



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 09:11 PM GMT

PDB ID : 4U27  
Title : Crystal structure of the E. coli ribosome bound to flopristin and linopristin.  
Authors : Noeske, J.; Huang, J.; Olivier, N.B.; Giacobbe, R.A.; Zambrowski, M.; Cate, J.H.D.  
Deposited on : 2014-06-07  
Resolution : 2.80 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

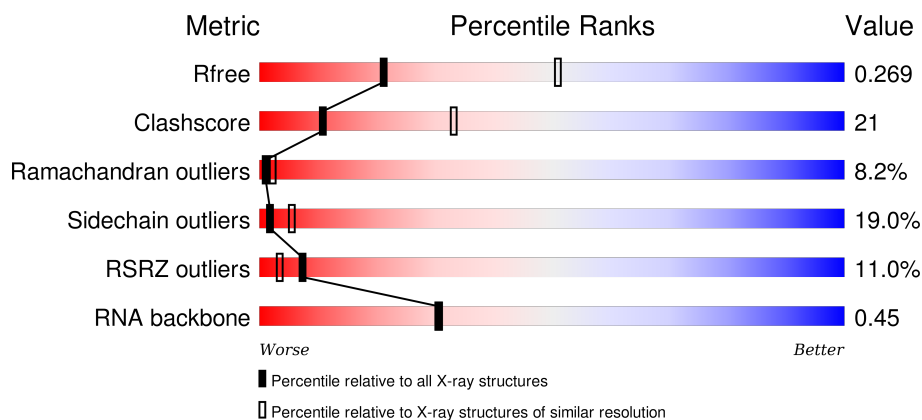
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

## *X-RAY DIFFRACTION*

The reported resolution of this entry is 2.80 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	2393 (2.80-2.80)
Clashscore	102246	2827 (2.80-2.80)
Ramachandran outliers	100387	2782 (2.80-2.80)
Sidechain outliers	100360	2784 (2.80-2.80)
RSRZ outliers	91569	2404 (2.80-2.80)
RNA backbone	2183	1091 (3.20-2.40)

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	1539	<div> <div>34%</div> <div>49%</div> <div>16%</div> </div>
1	CA	1539	<div> <div>3%</div> <div>33%</div> <div>52%</div> <div>15%</div> </div>
2	AB	218	<div> <div>9%</div> <div>25%</div> <div>45%</div> <div>23%</div> <div>6%</div> </div>
2	CB	218	<div> <div>26%</div> <div>25%</div> <div>55%</div> <div>17%</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	



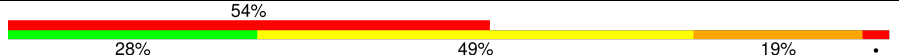
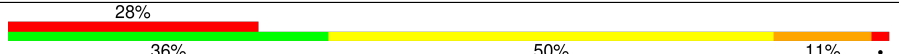


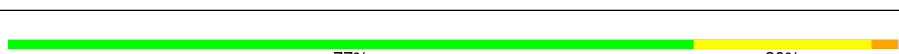
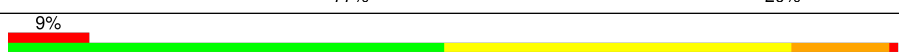

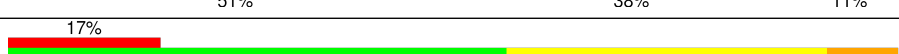
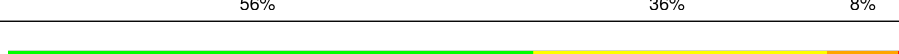
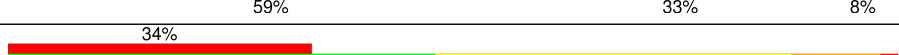
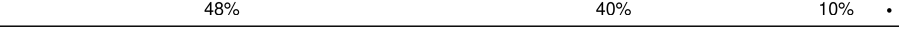
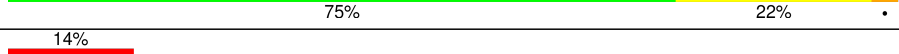


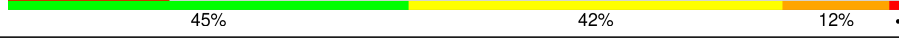


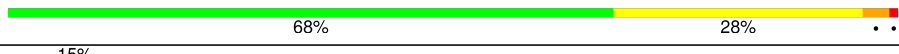
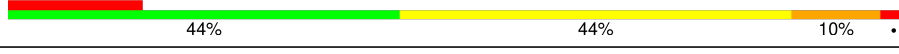
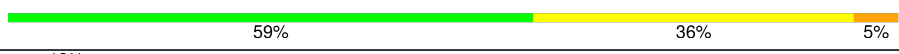



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Mol	Chain	Length	Quality of chain
15	CO	88	
16	AP	82	
16	CP	82	
17	AQ	80	
17	CQ	80	
18	AR	55	
18	CR	55	
19	AS	79	
19	CS	79	
20	AT	85	
20	CT	85	
21	AU	51	
21	CU	51	
22	BA	2903	
22	DA	2903	
23	BB	119	
23	DB	119	
24	BC	271	
24	DC	271	
25	BD	209	
25	DD	209	
26	BE	201	
26	DE	201	
27	BF	177	
27	DF	177	

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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	76	
44	DW	76	
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	

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Mol	Chain	Length	Quality of chain
53	B5	228	
54	B6	7	
54	D6	7	

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
54	MHW	D6	1	-	-	X	-
55	MG	AA	1622	-	-	-	X
55	MG	AA	1635	-	-	-	X
55	MG	AA	1644	-	-	-	X
55	MG	AA	1647	-	-	-	X
55	MG	AA	1656	-	-	-	X
55	MG	AA	1670	-	-	-	X
55	MG	AA	1671	-	-	-	X
55	MG	BA	3016	-	-	-	X
55	MG	BA	3041	-	-	-	X
55	MG	BA	3058	-	-	-	X
55	MG	BA	3084	-	-	-	X
55	MG	BA	3105	-	-	-	X
55	MG	BA	3106	-	-	-	X
55	MG	BA	3109	-	-	-	X
55	MG	BA	3110	-	-	-	X
55	MG	BA	3132	-	-	-	X
55	MG	BA	3137	-	-	-	X
55	MG	BA	3147	-	-	-	X
55	MG	BA	3151	-	-	-	X
55	MG	BA	3153	-	-	-	X
55	MG	BA	3174	-	-	-	X
55	MG	BA	3177	-	-	-	X
55	MG	DA	3003	-	-	-	X
55	MG	DA	3025	-	-	-	X
55	MG	DA	3026	-	-	-	X
55	MG	DA	3042	-	-	-	X
55	MG	DA	3065	-	-	-	X
55	MG	DA	3103	-	-	-	X
55	MG	DA	3110	-	-	-	X
55	MG	DA	3114	-	-	-	X
55	MG	DA	3117	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
55	MG	DA	3121	-	-	-	X
55	MG	DA	3125	-	-	-	X
55	MG	DA	3140	-	-	-	X
55	MG	DA	3153	-	-	-	X
55	MG	DA	3159	-	-	-	X
56	VIF	BA	3001	-	-	-	X



## 2 Entry composition

There are 58 unique types of molecules in this entry. The entry contains 288396 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	1538	Total	C	N	O	P	0	0	0
			32995	14716	6050	10691	1538			
1	CA	1539	Total	C	N	O	P	0	0	0
			33015	14725	6052	10699	1539			

- 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	151	Total	C	N	O	S	0	0	0
			1182	735	227	216	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	0
			884	546	178	157	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	96	Total	C	N	O	S	0	0	0
			774	483	160	128	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
			710	437	143	129	1			
15	CO	88	Total	C	N	O	S	0	0	0
			710	437	143	129	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	82	Total	C	N	O	S	0	0	0
			649	406	128	114	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	2897	Total	C	N	O	P	0	0	0
			62195	27745	11446	20107	2897			
22	DA	2897	Total	C	N	O	P	0	0	0
			62195	27745	11446	20107	2897			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	BB	119	Total	C	N	O	P	0	0	0
			2549	1135	466	829	119			
23	DB	118	Total	C	N	O	P	0	0	0
			2529	1126	464	821	118			

- 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	177	Total	C	N	O	S	0	0	0
			1411	899	249	257	6			
27	DF	177	Total	C	N	O	S	0	0	0
			1411	899	249	257	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
			1110	699	197	213	1			
29	DH	149	Total	C	N	O	S	0	0	0
			1110	699	197	213	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	76	Total	C	N	O	S	0	0	0
			580	359	117	103	1			
44	DW	75	Total	C	N	O	S	0	0	0
			569	353	113	102	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 509	C 313	N 99	O 95	S 2	0	0	0
46	DY	63	Total 509	C 313	N 99	O 95	S 2	0	0	0

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

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

- 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 a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
53	B5	191	Total	C	N	O	0	0	1
			1142	691	221	230			

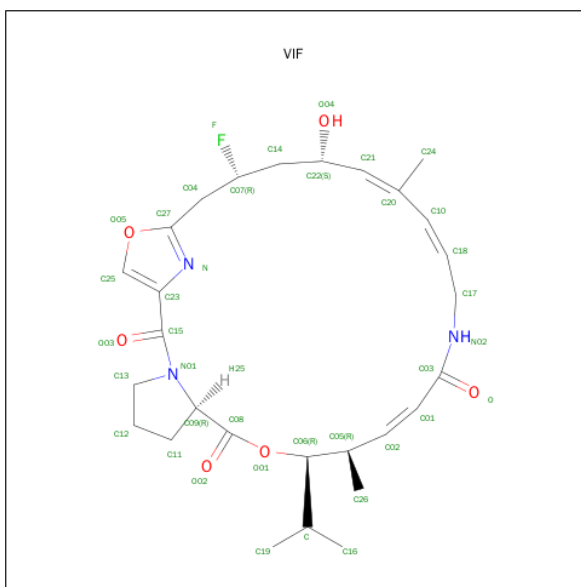
- Molecule 54 is a protein called Linopristin.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
54	B6	7	Total	C	N	O	0	0	0
			69	50	9	10			
54	D6	7	Total	C	N	O	0	0	0
			69	50	9	10			

- Molecule 55 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	BB	4	Total	Mg	0	0
			4	4		
55	BA	193	Total	Mg	0	0
			193	193		
55	CA	56	Total	Mg	0	0
			56	56		
55	BD	1	Total	Mg	0	0
			1	1		
55	AA	72	Total	Mg	0	0
			72	72		
55	BQ	1	Total	Mg	0	0
			1	1		
55	DA	167	Total	Mg	0	0
			167	167		
55	D2	1	Total	Mg	0	0
			1	1		
55	DB	3	Total	Mg	0	0
			3	3		

- Molecule 56 is Flopristin (three-letter code: VIF) (formula: C<sub>28</sub>H<sub>38</sub>FN<sub>3</sub>O<sub>6</sub>).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
56	BA	1	Total	C	F	N	O	0	0
			38	28	1	3	6		
56	DA	1	Total	C	F	N	O	0	0
			38	28	1	3	6		

- Molecule 57 is ZINC ION (three-letter code: ZN) (formula: Zn).

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

- Molecule 58 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	AA	193	Total	O	0	0
			193	193		
58	AL	2	Total	O	0	0
			2	2		
58	AN	5	Total	O	0	0
			5	5		
58	AT	2	Total	O	0	0
			2	2		
58	AU	1	Total	O	0	0
			1	1		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	BA	623	Total 623	O 623	0	0
58	BB	14	Total 14	O 14	0	0
58	BC	6	Total 6	O 6	0	0
58	BD	3	Total 3	O 3	0	0
58	BE	4	Total 4	O 4	0	0
58	BF	1	Total 1	O 1	0	0
58	BG	1	Total 1	O 1	0	0
58	BL	4	Total 4	O 4	0	0
58	BN	3	Total 3	O 3	0	0
58	BS	1	Total 1	O 1	0	0
58	BT	1	Total 1	O 1	0	0
58	B2	1	Total 1	O 1	0	0
58	B3	2	Total 2	O 2	0	0
58	B4	2	Total 2	O 2	0	0
58	CA	192	Total 192	O 192	0	0
58	CL	1	Total 1	O 1	0	0
58	CN	3	Total 3	O 3	0	0
58	CT	1	Total 1	O 1	0	0
58	CU	1	Total 1	O 1	0	0
58	DA	608	Total 608	O 608	0	0
58	DB	13	Total 13	O 13	0	0

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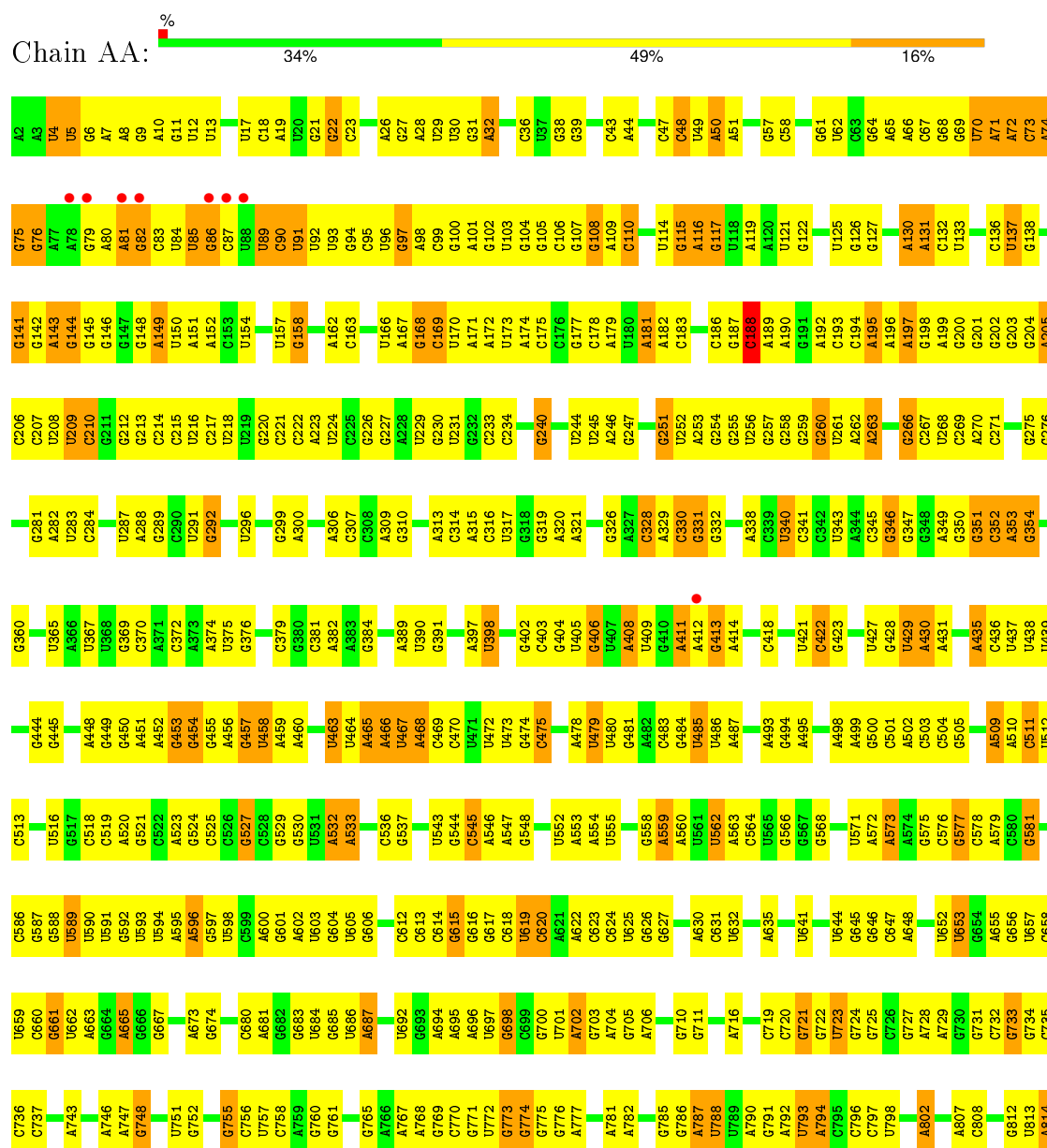
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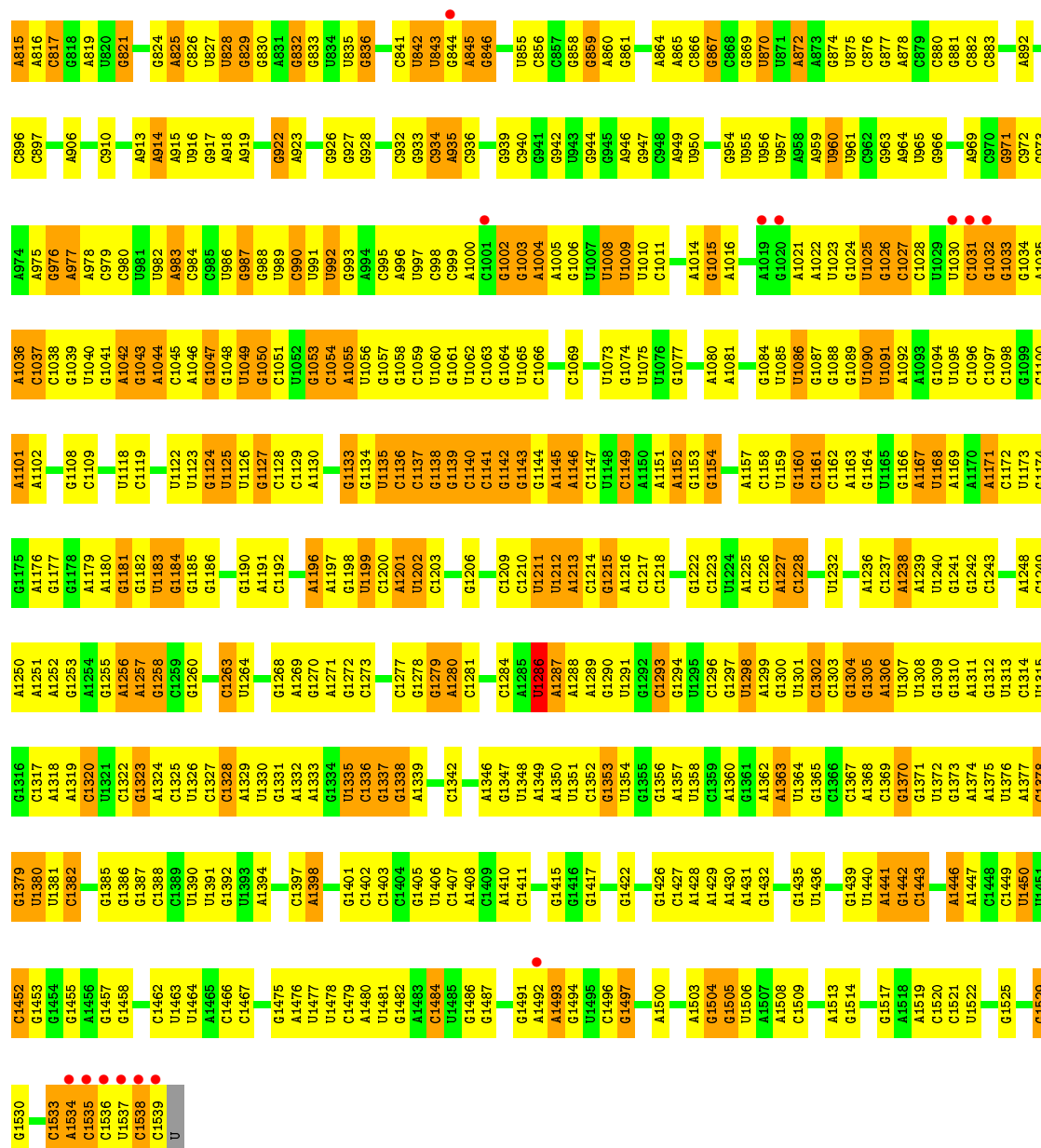
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
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58	DD	4	Total 4	O 4	0	0
58	DE	5	Total 5	O 5	0	0
58	DJ	1	Total 1	O 1	0	0
58	DL	4	Total 4	O 4	0	0
58	DN	2	Total 2	O 2	0	0
58	DT	1	Total 1	O 1	0	0
58	DU	1	Total 1	O 1	0	0
58	DV	1	Total 1	O 1	0	0
58	D0	1	Total 1	O 1	0	0
58	D2	1	Total 1	O 1	0	0
58	D3	2	Total 2	O 2	0	0
58	D4	1	Total 1	O 1	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.

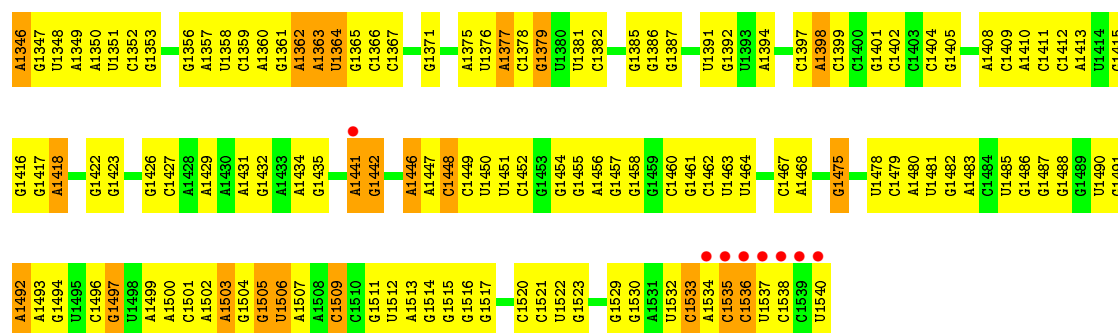
#### • Molecule 1: 16S rRNA



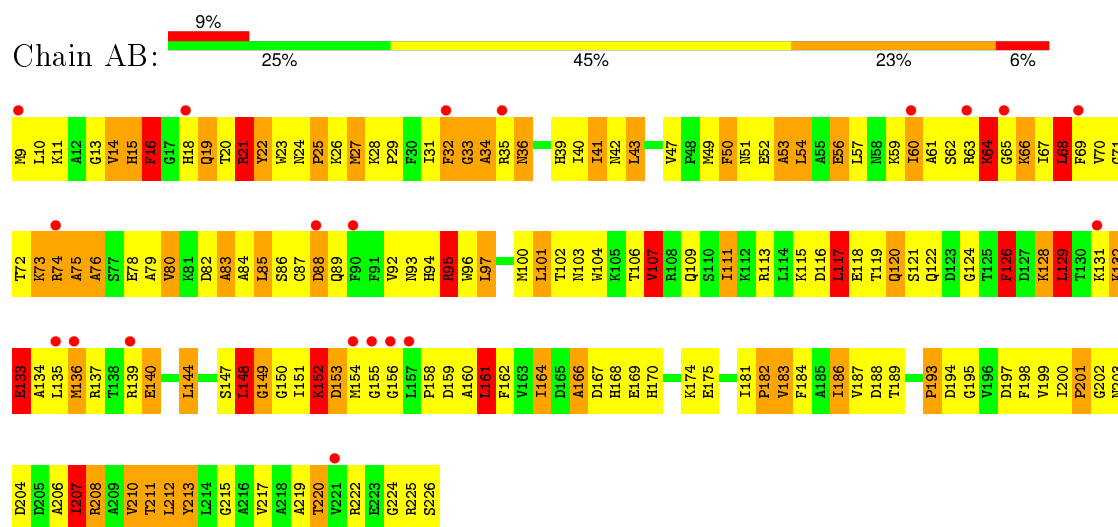




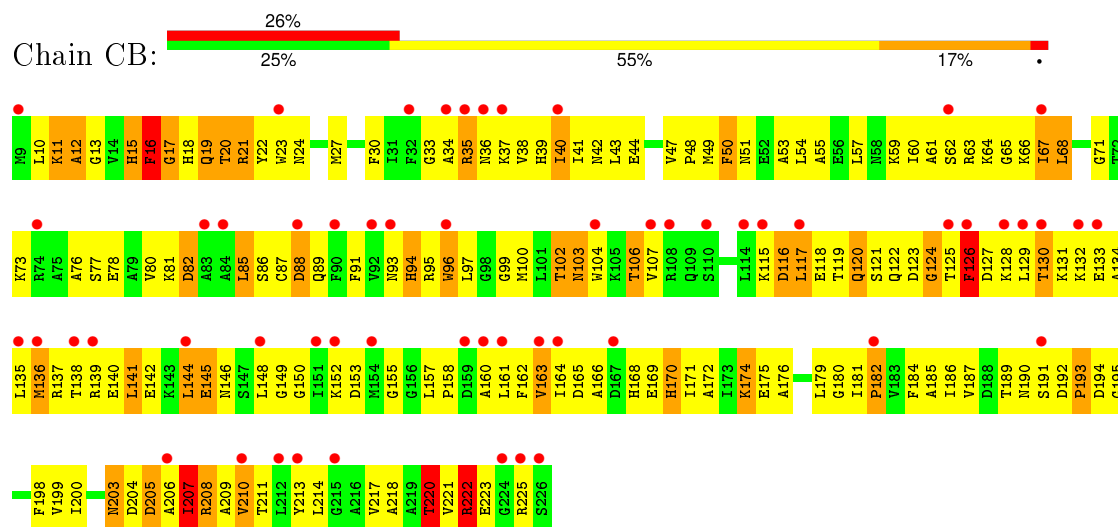
G1282	A1150	G1084	U950	G874	U801	G731	G568	C503	A432	G361	G289	G213
U1283	A1151	U1085	U1016	U875	U802	G732	U662	G504	A436	U367	C290	C214
G1284	A1152	U1086	G1018	U876	A802	G733	A663	G505	U437	U368	U291	C215
A1285	G1153	G1087	A1019	C979	G803	G734	A664	U508	U438	G369	G292	C217
U1287	A1154	G1088	G1020	C880	U804	G735	A665	A509	U439	C370	U294	U218
G1288	A1155	G1089	A1021	G881	G805	G736	G666	A509	A440	A371	C295	U219
A1288	G1156	U1090	A1022	C882	G806	G737	U671	C511	C441	C372	U296	G220
G1289	A1157	U1091	U1023	C883	A807	G738	A673	C512	G442	A373	G297	G221
U1290	G1158	G1092	U1024	U884	G808	G739	A674	C513	G443	A374	A298	C222
U1291	U1159	A1093	G1025	G885	G809	G740	G675	C514	G444	U375	G299	A223
G1292	G1160	G1094	G1026	U886	C810	G741	A676	C515	G445	G376	A300	U224
C1293	C1161	U1095	C1027	G888	C811	G742	A677	C516	G446	G377	G301	C225
A1294	C1162	C1096	A1028	A889	G812	G743	A678	C517	G447	G378	G302	G226
U1297	A1163	C1097	U1029	G890	U813	G744	A679	C518	G448	C379	G303	G227
C1296	G1159	G1098	U1030	U891	A814	G745	U678	C519	G449	G380	A306	A228
G1297	A1166	G1031	G1031	A892	A815	G746	U678	C520	G450	U376	C307	
U1298	G1167	C1032	G1032	C893	A816	G747	C679	C521	G451	A383	C308	G237
A1299	U1168	A1101	G1033	C893	C817	G748	G680	A520	A451	A384	C309	
G1300	A1169	A1102	G1034	C896	G818	G749	G682	C522	A452	A385	A309	
U1301	C1103	A1035	G1035	C897	A819	A753	G683	C523	G453	C386		G240
C1302	U1235	A1036	A1036	G898	U820	C754	G684	C525	G454	U387	C312	G241
G1303	A1171	G1105	G1037	C899	G821	G755	G685	C526	G455	U387	A313	G242
C1297	U1173	G1106	C1038	A900	U822	G756	U686	C527	G456	G388	C314	A243
G1304	G1174	C1107	G1039	A901	U822	G757	U687	C528	G457	A389	A315	U244
A1306	A1175	G1108	U1040	A902	C826	G758	G688	C529	G458	U390	C316	U245
U1307	G1176	A1176	G1041	C902	U827	A759	G689	C530	A459	G391	A246	
G1308	A1177	U1177	A1042	A906	U828	G760	G690	C531	U463	C392	G247	
U1309	G1178	G1043	G1043	U905	U828	G761	G691	C532	U463	A321	C248	
G1310	A1179	A1044	A1044	U906	G829	G762	U692	C533	U464	C322	U249	
C1245	U1116	U1116	G1045	A909	G832	A766	A695	C534	A465	A397	U323	A250
A1246	G1181	U1117	A1046	C910	G833	G769	A696	C535	A466	U398	G324	G251
U1252	C1182	U1118	G1047	A913	U834	G770	A696	C536	U467	A325	U252	
A1253	U1183	G1048	U1049	A914	U834	G771	A702	C537	G468	G326	G326	G253
G1254	G1184	U1049	U1048	A914	C840	G772	G703	C538	U469	C401	A327	G254
C1255	G1185	G1050	G1050	A914	C841	U772	G704	C539	U470	G402	C328	G255
A1256	G1186	U1125	U1125	A918	U842	G773	A705	C540	G471	C403	A329	U256
U1318	U1187	U1126	U1126	A919	U843	G774	G706	C541	G472	G404	C330	G257
A1319	A1190	G1127	C1054	U920	G844	G775	A706	C542	U473	U405	G331	G258
G1320	G1191	G1258	A1055	U921	A845	G776	U707	C543	U474	G406	G332	G259
U1321	C1192	C1128	A1055	U922	U845	G777	U708	C544	U475	G407	G332	
G1322	G1193	C1129	A1055	A923	G846	A777	C708	C545	U476	U407	G332	
C1260	U1193	A1130	U1062	A923	G847	G778	U709	C546	U477	A408	G337	A262
A1261	U1194	G1131	U1062	C924	G847	G779	G710	C547	U478	U409	A338	A263
C1262	C1195	G1132	U1065	C925	G851	A780	G711	C548	U479	U410	C339	C264
A1324	A1196	C1133	C1066	G926	G852	A781	A712	C549	G481	G410	G339	A264
C1263	U1197	G1134	A1067	C927	G852	A782	G713	C550	A482	A411		G265
G1266	G1198	U1135	G1068	U927	G858	G783	G714	C551	C483	A412	A344	G266
U1267	U1199	C1136	C1069	U928	G859	G784	A715	C552	G484	G413	C345	G267
A1269	C1200	G1137	U1070	C931	A860	G785	U716	C553	U485	G413	U268	
G1270	A1201	G1138	C1071	C931	G861	G786	U717	C554	U486		G346	C269
C1271	U1202	G1139	G1072	C934	G862	G787	U718	C555	A487	A349	A270	
G1272	C1203	U1073	A1005	C934	U863	A787	C719	C556	A487	U421	U273	
C1273	G1074	G1074	G1074	A938	A864	G790	G720	C557	A493	G422	G274	
A1274	C1141	C1141	U1007	C939	A865	G791	G721	C558	G494	G423	A353	
G1275	G1143	G1143	U1008	C940	A866	A792	G722	C559	A495	G424	G354	G278
C1276	U1144	U1078	U1008	C941	C866	A792	G722	C560	A496	G425	A279	
G1337	A1145	G1079	U1009	G941	G867	U793	U723	C561	G497	U426	C356	C280
C1277	U1146	A1080	U1010	G945	C868	A794	G724	C562	A498	U427	A357	
G1278	U1211	C1147	G1013	G945	G869	C795	G724	C563	G500	G428	G357	G281
A1279	U1212	U1148	G1014	A946	A872	G796	A728	C564	G501	U429	U358	A282
C1280	U1213	U1149	A1014	A946	A873	C797	A729	C565	C501	A430	G359	U283
G1343	U1214	G1149	C1015	U949	A874	U798	C726	C566	A502	A431	G360	



### • Molecule 2: 30S ribosomal protein S2

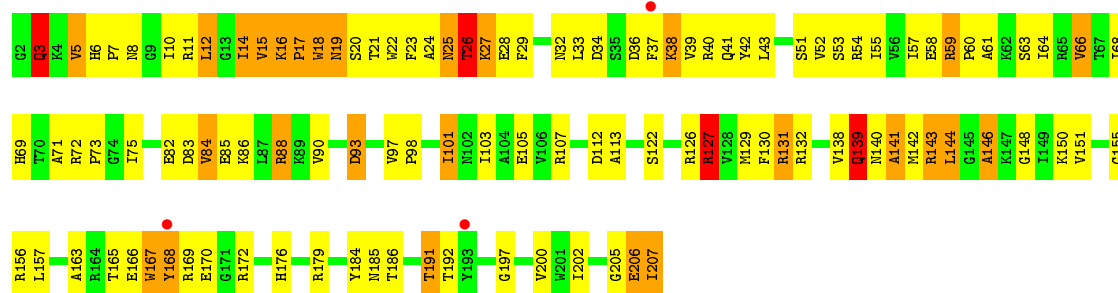


### • Molecule 2: 30S ribosomal protein S2

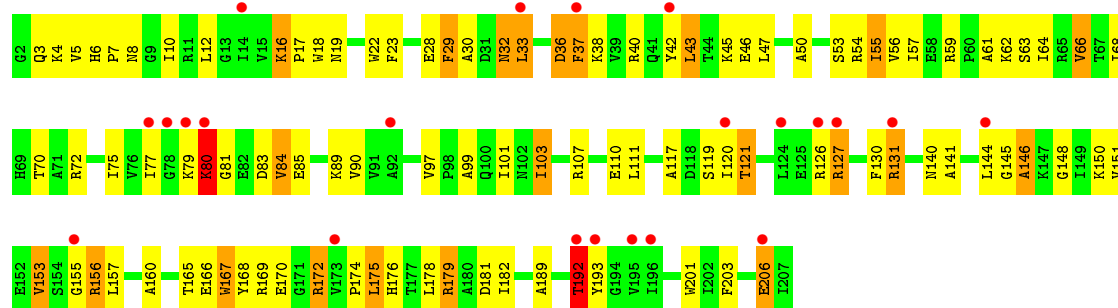


### • Molecule 3: 30S ribosomal protein S3

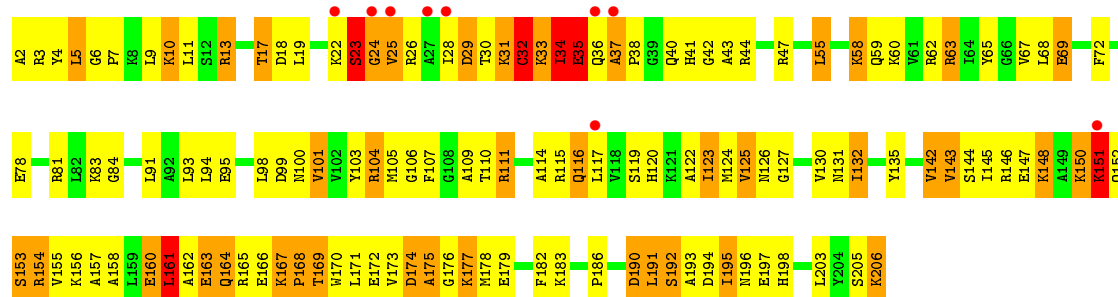




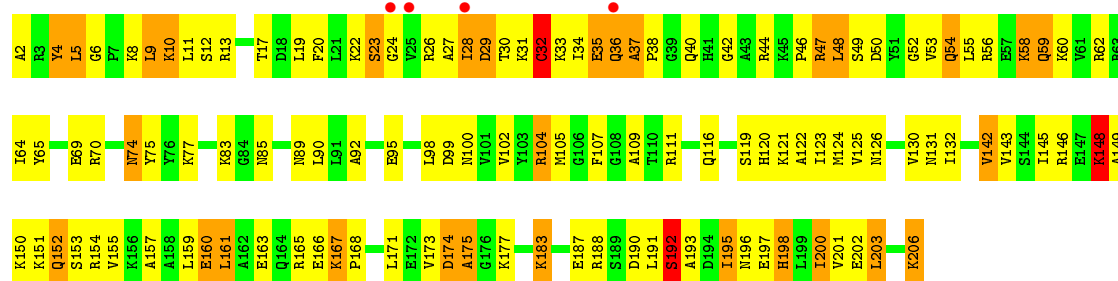
• Molecule 3: 30S ribosomal protein S3



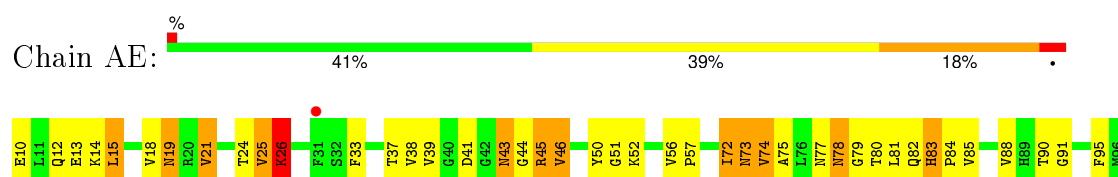
• Molecule 4: 30S ribosomal protein S4



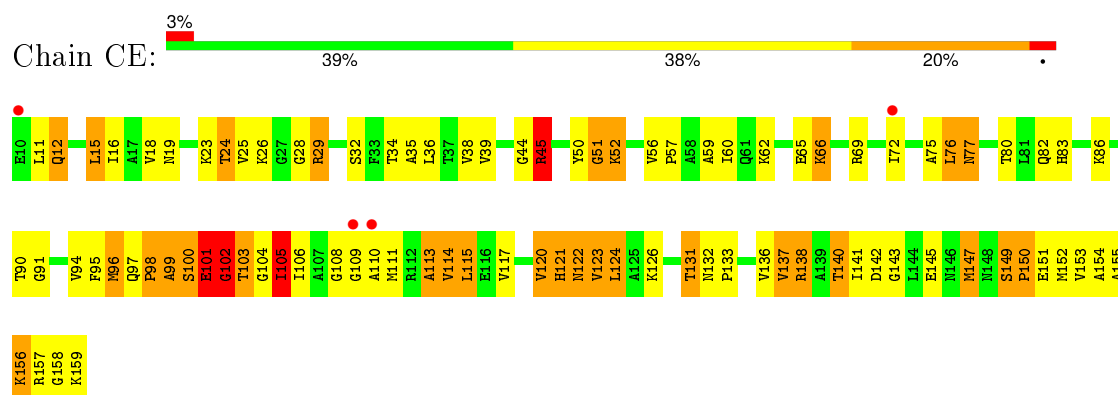
• Molecule 4: 30S ribosomal protein S4



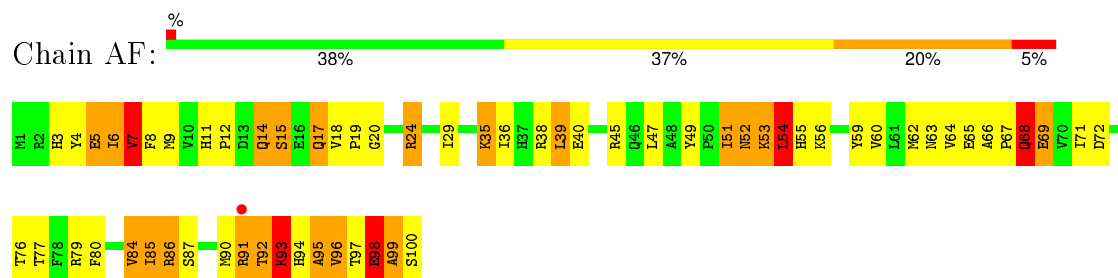
• Molecule 5: 30S ribosomal protein S5



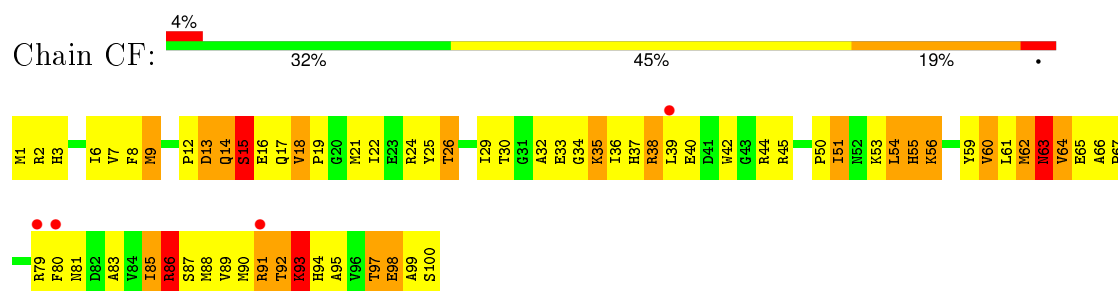
• Molecule 5: 30S ribosomal protein S5



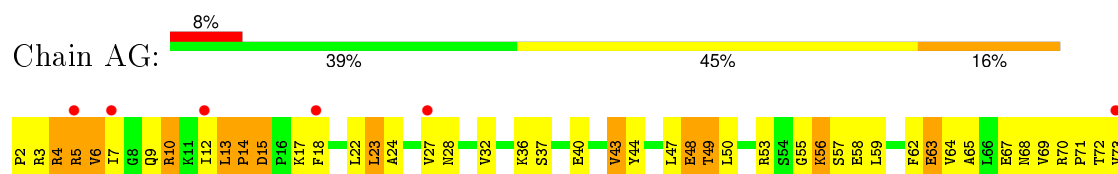
• Molecule 6: 30S ribosomal protein S6

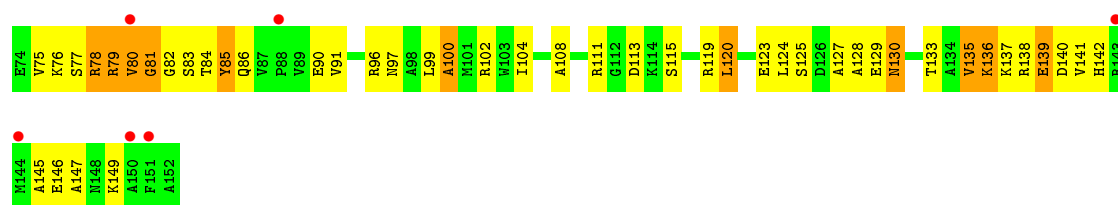


• Molecule 6: 30S ribosomal protein S6

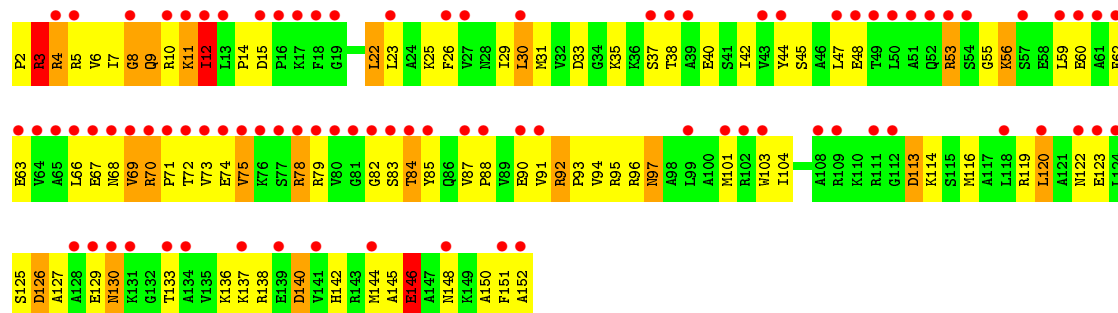
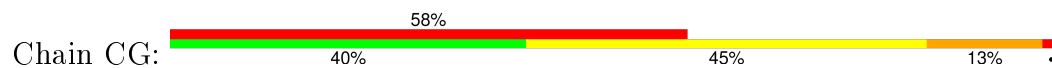


