51	GLY	4.6
30	BI	58	ILE	4.6
7	CG	19	SER	4.6
42	DU	24	VAL	4.6
10	CJ	41	PRO	4.6
44	DW	50	VAL	4.6
29	BH	76	GLU	4.6
22	BA	546	U	4.6
22	BA	2145	C	4.6
7	CG	74	VAL	4.6
12	AL	123	ALA	4.6
2	CB	163	ILE	4.6
27	DF	112	ASP	4.6
32	DK	75	SER	4.6
44	DW	52	CYS	4.6
14	CN	59	GLN	4.6
7	CG	16	LYS	4.6
4	CD	27	ILE	4.6
9	CI	37	TYR	4.6
7	CG	61	PHE	4.6
44	DW	41	GLY	4.5
30	BI	11	GLN	4.5
27	DF	51	ASN	4.5
41	DT	16	VAL	4.5
13	CM	73	SER	4.5
29	BH	77	THR	4.5
22	DA	2157	G	4.5
30	DI	41	PHE	4.5
22	DA	846	U	4.5
10	CJ	100	ILE	4.5
33	DL	142	ILE	4.5
10	CJ	98	VAL	4.5

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Mol	Chain	Res	Type	RSRZ
13	CM	63	VAL	4.5
13	CM	108	ARG	4.5
2	AB	68	PHE	4.5
22	DA	2147	A	4.5
19	CS	70	LEU	4.5
30	DI	82	ALA	4.5
4	AD	26	ALA	4.5
3	CC	194	VAL	4.5
7	CG	95	ARG	4.5
27	DF	93	GLU	4.5
32	DK	68	GLY	4.5
36	DO	40	ILE	4.5
30	DI	44	LYS	4.5
27	DF	128	SER	4.5
27	DF	30	VAL	4.5
29	BH	130	VAL	4.5
7	CG	73	GLU	4.5
36	DO	60	GLU	4.4
41	DT	76	ARG	4.4
26	DE	198	GLU	4.4
19	AS	2	ARG	4.4
3	CC	41	TYR	4.4
52	D4	26	ILE	4.4
13	CM	79	LEU	4.4
17	AQ	19	SER	4.4
26	DE	190	ALA	4.4
7	CG	54	GLY	4.4
42	DU	41	VAL	4.4
32	DK	89	ASN	4.4
26	DE	48	THR	4.4
22	DA	2145	C	4.4
52	D4	24	ARG	4.4
29	BH	75	LEU	4.4
25	DD	91	THR	4.4
9	CI	107	ALA	4.3
12	CL	123	ALA	4.3
19	CS	62	THR	4.3
28	DG	101	VAL	4.3
29	DH	95	GLY	4.3
30	DI	33	ASN	4.3
28	DG	57	TYR	4.3
29	DH	15	LEU	4.3

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Mol	Chain	Res	Type	RSRZ
9	AI	40	ARG	4.3
22	DA	1175	A	4.3
36	DO	62	LEU	4.3
19	CS	31	ARG	4.3
26	DE	197	GLU	4.3
22	DA	1078	U	4.3
42	DU	88	ASP	4.3
34	DM	136	MET	4.3
14	CN	26	LEU	4.3
52	D4	8	LYS	4.3
22	DA	1066	U	4.3
19	AS	48	ILE	4.3
35	DN	76	VAL	4.3
30	DI	59	THR	4.3
10	CJ	102	LEU	4.3
26	DE	143	LEU	4.3
29	BH	70	GLU	4.3
9	AI	62	LEU	4.3
29	BH	144	VAL	4.3
30	DI	98	GLY	4.3
10	CJ	34	ALA	4.3
30	DI	109	ALA	4.3
11	AK	125	LYS	4.3
29	DH	144	VAL	4.3
13	CM	89	ARG	4.3
13	CM	98	GLY	4.3
13	CM	82	LEU	4.2
42	DU	74	ALA	4.2
30	DI	23	VAL	4.2
13	CM	30	LYS	4.2
19	CS	27	LYS	4.2
16	CP	39	PHE	4.2
26	DE	172	ALA	4.2
39	DR	33	VAL	4.2
13	CM	46	GLU	4.2
22	BA	2149	U	4.2
26	DE	24	ASN	4.2
33	DL	26	GLY	4.2
41	DT	60	THR	4.2
30	BI	38	CYS	4.2
3	CC	28	PHE	4.2
44	DW	58	LEU	4.2

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Mol	Chain	Res	Type	RSRZ
7	CG	8	GLN	4.2
2	AB	73	ARG	4.2
30	BI	35	MET	4.2
28	DG	55	ASP	4.2
30	DI	84	GLY	4.2
29	DH	122	LEU	4.2
40	DS	47	VAL	4.2
9	CI	38	PHE	4.2
30	DI	48	ILE	4.2
2	CB	109	SER	4.2
8	CH	1	SER	4.2
9	CI	65	THR	4.2
49	D1	23	THR	4.2
13	CM	100	ARG	4.2
35	DN	25	ALA	4.2
49	D1	46	VAL	4.2
13	CM	29	SER	4.2
18	AR	73	HIS	4.1
39	DR	32	THR	4.1
30	DI	118	GLY	4.1
2	CB	40	ILE	4.1
39	DR	62	GLU	4.1
14	CN	1	ALA	4.1
41	DT	43	ILE	4.1
2	CB	17	HIS	4.1
2	CB	160	LEU	4.1
2	AB	8	MET	4.1
27	DF	104	THR	4.1
20	CT	66	ILE	4.1
33	DL	28	GLY	4.1
13	CM	109	LYS	4.1
13	CM	113	LYS	4.1
43	DV	94	ALA	4.1
13	CM	28	ARG	4.1
48	D0	32	THR	4.1
52	D4	36	ARG	4.1
51	D3	21	PHE	4.1
14	CN	19	TYR	4.1
44	DW	45	HIS	4.1
2	AB	188	THR	4.1
30	BI	18	ASN	4.1
30	DI	42	ASN	4.1

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Mol	Chain	Res	Type	RSRZ
14	AN	29	ILE	4.1
24	DC	232	GLY	4.1
31	DJ	44	TYR	4.1
19	CS	11	ASP	4.1
36	DO	46	GLU	4.1
32	BK	71	ARG	4.1
3	CC	38	VAL	4.0
7	CG	59	GLU	4.0
25	DD	43	ASP	4.0
52	D4	14	CYS	4.0
3	CC	42	LEU	4.0
28	DG	128	THR	4.0
40	DS	19	LEU	4.0
22	DA	1171	G	4.0
42	DU	26	ASN	4.0
42	DU	59	GLU	4.0
29	DH	116	ARG	4.0
27	DF	34	THR	4.0
22	BA	2136	G	4.0
29	BH	100	ALA	4.0
36	DO	50	ALA	4.0
47	DZ	32	GLY	4.0
21	AU	22	CYS	4.0
10	CJ	51	VAL	4.0
33	DL	4	ASN	4.0
38	DQ	22	GLY	4.0
2	CB	15	PHE	4.0
9	CI	89	TYR	4.0
30	BI	37	PHE	4.0
19	AS	70	LEU	4.0
46	DY	14	LEU	4.0
27	DF	140	ILE	4.0
1	AA	1534	A	4.0
35	DN	111	ALA	4.0
27	DF	116	LEU	4.0
30	DI	24	GLY	4.0
48	D0	33	SER	4.0
30	DI	94	LYS	4.0
19	AS	43	MET	4.0
26	DE	188	MET	4.0
13	AM	4	ALA	4.0
30	DI	14	ALA	4.0

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Mol	Chain	Res	Type	RSRZ
41	DT	14	PRO	4.0
34	DM	24	THR	4.0
7	CG	128	GLU	4.0
40	DS	31	GLN	4.0
10	CJ	37	ARG	3.9
28	DG	147	LEU	3.9
30	DI	88	GLY	3.9
3	CC	160	GLU	3.9
7	CG	55	LYS	3.9
30	DI	124	MET	3.9
41	DT	81	LYS	3.9
27	DF	171	ALA	3.9
3	CC	108	PRO	3.9
27	DF	135	ILE	3.9
7	AG	80	GLY	3.9
42	DU	31	GLY	3.9
30	DI	129	GLU	3.9
50	D2	43	THR	3.9
14	CN	78	LEU	3.9
46	DY	35	GLY	3.9
7	CG	84	TYR	3.9
22	DA	318	C	3.9
35	DN	119	SER	3.9
2	AB	45	THR	3.9
48	D0	22	THR	3.9
7	CG	17	PHE	3.9
9	CI	4	GLN	3.9
13	AM	94	LEU	3.9
19	CS	15	LEU	3.9
22	BA	2141	G	3.9
26	DE	42	GLY	3.9
41	DT	70	HIS	3.9
2	AB	48	MET	3.9
26	DE	55	SER	3.9
29	BH	102	ALA	3.9
2	CB	181	PRO	3.9
22	DA	2181	U	3.9
1	CA	954	G	3.9
44	DW	35	ILE	3.9
33	DL	89	VAL	3.9
44	DW	37	VAL	3.9
44	DW	59	PHE	3.9

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Mol	Chain	Res	Type	RSRZ
16	CP	52	LEU	3.9
24	DC	26	GLY	3.9
7	AG	4	ARG	3.9
14	CN	72	PHE	3.9
22	DA	1044	C	3.9
30	BI	141	ASP	3.8
33	DL	122	VAL	3.8
48	D0	45	ASP	3.8
3	AC	103	ALA	3.8
30	DI	18	ASN	3.8
30	DI	86	LYS	3.8
22	DA	1173	U	3.8
9	CI	68	GLY	3.8
21	AU	37	TYR	3.8
43	DV	54	ALA	3.8
2	CB	158	ASP	3.8
7	CG	15	PRO	3.8
25	DD	25	THR	3.8
21	AU	34	ARG	3.8
36	DO	112	GLU	3.8
7	CG	67	ASN	3.8
48	D0	25	THR	3.8
2	CB	186	VAL	3.8
10	CJ	38	GLY	3.8
40	DS	70	LYS	3.8
46	DY	29	ARG	3.8
1	CA	1317	C	3.8
30	DI	85	ILE	3.8
37	DP	111	GLU	3.8
30	BI	17	ALA	3.8
1	CA	212	G	3.8
10	CJ	77	VAL	3.8
46	DY	13	GLU	3.8
28	DG	140	ILE	3.8
1	AA	87	C	3.8
27	DF	150	GLY	3.8
3	CC	32	LEU	3.8
7	CG	140	VAL	3.8
30	BI	10	LEU	3.8
2	AB	87	ASP	3.8
42	DU	73	ASN	3.8
9	CI	128	LYS	3.8

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Mol	Chain	Res	Type	RSRZ
51	D3	60	CYS	3.8
41	DT	31	VAL	3.8
30	DI	53	PRO	3.8
28	DG	110	HIS	3.8
27	DF	154	THR	3.8
27	DF	156	THR	3.8
13	CM	104	ASN	3.7
41	DT	10	VAL	3.7
50	D2	33	ARG	3.7
52	D4	38	GLY	3.7
41	DT	54	GLU	3.7
30	BI	39	LYS	3.7
4	AD	24	VAL	3.7
22	DA	1083	U	3.7
20	CT	8	LYS	3.7
30	BI	65	SER	3.7
37	DP	73	PHE	3.7
1	AA	1031	C	3.7
1	CA	1314	C	3.7
2	CB	30	ILE	3.7
20	CT	67	HIS	3.7
29	BH	106	ALA	3.7
1	CA	208	U	3.7
17	CQ	7	LEU	3.7
30	BI	40	ALA	3.7
39	DR	75	VAL	3.7
22	DA	1067	A	3.7
2	CB	27	LYS	3.7
22	DA	138	U	3.7
44	DW	22	VAL	3.7
4	AD	28	ASP	3.7
31	DJ	128	ASN	3.7
27	DF	39	VAL	3.7
35	DN	38	LEU	3.7
29	BH	127	GLU	3.7
39	DR	37	GLU	3.7
44	DW	73	PRO	3.7
30	DI	141	ASP	3.7
29	DH	140	ALA	3.7
49	D1	34	GLU	3.7
1	AA	461	A	3.7
11	CK	125	LYS	3.7