• Molecule 7: 30S ribosomal protein S7

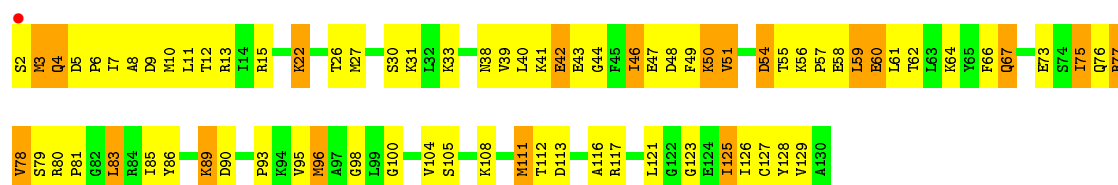




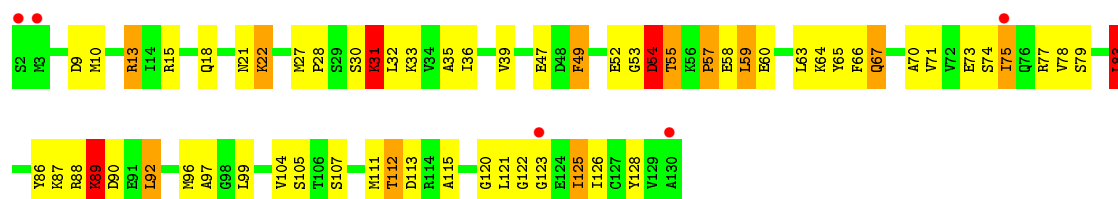
• Molecule 7: 30S ribosomal protein S7



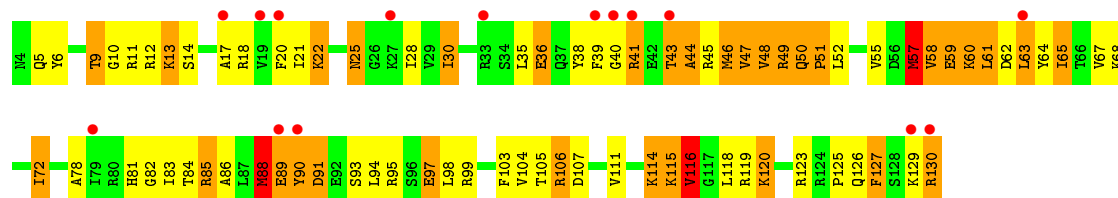
• Molecule 8: 30S ribosomal protein S8



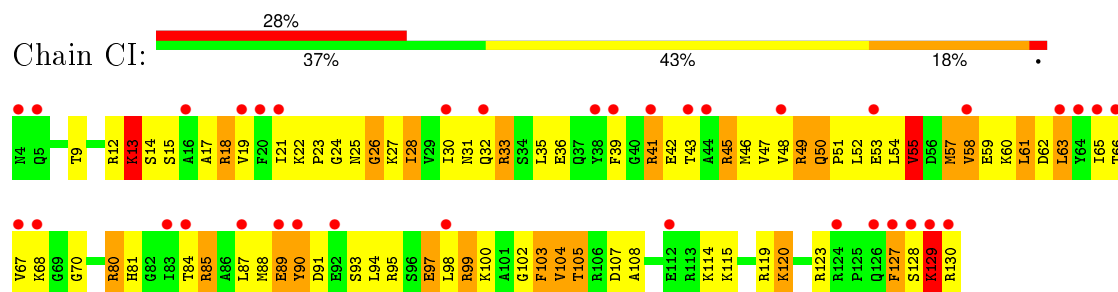
• Molecule 8: 30S ribosomal protein S8



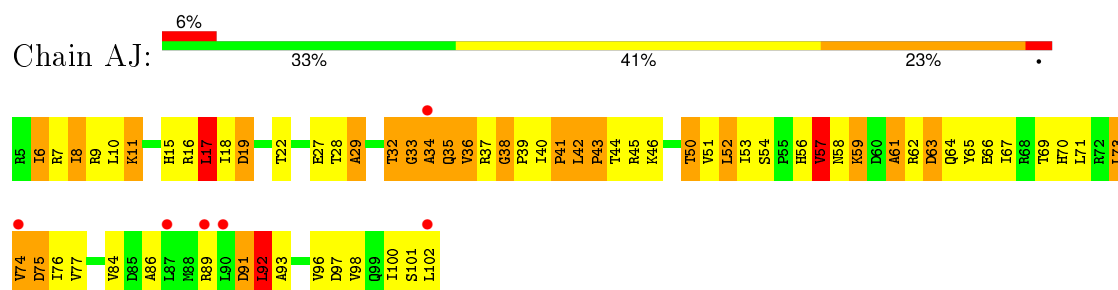
• Molecule 9: 30S ribosomal protein S9



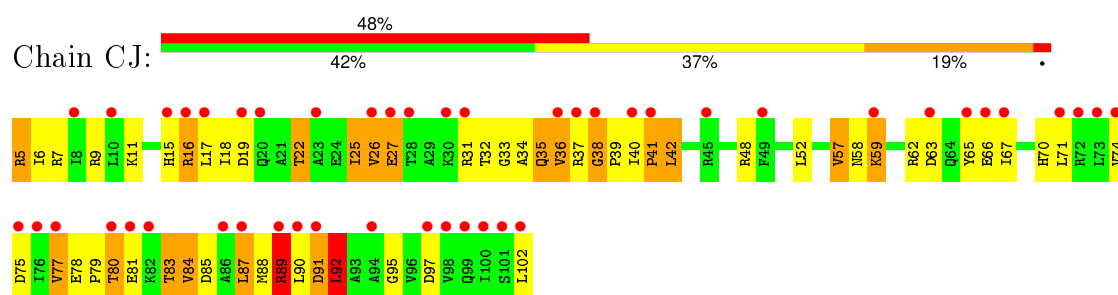
- Molecule 9: 30S ribosomal protein S9



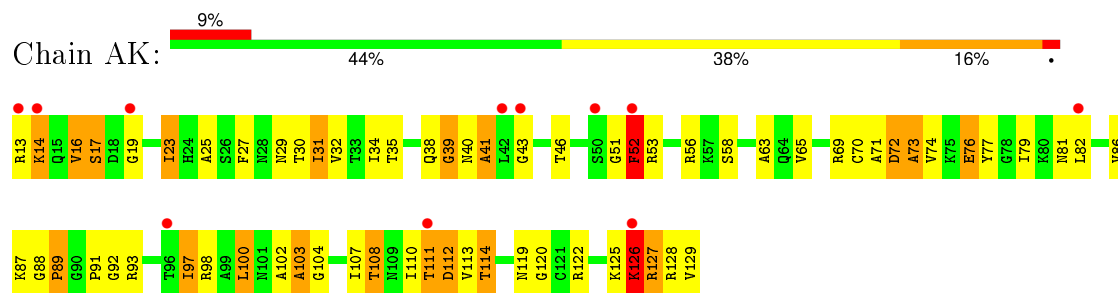
- Molecule 10: 30S ribosomal protein S10



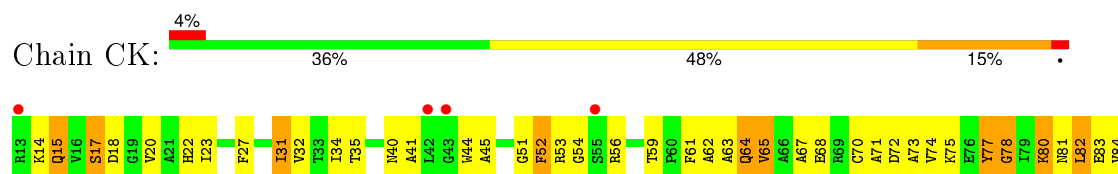
- Molecule 10: 30S ribosomal protein S10



- Molecule 11: 30S ribosomal protein S11

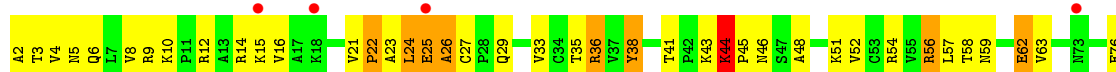


- Molecule 11: 30S ribosomal protein S11





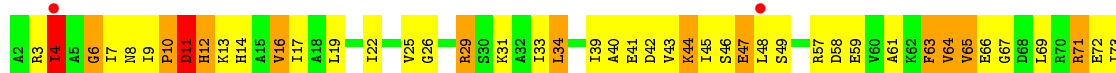
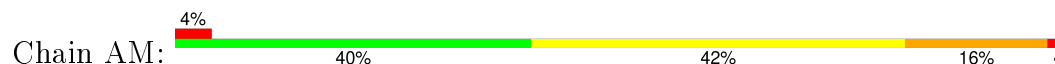
• Molecule 12: 30S ribosomal protein S12



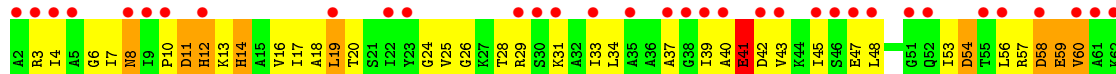
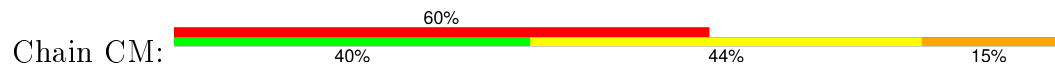
• Molecule 12: 30S ribosomal protein S12



• Molecule 13: 30S ribosomal protein S13

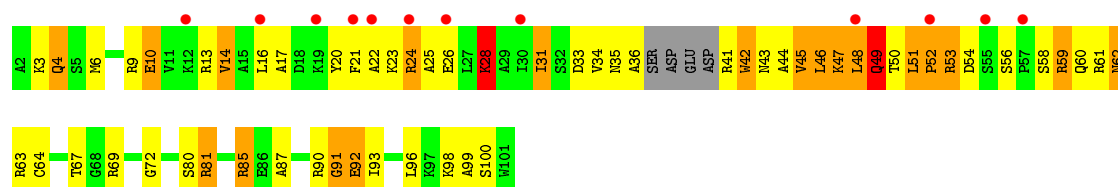


• Molecule 13: 30S ribosomal protein S13

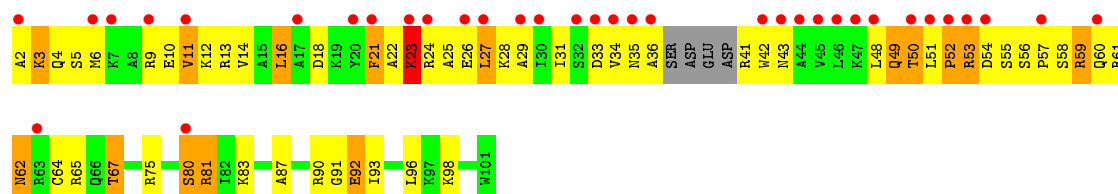


• Molecule 14: 30S ribosomal protein S14

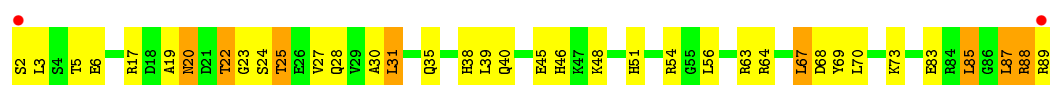




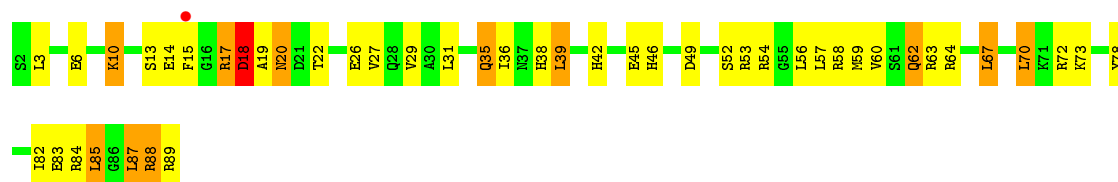
• Molecule 14: 30S ribosomal protein S14



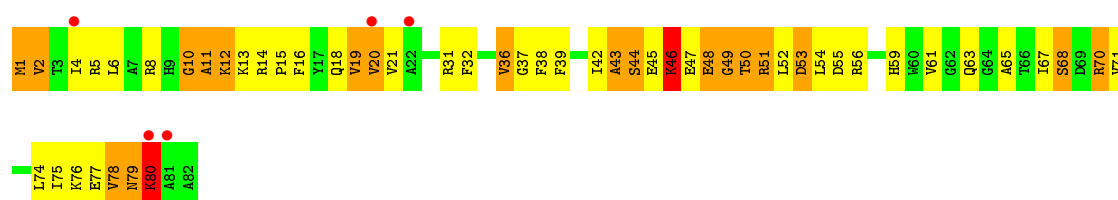
• Molecule 15: 30S ribosomal protein S15



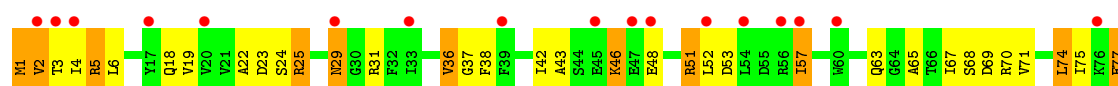
• Molecule 15: 30S ribosomal protein S15



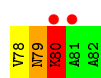
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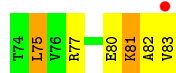
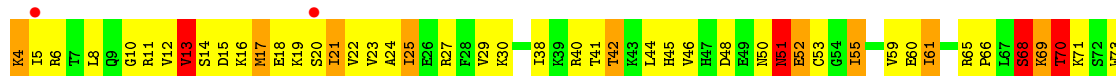
• Molecule 16: 30S ribosomal protein S16







- Molecule 17: 30S ribosomal protein S17



- Molecule 17: 30S ribosomal protein S17



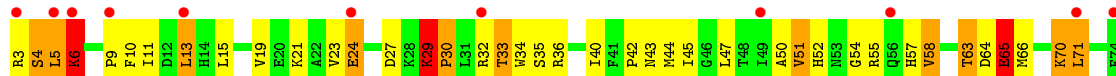
- Molecule 18: 30S ribosomal protein S18



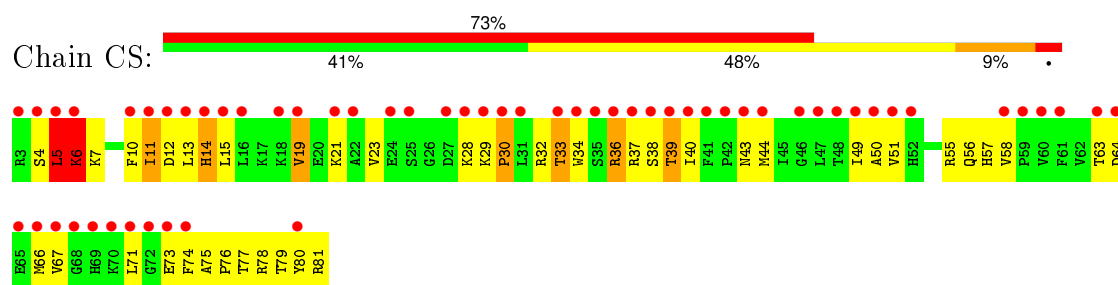
- Molecule 18: 30S ribosomal protein S18



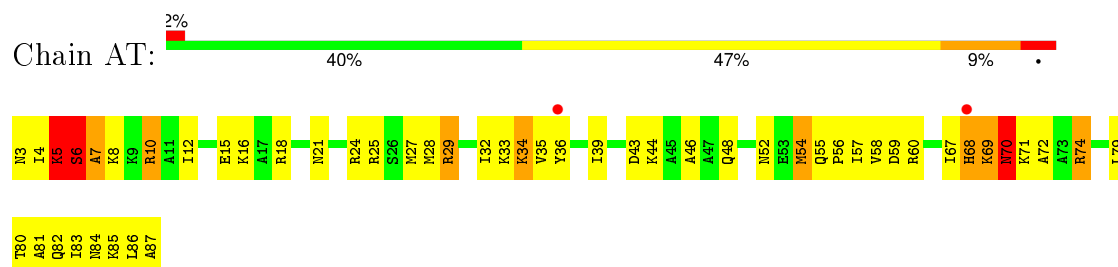
- Molecule 19: 30S ribosomal protein S19



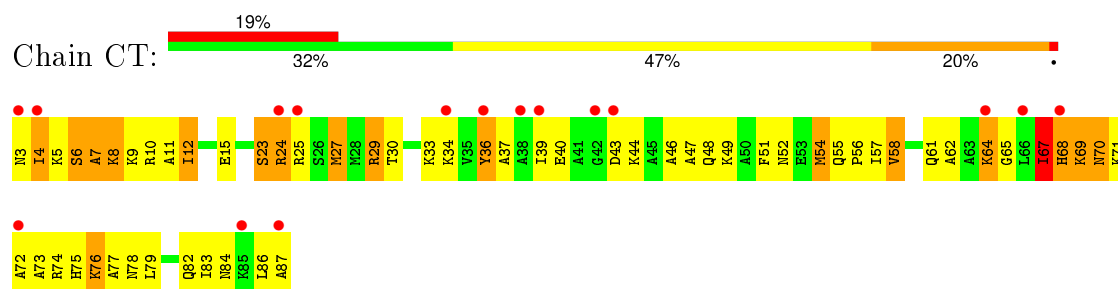
- Molecule 19: 30S ribosomal protein S19



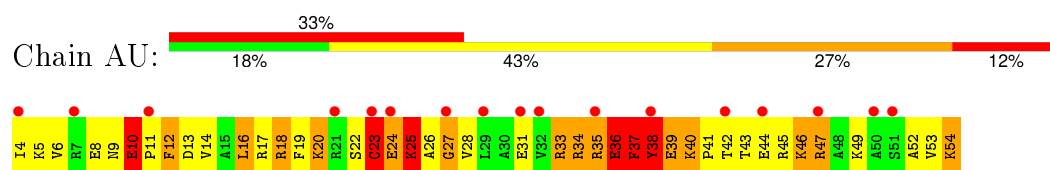
- Molecule 20: 30S ribosomal protein S20



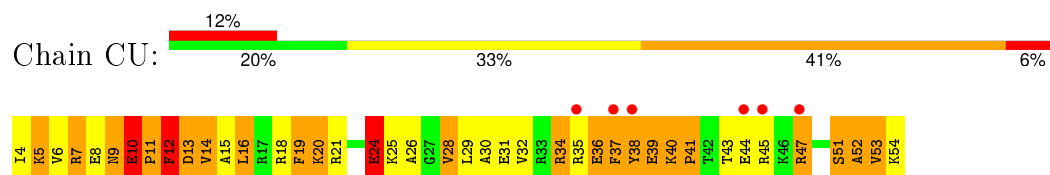
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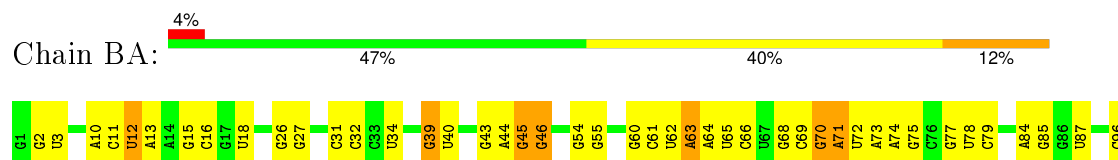
- Molecule 21: 30S ribosomal protein S21



- Molecule 21: 30S ribosomal protein S21

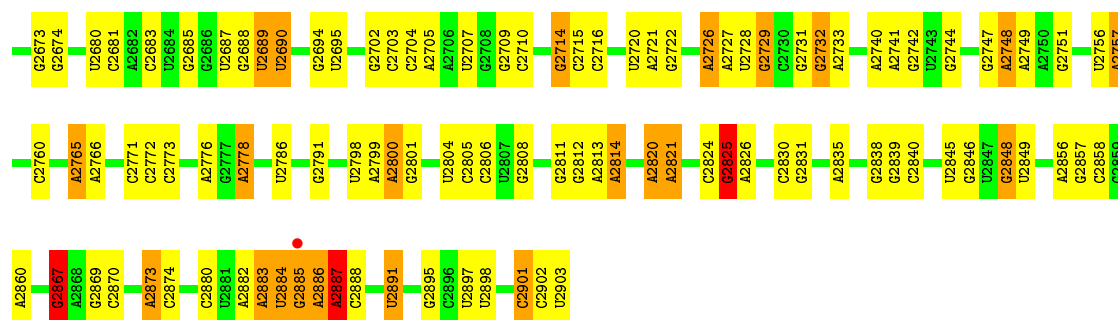


- Molecule 22: 23S rRNA

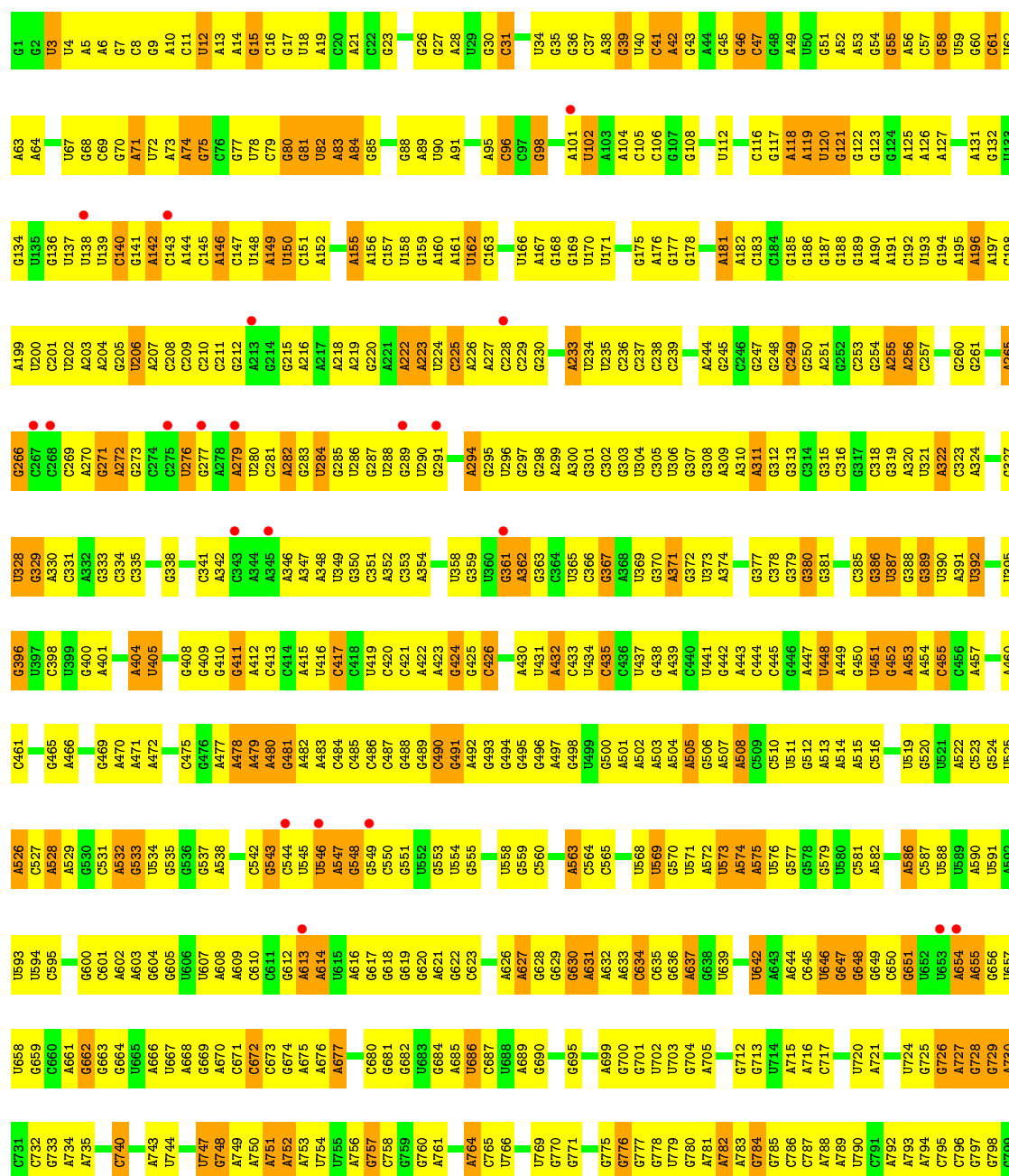


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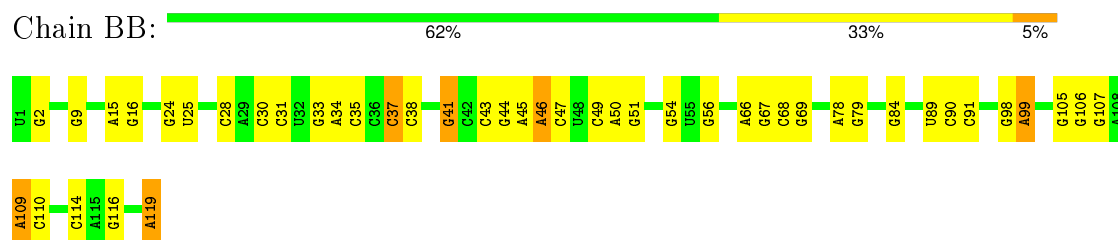
• Molecule 22: 23S rRNA



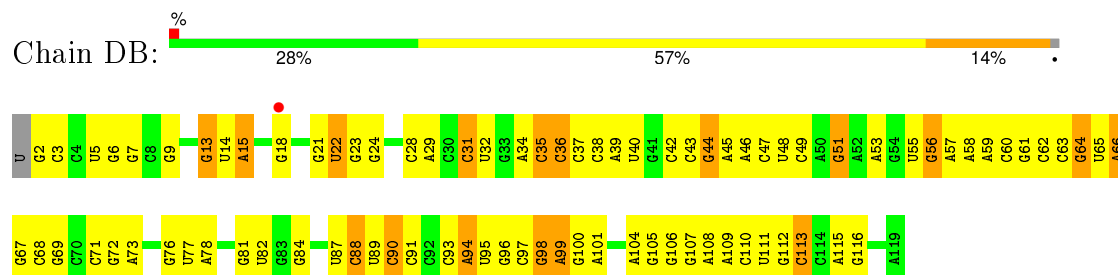
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G1831	G1763	U1693	G1483	U1553	G1483	A1413	C1351	A1286	G1220	G1139	C1075	C997	G924	G857
C1832	C1764	G1695	U1484	G1554	U1484	C1412	U1352	A1287	C1221	U1141	C1076	C998	A925	G858
C1833			U1485	C1555	U1485	U1415	A1353	G1288	U1222	C1140	C1006			U860
U1834	G1767	A1698	U1486	C1556	U1486	G1416	C1354	C1289	G1223	A1142	C1007		U931	A861
	G1768		U1487	C1557	G1487	C1417	A1355	C1290	U1224	A1143	A1009		A932	G862
G1839	U1769	A1701	G1488	C1557	G1488	G1418	G1356	C1291	G1225	A1144	A1010		U934	A863
			A1626	G1560	C1489	A1419	G1357		A1226	C1145	G1011		C985	G864
			G1628		A1490		C1357		G1227	C1146	U1012		A936	C865
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A2872	C2805	G2743	G2671	G2588	A2516	G2437	G3681	G2293	G2218	G2157	G2012	G1929	A1847
A2873	C2806	G2742	G2677	A2589	C2517	C2440	C2362	G2294	U2219	A2158	A2013	G1930	A1848
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	A2810	U2746	U2680	U2593	C2521	C2443	U2372	U2299	G2224	A2095	G2018	U1856	
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	U2861	G2793	G2729	A2657	C2576	G2505	G2428	A2352	A2284	U2149	C2073		
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	C2863	U2796	G2730	G2659	U2580	G2507	A2430	C2354	G2286	C2151	U2075	A2005	
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	G2866	A2799	A2733	A2662	U2583	C2512	A2433	U2357	G2289	C2153	A2080	C1924	
	C2867	G2800	G2734	G2663	U2584	A2513	A2434	C2358	G2290	A2154		C1925	
	A2868	U2801	G2735	G2664	U2585	U2514	A2435	C2359	G2291	G2155	G2083	U1926	
	G2869	G2802	A2736	A2665	U2586				U2292	G2156	C2084	A1927	
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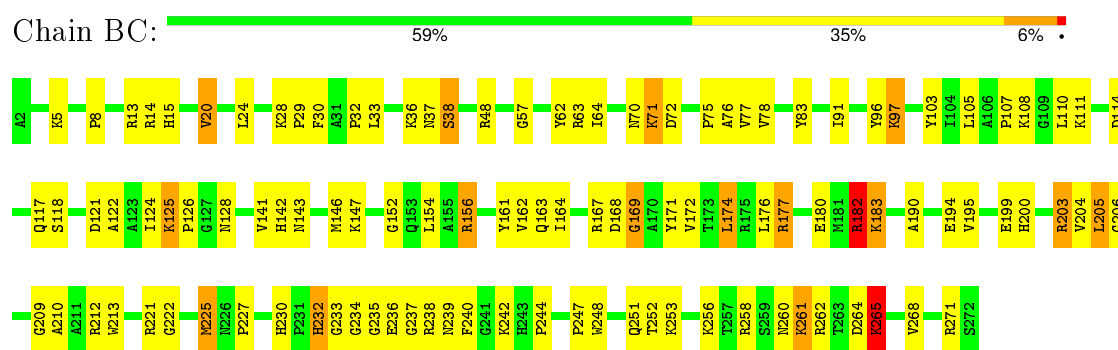
- Molecule 23: 5S rRNA



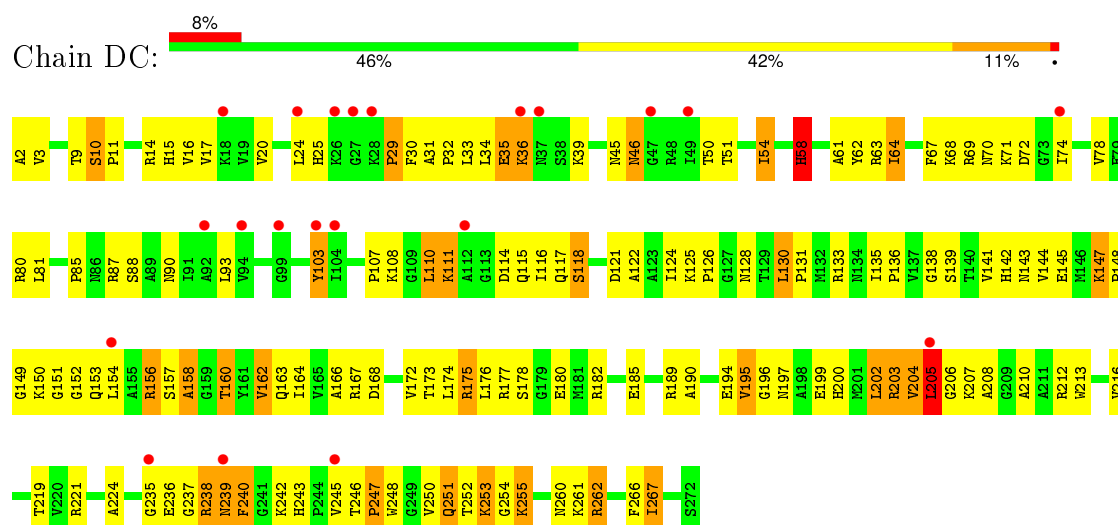
- Molecule 23: 5S rRNA



- Molecule 24: 50S ribosomal protein L2

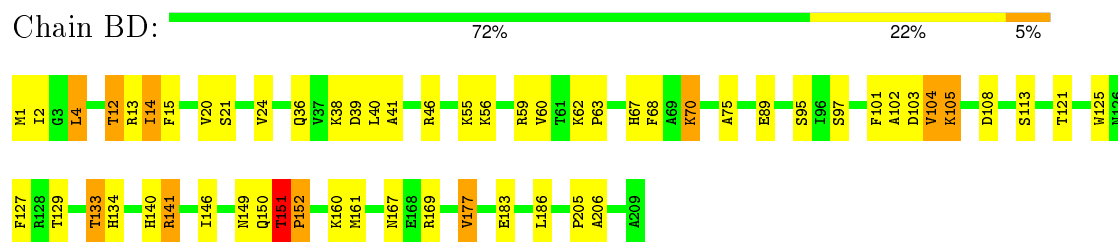


- Molecule 24: 50S ribosomal protein L2

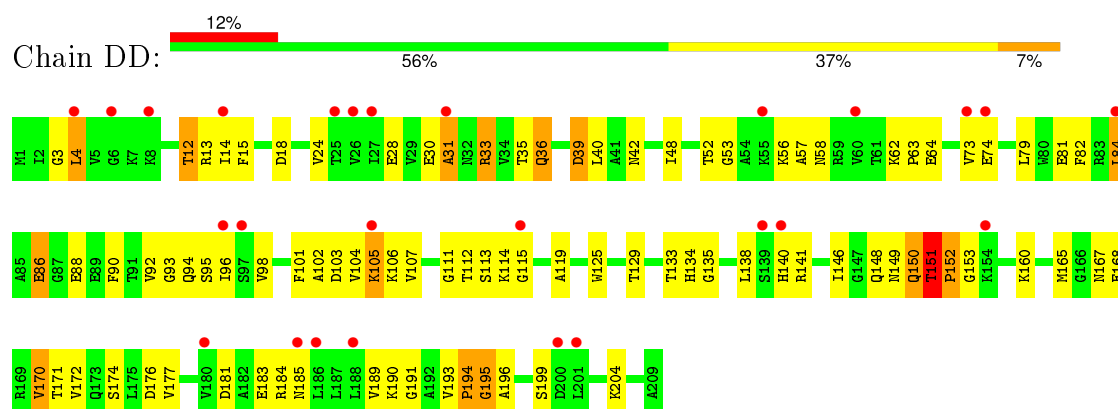


- Molecule 25: 50S ribosomal protein L3

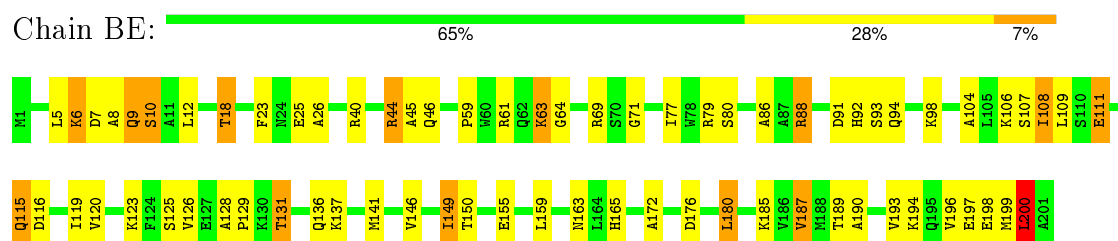




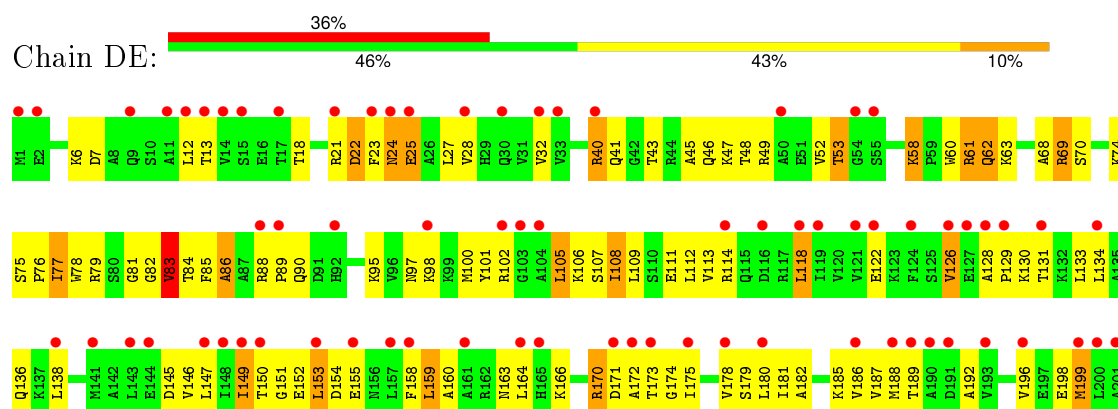
• Molecule 25: 50S ribosomal protein L3



• Molecule 26: 50S ribosomal protein L4

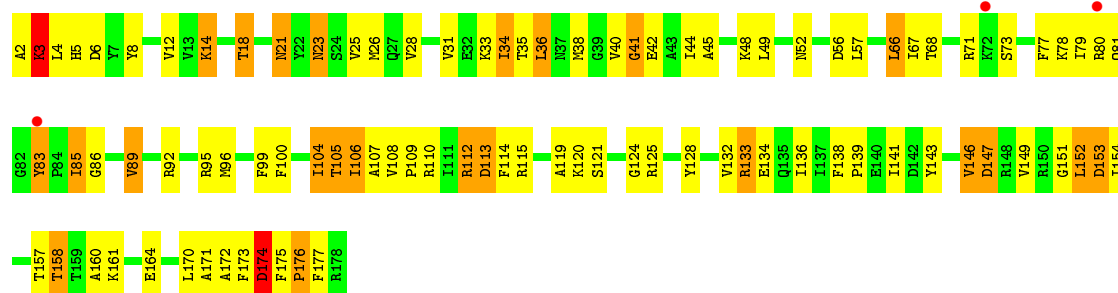


• Molecule 26: 50S ribosomal protein L4

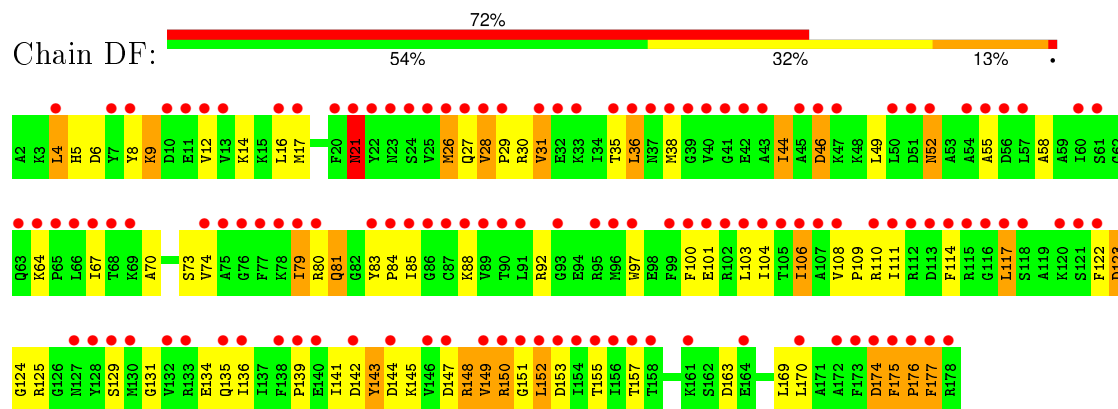


• Molecule 27: 50S ribosomal protein L5

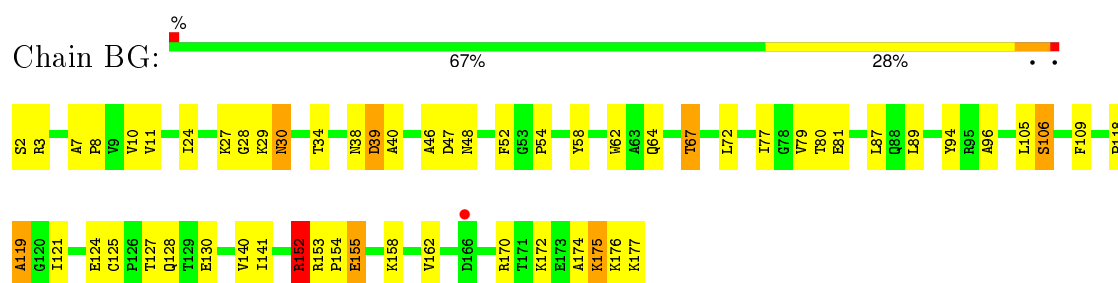




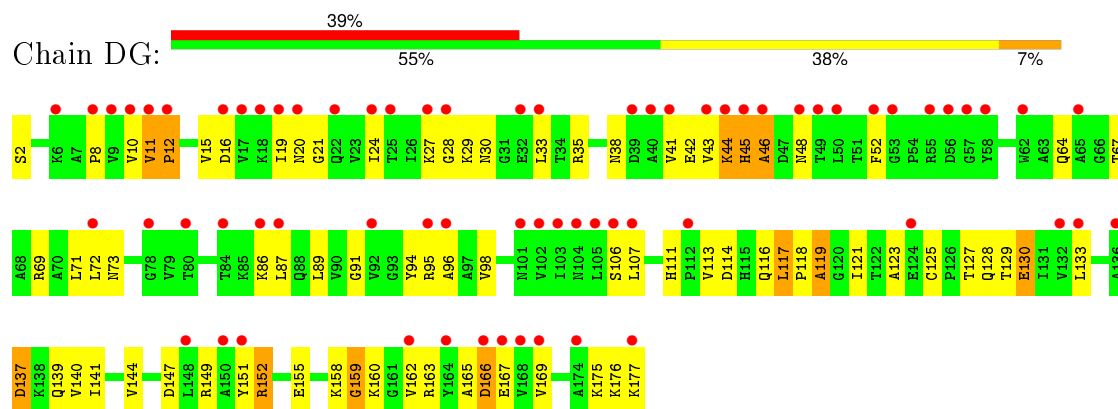
• Molecule 27: 50S ribosomal protein L5



• Molecule 28: 50S ribosomal protein L6

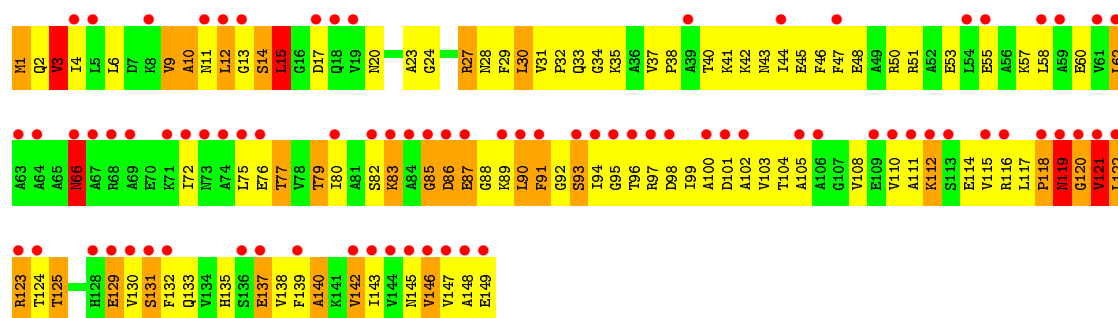


• Molecule 28: 50S ribosomal protein L6

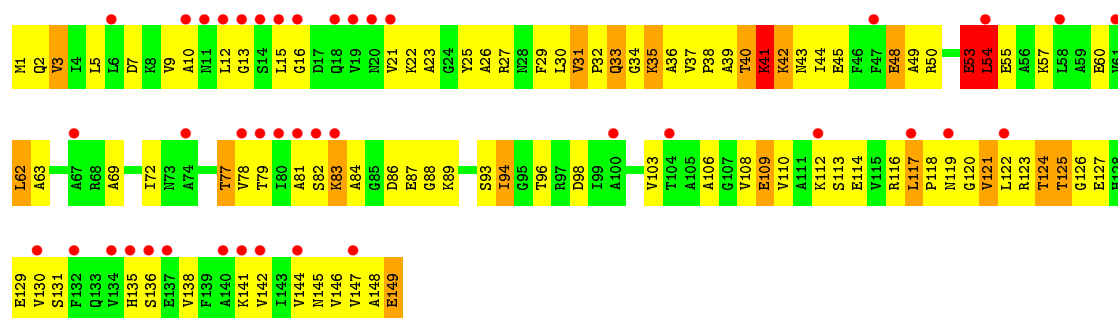


• Molecule 29: 50S ribosomal protein L9

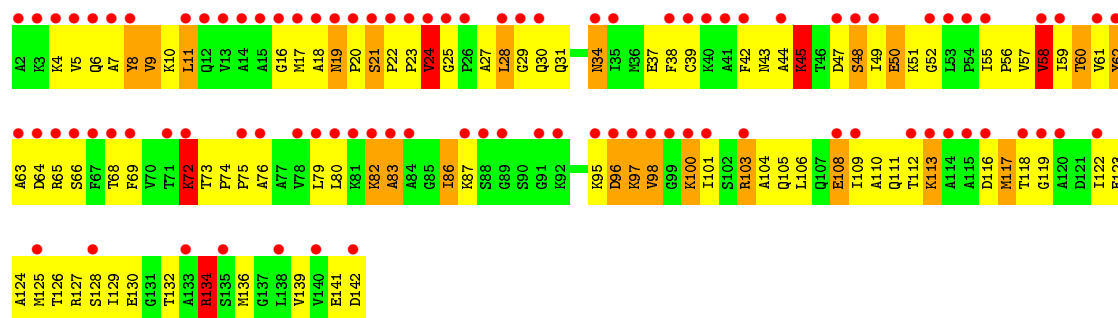




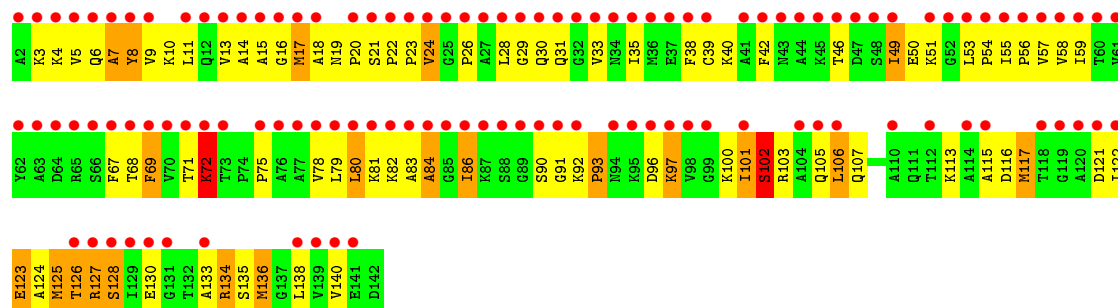
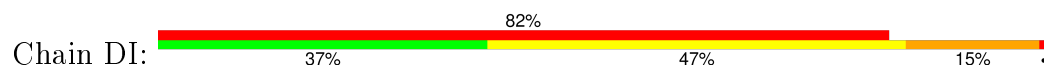
• Molecule 29: 50S ribosomal protein L9



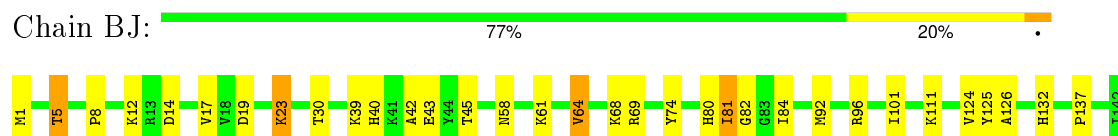
• Molecule 30: 50S ribosomal protein L11



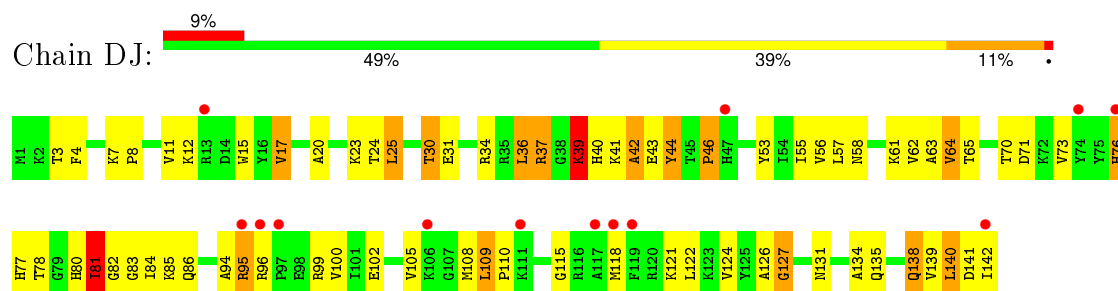
• Molecule 30: 50S ribosomal protein L11



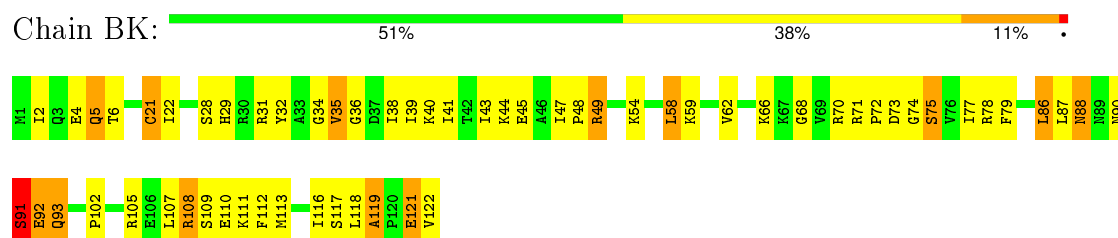
- Molecule 31: 50S ribosomal protein L13



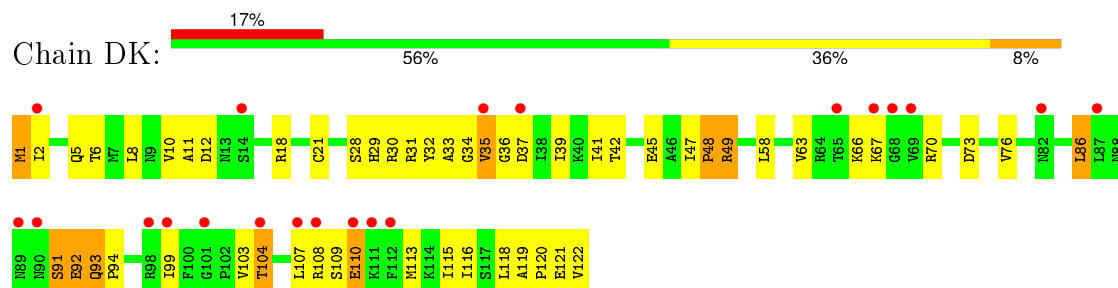
- Molecule 31: 50S ribosomal protein L13



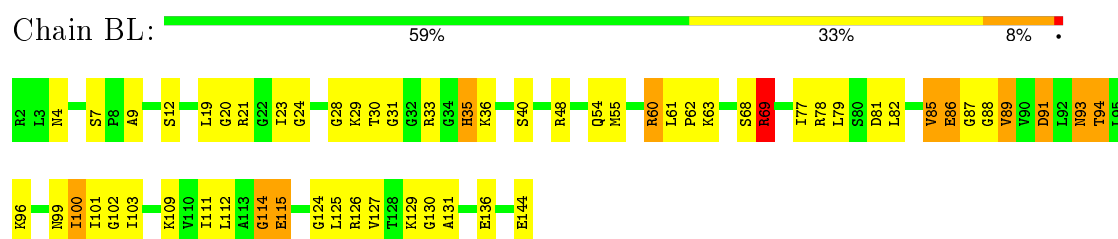
- Molecule 32: 50S ribosomal protein L14



- Molecule 32: 50S ribosomal protein L14

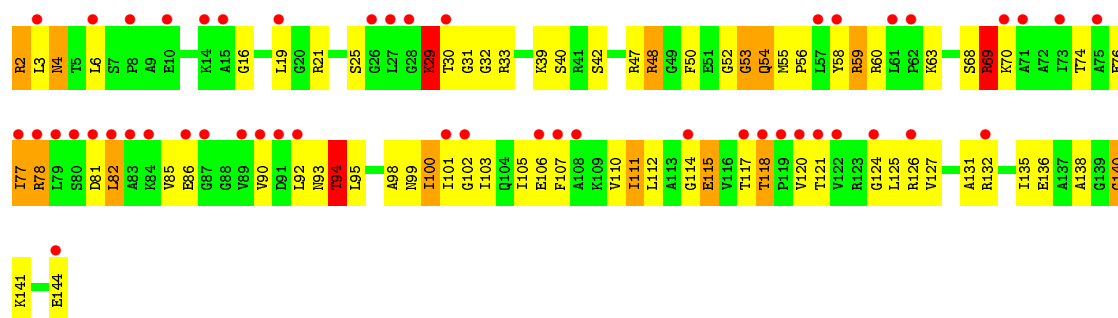


- Molecule 33: 50S ribosomal protein L15



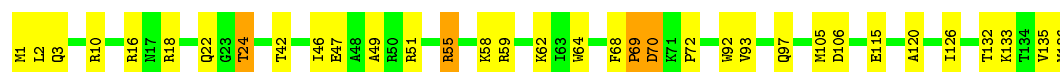
- Molecule 33: 50S ribosomal protein L15





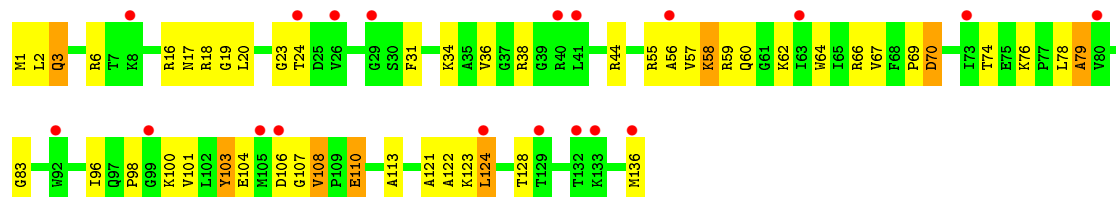
- Molecule 34: 50S ribosomal protein L16

Chain BM: 75% 22% .



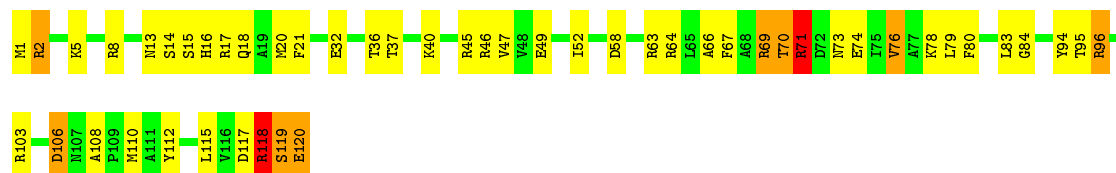
- Molecule 34: 50S ribosomal protein L16

Chain DM: 14% 63% 31% 6%



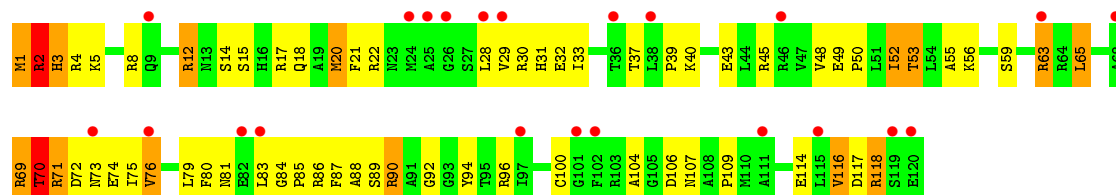
- Molecule 35: 50S ribosomal protein L17

Chain BN: 58% 33% 7% .



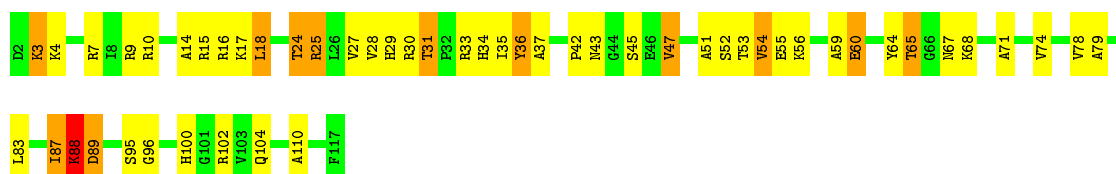
- Molecule 35: 50S ribosomal protein L17

Chain DN: 18% 45% 42% 12% .

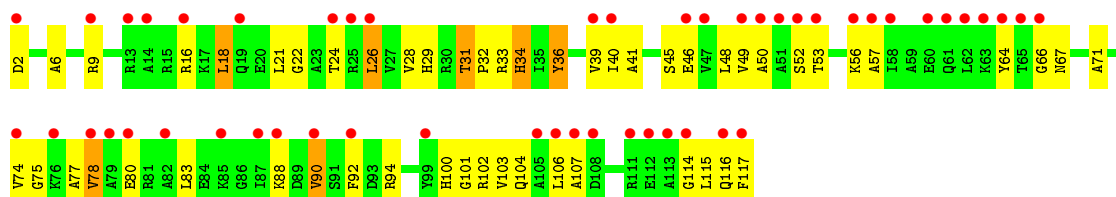


- Molecule 36: 50S ribosomal protein L18

Chain BO: 55% 34% 10% .



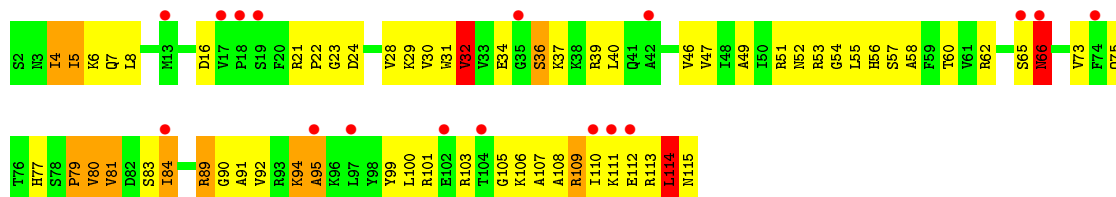
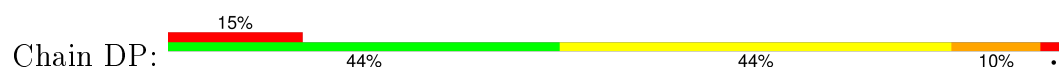
- Molecule 36: 50S ribosomal protein L18



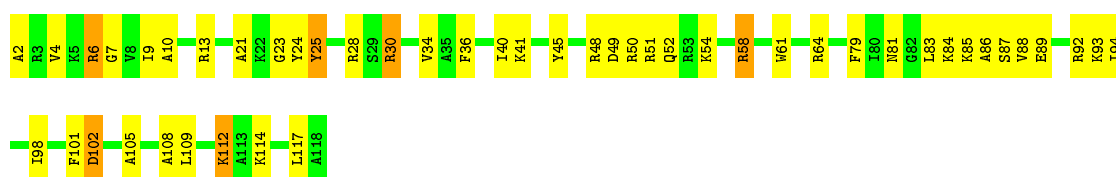
- Molecule 37: 50S ribosomal protein L19



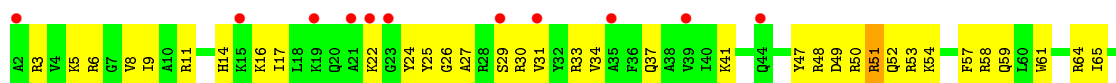
- Molecule 37: 50S ribosomal protein L19

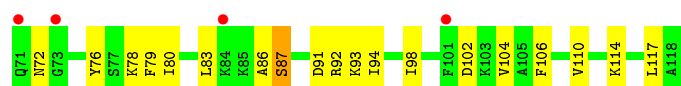


- Molecule 38: 50S ribosomal protein L20



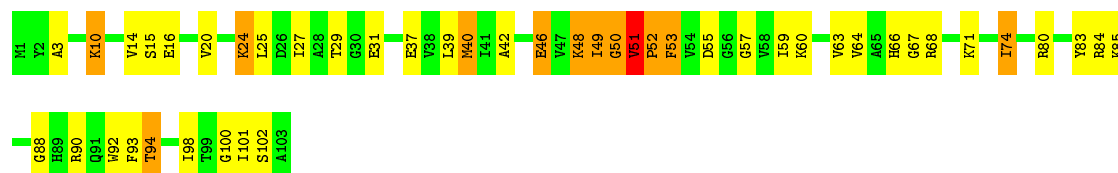
- Molecule 38: 50S ribosomal protein L20





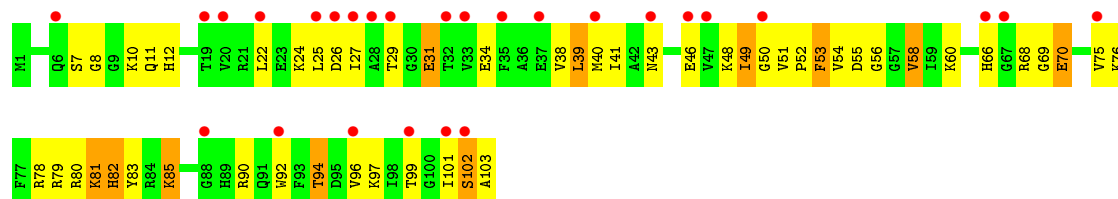
• Molecule 39: 50S ribosomal protein L21

Chain BR: 55% 33% 11%



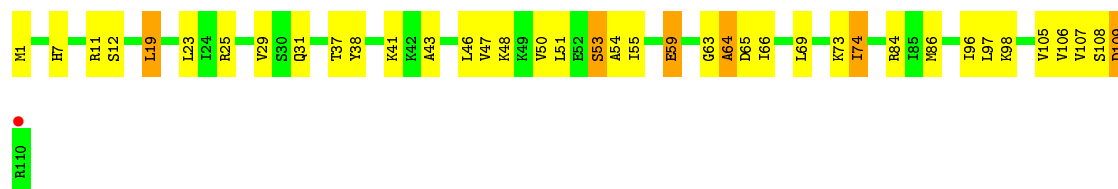
• Molecule 39: 50S ribosomal protein L21

Chain DR: 26% 50% 40% 11%



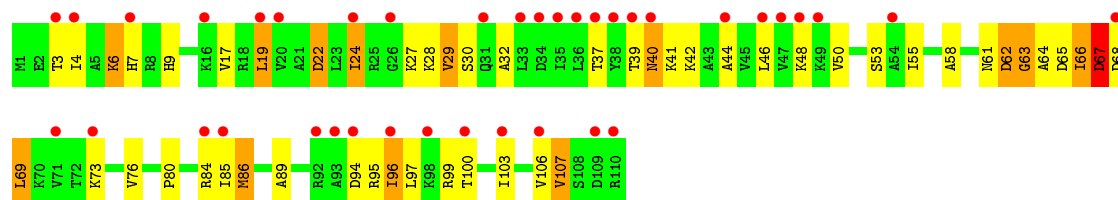
• Molecule 40: 50S ribosomal protein L22

Chain BS: 65% 30% 5%



• Molecule 40: 50S ribosomal protein L22

Chain DS: 35% 54% 34% 12%



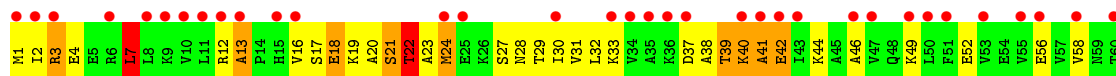
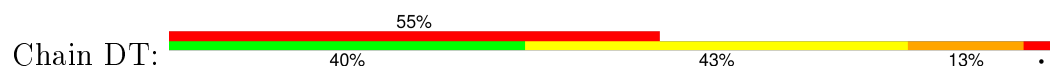
• Molecule 41: 50S ribosomal protein L23

Chain BT: 2% 54% 35% 9%

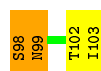
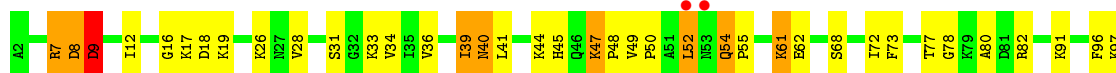




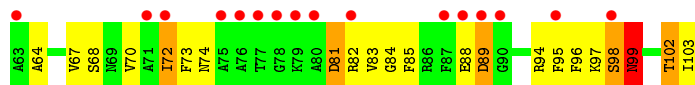
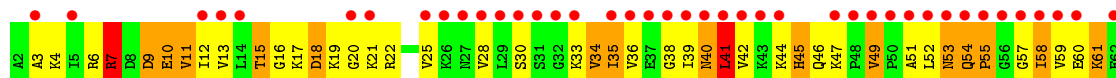
- Molecule 41: 50S ribosomal protein L23



- Molecule 42: 50S ribosomal protein L24



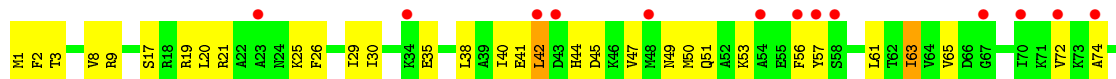
- Molecule 42: 50S ribosomal protein L24



- Molecule 43: 50S ribosomal protein L25



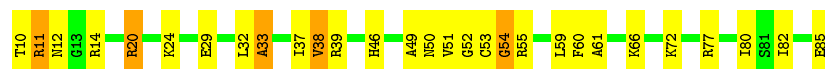
- Molecule 43: 50S ribosomal protein L25





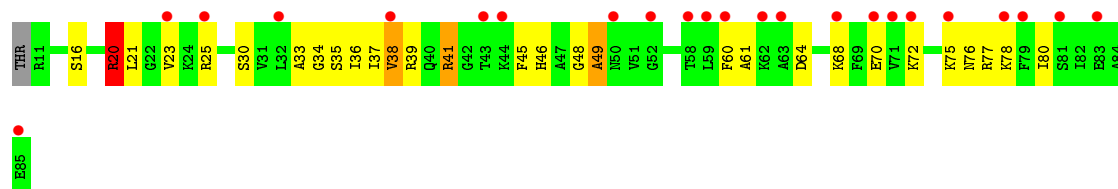
- Molecule 44: 50S ribosomal protein L27

Chain BW: 



- Molecule 44: 50S ribosomal protein L27

Chain DW: 




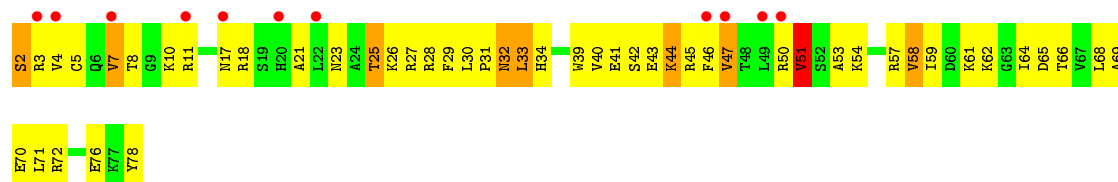
- Molecule 45: 50S ribosomal protein L28

Chain BX: 



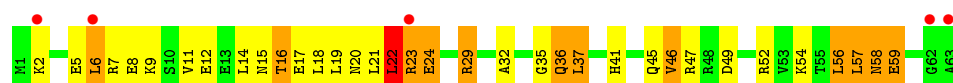
- Molecule 45: 50S ribosomal protein L28

Chain DX: 



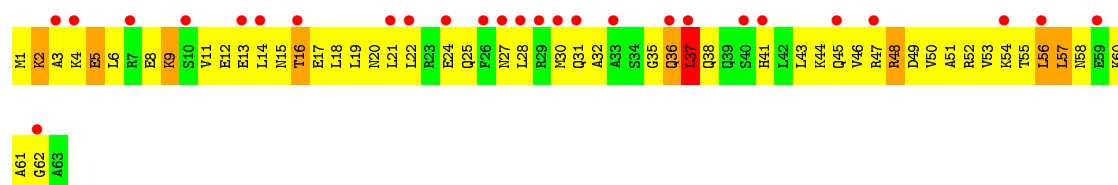
- Molecule 46: 50S ribosomal protein L29

Chain BY: 

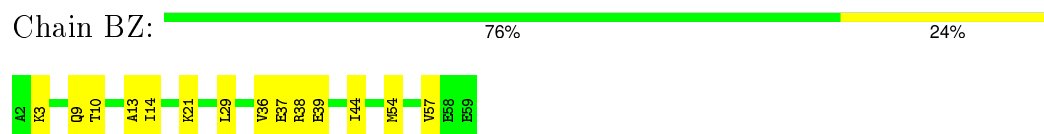


- Molecule 46: 50S ribosomal protein L29

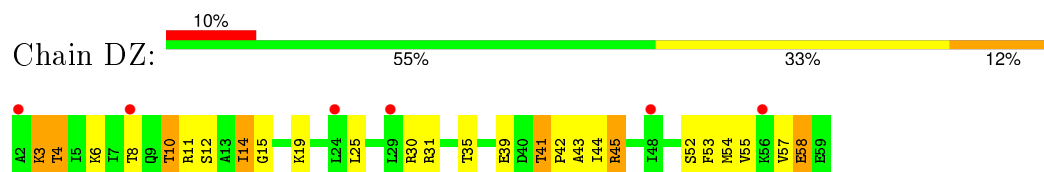
Chain DY: 



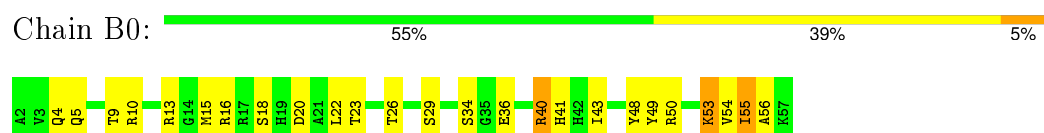
- Molecule 47: 50S ribosomal protein L30



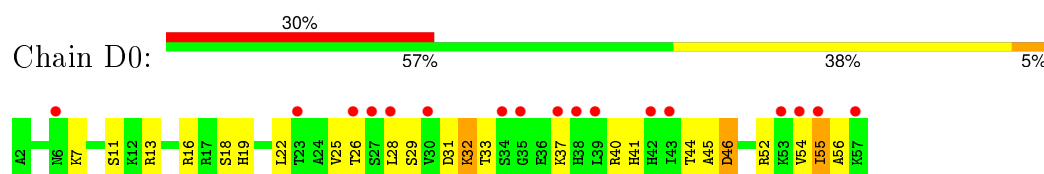
- Molecule 47: 50S ribosomal protein L30



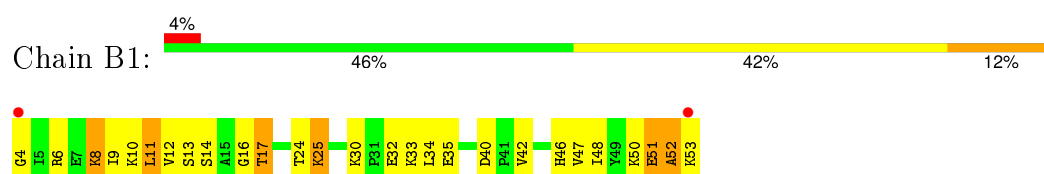
- Molecule 48: 50S ribosomal protein L32



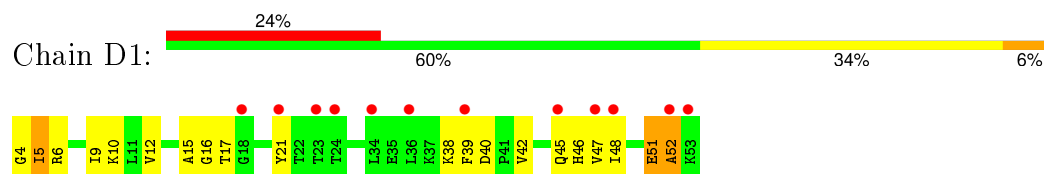
- Molecule 48: 50S ribosomal protein L32



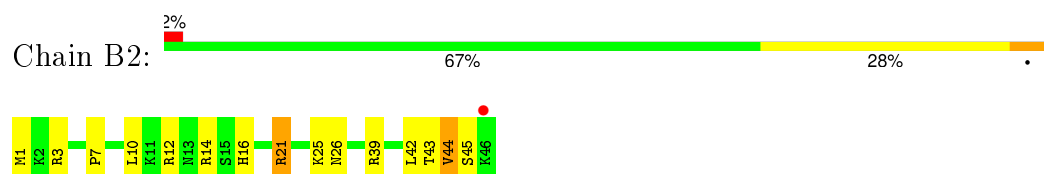
- Molecule 49: 50S ribosomal protein L33



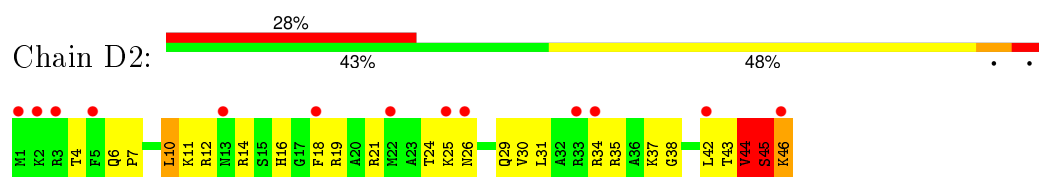
- Molecule 49: 50S ribosomal protein L33



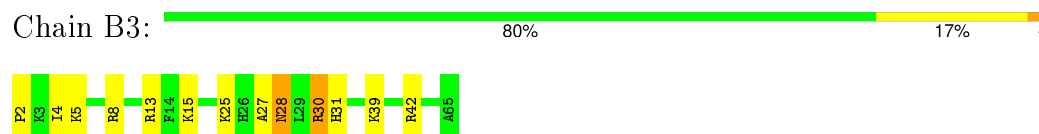
- Molecule 50: 50S ribosomal protein L34



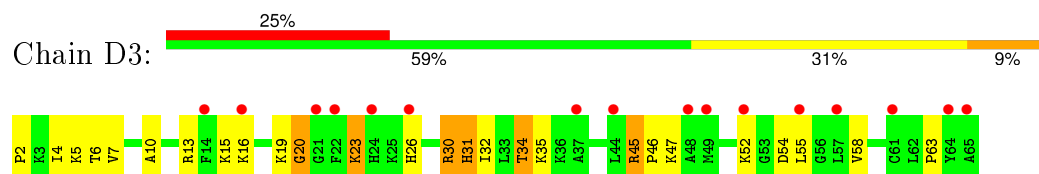
- Molecule 50: 50S ribosomal protein L34



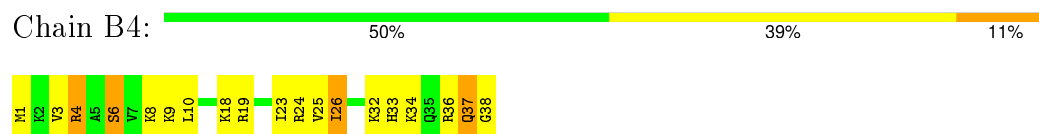
- Molecule 51: 50S ribosomal protein L35



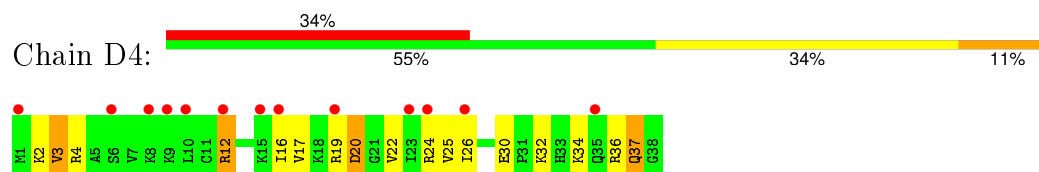
- Molecule 51: 50S ribosomal protein L35



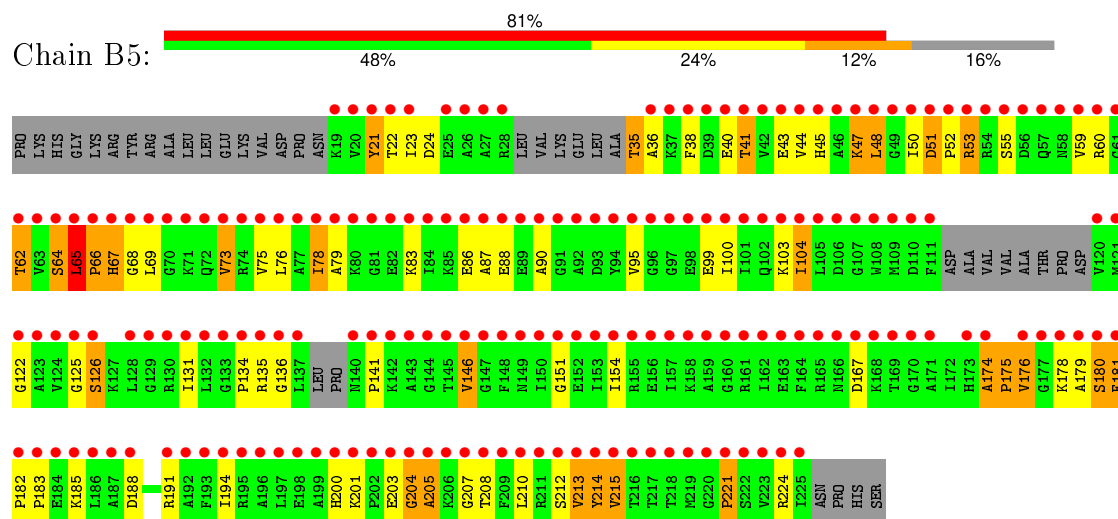
- Molecule 52: 50S ribosomal protein L36



- Molecule 52: 50S ribosomal protein L36



- Molecule 53: 50S ribosomal protein L1



- Molecule 54: Linopristin

Chain B6:  57% 43%



- Molecule 54: Linopristin

Chain D6:  71% 14% 14%



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	211.97Å 434.65Å 623.91Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	69.36 – 2.80 69.36 – 2.80	Depositor EDS
% Data completeness (in resolution range)	89.2 (69.36-2.80) 89.2 (69.36-2.80)	Depositor EDS
$R_{merge}$	0.13	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.37 (at 2.81Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.8.1_1168)	Depositor
R, $R_{free}$	0.215 , 0.260 0.224 , 0.269	Depositor DCC
$R_{free}$ test set	5006 reflections (0.40%)	DCC
Wilson B-factor (Å <sup>2</sup> )	51.2	Xtriage
Anisotropy	0.182	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.28 , 56.6	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.46$ , $\langle L^2 \rangle = 0.29$	Xtriage
Outliers	0 of 1244949 reflections	Xtriage
$F_o, F_c$ correlation	0.92	EDS
Total number of atoms	288396	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	60.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.01% 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: ZN, VIF, DBB, MG, 04X, 004, MHW, MHU

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	0.35	0/36944	0.82	6/57632 (0.0%)
1	CA	0.29	0/36966	0.79	2/57666 (0.0%)
2	AB	0.29	0/1736	0.58	0/2338
2	CB	0.26	0/1736	0.52	0/2338
3	AC	0.28	0/1652	0.54	0/2225
3	CC	0.26	0/1652	0.50	0/2225
4	AD	0.29	0/1665	0.55	0/2227
4	CD	0.32	0/1665	0.57	0/2227
5	AE	0.32	0/1119	0.61	0/1504
5	CE	0.31	0/1119	0.64	0/1504
6	AF	0.31	0/836	0.61	1/1128 (0.1%)
6	CF	0.27	0/836	0.60	1/1128 (0.1%)
7	AG	0.26	0/1196	0.50	0/1602
7	CG	0.26	0/1196	0.50	0/1602
8	AH	0.31	0/989	0.54	0/1326
8	CH	0.26	0/989	0.50	0/1326
9	AI	0.27	0/1034	0.58	0/1375
9	CI	0.27	0/1034	0.54	0/1375
10	AJ	0.29	0/797	0.56	0/1077
10	CJ	0.27	0/797	0.55	0/1077
11	AK	0.28	0/893	0.57	0/1205
11	CK	0.28	0/893	0.58	0/1205
12	AL	0.32	0/969	0.62	0/1300
12	CL	0.30	0/969	0.61	0/1300
13	AM	0.27	0/893	0.56	0/1193
13	CM	0.26	0/893	0.55	0/1193
14	AN	0.29	0/785	0.56	0/1043
14	CN	0.25	0/785	0.48	0/1043
15	AO	0.27	0/718	0.53	0/959
15	CO	0.26	0/718	0.48	0/959
16	AP	0.30	0/659	0.58	0/884
16	CP	0.27	0/659	0.52	0/884

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
17	AQ	0.30	0/658	0.58	0/881
17	CQ	0.29	0/658	0.54	0/881
18	AR	0.27	0/463	0.53	0/621
18	CR	0.28	0/463	0.54	0/621
19	AS	0.29	0/653	0.58	0/877
19	CS	0.28	0/653	0.52	0/877
20	AT	0.30	0/671	0.56	0/888
20	CT	0.26	0/671	0.51	0/888
21	AU	0.35	0/431	0.64	0/570
21	CU	0.35	0/431	0.60	0/570
22	BA	0.60	5/69659 (0.0%)	1.01	98/108672 (0.1%)
22	DA	0.28	0/69659	0.80	8/108672 (0.0%)
23	BB	0.53	0/2850	0.95	0/4444
23	DB	0.24	0/2828	0.79	0/4410
24	BC	0.39	0/2122	0.63	1/2852 (0.0%)
24	DC	0.28	0/2122	0.54	0/2852
25	BD	0.42	0/1586	0.65	1/2134 (0.0%)
25	DD	0.28	0/1586	0.53	0/2134
26	BE	0.38	0/1571	0.60	0/2113
26	DE	0.27	0/1571	0.52	0/2113
27	BF	0.31	0/1435	0.53	0/1926
27	DF	0.26	0/1435	0.48	0/1926
28	BG	0.31	0/1343	0.57	0/1816
28	DG	0.25	0/1343	0.47	0/1816
29	BH	0.36	0/1121	0.66	1/1515 (0.1%)
29	DH	0.35	0/1121	0.56	0/1515
30	BI	0.28	0/1046	0.56	0/1410
30	DI	0.29	0/1046	0.54	0/1410
31	BJ	0.44	0/1152	0.62	0/1551
31	DJ	0.27	0/1152	0.51	0/1551
32	BK	0.44	0/948	0.66	0/1268
32	DK	0.28	0/948	0.51	0/1268
33	BL	0.40	0/1054	0.68	0/1403
33	DL	0.27	0/1054	0.57	0/1403
34	BM	0.43	0/1093	0.64	0/1460
34	DM	0.26	0/1093	0.47	0/1460
35	BN	0.46	0/974	0.68	1/1301 (0.1%)
35	DN	0.27	0/974	0.51	0/1301
36	BO	0.34	0/902	0.59	0/1209
36	DO	0.26	0/902	0.48	0/1209
37	BP	0.39	0/929	0.57	0/1242
37	DP	0.28	0/929	0.53	0/1242
38	BQ	0.48	0/960	0.68	0/1278

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
38	DQ	0.27	0/960	0.48	0/1278
39	BR	0.47	0/829	0.73	1/1107 (0.1%)
39	DR	0.27	0/829	0.55	0/1107
40	BS	0.51	0/864	0.69	0/1156
40	DS	0.27	0/864	0.52	0/1156
41	BT	0.35	0/745	0.58	0/994
41	DT	0.27	0/745	0.53	0/994
42	BU	0.36	0/788	0.60	0/1051
42	DU	0.30	0/788	0.55	0/1051
43	BV	0.36	0/766	0.59	0/1025
43	DV	0.25	0/766	0.45	0/1025
44	BW	0.43	0/587	0.63	0/776
44	DW	0.26	0/576	0.48	0/762
45	BX	0.35	0/635	0.59	0/848
45	DX	0.28	0/635	0.52	0/848
46	BY	0.32	0/510	0.60	0/677
46	DY	0.26	0/510	0.54	0/677
47	BZ	0.46	0/453	0.60	0/605
47	DZ	0.26	0/453	0.52	0/605
48	B0	0.43	0/450	0.63	0/599
48	D0	0.29	0/450	0.55	0/599
49	B1	0.35	0/417	0.56	0/554
49	D1	0.27	0/417	0.48	0/554
50	B2	0.45	0/380	0.71	0/498
50	D2	0.29	0/380	0.52	0/498
51	B3	0.39	0/513	0.61	0/676
51	D3	0.26	0/513	0.48	0/676
52	B4	0.46	0/303	0.72	0/397
52	D4	0.25	0/303	0.50	0/397
53	B5	0.26	0/1145	0.50	0/1556
54	B6	4.15	4/13 (30.8%)	3.77	4/15 (26.7%)
54	D6	3.89	4/13 (30.8%)	3.55	1/15 (6.7%)
All	All	0.40	13/310652 (0.0%)	0.81	126/464396 (0.0%)

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
5	CE	0	1
6	CF	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
11	AK	0	1
12	AL	0	1
12	CL	0	1
21	AU	0	1
21	CU	0	1
24	BC	0	1
25	BD	0	1
25	DD	0	1
All	All	0	10

All (13) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	BA	1142	A	N9-C4	-10.72	1.31	1.37
22	BA	984	A	N9-C4	-9.17	1.32	1.37
22	BA	1936	A	N9-C4	-7.33	1.33	1.37
22	BA	974	G	N9-C8	6.97	1.42	1.37
54	B6	2	THR	CB-OG1	-6.86	1.29	1.43
54	B6	4	PRO	N-CD	-6.53	1.38	1.47
54	D6	4	PRO	N-CD	-6.35	1.39	1.47
54	D6	2	THR	CB-OG1	-5.92	1.31	1.43
54	B6	4	PRO	N-CA	-5.91	1.37	1.47
54	D6	2	THR	N-CA	-5.84	1.34	1.46
54	B6	2	THR	N-CA	-5.75	1.34	1.46
54	D6	4	PRO	N-CA	-5.52	1.37	1.47
22	BA	528	A	N7-C5	-5.39	1.36	1.39

All (126) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	984	A	C2-N3-C4	-10.54	105.33	110.60
22	BA	1142	A	C2-N3-C4	-9.69	105.75	110.60
22	BA	1142	A	N3-C4-C5	9.46	133.42	126.80
22	BA	984	A	N3-C4-C5	9.37	133.36	126.80
22	BA	974	G	C4-C5-N7	9.29	114.51	110.80
22	BA	974	G	C5-N7-C8	-8.84	99.88	104.30
25	BD	151	THR	C-N-CD	-8.78	101.28	120.60
22	BA	984	A	N3-C4-N9	-8.74	120.40	127.40
22	BA	752	A	C4-C5-N7	8.72	115.06	110.70
22	BA	528	A	N1-C6-N6	8.69	123.81	118.60
22	BA	528	A	C6-C5-N7	-8.51	126.34	132.30
22	BA	752	A	C5-N7-C8	-8.47	99.67	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1142	A	N3-C4-N9	-7.87	121.10	127.40
22	BA	1936	A	C2-N3-C4	-7.81	106.69	110.60
22	BA	1936	A	N3-C4-C5	7.73	132.21	126.80
22	BA	528	A	C2-N3-C4	-7.71	106.74	110.60
22	BA	2453	A	N1-C6-N6	7.61	123.17	118.60
22	BA	752	A	N1-C6-N6	7.46	123.08	118.60
24	BC	182	ARG	NE-CZ-NH2	7.29	123.95	120.30
22	BA	2250	G	C5-N7-C8	-7.15	100.72	104.30
22	BA	1936	A	N3-C4-N9	-7.12	121.70	127.40
35	BN	71	ARG	NE-CZ-NH2	7.09	123.84	120.30
54	D6	4	PRO	CA-C-O	-7.07	103.24	120.20
22	BA	2453	A	C5-C6-N6	-7.05	118.06	123.70
22	BA	528	A	N1-C2-N3	7.02	132.81	129.30
22	BA	974	G	N3-C4-C5	6.92	132.06	128.60
22	BA	752	A	C6-C5-N7	-6.71	127.60	132.30
22	BA	2030	A	N9-C4-C5	6.70	108.48	105.80
22	BA	2825	G	C4-N9-C1'	6.66	135.15	126.50
22	BA	528	A	C4-C5-C6	6.41	120.20	117.00
22	BA	984	A	C4-N9-C1'	-6.36	114.86	126.30
22	BA	502	A	O5'-P-OP1	-6.36	99.98	105.70
22	BA	984	A	C8-N9-C1'	6.29	139.03	127.70
22	BA	783	A	C5-N7-C8	-6.27	100.76	103.90
22	BA	2645	G	O4'-C1'-N9	6.26	113.20	108.20
22	BA	2012	G	C5-C6-O6	-6.19	124.89	128.60
1	AA	1286	U	C2-N1-C1'	6.14	125.06	117.70
22	BA	529	A	C8-N9-C4	6.12	108.25	105.80
22	BA	752	A	N7-C8-N9	6.08	116.84	113.80
1	CA	209	U	C2-N1-C1'	6.06	124.97	117.70
22	BA	512	G	O4'-C1'-N9	6.06	113.05	108.20
1	AA	1279	G	C8-N9-C4	-6.04	103.98	106.40
22	BA	783	A	C2-N3-C4	-6.03	107.58	110.60
22	BA	704	G	O4'-C1'-N9	5.99	113.00	108.20
54	B6	2	THR	CA-CB-OG1	-5.98	96.44	109.00
54	B6	2	THR	N-CA-CB	-5.97	98.95	110.30
6	CF	86	ARG	NE-CZ-NH1	5.97	123.28	120.30
54	B6	4	PRO	N-CD-CG	5.96	112.14	103.20
22	BA	2689	U	C5-C4-O4	5.95	129.47	125.90
22	BA	783	A	C4-C5-N7	5.92	113.66	110.70
22	BA	2689	U	N3-C4-O4	-5.91	115.27	119.40
22	DA	1313	U	C2-N1-C1'	5.90	124.78	117.70
22	BA	2867	G	O5'-P-OP1	-5.83	100.45	105.70
22	BA	748	G	O4'-C1'-N9	5.82	112.86	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	974	G	N7-C8-N9	5.80	116.00	113.10
22	BA	2250	G	C4-C5-N7	5.79	113.11	110.80
22	BA	2062	A	O4'-C1'-N9	5.75	112.80	108.20
22	BA	1282	U	C5-C4-O4	-5.74	122.46	125.90
22	BA	2848	G	O4'-C1'-N9	5.74	112.79	108.20
1	AA	578	C	O5'-P-OP1	-5.70	100.57	105.70
22	BA	752	A	N9-C4-C5	-5.68	103.53	105.80
22	BA	528	A	C8-N9-C4	-5.67	103.53	105.80
22	BA	974	G	O4'-C1'-N9	5.65	112.72	108.20
22	BA	1142	A	C5-N7-C8	-5.61	101.09	103.90
22	BA	2030	A	C5-C6-N6	5.57	128.15	123.70
22	DA	2447	G	C4-N9-C1'	-5.56	119.27	126.50
39	BR	51	VAL	C-N-CD	5.55	140.06	128.40
22	BA	984	A	C5-N7-C8	-5.54	101.13	103.90
22	DA	1314	C	C2-N1-C1'	5.54	124.90	118.80
22	BA	586	A	O5'-P-OP1	-5.54	100.71	105.70
22	BA	528	A	N7-C8-N9	5.54	116.57	113.80
22	BA	2190	G	C4-N9-C1'	5.54	133.70	126.50
22	BA	2580	U	C5-C4-O4	-5.53	122.58	125.90
22	BA	2825	G	C8-N9-C1'	-5.52	119.83	127.00
22	BA	2000	C	O5'-P-OP2	-5.51	100.74	105.70
22	BA	528	A	C4-C5-N7	5.51	113.45	110.70
22	BA	2825	G	N3-C4-C5	-5.50	125.85	128.60
22	BA	395	U	O4'-C1'-N1	5.47	112.58	108.20
22	BA	2030	A	N1-C6-N6	-5.46	115.33	118.60
22	BA	1660	G	N1-C6-O6	-5.42	116.64	119.90
22	BA	752	A	C5-C6-N6	-5.39	119.39	123.70
22	BA	2250	G	N7-C8-N9	5.39	115.79	113.10
22	BA	1142	A	C4-C5-C6	-5.38	114.31	117.00
22	BA	2765	A	N1-C6-N6	5.37	121.82	118.60
22	BA	1613	G	N1-C6-O6	-5.36	116.68	119.90
22	BA	1779	U	N3-C4-O4	-5.36	115.65	119.40
22	BA	481	G	O4'-C1'-N9	5.34	112.48	108.20
22	BA	1936	A	N1-C6-N6	5.34	121.80	118.60
1	AA	1279	G	N7-C8-N9	5.32	115.76	113.10
22	BA	1677	A	N1-C6-N6	5.30	121.78	118.60
22	DA	2585	U	C2-N1-C1'	-5.30	111.34	117.70
22	BA	808	G	C5-C6-O6	-5.29	125.42	128.60
22	BA	528	A	C5-N7-C8	-5.29	101.26	103.90
22	BA	537	G	C5-C6-O6	-5.28	125.43	128.60
22	BA	974	G	N1-C6-O6	5.27	123.06	119.90
22	BA	997	G	OP1-P-O3'	5.27	116.78	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1282	U	N3-C4-O4	5.25	123.08	119.40
22	BA	527	C	N1-C2-O2	-5.25	115.75	118.90
22	BA	2645	G	C4-N9-C1'	5.24	133.31	126.50
22	BA	1415	U	C2-N1-C1'	5.22	123.96	117.70
22	BA	1121	C	N1-C2-O2	-5.21	115.77	118.90
22	BA	1260	A	C8-N9-C4	5.20	107.88	105.80
1	CA	207	C	C2-N1-C1'	5.19	124.51	118.80
22	BA	1223	G	OP2-P-O3'	5.18	116.61	105.20
22	DA	2499	C	N1-C2-O2	-5.18	115.79	118.90
22	DA	2447	G	C8-N9-C1'	5.18	133.73	127.00
22	BA	585	G	N3-C4-C5	-5.17	126.02	128.60
29	BH	121	VAL	C-N-CA	5.15	134.59	121.70
22	BA	2190	G	C8-N9-C1'	-5.15	120.30	127.00
22	BA	537	G	N1-C6-O6	5.13	122.98	119.90
22	BA	2521	C	O5'-P-OP2	-5.13	101.08	105.70
22	BA	1584	U	C2-N1-C1'	5.12	123.85	117.70
22	BA	1785	A	C8-N9-C4	-5.12	103.75	105.80
22	BA	974	G	C5-C6-O6	-5.11	125.54	128.60
1	AA	1504	G	O4'-C1'-N9	5.10	112.28	108.20
22	DA	1786	A	O4'-C1'-N9	5.08	112.27	108.20
22	BA	2731	G	C4-C5-N7	5.07	112.83	110.80
1	AA	188	C	C2-N1-C1'	5.06	124.37	118.80
22	BA	1022	G	N9-C4-C5	5.05	107.42	105.40
22	DA	748	G	O4'-C1'-N9	5.05	112.24	108.20
54	B6	4	PRO	CA-C-O	-5.04	108.10	120.20
22	BA	2248	C	N1-C2-O2	5.04	121.92	118.90
6	AF	54	LEU	CA-CB-CG	5.04	126.89	115.30
22	BA	2645	G	C8-N9-C1'	-5.04	120.45	127.00
22	BA	2887	A	N1-C6-N6	5.03	121.62	118.60
22	BA	2059	A	N1-C6-N6	5.03	121.62	118.60

There are no chirality outliers.