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Mol	Chain	Res	Type	RSRZ
40	DS	110	ARG	3.7
30	BI	87	SER	3.7
41	DT	42	GLU	3.7
25	DD	38	LYS	3.7
22	DA	1076	C	3.7
42	DU	25	LYS	3.7
19	AS	39	ILE	3.7
22	DA	2110	G	3.7
24	DC	29	PHE	3.6
27	DF	172	PHE	3.6
4	AD	35	GLN	3.6
10	CJ	9	ARG	3.6
42	DU	70	ALA	3.6
48	D0	36	LYS	3.6
10	AJ	89	ARG	3.6
27	DF	168	LEU	3.6
16	AP	19	VAL	3.6
51	D3	19	GLY	3.6
39	DR	27	ILE	3.6
30	DI	103	ALA	3.6
52	D4	12	ARG	3.6
13	CM	110	GLY	3.6
35	DN	116	VAL	3.6
28	DG	45	ALA	3.6
28	DG	84	LYS	3.6
3	CC	36	PHE	3.6
14	CN	73	LEU	3.6
2	AB	95	TRP	3.6
33	DL	77	ILE	3.6
27	DF	38	GLY	3.6
7	CG	68	VAL	3.6
3	CC	195	ILE	3.6
24	DC	46	GLY	3.6
43	DV	35	GLU	3.6
52	D4	19	ARG	3.6
22	DA	345	A	3.6
26	DE	135	ALA	3.6
14	CN	60	ARG	3.6
33	DL	106	GLU	3.6
39	DR	8	GLY	3.6
44	DW	19	ARG	3.6
13	CM	96	VAL	3.6

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Mol	Chain	Res	Type	RSRZ
13	CM	75	SER	3.6
19	CS	74	ALA	3.6
2	AB	84	LEU	3.6
7	CG	48	THR	3.6
13	CM	37	GLY	3.6
36	DO	20	GLU	3.6
26	DE	103	GLY	3.5
3	AC	167	TYR	3.5
28	DG	165	ASP	3.5
7	CG	66	GLU	3.5
39	DR	7	SER	3.5
37	DP	37	LYS	3.5
19	CS	40	PHE	3.5
27	DF	1	ALA	3.5
2	CB	33	ALA	3.5
2	CB	24	PRO	3.5
37	DP	11	GLN	3.5
39	DR	55	ASP	3.5
41	DT	12	ARG	3.5
44	DW	34	SER	3.5
2	AB	89	PHE	3.5
7	CG	144	ALA	3.5
10	CJ	21	ALA	3.5
7	CG	18	GLY	3.5
2	AB	200	PRO	3.5
26	DE	120	VAL	3.5
27	DF	24	VAL	3.5
41	DT	1	MET	3.5
22	DA	1074	G	3.5
19	CS	20	LYS	3.5
2	CB	70	GLY	3.5
13	CM	4	ALA	3.5
40	DS	44	ALA	3.5
17	CQ	77	VAL	3.5
21	AU	41	THR	3.5
36	DO	65	THR	3.5
7	CG	76	SER	3.5
14	CN	50	LEU	3.5
39	DR	29	THR	3.5
22	DA	2106	U	3.5
36	DO	57	ALA	3.5
13	AM	42	VAL	3.5

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Mol	Chain	Res	Type	RSRZ
27	DF	126	ASN	3.5
35	DN	36	THR	3.5
14	CN	77	GLY	3.5
13	CM	70	ARG	3.5
1	CA	203	G	3.5
13	CM	112	ARG	3.5
14	CN	40	ARG	3.5
33	DL	143	GLU	3.5
2	AB	71	THR	3.4
20	CT	2	ASN	3.4
21	AU	8	ASN	3.4
37	DP	84	SER	3.4
33	DL	121	THR	3.4
3	CC	166	TRP	3.4
14	CN	100	TRP	3.4
2	AB	51	GLU	3.4
19	AS	45	GLY	3.4
25	DD	10	GLY	3.4
49	D1	22	THR	3.4
51	D3	27	ASN	3.4
27	DF	174	PHE	3.4
11	AK	41	LEU	3.4
9	CI	6	TYR	3.4
2	CB	38	HIS	3.4
52	D4	25	VAL	3.4
17	CQ	6	THR	3.4
21	AU	30	GLU	3.4
42	DU	94	PHE	3.4
25	DD	97	SER	3.4
30	DI	60	VAL	3.4
2	AB	30	ILE	3.4
49	D1	15	GLY	3.4
10	CJ	78	GLU	3.4
27	DF	55	ASP	3.4
42	DU	72	PHE	3.4
1	AA	1492	A	3.4
30	DI	126	ARG	3.4
22	DA	228	C	3.4
36	DO	27	VAL	3.4
9	CI	13	SER	3.4
30	DI	75	ALA	3.4
1	CA	86	G	3.4

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Mol	Chain	Res	Type	RSRZ
26	DE	56	GLY	3.4
28	DG	48	THR	3.4
46	DY	31	GLN	3.4
10	CJ	97	ASP	3.4
9	AI	18	VAL	3.4
22	DA	1090	A	3.4
32	DK	104	THR	3.4
38	DQ	1	ALA	3.4
39	DR	61	ALA	3.4
40	DS	69	LEU	3.4
9	AI	61	ASP	3.4
44	DW	7	GLY	3.4
29	BH	129	GLU	3.4
1	CA	1270	G	3.3
29	DH	141	LYS	3.3
44	DW	18	LYS	3.3
2	CB	82	ALA	3.3
30	BI	1	ALA	3.3
41	DT	20	ALA	3.3
10	CJ	33	GLY	3.3
52	D4	16	ILE	3.3
10	CJ	96	VAL	3.3
2	CB	87	ASP	3.3
17	AQ	6	THR	3.3
13	AM	32	ILE	3.3
9	CI	126	PHE	3.3
7	CG	9	ARG	3.3
10	CJ	5	ARG	3.3
29	BH	99	ILE	3.3
19	CS	63	ASP	3.3
20	CT	62	ALA	3.3
33	DL	31	GLY	3.3
52	D4	23	ILE	3.3
24	DC	244	VAL	3.3
1	CA	1138	G	3.3
26	DE	40	ARG	3.3
7	AG	82	SER	3.3
27	DF	125	GLY	3.3
41	DT	39	THR	3.3
21	AU	4	LYS	3.3
40	DS	49	LYS	3.3
1	CA	1031	C	3.3

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Mol	Chain	Res	Type	RSRZ
1	AA	85	U	3.3
19	AS	60	PHE	3.3
2	AB	24	PRO	3.3
13	AM	91	ARG	3.3
21	CU	23	GLU	3.3
30	DI	69	VAL	3.3
10	AJ	75	ASP	3.3
30	BI	41	PHE	3.3
51	D3	13	PHE	3.3
39	DR	43	ASN	3.3
2	CB	32	GLY	3.3
14	CN	76	PHE	3.3
22	DA	344	A	3.3
10	AJ	91	ASP	3.3
13	CM	26	LYS	3.3
16	CP	81	ALA	3.3
40	DS	5	ALA	3.3
21	AU	23	GLU	3.3
33	DL	90	VAL	3.3
2	CB	115	ASP	3.3
10	AJ	35	GLN	3.2
3	CC	86	LEU	3.2
2	AB	25	LYS	3.2
41	DT	69	ARG	3.2
49	D1	49	LYS	3.2
1	AA	78	A	3.2
2	CB	165	ALA	3.2
22	BA	1172	C	3.2
40	DS	20	VAL	3.2
41	DT	67	VAL	3.2
44	DW	56	HIS	3.2
2	CB	128	LEU	3.2
49	D1	30	PRO	3.2
13	CM	61	LYS	3.2
30	BI	20	SER	3.2
22	BA	277	G	3.2
2	CB	225	SER	3.2
29	BH	72	ILE	3.2
29	DH	18	GLN	3.2
29	DH	94	ILE	3.2
36	DO	87	ILE	3.2
17	CQ	43	LEU	3.2

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Mol	Chain	Res	Type	RSRZ
22	BA	2181	U	3.2
24	DC	238	ASN	3.2
22	DA	1084	A	3.2
26	DE	131	THR	3.2
2	CB	13	VAL	3.2
28	DG	82	PHE	3.2
42	DU	34	ILE	3.2
44	DW	36	ILE	3.2
22	DA	12	U	3.2
3	CC	205	GLU	3.2
5	AE	102	THR	3.2
24	BC	235	GLU	3.2
14	CN	64	ARG	3.2
27	DF	54	ALA	3.2
30	BI	48	ILE	3.2
39	DR	38	VAL	3.2
22	DA	2307	G	3.2
21	AU	20	ARG	3.2
40	DS	84	ARG	3.2
3	CC	172	VAL	3.2
13	CM	60	ALA	3.2
17	CQ	60	ILE	3.2
28	DG	42	VAL	3.2
22	DA	549	G	3.2
35	DN	100	CYS	3.2
22	DA	645	C	3.2
30	DI	25	PRO	3.2
10	CJ	22	THR	3.2
1	CA	204	G	3.2
11	AK	42	GLY	3.2
17	CQ	37	ILE	3.2
14	CN	98	ALA	3.2
28	DG	6	ALA	3.2
9	AI	128	LYS	3.2
14	CN	61	ASN	3.2
28	DG	100	ASN	3.2
2	CB	79	VAL	3.2
29	BH	139	PHE	3.2
37	DP	96	LEU	3.2
9	CI	5	TYR	3.2
35	DN	118	ARG	3.2
1	CA	950	U	3.1

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Mol	Chain	Res	Type	RSRZ
14	CN	71	GLY	3.1
48	D0	34	GLY	3.1
30	DI	40	ALA	3.1
38	DQ	28	SER	3.1
9	CI	64	ILE	3.1
22	DA	2306	C	3.1
10	CJ	89	ARG	3.1
13	AM	83	GLY	3.1
34	DM	135	VAL	3.1
22	BA	2108	A	3.1
27	DF	120	SER	3.1
40	DS	32	ALA	3.1
3	AC	99	GLN	3.1
13	CM	84	CYS	3.1
27	DF	164	GLU	3.1
2	CB	66	ILE	3.1
10	CJ	50	THR	3.1
29	DH	13	GLY	3.1
35	DN	28	LEU	3.1
2	CB	28	PRO	3.1
19	CS	71	GLY	3.1
36	DO	58	ILE	3.1
10	CJ	12	ALA	3.1
14	CN	75	LYS	3.1
39	DR	34	GLU	3.1
1	CA	202	G	3.1
2	CB	190	SER	3.1
9	CI	14	SER	3.1
24	DC	47	ARG	3.1
16	CP	57	ILE	3.1
34	DM	80	VAL	3.1
19	CS	43	MET	3.1
2	CB	103	TRP	3.1
25	DD	185	ASN	3.1
26	DE	87	ALA	3.1
39	DR	19	THR	3.1
19	CS	22	VAL	3.1
1	AA	88	U	3.1
1	CA	1235	U	3.1
30	DI	130	GLY	3.1
41	DT	75	GLY	3.1
14	CN	16	ALA	3.1