All (10) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
11	AK	126	LYS	Peptide
12	AL	38	TYR	Peptide
21	AU	39	GLU	Peptide
24	BC	232	HIS	Peptide
25	BD	151	THR	Peptide
5	CE	102	GLY	Peptide
6	CF	54	LEU	Peptide

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Mol	Chain	Res	Type	Group
12	CL	24	LEU	Peptide
21	CU	39	GLU	Peptide
25	DD	151	THR	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	32995	0	16607	1047	0
1	CA	33015	0	16617	1004	0
2	AB	1705	0	1732	177	0
2	CB	1705	0	1732	125	0
3	AC	1625	0	1696	75	0
3	CC	1625	0	1696	64	0
4	AD	1643	0	1707	134	0
4	CD	1643	0	1707	121	0
5	AE	1106	0	1148	75	0
5	CE	1106	0	1148	101	0
6	AF	818	0	808	60	0
6	CF	818	0	808	56	0
7	AG	1182	0	1238	58	0
7	CG	1182	0	1238	54	0
8	AH	979	0	1031	74	0
8	CH	979	0	1031	42	0
9	AI	1022	0	1070	82	0
9	CI	1022	0	1070	70	0
10	AJ	787	0	828	69	0
10	CJ	787	0	828	59	0
11	AK	877	0	887	66	0
11	CK	877	0	887	65	0
12	AL	955	0	1016	61	0
12	CL	955	0	1016	72	0
13	AM	884	0	941	61	0
13	CM	884	0	941	49	0
14	AN	774	0	824	59	0
14	CN	774	0	824	45	0
15	AO	710	0	728	27	0
15	CO	710	0	728	31	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
16	AP	649	0	666	60	0
16	CP	649	0	666	29	0
17	AQ	649	0	691	65	0
17	CQ	649	0	691	59	0
18	AR	456	0	478	17	0
18	CR	456	0	478	40	0
19	AS	638	0	665	40	0
19	CS	638	0	665	37	0
20	AT	665	0	714	50	0
20	CT	665	0	714	46	0
21	AU	426	0	449	49	0
21	CU	426	0	449	59	0
22	BA	62195	0	31280	1407	0
22	DA	62195	0	31280	2116	0
23	BB	2549	0	1291	30	0
23	DB	2529	0	1281	80	0
24	BC	2083	0	2154	82	0
24	DC	2083	0	2154	116	0
25	BD	1565	0	1616	52	0
25	DD	1565	0	1616	80	0
26	BE	1552	0	1619	46	0
26	DE	1552	0	1619	79	0
27	BF	1411	0	1444	89	0
27	DF	1411	0	1444	55	0
28	BG	1323	0	1371	43	0
28	DG	1323	0	1371	54	0
29	BH	1110	0	1147	151	0
29	DH	1110	0	1148	87	0
30	BI	1032	0	1085	81	0
30	DI	1032	0	1085	78	0
31	BJ	1129	0	1162	22	0
31	DJ	1129	0	1162	52	0
32	BK	939	0	1012	48	0
32	DK	939	0	1012	42	0
33	BL	1045	0	1117	55	0
33	DL	1045	0	1117	66	0
34	BM	1074	0	1157	25	0
34	DM	1074	0	1157	35	0
35	BN	961	0	1000	46	0
35	DN	961	0	1000	58	0
36	BO	892	0	923	37	0
36	DO	892	0	923	39	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
37	BP	917	0	962	28	0
37	DP	917	0	962	47	0
38	BQ	947	0	1019	39	0
38	DQ	947	0	1019	47	0
39	BR	816	0	839	56	0
39	DR	816	0	839	46	0
40	BS	857	0	922	28	0
40	DS	857	0	922	40	0
41	BT	739	0	807	37	0
41	DT	739	0	807	47	0
42	BU	780	0	831	27	0
42	DU	780	0	831	64	0
43	BV	753	0	780	20	0
43	DV	753	0	780	27	0
44	BW	580	0	594	18	0
44	DW	569	0	581	25	0
45	BX	625	0	652	22	0
45	DX	625	0	652	45	0
46	BY	509	0	543	35	0
46	DY	509	0	543	45	0
47	BZ	449	0	488	9	0
47	DZ	449	0	488	13	0
48	B0	444	0	458	23	0
48	D0	444	0	458	18	0
49	B1	410	0	440	22	0
49	D1	410	0	440	11	0
50	B2	377	0	418	17	0
50	D2	377	0	418	24	0
51	B3	504	0	572	12	0
51	D3	504	0	572	27	0
52	B4	302	0	340	23	0
52	D4	302	0	340	15	0
53	B5	1142	0	865	52	0
54	B6	69	0	60	1	0
54	D6	69	0	61	20	0
55	AA	72	0	0	0	0
55	BA	193	0	0	0	0
55	BB	4	0	0	0	0
55	BD	1	0	0	0	0
55	BQ	1	0	0	0	0
55	CA	56	0	0	0	0
55	D2	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
55	DA	167	0	0	0	0
55	DB	3	0	0	0	0
56	BA	38	0	38	2	0
56	DA	38	0	37	11	0
57	B4	1	0	0	0	0
57	D4	1	0	0	0	0
58	AA	193	0	0	20	0
58	AL	2	0	0	0	0
58	AN	5	0	0	0	0
58	AT	2	0	0	0	0
58	AU	1	0	0	0	0
58	B2	1	0	0	0	0
58	B3	2	0	0	0	0
58	B4	2	0	0	0	0
58	BA	623	0	0	64	0
58	BB	14	0	0	0	0
58	BC	6	0	0	1	0
58	BD	3	0	0	2	0
58	BE	4	0	0	0	0
58	BF	1	0	0	1	0
58	BG	1	0	0	1	0
58	BL	4	0	0	2	0
58	BN	3	0	0	0	0
58	BS	1	0	0	0	0
58	BT	1	0	0	0	0
58	CA	192	0	0	21	0
58	CL	1	0	0	0	0
58	CN	3	0	0	0	0
58	CT	1	0	0	0	0
58	CU	1	0	0	1	0
58	D0	1	0	0	0	0
58	D2	1	0	0	0	0
58	D3	2	0	0	0	0
58	D4	1	0	0	0	0
58	DA	608	0	0	99	0
58	DB	13	0	0	1	0
58	DC	11	0	0	0	0
58	DD	4	0	0	2	0
58	DE	5	0	0	2	0
58	DJ	1	0	0	0	0
58	DL	4	0	0	2	0
58	DN	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
58	DT	1	0	0	0	0
58	DU	1	0	0	0	0
58	DV	1	0	0	0	0
All	All	288396	0	192983	10007	0

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 21.