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Mol	Chain	Res	Type	RSRZ
27	DF	157	THR	3.1
33	DL	81	ASP	3.1
2	CB	67	LEU	3.1
30	DI	20	SER	3.1
1	CA	955	U	3.1
24	DC	102	TYR	3.1
3	CC	92	ASP	3.1
21	AU	36	PHE	3.1
42	DU	20	LYS	3.1
21	AU	31	VAL	3.1
37	DP	30	TRP	3.1
2	AB	150	ILE	3.1
25	DD	103	ASP	3.1
28	DG	21	GLN	3.1
35	DN	75	ILE	3.1
36	DO	25	ARG	3.1
45	DX	17	ARG	3.1
2	CB	99	MET	3.1
3	AC	169	GLU	3.1
9	CI	129	ARG	3.1
25	DD	187	LEU	3.1
26	DE	118	LEU	3.1
28	DG	52	GLY	3.1
14	CN	56	PRO	3.1
21	AU	40	PRO	3.1
7	CG	89	GLU	3.0
10	CJ	66	GLU	3.0
28	DG	166	GLU	3.0
39	DR	24	LYS	3.0
2	AB	160	LEU	3.0
3	CC	171	ARG	3.0
19	AS	15	LEU	3.0
2	CB	214	GLY	3.0
27	DF	96	TRP	3.0
42	DU	89	GLY	3.0
2	CB	114	LYS	3.0
10	AJ	63	ASP	3.0
14	CN	69	PRO	3.0
24	DC	241	LYS	3.0
42	DU	49	PRO	3.0
52	D4	20	ASP	3.0
22	DA	1870	C	3.0

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Mol	Chain	Res	Type	RSRZ
9	CI	51	LEU	3.0
39	DR	53	PHE	3.0
34	DM	36	VAL	3.0
30	BI	5	GLN	3.0
43	DV	63	ILE	3.0
22	BA	2148	G	3.0
17	CQ	22	VAL	3.0
2	AB	17	HIS	3.0
9	CI	10	ARG	3.0
1	CA	1313	U	3.0
43	DV	68	LYS	3.0
2	AB	201	GLY	3.0
9	CI	31	GLN	3.0
17	AQ	13	SER	3.0
39	DR	31	GLU	3.0
44	DW	39	GLN	3.0
34	DM	72	PRO	3.0
2	AB	56	LEU	3.0
29	BH	112	LYS	3.0
50	D2	36	ALA	3.0
22	DA	931	U	3.0
52	D4	32	LYS	3.0
2	AB	180	ILE	3.0
27	DF	44	ALA	3.0
27	DF	175	PRO	3.0
29	DH	148	ALA	3.0
35	DN	20	MET	3.0
44	DW	14	ASP	3.0
21	AU	3	ILE	3.0
9	CI	8	THR	3.0
21	AU	35	GLU	3.0
19	CS	16	LYS	3.0
33	DL	80	SER	3.0
41	DT	68	LYS	3.0
7	CG	43	TYR	3.0
3	CC	43	THR	3.0
14	CN	97	LYS	3.0
10	AJ	10	LEU	3.0
34	DM	33	LEU	3.0
37	DP	7	LEU	3.0
39	DR	25	LEU	3.0
3	AC	65	VAL	3.0

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Mol	Chain	Res	Type	RSRZ
13	CM	92	ARG	3.0
26	DE	43	THR	3.0
8	CH	124	ILE	3.0
9	AI	27	ILE	3.0
34	DM	31	PHE	3.0
22	DA	546	U	3.0
26	DE	186	VAL	3.0
2	AB	44	LYS	3.0
24	BC	236	GLY	3.0
2	AB	166	ASP	3.0
2	CB	41	ASN	3.0
2	CB	144	GLU	3.0
2	CB	150	ILE	3.0
3	CC	27	GLU	3.0
11	AK	95	THR	3.0
30	DI	3	LYS	3.0
44	DW	71	LYS	3.0
19	AS	8	PRO	2.9
28	DG	53	PRO	2.9
2	CB	113	LEU	2.9
6	CF	8	PHE	2.9
26	DE	183	PHE	2.9
1	CA	1312	G	2.9
22	DA	1459	G	2.9
29	DH	147	VAL	2.9
42	DU	98	ASN	2.9
22	DA	2602	A	2.9
24	DC	240	GLY	2.9
38	DQ	81	GLY	2.9
13	AM	114	PRO	2.9
13	CM	95	PRO	2.9
2	AB	151	LYS	2.9
38	DQ	105	PHE	2.9
39	DR	35	PHE	2.9
42	DU	39	ASN	2.9
29	DH	40	THR	2.9
36	DO	24	THR	2.9
3	CC	52	SER	2.9
30	DI	39	LYS	2.9
37	DP	42	PHE	2.9
29	DH	19	VAL	2.9
36	DO	103	VAL	2.9

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Mol	Chain	Res	Type	RSRZ
38	DQ	87	VAL	2.9
43	DV	69	GLU	2.9
19	AS	31	ARG	2.9
41	DT	30	ILE	2.9
19	AS	47	THR	2.9
30	BI	59	THR	2.9
13	CM	24	VAL	2.9
28	DG	130	ILE	2.9
36	DO	113	ALA	2.9
39	DR	28	ALA	2.9
2	AB	50	ASN	2.9
27	DF	77	LYS	2.9
2	AB	192	PRO	2.9
7	AG	81	GLY	2.9
28	DG	96	ALA	2.9
42	DU	17	ASP	2.9
2	AB	41	ASN	2.9
3	CC	90	VAL	2.9
51	D3	22	LYS	2.9
2	CB	110	ILE	2.9
39	DR	59	ILE	2.9
22	DA	1089	A	2.9
2	CB	95	TRP	2.9
7	AG	79	VAL	2.9
27	DF	131	VAL	2.9
43	DV	60	VAL	2.9
30	DI	62	ALA	2.9
36	DO	26	LEU	2.9
28	DG	41	GLU	2.9
1	CA	1441	A	2.9
2	AB	157	PRO	2.9
39	DR	6	GLN	2.9
43	DV	48	MET	2.9
30	DI	137	LEU	2.9
22	DA	62	U	2.9
22	DA	1174	U	2.9
4	AD	36	ALA	2.9
26	DE	89	PRO	2.9
1	CA	1236	A	2.9
9	CI	102	PHE	2.9
10	CJ	49	PHE	2.9
13	AM	113	LYS	2.9

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Mol	Chain	Res	Type	RSRZ
30	DI	91	LYS	2.9
40	DS	68	ASP	2.9
1	CA	1255	G	2.9
19	CS	39	ILE	2.9
2	CB	153	MET	2.9
25	DD	23	PRO	2.9
49	D1	36	LYS	2.9
30	DI	127	SER	2.9
38	DQ	31	TYR	2.9
19	AS	42	ASN	2.8
2	AB	99	MET	2.8
30	DI	45	THR	2.8
35	DN	112	TYR	2.8
14	CN	29	ILE	2.8
42	DU	32	LYS	2.8
49	B1	52	LYS	2.8
33	DL	107	PHE	2.8
7	CG	37	THR	2.8
2	AB	59	ILE	2.8
3	CC	77	GLY	2.8
28	DG	120	ILE	2.8
38	BQ	86	SER	2.8
27	DF	169	LEU	2.8
40	DS	43	ALA	2.8
9	CI	41	GLU	2.8
9	CI	58	GLU	2.8
14	CN	25	GLU	2.8
7	AG	3	ARG	2.8
25	DD	24	VAL	2.8
26	DE	32	VAL	2.8
30	DI	19	PRO	2.8
31	DJ	142	ILE	2.8
41	DT	74	ILE	2.8
30	DI	87	SER	2.8
10	CJ	27	GLU	2.8
15	CO	88	ARG	2.8
2	AB	195	VAL	2.8
3	AC	97	PRO	2.8
22	DA	2104	C	2.8
44	DW	53	GLY	2.8
40	DS	97	LEU	2.8
52	D4	34	LYS	2.8

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Mol	Chain	Res	Type	RSRZ
11	CK	18	GLY	2.8
24	DC	236	GLY	2.8
25	DD	6	GLY	2.8
1	CA	958	A	2.8
35	DN	98	LEU	2.8
27	DF	118	ALA	2.8
35	DN	114	GLU	2.8
9	AI	92	SER	2.8
14	CN	57	SER	2.8
29	DH	113	SER	2.8
30	DI	81	LYS	2.8
3	CC	60	ALA	2.8
11	CK	20	ALA	2.8
8	CH	102	VAL	2.8
22	DA	1118	C	2.8
2	CB	185	ILE	2.8
3	CC	170	GLY	2.8
7	CG	34	LYS	2.8
42	DU	40	LEU	2.8
52	B4	29	ALA	2.8
26	DE	169	VAL	2.8
8	AH	1	SER	2.8
40	DS	16	LYS	2.8
25	DD	96	ILE	2.8
3	CC	61	LYS	2.8
3	CC	106	ARG	2.8
2	AB	64	GLY	2.8
9	CI	106	ASP	2.8
19	AS	9	PHE	2.8
2	CB	200	PRO	2.8
19	CS	41	PRO	2.8
22	DA	1079	C	2.8
24	DC	243	PRO	2.8
2	AB	72	LYS	2.8
44	DW	77	LYS	2.8
19	CS	67	GLY	2.8
12	CL	22	ALA	2.8
22	DA	1043	C	2.8
27	DF	111	ARG	2.8
29	BH	64	ALA	2.8
29	DH	51	ARG	2.8
1	CA	1242	G	2.8

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Mol	Chain	Res	Type	RSRZ
22	DA	329	G	2.8
9	CI	61	ASP	2.7
30	DI	63	ASP	2.7
30	BI	114	ALA	2.7
30	DI	16	MET	2.7
5	AE	101	GLY	2.7
22	DA	343	C	2.7
26	DE	41	GLN	2.7
10	CJ	92	LEU	2.7
19	AS	30	LEU	2.7
2	AB	168	GLU	2.7
7	CG	14	ASP	2.7
7	CG	44	SER	2.7
9	AI	120	ALA	2.7
27	DF	83	PRO	2.7
30	BI	134	SER	2.7
25	DD	4	LEU	2.7
29	DH	139	PHE	2.7
30	DI	128	ILE	2.7
36	DO	66	GLY	2.7
7	AG	77	ARG	2.7
2	AB	164	ASP	2.7
2	AB	138	ARG	2.7
48	D0	35	GLU	2.7
26	DE	193	VAL	2.7
3	CC	154	GLY	2.7
20	CT	3	ILE	2.7
41	DT	65	GLY	2.7
7	CG	147	ASN	2.7
30	DI	38	CYS	2.7
42	DU	46	LYS	2.7
40	DS	33	LEU	2.7
16	CP	17	TYR	2.7
19	AS	46	LEU	2.7
26	DE	179	SER	2.7
7	CG	52	ARG	2.7
41	DT	84	TYR	2.7
45	DX	16	ASN	2.7
22	DA	2062	A	2.7
21	AU	10	PRO	2.7
39	DR	101	ILE	2.7
1	AA	79	G	2.7