All (10007) 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)
29:BH:123:ARG:HH22	1:CA:367:U:P	1.57	1.26
29:BH:117:LEU:O	29:BH:121:VAL:HG23	1.34	1.22
29:BH:117:LEU:O	29:BH:121:VAL:CG2	1.95	1.14
22:BA:2498:C:OP2	58:BA:3690:HOH:O	1.65	1.12
1:AA:533:A:OP1	58:AA:1848:HOH:O	1.68	1.11
22:BA:1153:C:OP2	58:BA:3360:HOH:O	1.70	1.09
29:BH:123:ARG:O	29:BH:124:THR:CG2	2.01	1.09
54:D6:4:PRO:CB	54:D6:5:MHU:HM1	1.80	1.09
23:DB:28:C:OP1	36:DO:36:TYR:OH	1.69	1.08
25:DD:151:THR:O	25:DD:153:GLY:N	1.86	1.08
54:D6:4:PRO:HB2	54:D6:5:MHU:CM	1.75	1.06
2:AB:21:ARG:O	2:AB:23:TRP:N	1.88	1.06
24:BC:260:ASN:O	24:BC:262:ARG:N	1.88	1.06
22:DA:602:A:O2'	22:DA:604:G:O2'	1.74	1.05
22:BA:842:U:O4	58:BA:3590:HOH:O	1.73	1.05
25:BD:140:HIS:NE2	58:BD:402:HOH:O	1.89	1.04
1:CA:1500:A:OP2	58:CA:1883:HOH:O	1.75	1.04
22:BA:1509:A:O2'	22:BA:1510:G:OP2	1.73	1.03
22:DA:2711:A:OP2	58:DA:3548:HOH:O	1.75	1.02
29:BH:123:ARG:NH2	1:CA:367:U:O5'	1.92	1.01
6:CF:12:PRO:O	6:CF:15:SER:OG	1.78	1.01
29:BH:123:ARG:NH2	1:CA:367:U:OP2	1.93	1.00
22:DA:1050:A:N6	22:DA:1109:C:O2	1.94	1.00
22:DA:790:U:OP2	58:DA:3755:HOH:O	1.77	1.00
29:BH:117:LEU:HD21	29:BH:121:VAL:H	1.23	1.00
29:BH:123:ARG:O	29:BH:124:THR:HG23	1.61	0.99
22:BA:2448:A:OP2	58:BA:3690:HOH:O	1.81	0.98
13:AM:11:ASP:OD1	13:AM:12:HIS:N	1.96	0.98
22:DA:2271:G:O6	58:DA:3509:HOH:O	1.79	0.98
22:DA:2627:G:O2'	22:DA:2781:A:N1	1.95	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1198:G:N7	58:CA:1852:HOH:O	1.94	0.97
29:DH:40:THR:O	29:DH:42:LYS:N	1.98	0.97
23:DB:34:A:N6	23:DB:44:G:O2'	1.98	0.97
22:BA:1009:A:OP2	31:BJ:39:LYS:NZ	1.97	0.96
29:BH:123:ARG:NH2	1:CA:367:U:P	2.37	0.96
14:CN:41:ARG:NH1	14:CN:42:TRP:O	1.98	0.96
2:CB:103:ASN:ND2	2:CB:106:THR:OG1	1.98	0.96
18:CR:25:ASP:O	18:CR:27:ALA:N	1.98	0.96
22:BA:2742:G:O6	58:BA:3799:HOH:O	1.82	0.95
1:AA:1077:G:N7	58:AA:1789:HOH:O	1.98	0.95
22:DA:310:A:O2'	22:DA:311:A:OP2	1.84	0.95
29:BH:120:GLY:C	29:BH:122:LEU:HA	1.85	0.95
22:DA:621:A:OP2	58:DA:3290:HOH:O	1.84	0.95
24:DC:157:SER:O	24:DC:160:THR:OG1	1.85	0.95
22:DA:1439:A:OP2	58:DA:3630:HOH:O	1.85	0.95
1:CA:515:G:N7	58:CA:1766:HOH:O	1.99	0.94
24:BC:244:PRO:O	24:BC:251:GLN:NE2	2.01	0.94
22:BA:2211:A:O2'	22:BA:2212:A:OP1	1.84	0.94
1:CA:1097:C:OP1	2:CB:139:ARG:NH2	1.99	0.94
22:BA:731:C:OP2	58:BA:3698:HOH:O	1.85	0.94
22:BA:1070:A:O2'	22:BA:1097:U:OP1	1.84	0.94
22:BA:1916:A:C4	22:BA:1917:U:H1'	2.03	0.94
24:BC:70:ASN:O	24:BC:72:ASP:N	2.02	0.93
22:BA:572:A:OP2	39:BR:80:ARG:NH2	2.02	0.93
27:DF:122:PHE:O	27:DF:124:GLY:N	2.02	0.93
1:CA:966:G:O2'	9:CI:130:ARG:OXT	1.87	0.92
22:BA:1602:U:O4	58:BA:3720:HOH:O	1.87	0.92
1:CA:558:G:OP1	58:CA:1730:HOH:O	1.85	0.92
22:DA:58:G:OP1	41:DT:78:SER:OG	1.86	0.92
22:DA:488:G:N2	22:DA:493:G:O6	2.02	0.92
1:CA:803:G:OP1	58:CA:1802:HOH:O	1.88	0.92
1:AA:1031:C:O2'	1:AA:1032:G:OP2	1.87	0.91
22:DA:787:C:OP1	58:DA:3754:HOH:O	1.88	0.91
3:AC:36:ASP:OD1	3:AC:59:ARG:NH1	2.04	0.91
1:CA:858:G:N7	58:CA:1820:HOH:O	2.04	0.91
22:DA:2506:U:C4	22:DA:2585:U:O4	2.24	0.90
22:BA:2720:U:OP1	37:BP:53:ARG:NH2	2.04	0.90
22:DA:1378:A:O2'	58:DA:3752:HOH:O	1.89	0.90
29:DH:83:LYS:HG3	29:DH:149:GLU:CG	2.02	0.90
35:BN:58:ASP:OD1	35:BN:63:ARG:NH2	2.04	0.90
22:DA:2243:U:OP1	58:DA:3738:HOH:O	1.88	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:452:A:N6	1:AA:480:U:O2	2.05	0.90
22:DA:2714:G:OP2	58:DA:3548:HOH:O	1.90	0.89
6:AF:91:ARG:O	6:AF:92:THR:OG1	1.89	0.89
1:AA:980:C:OP2	58:AA:1836:HOH:O	1.90	0.89
1:AA:1222:G:O6	58:AA:1836:HOH:O	1.90	0.89
22:BA:1179:G:C5	22:BA:1180:U:H1'	2.08	0.89
22:DA:381:G:OP1	45:DX:18:ARG:NH2	2.05	0.89
27:BF:40:VAL:O	27:BF:42:GLU:N	2.06	0.89
22:DA:1619:G:N7	58:DA:3643:HOH:O	2.05	0.88
1:CA:532:A:N6	3:CC:192:THR:OG1	2.06	0.88
1:CA:978:A:OP2	1:CA:1362:A:N6	2.05	0.88
22:BA:1073:A:H3'	22:BA:1074:G:C5'	2.03	0.88
1:CA:1211:U:O2'	1:CA:1212:U:OP2	1.91	0.88
22:DA:732:C:OP2	58:DA:3296:HOH:O	1.89	0.88
5:AE:157:ARG:O	5:AE:159:LYS:N	2.07	0.88
5:AE:99:ALA:O	5:AE:101:GLU:N	2.06	0.88
22:DA:1154:G:OP2	38:DQ:58:ARG:NH1	2.07	0.88
29:BH:123:ARG:O	29:BH:124:THR:HG22	1.74	0.88
22:DA:2550:G:OP1	58:DA:3721:HOH:O	1.89	0.88
29:BH:117:LEU:C	29:BH:121:VAL:HG23	1.93	0.87
22:BA:1180:U:O2'	22:BA:1181:U:OP1	1.92	0.87
22:DA:1269:A:OP2	58:DA:3380:HOH:O	1.93	0.87
22:BA:2579:C:OP1	58:BA:3543:HOH:O	1.94	0.86
29:DH:83:LYS:HG3	29:DH:149:GLU:HG2	1.56	0.86
8:AH:2:SER:O	8:AH:4:GLN:N	2.08	0.86
20:CT:5:LYS:O	20:CT:7:ALA:N	2.07	0.86
22:BA:2683:C:O2	32:BK:70:ARG:NH2	2.08	0.86
22:DA:2055:C:OP2	58:DA:3573:HOH:O	1.92	0.86
29:BH:147:VAL:HG12	29:BH:149:GLU:HG3	1.57	0.86
2:CB:15:HIS:O	2:CB:17:GLY:N	2.09	0.86
22:DA:1378:A:O2'	22:DA:1380:G:N7	2.09	0.85
22:DA:1010:A:OP2	58:DA:3779:HOH:O	1.93	0.85
3:CC:155:GLY:O	3:CC:157:LEU:N	2.08	0.85
1:AA:1145:A:O2'	1:AA:1146:A:O5'	1.94	0.85
1:CA:412:A:O2'	1:CA:413:G:O5'	1.95	0.85
22:DA:2004:G:OP2	58:DA:3798:HOH:O	1.92	0.85
22:DA:1652:A:OP1	35:DN:8:ARG:NH2	2.10	0.85
1:CA:1001:C:H2'	1:CA:1002:G:C8	2.10	0.85
22:DA:370:G:N7	58:DA:3559:HOH:O	2.09	0.85
22:BA:2445:G:OP1	26:BE:69:ARG:NH2	2.09	0.85
35:DN:1:MET:O	35:DN:3:HIS:N	2.09	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1371:G:N7	58:DA:3399:HOH:O	2.10	0.85
39:BR:24:LYS:HA	39:BR:94:THR:HG23	1.57	0.85
22:BA:2707:U:O2	35:BN:71:ARG:NH1	2.10	0.85
21:AU:35:ARG:O	21:AU:37:PHE:N	2.10	0.85
47:DZ:8:THR:OG1	47:DZ:35:THR:OG1	1.95	0.85
22:BA:2033:A:OP1	58:BA:3480:HOH:O	1.94	0.84
32:BK:70:ARG:NH1	32:BK:74:GLY:O	2.09	0.84
1:AA:1232:U:OP1	9:AI:126:GLN:NE2	2.10	0.84
2:AB:82:ASP:O	2:AB:85:LEU:N	2.09	0.84
22:DA:842:U:O4	58:DA:3580:HOH:O	1.95	0.84
22:DA:2507:C:OP1	58:DA:3709:HOH:O	1.94	0.84
22:BA:1002:G:O6	58:BA:3745:HOH:O	1.96	0.84
2:CB:206:ALA:O	2:CB:208:ARG:N	2.11	0.84
22:DA:528:A:OP1	58:DA:3245:HOH:O	1.94	0.84
1:AA:67:C:O2'	1:AA:171:A:N3	2.10	0.84
29:BH:117:LEU:O	29:BH:119:ASN:N	2.07	0.84
29:BH:117:LEU:HD21	29:BH:121:VAL:N	1.93	0.84
29:DH:82:SER:O	29:DH:84:ALA:N	2.10	0.84
22:DA:18:U:O4	58:DA:3205:HOH:O	1.96	0.84
1:CA:1124:G:O2'	1:CA:1145:A:N6	2.10	0.84
4:CD:100:ASN:OD1	4:CD:111:ARG:NH1	2.09	0.84
2:AB:115:LYS:O	2:AB:117:LEU:N	2.10	0.84
12:CL:22:PRO:O	12:CL:24:LEU:N	2.11	0.84
1:CA:299:G:O6	58:CA:1731:HOH:O	1.96	0.84
22:BA:1342:A:OP2	58:BA:3720:HOH:O	1.96	0.83
22:DA:299:A:N3	22:DA:319:G:O2'	2.11	0.83
9:AI:57:MET:SD	9:AI:58:VAL:N	2.51	0.83
22:DA:1013:C:OP2	58:DA:3599:HOH:O	1.94	0.83
12:CL:116:LYS:O	12:CL:117:TYR:CG	2.30	0.83
12:CL:66:TYR:O	12:CL:97:THR:OG1	1.95	0.83
22:DA:1262:A:OP1	40:DS:99:ARG:NH2	2.12	0.83
22:BA:545:U:O2'	22:BA:548:G:OP2	1.96	0.83
1:AA:1108:G:O6	58:AA:1861:HOH:O	1.96	0.83
22:DA:2162:G:H4'	22:DA:2163:A:OP1	1.77	0.83
22:BA:2800:A:H3'	22:BA:2801:G:H5'	1.61	0.83
22:DA:15:G:OP2	58:DA:3549:HOH:O	1.95	0.83
27:BF:158:THR:O	58:BF:201:HOH:O	1.96	0.83
22:DA:1667:G:O2'	22:DA:1991:U:O4	1.95	0.83
1:AA:503:C:OP1	58:AA:1882:HOH:O	1.95	0.83
29:DH:94:ILE:HB	29:DH:122:LEU:HD12	1.60	0.83
1:AA:131:A:O2'	1:AA:262:A:N3	2.10	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:370:G:OP2	58:BA:3563:HOH:O	1.97	0.82
22:DA:618:G:O6	58:DA:3289:HOH:O	1.95	0.82
22:BA:684:G:OP1	50:B2:21:ARG:NH1	2.12	0.82
22:BA:194:G:N7	58:BA:3766:HOH:O	2.12	0.82
29:BH:120:GLY:C	29:BH:122:LEU:CA	2.47	0.82
23:DB:31:C:O2'	23:DB:53:A:N1	2.11	0.82
2:AB:23:TRP:CH2	2:AB:25:PRO:HA	2.15	0.82
3:AC:14:ILE:O	3:AC:16:LYS:N	2.12	0.82
22:DA:2757:A:N1	28:DG:67:THR:HG21	1.95	0.82
1:AA:536:C:OP1	58:AA:1883:HOH:O	1.98	0.82
22:DA:784:G:OP1	58:DA:3313:HOH:O	1.96	0.81
22:BA:2757:A:N1	28:BG:67:THR:HG21	1.94	0.81
22:BA:1069:A:N1	22:BA:1073:A:N6	2.28	0.81
22:DA:1344:U:O2'	22:DA:1345:C:OP2	1.97	0.81
22:DA:642:U:O2'	22:DA:644:A:N7	2.13	0.81
22:BA:1917:U:C4	22:BA:1918:A:C4	2.68	0.81
22:DA:1377:G:OP2	58:DA:3394:HOH:O	1.99	0.81
14:AN:33:ASP:O	14:AN:35:ASN:N	2.13	0.81
49:D1:15:ALA:O	49:D1:17:THR:N	2.13	0.81
1:CA:484:G:H4'	1:CA:485:U:O5'	1.81	0.81
22:DA:684:G:OP1	50:D2:16:HIS:ND1	2.13	0.81
35:DN:87:PHE:O	35:DN:89:SER:N	2.12	0.81
1:AA:825:A:O2'	8:AH:13:ARG:NH1	2.14	0.81
1:CA:209:U:H4'	1:CA:210:C:OP2	1.80	0.81
11:CK:125:LYS:O	21:CU:34:ARG:NE	2.13	0.81
22:DA:733:G:OP2	58:DA:3294:HOH:O	1.98	0.81
39:BR:49:ILE:HG22	39:BR:53:PHE:N	1.95	0.81
22:DA:1266:G:O2'	22:DA:2012:G:O6	1.98	0.81
22:BA:797:G:O6	58:BA:3323:HOH:O	1.98	0.81
4:CD:192:SER:OG	4:CD:193:ALA:N	2.11	0.80
1:CA:533:A:OP1	58:CA:1764:HOH:O	1.97	0.80
24:BC:237:GLY:O	58:BC:305:HOH:O	1.98	0.80
14:AN:61:ARG:O	14:AN:62:ASN:HB2	1.80	0.80
22:DA:821:A:O3'	58:DA:3344:HOH:O	1.99	0.80
16:AP:49:GLY:O	16:AP:50:THR:OG1	1.98	0.80
3:CC:16:LYS:NZ	3:CC:181:ASP:OD1	2.15	0.80
7:AG:55:GLY:O	7:AG:57:SER:N	2.15	0.80
23:DB:29:A:O2'	23:DB:58:A:N1	2.14	0.80
40:DS:28:LYS:O	40:DS:30:SER:N	2.15	0.80
22:DA:1296:G:OP1	22:DA:2709:G:O2'	1.98	0.80
14:AN:91:GLY:O	14:AN:93:ILE:N	2.14	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:70:ARG:O	4:CD:74:ASN:ND2	2.14	0.80
1:AA:692:U:O2'	1:AA:694:A:N7	2.15	0.80
22:BA:1776:G:OP2	58:BA:3449:HOH:O	1.98	0.79
1:CA:1181:G:O2'	1:CA:1182:G:N7	2.15	0.79
23:BB:91:C:OP2	34:BM:18:ARG:NH2	2.16	0.79
22:DA:1377:G:N7	58:DA:3395:HOH:O	2.14	0.79
1:CA:736:C:OP1	18:CR:61:ARG:NH1	2.15	0.79
14:CN:91:GLY:O	14:CN:93:ILE:N	2.15	0.79
7:CG:68:ASN:OD1	7:CG:130:ASN:ND2	2.16	0.79
41:DT:17:SER:O	41:DT:19:LYS:N	2.16	0.79
12:CL:92:GLY:O	12:CL:94:ARG:N	2.16	0.79
17:CQ:21:ILE:N	17:CQ:48:ASP:OD2	2.16	0.79
22:DA:910:A:N3	22:DA:2264:C:O2'	2.15	0.79
22:BA:783:A:O2'	22:BA:785:G:OP1	2.00	0.79
1:AA:1003:G:N2	1:AA:1037:C:O2	2.15	0.79
1:AA:965:U:OP2	58:AA:1832:HOH:O	1.99	0.79
22:DA:1325:U:OP1	22:DA:1647:U:O2'	2.01	0.79
1:AA:516:U:O4	58:AA:1848:HOH:O	2.00	0.79
4:AD:22:LYS:O	4:AD:24:GLY:N	2.16	0.79
1:CA:1198:G:OP1	58:CA:1838:HOH:O	2.01	0.78
22:DA:2032:G:N7	58:DA:3532:HOH:O	2.14	0.78
25:BD:140:HIS:CE1	58:BD:402:HOH:O	2.31	0.78
22:BA:1917:U:C5	22:BA:1918:A:C5	2.71	0.78
1:CA:537:G:OP1	12:CL:110:ARG:NH2	2.17	0.78
5:CE:102:GLY:O	5:CE:104:GLY:N	2.17	0.78
11:AK:76:GLU:C	22:BA:2141:G:OP1	2.22	0.78
1:AA:75:G:N1	1:AA:96:U:O4	2.17	0.78
22:DA:2588:G:OP1	58:DA:3313:HOH:O	2.01	0.78
22:DA:978:G:N7	58:DA:3590:HOH:O	2.17	0.78
1:AA:875:U:O2'	8:AH:15:ARG:NH1	2.16	0.78
2:AB:73:LYS:O	2:AB:75:ALA:N	2.17	0.78
22:DA:587:C:OP2	33:DL:21:ARG:NH1	2.17	0.78
22:BA:2278:A:OP1	34:BM:10:ARG:NH2	2.17	0.78
22:BA:481:G:C4	22:BA:507:A:C2	2.72	0.78
22:DA:1267:U:O3'	58:DA:3377:HOH:O	2.01	0.78
22:DA:2144:G:N2	22:DA:2148:G:O6	2.17	0.78
22:DA:161:A:H3'	22:DA:162:U:H5''	1.66	0.78
5:CE:137:VAL:O	5:CE:138:ARG:CB	2.32	0.78
31:DJ:80:HIS:O	31:DJ:82:GLY:N	2.17	0.78
22:DA:2005:A:OP1	58:DA:3382:HOH:O	2.02	0.77
22:DA:2057:G:OP2	58:DA:3486:HOH:O	2.02	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2128:G:H2'	22:BA:2129:C:O4'	1.84	0.77
22:DA:1187:G:N7	58:DA:3577:HOH:O	2.17	0.77
22:DA:777:G:C2	22:DA:778:G:C8	2.72	0.77
22:DA:187:G:C2	22:DA:210:C:C2	2.73	0.77
22:BA:1845:G:OP1	24:BC:256:LYS:NZ	2.18	0.77
22:DA:1265:A:OP1	58:DA:3746:HOH:O	2.02	0.77
22:DA:118:A:C8	22:DA:119:A:C8	2.72	0.77
6:CF:91:ARG:O	6:CF:92:THR:OG1	2.01	0.77
22:BA:1603:A:OP1	58:BA:3413:HOH:O	2.02	0.77
35:DN:1:MET:CE	35:DN:1:MET:H1	1.96	0.77
11:CK:17:SER:O	11:CK:80:LYS:N	2.17	0.77
22:DA:1509:A:O2'	22:DA:1510:G:OP2	2.02	0.77
22:BA:245:G:N7	51:B3:8:ARG:NH1	2.32	0.77
35:DN:1:MET:HE2	35:DN:1:MET:H1	1.48	0.77
3:AC:25:ASN:O	3:AC:27:LYS:N	2.18	0.77
29:DH:1:MET:SD	29:DH:27:ARG:NH1	2.58	0.77
22:DA:306:U:O2	22:DA:312:G:N2	2.18	0.76
22:DA:2006:C:OP1	58:DA:3378:HOH:O	2.02	0.76
22:BA:999:U:OP2	58:BA:3363:HOH:O	2.03	0.76
13:AM:31:LYS:NZ	13:AM:41:GLU:OE1	2.18	0.76
22:BA:1780:A:N7	58:BA:3762:HOH:O	2.17	0.76
53:B5:65:LEU:O	53:B5:67:HIS:N	2.19	0.76
17:CQ:8:LEU:HB2	17:CQ:61:ILE:CG2	2.14	0.76
22:BA:784:G:H5'	22:BA:785:G:OP1	1.85	0.76
22:DA:2286:G:H4'	22:DA:2287:A:O5'	1.86	0.76
29:DH:53:GLU:O	29:DH:55:GLU:N	2.19	0.76
1:CA:64:G:C8	1:CA:99:C:N4	2.53	0.76
8:AH:42:GLU:N	8:AH:42:GLU:OE1	2.19	0.76
9:AI:30:ILE:HD11	9:AI:38:TYR:CD1	2.21	0.76
22:DA:514:A:N3	22:DA:581:C:O2'	2.17	0.76
4:AD:32:CYS:O	4:AD:33:LYS:HB2	1.84	0.76
13:CM:13:LYS:O	13:CM:14:HIS:ND1	2.19	0.76
39:DR:8:GLY:O	39:DR:10:LYS:NZ	2.19	0.76
1:CA:1049:U:OP1	58:CA:1846:HOH:O	2.04	0.76
22:DA:2407:A:OP1	58:DA:3564:HOH:O	2.04	0.76
29:DH:45:GLU:O	29:DH:49:ALA:N	2.19	0.76
29:BH:123:ARG:NH1	1:CA:367:U:OP2	2.19	0.76
37:DP:89:ARG:NH1	37:DP:115:ASN:OXT	2.19	0.76
1:AA:1181:G:O2'	1:AA:1182:G:C5	2.39	0.76
22:DA:2125:G:N1	22:DA:2171:A:OP1	2.19	0.76
22:BA:2017:U:OP2	58:BA:3271:HOH:O	2.03	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:98:LYS:NZ	58:DE:305:HOH:O	2.16	0.76
50:D2:43:THR:OG1	50:D2:44:VAL:N	2.15	0.76
1:CA:1151:A:C2	1:CA:1152:A:C5	2.74	0.75
22:BA:533:G:OP1	38:BQ:24:TYR:O	2.04	0.75
22:BA:1746:A:H2'	22:BA:1747:U:C6	2.21	0.75
22:DA:1153:C:P	58:DA:3359:HOH:O	2.43	0.75
1:CA:1004:A:O2'	1:CA:1036:A:N1	2.18	0.75
7:AG:27:VAL:HG12	7:AG:43:VAL:HG21	1.68	0.75
4:AD:100:ASN:OD1	4:AD:111:ARG:NH1	2.20	0.75
22:DA:1826:G:O6	58:DA:3783:HOH:O	2.04	0.75
22:DA:2115:G:O2'	22:DA:2117:A:N6	2.19	0.75
22:DA:2520:C:HO2'	22:DA:2565:A:HO2'	1.30	0.75
16:AP:46:LYS:HD3	16:AP:47:GLU:N	2.02	0.75
1:AA:91:U:H2'	1:AA:92:U:O4'	1.86	0.75
22:BA:1379:U:C6	22:BA:1379:U:OP1	2.39	0.75
29:DH:124:THR:OG1	29:DH:125:THR:N	2.17	0.75
1:AA:1149:C:OP2	9:AI:11:ARG:NH2	2.20	0.75
22:DA:2091:C:H3'	22:DA:2092:U:H5''	1.67	0.75
22:DA:1342:A:OP2	58:DA:3712:HOH:O	2.04	0.75
22:DA:2551:C:OP2	58:DA:3720:HOH:O	2.05	0.75
22:BA:1188:U:C2'	22:BA:1189:A:H5'	2.17	0.75
22:DA:118:A:N3	22:DA:178:G:HI'	2.01	0.74
14:AN:90:ARG:NH1	14:AN:92:GLU:OE2	2.20	0.74
22:DA:2566:A:N1	32:DK:28:SER:OG	2.20	0.74
14:AN:46:LEU:O	14:AN:48:LEU:N	2.20	0.74
11:AK:29:ASN:OD1	11:AK:30:THR:N	2.19	0.74
22:DA:108:G:O2'	22:DA:347:A:N3	2.18	0.74
29:BH:117:LEU:HD11	29:BH:122:LEU:HD12	1.69	0.74
22:DA:822:G:OP2	58:DA:3346:HOH:O	2.06	0.74
22:BA:198:C:P	58:BA:3768:HOH:O	2.45	0.74
29:BH:123:ARG:C	29:BH:124:THR:HG23	2.06	0.74
29:BH:88:GLY:O	29:BH:125:THR:OG1	2.04	0.74
22:DA:2057:G:OP1	58:DA:3669:HOH:O	2.05	0.74
28:BG:155:GLU:OE2	28:BG:158:LYS:N	2.20	0.74
36:BO:31:THR:O	36:BO:102:ARG:NH1	2.19	0.74
22:DA:2838:G:O2'	35:DN:45:ARG:NH1	2.20	0.74
12:CL:25:GLU:O	12:CL:27:CYS:N	2.21	0.74
22:BA:301:G:OP2	42:BU:82:ARG:NH1	2.21	0.74
22:DA:2707:U:O2	35:DN:71:ARG:NH1	2.20	0.74
28:BG:80:THR:HG22	28:BG:81:GLU:N	2.02	0.74
31:DJ:41:LYS:O	31:DJ:44:TYR:N	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2611:C:H1'	54:D6:6:04X:H33	1.70	0.73
33:BL:85:VAL:HG11	33:BL:94:THR:HG22	1.70	0.73
29:BH:123:ARG:CZ	1:CA:367:U:OP2	2.35	0.73
22:BA:731:C:OP2	58:BA:3700:HOH:O	2.04	0.73
1:AA:108:G:N3	1:AA:108:G:H5'	2.03	0.73
1:AA:119:A:C2	1:AA:240:G:C8	2.76	0.73
22:BA:2127:G:H4'	22:BA:2128:G:OP1	1.88	0.73
4:AD:95:GLU:OE2	4:AD:104:ARG:NH1	2.21	0.73
53:B5:50:ILE:C	53:B5:52:PRO:HD3	2.09	0.73
24:BC:182:ARG:NH2	24:BC:183:LYS:O	2.22	0.73
20:AT:69:LYS:O	20:AT:71:LYS:N	2.21	0.73
28:BG:174:ALA:O	28:BG:175:LYS:HB3	1.88	0.73
22:DA:668:A:N6	22:DA:670:A:O2'	2.20	0.73
4:AD:150:LYS:O	4:AD:152:GLN:NE2	2.21	0.73
1:AA:509:A:OP2	58:AA:1722:HOH:O	2.05	0.73
1:AA:1350:A:OP1	9:AI:123:ARG:NE	2.22	0.73
22:DA:84:A:N1	22:DA:98:G:O2'	2.17	0.73
24:DC:210:ALA:HA	24:DC:213:TRP:CE2	2.22	0.73
1:CA:495:A:C2	1:CA:496:A:C6	2.75	0.73
5:AE:104:GLY:O	5:AE:105:ILE:HG22	1.89	0.73
1:CA:688:G:O2'	1:CA:704:A:N1	2.18	0.73
39:BR:49:ILE:HG22	39:BR:53:PHE:CA	2.18	0.73
5:CE:101:GLU:O	5:CE:103:THR:N	2.22	0.73
25:DD:12:THR:OG1	25:DD:13:ARG:N	2.20	0.73
17:AQ:17:MET:N	17:AQ:17:MET:SD	2.62	0.73
22:DA:142:A:C6	22:DA:143:C:N4	2.57	0.73
2:CB:169:GLU:O	2:CB:171:ILE:N	2.22	0.73
48:B0:54:VAL:O	48:B0:56:ALA:N	2.22	0.73
9:AI:45:ARG:HG2	9:AI:46:MET:SD	2.30	0.72
34:DM:66:ARG:NH1	34:DM:104:GLU:OE1	2.22	0.72
1:AA:254:G:OP1	17:AQ:70:THR:HB	1.88	0.72
22:DA:846:U:O2'	22:DA:847:U:O5'	2.06	0.72
22:DA:2209:G:C2	22:DA:2216:G:C2	2.77	0.72
29:BH:86:ASP:HB2	1:CA:359:G:O2'	1.88	0.72
22:BA:761:A:OP1	58:BA:3700:HOH:O	2.06	0.72
22:DA:1335:C:N4	58:DA:3392:HOH:O	2.21	0.72
1:CA:684:U:O2'	11:CK:40:ASN:O	2.04	0.72
22:BA:1776:G:OP2	58:BA:3451:HOH:O	2.07	0.72
39:DR:82:HIS:ND1	39:DR:82:HIS:O	2.23	0.72
22:DA:453:A:OP1	58:DA:3241:HOH:O	2.07	0.72
22:BA:2057:G:OP2	58:BA:3490:HOH:O	2.06	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:731:C:P	58:BA:3698:HOH:O	2.45	0.72
1:AA:79:G:N2	1:AA:91:U:O4	2.22	0.72
22:DA:608:A:H2'	22:DA:609:A:C8	2.24	0.72
1:CA:976:G:OP2	1:CA:1358:U:O2'	2.06	0.72
1:AA:824:G:H1'	8:AH:2:SER:N	2.05	0.72
24:BC:117:GLN:N	24:BC:128:ASN:OD1	2.23	0.72
22:DA:2115:G:HO2'	22:DA:2117:A:N6	1.88	0.72
22:DA:250:G:OP2	51:D3:13:ARG:NH1	2.23	0.72
22:DA:1776:G:N2	22:DA:1789:A:H1'	2.05	0.72
22:DA:1394:U:H4'	22:DA:1603:A:H4'	1.72	0.72
7:AG:99:LEU:O	7:AG:102:ARG:N	2.23	0.72
1:AA:451:A:C8	1:AA:452:A:C2	2.78	0.71
22:DA:362:A:C4	22:DA:363:G:C8	2.78	0.71
5:AE:81:LEU:HD12	5:AE:147:MET:SD	2.30	0.71
1:CA:552:U:C4	1:CA:553:A:N7	2.57	0.71
22:DA:827:U:OP2	58:DA:3697:HOH:O	2.09	0.71
22:DA:1515:A:HO2'	22:DA:1556:C:HO2'	1.36	0.71
31:BJ:81:ILE:HG23	31:BJ:82:GLY:N	2.06	0.71
22:BA:1309:G:H4'	50:B2:7:PRO:HB2	1.70	0.71
3:AC:139:GLN:O	3:AC:141:ALA:N	2.23	0.71
22:DA:2056:G:OP2	58:DA:3486:HOH:O	2.07	0.71
22:BA:1916:A:O5'	22:BA:1917:U:OP2	2.07	0.71
24:BC:204:VAL:O	24:BC:206:GLY:N	2.23	0.71
22:DA:2061:G:O6	56:DA:3001:VIF:H29	1.90	0.71
22:DA:2171:A:O2'	22:DA:2173:A:OP1	2.08	0.71
22:BA:2325:G:C6	22:BA:2326:C:N4	2.58	0.71
29:DH:31:VAL:HB	29:DH:32:PRO:CD	2.20	0.71
22:BA:2334:U:C4	36:BO:16:ARG:HD3	2.24	0.71
28:DG:11:VAL:O	28:DG:48:ASN:ND2	2.23	0.71
22:DA:572:A:OP2	39:DR:80:ARG:NH2	2.24	0.71
15:CO:56:LEU:O	15:CO:59:MET:N	2.24	0.71
22:DA:1376:C:O5'	58:DA:3398:HOH:O	2.06	0.71
1:CA:604:G:H2'	1:CA:605:U:O4'	1.91	0.71
22:DA:1613:G:O6	58:DA:3641:HOH:O	2.04	0.71
2:CB:193:PRO:O	2:CB:195:GLY:N	2.23	0.71
22:DA:334:C:OP1	22:DA:335:C:N4	2.24	0.71
22:BA:714:U:O2'	22:BA:716:A:N7	2.19	0.71
22:BA:627:A:OP1	33:BL:78:ARG:NH1	2.22	0.71
22:BA:2520:C:C6	22:BA:2567:G:H1'	2.26	0.71
22:BA:653:U:OP2	22:BA:653:U:C6	2.43	0.71
26:BE:7:ASP:O	26:BE:9:GLN:N	2.23	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1918:A:O2'	22:BA:1920:C:N4	2.24	0.71
22:DA:1380:G:OP2	58:DA:3752:HOH:O	2.08	0.71
22:BA:1869:G:H3'	22:BA:1870:C:H5'	1.72	0.71
22:BA:1779:U:H5	22:BA:1784:A:N7	1.89	0.71
22:BA:517:C:OP2	48:B0:10:ARG:NH2	2.24	0.71
2:CB:54:LEU:HA	2:CB:57:LEU:HB3	1.73	0.71
22:BA:1731:G:C6	22:BA:1733:G:C5	2.79	0.71
1:CA:1266:G:N2	1:CA:1269:A:OP2	2.23	0.71
22:DA:2284:A:O2'	22:DA:2288:A:N1	2.21	0.71
5:CE:101:GLU:CD	5:CE:101:GLU:O	2.29	0.70
30:BI:122:ILE:O	30:BI:126:THR:OG1	2.08	0.70
1:CA:412:A:HO2'	1:CA:413:G:P	2.14	0.70
1:CA:485:U:O2'	1:CA:486:U:OP1	2.08	0.70
22:DA:2111:U:C5	22:DA:2145:C:H2'	2.27	0.70
17:AQ:16:LYS:N	17:AQ:17:MET:SD	2.64	0.70
3:AC:85:GLU:OE1	3:AC:88:ARG:NH1	2.24	0.70
23:DB:48:U:H4'	36:DO:100:HIS:CD2	2.26	0.70
1:CA:645:G:N7	58:CA:1791:HOH:O	2.23	0.70
25:DD:140:HIS:NE2	58:DD:302:HOH:O	2.17	0.70
22:DA:2857:G:N2	22:DA:2860:A:OP2	2.23	0.70
1:AA:983:A:H2'	1:AA:983:A:N3	2.07	0.70
1:AA:1397:C:O2'	1:AA:1398:A:OP1	2.09	0.70
22:DA:2594:C:N4	22:DA:2595:G:O6	2.25	0.70
1:CA:949:A:O2'	1:CA:971:G:O6	2.07	0.70
20:AT:29:ARG:O	20:AT:33:LYS:HG2	1.91	0.70
22:BA:636:G:C6	33:BL:111:ILE:HD11	2.26	0.70
22:DA:188:G:O2'	22:DA:1365:A:N6	2.25	0.70
22:BA:1916:A:N3	22:BA:1917:U:H1'	2.05	0.70
1:CA:890:G:O2'	1:CA:891:U:OP2	2.09	0.70
22:BA:357:C:H2'	22:BA:358:U:C6	2.26	0.70
20:AT:6:SER:OG	20:AT:7:ALA:N	2.21	0.70
13:AM:66:GLU:O	13:AM:69:LEU:N	2.24	0.70
22:BA:1385:A:H1'	22:BA:1386:C:C6	2.27	0.70
29:BH:94:ILE:HG22	29:BH:99:ILE:HG13	1.72	0.70
22:BA:1022:G:N2	22:BA:1142:A:C2	2.57	0.70
22:BA:1188:U:H2'	22:BA:1189:A:H5'	1.74	0.70
20:CT:48:GLN:O	20:CT:52:ASN:ND2	2.25	0.70
32:BK:105:ARG:NH2	32:BK:122:VAL:O	2.25	0.70
35:BN:2:ARG:HA	35:BN:5:LYS:HD2	1.74	0.70
9:CI:57:MET:SD	9:CI:58:VAL:N	2.64	0.70
1:AA:1406:U:C5	1:AA:1407:C:C5	2.80	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1225:A:H2'	1:AA:1226:C:C5	2.26	0.70
22:BA:1509:A:O2'	22:BA:1510:G:P	2.49	0.70
22:DA:188:G:HO2'	22:DA:1365:A:N6	1.89	0.70
8:AH:54:ASP:OD1	8:AH:55:THR:N	2.24	0.70
22:BA:621:A:OP2	58:BA:3294:HOH:O	2.10	0.70
1:CA:666:G:C6	1:CA:741:G:C6	2.80	0.70
6:CF:97:THR:O	6:CF:98:GLU:HB3	1.91	0.70
10:AJ:54:SER:O	14:AN:81:ARG:NH2	2.25	0.69
8:CH:59:LEU:HD12	8:CH:60:GLU:N	2.06	0.69
1:AA:1299:A:H2'	1:AA:1299:A:N3	2.06	0.69
22:BA:1079:C:C5	22:BA:1088:A:C2	2.79	0.69
45:DX:31:PRO:O	45:DX:33:LEU:N	2.25	0.69
22:DA:1607:C:N4	22:DA:1622:G:N7	2.39	0.69
1:AA:781:A:OP2	58:AA:1813:HOH:O	2.09	0.69
22:BA:528:A:C8	22:BA:528:A:H3'	2.26	0.69
22:BA:1090:A:H2'	22:BA:1091:G:H5'	1.73	0.69
1:CA:4:U:H5''	1:CA:5:U:OP1	1.92	0.69
12:CL:34:CYS:HA	12:CL:55:VAL:HA	1.73	0.69
1:CA:718:A:C5	11:CK:118:HIS:CD2	2.80	0.69
22:DA:82:U:N3	22:DA:83:A:N7	2.40	0.69
38:BQ:24:TYR:O	38:BQ:25:TYR:CB	2.40	0.69
1:AA:979:C:OP1	58:AA:1836:HOH:O	2.09	0.69
12:CL:25:GLU:O	12:CL:26:ALA:C	2.30	0.69
31:DJ:41:LYS:O	31:DJ:43:GLU:N	2.26	0.69
24:DC:2:ALA:N	24:DC:199:GLU:OE1	2.24	0.69
42:DU:96:PHE:CE1	42:DU:103:ILE:HG13	2.27	0.69
22:BA:2286:G:H4'	22:BA:2287:A:O5'	1.92	0.69
22:DA:2592:G:N7	58:DA:3785:HOH:O	2.25	0.69
22:BA:1073:A:OP1	22:BA:1073:A:C8	2.46	0.69
1:AA:1145:A:O2'	1:AA:1146:A:P	2.50	0.69
1:AA:652:U:O2'	1:AA:653:U:OP2	2.08	0.69
2:AB:63:ARG:O	2:AB:64:LYS:HB2	1.92	0.69
22:DA:1476:U:H1'	22:DA:1732:C:C2	2.28	0.69
41:BT:76:ARG:NH2	41:BT:79:ASP:OD1	2.26	0.69
1:CA:1317:C:OP1	14:CN:56:SER:OG	2.08	0.69
22:DA:2407:A:OP2	58:DA:3562:HOH:O	2.10	0.69
22:BA:819:A:C4	22:BA:1189:A:C2	2.80	0.69
33:BL:87:GLY:O	33:BL:89:VAL:N	2.25	0.69
53:B5:50:ILE:HG22	53:B5:51:ASP:N	2.08	0.69
22:DA:2683:C:OP1	37:DP:51:ARG:NH2	2.25	0.69
9:CI:57:MET:O	9:CI:59:GLU:N	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2308:G:O6	22:BA:2311:A:N7	2.26	0.69
1:AA:38:G:C2	1:AA:397:A:C2	2.81	0.69
22:BA:2189:U:H2'	22:BA:2190:G:C1'	2.23	0.69
22:BA:250:G:OP1	58:BA:3821:HOH:O	2.10	0.69
17:AQ:16:LYS:C	17:AQ:17:MET:SD	2.71	0.69
1:AA:1277:C:HO2'	1:AA:1279:G:H8	1.41	0.69
32:DK:76:VAL:HG12	37:DP:73:VAL:HG22	1.75	0.69
22:DA:1786:A:H1'	22:DA:1938:A:N6	2.08	0.69
1:AA:1014:A:N7	1:AA:1015:G:C5	2.60	0.69
4:AD:26:ARG:HD2	4:AD:31:LYS:HE3	1.74	0.69
1:CA:577:G:C8	1:CA:816:A:C6	2.81	0.69
22:DA:1651:G:C2	22:DA:2007:U:O2	2.46	0.69
22:BA:954:G:OP2	34:BM:16:ARG:NH2	2.26	0.69
45:DX:33:LEU:O	45:DX:34:HIS:ND1	2.26	0.68
22:DA:1317:G:C2	22:DA:1336:A:C2	2.81	0.68
22:BA:1057:A:C2	22:BA:1086:A:C2	2.80	0.68
1:CA:728:A:H2'	1:CA:729:A:C8	2.28	0.68
22:BA:2685:G:OP1	32:BK:78:ARG:NH2	2.26	0.68
22:BA:2075:U:O2'	22:BA:2077:A:OP2	2.10	0.68
4:CD:4:TYR:O	4:CD:5:LEU:HB2	1.93	0.68
1:AA:64:G:C8	1:AA:99:C:N4	2.62	0.68
22:DA:2343:U:O2'	22:DA:2373:G:O2'	2.08	0.68
22:DA:945:A:OP2	58:DA:3345:HOH:O	2.11	0.68
22:BA:2019:A:H4'	38:BQ:34:VAL:HG21	1.75	0.68
22:DA:1936:A:OP1	58:DA:3458:HOH:O	2.11	0.68
1:AA:104:G:C2	1:AA:105:G:C8	2.80	0.68
1:CA:646:G:O6	58:CA:1793:HOH:O	2.11	0.68
29:BH:117:LEU:O	29:BH:121:VAL:HG22	1.93	0.68
22:BA:1073:A:H3'	22:BA:1074:G:H5''	1.72	0.68
5:CE:137:VAL:O	5:CE:138:ARG:HB2	1.93	0.68
22:DA:450:G:O6	58:DA:3241:HOH:O	2.11	0.68
22:DA:1855:U:C5	22:DA:1856:U:C5	2.81	0.68
54:D6:4:PRO:HB2	54:D6:5:MHU:HM1	0.84	0.68
9:AI:9:THR:HG22	9:AI:10:GLY:N	2.08	0.68
22:DA:2291:U:H2'	22:DA:2292:U:C6	2.29	0.68
1:AA:657:U:O2	15:AO:22:THR:CG2	2.41	0.68
22:BA:381:G:OP1	45:BX:18:ARG:NH2	2.27	0.68
12:AL:76:GLU:O	12:AL:77:HIS:HB2	1.93	0.68
28:DG:166:ASP:OD1	28:DG:166:ASP:N	2.26	0.68
2:CB:16:PHE:CE2	2:CB:18:HIS:CE1	2.82	0.68
9:CI:41:ARG:O	9:CI:45:ARG:NH1	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:54:ASP:OD1	14:CN:59:ARG:NH1	2.26	0.68
31:BJ:64:VAL:CG1	31:BJ:68:LYS:HB2	2.24	0.68
41:DT:37:ASP:OD1	41:DT:38:ALA:N	2.27	0.68
22:DA:1515:A:O2'	22:DA:1556:C:O2'	2.12	0.68
22:DA:2079:U:H2'	22:DA:2080:A:O4'	1.92	0.68
22:DA:2843:G:N2	22:DA:2875:C:C2	2.62	0.68
1:CA:152:A:N6	1:CA:170:U:C2	2.62	0.68
6:AF:7:VAL:O	6:AF:7:VAL:HG22	1.94	0.68
22:DA:1289:C:O2'	22:DA:1330:C:H4'	1.91	0.68
30:DI:69:PHE:N	30:DI:69:PHE:CD1	2.62	0.68
4:AD:11:LEU:HD22	4:AD:63:ARG:HD3	1.75	0.68
22:BA:792:A:N3	22:BA:2072:C:O2'	2.24	0.68
1:CA:1133:G:C2	1:CA:1142:G:C2	2.81	0.68
22:BA:1141:U:H4'	22:BA:1142:A:O4'	1.93	0.68
1:CA:71:A:C2	1:CA:72:A:C8	2.82	0.68
4:AD:163:GLU:OE2	4:AD:164:GLN:N	2.27	0.68
53:B5:48:LEU:HA	53:B5:208:THR:CB	2.24	0.68
6:CF:45:ARG:O	6:CF:56:LYS:HA	1.93	0.68
22:DA:2164:C:H2'	22:DA:2165:C:C6	2.28	0.68
22:BA:1824:G:N3	24:BC:252:THR:HG21	2.09	0.68
22:DA:104:A:H2'	22:DA:105:C:O4'	1.94	0.68
5:CE:82:GLN:OE1	5:CE:150:PRO:HD3	1.94	0.68
22:DA:1181:U:H2'	22:DA:1182:G:C8	2.28	0.68
22:DA:27:G:O2'	22:DA:28:A:OP2	2.12	0.68
22:BA:977:G:N7	58:BA:3596:HOH:O	2.26	0.68
22:DA:2143:C:H2'	22:DA:2144:G:O4'	1.93	0.68
9:CI:102:GLY:O	9:CI:104:VAL:N	2.27	0.68
1:AA:269:C:H2'	1:AA:270:A:C8	2.29	0.68
1:CA:1297:G:O2'	7:CG:114:LYS:NZ	2.26	0.67
16:AP:42:ILE:O	16:AP:44:SER:N	2.27	0.67
22:BA:198:C:OP1	58:BA:3768:HOH:O	2.11	0.67
22:DA:1604:C:OP1	58:DA:3406:HOH:O	2.12	0.67
22:BA:2327:A:H2'	22:BA:2328:A:C8	2.29	0.67
22:DA:185:G:C6	22:DA:212:G:C2	2.82	0.67
22:DA:1094:U:H2'	22:DA:1096:A:OP2	1.94	0.67
35:DN:8:ARG:N	35:DN:43:GLU:OE2	2.27	0.67
22:DA:1509:A:C4	22:DA:1510:G:C8	2.82	0.67
1:AA:1014:A:N3	19:AS:34:TRP:CH2	2.62	0.67
12:AL:24:LEU:O	12:AL:25:GLU:C	2.32	0.67
22:DA:2811:G:H2'	22:DA:2812:G:O4'	1.94	0.67
22:DA:89:A:C2	22:DA:90:U:C2	2.83	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1000:A:H2'	1:CA:1001:C:O4'	1.93	0.67
1:CA:568:G:N2	1:CA:883:C:C2	2.63	0.67
1:CA:1298:U:O2	1:CA:1298:U:H2'	1.93	0.67
22:BA:2377:A:C2'	22:BA:2378:A:H5'	2.25	0.67
29:BH:122:LEU:HD23	29:BH:123:ARG:N	2.10	0.67
14:CN:61:ARG:O	14:CN:62:ASN:HB2	1.93	0.67
4:AD:160:GLU:O	4:AD:162:ALA:N	2.27	0.67
39:DR:39:LEU:HA	39:DR:49:ILE:HG21	1.75	0.67
22:DA:2505:G:N2	54:D6:4:PRO:HB3	2.09	0.67
22:DA:1427:A:N6	22:DA:1571:A:OP2	2.28	0.67
22:BA:2321:U:H5'	22:BA:2322:A:OP2	1.94	0.67
1:CA:632:U:H2'	1:CA:632:U:O2	1.92	0.67
22:BA:2032:G:C8	58:BA:3536:HOH:O	2.47	0.67
1:CA:920:U:H2'	1:CA:921:U:C6	2.29	0.67
1:AA:1504:G:O3'	58:AA:1869:HOH:O	2.12	0.67
41:BT:54:GLU:HB3	41:BT:88:LYS:HG3	1.77	0.67
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.30	0.67
22:BA:265:A:H4'	22:BA:266:G:OP1	1.94	0.67
22:DA:1530:G:N2	22:DA:1542:U:O2	2.26	0.67
1:AA:319:G:N7	58:AA:1708:HOH:O	2.27	0.67
22:DA:1006:C:OP2	58:DA:3780:HOH:O	2.11	0.67
17:AQ:4:LYS:O	17:AQ:4:LYS:HD2	1.95	0.67
22:DA:1209:U:O2	22:DA:1210:G:N2	2.27	0.67
1:CA:1321:U:O3'	19:CS:78:ARG:NH2	2.27	0.67
22:BA:1924:C:H2'	22:BA:1925:C:H5''	1.76	0.67
1:CA:1361:G:C3'	1:CA:1362:A:H5''	2.24	0.67
9:CI:22:LYS:O	9:CI:24:GLY:N	2.28	0.67
22:BA:585:G:N7	38:BQ:6:ARG:NH1	2.42	0.67
31:DJ:99:ARG:NH1	31:DJ:102:GLU:OE1	2.28	0.67
1:CA:939:G:OP1	7:CG:95:ARG:NH2	2.27	0.67
22:DA:2325:G:C6	22:DA:2326:C:N4	2.63	0.67
18:AR:25:ASP:O	18:AR:27:ALA:N	2.28	0.67
2:AB:160:ALA:O	2:AB:161:LEU:HB2	1.95	0.67
22:DA:1009:A:N3	22:DA:1153:C:O2'	2.22	0.67
22:BA:636:G:N7	33:BL:109:LYS:HE2	2.10	0.67
1:AA:1152:A:OP1	10:AJ:70:HIS:ND1	2.27	0.67
1:AA:1047:G:HO2'	1:AA:1215:G:HO2'	1.42	0.67
22:DA:912:C:N4	22:DA:913:U:O4	2.27	0.67
1:AA:109:A:H2'	1:AA:326:G:N2	2.10	0.67
12:AL:44:LYS:CB	12:AL:45:PRO:CD	2.72	0.67
22:BA:973:A:O4'	22:BA:1188:U:C6	2.47	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1083:U:O2	22:BA:1086:A:N1	2.28	0.67
4:AD:11:LEU:CD2	4:AD:63:ARG:HD3	2.25	0.67
22:DA:1141:U:H4'	22:DA:1142:A:O4'	1.94	0.67
1:CA:1431:A:C6	1:CA:1432:G:C6	2.82	0.67
1:AA:1023:U:H2'	1:AA:1024:G:C8	2.30	0.67
9:CI:84:THR:HG21	9:CI:103:PHE:HB3	1.75	0.67
22:DA:1225:G:C6	22:DA:1226:A:N6	2.63	0.67
4:CD:148:LYS:O	4:CD:149:ALA:HB3	1.95	0.67
29:BH:27:ARG:O	29:BH:28:ASN:HB2	1.95	0.67
22:BA:1061:U:O2'	22:BA:1062:G:O5'	2.11	0.66
23:DB:14:U:O2	23:DB:14:U:H2'	1.96	0.66
1:CA:791:G:C6	1:CA:792:A:N7	2.63	0.66
22:BA:1508:A:O2'	22:BA:1509:A:O4'	2.12	0.66
22:DA:2128:G:N3	22:DA:2173:A:O2'	2.29	0.66
22:DA:47:C:HO2'	22:DA:52:A:HO2'	1.38	0.66
22:DA:1097:U:C5	22:DA:1098:A:H1'	2.29	0.66
1:CA:980:C:N3	58:CA:1845:HOH:O	2.28	0.66
42:DU:11:VAL:HG12	42:DU:72:ILE:HA	1.77	0.66
1:CA:373:A:C2	1:CA:374:A:C8	2.84	0.66
13:AM:46:SER:O	13:AM:47:GLU:HB3	1.95	0.66
14:AN:51:LEU:O	14:AN:53:ARG:N	2.28	0.66
1:AA:257:G:N7	58:AA:1805:HOH:O	2.28	0.66
31:BJ:17:VAL:HG23	31:BJ:137:PRO:HB2	1.76	0.66
33:DL:93:ASN:OD1	33:DL:94:THR:N	2.28	0.66
29:BH:94:ILE:CG2	29:BH:99:ILE:HG13	2.26	0.66
5:CE:99:ALA:O	5:CE:101:GLU:N	2.28	0.66
4:AD:191:LEU:O	4:AD:192:SER:HB2	1.94	0.66
22:DA:188:G:C2	22:DA:209:C:N3	2.64	0.66
30:DI:58:VAL:HG12	30:DI:59:ILE:N	2.10	0.66
22:DA:995:C:O2	31:DJ:3:THR:OG1	2.14	0.66
1:AA:1493:A:O2'	1:AA:1494:G:OP2	2.12	0.66
22:DA:1251:C:OP2	38:DQ:6:ARG:NH2	2.28	0.66
12:AL:21:VAL:HG23	12:AL:95:TYR:CE2	2.30	0.66
33:BL:91:ASP:HB3	33:BL:94:THR:HB	1.77	0.66
33:DL:93:ASN:O	33:DL:95:LEU:N	2.28	0.66
22:DA:2345:G:C4	22:DA:2381:A:C2	2.84	0.66
3:AC:155:GLY:HA2	3:AC:163:ALA:HB1	1.78	0.66
1:AA:1109:C:OP2	3:AC:176:HIS:ND1	2.27	0.66
1:AA:144:G:C4	1:AA:179:A:C2	2.84	0.66
22:DA:2484:G:OP1	34:DM:44:ARG:NH2	2.27	0.66
1:CA:405:U:OP1	1:CA:406:G:O2'	2.06	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:983:A:C2'	1:AA:983:A:N3	2.58	0.66
1:CA:568:G:O6	12:CL:2:ALA:HB2	1.95	0.66
1:AA:935:A:C2	1:AA:936:C:C2	2.82	0.66
22:DA:526:A:N6	22:DA:2626:C:H4'	2.11	0.66
25:BD:12:THR:HG23	37:BP:9:GLU:OE2	1.96	0.66
22:BA:747:U:C4	22:BA:2613:U:C5	2.83	0.66
1:CA:686:U:O2'	1:CA:687:A:OP2	2.12	0.66
1:AA:1014:A:H2'	1:AA:1015:G:O4'	1.95	0.66
47:DZ:14:ILE:HG22	47:DZ:15:GLY:N	2.11	0.66
22:BA:861:A:C2	22:BA:917:A:C4	2.83	0.66
40:DS:80:PRO:HD2	40:DS:100:THR:OG1	1.96	0.66
6:AF:84:VAL:O	6:AF:84:VAL:CG2	2.43	0.66