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Mol	Chain	Res	Type	RSRZ
14	AN	54	SER	2.7
28	DG	44	HIS	2.7
27	DF	41	GLU	2.7
40	DS	4	ILE	2.7
39	DR	60	LYS	2.7
41	DT	24	MET	2.7
38	DQ	38	VAL	2.7
13	CM	88	LEU	2.7
21	CU	7	GLU	2.7
30	BI	44	LYS	2.7
43	DV	84	PRO	2.7
17	CQ	45	VAL	2.7
24	DC	249	VAL	2.7
49	D1	31	GLU	2.7
11	AK	33	ILE	2.7
25	DD	14	ILE	2.7
44	DW	38	ARG	2.7
1	CA	1032	G	2.7
16	CP	60	TRP	2.7
11	CK	99	LEU	2.6
27	DF	76	PHE	2.6
28	DG	137	LYS	2.6
33	DL	19	LEU	2.6
35	DN	77	ALA	2.6
36	DO	117	PHE	2.6
2	CB	81	ASP	2.6
48	D0	24	VAL	2.6
26	DE	60	TRP	2.6
47	DZ	55	LYS	2.6
7	CG	142	ARG	2.6
30	DI	117	THR	2.6
30	DI	54	ILE	2.6
7	CG	129	ASN	2.6
40	DS	34	ASP	2.6
51	D3	23	HIS	2.6
28	DG	168	VAL	2.6
9	AI	31	GLN	2.6
24	BC	239	PHE	2.6
26	DE	88	ARG	2.6
26	DE	90	GLN	2.6
2	CB	155	GLY	2.6
51	D3	9	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
5	CE	79	THR	2.6
25	DD	8	LYS	2.6
28	DG	50	THR	2.6
34	DM	1	MET	2.6
16	CP	20	VAL	2.6
22	BA	1072	C	2.6
45	DX	12	VAL	2.6
9	CI	117	LEU	2.6
27	DF	151	LEU	2.6
45	DX	20	ALA	2.6
2	AB	199	ILE	2.6
2	CB	159	ALA	2.6
2	CB	192	PRO	2.6
10	AJ	8	ILE	2.6
13	CM	77	LYS	2.6
16	AP	4	ILE	2.6
30	BI	75	ALA	2.6
22	BA	613	A	2.6
22	DA	101	A	2.6
25	DD	29	VAL	2.6
2	CB	134	LEU	2.6
29	BH	55	GLU	2.6
42	DU	61	GLU	2.6
14	CN	3	GLN	2.6
19	CS	21	ALA	2.6
30	BI	53	PRO	2.6
2	CB	20	ARG	2.6
24	BC	237	ARG	2.6
30	BI	138	VAL	2.6
51	D3	14	LYS	2.6
1	CA	94	G	2.6
1	CA	1036	A	2.6
22	DA	1116	G	2.6
29	DH	2	GLN	2.6
10	AJ	74	VAL	2.6
27	DF	173	ASP	2.6
30	BI	4	VAL	2.6
29	DH	83	LYS	2.6
22	DA	2402	U	2.6
25	DD	27	ILE	2.6
26	DE	150	THR	2.6
27	DF	106	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
22	DA	1538	G	2.6
26	DE	126	VAL	2.6
39	DR	23	GLU	2.6
1	CA	207	C	2.6
28	DG	87	GLN	2.6
50	D2	12	ARG	2.6
52	D4	28	SER	2.6
16	AP	45	GLU	2.6
22	DA	1205	A	2.6
28	DG	19	ASN	2.6
41	BT	24	MET	2.6
2	AB	224	ARG	2.6
45	DX	2	ARG	2.6
3	CC	144	GLY	2.6
10	AJ	100	ILE	2.6
13	CM	76	ILE	2.6
38	DQ	43	GLN	2.6
47	DZ	1	ALA	2.6
2	CB	31	PHE	2.6
14	CN	23	ARG	2.5
2	CB	25	LYS	2.5
31	BJ	142	ILE	2.5
19	CS	49	ALA	2.5
36	DO	41	ALA	2.5
43	DV	6	ALA	2.5
30	BI	97	VAL	2.5
36	DO	28	VAL	2.5
13	CM	23	GLY	2.5
13	CM	57	ASP	2.5
27	DF	32	LYS	2.5
38	DQ	90	ASP	2.5
9	AI	19	PHE	2.5
2	CB	26	MET	2.5
7	CG	83	THR	2.5
14	CN	31	SER	2.5
35	DN	70	THR	2.5
41	BT	1	MET	2.5
42	DU	3	LYS	2.5
22	BA	1065	U	2.5
35	DN	23	ASN	2.5
3	CC	91	ALA	2.5
7	CG	146	ALA	2.5

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Mol	Chain	Res	Type	RSRZ
11	AK	20	ALA	2.5
26	DE	5	LEU	2.5
45	DX	32	LEU	2.5
1	CA	81	A	2.5
29	DH	14	SER	2.5
40	DS	37	THR	2.5
2	AB	23	ASN	2.5
29	DH	27	ARG	2.5
2	AB	52	ALA	2.5
3	AC	90	VAL	2.5
17	CQ	58	VAL	2.5
20	CT	7	LYS	2.5
22	DA	1450	G	2.5
22	DA	2180	U	2.5
37	DP	40	GLN	2.5
40	DS	21	ALA	2.5
42	DU	58	VAL	2.5
46	DY	32	ALA	2.5
52	D4	7	VAL	2.5
2	AB	213	LEU	2.5
14	CN	22	LYS	2.5
19	AS	73	PHE	2.5
28	DG	132	LEU	2.5
26	DE	173	THR	2.5
27	DF	138	PRO	2.5
30	DI	31	GLY	2.5
49	D1	21	THR	2.5
3	CC	139	ASN	2.5
24	DC	99	GLU	2.5
26	DE	98	LYS	2.5
27	DF	98	PHE	2.5
1	AA	1032	G	2.5
28	DG	1	SER	2.5
29	DH	77	THR	2.5
30	BI	99	LYS	2.5
44	DW	61	LYS	2.5
2	CB	117	GLU	2.5
2	AB	167	HIS	2.5
31	DJ	119	PHE	2.5
41	DT	91	GLN	2.5
10	CJ	25	ILE	2.5
3	CC	202	PHE	2.5

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Mol	Chain	Res	Type	RSRZ
40	DS	101	SER	2.5
8	CH	85	TYR	2.5
6	CF	74	LEU	2.5
13	CM	51	GLN	2.5
30	BI	137	LEU	2.5
18	CR	63	TYR	2.5
19	AS	37	SER	2.5
46	DY	33	ALA	2.5
26	DE	171	ASP	2.5
27	DF	6	TYR	2.5
44	BW	40	ARG	2.5
46	DY	34	SER	2.5
28	DG	56	GLY	2.5
2	AB	170	ILE	2.5
9	CI	20	ILE	2.5
27	DF	33	ILE	2.5
1	AA	412	A	2.5
7	AG	78	ARG	2.5
19	AS	32	THR	2.5
19	AS	55	GLN	2.5
28	DG	105	SER	2.5
52	D4	2	LYS	2.5
9	CI	9	GLY	2.5
9	CI	90	ASP	2.5
38	DQ	16	ILE	2.5
32	DK	110	GLU	2.5
26	DE	200	LEU	2.5
46	BY	23	ARG	2.5
13	AM	31	ALA	2.5
48	D0	55	ALA	2.5
21	CU	37	TYR	2.5
6	CF	6	ILE	2.5
13	CM	81	ASP	2.5
22	DA	1064	C	2.5
27	DF	17	THR	2.5
50	D2	17	GLY	2.5
30	DI	100	ILE	2.5
42	DU	71	ILE	2.5
37	DP	33	GLU	2.5
30	DI	139	VAL	2.5
14	CN	51	PRO	2.4
32	DK	33	ALA	2.4

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Mol	Chain	Res	Type	RSRZ
22	DA	653	U	2.4
35	DN	9	GLN	2.4
22	BA	2885	G	2.4
23	DB	18	G	2.4
3	AC	148	ILE	2.4
1	CA	1027	C	2.4
45	DX	48	LEU	2.4
7	CG	51	GLN	2.4
9	CI	125	GLN	2.4
19	AS	10	ILE	2.4
7	CG	139	ASP	2.4
13	CM	27	THR	2.4
10	AJ	90	LEU	2.4
22	DA	467	G	2.4
3	CC	31	ASN	2.4
36	DO	59	ALA	2.4
41	DT	13	ALA	2.4
41	DT	59	ASN	2.4
3	AC	80	GLY	2.4
9	CI	63	TYR	2.4
10	CJ	65	TYR	2.4
18	AR	50	TYR	2.4
30	BI	19	PRO	2.4
17	AQ	15	LYS	2.4
17	CQ	38	LYS	2.4
27	DF	178	LYS	2.4
3	CC	129	PHE	2.4
43	DV	44	HIS	2.4
5	AE	114	LEU	2.4
10	AJ	14	ASP	2.4
34	DM	41	LEU	2.4
3	AC	168	ARG	2.4
26	DE	47	LYS	2.4
52	D4	31	PRO	2.4
11	AK	83	VAL	2.4
38	DQ	94	LEU	2.4
39	DR	92	TRP	2.4
42	DU	48	VAL	2.4
9	CI	43	ALA	2.4
27	DF	61	GLY	2.4
32	DK	77	ILE	2.4
10	CJ	52	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
22	DA	1117	C	2.4
26	DE	4	VAL	2.4
3	AC	188	ALA	2.4
16	AP	22	ALA	2.4
22	DA	790	U	2.4
2	AB	16	GLY	2.4
13	CM	22	TYR	2.4
28	BG	25	ILE	2.4
8	CH	60	LEU	2.4
13	CM	18	LEU	2.4
30	DI	78	LEU	2.4
38	DQ	7	VAL	2.4
40	DS	98	LYS	2.4
19	AS	63	ASP	2.4
26	DE	191	ASP	2.4
27	DF	53	ALA	2.4
3	AC	81	GLU	2.4
3	CC	104	GLU	2.4
33	DL	114	GLY	2.4
22	BA	2182	U	2.4
27	DF	84	ILE	2.4
27	DF	113	PHE	2.4
29	DH	115	VAL	2.4
37	BP	65	ASN	2.4
17	CQ	5	ARG	2.4
50	D2	30	VAL	2.4
3	CC	94	ALA	2.4
31	DJ	63	ALA	2.4
1	CA	466	A	2.4
3	AC	100	ILE	2.4
7	AG	150	PHE	2.4
20	CT	84	LYS	2.4
30	DI	52	LEU	2.4
52	D4	13	ASN	2.4
39	DR	12	HIS	2.4
2	AB	156	LEU	2.4
2	AB	216	VAL	2.4
2	CB	21	TYR	2.4
28	DG	68	ARG	2.4
29	BH	83	LYS	2.4
33	DL	91	ASP	2.4
13	CM	59	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
50	D2	42	LEU	2.4
24	BC	238	ASN	2.4
39	DR	36	ALA	2.4
41	DT	46	ALA	2.4
48	D0	23	ALA	2.4
49	D1	29	LYS	2.4
21	AU	12	ASP	2.4
30	DI	104	GLN	2.4
40	DS	67	ASP	2.4
46	DY	28	LEU	2.4
52	D4	11	CYS	2.4
40	DS	3	THR	2.4
45	DX	18	SER	2.4
22	DA	1170	C	2.4
22	DA	2313	C	2.4
5	CE	157	GLY	2.4
20	CT	23	ARG	2.4
22	BA	654	A	2.4
38	DQ	41	ALA	2.4
44	DW	67	LYS	2.4
24	DC	201	LEU	2.4
29	DH	117	LEU	2.4
37	DP	29	VAL	2.4
22	DA	93	G	2.3
39	DR	45	GLU	2.3
9	AI	16	ALA	2.3
22	DA	1065	U	2.3
9	CI	86	LEU	2.3
28	BG	116	LEU	2.3
28	DG	106	LEU	2.3
39	DR	98	ILE	2.3
50	D2	18	PHE	2.3
22	DA	1046	A	2.3
2	CB	151	LYS	2.3
27	DF	109	ARG	2.3
7	CG	138	GLU	2.3
33	DL	68	SER	2.3
1	CA	1013	G	2.3
26	DE	54	GLY	2.3
10	AJ	76	ILE	2.3
19	AS	44	ILE	2.3
35	DN	21	PHE	2.3