22:BA:1606:C:HO2'	22:BA:1607:C:P	2.18	0.66
7:AG:4:ARG:O	7:AG:6:VAL:N	2.29	0.66
22:BA:747:U:C5	22:BA:2613:U:C5	2.83	0.66
24:BC:141:VAL:HG11	24:BC:190:ALA:HB1	1.77	0.66
1:CA:1077:G:N2	1:CA:1080:A:OP2	2.29	0.66
22:BA:1324:G:N7	58:BA:3619:HOH:O	2.28	0.66
32:DK:30:ARG:NH2	32:DK:37:ASP:OD1	2.28	0.66
22:BA:276:U:O2	22:BA:276:U:H2'	1.96	0.66
22:DA:301:G:C2	22:DA:302:C:C2	2.84	0.66
38:BQ:87:SER:HB2	39:BR:51:VAL:HA	1.77	0.66
41:DT:21:SER:O	41:DT:23:ALA:N	2.29	0.66
10:AJ:44:THR:HG22	10:AJ:70:HIS:HA	1.78	0.66
22:DA:352:A:H2'	22:DA:353:C:O4'	1.95	0.66
7:CG:88:PRO:HD2	7:CG:151:PHE:O	1.96	0.66
23:DB:23:G:O6	58:DB:304:HOH:O	2.12	0.66
1:AA:667:G:H4'	15:AO:51:HIS:ND1	2.10	0.66
22:DA:2028:U:O4	58:DA:3478:HOH:O	2.12	0.66
1:AA:976:G:OP2	1:AA:1358:U:O2'	2.13	0.66
22:DA:53:A:C8	22:DA:54:G:C8	2.84	0.66
22:DA:1060:U:O4'	22:DA:1062:G:H5'	1.96	0.66
1:CA:378:G:C2	1:CA:386:C:O2	2.49	0.66
51:B3:27:ALA:O	51:B3:28:ASN:HB2	1.96	0.66
22:BA:981:A:OP1	58:BA:3598:HOH:O	2.14	0.66
22:DA:1359:A:C2	22:DA:1360:G:H1'	2.31	0.65
22:BA:2191:A:C6	22:BA:2192:U:O4	2.49	0.65
2:CB:73:LYS:NZ	2:CB:204:ASP:O	2.24	0.65
24:DC:70:ASN:O	24:DC:72:ASP:N	2.28	0.65
11:AK:38:GLN:O	11:AK:40:ASN:N	2.29	0.65
9:CI:120:LYS:HG3	9:CI:123:ARG:HB3	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:66:ILE:O	40:DS:68:ASP:N	2.29	0.65
4:AD:123:ILE:N	4:AD:123:ILE:HD13	2.11	0.65
17:CQ:48:ASP:OD1	17:CQ:48:ASP:N	2.29	0.65
22:DA:844:A:C2	22:DA:845:A:N7	2.64	0.65
22:DA:160:A:N3	22:DA:2208:C:O2'	2.28	0.65
2:AB:33:GLY:O	2:AB:34:ALA:CB	2.44	0.65
22:BA:619:G:O6	58:BA:3291:HOH:O	2.13	0.65
1:CA:1203:C:H4'	14:CN:67:THR:HB	1.77	0.65
1:AA:437:U:HO2'	4:AD:120:HIS:HD1	1.41	0.65
3:CC:150:LYS:HG2	3:CC:201:TRP:CE3	2.31	0.65
22:DA:2199:A:C6	22:DA:2200:C:C2	2.84	0.65
22:BA:1187:G:H5'	39:BR:83:TYR:CE2	2.30	0.65
37:DP:53:ARG:N	37:DP:57:SER:OG	2.29	0.65
37:BP:106:LYS:O	37:BP:109:ARG:HD3	1.97	0.65
22:DA:2268:A:OP1	58:DA:3508:HOH:O	2.12	0.65
22:DA:1935:G:H1'	22:DA:1964:G:N2	2.11	0.65
1:AA:572:A:H5'	1:AA:573:A:OP2	1.96	0.65
22:DA:616:A:H4'	26:DE:101:TYR:CZ	2.32	0.65
22:DA:2692:G:O4'	22:DA:2846:G:N2	2.29	0.65
22:DA:1676:A:N7	58:DA:3766:HOH:O	2.29	0.65
2:CB:82:ASP:N	2:CB:82:ASP:OD1	2.28	0.65
29:BH:139:PHE:O	29:BH:140:ALA:CB	2.44	0.65
22:DA:46:G:C2	22:DA:47:C:C6	2.84	0.65
22:BA:118:A:C8	22:BA:119:A:C8	2.83	0.65
29:BH:14:SER:O	29:BH:15:LEU:HB2	1.95	0.65
50:B2:43:THR:O	50:B2:44:VAL:HG12	1.97	0.65
17:AQ:14:SER:HB3	17:AQ:22:VAL:CG1	2.26	0.65
1:CA:207:C:O2	1:CA:207:C:H2'	1.97	0.65
22:DA:1782:U:O2	22:DA:2608:G:O2'	2.09	0.65
20:AT:69:LYS:NZ	20:AT:70:ASN:OD1	2.29	0.65
1:CA:846:G:C2	1:CA:847:G:C8	2.85	0.65
43:BV:6:ALA:HB1	43:BV:40:ILE:HG23	1.78	0.65
22:DA:2058:A:N6	22:DA:2059:A:N6	2.44	0.65
22:BA:1178:C:H2'	22:BA:1179:G:N7	2.12	0.65
22:DA:1809:A:C5	22:DA:1810:A:N7	2.64	0.65
22:DA:990:A:N1	39:DR:78:ARG:NH1	2.44	0.65
22:DA:1826:G:O2'	22:DA:1971:U:OP2	2.14	0.65
4:AD:168:PRO:O	4:AD:169:THR:OG1	2.15	0.65
22:DA:756:A:N7	58:DA:3299:HOH:O	2.28	0.65
22:DA:1998:A:OP2	25:DD:141:ARG:NH2	2.30	0.65
7:CG:92:ARG:NE	7:CG:93:PRO:HD2	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1120:G:C6	22:DA:1121:C:C4	2.84	0.65
26:BE:119:ILE:HB	26:BE:187:VAL:HG23	1.78	0.65
22:BA:1064:C:O2	22:BA:1074:G:N2	2.30	0.65
4:AD:153:SER:OG	4:AD:154:ARG:N	2.28	0.65
1:CA:72:A:N6	1:CA:73:C:N4	2.45	0.65
1:CA:73:C:O2'	1:CA:74:A:O5'	2.14	0.65
2:CB:141:LEU:O	2:CB:144:LEU:N	2.30	0.65
53:B5:213:VAL:O	53:B5:214:TYR:CB	2.45	0.65
22:DA:16:C:O3'	48:D0:11:SER:OG	2.09	0.65
29:BH:114:GLU:HB3	29:BH:133:GLN:O	1.97	0.65
22:BA:1582:C:O2'	22:BA:1585:C:N3	2.30	0.65
22:DA:2498:C:OP2	58:DA:3682:HOH:O	2.15	0.65
22:BA:2140:G:N3	22:BA:2140:G:H2'	2.10	0.65
1:CA:1048:G:OP2	58:CA:1849:HOH:O	2.14	0.65
22:BA:2188:U:H2'	22:BA:2189:U:C6	2.32	0.65
1:AA:212:G:N2	1:AA:213:G:C4	2.65	0.65
6:AF:47:LEU:HD13	6:AF:51:ILE:HG23	1.79	0.65
42:DU:18:ASP:N	42:DU:18:ASP:OD1	2.28	0.65
5:CE:56:VAL:N	5:CE:57:PRO:HD2	2.11	0.65
22:BA:797:G:N7	58:BA:3321:HOH:O	2.30	0.65
38:BQ:49:ASP:HA	38:BQ:52:GLN:HB2	1.79	0.65
30:BI:39:CYS:HA	30:BI:42:PHE:HB3	1.79	0.65
10:CJ:35:GLN:HG2	10:CJ:77:VAL:HB	1.77	0.65
22:BA:2469:A:O2'	34:BM:55:ARG:NH1	2.29	0.65
22:BA:137:U:H2'	22:BA:140:C:C2	2.32	0.65
22:DA:1028:A:N6	22:DA:1125:G:H2'	2.12	0.65
29:BH:122:LEU:C	29:BH:123:ARG:HG2	2.17	0.65
1:CA:1361:G:H3'	1:CA:1362:A:H5''	1.78	0.65
1:CA:992:U:C5	1:CA:1043:G:C8	2.85	0.65
39:BR:49:ILE:CG2	39:BR:53:PHE:N	2.60	0.65
37:DP:91:ALA:HB2	37:DP:113:ARG:HA	1.79	0.65
22:DA:1179:G:C5	22:DA:1180:U:H1'	2.32	0.65
22:DA:1096:A:H2'	22:DA:1097:U:O4'	1.97	0.65
1:CA:309:A:O2'	1:CA:607:A:N1	2.24	0.65
22:DA:1668:A:O4'	22:DA:1669:A:C2	2.50	0.65
22:BA:1754:A:C6	22:BA:1755:A:C6	2.84	0.65
22:BA:770:G:N7	58:BA:3725:HOH:O	2.29	0.65
2:AB:167:ASP:OD1	2:AB:168:HIS:N	2.30	0.65
22:BA:783:A:H2'	22:BA:785:G:OP1	1.97	0.64
22:DA:297:G:H5''	42:DU:85:PHE:HB2	1.77	0.64
1:CA:536:C:OP1	58:CA:1770:HOH:O	2.15	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:155:ALA:HB1	8:CH:66:PHE:CD2	2.31	0.64
22:BA:528:A:H3'	22:BA:528:A:H8	1.61	0.64
22:DA:152:A:C2	22:DA:175:G:C2	2.85	0.64
22:DA:13:A:N1	22:DA:525:U:H2'	2.12	0.64
43:BV:14:LYS:HD2	43:BV:18:ARG:NH1	2.11	0.64
22:BA:1936:A:H2	22:BA:1943:U:H3	1.44	0.64
22:BA:197:A:N6	22:BA:2430:A:H2'	2.11	0.64
1:AA:154:U:C2	1:AA:168:G:N2	2.65	0.64
53:B5:40:GLU:HA	53:B5:181:PHE:HA	1.78	0.64
24:BC:182:ARG:CG	24:BC:182:ARG:HH21	2.09	0.64
9:AI:43:THR:O	9:AI:44:ALA:CB	2.45	0.64
19:CS:55:ARG:CZ	19:CS:79:THR:HG22	2.27	0.64
12:CL:38:TYR:HB2	12:CL:52:VAL:HG13	1.80	0.64
1:AA:1053:G:N7	1:AA:1199:U:H3'	2.12	0.64
1:AA:328:C:O2	1:AA:328:C:H2'	1.96	0.64
1:AA:1410:A:C4	1:AA:1491:G:N2	2.66	0.64
22:BA:1921:G:C2	22:BA:1922:G:C8	2.85	0.64
22:BA:1179:G:C6	22:BA:1180:U:H1'	2.32	0.64
22:BA:198:C:OP2	58:BA:3768:HOH:O	2.15	0.64
37:BP:90:GLY:O	37:BP:113:ARG:NH1	2.29	0.64
1:CA:32:A:OP1	1:CA:398:U:H1'	1.97	0.64
22:DA:1754:A:N6	22:DA:1755:A:C6	2.65	0.64
8:CH:125:ILE:HD11	8:CH:128:TYR:CE1	2.31	0.64
1:AA:524:G:C6	1:AA:525:C:N4	2.65	0.64
1:AA:1145:A:O2'	1:AA:1146:A:C5'	2.45	0.64
10:AJ:74:VAL:HG12	10:AJ:75:ASP:N	2.12	0.64
1:CA:1124:G:N2	1:CA:1127:G:C2	2.65	0.64
1:CA:1431:A:N6	1:CA:1432:G:O6	2.30	0.64
22:BA:1263:U:OP1	48:B0:13:ARG:NH1	2.30	0.64
1:AA:702:A:N6	22:BA:1846:G:O2'	2.30	0.64
40:BS:84:ARG:HB2	40:BS:96:ILE:HG13	1.77	0.64
22:BA:1949:G:N2	22:BA:1958:C:C2	2.66	0.64
22:BA:142:A:C5	22:BA:143:C:C4	2.85	0.64
9:CI:95:ARG:O	9:CI:99:ARG:N	2.30	0.64
1:AA:1129:C:O2	1:AA:1130:A:N6	2.31	0.64
2:AB:85:LEU:HG	2:AB:86:SER:N	2.10	0.64
22:DA:2136:G:N1	22:DA:2156:G:H1'	2.11	0.64
22:BA:2287:A:OP1	49:B1:30:LYS:NZ	2.30	0.64
3:AC:130:PHE:CZ	3:AC:131:ARG:HD2	2.32	0.64
22:DA:1091:G:O2'	22:DA:1092:C:OP2	2.11	0.64
22:BA:580:U:H2'	22:BA:581:C:C6	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:826:U:O2'	33:DL:53:GLY:HA3	1.97	0.64
4:AD:3:ARG:CZ	4:AD:115:ARG:HD3	2.28	0.64
8:CH:88:ARG:O	8:CH:122:GLY:HA3	1.98	0.64
5:AE:137:VAL:O	5:AE:138:ARG:CB	2.44	0.64
54:D6:6:04X:H4	54:D6:6:04X:H41	1.79	0.64
22:BA:1124:G:N7	58:BA:3610:HOH:O	2.30	0.64
35:BN:66:ALA:O	35:BN:69:ARG:O	2.15	0.64
22:DA:2094:A:OP1	29:DH:22:LYS:HG3	1.97	0.64
22:DA:2261:C:C2	22:DA:2280:G:N2	2.66	0.64
22:DA:2062:A:N7	54:D6:1:MHW:CG2	2.61	0.64
22:DA:2061:G:C6	56:DA:3001:VIF:H29	2.33	0.64
22:BA:783:A:C2'	22:BA:785:G:OP1	2.45	0.64
22:BA:2190:G:C2	22:BA:2191:A:C4	2.85	0.64
13:CM:114:LYS:HB2	13:CM:115:PRO:HD3	1.78	0.64
4:CD:174:ASP:O	4:CD:175:ALA:CB	2.46	0.64
31:BJ:125:TYR:OH	31:BJ:132:HIS:NE2	2.31	0.64
16:AP:38:PHE:CZ	16:AP:51:ARG:HB2	2.33	0.64
49:D1:51:GLU:HG3	49:D1:52:ALA:N	2.13	0.64
6:AF:93:LYS:O	6:AF:93:LYS:HG2	1.98	0.64
17:CQ:12:VAL:HG23	17:CQ:57:ASP:O	1.97	0.64
14:AN:52:PRO:O	14:AN:53:ARG:CB	2.46	0.64
17:CQ:19:LYS:O	17:CQ:71:LYS:NZ	2.26	0.64
3:AC:205:GLY:O	3:AC:206:GLU:HG3	1.98	0.64
1:AA:928:G:O2'	1:AA:1533:C:OP1	2.15	0.64
22:DA:2111:U:C4	22:DA:2145:C:H2'	2.32	0.64
1:AA:1014:A:C2	19:AS:34:TRP:CH2	2.85	0.64
22:DA:537:G:N1	22:DA:555:G:C2	2.66	0.64
22:DA:508:A:N6	40:DS:9:HIS:CE1	2.66	0.64
40:BS:37:THR:OG1	40:BS:48:LYS:NZ	2.31	0.64
42:BU:39:ILE:HG22	42:BU:40:ASN:H	1.63	0.64
29:BH:83:LYS:HG3	1:CA:55:A:N3	2.13	0.64
29:DH:117:LEU:CD1	29:DH:130:VAL:HG22	2.28	0.64
1:AA:108:G:C5'	1:AA:108:G:N3	2.60	0.63
22:BA:1131:G:OP1	31:BJ:82:GLY:HA2	1.97	0.63
39:DR:49:ILE:HG22	39:DR:54:VAL:N	2.13	0.63
1:CA:463:U:H5'	1:CA:464:U:OP2	1.98	0.63
22:DA:38:A:C2	22:DA:442:G:C6	2.86	0.63
32:DK:2:ILE:N	32:DK:33:ALA:O	2.31	0.63
29:BH:97:ARG:NH1	1:CA:370:C:O4'	2.31	0.63
6:CF:86:ARG:HH11	6:CF:86:ARG:CG	2.11	0.63
1:AA:1100:C:O2'	1:AA:1102:A:OP1	2.16	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:53:VAL:HG13	21:CU:54:LYS:N	2.14	0.63
53:B5:180:SER:CB	53:B5:188:ASP:CB	2.76	0.63
22:BA:1071:G:C8	22:BA:1089:A:N6	2.66	0.63
22:BA:830:G:H4'	22:BA:831:G:OP2	1.98	0.63
22:DA:2610:C:O4'	54:D6:7:004:HD2	1.99	0.63
22:BA:1917:U:H2'	22:BA:1917:U:O2	1.98	0.63
6:AF:92:THR:HG22	6:AF:93:LYS:N	2.12	0.63
22:DA:300:A:O2'	22:DA:318:C:O2'	2.09	0.63
22:BA:475:C:C4	22:BA:481:G:O6	2.52	0.63
1:AA:923:A:O4'	1:AA:1398:A:C2	2.51	0.63
13:AM:29:ARG:CZ	13:AM:63:PHE:HB2	2.27	0.63
22:DA:1805:A:C2	22:DA:1813:G:C2	2.86	0.63
24:DC:17:VAL:HB	24:DC:204:VAL:HG22	1.80	0.63
13:AM:3:ARG:HA	13:AM:9:ILE:HA	1.80	0.63
22:DA:563:A:C4	22:DA:2018:G:C2	2.86	0.63
22:DA:2125:G:H5'	22:DA:2126:A:OP2	1.98	0.63
22:DA:1826:G:C5	22:DA:1827:U:C5	2.87	0.63
22:DA:1088:A:N6	30:DI:135:SER:OG	2.30	0.63
22:DA:613:A:OP2	22:DA:614:A:N7	2.31	0.63
25:DD:133:THR:HG23	25:DD:134:HIS:N	2.13	0.63
22:DA:1075:C:H2'	22:DA:1076:C:C6	2.33	0.63
22:BA:1417:C:H2'	22:BA:1418:G:O4'	1.98	0.63
22:DA:1046:A:O2'	22:DA:1047:G:OP1	2.16	0.63
1:CA:1040:U:H2'	1:CA:1041:G:C8	2.34	0.63
2:CB:53:ALA:O	2:CB:57:LEU:HB2	1.99	0.63
46:BY:56:LEU:O	46:BY:57:LEU:HB2	1.98	0.63
17:AQ:60:GLU:OE2	17:AQ:77:ARG:NH1	2.32	0.63
22:BA:1266:G:OP1	48:B0:16:ARG:NE	2.31	0.63
1:AA:579:A:O2'	15:AO:54:ARG:NH1	2.31	0.63
50:D2:35:ARG:O	50:D2:38:GLY:N	2.30	0.63
1:CA:1225:A:H2'	1:CA:1226:C:C5	2.34	0.63
4:CD:62:ARG:NH1	4:CD:69:GLU:OE1	2.31	0.63
29:DH:117:LEU:HG	29:DH:120:GLY:O	1.98	0.63
1:CA:16:A:H2'	1:CA:17:U:H5'	1.80	0.63
22:DA:1715:G:O2'	22:DA:1743:G:O6	2.12	0.63
22:DA:2579:C:OP1	58:DA:3539:HOH:O	2.14	0.63
22:BA:587:C:OP2	33:BL:21:ARG:NH1	2.32	0.63
2:CB:119:THR:O	2:CB:120:GLN:CB	2.46	0.63
2:AB:80:VAL:N	2:AB:82:ASP:OD2	2.31	0.63
22:DA:466:A:N1	22:DA:795:C:O2'	2.28	0.63
22:DA:749:A:C5	22:DA:750:A:N7	2.67	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:67:ILE:O	2:AB:68:LEU:HB2	1.96	0.63
1:AA:205:A:OP1	1:AA:205:A:H4'	1.97	0.63
1:CA:149:A:C2	1:CA:150:U:C2	2.87	0.63
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.63	0.63
22:BA:1180:U:O2'	22:BA:1181:U:P	2.56	0.63
22:DA:1810:A:H2'	22:DA:1811:G:O4'	1.98	0.63
23:BB:28:C:OP1	36:BO:31:THR:HG21	1.98	0.63
1:CA:55:A:C6	1:CA:56:U:C2	2.87	0.63
22:DA:749:A:C6	22:DA:750:A:N7	2.66	0.63
25:DD:48:ILE:HG23	25:DD:84:LEU:CD2	2.28	0.63
1:CA:1377:A:C5	7:CG:7:ILE:HD12	2.33	0.63
22:DA:1469:A:H2'	22:DA:1470:A:C8	2.34	0.63
11:AK:76:GLU:O	11:AK:77:TYR:CD1	2.52	0.63
22:DA:1843:C:H4'	24:DC:251:GLN:CD	2.19	0.63
22:BA:1439:A:OP2	58:BA:3639:HOH:O	2.15	0.63
24:BC:37:ASN:O	24:BC:38:SER:HB3	1.99	0.63
22:BA:1917:U:O4	22:BA:1918:A:C2	2.52	0.62
22:BA:1907:G:C6	22:BA:1908:C:C4	2.88	0.62
1:CA:572:A:H5'	1:CA:573:A:OP2	1.99	0.62
1:AA:338:A:N1	1:AA:351:G:O6	2.32	0.62
22:DA:2505:G:OP2	56:DA:3001:VIF:H6	1.99	0.62
22:BA:2309:A:N6	22:BA:2310:C:N4	2.48	0.62
22:DA:287:G:C2	22:DA:354:A:C2	2.87	0.62
2:CB:141:LEU:O	2:CB:145:GLU:N	2.32	0.62
1:CA:32:A:C2	1:CA:33:A:C5	2.87	0.62
4:AD:101:VAL:HG12	4:AD:101:VAL:O	1.98	0.62
22:BA:18:U:OP1	38:BQ:30:ARG:NH2	2.32	0.62
22:DA:724:U:H2'	22:DA:725:G:O4'	1.98	0.62
30:DI:21:SER:HB3	30:DI:22:PRO:HD3	1.81	0.62
11:AK:102:ALA:O	11:AK:104:GLY:N	2.32	0.62
22:BA:2063:C:O2	22:BA:2450:A:N1	2.32	0.62
33:BL:68:SER:O	33:BL:69:ARG:HB2	1.99	0.62
22:DA:1351:C:H2'	22:DA:1352:U:O4'	1.99	0.62
22:DA:2127:G:H4'	22:DA:2128:G:OP1	1.98	0.62
5:CE:99:ALA:O	5:CE:122:ASN:ND2	2.31	0.62
30:BI:127:ARG:HA	30:BI:130:GLU:HG3	1.81	0.62
22:DA:1323:C:C5	22:DA:1324:G:N7	2.67	0.62
22:DA:1649:G:C6	22:DA:2009:A:C6	2.87	0.62
15:AO:63:ARG:HG2	15:AO:67:LEU:HD12	1.80	0.62
12:AL:44:LYS:HB2	12:AL:45:PRO:CD	2.29	0.62
25:BD:13:ARG:HD3	25:BD:21:SER:OG	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2683:C:OP1	37:BP:51:ARG:NH2	2.32	0.62
22:DA:1779:U:H5	22:DA:1784:A:N7	1.97	0.62
22:DA:2144:G:C2	22:DA:2146:C:O2	2.52	0.62
17:AQ:52:GLU:N	17:AQ:52:GLU:CD	2.52	0.62
22:BA:2467:C:OP1	52:B4:8:LYS:NZ	2.25	0.62
21:CU:36:GLU:OE1	21:CU:36:GLU:HA	1.99	0.62
13:AM:64:VAL:HG12	13:AM:64:VAL:O	1.99	0.62
22:DA:813:U:H2'	22:DA:814:C:C6	2.35	0.62
1:AA:145:G:N2	1:AA:178:C:N3	2.48	0.62
22:BA:1734:G:C4	22:BA:1735:A:C8	2.88	0.62
1:AA:1054:C:C5	1:AA:1196:A:H2'	2.34	0.62
22:DA:1313:U:O2	22:DA:1313:U:H2'	1.98	0.62
22:DA:2379:G:H4'	36:DO:21:LEU:HD11	1.81	0.62
5:CE:141:ILE:O	5:CE:143:GLY:N	2.31	0.62
9:CI:54:LEU:O	9:CI:55:VAL:HG22	1.99	0.62
11:CK:101:ASN:C	11:CK:101:ASN:OD1	2.38	0.62
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.35	0.62
22:DA:2504:U:C5	56:DA:3001:VIF:H30	2.34	0.62
22:BA:1061:U:HO2'	22:BA:1062:G:P	2.22	0.62
21:AU:36:GLU:O	21:AU:37:PHE:HB2	1.98	0.62
2:AB:75:ALA:O	2:AB:76:ALA:HB2	1.99	0.62
39:BR:49:ILE:HB	39:BR:51:VAL:O	1.98	0.62
4:AD:123:ILE:CD1	4:AD:123:ILE:N	2.62	0.62
22:DA:1316:U:C2	22:DA:1337:G:N2	2.67	0.62
22:DA:1411:U:H2'	22:DA:1412:U:O4'	1.99	0.62
33:DL:29:LYS:HG3	33:DL:30:THR:HG23	1.81	0.62
22:DA:1338:G:O2'	22:DA:1393:A:N1	2.21	0.62
1:CA:1486:G:H2'	1:CA:1487:G:O4'	1.98	0.62
34:BM:62:LYS:HD3	34:BM:64:TRP:CZ2	2.34	0.62
18:CR:25:ASP:O	18:CR:28:THR:N	2.31	0.62
1:CA:1211:U:C2'	1:CA:1212:U:OP2	2.47	0.62
1:CA:1161:C:O2	1:CA:1176:A:C2	2.53	0.62
22:BA:1747:U:H2'	22:BA:1748:C:C6	2.35	0.62
22:DA:35:G:C4	22:DA:454:A:C2	2.87	0.62
1:CA:718:A:C8	1:CA:719:C:C5	2.88	0.62
22:DA:301:G:H1'	22:DA:302:C:C6	2.35	0.62
22:DA:132:G:N2	22:DA:148:U:C2	2.68	0.62
22:BA:1360:G:C6	22:BA:1372:U:C2	2.88	0.62
13:CM:93:ARG:CZ	13:CM:93:ARG:HB3	2.28	0.62
6:AF:76:THR:O	6:AF:79:ARG:N	2.33	0.62
22:BA:1061:U:H3'	22:BA:1062:G:H5'	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:99:ASP:OD1	4:CD:100:ASN:N	2.33	0.62
1:AA:411:A:C5	1:AA:429:U:C5	2.88	0.62
22:DA:973:A:OP2	39:DR:81:LYS:NZ	2.23	0.62
1:AA:80:A:C2	1:AA:90:C:N3	2.68	0.62
22:DA:1027:A:C6	22:DA:1126:A:N3	2.67	0.62
22:BA:1474:U:H2'	22:BA:1475:G:H5'	1.82	0.62
22:BA:487:C:O2	40:BS:53:SER:OG	2.17	0.62
27:BF:108:VAL:CG1	27:BF:114:PHE:CZ	2.83	0.62
22:DA:1440:U:O4	58:DA:3630:HOH:O	2.11	0.62
1:CA:1006:G:H2'	1:CA:1007:U:C6	2.35	0.62
29:BH:97:ARG:HD3	1:CA:370:C:H5'	1.81	0.62
22:DA:479:A:H4'	22:DA:480:A:OP1	2.00	0.62
22:BA:360:U:H3'	22:BA:361:G:C8	2.35	0.62
22:DA:2821:A:OP2	25:DD:115:GLY:N	2.33	0.62
30:BI:82:LYS:O	30:BI:83:ALA:HB2	1.99	0.62
2:AB:50:PHE:HA	2:AB:213:TYR:OH	1.99	0.62
30:DI:6:GLN:O	30:DI:7:ALA:CB	2.48	0.62
22:BA:1915:U:O2'	22:BA:1916:A:H5'	1.99	0.62
10:AJ:73:LEU:O	10:AJ:74:VAL:HB	2.00	0.62
22:DA:782:A:O2'	24:DC:224:ALA:O	2.18	0.62
10:AJ:52:LEU:HD11	10:AJ:59:LYS:HA	1.81	0.62
22:DA:1179:G:C6	22:DA:1180:U:H1'	2.34	0.62
14:AN:52:PRO:O	14:AN:53:ARG:HB3	2.00	0.62
6:AF:97:THR:O	6:AF:98:GLU:HB3	2.00	0.62
30:DI:33:VAL:HG22	30:DI:67:PHE:CE1	2.35	0.62
1:CA:475:C:H2'	1:CA:476:U:C6	2.34	0.62
22:BA:2517:C:C6	22:BA:2542:A:N7	2.68	0.62
32:DK:118:LEU:O	32:DK:119:ALA:HB3	2.00	0.62
33:DL:102:GLY:N	58:DL:202:HOH:O	2.33	0.62
22:DA:2611:C:C1'	54:D6:6:04X:H33	2.30	0.61
1:AA:1407:C:O2'	22:BA:1912:A:N6	2.33	0.61
22:BA:1917:U:C4	22:BA:1918:A:C5	2.88	0.61
52:D4:19:ARG:O	52:D4:20:ASP:HB2	2.00	0.61
7:AG:15:ASP:OD1	7:AG:44:TYR:OH	2.18	0.61
42:DU:74:ASN:HA	42:DU:96:PHE:CZ	2.35	0.61
33:BL:61:LEU:O	51:B3:13:ARG:HD3	1.99	0.61
22:DA:1477:A:N6	22:DA:1514:G:O2'	2.32	0.61
27:DF:106:ILE:HD11	27:DF:139:PRO:HG2	1.81	0.61
22:DA:2848:G:OP2	37:DP:95:ALA:N	2.32	0.61
22:BA:1993:U:H4'	25:BD:133:THR:HG21	1.82	0.61
22:BA:1224:U:H4'	39:BR:88:GLY:O	1.98	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:35:GLU:O	4:CD:38:PRO:HD3	1.99	0.61
22:BA:1422:G:C4	22:BA:1423:G:C8	2.88	0.61
22:DA:2062:A:N7	54:D6:1:MHW:CD	2.63	0.61
22:BA:1073:A:C3'	22:BA:1074:G:H5''	2.29	0.61
1:AA:455:G:C2	1:AA:478:A:C2	2.87	0.61
22:DA:320:A:H4'	22:DA:322:A:N7	2.15	0.61
50:B2:43:THR:O	50:B2:44:VAL:CB	2.48	0.61
4:CD:174:ASP:O	4:CD:175:ALA:HB2	2.00	0.61
4:CD:33:LYS:O	4:CD:33:LYS:HG2	1.99	0.61
21:CU:4:ILE:N	21:CU:19:PHE:CE2	2.68	0.61
13:CM:40:ALA:O	13:CM:42:ASP:N	2.32	0.61
42:DU:22:ARG:CZ	42:DU:73:PHE:CE2	2.83	0.61
22:DA:2163:A:OP1	22:DA:2171:A:C8	2.53	0.61
5:CE:136:VAL:O	5:CE:140:THR:OG1	2.17	0.61
22:BA:1746:A:H2'	22:BA:1747:U:H6	1.62	0.61
22:BA:2531:A:OP2	28:BG:174:ALA:O	2.17	0.61
22:DA:1340:U:C4	22:DA:1603:A:C8	2.88	0.61
29:DH:32:PRO:O	29:DH:33:GLN:CB	2.48	0.61
9:CI:26:GLY:N	9:CI:61:LEU:O	2.33	0.61
22:DA:2328:A:H2'	22:DA:2329:U:C6	2.35	0.61
1:CA:451:A:H4'	1:CA:452:A:O5'	2.00	0.61
33:DL:81:ASP:O	33:DL:82:LEU:HB3	2.00	0.61
22:BA:1494:A:C2	22:BA:1495:A:C4	2.88	0.61
24:BC:143:ASN:OD1	24:BC:152:GLY:HA3	2.01	0.61
22:DA:671:C:O2'	22:DA:672:C:O5'	2.19	0.61
21:AU:34:ARG:CZ	21:AU:35:ARG:HB2	2.30	0.61
39:BR:49:ILE:HG22	39:BR:52:PRO:C	2.20	0.61
22:DA:587:C:N3	33:DL:33:ARG:NH2	2.48	0.61
12:AL:94:ARG:HB2	12:AL:95:TYR:CE1	2.35	0.61
22:BA:580:U:H2'	22:BA:581:C:H6	1.65	0.61
24:DC:145:GLU:HA	24:DC:152:GLY:HA2	1.82	0.61
2:CB:21:ARG:HA	2:CB:21:ARG:NH1	2.16	0.61
22:DA:2415:G:C6	22:DA:2416:C:C4	2.88	0.61
28:BG:30:ASN:CG	28:BG:30:ASN:O	2.38	0.61
22:DA:2658:C:OP1	28:DG:158:LYS:NZ	2.32	0.61
54:D6:5:MHU:HB1	54:D6:6:04X:H45	1.82	0.61
22:DA:1359:A:C8	22:DA:1373:A:N1	2.68	0.61
5:CE:98:PRO:O	5:CE:99:ALA:HB3	2.00	0.61
22:DA:187:G:N2	22:DA:210:C:C2	2.68	0.61
1:AA:90:C:C2	1:AA:91:U:C5	2.88	0.61
22:DA:2360:G:H1'	33:DL:60:ARG:HD3	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:84:ARG:HB2	40:BS:96:ILE:CG1	2.30	0.61
2:CB:21:ARG:HA	2:CB:21:ARG:CZ	2.29	0.61
22:DA:137:U:H2'	22:DA:140:C:C2	2.35	0.61
22:DA:1638:C:O2	22:DA:2698:U:O2'	2.10	0.61
2:CB:100:MET:HA	2:CB:107:VAL:HG21	1.82	0.61
31:BJ:42:ALA:O	38:BQ:64:ARG:HG2	2.01	0.61
4:CD:168:PRO:CB	4:CD:171:LEU:HD12	2.30	0.61
38:DQ:72:ASN:HB3	38:DQ:110:VAL:HG11	1.83	0.61
2:AB:75:ALA:O	2:AB:76:ALA:CB	2.48	0.61
22:BA:480:A:OP2	42:BU:44:LYS:NZ	2.32	0.61
22:DA:811:U:O2	22:DA:1251:C:C6	2.53	0.61
4:AD:122:ALA:O	4:AD:123:ILE:HG23	2.00	0.61
22:BA:1415:U:O2	22:BA:1415:U:H2'	1.99	0.61
22:BA:15:G:OP2	58:BA:3554:HOH:O	2.16	0.61
22:BA:2305:U:C2	27:BF:151:GLY:HA3	2.35	0.61
21:CU:8:GLU:HB3	21:CU:12:PHE:CE2	2.36	0.61
1:AA:1173:U:H2'	1:AA:1174:G:C8	2.35	0.61
26:BE:18:THR:HA	26:BE:106:LYS:HG2	1.83	0.61
22:DA:1808:A:H3'	22:DA:1809:A:C8	2.35	0.61
22:DA:2093:G:C6	22:DA:2225:A:C8	2.89	0.61
1:CA:170:U:O2'	1:CA:171:A:H5'	2.00	0.61
22:BA:2298:A:C6	22:BA:2321:U:O4	2.54	0.61
37:BP:93:ARG:O	37:BP:94:LYS:HB2	1.99	0.61
1:CA:1377:A:C5	7:CG:7:ILE:CD1	2.84	0.61
22:DA:2009:A:N6	58:DA:3373:HOH:O	2.25	0.61
27:BF:176:PRO:O	27:BF:177:PHE:HB2	2.00	0.61
4:CD:168:PRO:HB2	4:CD:171:LEU:HD12	1.83	0.61
43:BV:80:HIS:NE2	43:BV:83:LYS:HG3	2.16	0.61
22:BA:2291:U:H2'	22:BA:2292:U:C6	2.35	0.61
23:DB:81:G:C5	23:DB:82:U:C5	2.89	0.61
31:DJ:30:THR:HA	31:DJ:108:MET:SD	2.41	0.61
22:BA:1008:A:N6	22:BA:1136:G:C6	2.69	0.61
1:CA:1490:U:H2'	1:CA:1491:G:O4'	1.99	0.61
22:BA:1915:U:H2'	22:BA:1916:A:C8	2.35	0.61
22:DA:1808:A:N1	45:DX:28:ARG:HD2	2.16	0.61
39:BR:51:VAL:HG23	39:BR:52:PRO:HD2	1.83	0.61
12:AL:63:VAL:HG21	12:AL:95:TYR:CE1	2.36	0.61
1:AA:562:U:OP2	12:AL:14:ARG:NH1	2.33	0.61
7:AG:79:ARG:NH1	7:AG:82:GLY:O	2.34	0.61
8:AH:113:ASP:OD2	8:AH:117:ARG:NH2	2.32	0.61
28:BG:121:ILE:HD12	28:BG:141:ILE:HG22	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:58:VAL:HG13	39:DR:102:SER:HB2	1.81	0.61
27:DF:142:ASP:O	27:DF:144:ASP:N	2.33	0.61
9:AI:127:PHE:CD1	9:AI:127:PHE:O	2.53	0.61
1:AA:21:G:N2	1:AA:22:G:C6	2.69	0.61
22:DA:225:C:H2'	22:DA:226:A:O4'	2.01	0.61
1:AA:96:U:O2'	1:AA:97:G:P	2.59	0.61
22:DA:1509:A:O2'	22:DA:1510:G:P	2.59	0.61
22:DA:582:A:OP1	38:DQ:14:HIS:ND1	2.34	0.61
1:CA:1151:A:N3	1:CA:1152:A:C8	2.69	0.61
53:B5:204:GLY:O	53:B5:205:ALA:CB	2.48	0.61
20:AT:70:ASN:N	20:AT:70:ASN:OD1	2.33	0.61
15:AO:19:ALA:O	15:AO:20:ASN:CB	2.49	0.61
2:CB:85:LEU:HG	2:CB:85:LEU:O	2.00	0.61
22:DA:1091:G:N3	22:DA:1092:C:C5	2.69	0.61
21:AU:20:LYS:CE	21:AU:20:LYS:HA	2.30	0.61
22:BA:1435:G:O2'	22:BA:1436:G:H5'	1.99	0.61
1:AA:381:C:H2'	1:AA:382:A:O4'	2.01	0.61
22:DA:533:G:H5'	38:DQ:24:TYR:CE1	2.36	0.61
46:BY:18:LEU:O	46:BY:22:LEU:HB2	2.00	0.61
29:DH:83:LYS:H	29:DH:149:GLU:HG2	1.64	0.61
22:DA:1651:G:N2	22:DA:2007:U:O2	2.34	0.61
22:DA:1809:A:C4	22:DA:1810:A:C8	2.89	0.61
1:CA:1255:G:C6	1:CA:1279:G:C8	2.89	0.61
1:CA:72:A:C6	1:CA:73:C:C4	2.88	0.61
22:DA:858:G:O2'	22:DA:2268:A:N3	2.25	0.61
10:AJ:35:GLN:CG	10:AJ:77:VAL:HB	2.31	0.61
47:BZ:10:THR:HG22	47:BZ:54:MET:C	2.21	0.61
8:CH:55:THR:C	8:CH:57:PRO:HD3	2.21	0.61
39:BR:68:ARG:HD3	39:BR:92:TRP:CZ2	2.35	0.61
1:AA:11:G:C6	1:AA:12:U:C4	2.89	0.61
22:DA:588:U:H1'	26:DE:85:PHE:CD1	2.35	0.61
29:BH:121:VAL:N	29:BH:122:LEU:HB2	2.16	0.60
1:AA:829:G:C2	1:AA:830:G:C8	2.89	0.60
1:CA:1022:A:C5	1:CA:1023:U:C4	2.89	0.60
3:AC:16:LYS:HG3	3:AC:17:PRO:HD2	1.83	0.60
8:AH:42:GLU:OE1	8:AH:42:GLU:CA	2.49	0.60
33:BL:85:VAL:CG1	33:BL:94:THR:HG22	2.30	0.60
1:CA:1138:G:C2	1:CA:1140:C:C4	2.89	0.60
22:BA:977:G:C5	58:BA:3596:HOH:O	2.52	0.60
12:AL:24:LEU:HB2	12:AL:59:ASN:ND2	2.16	0.60
5:CE:154:ALA:HA	5:CE:157:ARG:HB3	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:94:A:OP1	43:DV:19:ARG:HD3	2.01	0.60
22:BA:933:A:H5'	22:BA:934:U:OP2	2.01	0.60
14:CN:80:SER:O	14:CN:83:LYS:N	2.33	0.60
2:AB:222:ARG:CZ	2:AB:222:ARG:HB3	2.30	0.60
22:DA:1025:G:O2'	58:DA:3707:HOH:O	2.16	0.60
2:CB:134:ALA:O	2:CB:138:THR:OG1	2.16	0.60
13:AM:11:ASP:O	13:AM:12:HIS:ND1	2.34	0.60
22:DA:1395:A:O2'	22:DA:1397:U:C6	2.53	0.60
22:DA:279:A:C2	22:DA:362:A:H4'	2.35	0.60
22:DA:13:A:N3	22:DA:14:A:N6	2.48	0.60
22:BA:1223:G:OP2	39:BR:68:ARG:NH1	2.34	0.60
10:CJ:27:GLU:O	10:CJ:31:ARG:HB3	2.00	0.60
1:CA:815:A:N7	1:CA:1509:C:O2'	2.25	0.60
7:CG:145:ALA:O	7:CG:146:GLU:HB2	2.00	0.60
22:DA:247:G:H4'	22:DA:386:G:C5	2.36	0.60
31:DJ:110:PRO:O	31:DJ:115:GLY:HA3	2.01	0.60
1:CA:695:A:H2'	1:CA:696:A:C8	2.36	0.60
1:AA:861:G:HO2'	1:AA:874:G:HO2'	1.49	0.60
12:AL:24:LEU:HG	12:AL:25:GLU:N	2.16	0.60
22:DA:858:G:C4	22:DA:2268:A:C2	2.89	0.60
30:BI:39:CYS:CA	30:BI:42:PHE:HB3	2.31	0.60
22:DA:1090:A:N1	22:DA:1091:G:C5	2.69	0.60
22:DA:571:U:C4	22:DA:575:A:C5	2.89	0.60
27:BF:25:VAL:O	27:BF:28:VAL:HG12	2.01	0.60
29:BH:100:ALA:HB1	29:BH:112:LYS:HA	1.83	0.60
35:BN:58:ASP:CG	35:BN:63:ARG:HH22	2.04	0.60
1:AA:979:C:H1'	1:AA:1317:C:N4	2.16	0.60
22:DA:1783:A:C2	22:DA:2588:G:O4'	2.53	0.60
1:AA:108:G:O6	20:AT:10:ARG:HG2	2.01	0.60
46:DY:11:VAL:O	46:DY:15:ASN:ND2	2.35	0.60
22:BA:1823:G:N7	58:BA:3661:HOH:O	2.31	0.60
10:AJ:63:ASP:HB3	10:AJ:65:TYR:CE1	2.36	0.60
22:DA:856:G:N2	22:DA:922:C:C2	2.69	0.60
1:CA:881:G:C6	1:CA:882:C:C4	2.90	0.60
1:CA:990:C:C4	1:CA:991:U:O4	2.55	0.60
11:AK:125:LYS:CG	11:AK:126:LYS:N	2.63	0.60
5:CE:98:PRO:O	5:CE:99:ALA:CB	2.49	0.60
53:B5:64:SER:O	53:B5:65:LEU:CB	2.50	0.60
22:BA:1587:G:C4	22:BA:1588:G:C8	2.90	0.60
26:DE:150:THR:OG1	26:DE:151:GLY:N	2.35	0.60
1:AA:466:A:H5'	1:AA:467:U:OP2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:268:U:H2'	1:CA:269:C:C6	2.36	0.60
26:DE:76:PRO:HA	26:DE:82:GLY:HA2	1.84	0.60
22:DA:271:G:H1'	22:DA:272:A:O5'	2.01	0.60
27:BF:171:ALA:O	27:BF:174:ASP:N	2.32	0.60
22:DA:658:U:O2'	26:DE:95:LYS:NZ	2.28	0.60
9:CI:91:ASP:OD1	9:CI:93:SER:N	2.35	0.60
4:CD:146:ARG:O	4:CD:150:LYS:N	2.34	0.60
22:DA:2202:U:O2'	22:DA:2204:G:OP1	2.15	0.60
22:DA:2164:C:H5''	22:DA:2165:C:C5	2.36	0.60
22:DA:1171:G:C2	22:DA:1179:G:O6	2.55	0.60
22:BA:1734:G:N3	22:BA:1735:A:C8	2.70	0.60
42:BU:39:ILE:HG22	42:BU:40:ASN:N	2.17	0.60
22:BA:1907:G:C5	22:BA:1908:C:C5	2.89	0.60
22:DA:2820:A:C8	25:DD:196:ALA:HB1	2.36	0.60
28:BG:109:PHE:HE1	28:BG:152:ARG:CZ	2.13	0.60
22:DA:834:G:H1'	22:DA:2358:A:N3	2.17	0.60
14:CN:21:PHE:O	14:CN:23:LYS:N	2.34	0.60
46:DY:56:LEU:O	46:DY:57:LEU:CB	2.49	0.60
22:BA:1916:A:H2'	22:BA:1917:U:C4'	2.32	0.60
1:AA:877:G:H21	8:AH:2:SER:N	2.00	0.60
32:BK:73:ASP:OD1	32:BK:75:SER:OG	2.15	0.60
1:AA:72:A:C2'	1:AA:73:C:H5'	2.32	0.60
22:DA:2019:A:H4'	38:DQ:34:VAL:HG21	1.84	0.60
41:DT:39:THR:O	41:DT:41:ALA:N	2.35	0.60
3:AC:83:ASP:O	3:AC:86:LYS:HG3	2.01	0.60
36:DO:100:HIS:CD2	36:DO:101:GLY:N	2.70	0.60
22:DA:1469:A:C2	22:DA:1470:A:C5	2.89	0.60
42:DU:33:LYS:HB3	42:DU:64:ALA:HB1	1.82	0.60
1:AA:484:G:H4'	1:AA:485:U:OP1	2.00	0.60
36:BO:10:ARG:NH2	36:BO:96:GLY:O	2.35	0.60
1:AA:315:A:O2'	1:AA:330:C:H4'	2.02	0.60
32:BK:36:GLY:HA2	32:BK:62:VAL:O	2.01	0.60
38:DQ:76:TYR:CZ	38:DQ:80:ILE:HG13	2.37	0.60
22:DA:2361:G:C5	22:DA:2362:C:C5	2.90	0.60
29:DH:126:GLY:O	29:DH:146:VAL:HG23	2.00	0.60
1:CA:1309:G:C6	1:CA:1329:A:C2	2.89	0.60
29:BH:117:LEU:CD2	29:BH:121:VAL:HA	2.31	0.60
22:DA:2142:A:C2	22:DA:2150:C:N3	2.70	0.60
22:BA:1779:U:C5	22:BA:1784:A:N7	2.69	0.60
22:BA:528:A:C8	22:BA:528:A:C3'	2.84	0.60
1:CA:16:A:C2'	1:CA:17:U:H5'	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:316:C:C2	1:AA:317:U:C5	2.89	0.60
31:BJ:19:ASP:O	31:BJ:23:LYS:HE2	2.02	0.60
14:CN:33:ASP:O	14:CN:35:ASN:N	2.35	0.60
24:DC:45:ASN:OD1	24:DC:46:ASN:N	2.35	0.60
2:AB:154:MET:O	2:AB:156:GLY:N	2.34	0.60
22:BA:1922:G:N2	22:BA:1923:U:O4'	2.35	0.60
2:CB:210:VAL:O	2:CB:214:LEU:HB2	2.02	0.60
1:CA:533:A:O2'	1:CA:535:A:OP2	2.19	0.60
22:DA:247:G:H4'	22:DA:386:G:C4	2.36	0.60
22:DA:102:U:C2	46:DY:2:LYS:HE2	2.36	0.60
4:CD:90:LEU:HD21	4:CD:200:ILE:HD11	1.84	0.60
1:CA:998:C:H2'	1:CA:999:C:C6	2.37	0.60
28:DG:45:HIS:O	28:DG:46:ALA:HB3	2.02	0.60
23:BB:41:G:H5''	27:BF:66:LEU:HD13	1.84	0.60
1:CA:1379:G:N2	1:CA:1381:U:O4	2.32	0.60
1:AA:1191:A:OP2	3:AC:3:GLN:NE2	2.35	0.60
1:AA:1319:A:C8	1:AA:1323:G:C5	2.90	0.60
6:CF:18:VAL:HG12	6:CF:19:PRO:N	2.16	0.60
22:DA:2420:C:OP1	51:D3:34:THR:HB	2.01	0.60
22:DA:2058:A:C6	22:DA:2059:A:N6	2.70	0.60
22:BA:1073:A:H3'	22:BA:1074:G:H5'	1.80	0.60
25:BD:13:ARG:HD2	25:BD:15:PHE:CE2	2.36	0.60
22:BA:819:A:OP2	22:BA:1187:G:N2	2.33	0.60
22:DA:2339:C:H2'	22:DA:2340:A:C8	2.37	0.60
12:AL:23:ALA:O	12:AL:24:LEU:O	2.20	0.60
1:CA:938:A:N6	1:CA:939:G:C6	2.69	0.60
22:DA:1226:A:OP1	38:DQ:16:LYS:NZ	2.34	0.60
1:AA:144:G:C5	1:AA:179:A:C2	2.90	0.60
46:DY:60:LYS:O	46:DY:62:GLY:N	2.35	0.60
22:DA:1802:A:OP2	22:DA:1815:A:N6	2.35	0.60
1:AA:988:G:C6	1:AA:989:U:C4	2.89	0.60
22:BA:1851:U:C4	22:BA:1852:U:C4	2.90	0.60
2:CB:47:VAL:HB	2:CB:48:PRO:HD3	1.83	0.60
4:CD:28:ILE:O	4:CD:31:LYS:NZ	2.34	0.60
1:AA:1141:C:O2'	1:AA:1142:G:O5'	2.17	0.60
30:DI:97:LYS:HD2	30:DI:97:LYS:N	2.17	0.60
22:BA:31:C:O2'	22:BA:1238:G:H5'	2.02	0.60
28:DG:27:LYS:O	28:DG:27:LYS:HG3	2.01	0.60
22:DA:2898:U:H2'	22:DA:2899:A:C8	2.36	0.60
22:BA:1179:G:C5	22:BA:1180:U:C1'	2.84	0.59
41:DT:18:GLU:O	41:DT:22:THR:OG1	2.20	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:872:A:C5	1:AA:874:G:C8	2.90	0.59
16:AP:43:ALA:O	16:AP:46:LYS:HD2	2.02	0.59
22:DA:295:G:H2'	22:DA:295:G:N3	2.16	0.59
4:AD:58:LYS:HG3	4:AD:59:GLN:N	2.17	0.59
24:DC:15:HIS:O	24:DC:204:VAL:HG21	2.02	0.59
35:BN:73:ASN:HA	35:BN:76:VAL:HG12	1.84	0.59
22:DA:425:G:N2	22:DA:426:C:C2	2.69	0.59
22:DA:398:C:OP1	45:DX:32:ASN:ND2	2.34	0.59
22:DA:1430:G:H2'	22:DA:1431:A:O4'	2.02	0.59
28:DG:116:GLN:NE2	28:DG:117:LEU:O	2.35	0.59
29:BH:99:ILE:HB	29:BH:115:VAL:HG11	1.84	0.59
1:CA:1041:G:H2'	1:CA:1042:A:C8	2.37	0.59
1:AA:1006:G:OP1	1:AA:1037:C:O2'	2.19	0.59
22:DA:2091:C:H1'	45:DX:34:HIS:CD2	2.37	0.59
17:AQ:69:LYS:O	17:AQ:70:THR:HB	2.01	0.59
4:AD:59:GLN:O	4:AD:63:ARG:HG2	2.02	0.59
4:CD:174:ASP:OD2	4:CD:175:ALA:N	2.36	0.59
17:AQ:48:ASP:OD2	17:AQ:52:GLU:OE1	2.19	0.59
4:CD:107:PHE:CG	4:CD:145:ILE:HD11	2.37	0.59
8:AH:66:PHE:CD2	8:AH:67:GLN:HG2	2.37	0.59
5:AE:153:VAL:O	5:AE:156:LYS:HB2	2.01	0.59
36:BO:35:ILE:HG21	36:BO:71:ALA:HA	1.84	0.59
22:DA:2743:U:OP1	52:D4:34:LYS:NZ	2.31	0.59
22:BA:1378:A:O2'	22:BA:1380:G:OP2	2.20	0.59
1:AA:1211:U:HO2'	1:AA:1212:U:P	2.24	0.59
22:DA:1389:G:N2	22:DA:1398:C:N3	2.50	0.59
22:DA:1206:G:C5	22:DA:1207:C:C5	2.90	0.59
30:BI:19:ASN:N	30:BI:20:PRO:CD	2.65	0.59
22:DA:1958:C:P	58:DA:3731:HOH:O	2.60	0.59
29:BH:94:ILE:HG22	29:BH:99:ILE:CG1	2.32	0.59
14:CN:41:ARG:HG2	14:CN:42:TRP:N	2.18	0.59
22:BA:1064:C:H2'	22:BA:1064:C:O2	2.01	0.59
22:DA:1353:A:C8	22:DA:1378:A:N6	2.70	0.59
14:CN:52:PRO:O	14:CN:53:ARG:HB3	2.02	0.59
22:DA:1361:G:C2	22:DA:1362:C:C6	2.90	0.59
5:CE:82:GLN:OE1	5:CE:149:SER:HA	2.02	0.59
22:DA:301:G:N3	22:DA:302:C:C2	2.71	0.59
1:CA:455:G:N2	1:CA:478:A:C2	2.70	0.59
24:DC:3:VAL:CG1	24:DC:202:LEU:HD23	2.31	0.59
24:BC:167:ARG:O	24:BC:168:ASP:HB3	2.02	0.59
45:DX:54:LYS:O	45:DX:57:ARG:N	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:194:G:O5'	58:DA:3758:HOH:O	2.17	0.59
32:BK:113:MET:O	32:BK:116:ILE:HG13	2.02	0.59
22:DA:654:A:H3'	22:DA:654:A:N3	2.18	0.59
4:AD:130:VAL:HG11	4:AD:135:TYR:CG	2.37	0.59
22:BA:150:U:H2'	22:BA:151:C:C6	2.38	0.59
33:DL:59:ARG:CZ	33:DL:59:ARG:HB3	2.32	0.59
22:DA:2062:A:C2	56:DA:3001:VIF:H12	2.37	0.59
22:DA:1109:C:H3'	22:DA:1110:G:C8	2.38	0.59
22:BA:999:U:P	58:BA:3363:HOH:O	2.60	0.59
22:BA:798:G:O6	58:BA:3323:HOH:O	2.13	0.59
4:CD:74:ASN:HA	4:CD:77:LYS:HB2	1.84	0.59
1:CA:972:C:H4'	10:CJ:59:LYS:HG2	1.84	0.59
29:DH:126:GLY:O	29:DH:146:VAL:N	2.35	0.59
24:BC:146:MET:SD	24:BC:154:LEU:HD21	2.43	0.59
22:DA:411:G:OP2	22:DA:2406:A:O2'	2.16	0.59
22:BA:2839:G:OP1	35:BN:46:ARG:HD2	2.02	0.59
1:AA:844:G:C6	1:AA:846:G:O2'	2.55	0.59
1:AA:201:G:C2	1:AA:217:C:O2	2.55	0.59
26:DE:75:SER:HB3	26:DE:78:TRP:CE3	2.38	0.59
24:DC:62:TYR:CE2	24:DC:63:ARG:O	2.56	0.59
22:BA:64:A:H2'	22:BA:65:U:C6	2.37	0.59
10:CJ:48:ARG:NH1	10:CJ:66:GLU:OE1	2.36	0.59
22:DA:565:C:H4'	22:DA:1253:A:N6	2.18	0.59
12:AL:122:PRO:O	12:AL:124:ALA:N	2.36	0.59
1:AA:1441:A:H2'	1:AA:1442:G:O5'	2.02	0.59
1:AA:722:G:O2'	21:AU:49:LYS:NZ	2.34	0.59
22:DA:1344:U:O2'	22:DA:1345:C:P	2.60	0.59
22:DA:514:A:C2	22:DA:515:A:C4	2.90	0.59
7:CG:151:PHE:O	7:CG:152:ALA:HB2	2.02	0.59
46:BY:18:LEU:O	46:BY:22:LEU:CB	2.51	0.59
21:AU:10:GLU:CG	21:AU:11:PRO:HD3	2.31	0.59
24:DC:124:ILE:HG22	24:DC:124:ILE:O	2.03	0.59
22:BA:2534:A:H2'	22:BA:2535:G:O5'	2.03	0.59
22:BA:1932:A:H5''	22:BA:1933:G:OP2	2.02	0.59
2:AB:118:GLU:O	2:AB:121:SER:N	2.33	0.59
16:AP:36:VAL:HG13	16:AP:36:VAL:O	2.00	0.59
1:AA:1255:G:O2'	1:AA:1258:G:N3	2.32	0.59
1:AA:933:G:N7	7:AG:3:ARG:NH1	2.50	0.59
10:AJ:33:GLY:O	10:AJ:34:ALA:CB	2.50	0.59
22:DA:1045:C:O2	22:DA:1047:G:N1	2.35	0.59
14:AN:46:LEU:HG	14:AN:47:LYS:N	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:157:ARG:HD2	8:AH:43:GLU:O	2.03	0.59
39:DR:82:HIS:CG	39:DR:82:HIS:O	2.56	0.59
22:DA:777:G:N7	22:DA:793:A:H2	1.99	0.59
1:CA:957:U:O3'	19:CS:79:THR:OG1	2.19	0.59
35:BN:73:ASN:HA	35:BN:76:VAL:CG1	2.32	0.59
43:DV:51:GLN:OE1	43:DV:57:TYR:OH	2.19	0.59
22:DA:2196:C:N3	22:DA:2197:U:C4	2.70	0.59
22:BA:744:U:OP1	58:BA:3657:HOH:O	2.15	0.59
15:CO:87:LEU:O	15:CO:88:ARG:HB3	2.02	0.59
1:AA:166:U:H3'	1:AA:167:A:C8	2.38	0.59
16:AP:61:VAL:CG2	16:AP:67:ILE:HD11	2.33	0.59
22:DA:197:A:H62	22:DA:2430:A:H2'	1.66	0.59
22:DA:2454:G:H1'	58:DA:3532:HOH:O	2.02	0.59
25:DD:151:THR:HG22	25:DD:152:PRO:CD	2.33	0.59
1:CA:858:G:O6	1:CA:869:G:H3'	2.02	0.59
1:CA:1361:G:H3'	1:CA:1362:A:C5'	2.31	0.59
22:DA:223:A:C5	22:DA:422:A:C8	2.90	0.59
22:DA:2135:A:C2	22:DA:2136:G:H1'	2.38	0.59
28:BG:174:ALA:O	28:BG:175:LYS:CB	2.50	0.59
33:DL:95:LEU:O	33:DL:100:ILE:HG23	2.03	0.59
25:DD:48:ILE:HG23	25:DD:84:LEU:HD21	1.84	0.59
22:DA:1323:C:C4	22:DA:1324:G:N7	2.71	0.59
10:AJ:33:GLY:O	10:AJ:34:ALA:HB3	2.03	0.59
1:AA:596:A:C6	1:AA:645:G:C2	2.91	0.59
29:BH:1:MET:O	29:BH:20:ASN:ND2	2.35	0.59
8:AH:125:ILE:O	8:AH:125:ILE:HG13	2.02	0.59
22:BA:1106:G:N2	22:BA:1107:G:H1'	2.17	0.59
23:DB:37:C:N4	23:DB:38:C:N3	2.50	0.59
46:BY:15:ASN:O	46:BY:19:LEU:HG	2.02	0.59
5:AE:109:GLY:O	5:AE:110:ALA:HB2	2.01	0.59
1:AA:620:C:H1'	4:AD:132:ILE:HD11	1.84	0.59
33:DL:50:PHE:CZ	33:DL:52:GLY:O	2.56	0.59
22:BA:1073:A:C3'	22:BA:1074:G:C5'	2.80	0.59
39:BR:52:PRO:O	39:BR:53:PHE:O	2.21	0.59
11:AK:34:ILE:HB	11:AK:74:VAL:HG11	1.85	0.59
1:AA:89:U:O2'	1:AA:90:C:H5''	2.03	0.59
32:BK:121:GLU:O	32:BK:122:VAL:OXT	2.20	0.59
22:BA:2192:U:C4	22:BA:2193:G:N7	2.71	0.59
1:CA:374:A:H5''	1:CA:452:A:N1	2.18	0.59
22:BA:747:U:C4	22:BA:2613:U:C4	2.91	0.59
22:DA:289:G:C2	22:DA:352:A:C2	2.90	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:843:U:OP1	1:AA:846:G:N2	2.36	0.59
22:DA:341:C:H2'	22:DA:342:A:C8	2.37	0.59
40:BS:63:GLY:O	40:BS:64:ALA:HB3	2.02	0.59
22:BA:2886:A:C5	22:BA:2887:A:C8	2.90	0.59
1:CA:227:G:H2'	1:CA:228:A:O4'	2.02	0.59
5:AE:115:LEU:HG	5:AE:120:VAL:HG21	1.85	0.59
22:BA:1482:G:C6	22:BA:1508:A:C6	2.90	0.59
22:BA:545:U:H3'	22:BA:546:U:H4'	1.84	0.59
11:AK:13:ARG:N	22:BA:2141:G:H4'	2.17	0.59
4:AD:150:LYS:O	4:AD:151:LYS:C	2.41	0.59
41:BT:88:LYS:O	41:BT:89:GLU:CG	2.51	0.59
22:BA:1720:U:H2'	22:BA:1721:G:O4'	2.03	0.59
22:DA:1076:C:H2'	22:DA:1077:A:O4'	2.03	0.59
5:AE:108:GLY:O	5:AE:109:GLY:C	2.41	0.59
38:DQ:25:TYR:CD2	38:DQ:26:GLY:N	2.70	0.59
27:BF:132:VAL:HG22	27:BF:152:LEU:HB2	1.84	0.59
22:BA:1094:U:N3	22:BA:1097:U:OP2	2.36	0.59
1:AA:64:G:C2	1:AA:67:C:N4	2.71	0.59
9:AI:52:LEU:HB3	9:AI:57:MET:HG3	1.85	0.59
22:DA:942:G:O2'	22:DA:1189:A:O2'	2.12	0.59
3:CC:16:LYS:HG3	3:CC:17:PRO:HD2	1.83	0.59
5:AE:82:GLN:NE2	5:AE:150:PRO:HD3	2.17	0.59
22:BA:1936:A:C2	22:BA:1945:G:C8	2.91	0.59
22:DA:1327:A:H2'	22:DA:1328:A:O4'	2.03	0.59
6:AF:38:ARG:HB3	6:AF:63:ASN:HB2	1.84	0.59
38:BQ:50:ARG:O	38:BQ:54:LYS:HE2	2.02	0.59
40:BS:55:ILE:HG23	40:BS:66:ILE:HG12	1.84	0.59
22:BA:2897:U:H2'	22:BA:2898:U:C6	2.38	0.59
22:BA:2786:U:OP1	25:BD:70:LYS:NZ	2.30	0.59
42:DU:45:HIS:HB3	42:DU:58:ILE:HG12	1.84	0.59
25:DD:151:THR:O	25:DD:152:PRO:C	2.41	0.58
22:BA:1922:G:N3	22:BA:1922:G:H2'	2.17	0.58
1:AA:408:A:OP1	4:AD:110:THR:HG21	2.03	0.58
1:AA:108:G:C6	20:AT:10:ARG:HG2	2.38	0.58
17:AQ:12:VAL:HG12	17:AQ:13:VAL:N	2.17	0.58
7:AG:80:VAL:O	7:AG:82:GLY:N	2.36	0.58
16:AP:79:ASN:O	16:AP:80:LYS:HB2	2.03	0.58
1:AA:188:C:N3	1:AA:189:A:C2	2.70	0.58
22:DA:1973:G:C6	22:DA:1974:C:C4	2.91	0.58
22:DA:2726:A:O2'	22:DA:2727:A:O5'	2.16	0.58
15:CO:60:VAL:O	15:CO:63:ARG:N	2.35	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:18:VAL:N	6:AF:19:PRO:HD2	2.17	0.58
24:DC:147:LYS:HB2	24:DC:150:LYS:HB2	1.84	0.58
22:DA:2854:G:C2	22:DA:2864:G:C2	2.91	0.58
32:BK:107:LEU:O	32:BK:109:SER:N	2.36	0.58
22:BA:2529:G:OP1	28:BG:172:LYS:NZ	2.35	0.58
1:CA:131:A:O2'	1:CA:262:A:N3	2.32	0.58
22:BA:1171:G:N2	22:BA:1178:C:O2	2.35	0.58
39:BR:39:LEU:HA	39:BR:49:ILE:CG2	2.33	0.58
22:DA:45:G:O3'	22:DA:46:G:O4'	2.20	0.58
22:BA:2191:A:C2	22:BA:2192:U:N3	2.72	0.58
22:DA:811:U:O2	22:DA:1251:C:C5	2.56	0.58
1:AA:316:C:C5	1:AA:351:G:C2	2.91	0.58
1:CA:513:C:H2'	1:CA:514:C:C6	2.39	0.58
19:CS:63:THR:HG22	19:CS:64:ASP:N	2.18	0.58
22:BA:1981:A:OP1	58:BA:3450:HOH:O	2.17	0.58
1:AA:622:A:C8	1:AA:623:C:C6	2.91	0.58
3:AC:11:ARG:O	3:AC:14:ILE:N	2.36	0.58
11:CK:127:ARG:HB2	21:CU:34:ARG:NH1	2.18	0.58
5:CE:133:PRO:HA	5:CE:136:VAL:HG12	1.84	0.58
22:DA:2225:A:H4'	22:DA:2226:C:O5'	2.03	0.58
33:BL:99:ASN:OD1	58:BL:302:HOH:O	2.17	0.58
46:DY:18:LEU:O	46:DY:22:LEU:HB3	2.02	0.58
22:BA:645:C:O2'	22:BA:646:U:H5''	2.03	0.58
1:AA:767:A:H2'	1:AA:768:A:O4'	2.03	0.58
22:DA:2112:G:N3	22:DA:2112:G:H2'	2.18	0.58
3:AC:97:VAL:HB	3:AC:98:PRO:HD2	1.84	0.58
22:DA:1050:A:C2	22:DA:2751:G:C4	2.92	0.58
22:BA:2580:U:C5	22:BA:2581:G:C6	2.92	0.58
1:CA:1523:G:OP1	11:CK:125:LYS:NZ	2.32	0.58
22:DA:2563:U:H1'	22:DA:2566:A:N6	2.19	0.58
22:BA:627:A:C6	22:BA:637:A:C8	2.92	0.58
22:BA:250:G:OP2	51:B3:13:ARG:NH1	2.36	0.58
5:CE:77:ASN:HB2	5:CE:82:GLN:HG2	1.85	0.58
22:BA:588:U:H2'	22:BA:589:U:C6	2.38	0.58
1:AA:49:U:O4	1:AA:365:U:H5	1.86	0.58
22:BA:1450:G:C6	22:BA:1451:C:N4	2.72	0.58
10:CJ:15:HIS:CE1	10:CJ:16:ARG:HD3	2.39	0.58
21:CU:44:GLU:OE1	21:CU:45:ARG:NH1	2.36	0.58
13:AM:82:ASP:OD2	27:BF:112:ARG:NH2	2.36	0.58
22:BA:1454:C:H5'	35:BN:63:ARG:HD2	1.86	0.58
2:CB:54:LEU:HD12	2:CB:220:THR:HG21	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1938:A:C6	22:DA:2590:A:H1'	2.38	0.58
22:DA:830:G:C4	22:DA:2448:A:C5	2.91	0.58
22:DA:2345:G:C5	22:DA:2381:A:C2	2.91	0.58
4:AD:98:LEU:O	4:AD:101:VAL:N	2.36	0.58
24:DC:145:GLU:OE2	24:DC:149:GLY:N	2.36	0.58
21:CU:11:PRO:C	21:CU:12:PHE:CG	2.74	0.58
10:CJ:22:THR:HA	10:CJ:25:ILE:HG22	1.84	0.58
29:DH:34:GLY:O	29:DH:35:LYS:CB	2.51	0.58
40:BS:43:ALA:O	40:BS:47:VAL:HG12	2.03	0.58
1:AA:209:U:H4'	1:AA:210:C:OP2	2.02	0.58
11:AK:69:ARG:HD2	22:BA:2146:C:N3	2.17	0.58
13:CM:10:PRO:O	13:CM:11:ASP:HB2	2.04	0.58
1:CA:757:U:OP1	1:CA:822:U:O2'	2.16	0.58
1:AA:1286:U:H2'	1:AA:1286:U:O2	2.03	0.58
22:DA:276:U:H2'	22:DA:276:U:O2	2.03	0.58
22:DA:201:C:C4	22:DA:202:U:C5	2.92	0.58
1:AA:71:A:H3'	1:AA:71:A:OP2	2.04	0.58
39:BR:49:ILE:CG2	39:BR:52:PRO:C	2.72	0.58
5:CE:105:ILE:HG23	5:CE:105:ILE:O	2.04	0.58
16:AP:42:ILE:HG22	16:AP:42:ILE:O	2.02	0.58
1:CA:495:A:C2	1:CA:496:A:N6	2.72	0.58
30:BI:124:ALA:O	30:BI:127:ARG:HG2	2.04	0.58
10:AJ:53:ILE:HG22	10:AJ:61:ALA:HB1	1.84	0.58
22:DA:1733:G:C5	22:DA:1734:G:C8	2.91	0.58
22:BA:1606:C:O2'	22:BA:1607:C:O5'	2.20	0.58
22:DA:192:C:C5	22:DA:193:U:C2	2.90	0.58
22:DA:1817:G:OP1	24:DC:62:TYR:OH	2.13	0.58
40:BS:29:VAL:CG1	40:BS:55:ILE:HD11	2.33	0.58
36:BO:79:ALA:HB2	36:BO:110:ALA:HA	1.86	0.58
33:BL:79:LEU:HB2	33:BL:114:GLY:O	2.04	0.58
36:BO:87:ILE:HG22	36:BO:88:LYS:N	2.17	0.58
22:DA:936:A:C2	22:DA:937:C:C2	2.92	0.58
35:DN:117:ASP:O	35:DN:118:ARG:HB2	2.02	0.58
7:CG:83:SER:O	7:CG:85:TYR:N	2.37	0.58
34:DM:19:GLY:O	34:DM:38:ARG:NH1	2.33	0.58
1:CA:955:U:H2'	1:CA:956:U:O4'	2.04	0.58
1:CA:380:G:N2	1:CA:383:A:OP2	2.35	0.58
5:CE:24:THR:HA	5:CE:29:ARG:HA	1.85	0.58
22:DA:1951:U:H2'	22:DA:1953:A:OP2	2.03	0.58
4:CD:12:SER:HA	4:CD:19:LEU:HD12	1.84	0.58
29:BH:31:VAL:N	29:BH:32:PRO:HD2	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1181:G:C2	1:AA:1182:G:N2	2.72	0.58
1:CA:1004:A:C6	1:CA:1005:A:C6	2.91	0.58
17:AQ:17:MET:O	17:AQ:19:LYS:N	2.37	0.58
1:AA:1320:C:O2	19:AS:36:ARG:NH1	2.37	0.58
15:AO:19:ALA:O	15:AO:20:ASN:HB2	2.04	0.58
5:CE:75:ALA:O	5:CE:82:GLN:NE2	2.37	0.58
22:DA:1253:A:OP1	38:DQ:33:ARG:NH1	2.36	0.58
1:CA:1337:G:H5''	1:CA:1338:G:OP1	2.04	0.58
25:DD:104:VAL:O	25:DD:105:LYS:CB	2.52	0.58
28:DG:19:ILE:O	28:DG:21:GLY:N	2.37	0.58
3:CC:42:TYR:CE2	3:CC:90:VAL:HG21	2.39	0.58
8:AH:11:LEU:HD12	8:AH:77:ARG:HG2	1.85	0.58
22:DA:2469:A:O2'	34:DM:55:ARG:CZ	2.52	0.58
22:BA:2254:C:C2'	22:BA:2255:G:H5'	2.34	0.58
29:BH:123:ARG:NH2	1:CA:367:U:C5'	2.67	0.58
25:DD:151:THR:HG22	25:DD:152:PRO:N	2.19	0.58
1:AA:157:U:O2'	1:AA:158:G:H5'	2.04	0.58
35:BN:49:GLU:OE2	35:BN:95:THR:HG22	2.04	0.58
22:BA:2318:G:C6	22:BA:2319:G:N1	2.72	0.58
1:AA:468:A:H5''	1:AA:468:A:N3	2.18	0.58
1:AA:85:U:O4'	1:AA:86:G:N2	2.37	0.58
54:D6:3:DBB:HG2	54:D6:4:PRO:HA	1.86	0.58
1:CA:1072:G:C6	1:CA:1073:U:C4	2.92	0.58
22:BA:2756:U:OP2	52:B4:19:ARG:NE	2.37	0.58
1:AA:452:A:C8	1:AA:453:G:C8	2.91	0.58
22:BA:1020:A:C2	22:BA:1141:U:C2	2.92	0.58
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.38	0.58
22:DA:528:A:N1	22:DA:2042:A:H2'	2.19	0.58
1:CA:1296:C:H4'	1:CA:1302:C:C4	2.38	0.58
27:BF:79:ILE:HG21	27:BF:85:ILE:CD1	2.33	0.58
2:AB:54:LEU:HD12	2:AB:220:THR:HG21	1.84	0.58
1:AA:1141:C:C2	1:AA:1142:G:C8	2.92	0.58
26:BE:128:ALA:HB1	26:BE:129:PRO:HD2	1.85	0.58
22:BA:1248:G:OP1	38:BQ:2:ALA:N	2.37	0.58
27:DF:46:ASP:N	27:DF:46:ASP:OD1	2.36	0.58
42:BU:12:ILE:HG21	42:BU:80:ALA:HB2	1.85	0.58
53:B5:125:GLY:O	53:B5:126:SER:CB	2.51	0.58
22:BA:2597:G:O2'	22:BA:2598:A:H5'	2.02	0.58
1:AA:880:C:OP2	12:AL:3:THR:HG21	2.04	0.58
16:AP:10:GLY:HA3	16:AP:15:PRO:HA	1.85	0.58
22:DA:2037:A:C6	22:DA:2038:G:C6	2.92	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:121:ASP:N	24:DC:121:ASP:OD1	2.37	0.58
30:BI:72:LYS:CD	30:BI:72:LYS:N	2.67	0.58
22:BA:2554:U:C4	22:BA:2555:U:O4	2.56	0.58
1:CA:994:A:N3	1:CA:994:A:H2'	2.19	0.58
22:DA:776:G:C8	22:DA:793:A:C4	2.92	0.58
16:AP:44:SER:O	16:AP:46:LYS:HD2	2.04	0.58
22:DA:2683:C:H4'	25:DD:13:ARG:NH1	2.18	0.58
22:BA:2310:C:H2'	22:BA:2311:A:H5'	1.86	0.58
6:CF:85:ILE:O	6:CF:86:ARG:O	2.21	0.58
1:CA:1521:C:C4	1:CA:1522:U:C5	2.92	0.58
4:CD:31:LYS:HD3	4:CD:31:LYS:N	2.19	0.58
3:CC:42:TYR:CZ	3:CC:46:GLU:HG3	2.38	0.58
7:AG:71:PRO:HD2	7:AG:96:ARG:O	2.03	0.58
22:DA:2716:C:H2'	22:DA:2717:C:H6	1.69	0.58
1:CA:765:G:C6	1:CA:812:G:C4	2.92	0.58
29:DH:108:VAL:O	29:DH:110:VAL:N	2.36	0.58
22:BA:1428:C:C5	22:BA:1569:A:H5''	2.39	0.58
22:BA:947:A:HO2'	22:BA:984:A:H2	1.51	0.58
22:BA:1925:C:H4'	22:BA:1926:U:C4	2.38	0.57
1:AA:451:A:OP2	16:AP:70:ARG:NH2	2.36	0.57
22:DA:187:G:C2	22:DA:210:C:O2	2.55	0.57
22:DA:2091:C:C3'	22:DA:2092:U:H5''	2.32	0.57
30:BI:122:ILE:HG22	30:BI:122:ILE:O	2.04	0.57
1:AA:1060:U:OP1	14:AN:85:ARG:NH2	2.37	0.57
22:BA:1083:U:O2	22:BA:1086:A:C2	2.57	0.57
5:AE:136:VAL:O	5:AE:140:THR:OG1	2.21	0.57
40:BS:37:THR:HG22	40:BS:38:TYR:CD1	2.39	0.57
2:AB:111:ILE:N	2:AB:111:ILE:HD13	2.20	0.57
6:AF:98:GLU:O	6:AF:99:ALA:O	2.21	0.57
22:DA:575:A:C2	22:DA:576:U:C6	2.92	0.57
3:AC:150:LYS:HA	3:AC:168:TYR:O	2.04	0.57
1:AA:1378:C:H2'	1:AA:1379:G:O5'	2.04	0.57
22:DA:600:G:C5	22:DA:601:C:C4	2.92	0.57
1:CA:805:C:C2	1:CA:806:C:C5	2.92	0.57
1:AA:946:A:O2'	1:AA:1333:A:N3	2.33	0.57
2:AB:126:PHE:N	2:AB:126:PHE:HD1	2.02	0.57
25:DD:33:ARG:NH2	25:DD:74:GLU:O	2.37	0.57
22:DA:305:C:H1'	22:DA:313:G:N2	2.19	0.57
1:AA:131:A:H2'	1:AA:132:C:C6	2.40	0.57
22:DA:2586:U:C5	22:DA:2608:G:N2	2.72	0.57
35:DN:90:ARG:CZ	35:DN:116:VAL:HG11	2.33	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2612:C:H5''	22:DA:2613:U:OP1	2.04	0.57
22:DA:1826:G:C6	22:DA:1827:U:C4	2.91	0.57
1:CA:495:A:N1	1:CA:496:A:N6	2.52	0.57
24:DC:30:PHE:CE2	24:DC:32:PRO:HG2	2.38	0.57
2:AB:166:ALA:HB2	2:AB:187:VAL:HG12	1.86	0.57
1:CA:1359:C:OP2	14:CN:75:ARG:NH1	2.37	0.57
22:DA:2736:A:C2	22:DA:2769:U:O2	2.58	0.57
22:DA:1087:G:N1	22:DA:1089:A:C2	2.72	0.57
22:DA:1545:A:H2'	22:DA:1546:G:O4'	2.04	0.57
3:CC:59:ARG:HB2	3:CC:63:SER:O	2.03	0.57
22:DA:547:A:N7	22:DA:548:G:N3	2.52	0.57
22:BA:1028:A:N6	22:BA:1125:G:H2'	2.19	0.57
11:CK:23:ILE:HD11	11:CK:86:VAL:HG13	1.85	0.57
2:AB:15:HIS:O	2:AB:16:PHE:C	2.41	0.57
22:BA:990:A:H5''	22:BA:991:C:OP1	2.04	0.57
1:AA:429:U:H1'	1:AA:430:A:H5''	1.86	0.57
7:AG:40:GLU:HA	7:AG:43:VAL:CG2	2.35	0.57
22:DA:2842:G:H2'	22:DA:2843:G:O4'	2.03	0.57
1:CA:1080:A:OP1	5:CE:52:LYS:HE2	2.05	0.57
6:AF:51:ILE:HD12	6:AF:86:ARG:CZ	2.34	0.57
22:DA:749:A:C4	22:DA:750:A:C8	2.91	0.57
1:AA:1141:C:O2'	1:AA:1142:G:P	2.61	0.57
1:CA:1308:U:OP1	13:CM:97:VAL:N	2.37	0.57
30:BI:113:LYS:HD3	30:BI:117:MET:HG2	1.86	0.57
1:CA:197:A:O2'	1:CA:220:G:N2	2.37	0.57
52:B4:26:ILE:CD1	52:B4:26:ILE:N	2.67	0.57
10:CJ:88:MET:O	10:CJ:89:ARG:CB	2.52	0.57
20:AT:57:ILE:HD12	20:AT:60:ARG:HD2	1.85	0.57
5:AE:50:TYR:CE1	5:AE:134:ILE:HD11	2.39	0.57
22:BA:1168:G:H2'	22:BA:1169:A:O4'	2.05	0.57
1:AA:1124:G:H3'	1:AA:1145:A:N6	2.19	0.57
21:AU:37:PHE:HB3	21:AU:41:PRO:HG3	1.86	0.57
1:AA:71:A:O2'	1:AA:72:A:P	2.62	0.57
22:DA:2563:U:H1'	22:DA:2566:A:C6	2.39	0.57
42:DU:7:ARG:O	42:DU:25:VAL:HB	2.05	0.57
22:DA:1068:G:N3	22:DA:1068:G:H2'	2.19	0.57
22:DA:1027:A:N6	22:DA:1126:A:N3	2.52	0.57
17:CQ:19:LYS:HD3	17:CQ:49:GLU:HA	1.86	0.57
22:DA:533:G:C5	22:DA:534:U:C4	2.92	0.57
25:DD:101:PHE:O	25:DD:104:VAL:HG22	2.04	0.57
22:BA:1277:G:H5'	35:BN:20:MET:CE	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2547:A:H2'	22:BA:2548:U:C6	2.39	0.57
43:DV:21:ARG:HA	43:DV:25:LYS:O	2.03	0.57
29:DH:62:LEU:C	29:DH:62:LEU:HD13	2.25	0.57
22:DA:1197:G:H2'	22:DA:1198:U:C6	2.39	0.57
53:B5:167:ASP:CB	53:B5:176:VAL:O	2.53	0.57
38:BQ:9:ILE:HG13	38:BQ:10:ALA:N	2.18	0.57
22:DA:388:G:N7	22:DA:390:U:H2'	2.19	0.57
1:AA:1304:G:N1	1:AA:1305:G:N2	2.52	0.57
22:BA:996:A:N6	22:BA:1160:G:C6	2.72	0.57
12:CL:23:ALA:HA	12:CL:61:PHE:CD2	2.39	0.57
12:CL:90:LEU:HB2	12:CL:93:VAL:CG2	2.35	0.57
39:BR:49:ILE:C	39:BR:51:VAL:O	2.43	0.57
22:BA:2128:G:H5'	53:B5:36:ALA:HA	1.87	0.57
50:D2:43:THR:O	50:D2:44:VAL:HB	2.05	0.57
14:AN:87:ALA:O	14:AN:92:GLU:HB2	2.04	0.57
22:BA:2192:U:C4	22:BA:2193:G:C8	2.93	0.57
4:AD:26:ARG:CD	4:AD:31:LYS:HE3	2.34	0.57
33:DL:94:THR:O	33:DL:98:ALA:N	2.34	0.57
22:DA:586:A:H1'	22:DA:672:C:H1'	1.85	0.57
5:AE:149:SER:HB2	5:AE:152:MET:HB2	1.87	0.57
1:AA:1211:U:O2'	1:AA:1212:U:P	2.63	0.57
22:DA:1769:U:O2'	22:DA:1958:C:OP1	2.23	0.57
1:CA:511:C:C2	1:CA:512:U:C5	2.92	0.57
41:BT:17:SER:O	41:BT:18:GLU:C	2.42	0.57
1:CA:1179:A:O3'	9:CI:105:THR:OG1	2.22	0.57
25:BD:104:VAL:O	25:BD:105:LYS:HB2	2.05	0.57
11:AK:52:PHE:HB3	11:AK:56:ARG:HB3	1.85	0.57
9:AI:90:TYR:O	9:AI:91:ASP:CG	2.42	0.57
1:CA:662:U:H2'	1:CA:663:A:C8	2.39	0.57
1:AA:1055:A:C6	1:AA:1206:G:C5	2.92	0.57
11:CK:107:ILE:O	11:CK:107:ILE:HG23	2.04	0.57
18:AR:31:ASN:OD1	18:AR:31:ASN:N	2.37	0.57
22:DA:2886:A:C2	22:DA:2887:A:H1'	2.40	0.57
22:DA:2061:G:H5''	22:DA:2503:A:C2	2.40	0.57
22:BA:1078:U:H1'	22:BA:1088:A:C2	2.39	0.57
2:CB:210:VAL:CG2	2:CB:211:THR:N	2.68	0.57
1:AA:73:C:O2'	1:AA:74:A:H5''	2.04	0.57
1:CA:1296:C:H4'	1:CA:1302:C:N4	2.20	0.57
1:AA:1014:A:N3	19:AS:34:TRP:CZ3	2.72	0.57
22:DA:526:A:P	58:DA:3246:HOH:O	2.63	0.57
1:CA:256:U:H2'	1:CA:257:G:O4'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:117:LEU:HB3	29:DH:120:GLY:O	2.05	0.57
22:BA:1421:G:C2	22:BA:1422:G:C8	2.92	0.57
13:CM:10:PRO:O	13:CM:11:ASP:CB	2.52	0.57
1:AA:1378:C:C2'	1:AA:1379:G:O5'	2.53	0.57
24:BC:230:HIS:CD2	24:BC:247:PRO:HA	2.40	0.57
4:AD:174:ASP:O	4:AD:175:ALA:HB2	2.05	0.57
20:CT:25:ARG:O	20:CT:29:ARG:HG3	2.04	0.57
41:DT:12:ARG:O	41:DT:13:ALA:HB2	2.05	0.57
26:BE:149:ILE:HD11	26:BE:172:ALA:HA	1.87	0.57
36:DO:80:GLU:HA	36:DO:83:LEU:HD12	1.87	0.57
22:DA:1300:G:O6	22:DA:1626:A:O2'	2.13	0.57
1:AA:727:G:N1	1:AA:731:G:C6	2.73	0.57
29:BH:132:PHE:CE2	29:BH:142:VAL:HG21	2.40	0.57
29:BH:95:GLY:HA2	29:BH:117:LEU:HD22	1.87	0.57
1:AA:72:A:H2'	1:AA:73:C:H5'	1.86	0.57
22:DA:2133:G:N2	22:DA:2158:A:C6	2.73	0.57
22:DA:784:G:OP2	58:DA:3311:HOH:O	2.17	0.57
22:DA:2706:A:C2	22:DA:2707:U:C2	2.92	0.57
22:DA:250:G:H2'	22:DA:251:A:C8	2.39	0.57
4:AD:58:LYS:NZ	4:AD:69:GLU:OE2	2.35	0.57
4:CD:148:LYS:O	4:CD:149:ALA:CB	2.51	0.57
30:BI:82:LYS:O	30:BI:83:ALA:CB	2.53	0.57
1:CA:951:G:N3	1:CA:970:C:O2'	2.33	0.57
46:DY:18:LEU:O	46:DY:22:LEU:CB	2.52	0.57
10:CJ:81:GLU:HA	10:CJ:84:VAL:HG12	1.85	0.57
47:DZ:10:THR:HG22	47:DZ:54:MET:HA	1.86	0.57
1:AA:197:A:N3	1:AA:198:G:H1'	2.20	0.57
28:DG:133:LEU:CD1	28:DG:141:ILE:HB	2.34	0.57
7:CG:103:TRP:CD2	7:CG:137:LYS:HG2	2.39	0.57
1:AA:588:G:C6	1:AA:589:U:N3	2.72	0.57
1:AA:1125:U:C5	1:AA:1127:G:C5	2.93	0.57
20:AT:44:LYS:CD	20:AT:87:ALA:HA	2.34	0.57
22:DA:2063:C:H2'	22:DA:2063:C:O2	2.05	0.57
5:CE:35:ALA:O	5:CE:50:TYR:O	2.23	0.57
22:DA:1682:G:H2'	22:DA:1683:U:C6	2.39	0.57
1:CA:134:G:H2'	1:CA:135:C:O4'	2.04	0.57
22:DA:2059:A:C2	54:D6:5:MHU:HE2	2.40	0.57
1:CA:1215:G:C5	1:CA:1216:A:N7	2.73	0.57
18:CR:58:ALA:O	18:CR:61:ARG:N	2.38	0.57
1:AA:188:C:O2	1:AA:188:C:H2'	2.05	0.57
1:AA:1367:C:OP2	9:AI:114:LYS:NZ	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:690:G:O2'	22:DA:780:G:OP1	2.20	0.57
1:CA:1244:G:C6	1:CA:1245:C:N4	2.73	0.57
2:AB:162:PHE:HA	2:AB:184:PHE:O	2.04	0.57
24:BC:209:GLY:O	24:BC:212:ARG:N	2.38	0.57
19:CS:11:ILE:HG13	19:CS:12:ASP:N	2.19	0.57
24:BC:162:VAL:CG1	24:BC:163:GLN:N	2.67	0.57
22:BA:319:G:C4	22:BA:333:G:N2	2.72	0.57
35:DN:76:VAL:HA	35:DN:79:LEU:HD12	1.86	0.57
1:AA:866:C:C4	1:AA:867:G:H1'	2.39	0.57
22:DA:1907:G:C2	22:DA:1924:C:C2	2.93	0.57
1:CA:86:G:H1'	1:CA:87:C:O4'	2.05	0.57
1:CA:1408:A:C2	1:CA:1494:G:C4	2.92	0.57
22:DA:781:A:H2'	22:DA:1777:U:O2'	2.05	0.57
28:DG:159:GLY:O	28:DG:163:ARG:NH1	2.38	0.57
29:BH:117:LEU:HD21	29:BH:121:VAL:CA	2.35	0.57
22:DA:370:G:O2'	22:DA:424:G:OP1	2.19	0.57
39:BR:39:LEU:HA	39:BR:49:ILE:HG23	1.86	0.57
11:CK:17:SER:OG	11:CK:18:ASP:N	2.38	0.57
1:AA:1160:G:O6	1:AA:1181:G:C6	2.58	0.57
22:DA:190:A:N6	22:DA:191:A:N1	2.53	0.57
22:BA:528:A:C2	22:BA:2043:C:H4'	2.39	0.57
22:DA:82:U:C2	22:DA:83:A:C8	2.93	0.57
1:CA:254:G:OP1	17:CQ:69:LYS:O	2.23	0.57
1:CA:409:U:OP1	4:CD:24:GLY:CA	2.53	0.57
22:DA:630:G:H5''	22:DA:631:A:OP2	2.05	0.57
22:DA:1799:G:N2	22:DA:1818:U:O2'	2.37	0.57
4:CD:19:LEU:HD22	4:CD:64:ILE:HG13	1.86	0.57
22:DA:2037:A:N6	22:DA:2038:G:O6	2.37	0.57
45:BX:78:TYR:CD1	45:BX:78:TYR:OXT	2.58	0.57
27:DF:5:HIS:HB2	27:DF:97:TRP:CG	2.39	0.57
19:AS:65:GLU:OE2	19:AS:66:MET:N	2.38	0.57
22:DA:2104:C:H2'	22:DA:2105:U:O4'	2.04	0.57
12:CL:28:PRO:HB2	12:CL:29:GLN:OE1	2.05	0.57
22:BA:307:G:N2	22:BA:309:A:H3'	2.20	0.57
40:DS:37:THR:OG1	40:DS:48:LYS:NZ	2.38	0.57
22:DA:1007:C:OP1	31:DJ:37:ARG:NH2	2.37	0.57
39:BR:14:VAL:HG21	39:BR:20:VAL:HG21	1.87	0.57
22:DA:590:A:C6	22:DA:591:U:C4	2.93	0.57
1:AA:728:A:C6	1:AA:729:A:C6	2.93	0.57
29:BH:117:LEU:CD2	29:BH:121:VAL:H	2.08	0.57
24:BC:72:ASP:HA	24:BC:118:SER:O	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1041:G:C6	1:CA:1042:A:N6	2.73	0.57
9:AI:35:LEU:HD11	9:AI:48:VAL:HG21	1.86	0.57
30:DI:58:VAL:O	30:DI:69:PHE:HB3	2.05	0.57
4:CD:35:GLU:HG3	4:CD:36:GLN:HG3	1.87	0.57
6:CF:19:PRO:HA	6:CF:22:ILE:HB	1.87	0.57
1:AA:208:U:C5	1:AA:210:C:C4	2.93	0.57
53:B5:45:HIS:CD2	53:B5:176:VAL:HA	2.40	0.57
2:AB:184:PHE:CZ	2:AB:198:PHE:CD2	2.93	0.57
22:DA:2873:A:H4'	58:DA:3802:HOH:O	2.04	0.57
21:AU:12:PHE:N	21:AU:12:PHE:CD1	2.72	0.57
22:BA:1998:A:OP2	25:BD:141:ARG:NH2	2.38	0.57
50:D2:34:ARG:HB2	50:D2:42:LEU:CD1	2.34	0.57
1:AA:102:G:C2	1:AA:103:U:C6	2.93	0.57
22:BA:2808:G:N2	22:BA:2891:U:C6	2.73	0.57
24:DC:141:VAL:HG11	24:DC:190:ALA:HB1	1.87	0.57
40:DS:29:VAL:HG21	40:DS:107:VAL:HG21	1.87	0.57
22:DA:1450:G:C6	22:DA:1451:C:N4	2.73	0.57
22:BA:1508:A:OP1	22:BA:1508:A:H4'	2.04	0.56
29:DH:21:VAL:HG22	29:DH:22:LYS:N	2.19	0.56
22:DA:1317:G:N2	22:DA:1336:A:C2	2.73	0.56
22:DA:1224:U:C4	22:DA:1225:G:C6	2.93	0.56
1:CA:211:G:O2'	1:CA:212:G:H4'	2.05	0.56
22:BA:139:U:HO2'	22:BA:141:G:H1	1.52	0.56
13:AM:3:ARG:CG	13:AM:4:ILE:N	2.68	0.56
22:BA:278:A:C2	22:BA:362:A:C8	2.93	0.56
6:CF:22:ILE:O	6:CF:26:THR:OG1	2.22	0.56
1:AA:596:A:C5	1:AA:645:G:C2	2.92	0.56
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.40	0.56
4:AD:174:ASP:OD2	4:AD:176:GLY:N	2.38	0.56
22:DA:2788:C:H2'	22:DA:2789:C:C6	2.40	0.56
2:CB:91:PHE:CD1	2:CB:150:GLY:HA3	2.40	0.56
22:DA:1847:A:O2'	22:DA:1848:A:C8	2.59	0.56
25:BD:62:LYS:HB2	25:BD:63:PRO:HD3	1.87	0.56
41:DT:62:VAL:HG12	41:DT:63:VAL:N	2.20	0.56
27:BF:105:THR:CG2	27:BF:106:ILE:HG23	2.35	0.56
52:B4:36:ARG:HG2	52:B4:37:GLN:N	2.19	0.56
22:BA:998:C:H3'	58:BA:3363:HOH:O	2.06	0.56
22:DA:2126:A:O2'	22:DA:2162:G:O6	2.18	0.56
1:CA:401:C:OP2	4:CD:70:ARG:HD3	2.05	0.56
1:CA:1005:A:O3'	1:CA:1037:C:O2'	2.22	0.56
22:DA:347:A:C2	22:DA:348:A:C4	2.93	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:93:ASN:O	33:BL:94:THR:CB	2.52	0.56
31:BJ:81:ILE:HG23	31:BJ:82:GLY:H	1.70	0.56
22:BA:2187:U:H2'	22:BA:2188:U:O4'	2.06	0.56
1:CA:404:G:N7	4:CD:2:ALA:HB3	2.20	0.56
22:DA:271:G:H4'	22:DA:272:A:OP1	2.04	0.56
4:CD:29:ASP:C	4:CD:31:LYS:H	2.08	0.56
2:AB:126:PHE:CD1	2:AB:126:PHE:N	2.73	0.56
1:AA:173:U:C6	1:AA:197:A:C2	2.93	0.56
22:DA:2474:U:H5''	22:DA:2475:C:OP2	2.05	0.56
3:CC:148:GLY:O	3:CC:203:PHE:N	2.36	0.56
36:DO:33:ARG:O	36:DO:34:HIS:CB	2.53	0.56
5:CE:122:ASN:O	5:CE:123:VAL:O	2.23	0.56
7:AG:40:GLU:HA	7:AG:43:VAL:HG23	1.87	0.56
1:AA:91:U:C4	1:AA:92:U:C2	2.93	0.56
5:AE:82:GLN:H	5:AE:147:MET:HE1	1.69	0.56
1:AA:1058:G:C5	1:AA:1059:C:C5	2.93	0.56
22:BA:528:A:H2	22:BA:2043:C:C5'	2.18	0.56
22:DA:1019:U:OP1	22:DA:1035:U:O2'	2.20	0.56
22:DA:1676:A:H2'	22:DA:1677:A:O4'	2.05	0.56
50:B2:43:THR:O	50:B2:44:VAL:HB	2.06	0.56
1:AA:207:C:O2	1:AA:213:G:N2	2.38	0.56
1:CA:33:A:H2'	1:CA:34:C:C6	2.40	0.56
10:AJ:6:ILE:CD1	10:AJ:76:ILE:HB	2.35	0.56
22:DA:2820:A:C8	25:DD:196:ALA:CB	2.88	0.56
1:AA:995:C:N3	1:AA:1046:A:O2'	2.35	0.56
22:BA:622:G:OP2	58:BL:302:HOH:O	2.17	0.56
12:AL:3:THR:HG22	12:AL:4:VAL:N	2.21	0.56
22:DA:2716:C:H2'	22:DA:2717:C:C6	2.40	0.56
22:DA:2886:A:C2	48:D0:29:SER:HB3	2.39	0.56
3:CC:130:PHE:CE1	3:CC:131:ARG:HD3	2.40	0.56
1:CA:439:U:H4'	4:CD:121:LYS:CG	2.35	0.56
1:CA:439:U:H4'	4:CD:121:LYS:HG3	1.86	0.56
22:BA:477:A:H2'	22:BA:478:A:C8	2.40	0.56
22:BA:1842:G:H2'	22:BA:1843:C:O4'	2.06	0.56
22:BA:2694:G:H2'	22:BA:2695:U:C6	2.39	0.56
1:AA:1314:C:H41	19:AS:4:SER:HA	1.70	0.56
22:BA:2615:U:C2	48:B0:4:GLN:HA	2.40	0.56
1:CA:844:G:O4'	1:CA:844:G:P	2.63	0.56
22:DA:2602:A:H4'	22:DA:2603:G:H5'	1.88	0.56
22:DA:2511:U:C5	22:DA:2512:C:C5	2.94	0.56
27:BF:2:ALA:O	27:BF:3:LYS:C	2.43	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2583:G:C2'	22:BA:2584:U:O5'	2.53	0.56
22:BA:372:G:OP2	45:BX:61:LYS:HD3	2.06	0.56
22:DA:607:U:O4	22:DA:619:G:H2'	2.04	0.56
21:CU:18:ARG:O	21:CU:21:ARG:N	2.39	0.56
22:DA:1390:U:H2'	22:DA:1391:U:H5'	1.87	0.56
27:DF:147:ASP:O	27:DF:148:ARG:HB2	2.05	0.56
9:AI:21:ILE:HG22	9:AI:22:LYS:N	2.20	0.56
1:AA:1166:G:N1	1:AA:1169:A:OP2	2.38	0.56
22:DA:1581:G:C6	22:DA:1582:C:C4	2.93	0.56
1:CA:968:A:C8	1:CA:1062:U:H4'	2.40	0.56
23:DB:39:A:H2'	23:DB:40:U:C6	2.39	0.56
46:BY:45:GLN:O	46:BY:46:VAL:HB	2.06	0.56
22:BA:1914:C:H2'	22:BA:1914:C:O2	2.04	0.56
14:AN:49:GLN:OE1	14:AN:49:GLN:HA	2.05	0.56
1:CA:412:A:O2'	1:CA:413:G:H4'	2.05	0.56
42:DU:98:SER:O	42:DU:99:ASN:HB3	2.05	0.56
1:CA:728:A:C8	15:CO:54:ARG:CZ	2.89	0.56
1:AA:145:G:N2	1:AA:178:C:C2	2.73	0.56
33:BL:68:SER:O	33:BL:69:ARG:CB	2.53	0.56
22:DA:1313:U:H4'	22:DA:1332:G:H4'	1.87	0.56
6:AF:98:GLU:CG	6:AF:99:ALA:N	2.69	0.56
1:CA:811:C:N4	1:CA:812:G:C6	2.73	0.56
21:AU:12:PHE:HD1	21:AU:12:PHE:N	2.03	0.56
21:AU:14:VAL:HG13	21:AU:16:LEU:HG	1.86	0.56
15:CO:19:ALA:O	15:CO:20:ASN:HB2	2.03	0.56
11:AK:27:PHE:CE2	11:AK:89:PRO:HG2	2.41	0.56
22:BA:1095:A:H2'	22:BA:1096:A:C8	2.40	0.56
1:CA:679:C:O2	1:CA:712:A:C2	2.58	0.56
42:BU:18:ASP:O	42:BU:19:LYS:C	2.44	0.56
4:AD:38:PRO:HD2	4:AD:42:GLY:HA3	1.87	0.56
6:CF:81:ASN:OD1	6:CF:83:ALA:N	2.38	0.56
22:DA:2663:G:H2'	22:DA:2664:G:O4'	2.04	0.56
30:BI:97:LYS:HG3	30:BI:139:VAL:HG22	1.86	0.56
1:AA:537:G:OP1	12:AL:110:ARG:NH2	2.38	0.56
15:CO:35:GLN:NE2	15:CO:39:LEU:HD22	2.19	0.56
1:AA:1449:C:C2'	1:AA:1450:U:H5'	2.36	0.56
20:CT:3:ASN:O	20:CT:5:LYS:N	2.38	0.56
41:DT:17:SER:O	41:DT:20:ALA:N	2.38	0.56
22:BA:1340:U:C5	22:BA:1603:A:C8	2.93	0.56
22:DA:105:C:H2'	22:DA:106:C:C6	2.40	0.56
1:CA:1431:A:C6	1:CA:1432:G:O6	2.58	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:67:ASP:N	40:DS:67:ASP:OD1	2.38	0.56
17:CQ:47:HIS:HB2	17:CQ:67:LEU:CD1	2.36	0.56
22:DA:247:G:C8	22:DA:249:C:C6	2.94	0.56
1:AA:1319:A:C8	1:AA:1323:G:C6	2.93	0.56
4:CD:29:ASP:O	4:CD:31:LYS:N	2.35	0.56
22:DA:192:C:O2'	22:DA:802:A:N3	2.38	0.56
1:AA:200:G:C2	1:AA:218:U:O2	2.59	0.56
22:DA:981:A:OP2	22:DA:982:C:N4	2.32	0.56
24:DC:30:PHE:CE2	24:DC:32:PRO:CG	2.88	0.56
22:DA:1525:A:C2	22:DA:1526:C:C2	2.93	0.56
22:BA:2583:G:H2'	22:BA:2584:U:O5'	2.05	0.56
1:CA:1166:G:H2'	1:CA:1168:U:OP2	2.06	0.56
22:BA:1467:U:C4	22:BA:1546:G:C2	2.94	0.56
18:CR:20:GLU:O	18:CR:22:ASP:N	2.38	0.56
1:CA:706:A:C5	1:CA:707:U:C5	2.93	0.56
22:BA:2020:A:H5'	48:B0:9:THR:CG2	2.36	0.56
22:DA:1194:A:H2'	22:DA:1195:G:O5'	2.05	0.56
2:CB:205:ASP:OD1	2:CB:205:ASP:N	2.37	0.56
24:DC:9:THR:O	24:DC:10:SER:CB	2.53	0.56
29:DH:83:LYS:N	29:DH:149:GLU:HG2	2.20	0.56
4:AD:190:ASP:OD1	4:AD:190:ASP:N	2.39	0.56
22:DA:204:A:H5'	22:DA:206:U:O4'	2.05	0.56
20:AT:5:LYS:O	20:AT:7:ALA:N	2.38	0.56
22:BA:2187:U:C5	22:BA:2188:U:C4	2.93	0.56
22:BA:2189:U:H2'	22:BA:2190:G:O4'	2.06	0.56
6:AF:5:GLU:O	6:AF:6:ILE:HB	2.06	0.56
22:DA:2387:U:H1'	44:DW:41:ARG:CD	2.35	0.56
42:DU:4:LYS:O	42:DU:94:ARG:NH2	2.37	0.56
22:DA:1062:G:C5	22:DA:1088:A:H2'	2.40	0.56
1:AA:702:A:H3'	1:AA:703:G:H5'	1.88	0.56
1:CA:429:U:O3'	4:CD:22:LYS:HE3	2.06	0.56
4:CD:22:LYS:O	4:CD:23:SER:C	2.43	0.56
46:DY:57:LEU:HA	46:DY:60:LYS:HB3	1.88	0.56
2:AB:118:GLU:HA	2:AB:121:SER:HB2	1.87	0.56
22:DA:2349:G:OP1	51:D3:45:ARG:NH2	2.39	0.56
22:DA:321:U:C6	26:DE:159:LEU:HD22	2.40	0.56
26:DE:58:LYS:NZ	26:DE:70:SER:O	2.37	0.56
27:BF:52:ASN:ND2	27:BF:147:ASP:OD2	2.38	0.56
1:CA:1417:G:C6	1:CA:1482:G:C6	2.94	0.56
37:BP:31:TRP:CE2	37:BP:40:LEU:HD11	2.41	0.56
35:BN:32:GLU:HA	35:BN:115:LEU:HD12	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B4:4:ARG:O	52:B4:37:GLN:O	2.23	0.56
12:CL:110:ARG:NE	12:CL:117:TYR:CD2	2.73	0.56
12:CL:116:LYS:O	12:CL:117:TYR:CD2	2.59	0.56
22:DA:740:C:H5'	22:DA:1784:A:H3'	1.88	0.56
22:DA:845:A:N3	22:DA:845:A:H3'	2.21	0.56
22:DA:1020:A:C2	22:DA:1141:U:C2	2.93	0.56
22:BA:619:G:O6	26:BE:98:LYS:NZ	2.38	0.56
22:DA:1999:C:O2	22:DA:2687:U:O2'	2.20	0.56
1:CA:307:C:H5''	1:CA:308:C:OP2	2.06	0.56
1:CA:1226:C:H2'	13:CM:102:THR:HB	1.88	0.56
39:DR:58:VAL:O	39:DR:58:VAL:HG22	2.06	0.56
22:DA:2602:A:H4'	22:DA:2603:G:C5'	2.36	0.56
12:AL:110:ARG:NH1	12:AL:112:GLN:O	2.37	0.56
1:AA:1439:G:H2'	1:AA:1440:U:O4'	2.06	0.56
1:CA:344:A:OP2	1:CA:345:C:N4	2.38	0.56
24:DC:212:ARG:NE	24:DC:216:VAL:O	2.39	0.56
22:DA:159:G:O2'	22:DA:167:A:N6	2.37	0.56
22:BA:1857:G:N2	22:BA:1884:G:H1'	2.19	0.56
22:DA:564:C:H1'	38:DQ:37:GLN:NE2	2.21	0.56
22:DA:63:A:C2	22:DA:64:A:C5	2.94	0.56
1:CA:313:A:H2'	1:CA:314:C:C6	2.41	0.56
22:DA:2504:U:C4	56:DA:3001:VIF:H30	2.41	0.56
35:BN:71:ARG:CG	35:BN:71:ARG:HH21	2.19	0.56
1:AA:260:G:H2'	1:AA:261:U:C6	2.40	0.56
22:DA:2757:A:N1	28:DG:67:THR:CG2	2.68	0.56
22:DA:1131:G:OP1	31:DJ:82:GLY:HA2	2.06	0.56
1:AA:1118:U:C5'	9:AI:106:ARG:HG3	2.35	0.56
1:AA:545:C:H2'	1:AA:546:A:H5'	1.88	0.56
9:CI:120:LYS:CG	9:CI:123:ARG:HB3	2.35	0.56
22:BA:1585:C:C2'	22:BA:1586:A:H5'	2.36	0.56
22:BA:2151:U:H2'	22:BA:2152:G:N7	2.21	0.56
43:BV:14:LYS:CD	43:BV:18:ARG:NH1	2.69	0.56
1:AA:702:A:N6	22:BA:1847:A:C4'	2.69	0.56
4:CD:36:GLN:O	4:CD:37:ALA:HB2	2.06	0.56
22:BA:2292:U:H2'	22:BA:2293:G:C8	2.41	0.56
1:CA:881:G:C5	1:CA:882:C:C5	2.94	0.56
21:AU:10:GLU:HG3	21:AU:11:PRO:HD3	1.88	0.56
35:DN:117:ASP:O	35:DN:118:ARG:CB	2.53	0.56
25:DD:104:VAL:HG23	25:DD:177:VAL:HG11	1.88	0.56
1:AA:1313:U:OP2	19:AS:6:LYS:HB3	2.06	0.56
22:DA:2074:U:H2'	22:DA:2075:U:C6	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:40:THR:OG1	29:BH:43:ASN:OD1	2.24	0.56
32:DK:92:GLU:O	32:DK:93:GLN:HB2	2.05	0.56
53:B5:212:SER:HA	53:B5:221:PRO:CB	2.36	0.56
21:CU:14:VAL:HG12	21:CU:16:LEU:HG	1.88	0.56
1:AA:956:U:C4	1:AA:957:U:C5	2.94	0.56
2:AB:119:THR:O	2:AB:120:GLN:CB	2.53	0.56
22:DA:532:A:N3	22:DA:532:A:H2'	2.21	0.56
1:AA:1426:G:H2'	1:AA:1427:C:O4'	2.05	0.56
22:DA:1438:U:C5	22:DA:1552:A:C2	2.94	0.56
2:AB:82:ASP:O	2:AB:84:ALA:N	2.39	0.56
12:CL:90:LEU:HB2	12:CL:93:VAL:HG21	1.88	0.56
5:CE:104:GLY:O	5:CE:105:ILE:HG22	2.06	0.56
22:BA:1653:G:H3'	35:BN:2:ARG:HG3	1.86	0.56
1:AA:545:C:H5'	4:AD:69:GLU:HG3	1.88	0.56
44:DW:21:LEU:HA	44:DW:39:ARG:HB2	1.88	0.56
6:AF:84:VAL:O	6:AF:84:VAL:HG23	2.06	0.56
30:DI:54:PRO:O	30:DI:75:PRO:HD2	2.06	0.56
1:CA:207:C:O2'	1:CA:213:G:N2	2.39	0.56
22:BA:2140:G:C2	22:BA:2152:G:N1	2.74	0.56
27:BF:132:VAL:CG2	27:BF:152:LEU:HB2	2.36	0.56
19:AS:5:LEU:O	19:AS:6:LYS:HD2	2.05	0.56