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Mol	Chain	Res	Type	RSRZ
42	DU	1	ALA	2.3
10	AJ	98	VAL	2.3
28	DG	9	VAL	2.3
3	AC	205	GLU	2.3
21	CU	9	GLU	2.3
27	DF	139	GLU	2.3
30	BI	120	ASP	2.3
2	AB	19	THR	2.3
2	AB	124	THR	2.3
19	AS	62	THR	2.3
9	CI	62	LEU	2.3
45	DX	29	LEU	2.3
35	DN	42	LYS	2.3
10	CJ	35	GLN	2.3
22	DA	805	G	2.3
22	DA	1168	G	2.3
1	CA	1209	C	2.3
2	AB	191	ASP	2.3
13	CM	39	ALA	2.3
14	CN	20	PHE	2.3
19	CS	75	PRO	2.3
4	AD	21	LYS	2.3
36	DO	88	LYS	2.3
44	DW	74	LYS	2.3
13	CM	91	ARG	2.3
17	AQ	52	CYS	2.3
2	AB	43	GLU	2.3
2	AB	152	ASP	2.3
22	DA	1202	G	2.3
13	AM	2	ARG	2.3
19	CS	61	VAL	2.3
21	CU	34	ARG	2.3
46	DY	40	SER	2.3
37	DP	114	ASN	2.3
22	DA	1094	U	2.3
22	DA	1176	U	2.3
27	BF	77	LYS	2.3
27	DF	99	PHE	2.3
27	DF	124	ARG	2.3
29	DH	138	VAL	2.3
2	CB	45	THR	2.3
7	CG	40	SER	2.3

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Mol	Chain	Res	Type	RSRZ
39	DR	66	HIS	2.3
40	DS	39	THR	2.3
46	DY	10	SER	2.3
30	BI	24	GLY	2.3
44	BW	51	GLY	2.3
44	DW	6	GLY	2.3
13	CM	44	ILE	2.3
41	DT	7	LEU	2.3
25	DD	104	VAL	2.3
27	BF	74	ALA	2.3
2	CB	157	PRO	2.3
2	AB	190	SER	2.3
30	DI	89	SER	2.3
9	CI	118	ARG	2.3
8	CH	44	PHE	2.3
49	D1	33	LEU	2.3
1	AA	1441	A	2.3
43	DV	22	ALA	2.3
48	D0	29	VAL	2.3
25	DD	114	LYS	2.3
26	DE	155	GLU	2.3
37	DP	110	LYS	2.3
26	DE	9	GLN	2.3
26	DE	44	ARG	2.3
35	DN	45	ARG	2.3
3	CC	123	LEU	2.3
27	DF	35	LEU	2.3
27	DF	40	GLY	2.3
31	DJ	92	MET	2.3
22	DA	33	C	2.3
22	DA	1045	C	2.3
22	DA	1278	C	2.3
30	DI	13	ALA	2.3
43	DV	23	ALA	2.3
26	DE	57	LYS	2.3
44	DW	43	LYS	2.3
7	CG	101	ARG	2.3
21	AU	9	GLU	2.3
22	BA	2151	U	2.3
22	DA	1420	A	2.3
42	DU	21	ARG	2.3
43	DV	82	TYR	2.3

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Mol	Chain	Res	Type	RSRZ
7	CG	56	SER	2.3
13	CM	66	GLY	2.3
26	DE	134	LEU	2.3
51	D3	56	LEU	2.3
14	CN	43	ALA	2.3
28	DG	72	ASN	2.3
38	DQ	34	ALA	2.3
21	AU	6	ARG	2.3
21	CU	44	ARG	2.3
41	DT	37	ASP	2.3
11	AK	81	LEU	2.3
24	BC	234	GLY	2.3
29	DH	16	GLY	2.3
8	CH	126	CYS	2.3
22	DA	1103	A	2.3
22	DA	1530	G	2.3
48	D0	38	LEU	2.3
29	DH	8	LYS	2.3
36	DO	78	VAL	2.3
34	DM	110	GLU	2.2
42	DU	52	ASN	2.2
3	CC	73	GLY	2.2
3	CC	204	GLY	2.2
43	DV	45	ASP	2.2
13	CM	42	VAL	2.2
42	DU	82	VAL	2.2
26	DE	201	ALA	2.2
16	CP	48	GLU	2.2
42	DU	14	THR	2.2
3	AC	85	LYS	2.2
27	DF	7	TYR	2.2
40	DS	36	LEU	2.2
41	DT	64	LYS	2.2
45	DX	21	LEU	2.2
2	CB	88	GLN	2.2
2	CB	180	ILE	2.2
32	DK	103	VAL	2.2
2	AB	33	ALA	2.2
40	DS	54	ALA	2.2
42	BU	87	GLU	2.2
26	DE	189	THR	2.2
43	DV	5	ASN	2.2

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Mol	Chain	Res	Type	RSRZ
2	CB	42	LEU	2.2
24	DC	248	GLY	2.2
3	AC	82	ASP	2.2
3	AC	179	ALA	2.2
7	CG	60	ALA	2.2
30	DI	132	ALA	2.2
14	AN	42	ASN	2.2
29	BH	51	ARG	2.2
26	DE	149	ILE	2.2
27	DF	108	PRO	2.2
19	CS	5	LYS	2.2
24	DC	231	HIS	2.2
28	DG	164	ALA	2.2
2	CB	22	TRP	2.2
3	CC	126	ARG	2.2
11	AK	52	ARG	2.2
34	DM	16	ARG	2.2
47	DZ	7	THR	2.2
3	AC	201	ILE	2.2
21	AU	27	VAL	2.2
7	CG	50	ALA	2.2
8	AH	53	ASP	2.2
8	CH	92	PRO	2.2
41	DT	56	GLU	2.2
28	DG	94	ARG	2.2
34	DM	40	ARG	2.2
35	DN	96	ARG	2.2
25	DD	188	LEU	2.2
40	DS	26	GLY	2.2
27	DF	66	ILE	2.2
27	DF	148	VAL	2.2
42	DU	23	LYS	2.2
9	AI	91	GLU	2.2
10	CJ	47	GLU	2.2
48	D0	1	ALA	2.2
52	B4	12	ARG	2.2
19	CS	48	ILE	2.2
48	D0	54	ILE	2.2
19	CS	76	THR	2.2
2	AB	133	ALA	2.2
3	CC	142	ARG	2.2
29	BH	18	GLN	2.2

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Mol	Chain	Res	Type	RSRZ
39	DR	18	GLN	2.2
2	CB	68	PHE	2.2
14	CN	47	LEU	2.2
17	CQ	44	HIS	2.2
33	DL	20	GLY	2.2
38	DQ	14	LYS	2.2
40	DS	105	VAL	2.2
9	CI	111	GLU	2.2
30	BI	49	GLU	2.2
1	AA	1362	A	2.2
22	DA	932	U	2.2
33	DL	70	LYS	2.2
41	DT	71	GLY	2.2
3	AC	102	ILE	2.2
9	AI	88	GLU	2.2
24	DC	103	ILE	2.2
27	DF	163	GLU	2.2
14	CN	65	GLN	2.2
3	AC	79	LYS	2.2
24	DC	109	LEU	2.2
43	DV	37	PRO	2.2
44	DW	20	LEU	2.2
49	B1	3	GLY	2.2
27	DF	27	VAL	2.2
27	DF	59	ILE	2.2
29	BH	4	ILE	2.2
39	DR	54	VAL	2.2
18	CR	19	GLU	2.2
27	DF	82	TYR	2.2
6	CF	62	MET	2.2
41	DT	40	LYS	2.2
3	CC	196	GLY	2.2
3	CC	180	ASP	2.2
1	CA	532	A	2.1
1	CA	1360	A	2.1
10	CJ	67	ILE	2.2
14	AN	32	ASP	2.2
19	AS	23	GLU	2.1
3	CC	44	LYS	2.1
10	CJ	20	GLN	2.1
28	DG	49	LEU	2.1
30	BI	43	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
32	DK	112	PHE	2.1
35	DN	102	PHE	2.1
49	B1	51	ALA	2.1
11	AK	36	ARG	2.1
39	BR	50	GLY	2.1
16	CP	45	GLU	2.1
32	DK	39	ILE	2.1
36	DO	55	GLU	2.1
38	DQ	111	LYS	2.1
10	AJ	87	LEU	2.1
10	CJ	64	GLN	2.1
28	DG	127	GLN	2.1
32	DK	16	ALA	2.1
35	DN	115	LEU	2.1
36	DO	77	ALA	2.1
39	DR	86	GLN	2.1
46	DY	45	GLN	2.1
16	AP	48	GLU	2.1
22	DA	2667	C	2.1
23	DB	118	C	2.1
26	DE	33	VAL	2.1
35	DN	39	PRO	2.1
42	DU	69	VAL	2.1
29	DH	11	ASN	2.1
51	D3	5	THR	2.1
22	BA	1171	G	2.1
22	DA	1715	G	2.1
3	CC	145	ALA	2.1
37	DP	71	ARG	2.1
1	CA	1257	A	2.1
13	CM	87	GLY	2.1
24	DC	233	GLY	2.1
40	DS	15	GLN	2.1
3	CC	55	VAL	2.1
25	DD	5	VAL	2.1
32	DK	78	ARG	2.1
40	DS	95	ARG	2.1
8	AH	23	ALA	2.1
20	CT	40	ALA	2.1
29	DH	10	ALA	2.1
22	BA	2106	U	2.1
44	DW	64	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
9	CI	82	ILE	2.1
12	AL	24	GLU	2.1
30	BI	54	ILE	2.1
13	AM	92	ARG	2.1
2	CB	152	ASP	2.1
10	CJ	42	LEU	2.1
24	DC	45	ASN	2.1
30	DI	131	THR	2.1
34	DM	132	THR	2.1
2	AB	63	LYS	2.1
40	DS	73	LYS	2.1
27	DF	62	GLN	2.1
40	DS	2	GLU	2.1
8	CH	35	ILE	2.1
22	DA	92	U	2.1
2	AB	101	THR	2.1
22	BA	2107	G	2.1
22	DA	317	G	2.1
27	DF	2	LYS	2.1
45	DX	13	THR	2.1
3	CC	70	ALA	2.1
9	CI	73	GLY	2.1
7	CG	62	GLU	2.1
9	CI	109	GLN	2.1
1	CA	87	C	2.1
19	AS	18	VAL	2.1
20	CT	56	ILE	2.1
3	AC	143	LEU	2.1
10	CJ	90	LEU	2.1
16	AP	17	TYR	2.1
42	DU	99	SER	2.1
30	BI	95	ASP	2.1
30	DI	107	GLU	2.1
2	CB	34	ARG	2.1
9	CI	122	ARG	2.1
24	DC	237	ARG	2.1
2	AB	128	LEU	2.1
8	CH	82	LEU	2.1
27	BF	116	LEU	2.1
24	DC	258	SER	2.1
34	DM	23	GLY	2.1
2	AB	193	ASP	2.1

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Mol	Chain	Res	Type	RSRZ
19	AS	61	VAL	2.1
28	DG	131	VAL	2.1
30	DI	96	LYS	2.1
1	CA	1361	G	2.1
2	AB	113	LEU	2.1
4	AD	20	LEU	2.1
29	BH	15	LEU	2.1
27	DF	28	PRO	2.1
35	DN	27	SER	2.1
3	CC	181	ILE	2.1
11	AK	99	LEU	2.1
10	CJ	16	ARG	2.1
33	DL	132	ARG	2.1
49	D1	20	TYR	2.1
1	AA	80	A	2.1
2	AB	14	HIS	2.1
2	CB	75	ALA	2.1
8	AH	129	ALA	2.1
22	DA	1080	A	2.1
22	DA	2108	A	2.1
36	DO	11	ALA	2.1
22	DA	810	U	2.1
22	DA	1622	G	2.1
44	DW	15	SER	2.1
2	AB	22	TRP	2.1
13	CM	103	THR	2.1
27	DF	146	ASP	2.1
30	BI	111	THR	2.1
5	CE	123	LEU	2.1
8	CH	58	LEU	2.1
14	CN	68	ARG	2.1
40	DS	88	ARG	2.1
20	CT	63	LYS	2.1
25	DD	19	GLY	2.1
25	DD	166	GLY	2.1
42	DU	10	VAL	2.1
25	DD	2	ILE	2.0
1	AA	121	U	2.0
22	DA	795	C	2.0
26	DE	176	ASP	2.0
30	BI	63	ASP	2.0
1	CA	1310	G	2.0

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Mol	Chain	Res	Type	RSRZ
3	CC	88	LYS	2.0
30	BI	91	LYS	2.0
42	DU	96	LYS	2.0
21	AU	38	GLU	2.0
26	DE	51	GLU	2.0
28	DG	20	GLY	2.0
2	AB	159	ALA	2.0
33	DL	83	ALA	2.0
31	DJ	136	GLN	2.0
29	BH	47	PHE	2.0
3	CC	35	ASP	2.0
40	DS	30	SER	2.0
13	AM	84	CYS	2.0
17	AQ	69	THR	2.0
22	DA	2585	U	2.0
40	DS	94	ASP	2.0
41	DT	49	LYS	2.0
41	DT	79	ASP	2.0
31	DJ	98	GLU	2.0
10	AJ	65	TYR	2.0
12	CL	92	VAL	2.0
30	DI	32	VAL	2.0
27	DF	78	ILE	2.0
2	CB	107	ARG	2.0
10	CJ	17	LEU	2.0
24	DC	250	GLN	2.0
2	CB	162	VAL	2.0
8	CH	109	VAL	2.0
8	CH	127	TYR	2.0
22	BA	884	U	2.0
26	DE	65	THR	2.0
29	DH	20	ASN	2.0
19	CS	10	ILE	2.0
31	DJ	35	ARG	2.0
2	CB	161	PHE	2.0
10	AJ	99	GLN	2.0
38	DQ	35	PHE	2.0
42	BU	86	PHE	2.0
1	CA	1131	G	2.0
25	DD	176	ASP	2.0
3	CC	191	THR	2.0
10	CJ	68	ARG	2.0

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Mol	Chain	Res	Type	RSRZ
13	CM	36	ALA	2.0
22	BA	2109	U	2.0
26	DE	34	ALA	2.0
27	DF	37	MET	2.0
30	BI	93	ASN	2.0
30	DI	64	ARG	2.0
33	DL	75	ALA	2.0
30	DI	79	LEU	2.0
1	CA	206	C	2.0
10	CJ	81	GLU	2.0
10	CJ	36	VAL	2.0
13	AM	77	LYS	2.0
14	CN	6	LYS	2.0
24	DC	64	VAL	2.0
34	DM	103	TYR	2.0
9	CI	27	ILE	2.0
22	DA	136	G	2.0
22	BA	1078	U	2.0

## 6.2 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

## 6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
53	MG	BA	3130	1/1	0.70	0.47	25.95	205,205,205,205	0
53	MG	CA	1628	1/1	0.57	1.57	23.15	236,236,236,236	0
53	MG	DA	3033	1/1	0.59	0.53	21.53	149,149,149,149	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
53	MG	DA	3079	1/1	0.81	0.63	20.91	150,150,150,150	0
53	MG	BA	3057	1/1	0.76	0.24	19.36	161,161,161,161	0
53	MG	BA	3036	1/1	0.94	0.38	17.15	169,169,169,169	0
53	MG	BA	3040	1/1	0.96	0.21	14.97	8,8,8,8	0
53	MG	BA	3070	1/1	0.95	0.24	14.48	134,134,134,134	0
53	MG	DA	3013	1/1	0.60	0.88	12.81	185,185,185,185	0
53	MG	DA	3082	1/1	0.51	0.36	11.85	189,189,189,189	0
53	MG	BA	3135	1/1	0.96	0.43	8.59	196,196,196,196	0
53	MG	BA	3100	1/1	0.95	0.21	8.54	24,24,24,24	0
53	MG	DA	3075	1/1	0.83	0.41	6.42	140,140,140,140	0
53	MG	BA	3123	1/1	0.92	0.44	6.04	118,118,118,118	0
53	MG	BA	3082	1/1	0.86	0.19	5.95	85,85,85,85	0
53	MG	CA	1625	1/1	0.89	0.30	5.66	91,91,91,91	0
53	MG	BA	3103	1/1	0.94	0.20	5.25	7,7,7,7	0
53	MG	DA	3108	1/1	0.81	0.41	4.89	172,172,172,172	0
53	MG	DA	3076	1/1	0.89	0.28	4.79	158,158,158,158	0
53	MG	DA	3002	1/1	0.67	0.32	4.53	160,160,160,160	0
53	MG	DA	3133	1/1	0.18	0.46	4.50	239,239,239,239	0
53	MG	BA	3063	1/1	0.99	0.18	3.91	13,13,13,13	0
53	MG	CA	1607	1/1	0.71	0.26	3.39	154,154,154,154	0
53	MG	DA	3129	1/1	0.90	0.74	3.28	203,203,203,203	0
53	MG	AA	1620	1/1	0.97	0.18	3.25	28,28,28,28	0
53	MG	BA	3104	1/1	0.95	0.19	3.04	12,12,12,12	0
53	MG	BA	3108	1/1	0.95	0.18	2.98	8,8,8,8	0
53	MG	CA	1618	1/1	0.80	0.30	2.97	139,139,139,139	0
53	MG	BA	3027	1/1	0.97	0.19	2.96	109,109,109,109	0
53	MG	BA	3047	1/1	0.56	0.16	2.78	152,152,152,152	0
53	MG	AA	1639	1/1	0.90	0.16	1.67	126,126,126,126	0
53	MG	DA	3115	1/1	0.83	0.24	1.60	139,139,139,139	0
53	MG	BA	3128	1/1	0.96	0.17	1.53	7,7,7,7	0
53	MG	CA	1621	1/1	0.94	0.21	1.44	55,55,55,55	0
53	MG	BA	3133	1/1	0.96	0.18	1.44	10,10,10,10	0
53	MG	BA	3111	1/1	0.96	0.16	1.33	74,74,74,74	0
53	MG	BA	3107	1/1	0.98	0.17	1.26	8,8,8,8	0
54	ERY	BA	3136	51/51	0.96	0.23	1.24	5,11,15,16	0
53	MG	DA	3051	1/1	0.78	0.21	0.94	124,124,124,124	0
53	MG	AA	1621	1/1	0.95	0.14	0.81	91,91,91,91	0
53	MG	BA	3013	1/1	0.99	0.17	0.78	9,9,9,9	0
53	MG	BA	3049	1/1	0.96	0.16	0.57	11,11,11,11	0
53	MG	AA	1616	1/1	0.88	0.16	0.52	78,78,78,78	0
53	MG	DA	3043	1/1	0.43	0.44	0.43	213,213,213,213	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
53	MG	DA	3120	1/1	0.83	0.23	0.41	76,76,76,76	0
53	MG	BA	3115	1/1	0.91	0.15	0.37	10,10,10,10	0
53	MG	CA	1631	1/1	0.86	0.22	0.01	88,88,88,88	0
53	MG	CA	1629	1/1	0.74	0.19	-0.09	217,217,217,217	0
53	MG	DA	3128	1/1	0.93	0.24	-0.10	123,123,123,123	0
53	MG	AA	1631	1/1	0.97	0.13	-0.15	69,69,69,69	0
53	MG	BA	3008	1/1	0.97	0.14	-0.18	13,13,13,13	0
53	MG	DA	3065	1/1	0.92	0.22	-0.20	83,83,83,83	0
53	MG	CA	1616	1/1	0.87	0.35	-0.22	232,232,232,232	0
53	MG	BA	3106	1/1	0.96	0.15	-0.33	25,25,25,25	0
53	MG	DA	3084	1/1	0.62	0.18	-0.35	182,182,182,182	0
53	MG	DA	3048	1/1	0.92	0.18	-0.36	132,132,132,132	0
53	MG	AN	202	1/1	0.93	0.15	-0.43	169,169,169,169	0
53	MG	DA	3083	1/1	0.55	0.20	-0.48	224,224,224,224	0
53	MG	DA	3095	1/1	0.74	0.21	-0.48	116,116,116,116	0
53	MG	AA	1622	1/1	0.90	0.13	-0.51	97,97,97,97	0
53	MG	BA	3062	1/1	0.92	0.15	-0.60	15,15,15,15	0
53	MG	DA	3037	1/1	0.91	0.14	-0.62	81,81,81,81	0
53	MG	DA	3069	1/1	0.87	0.19	-0.65	202,202,202,202	0
53	MG	DA	3104	1/1	0.86	0.17	-0.69	34,34,34,34	0
53	MG	BA	3131	1/1	0.92	0.11	-0.74	140,140,140,140	0
53	MG	CA	1609	1/1	0.92	0.20	-0.84	80,80,80,80	0
53	MG	AA	1606	1/1	0.91	0.11	-0.90	58,58,58,58	0
53	MG	CA	1617	1/1	0.74	0.16	-0.93	280,280,280,280	0
53	MG	DA	3103	1/1	0.91	0.16	-0.96	98,98,98,98	0
53	MG	DA	3101	1/1	0.84	0.21	-0.96	104,104,104,104	0
53	MG	AA	1607	1/1	0.81	0.15	-0.97	119,119,119,119	0
53	MG	BA	3071	1/1	0.96	0.15	-1.03	112,112,112,112	0
53	MG	DB	201	1/1	0.80	0.09	-1.19	114,114,114,114	0
53	MG	DA	3100	1/1	0.92	0.19	-1.21	93,93,93,93	0
53	MG	AA	1633	1/1	0.90	0.08	-1.31	75,75,75,75	0
53	MG	BA	3037	1/1	0.98	0.13	-1.31	17,17,17,17	0
53	MG	DA	3044	1/1	0.92	0.17	-1.31	83,83,83,83	0
53	MG	DA	3112	1/1	0.91	0.14	-1.33	66,66,66,66	0
55	ZN	D4	101	1/1	0.93	0.09	-1.38	151,151,151,151	0
53	MG	BA	3012	1/1	0.97	0.15	-1.42	6,6,6,6	0
53	MG	CA	1641	1/1	0.91	0.14	-1.63	80,80,80,80	0
53	MG	BA	3017	1/1	0.97	0.09	-1.64	30,30,30,30	0
53	MG	BA	3016	1/1	0.96	0.13	-1.73	7,7,7,7	0
55	ZN	B4	101	1/1	0.99	0.10	-1.74	84,84,84,84	0
53	MG	DA	3131	1/1	0.86	0.15	-1.88	70,70,70,70	0
53	MG	CA	1606	1/1	0.93	0.14	-1.89	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
53	MG	AA	1632	1/1	0.99	0.11	-1.91	31,31,31,31	0
53	MG	DA	3061	1/1	0.84	0.11	-1.92	134,134,134,134	0
53	MG	DA	3105	1/1	0.94	0.14	-2.11	51,51,51,51	0
53	MG	DA	3040	1/1	0.91	0.17	-2.18	52,52,52,52	0
53	MG	CA	1604	1/1	0.96	0.07	-2.21	60,60,60,60	0
53	MG	DA	3068	1/1	0.89	0.11	-2.28	78,78,78,78	0
53	MG	BA	3022	1/1	0.97	0.14	-2.32	9,9,9,9	0
53	MG	BA	3113	1/1	0.96	0.09	-2.33	21,21,21,21	0
53	MG	DA	3038	1/1	0.63	0.12	-2.33	204,204,204,204	0
53	MG	DA	3024	1/1	0.88	0.15	-2.42	106,106,106,106	0
53	MG	AA	1641	1/1	0.97	0.11	-2.49	39,39,39,39	0
53	MG	DA	3106	1/1	0.64	0.15	-2.50	205,205,205,205	0
53	MG	BA	3078	1/1	0.91	0.08	-2.55	41,41,41,41	0
53	MG	CA	1642	1/1	0.97	0.05	-2.59	58,58,58,58	0
53	MG	DA	3025	1/1	0.88	0.12	-2.62	110,110,110,110	0
53	MG	DA	3052	1/1	0.93	0.10	-2.76	49,49,49,49	0
53	MG	AA	1613	1/1	0.95	0.08	-2.91	57,57,57,57	0
53	MG	DA	3050	1/1	0.74	0.13	-2.95	125,125,125,125	0
53	MG	DA	3027	1/1	0.73	0.10	-3.04	144,144,144,144	0
53	MG	BA	3005	1/1	0.95	0.10	-3.09	93,93,93,93	0
53	MG	AA	1629	1/1	0.93	0.07	-3.14	183,183,183,183	0
53	MG	BA	3002	1/1	0.86	0.11	-3.15	77,77,77,77	0
53	MG	CA	1639	1/1	0.84	0.10	-3.30	226,226,226,226	0
53	MG	DA	3012	1/1	0.93	0.09	-3.40	51,51,51,51	0
53	MG	AN	201	1/1	0.96	0.07	-3.45	105,105,105,105	0
53	MG	AA	1623	1/1	0.92	0.09	-3.57	72,72,72,72	0
53	MG	DA	3017	1/1	0.84	0.13	-3.58	68,68,68,68	0
53	MG	DA	3055	1/1	0.95	0.10	-3.84	84,84,84,84	0
53	MG	DA	3023	1/1	0.82	0.13	-3.92	78,78,78,78	0
53	MG	BA	3096	1/1	0.96	0.11	-3.94	45,45,45,45	0
53	MG	BA	3129	1/1	0.97	0.12	-4.13	14,14,14,14	0
53	MG	BA	3021	1/1	0.96	0.08	-4.29	43,43,43,43	0
53	MG	BA	3053	1/1	0.99	0.09	-4.41	9,9,9,9	0
53	MG	DA	3124	1/1	0.96	0.12	-4.42	48,48,48,48	0
53	MG	AA	1627	1/1	0.95	0.06	-4.63	78,78,78,78	0
53	MG	BA	3119	1/1	0.88	0.11	-4.72	12,12,12,12	0
53	MG	DA	3066	1/1	0.97	0.08	-4.79	48,48,48,48	0
53	MG	BB	202	1/1	0.93	0.07	-5.27	43,43,43,43	0
53	MG	BA	3068	1/1	0.99	0.10	-5.37	20,20,20,20	0
53	MG	BA	3092	1/1	0.89	0.07	-5.40	38,38,38,38	0
53	MG	BA	3024	1/1	0.98	0.11	-5.49	17,17,17,17	0
53	MG	BA	3095	1/1	0.98	0.10	-5.59	22,22,22,22	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
53	MG	BA	3065	1/1	0.97	0.09	-5.89	7,7,7,7	0
53	MG	AA	1609	1/1	0.94	0.06	-6.40	28,28,28,28	0
53	MG	BA	3117	1/1	0.94	0.08	-6.94	83,83,83,83	0
53	MG	BA	3023	1/1	0.96	0.10	-7.45	7,7,7,7	0
53	MG	BA	3109	1/1	0.98	0.06	-8.11	57,57,57,57	0
53	MG	BA	3058	1/1	0.97	0.07	-13.22	35,35,35,35	0
53	MG	CA	1613	1/1	0.84	0.11	-13.26	114,114,114,114	0
53	MG	BA	3038	1/1	0.97	0.13	-	7,7,7,7	0
53	MG	AA	1615	1/1	0.94	0.05	-	128,128,128,128	0
53	MG	BA	3033	1/1	0.88	0.16	-	10,10,10,10	0
53	MG	BA	3118	1/1	0.95	0.38	-	168,168,168,168	0
53	MG	BA	3073	1/1	0.89	0.18	-	135,135,135,135	0
53	MG	DA	3110	1/1	0.32	0.17	-	183,183,183,183	0
53	MG	BA	3120	1/1	0.95	0.10	-	53,53,53,53	0
53	MG	CA	1636	1/1	0.28	0.18	-	155,155,155,155	0
53	MG	DA	3036	1/1	0.79	0.16	-	211,211,211,211	0
53	MG	DA	3026	1/1	0.71	0.97	-	244,244,244,244	0
53	MG	DA	3046	1/1	0.90	0.10	-	76,76,76,76	0
53	MG	BA	3064	1/1	0.97	0.10	-	6,6,6,6	0
53	MG	DA	3003	1/1	0.08	1.80	-	268,268,268,268	0
53	MG	DA	3073	1/1	0.78	0.11	-	162,162,162,162	0
53	MG	BA	3094	1/1	0.98	0.09	-	24,24,24,24	0
53	MG	DA	3072	1/1	0.87	0.13	-	132,132,132,132	0
53	MG	CA	1624	1/1	0.91	0.69	-	179,179,179,179	0
53	MG	DA	3019	1/1	0.94	0.21	-	224,224,224,224	0
53	MG	AA	1614	1/1	0.91	0.15	-	197,197,197,197	0
53	MG	DA	3094	1/1	0.83	0.09	-	96,96,96,96	0
53	MG	CA	1626	1/1	0.92	0.26	-	29,29,29,29	0
53	MG	BA	3112	1/1	0.84	0.28	-	89,89,89,89	0
53	MG	CA	1640	1/1	0.67	0.21	-	149,149,149,149	0
53	MG	BA	3132	1/1	0.76	0.23	-	165,165,165,165	0
53	MG	DA	3107	1/1	0.93	0.18	-	121,121,121,121	0
53	MG	CA	1638	1/1	0.88	0.15	-	139,139,139,139	0
53	MG	DA	3016	1/1	-0.03	0.67	-	231,231,231,231	0
53	MG	BA	3059	1/1	0.87	0.22	-	109,109,109,109	0
53	MG	BA	3042	1/1	0.93	0.14	-	18,18,18,18	0
53	MG	BA	3025	1/1	0.92	0.46	-	119,119,119,119	0
53	MG	DA	3032	1/1	0.74	0.14	-	100,100,100,100	0
53	MG	BA	3101	1/1	0.95	0.12	-	64,64,64,64	0
53	MG	DA	3041	1/1	0.94	0.13	-	122,122,122,122	0
53	MG	AA	1625	1/1	0.95	0.31	-	121,121,121,121	0
53	MG	DA	3029	1/1	0.86	0.47	-	151,151,151,151	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
53	MG	DA	3099	1/1	0.00	0.23	-	180,180,180,180	0
53	MG	BB	204	1/1	0.97	0.09	-	20,20,20,20	0
53	MG	BA	3072	1/1	0.97	0.12	-	10,10,10,10	0
53	MG	DA	3006	1/1	0.67	0.21	-	267,267,267,267	0
53	MG	DA	3005	1/1	0.88	1.08	-	309,309,309,309	0
53	MG	BA	3050	1/1	0.95	0.12	-	37,37,37,37	0
53	MG	BA	3034	1/1	0.93	0.30	-	154,154,154,154	0
53	MG	DA	3030	1/1	0.92	0.17	-	111,111,111,111	0
53	MG	AA	1637	1/1	0.95	0.09	-	104,104,104,104	0
53	MG	DA	3132	1/1	0.68	0.10	-	175,175,175,175	0
53	MG	CA	1603	1/1	0.80	0.32	-	165,165,165,165	0
53	MG	DA	3121	1/1	0.93	0.23	-	119,119,119,119	0
53	MG	DA	3062	1/1	0.30	1.12	-	193,193,193,193	0
53	MG	DA	3031	1/1	0.90	0.10	-	79,79,79,79	0
53	MG	DA	3047	1/1	0.62	0.19	-	136,136,136,136	0
53	MG	BA	3088	1/1	0.98	0.05	-	11,11,11,11	0
53	MG	BA	3121	1/1	0.96	0.18	-	10,10,10,10	0
53	MG	BA	3116	1/1	0.97	0.07	-	17,17,17,17	0
53	MG	DA	3008	1/1	0.81	0.14	-	142,142,142,142	0
53	MG	BA	3084	1/1	0.86	0.20	-	50,50,50,50	0
53	MG	CA	1623	1/1	0.88	0.13	-	120,120,120,120	0
53	MG	DA	3039	1/1	0.62	0.13	-	99,99,99,99	0
53	MG	BA	3004	1/1	0.86	0.24	-	147,147,147,147	0
53	MG	CA	1608	1/1	0.89	0.15	-	51,51,51,51	0
53	MG	CA	1622	1/1	0.21	0.08	-	208,208,208,208	0
53	MG	AA	1608	1/1	0.96	0.15	-	32,32,32,32	0
53	MG	BA	3007	1/1	0.87	0.10	-	69,69,69,69	0
53	MG	AA	1636	1/1	0.92	0.08	-	25,25,25,25	0
53	MG	DA	3028	1/1	0.04	1.00	-	262,262,262,262	0
53	MG	BA	3087	1/1	0.89	0.18	-	125,125,125,125	0
53	MG	BA	3006	1/1	0.98	0.06	-	31,31,31,31	0
53	MG	BA	3056	1/1	0.97	0.24	-	233,233,233,233	0
53	MG	DA	3125	1/1	0.72	0.31	-	163,163,163,163	0
53	MG	DA	3089	1/1	0.86	0.24	-	69,69,69,69	0
53	MG	AA	1624	1/1	0.97	0.24	-	31,31,31,31	0
53	MG	DA	3123	1/1	0.86	0.20	-	165,165,165,165	0
53	MG	DA	3021	1/1	0.96	0.19	-	41,41,41,41	0
53	MG	AA	1626	1/1	0.89	0.18	-	106,106,106,106	0
53	MG	AA	1619	1/1	0.80	0.15	-	125,125,125,125	0
53	MG	BA	3003	1/1	0.94	0.12	-	42,42,42,42	0
53	MG	BA	3066	1/1	0.96	0.15	-	11,11,11,11	0
53	MG	BA	3098	1/1	0.87	0.16	-	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
53	MG	BA	3110	1/1	0.94	0.20	-	102,102,102,102	0
53	MG	DA	3022	1/1	0.82	0.27	-	162,162,162,162	0
53	MG	DA	3090	1/1	0.90	0.10	-	91,91,91,91	0
53	MG	DA	3060	1/1	0.89	0.50	-	161,161,161,161	0
53	MG	DA	3093	1/1	0.91	0.16	-	228,228,228,228	0
53	MG	CA	1610	1/1	0.74	0.09	-	175,175,175,175	0
53	MG	DA	3011	1/1	0.87	0.17	-	152,152,152,152	0
53	MG	BA	3075	1/1	0.89	0.19	-	69,69,69,69	0
53	MG	BA	3086	1/1	0.88	0.18	-	88,88,88,88	0
53	MG	CA	1615	1/1	0.90	0.09	-	124,124,124,124	0
53	MG	BA	3020	1/1	0.98	0.15	-	35,35,35,35	0
53	MG	AA	1612	1/1	0.91	0.21	-	104,104,104,104	0
53	MG	BA	3055	1/1	0.89	0.32	-	191,191,191,191	0
53	MG	BA	3060	1/1	0.90	0.48	-	174,174,174,174	0
53	MG	DA	3078	1/1	0.38	1.02	-	210,210,210,210	0
53	MG	DA	3119	1/1	0.91	0.14	-	88,88,88,88	0
53	MG	BA	3054	1/1	0.98	0.10	-	25,25,25,25	0
53	MG	BA	3074	1/1	0.98	0.15	-	18,18,18,18	0
53	MG	BA	3134	1/1	0.93	0.22	-	143,143,143,143	0
53	MG	CA	1627	1/1	0.68	0.21	-	198,198,198,198	0
53	MG	DA	3057	1/1	0.80	0.51	-	212,212,212,212	0
53	MG	DA	3007	1/1	0.73	0.44	-	253,253,253,253	0
53	MG	DA	3085	1/1	0.90	0.28	-	148,148,148,148	0
53	MG	BA	3093	1/1	0.96	0.07	-	45,45,45,45	0
53	MG	AA	1603	1/1	0.91	0.17	-	121,121,121,121	0
53	MG	BB	203	1/1	0.93	0.12	-	17,17,17,17	0
53	MG	BA	3044	1/1	0.99	0.22	-	14,14,14,14	0
53	MG	DA	3091	1/1	0.91	0.38	-	200,200,200,200	0
53	MG	DA	3102	1/1	0.95	0.06	-	62,62,62,62	0
53	MG	BA	3124	1/1	0.98	0.16	-	16,16,16,16	0
53	MG	AA	1617	1/1	0.83	0.69	-	203,203,203,203	0
53	MG	DC	301	1/1	0.88	0.12	-	124,124,124,124	0
53	MG	DA	3004	1/1	0.88	0.12	-	80,80,80,80	0
53	MG	BA	3011	1/1	0.84	0.30	-	131,131,131,131	0
53	MG	CA	1605	1/1	0.95	0.21	-	40,40,40,40	0
53	MG	CA	1630	1/1	0.84	0.09	-	123,123,123,123	0
53	MG	BA	3051	1/1	0.99	0.12	-	10,10,10,10	0
53	MG	CA	1633	1/1	0.83	0.10	-	77,77,77,77	0
53	MG	BA	3026	1/1	0.98	0.07	-	19,19,19,19	0
53	MG	DA	3067	1/1	0.97	0.10	-	38,38,38,38	0
53	MG	DA	3070	1/1	0.81	0.11	-	56,56,56,56	0
53	MG	BA	3081	1/1	0.98	0.08	-	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
53	MG	AA	1610	1/1	0.87	0.12	-	210,210,210,210	0
53	MG	DA	3118	1/1	0.89	0.12	-	70,70,70,70	0
53	MG	BA	3089	1/1	0.89	0.09	-	30,30,30,30	0
53	MG	DA	3045	1/1	0.60	0.49	-	233,233,233,233	0
53	MG	AA	1634	1/1	0.72	0.15	-	199,199,199,199	0
53	MG	AA	1630	1/1	0.89	0.14	-	87,87,87,87	0
53	MG	DA	3035	1/1	0.86	0.17	-	84,84,84,84	0
53	MG	DA	3097	1/1	0.66	0.25	-	116,116,116,116	0
53	MG	CA	1620	1/1	0.66	0.10	-	170,170,170,170	0
53	MG	DA	3010	1/1	0.60	0.51	-	171,171,171,171	0
53	MG	DA	3086	1/1	0.88	0.16	-	94,94,94,94	0
53	MG	BA	3014	1/1	0.94	0.21	-	42,42,42,42	0
53	MG	DA	3114	1/1	0.81	0.16	-	123,123,123,123	0
53	MG	AA	1618	1/1	0.74	0.09	-	164,164,164,164	0
53	MG	DA	3127	1/1	0.58	0.57	-	199,199,199,199	0
53	MG	DA	3111	1/1	0.22	0.41	-	127,127,127,127	0
53	MG	BA	3009	1/1	0.95	0.13	-	13,13,13,13	0
53	MG	BA	3031	1/1	0.95	0.09	-	34,34,34,34	0
53	MG	AA	1611	1/1	0.96	0.06	-	54,54,54,54	0
53	MG	DA	3018	1/1	0.63	0.25	-	232,232,232,232	0
53	MG	DA	3058	1/1	0.57	0.49	-	235,235,235,235	0
53	MG	BA	3076	1/1	0.95	0.06	-	32,32,32,32	0
53	MG	CA	1637	1/1	0.72	0.13	-	63,63,63,63	0
53	MG	DA	3096	1/1	0.89	0.09	-	92,92,92,92	0
53	MG	BA	3019	1/1	0.96	0.31	-	10,10,10,10	0
53	MG	BA	3083	1/1	0.80	0.20	-	113,113,113,113	0
53	MG	AA	1605	1/1	0.96	0.16	-	35,35,35,35	0
53	MG	BA	3043	1/1	0.97	0.12	-	29,29,29,29	0
53	MG	AA	1604	1/1	0.82	0.14	-	120,120,120,120	0
53	MG	AA	1628	1/1	0.84	0.18	-	183,183,183,183	0
53	MG	CA	1614	1/1	0.51	1.07	-	231,231,231,231	0
53	MG	DA	3113	1/1	0.94	0.07	-	96,96,96,96	0
53	MG	BA	3127	1/1	0.97	0.15	-	15,15,15,15	0
53	MG	DA	3122	1/1	0.77	0.11	-	72,72,72,72	0
53	MG	BA	3114	1/1	0.91	0.16	-	144,144,144,144	0
53	MG	DA	3098	1/1	0.82	0.15	-	118,118,118,118	0
53	MG	DA	3117	1/1	0.94	0.17	-	71,71,71,71	0
53	MG	BA	3010	1/1	0.95	0.08	-	19,19,19,19	0
53	MG	BA	3028	1/1	0.91	0.11	-	32,32,32,32	0
53	MG	DA	3081	1/1	0.97	0.10	-	92,92,92,92	0
53	MG	CA	1634	1/1	0.93	0.12	-	153,153,153,153	0
53	MG	BA	3105	1/1	0.98	0.14	-	9,9,9,9	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
53	MG	BA	3122	1/1	0.93	0.10	-	21,21,21,21	0
53	MG	DA	3109	1/1	0.10	0.71	-	176,176,176,176	0
53	MG	BA	3041	1/1	0.98	0.19	-	13,13,13,13	0
53	MG	DA	3080	1/1	0.91	0.15	-	137,137,137,137	0
53	MG	DA	3015	1/1	0.62	0.41	-	145,145,145,145	0
53	MG	BA	3090	1/1	0.85	0.07	-	73,73,73,73	0
53	MG	DA	3074	1/1	0.60	1.19	-	240,240,240,240	0
53	MG	BA	3035	1/1	0.97	0.12	-	11,11,11,11	0
53	MG	DA	3042	1/1	0.83	0.17	-	94,94,94,94	0
53	MG	BA	3001	1/1	0.92	0.14	-	110,110,110,110	0
53	MG	DA	3092	1/1	0.70	0.12	-	121,121,121,121	0
53	MG	BA	3125	1/1	0.89	0.18	-	41,41,41,41	0
53	MG	DJ	201	1/1	-0.32	3.06	-	284,284,284,284	0
53	MG	DC	302	1/1	0.88	0.27	-	121,121,121,121	0
53	MG	BA	3067	1/1	0.96	0.12	-	10,10,10,10	0
53	MG	BA	3029	1/1	0.98	0.09	-	66,66,66,66	0
53	MG	BA	3018	1/1	0.95	0.16	-	40,40,40,40	0
53	MG	BA	3079	1/1	0.93	0.18	-	30,30,30,30	0
53	MG	AA	1635	1/1	0.90	0.10	-	88,88,88,88	0
53	MG	BA	3077	1/1	0.97	0.15	-	121,121,121,121	0
53	MG	DA	3126	1/1	0.86	0.10	-	76,76,76,76	0
53	MG	BA	3039	1/1	0.99	0.17	-	20,20,20,20	0
53	MG	BA	3080	1/1	0.96	0.13	-	11,11,11,11	0
53	MG	DA	3053	1/1	0.86	0.12	-	80,80,80,80	0
53	MG	DA	3130	1/1	0.12	2.60	-	279,279,279,279	0
53	MG	DA	3001	1/1	0.76	0.12	-	130,130,130,130	0
53	MG	CA	1601	1/1	0.71	0.12	-	179,179,179,179	0
53	MG	DA	3054	1/1	0.88	0.08	-	71,71,71,71	0
53	MG	BA	3102	1/1	0.95	0.13	-	23,23,23,23	0
53	MG	AA	1640	1/1	0.98	0.18	-	17,17,17,17	0
53	MG	CA	1632	1/1	0.82	0.16	-	163,163,163,163	0
53	MG	BA	3126	1/1	0.99	0.11	-	18,18,18,18	0
53	MG	DA	3087	1/1	0.53	0.17	-	164,164,164,164	0
53	MG	DA	3064	1/1	0.31	1.25	-	230,230,230,230	0
53	MG	DA	3071	1/1	0.89	0.19	-	52,52,52,52	0
53	MG	BA	3030	1/1	0.98	0.22	-	15,15,15,15	0
53	MG	DA	3009	1/1	0.76	0.17	-	101,101,101,101	0
53	MG	BA	3046	1/1	0.96	0.15	-	16,16,16,16	0
53	MG	BA	3099	1/1	0.93	0.10	-	18,18,18,18	0
53	MG	CA	1602	1/1	0.58	0.20	-	175,175,175,175	0
53	MG	DA	3116	1/1	0.80	0.18	-	66,66,66,66	0
53	MG	BA	3048	1/1	0.76	0.18	-	104,104,104,104	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
53	MG	BA	3032	1/1	0.98	0.13	-	16,16,16,16	0
53	MG	DA	3049	1/1	0.78	0.32	-	235,235,235,235	0
53	MG	BA	3085	1/1	0.98	0.13	-	6,6,6,6	0
53	MG	AA	1638	1/1	0.79	0.11	-	102,102,102,102	0
53	MG	BB	201	1/1	0.71	0.32	-	236,236,236,236	0
53	MG	DA	3059	1/1	0.59	0.22	-	183,183,183,183	0
53	MG	CA	1611	1/1	0.88	0.20	-	122,122,122,122	0
53	MG	CA	1635	1/1	0.97	0.08	-	85,85,85,85	0
53	MG	DA	3056	1/1	0.94	0.13	-	112,112,112,112	0
53	MG	BA	3097	1/1	0.95	0.14	-	80,80,80,80	0
53	MG	CA	1612	1/1	0.86	0.39	-	120,120,120,120	0
53	MG	BA	3045	1/1	0.99	0.13	-	17,17,17,17	0
53	MG	BA	3052	1/1	0.94	0.12	-	25,25,25,25	0
53	MG	DA	3014	1/1	0.56	0.29	-	128,128,128,128	0
53	MG	CA	1619	1/1	0.89	0.16	-	201,201,201,201	0
53	MG	DA	3077	1/1	0.95	0.27	-	114,114,114,114	0
53	MG	DA	3034	1/1	0.91	0.09	-	89,89,89,89	0
53	MG	DA	3063	1/1	0.73	2.08	-	192,192,192,192	0
53	MG	BA	3015	1/1	0.94	0.13	-	38,38,38,38	0
53	MG	DA	3088	1/1	0.86	0.14	-	141,141,141,141	0
53	MG	AA	1602	1/1	0.89	0.12	-	119,119,119,119	0
53	MG	BA	3069	1/1	0.91	0.10	-	176,176,176,176	0
53	MG	DA	3020	1/1	0.67	0.52	-	218,218,218,218	0
53	MG	BA	3091	1/1	0.82	0.26	-	113,113,113,113	0
53	MG	AA	1601	1/1	0.96	0.13	-	78,78,78,78	0
53	MG	BA	3061	1/1	0.85	0.28	-	223,223,223,223	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.