30:BI:100:LYS:HB3	30:BI:139:VAL:HB	1.87	0.56
1:AA:600:A:C2	1:AA:601:G:C4	2.93	0.56
2:CB:68:LEU:HD12	2:CB:158:PRO:HG2	1.88	0.56
27:DF:4:LEU:HD13	27:DF:100:PHE:CD2	2.41	0.56
3:AC:90:VAL:HA	3:AC:93:ASP:HB2	1.88	0.56
22:BA:388:G:N7	22:BA:390:U:H2'	2.21	0.56
48:B0:40:ARG:O	48:B0:41:HIS:HB2	2.05	0.56
22:BA:225:C:H2'	22:BA:226:A:O4'	2.06	0.56
11:CK:52:PHE:CZ	11:CK:62:ALA:HA	2.40	0.56
22:DA:294:A:C2	22:DA:346:A:N6	2.74	0.56
22:DA:674:G:H1'	26:DE:69:ARG:NE	2.20	0.56
9:AI:50:GLN:O	9:AI:52:LEU:N	2.39	0.56
22:DA:1509:A:N3	22:DA:1510:G:C8	2.74	0.56
4:AD:95:GLU:OE1	4:AD:191:LEU:CD2	2.54	0.56
22:BA:2307:G:N3	22:BA:2308:G:O6	2.39	0.56
22:DA:1027:A:C6	22:DA:1126:A:C4	2.93	0.56
51:D3:31:HIS:ND1	51:D3:32:ILE:HG13	2.21	0.56
1:AA:1264:U:O2	1:AA:1272:G:C2	2.59	0.56
1:CA:247:G:C6	1:CA:278:G:C2	2.94	0.56
22:DA:1341:G:C2	41:DT:84:TYR:CD2	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2822:G:H2'	22:DA:2823:A:H5''	1.88	0.56
22:BA:280:U:H2'	22:BA:281:C:O4'	2.06	0.56
22:DA:2467:C:O2	34:DM:123:LYS:NZ	2.38	0.56
1:CA:636:U:H2'	1:CA:637:C:C6	2.41	0.56
2:AB:9:MET:SD	2:AB:9:MET:N	2.79	0.56
2:AB:151:ILE:O	2:AB:152:LYS:C	2.44	0.56
4:AD:107:PHE:CG	4:AD:145:ILE:HD11	2.41	0.56
39:BR:49:ILE:HB	39:BR:52:PRO:C	2.27	0.55
22:DA:1708:C:HO2'	22:DA:2860:A:HO2'	1.53	0.55
22:BA:2192:U:H2'	22:BA:2193:G:O4'	2.05	0.55
32:BK:78:ARG:NH1	37:BP:71:GLU:OE2	2.40	0.55
22:BA:1474:U:C2'	22:BA:1475:G:H5'	2.35	0.55
10:AJ:65:TYR:HB3	14:AN:96:LEU:HD11	1.88	0.55
4:AD:130:VAL:HG11	4:AD:135:TYR:CD2	2.40	0.55
22:DA:1230:A:H2'	22:DA:1231:U:C6	2.42	0.55
31:DJ:140:LEU:HD12	31:DJ:141:ASP:N	2.21	0.55
1:CA:1162:C:C2	1:CA:1175:G:N2	2.74	0.55
22:BA:2714:G:O2'	22:BA:2715:C:H5'	2.06	0.55
22:BA:1115:G:C2	22:BA:1116:G:C5	2.94	0.55
22:BA:2812:G:H2'	22:BA:2813:A:O4'	2.05	0.55
1:CA:927:G:O2'	1:CA:1503:A:N7	2.37	0.55
22:BA:1910:G:H2'	22:BA:1911:U:O4'	2.06	0.55
22:BA:1926:U:H2'	22:BA:1926:U:O2	2.05	0.55
1:AA:452:A:H2'	1:AA:453:G:C5'	2.35	0.55
1:CA:994:A:C8	1:CA:1216:A:H4'	2.41	0.55
22:DA:422:A:C2	22:DA:423:A:C4	2.94	0.55
22:DA:569:U:H5''	22:DA:821:A:C2	2.42	0.55
39:DR:78:ARG:HB3	39:DR:83:TYR:CD1	2.42	0.55
1:CA:66:A:H4'	1:CA:173:U:C5	2.41	0.55
22:BA:1717:A:H2'	22:BA:1718:G:O5'	2.07	0.55
9:AI:25:ASN:N	9:AI:62:ASP:OD1	2.39	0.55
4:AD:78:GLU:OE2	4:AD:81:ARG:NH1	2.39	0.55
33:DL:136:GLU:HA	33:DL:140:GLY:HA3	1.87	0.55
22:DA:196:A:O2'	22:DA:805:G:O6	2.16	0.55
22:BA:1014:A:C5	22:BA:1015:U:C5	2.95	0.55
22:BA:70:G:H4'	22:BA:71:A:OP1	2.05	0.55
1:AA:1394:A:N1	1:AA:1500:A:O2'	2.28	0.55
24:BC:107:PRO:HB3	24:BC:142:HIS:CE1	2.41	0.55
3:CC:40:ARG:HG2	3:CC:55:ILE:HD11	1.88	0.55
22:DA:1584:U:O2	22:DA:1584:U:H3'	2.07	0.55
19:CS:80:TYR:O	19:CS:81:ARG:CB	2.53	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:11:ASP:CG	13:AM:12:HIS:N	2.59	0.55
1:CA:978:A:C5	1:CA:1318:A:N6	2.74	0.55
22:DA:224:U:C4	22:DA:225:C:C5	2.94	0.55
2:AB:72:THR:O	2:AB:73:LYS:HB3	2.06	0.55
1:AA:96:U:O2'	1:AA:97:G:O5'	2.22	0.55
22:DA:2093:G:N7	22:DA:2225:A:H2'	2.22	0.55
22:BA:1405:U:H2'	22:BA:1406:U:C6	2.42	0.55
1:CA:1201:A:H1'	1:CA:1202:U:OP2	2.05	0.55
22:DA:1027:A:N7	22:DA:1126:A:C2	2.75	0.55
22:DA:1288:G:C4	22:DA:1327:A:C2	2.94	0.55
22:DA:146:A:C2	22:DA:147:C:C2	2.95	0.55
1:CA:455:G:C2	1:CA:478:A:N1	2.75	0.55
22:BA:1132:U:H3'	22:BA:1133:A:H5''	1.89	0.55
22:DA:1823:G:N7	58:DA:3653:HOH:O	2.39	0.55
22:BA:456:C:O2	41:BT:73:ARG:NH1	2.37	0.55
27:BF:124:GLY:C	27:BF:125:ARG:HG2	2.25	0.55
1:AA:1008:U:H2'	1:AA:1009:U:C6	2.41	0.55
1:AA:587:G:C2	1:AA:755:G:C5	2.95	0.55
9:AI:86:ALA:C	9:AI:88:MET:N	2.60	0.55
22:BA:858:G:H3'	22:BA:859:G:C8	2.40	0.55
35:DN:28:LEU:O	35:DN:32:GLU:HA	2.06	0.55
22:DA:1651:G:C6	22:DA:1652:A:C5	2.95	0.55
22:DA:1827:U:O2'	22:DA:1970:A:N3	2.37	0.55
1:AA:89:U:O2'	1:AA:90:C:C5'	2.54	0.55
48:B0:55:ILE:HG22	48:B0:56:ALA:N	2.21	0.55
1:CA:976:G:N2	1:CA:1363:A:N3	2.54	0.55
31:BJ:81:ILE:HG12	31:BJ:82:GLY:H	1.71	0.55
1:AA:1277:C:O2'	1:AA:1279:G:HI'	2.05	0.55
22:DA:945:A:C5	22:DA:2448:A:C2	2.95	0.55
6:AF:53:LYS:O	6:AF:54:LEU:CD1	2.54	0.55
25:DD:84:LEU:HD13	25:DD:88:GLU:HB2	1.89	0.55
22:DA:134:G:C2	22:DA:146:A:C2	2.95	0.55
22:DA:247:G:N7	22:DA:249:C:C2	2.75	0.55
1:AA:990:C:N3	1:AA:991:U:C4	2.75	0.55
5:AE:109:GLY:O	5:AE:110:ALA:CB	2.53	0.55
22:DA:2457:U:C4	22:DA:2458:G:C6	2.94	0.55
22:DA:2552:U:C2	22:DA:2554:U:H5'	2.42	0.55
22:DA:182:A:O2'	22:DA:433:C:O2'	2.07	0.55
22:BA:1487:U:C2	22:BA:1503:A:C2	2.94	0.55
2:CB:35:ARG:O	2:CB:38:VAL:HG12	2.07	0.55
30:DI:10:LYS:HB2	30:DI:56:PRO:HB3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:83:HIS:CD2	8:CH:96:MET:CE	2.90	0.55
2:CB:131:LYS:O	2:CB:135:LEU:N	2.40	0.55
22:DA:2061:G:H1	56:DA:3001:VIF:H19	1.72	0.55
22:BA:1776:G:P	58:BA:3451:HOH:O	2.63	0.55
22:BA:1918:A:O2'	22:BA:1920:C:C4	2.59	0.55
22:BA:1176:U:H2'	22:BA:1177:G:C4	2.42	0.55
3:AC:7:PRO:HG2	3:AC:184:TYR:CG	2.42	0.55
22:DA:2182:U:H2'	22:DA:2183:A:C8	2.41	0.55
37:DP:89:ARG:HD2	37:DP:113:ARG:CZ	2.37	0.55
1:CA:144:G:C5	1:CA:179:A:C2	2.94	0.55
22:BA:2032:G:N7	58:BA:3536:HOH:O	2.37	0.55
40:DS:66:ILE:O	40:DS:67:ASP:C	2.44	0.55
10:CJ:77:VAL:O	10:CJ:79:PRO:HD3	2.07	0.55
24:DC:136:PRO:O	24:DC:139:SER:OG	2.21	0.55
1:AA:1237:C:C4	1:AA:1336:C:N3	2.75	0.55
22:BA:1283:G:N2	22:BA:1285:A:H3'	2.22	0.55
24:DC:144:VAL:HB	24:DC:154:LEU:HB2	1.88	0.55
22:DA:2011:U:O4	58:DA:3375:HOH:O	2.17	0.55
22:DA:2752:C:C5	22:DA:2753:A:N7	2.75	0.55
1:AA:772:U:C2'	1:AA:773:G:O5'	2.55	0.55
22:BA:2114:A:H2'	22:BA:2114:A:N3	2.20	0.55
32:DK:107:LEU:O	32:DK:109:SER:N	2.38	0.55
29:BH:98:ASP:O	29:BH:102:ALA:HB3	2.07	0.55
29:BH:86:ASP:O	29:BH:87:GLU:CB	2.53	0.55
29:BH:89:LYS:HG2	1:CA:359:G:OP1	2.06	0.55
22:BA:1031:G:N3	52:B4:38:GLY:O	2.40	0.55
1:AA:451:A:H4'	1:AA:452:A:O5'	2.07	0.55
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.22	0.55
1:CA:1361:G:H2'	1:CA:1362:A:H5''	1.87	0.55
9:AI:58:VAL:O	9:AI:59:GLU:CG	2.55	0.55
22:DA:684:G:C2	22:DA:794:A:C2	2.95	0.55
4:AD:147:GLU:HA	4:AD:150:LYS:CD	2.36	0.55
17:AQ:45:HIS:CB	17:AQ:70:THR:HG23	2.35	0.55
22:DA:1335:C:H2'	22:DA:1336:A:C8	2.42	0.55
1:AA:1299:A:C6	1:AA:1301:U:O2	2.60	0.55
22:BA:2190:G:C6	22:BA:2191:A:C6	2.95	0.55
25:DD:133:THR:HG23	25:DD:134:HIS:H	1.72	0.55
22:DA:2261:C:C2	22:DA:2280:G:C2	2.94	0.55
46:DY:56:LEU:O	46:DY:57:LEU:HB2	2.07	0.55
22:DA:2392:A:C8	22:DA:2429:G:C2	2.95	0.55
16:AP:10:GLY:O	16:AP:11:ALA:HB2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:147:SER:O	2:AB:148:LEU:CB	2.54	0.55
2:AB:151:ILE:HG23	2:AB:152:LYS:N	2.21	0.55
22:BA:27:G:C4	22:BA:512:G:N2	2.75	0.55
22:DA:1444:G:C2	22:DA:1548:A:C2	2.94	0.55
22:DA:1916:A:H2'	22:DA:1917:U:O4'	2.07	0.55
25:DD:112:THR:O	25:DD:195:GLY:HA2	2.06	0.55
25:DD:149:ASN:OD1	25:DD:150:GLN:N	2.39	0.55
22:BA:1912:A:C8	22:BA:1917:U:O4	2.60	0.55
1:CA:1317:C:N4	1:CA:1318:A:N3	2.55	0.55
2:CB:208:ARG:O	2:CB:210:VAL:N	2.40	0.55
12:CL:74:LEU:HD11	12:CL:80:ILE:HG21	1.89	0.55
53:B5:50:ILE:CG2	53:B5:51:ASP:N	2.69	0.55
22:DA:445:C:O2'	22:DA:449:A:N3	2.36	0.55
22:BA:1090:A:C2'	22:BA:1091:G:H5'	2.36	0.55
1:CA:4:U:H2'	1:CA:4:U:O2	2.05	0.55
2:CB:16:PHE:CZ	2:CB:18:HIS:CE1	2.95	0.55
22:BA:1738:G:O2'	22:BA:1739:A:O5'	2.23	0.55
5:AE:133:PRO:HA	5:AE:136:VAL:HG13	1.88	0.55
22:DA:1324:G:N2	22:DA:1328:A:N1	2.55	0.55
22:DA:247:G:OP2	22:DA:249:C:N4	2.40	0.55
22:DA:219:A:N3	22:DA:234:U:O2'	2.38	0.55
28:DG:176:LYS:O	28:DG:177:LYS:HB2	2.07	0.55
22:DA:1838:C:C5	22:DA:1899:A:C5	2.95	0.55
21:AU:42:THR:O	21:AU:46:LYS:HB2	2.06	0.55
45:DX:68:LEU:HD22	45:DX:78:TYR:CE1	2.40	0.55
22:DA:2297:A:N1	22:DA:2321:U:C5	2.74	0.55
1:CA:372:C:O2	58:CA:1892:HOH:O	2.08	0.55
22:DA:634:C:H2'	22:DA:635:C:C6	2.41	0.55
11:CK:89:PRO:HD3	21:CU:29:LEU:CD1	2.37	0.55
38:DQ:86:ALA:O	38:DQ:87:SER:CB	2.54	0.55
22:DA:2849:U:H4'	22:DA:2868:A:C2	2.42	0.55
5:CE:15:LEU:HD12	5:CE:15:LEU:C	2.26	0.55
35:BN:103:ARG:HB2	35:BN:110:MET:HE3	1.89	0.55
29:BH:121:VAL:N	29:BH:122:LEU:CA	2.69	0.55
29:BH:121:VAL:N	29:BH:122:LEU:CB	2.70	0.55
2:AB:24:ASN:O	2:AB:26:LYS:N	2.40	0.55
22:BA:1911:U:H2'	22:BA:1918:A:C2	2.41	0.55
1:CA:978:A:P	1:CA:1362:A:N6	2.79	0.55
2:CB:15:HIS:ND1	2:CB:15:HIS:C	2.59	0.55
12:CL:87:VAL:HB	12:CL:93:VAL:HG21	1.89	0.55
22:DA:116:C:C4	22:DA:117:G:N7	2.74	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:D2:43:THR:HG1	50:D2:44:VAL:N	2.02	0.55
11:AK:23:ILE:O	11:AK:23:ILE:HG13	2.06	0.55
22:BA:1605:C:H2'	22:BA:1606:C:H5'	1.88	0.55
1:AA:1363:A:O2'	1:AA:1365:G:N7	2.39	0.55
22:DA:1993:U:H4'	25:DD:133:THR:CG2	2.37	0.55
1:AA:702:A:N6	22:BA:1847:A:O4'	2.39	0.55
22:DA:503:A:C2	22:DA:506:G:C4	2.94	0.55
1:AA:721:G:H4'	1:AA:722:G:O4'	2.07	0.55
22:DA:1465:G:C5	22:DA:1466:U:C4	2.95	0.55
22:DA:547:A:H3'	22:DA:548:G:C5'	2.37	0.55
19:AS:64:ASP:HB3	27:BF:115:ARG:NH2	2.21	0.55
1:AA:1268:G:H2'	1:AA:1269:A:C8	2.42	0.55
26:BE:59:PRO:HD3	26:BE:71:GLY:O	2.07	0.55
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.42	0.55
1:AA:196:A:N3	1:AA:222:C:H1'	2.21	0.55
1:CA:1089:G:C5	1:CA:1090:U:C5	2.95	0.55
39:BR:27:ILE:CG2	39:BR:63:VAL:HG21	2.37	0.55
19:CS:19:VAL:HG21	19:CS:44:MET:HG2	1.88	0.55
17:CQ:60:GLU:HB3	17:CQ:76:VAL:CG2	2.37	0.55
7:CG:75:VAL:HG21	7:CG:144:MET:HG2	1.89	0.55
22:DA:836:G:C5	22:DA:837:C:C4	2.94	0.55
21:CU:40:LYS:N	21:CU:41:PRO:CD	2.67	0.55
1:AA:8:A:H5'	5:AE:125:ALA:O	2.07	0.55
16:CP:23:ASP:O	16:CP:25:ARG:N	2.40	0.55
29:BH:120:GLY:CA	29:BH:122:LEU:HA	2.37	0.55
22:BA:1061:U:O2'	22:BA:1062:G:C5'	2.55	0.55
22:DA:422:A:OP2	58:DA:3560:HOH:O	2.18	0.55
22:DA:740:C:H5'	22:DA:1784:A:C2'	2.37	0.55
22:DA:740:C:N4	22:DA:758:C:O2	2.40	0.55
1:AA:411:A:C6	1:AA:429:U:C5	2.94	0.55
1:CA:66:A:C6	1:CA:67:C:C5	2.95	0.55
1:AA:1157:A:N6	1:AA:1180:A:N7	2.54	0.55
22:DA:847:U:O2	22:DA:934:U:H1'	2.06	0.55
25:DD:140:HIS:CE1	58:DD:303:HOH:O	2.59	0.55
4:AD:29:ASP:O	4:AD:31:LYS:HD3	2.07	0.55
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.88	0.55
10:AJ:65:TYR:CB	14:AN:96:LEU:HD11	2.36	0.55
24:DC:147:LYS:HB2	24:DC:150:LYS:CB	2.37	0.55
28:DG:133:LEU:HD13	28:DG:141:ILE:HB	1.89	0.55
20:AT:44:LYS:NZ	20:AT:86:LEU:O	2.30	0.55
17:AQ:81:LYS:N	17:AQ:81:LYS:CD	2.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:68:G:C5	1:AA:69:G:H1'	2.42	0.55
22:DA:273:G:N2	22:DA:365:U:O2	2.40	0.55
28:DG:118:PRO:HG3	28:DG:144:VAL:HG21	1.89	0.55
19:CS:75:ALA:N	19:CS:76:PRO:CD	2.69	0.55
1:CA:106:C:O2	1:CA:379:C:H4'	2.07	0.55
22:DA:1290:C:C2	22:DA:1291:C:C6	2.95	0.55
22:DA:1082:U:OP1	30:DI:124:ALA:CB	2.54	0.55
22:DA:310:A:HO2'	22:DA:311:A:P	2.22	0.55
22:BA:2846:G:OP1	37:BP:53:ARG:NH1	2.40	0.55
6:AF:68:GLN:HA	6:AF:71:ILE:CG2	2.37	0.55
5:CE:101:GLU:C	5:CE:103:THR:N	2.60	0.55
22:DA:447:A:H5'	22:DA:449:A:C5	2.42	0.55
22:DA:2341:G:C5	22:DA:2342:C:C4	2.95	0.55
22:DA:2812:G:N2	22:DA:2889:C:O2	2.40	0.55
5:AE:137:VAL:O	5:AE:137:VAL:HG22	2.07	0.55
1:CA:960:U:C5	1:CA:1225:A:C8	2.95	0.55
4:CD:35:GLU:HG3	4:CD:36:GLN:N	2.22	0.55
22:DA:5:A:C2	22:DA:2899:A:C2	2.95	0.55
1:AA:1313:U:P	19:AS:6:LYS:HB3	2.47	0.55
1:AA:246:A:C2	1:AA:282:A:C5	2.95	0.55
23:BB:49:C:O3'	36:BO:68:LYS:HE2	2.07	0.55
22:BA:634:C:H2'	22:BA:635:C:C6	2.42	0.55
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.43	0.55
1:CA:1084:G:C5	1:CA:1085:U:C4	2.95	0.55
22:BA:468:G:N7	50:B2:39:ARG:NH2	2.53	0.55
5:CE:96:MET:HE3	5:CE:111:MET:CE	2.37	0.55
1:AA:955:U:O4'	1:AA:1227:A:N6	2.40	0.55
29:BH:10:ALA:O	29:BH:12:LEU:N	2.40	0.55
7:CG:126:ASP:N	7:CG:126:ASP:OD1	2.38	0.55
24:DC:267:ILE:O	24:DC:267:ILE:HG22	2.07	0.55
31:DJ:56:VAL:HB	31:DJ:124:VAL:HB	1.89	0.55
22:DA:1652:A:C2	22:DA:2006:C:N3	2.75	0.54
22:DA:1355:G:C2	22:DA:1356:G:C8	2.95	0.54
22:DA:1370:C:H2'	22:DA:1371:G:C8	2.42	0.54
22:DA:579:G:N2	22:DA:1262:A:C4	2.75	0.54
1:CA:484:G:C5	1:CA:486:U:H1'	2.42	0.54
22:DA:2093:G:C2	22:DA:2094:A:C5	2.96	0.54
22:DA:1308:A:H2'	22:DA:1309:G:O4'	2.07	0.54
42:DU:74:ASN:ND2	42:DU:96:PHE:CD1	2.76	0.54
22:BA:1585:C:H2'	22:BA:1586:A:O4'	2.07	0.54
22:DA:1638:C:H4'	22:DA:2710:C:O2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1638:C:H5''	22:DA:2710:C:O2'	2.07	0.54
34:DM:17:ASN:O	34:DM:38:ARG:HD3	2.07	0.54
46:DY:17:GLU:HB2	46:DY:53:VAL:HG11	1.90	0.54
22:BA:2061:G:O6	56:BA:3001:VIF:H19	2.07	0.54
26:DE:48:THR:O	26:DE:52:VAL:HG23	2.06	0.54
14:AN:13:ARG:O	14:AN:17:ALA:HB2	2.07	0.54
5:CE:131:THR:O	5:CE:132:ASN:C	2.45	0.54
1:AA:1043:G:O6	1:AA:1044:A:N6	2.41	0.54
22:DA:2110:G:C6	22:DA:2120:G:C8	2.95	0.54
22:BA:215:G:H4'	22:BA:216:A:OP1	2.07	0.54
1:AA:141:G:C2	1:AA:142:G:H1'	2.42	0.54
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.90	0.54
22:DA:2308:G:H5''	22:DA:2309:A:OP2	2.05	0.54
27:DF:36:LEU:O	27:DF:88:LYS:HA	2.06	0.54
2:AB:21:ARG:HA	2:AB:21:ARG:CZ	2.37	0.54
22:DA:604:G:N1	22:DA:605:G:C5	2.75	0.54
22:DA:491:G:C6	22:DA:492:A:C6	2.94	0.54
2:AB:86:SER:OG	2:AB:87:CYS:SG	2.63	0.54
1:CA:671:G:N2	1:CA:736:C:C2	2.76	0.54
1:AA:872:A:C8	1:AA:874:G:C8	2.95	0.54
29:DH:31:VAL:HB	29:DH:32:PRO:HD3	1.89	0.54
22:DA:2344:U:H4'	22:DA:2345:G:OP1	2.07	0.54
7:CG:74:GLU:O	7:CG:88:PRO:HA	2.07	0.54
1:CA:960:U:O2'	1:CA:1223:C:H4'	2.07	0.54
22:DA:478:A:N6	22:DA:500:G:O2'	2.40	0.54
27:BF:171:ALA:O	27:BF:173:PHE:N	2.40	0.54
1:AA:1322:C:OP1	19:AS:78:ARG:NH2	2.40	0.54
22:DA:2693:G:N2	22:DA:2717:C:C2	2.74	0.54
22:DA:2118:U:O4	22:DA:2149:U:H1'	2.06	0.54
15:CO:17:ARG:O	15:CO:18:ASP:HB3	2.07	0.54
22:DA:2834:G:H2'	22:DA:2879:A:N6	2.22	0.54
22:DA:1248:G:C4	38:DQ:3:ARG:HG3	2.43	0.54
22:BA:2024:G:OP2	22:BA:2034:U:H4'	2.07	0.54
22:BA:2564:A:C2	22:BA:2647:U:H4'	2.42	0.54
1:AA:663:A:H5'	1:AA:836:G:OP1	2.07	0.54
42:DU:95:PHE:HA	42:DU:102:THR:HA	1.90	0.54
1:AA:114:U:O2'	1:AA:115:G:H5'	2.07	0.54
37:DP:103:ARG:HB3	37:DP:108:ALA:HB2	1.89	0.54
47:DZ:52:SER:HA	47:DZ:55:VAL:HG22	1.89	0.54
22:DA:30:G:C6	22:DA:31:C:N3	2.75	0.54
11:AK:71:ALA:O	11:AK:73:ALA:N	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:58:VAL:HG12	20:AT:72:ALA:CB	2.37	0.54
30:BI:28:LEU:HD12	30:BI:28:LEU:O	2.07	0.54
22:DA:2790:U:H5'	22:DA:2893:A:N7	2.22	0.54
29:BH:90:LEU:CD2	29:BH:93:SER:HA	2.37	0.54
3:AC:36:ASP:O	3:AC:39:VAL:HG22	2.08	0.54
1:CA:1361:G:C2'	1:CA:1362:A:H5''	2.36	0.54
22:DA:668:A:C2	22:DA:670:A:C5	2.95	0.54
22:DA:1125:G:C6	22:DA:1126:A:N6	2.75	0.54
5:CE:157:ARG:O	5:CE:159:LYS:N	2.36	0.54
22:DA:134:G:N2	22:DA:146:A:N3	2.55	0.54
30:DI:6:GLN:O	30:DI:7:ALA:HB3	2.08	0.54
1:AA:1257:A:H4'	1:AA:1258:G:OP2	2.07	0.54
1:AA:189:A:H2'	1:AA:190:A:O4'	2.06	0.54
22:DA:2725:A:C4	22:DA:2727:A:C8	2.95	0.54
26:BE:149:ILE:HD12	26:BE:150:THR:N	2.22	0.54
22:DA:2467:C:N4	22:DA:2468:A:C6	2.75	0.54
26:DE:52:VAL:HG21	26:DE:81:GLY:HA2	1.89	0.54
22:DA:2800:A:C2	22:DA:2895:G:H1'	2.42	0.54
39:BR:46:GLU:O	39:BR:46:GLU:OE1	2.26	0.54
1:CA:1291:U:H4'	9:CI:42:GLU:HG2	1.89	0.54
22:DA:2740:A:C6	22:DA:2764:A:C8	2.95	0.54
22:DA:2773:C:H2'	22:DA:2774:C:C6	2.42	0.54
22:BA:84:A:H4'	22:BA:85:G:O5'	2.06	0.54
23:DB:2:G:N2	23:DB:3:C:C2	2.76	0.54
32:BK:66:LYS:HD2	32:BK:79:PHE:O	2.08	0.54
22:BA:2825:G:H2'	22:BA:2826:A:H5'	1.90	0.54
22:BA:1688:U:H1'	22:BA:1701:A:C6	2.42	0.54
22:BA:614:A:O2'	22:BA:615:U:OP2	2.26	0.54
29:BH:90:LEU:HA	29:BH:125:THR:HG23	1.90	0.54
22:BA:1922:G:N2	22:BA:1923:U:C1'	2.71	0.54
22:DA:2134:A:N6	22:DA:2157:G:O2'	2.39	0.54
5:CE:133:PRO:HA	5:CE:136:VAL:CG1	2.37	0.54
1:CA:718:A:C6	11:CK:118:HIS:CD2	2.95	0.54
22:DA:1731:G:C6	22:DA:1733:G:C5	2.96	0.54
1:CA:406:G:C2	1:CA:407:U:C5	2.95	0.54
46:BY:56:LEU:O	46:BY:57:LEU:CB	2.54	0.54
12:AL:116:LYS:O	12:AL:117:TYR:HB2	2.08	0.54
22:BA:2451:A:C2	56:BA:3001:VIF:C23	2.90	0.54
2:CB:94:HIS:CD2	2:CB:146:ASN:HB2	2.41	0.54
8:CH:9:ASP:OD2	8:CH:13:ARG:NH1	2.40	0.54
1:CA:76:G:N2	1:CA:95:C:C2	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:174:A:C4	1:CA:175:C:C6	2.95	0.54
22:BA:228:C:N4	22:BA:2407:A:N3	2.54	0.54
24:BC:30:PHE:CZ	24:BC:32:PRO:HG2	2.43	0.54
1:AA:1035:A:C2	1:AA:1036:A:C4	2.95	0.54
22:BA:864:G:C6	22:BA:865:C:N4	2.75	0.54
10:AJ:91:ASP:OD2	10:AJ:91:ASP:N	2.39	0.54
6:CF:29:ILE:HG22	6:CF:34:GLY:O	2.08	0.54
1:AA:1086:U:O2'	1:AA:1087:G:H5'	2.08	0.54
22:DA:1029:A:N7	22:DA:1030:C:C2	2.76	0.54
36:BO:59:ALA:O	36:BO:60:GLU:C	2.45	0.54
8:AH:59:LEU:HD11	8:AH:61:LEU:HD21	1.90	0.54
6:AF:3:HIS:O	6:AF:92:THR:OG1	2.26	0.54
1:AA:982:U:H4'	1:AA:983:A:C5'	2.37	0.54
1:AA:260:G:O6	58:AA:1702:HOH:O	2.17	0.54
22:DA:52:A:N7	22:DA:117:G:N2	2.56	0.54
1:CA:1302:C:C5	13:CM:17:ILE:HD13	2.43	0.54
1:AA:90:C:H1'	1:AA:91:U:H5'	1.88	0.54
7:AG:97:ASN:HA	7:AG:100:ALA:HB3	1.89	0.54
22:BA:2328:A:H2'	22:BA:2329:U:C6	2.42	0.54
22:BA:2191:A:C2	22:BA:2192:U:C4	2.94	0.54
1:CA:920:U:H2'	1:CA:921:U:H6	1.73	0.54
29:BH:14:SER:OG	29:BH:17:ASP:CG	2.46	0.54
22:DA:500:G:N2	22:DA:502:A:C8	2.76	0.54
51:D3:34:THR:HG22	51:D3:35:LYS:N	2.22	0.54
1:AA:721:G:C6	1:AA:733:G:C2	2.95	0.54
22:DA:1581:G:C5	22:DA:1582:C:C4	2.96	0.54
7:AG:113:ASP:HB2	7:AG:119:ARG:HG3	1.89	0.54
1:AA:1123:U:O2'	10:AJ:39:PRO:O	2.21	0.54
22:BA:1374:G:C5	22:BA:1375:U:C5	2.96	0.54
28:DG:41:VAL:HG12	28:DG:42:GLU:N	2.23	0.54
22:DA:2749:A:OP1	28:DG:2:SER:N	2.40	0.54
22:BA:2323:G:C2'	22:BA:2324:U:H5'	2.38	0.54
26:DE:146:VAL:HA	26:DE:185:LYS:O	2.07	0.54
13:CM:20:THR:HG22	13:CM:26:GLY:C	2.27	0.54
22:DA:1831:G:C6	22:DA:1832:C:C4	2.96	0.54
29:DH:79:THR:HA	29:DH:145:ASN:HB2	1.89	0.54
22:BA:790:U:OP2	58:BA:3763:HOH:O	2.18	0.54
1:AA:619:U:N3	4:AD:131:ASN:OD1	2.37	0.54
1:CA:96:U:O2'	1:CA:97:G:P	2.66	0.54
14:CN:3:LYS:HB3	14:CN:6:MET:HG2	1.90	0.54
29:BH:103:VAL:HG21	29:BH:132:PHE:CE1	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:516:U:O2'	1:AA:519:C:N3	2.40	0.54
1:CA:299:G:C6	1:CA:300:A:C6	2.95	0.54
16:AP:50:THR:O	16:AP:50:THR:HG22	2.08	0.54
1:CA:401:C:P	4:CD:70:ARG:HD3	2.47	0.54
30:DI:58:VAL:CG1	30:DI:59:ILE:N	2.71	0.54
4:CD:167:LYS:HE2	4:CD:173:VAL:HG11	1.89	0.54
17:CQ:16:LYS:C	17:CQ:17:MET:SD	2.86	0.54
27:BF:173:PHE:O	27:BF:174:ASP:CB	2.56	0.54
22:BA:2582:G:C2	22:BA:2583:G:C8	2.95	0.54
22:DA:219:A:N6	22:DA:220:G:C6	2.76	0.54
11:CK:89:PRO:HD3	21:CU:29:LEU:HD11	1.89	0.54
32:BK:66:LYS:HA	32:BK:79:PHE:O	2.07	0.54
22:DA:443:A:N7	26:DE:40:ARG:HG3	2.22	0.54
22:DA:2083:G:N7	22:DA:2084:C:C5	2.76	0.54
3:CC:145:GLY:O	3:CC:146:ALA:O	2.26	0.54
37:DP:65:SER:O	37:DP:66:ASN:C	2.44	0.54
20:CT:36:TYR:CG	20:CT:37:ALA:N	2.76	0.54
29:BH:77:THR:O	29:BH:77:THR:CG2	2.56	0.54
18:CR:72:ASP:C	18:CR:73:ARG:HG2	2.28	0.54
41:BT:49:LYS:N	41:BT:49:LYS:HD3	2.23	0.54
2:CB:132:LYS:O	2:CB:136:MET:HB3	2.07	0.54
22:BA:1176:U:C4	22:BA:1177:G:O6	2.60	0.54
22:DA:370:G:C6	22:DA:424:G:C5	2.95	0.54
21:AU:40:LYS:N	21:AU:41:PRO:CD	2.71	0.54
36:DO:33:ARG:O	36:DO:34:HIS:CD2	2.60	0.54
35:DN:69:ARG:O	35:DN:71:ARG:N	2.38	0.54
42:DU:7:ARG:HD3	42:DU:7:ARG:C	2.28	0.54
22:DA:1566:A:N3	24:DC:213:TRP:HB2	2.23	0.54
22:DA:2355:G:OP1	44:DW:25:ARG:NH2	2.41	0.54
1:AA:1493:A:OP2	1:AA:1493:A:C8	2.60	0.54
22:DA:2267:A:H5''	22:DA:2268:A:C5'	2.38	0.54
22:DA:150:U:H2'	22:DA:151:C:C6	2.42	0.54
22:BA:18:U:O3'	38:BQ:23:GLY:HA2	2.08	0.54
25:BD:133:THR:HG23	25:BD:134:HIS:N	2.21	0.54
10:AJ:6:ILE:HD12	10:AJ:76:ILE:O	2.08	0.54
22:DA:600:G:C5'	26:DE:27:LEU:HD22	2.38	0.54
22:BA:1883:U:O4	22:BA:1884:G:C6	2.60	0.54
9:AI:40:GLY:O	9:AI:41:ARG:HB2	2.07	0.54
22:BA:1082:U:C5'	30:BI:119:GLY:CA	2.86	0.54
31:DJ:94:ALA:O	31:DJ:96:ARG:N	2.41	0.54
22:DA:1319:C:H2'	22:DA:1320:C:H5'	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:89:LYS:HG3	8:CH:90:ASP:N	2.22	0.54
30:BI:57:VAL:HG22	30:BI:58:VAL:N	2.23	0.54
23:BB:30:C:H2'	23:BB:31:C:H5'	1.90	0.54
22:BA:1577:C:H2'	22:BA:1578:U:C1'	2.37	0.54
42:DU:3:ALA:O	42:DU:6:ARG:NH1	2.40	0.54
22:BA:1925:C:H5''	22:BA:1926:U:O4	2.08	0.54
22:DA:998:C:OP2	38:DQ:58:ARG:NH2	2.41	0.54
36:DO:33:ARG:O	36:DO:34:HIS:HB2	2.08	0.54
39:BR:49:ILE:HB	39:BR:52:PRO:HA	1.90	0.54
1:CA:1181:G:O2'	1:CA:1182:G:C5	2.60	0.54
18:CR:63:ARG:HB3	18:CR:70:TYR:CZ	2.42	0.54
22:DA:39:G:C6	22:DA:40:U:C4	2.96	0.54
36:DO:100:HIS:CG	36:DO:101:GLY:N	2.76	0.54
1:AA:270:A:C5	1:AA:271:C:C4	2.96	0.54
5:AE:137:VAL:O	5:AE:138:ARG:HB2	2.07	0.54
22:DA:725:G:C6	22:DA:726:G:N1	2.76	0.54
1:CA:794:A:O2'	1:CA:1521:C:O2'	2.26	0.54
1:AA:946:A:H2'	1:AA:947:G:C8	2.43	0.54
22:DA:547:A:H3'	22:DA:548:G:H5'	1.89	0.54
13:AM:83:LEU:HD21	19:AS:65:GLU:HG2	1.90	0.54
22:DA:2690:U:C4	22:DA:2873:A:N1	2.76	0.54
41:DT:61:LEU:HD12	41:DT:62:VAL:N	2.23	0.54
3:CC:36:ASP:O	3:CC:40:ARG:HG3	2.08	0.54
1:CA:1149:C:N4	1:CA:1150:A:C6	2.75	0.54
1:CA:158:G:C5	1:CA:164:G:C6	2.96	0.54
6:CF:6:ILE:HD12	6:CF:6:ILE:N	2.23	0.54
22:DA:238:C:H2'	22:DA:239:C:O4'	2.08	0.54
22:BA:815:C:O2'	22:BA:816:C:H5'	2.07	0.54
1:CA:249:U:O2'	1:CA:252:U:O2'	2.15	0.54
1:AA:655:A:C2	1:AA:656:G:C4	2.96	0.54
22:DA:2272:U:H5''	22:DA:2273:A:OP1	2.07	0.54
15:CO:70:LEU:HD13	15:CO:78:TYR:HA	1.89	0.54
1:CA:442:G:C6	1:CA:443:C:C4	2.96	0.54
2:CB:62:SER:C	2:CB:64:LYS:N	2.60	0.54
1:CA:1467:C:H2'	1:CA:1468:A:C8	2.43	0.54
35:DN:55:ALA:HA	35:DN:80:PHE:CE1	2.43	0.54
22:BA:102:U:C2	46:BY:2:LYS:HE3	2.43	0.54
22:DA:2591:C:OP1	24:DC:238:ARG:NH1	2.41	0.54
2:AB:101:LEU:HD11	2:AB:158:PRO:HG2	1.90	0.54
19:AS:15:LEU:HD13	19:AS:33:THR:HG21	1.90	0.54
46:BY:37:LEU:C	46:BY:37:LEU:HD12	2.28	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:65:TYR:CG	4:AD:94:LEU:HD22	2.42	0.54
14:CN:16:LEU:HB3	14:CN:55:SER:HA	1.90	0.54
24:DC:160:THR:HG23	24:DC:177:ARG:HG2	1.90	0.54
22:DA:59:U:O2'	22:DA:74:A:OP2	2.14	0.54
22:DA:1809:A:H2'	22:DA:1810:A:H8	1.73	0.54
22:BA:998:C:OP2	38:BQ:58:ARG:NH2	2.39	0.54
1:AA:874:G:C6	1:AA:875:U:C4	2.96	0.54
1:AA:255:G:C6	1:AA:256:U:C4	2.96	0.54
22:DA:845:A:N1	22:DA:847:U:C6	2.76	0.54
22:DA:40:U:H2'	22:DA:41:C:C6	2.43	0.54
33:DL:77:ILE:HD11	33:DL:101:ILE:HG21	1.90	0.54
22:DA:812:C:H1'	22:DA:1250:G:C2	2.42	0.54
1:CA:429:U:H3'	4:CD:9:LEU:HD23	1.90	0.54
32:BK:35:VAL:HG12	32:BK:36:GLY:N	2.23	0.54
22:BA:2694:G:C5	22:BA:2695:U:C4	2.96	0.54
4:AD:105:MET:HB2	4:AD:107:PHE:CE2	2.43	0.54
19:CS:58:VAL:HG11	19:CS:75:ALA:HA	1.90	0.54
22:DA:1692:U:O2'	22:DA:1693:U:H2'	2.07	0.54
41:BT:11:LEU:CD2	41:BT:11:LEU:N	2.70	0.54
22:DA:893:C:H2'	22:DA:894:U:O4'	2.07	0.54
14:CN:87:ALA:HB1	14:CN:92:GLU:HB2	1.90	0.54
32:DK:34:GLY:O	32:DK:36:GLY:N	2.41	0.54
22:DA:2294:G:P	36:DO:94:ARG:HH12	2.30	0.54
1:CA:689:C:OP2	11:CK:53:ARG:NH2	2.41	0.54
54:B6:1:MHW:O	54:B6:1:MHW:OG1	2.26	0.54
22:DA:593:U:H2'	22:DA:594:U:C6	2.43	0.54
22:DA:2574:G:O2'	25:DD:148:GLN:HB3	2.08	0.54
18:CR:25:ASP:O	18:CR:26:ILE:C	2.47	0.54
2:AB:83:ALA:HA	2:AB:86:SER:OG	2.08	0.54
2:CB:206:ALA:O	2:CB:207:ILE:C	2.46	0.54
22:DA:783:A:O2'	22:DA:1779:U:O2	2.19	0.54
4:AD:191:LEU:O	4:AD:192:SER:CB	2.56	0.54
2:CB:203:ASN:OD1	2:CB:204:ASP:N	2.41	0.54
1:CA:207:C:HO2'	1:CA:213:G:N2	2.06	0.54
1:CA:474:G:C2	1:CA:475:C:C2	2.96	0.54
14:CN:24:ARG:HG2	14:CN:27:LEU:HD12	1.90	0.54
1:AA:376:G:H5''	16:AP:5:ARG:HB2	1.90	0.54
16:AP:12:LYS:O	16:AP:13:LYS:HB2	2.08	0.54
22:DA:1464:G:C4	22:DA:1465:G:C8	2.96	0.54
20:AT:83:ILE:O	20:AT:87:ALA:CB	2.56	0.54
1:AA:194:C:C2'	1:AA:195:A:H5'	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:27:MET:HG2	2:AB:189:THR:HA	1.89	0.54
3:AC:15:VAL:HG11	3:AC:179:ARG:O	2.07	0.54
1:CA:1535:C:O2'	1:CA:1536:C:C5	2.61	0.54
30:BI:59:ILE:HG22	30:BI:61:VAL:HG23	1.90	0.54
22:BA:2773:C:H5''	25:BD:169:ARG:HG2	1.90	0.54
36:DO:26:LEU:HD23	36:DO:117:PHE:CE2	2.43	0.54
1:CA:1386:G:C2	1:CA:1387:G:C8	2.95	0.54
39:BR:71:LYS:HA	39:BR:90:ARG:HG2	1.90	0.54
22:DA:1655:A:C6	22:DA:1656:C:C2	2.95	0.54
22:DA:1276:A:C2	22:DA:1295:C:O2	2.61	0.54
39:DR:29:THR:O	39:DR:29:THR:HG22	2.08	0.54
30:BI:86:ILE:N	30:BI:86:ILE:HD12	2.23	0.54
35:DN:12:ARG:CZ	35:DN:20:MET:CE	2.86	0.54
1:AA:828:U:C5	1:AA:859:G:C4	2.96	0.53
5:AE:105:ILE:HG23	5:AE:105:ILE:O	2.08	0.53
1:CA:1201:A:H4'	1:CA:1202:U:O5'	2.07	0.53
17:CQ:49:GLU:O	17:CQ:50:ASN:CG	2.47	0.53
22:DA:481:G:C4	22:DA:507:A:C2	2.96	0.53
22:DA:1203:U:O2'	33:DL:4:ASN:OD1	2.26	0.53
1:CA:773:G:N3	1:CA:807:A:C2	2.76	0.53
1:AA:1227:A:H2'	1:AA:1228:C:O5'	2.08	0.53
24:BC:235:GLY:HA3	24:BC:239:ASN:HB2	1.91	0.53
22:BA:287:G:C2	22:BA:354:A:C2	2.96	0.53
22:BA:455:C:N3	22:BA:472:A:H2'	2.22	0.53
30:DI:19:ASN:ND2	30:DI:39:CYS:SG	2.81	0.53
22:DA:1252:G:H5''	58:DA:3283:HOH:O	2.08	0.53
22:BA:1820:U:OP1	24:BC:177:ARG:NH2	2.41	0.53
20:AT:48:GLN:OE1	20:AT:52:ASN:ND2	2.41	0.53
22:BA:560:C:OP2	58:BA:3250:HOH:O	2.19	0.53
20:AT:55:GLN:N	20:AT:56:PRO:HD2	2.24	0.53
2:AB:186:ILE:HA	2:AB:200:ILE:HB	1.90	0.53
5:AE:41:ASP:OD1	5:AE:43:ASN:N	2.37	0.53
3:AC:126:ARG:O	3:AC:127:ARG:CB	2.55	0.53
53:B5:35:THR:O	53:B5:35:THR:OG1	2.24	0.53
27:DF:163:ASP:N	27:DF:163:ASP:OD1	2.41	0.53
22:DA:389:G:C8	22:DA:2413:G:H4'	2.44	0.53
22:BA:616:A:C2	22:BA:617:G:HI'	2.43	0.53
22:DA:2062:A:C8	54:D6:1:MHW:CG2	2.92	0.53
22:BA:1483:G:C2	22:BA:1484:U:C2	2.97	0.53
30:BI:11:LEU:HD12	30:BI:24:VAL:HG12	1.89	0.53
1:AA:984:C:N3	1:AA:1222:G:C2	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:125:LYS:HG2	11:AK:126:LYS:N	2.24	0.53
11:CK:124:PRO:HB2	11:CK:126:LYS:HE3	1.90	0.53
23:BB:90:C:C2'	23:BB:91:C:O5'	2.56	0.53
22:DA:47:C:O2'	22:DA:52:A:O2'	2.15	0.53
22:DA:2563:U:C1'	22:DA:2566:A:N6	2.71	0.53
11:AK:25:ALA:HA	11:AK:30:THR:HG22	1.90	0.53
24:BC:125:LYS:HG2	24:BC:128:ASN:ND2	2.23	0.53
13:AM:46:SER:O	13:AM:47:GLU:CB	2.57	0.53
33:DL:77:ILE:O	33:DL:110:VAL:O	2.26	0.53
2:CB:81:LYS:HG2	2:CB:85:LEU:HD23	1.90	0.53
2:AB:213:TYR:O	2:AB:217:VAL:HG23	2.08	0.53
1:AA:844:G:N2	1:AA:846:G:H4'	2.23	0.53
1:AA:483:C:O2	16:AP:13:LYS:NZ	2.41	0.53
22:DA:1082:U:OP1	30:DI:124:ALA:HB2	2.09	0.53
20:CT:36:TYR:CD1	20:CT:36:TYR:C	2.81	0.53
41:BT:11:LEU:O	46:BY:29:ARG:NH1	2.41	0.53
27:BF:68:THR:N	27:BF:86:GLY:O	2.41	0.53
22:BA:960:A:H5''	22:BA:961:C:OP2	2.09	0.53
22:DA:969:G:H2'	22:DA:970:U:C6	2.43	0.53
42:DU:88:GLU:O	42:DU:89:ASP:CB	2.56	0.53
46:DY:20:ASN:O	46:DY:24:GLU:HB2	2.08	0.53
1:CA:1463:U:H2'	1:CA:1464:U:C6	2.43	0.53
22:BA:320:A:H2'	26:BE:131:THR:HG21	1.91	0.53
22:DA:560:C:O2	38:DQ:48:ARG:NH1	2.42	0.53
2:CB:88:ASP:N	2:CB:88:ASP:OD1	2.41	0.53
22:BA:1853:A:N1	22:BA:2087:G:H1'	2.22	0.53
10:AJ:15:HIS:CG	10:AJ:16:ARG:N	2.77	0.53
22:DA:58:G:N3	22:DA:70:G:N2	2.56	0.53
39:BR:24:LYS:HA	39:BR:94:THR:CG2	2.34	0.53
22:DA:2094:A:C4	22:DA:2095:A:C8	2.96	0.53
17:AQ:69:LYS:O	17:AQ:70:THR:CB	2.54	0.53
29:DH:32:PRO:O	29:DH:33:GLN:HB2	2.08	0.53
22:BA:1730:C:O2'	22:BA:1731:G:C4	2.60	0.53
12:AL:25:GLU:O	12:AL:26:ALA:C	2.46	0.53
22:DA:864:G:C6	22:DA:865:C:N4	2.76	0.53
22:DA:864:G:N2	22:DA:913:U:C2	2.76	0.53
22:DA:1060:U:H4'	22:DA:1061:U:H5'	1.89	0.53
42:DU:13:VAL:HG21	42:DU:39:ILE:CG2	2.39	0.53
4:CD:34:ILE:O	4:CD:35:GLU:HB3	2.08	0.53
28:DG:158:LYS:O	28:DG:160:LYS:N	2.41	0.53
22:DA:1012:U:O4	31:DJ:30:THR:HG21	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:90:TYR:O	9:CI:91:ASP:CG	2.46	0.53
1:CA:756:C:H2'	1:CA:757:U:H5'	1.90	0.53
35:DN:75:ILE:O	35:DN:79:LEU:HD12	2.07	0.53
22:DA:2868:A:C2	22:DA:2869:G:C4	2.96	0.53
35:BN:37:THR:HG22	35:BN:110:MET:HE1	1.89	0.53
35:DN:20:MET:HG3	35:DN:21:PHE:N	2.22	0.53
15:CO:14:GLU:O	15:CO:84:ARG:NH2	2.42	0.53
22:DA:6:A:N3	31:DJ:135:GLN:NE2	2.56	0.53
1:CA:527:G:C2	1:CA:528:C:C6	2.96	0.53
37:DP:29:LYS:HB3	37:DP:40:LEU:HD21	1.91	0.53
10:AJ:50:THR:HB	10:AJ:64:GLN:HG2	1.89	0.53
34:BM:42:THR:HG22	34:BM:93:VAL:HG12	1.89	0.53
6:AF:49:TYR:O	6:AF:49:TYR:CD1	2.62	0.53
25:DD:181:ASP:OD1	25:DD:184:ARG:N	2.41	0.53
22:BA:1343:G:C4	22:BA:1344:U:C5	2.96	0.53
22:BA:1098:A:C5	22:BA:1099:G:C6	2.95	0.53
22:BA:1098:A:H5'	22:BA:1099:G:OP2	2.07	0.53
22:DA:489:G:H4'	22:DA:490:C:OP1	2.07	0.53
22:DA:370:G:C6	22:DA:424:G:N7	2.77	0.53
22:DA:1343:G:H1'	22:DA:1597:A:C4	2.43	0.53
7:AG:57:SER:OG	7:AG:58:GLU:N	2.40	0.53
1:AA:1181:G:H4'	1:AA:1182:G:OP1	2.07	0.53
22:DA:454:A:H4'	22:DA:455:C:OP2	2.08	0.53
22:DA:2283:C:C4	22:DA:2389:G:C5	2.96	0.53
9:CI:49:ARG:NH2	9:CI:52:LEU:O	2.42	0.53
22:DA:1734:G:H2'	22:DA:1735:A:C8	2.44	0.53
7:CG:93:PRO:O	7:CG:97:ASN:ND2	2.41	0.53
6:AF:99:ALA:O	6:AF:100:SER:CB	2.56	0.53
1:CA:409:U:OP1	4:CD:24:GLY:HA2	2.08	0.53
1:AA:202:G:C2	1:AA:216:U:O2	2.61	0.53
1:AA:469:C:H2'	1:AA:470:C:O4'	2.09	0.53
11:AK:72:ASP:O	11:AK:73:ALA:HB2	2.08	0.53
22:BA:1802:A:N1	22:BA:1822:C:H1'	2.23	0.53
12:CL:86:ARG:CZ	12:CL:88:LYS:HB3	2.37	0.53
53:B5:99:GLU:O	53:B5:103:LYS:CB	2.57	0.53
46:DY:27:ASN:HA	46:DY:30:MET:HB2	1.91	0.53
31:DJ:105:VAL:HG12	31:DJ:109:LEU:HD12	1.90	0.53
22:BA:1584:U:H2'	22:BA:1584:U:O2	2.08	0.53
1:CA:60:A:H4'	1:CA:61:G:O5'	2.08	0.53
15:AO:45:GLU:HG2	15:AO:46:HIS:N	2.22	0.53
22:DA:12:U:O2	22:DA:12:U:H2'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1984:G:C6	22:BA:1985:C:C5	2.97	0.53
1:AA:828:U:H2'	1:AA:829:G:O5'	2.08	0.53
13:AM:10:PRO:O	13:AM:11:ASP:CB	2.56	0.53
22:DA:1809:A:C6	22:DA:1810:A:C5	2.96	0.53
21:AU:37:PHE:O	21:AU:38:TYR:CB	2.56	0.53
22:BA:480:A:OP2	42:BU:44:LYS:CE	2.57	0.53
22:DA:161:A:C3'	22:DA:162:U:H5''	2.35	0.53
5:CE:133:PRO:O	5:CE:137:VAL:HG13	2.07	0.53
45:DX:30:LEU:HB3	45:DX:31:PRO:CD	2.38	0.53
15:CO:53:ARG:O	15:CO:56:LEU:HB3	2.07	0.53
1:AA:251:G:N1	1:AA:266:G:C6	2.77	0.53
13:AM:47:GLU:O	13:AM:49:SER:N	2.42	0.53
1:AA:258:G:C5	1:AA:259:G:C8	2.95	0.53
25:DD:84:LEU:CD1	25:DD:88:GLU:HB2	2.39	0.53
22:DA:1314:C:OP1	22:DA:1332:G:OP1	2.25	0.53
22:DA:2038:G:H2'	22:DA:2039:U:O4'	2.06	0.53
37:BP:31:TRP:CE2	37:BP:40:LEU:CD1	2.91	0.53
33:DL:68:SER:O	33:DL:69:ARG:CB	2.57	0.53
36:DO:2:ASP:O	36:DO:6:ALA:HB2	2.09	0.53
4:CD:126:ASN:OD1	4:CD:142:VAL:HG23	2.08	0.53
1:AA:680:C:C2	1:AA:711:G:N2	2.77	0.53
1:CA:8:A:C6	4:CD:206:LYS:HB3	2.42	0.53
4:CD:46:PRO:O	4:CD:47:ARG:C	2.46	0.53
13:CM:6:GLY:O	13:CM:8:ASN:N	2.42	0.53
22:BA:1179:G:H3'	22:BA:1180:U:H4'	1.88	0.53
11:AK:34:ILE:HG12	11:AK:70:CYS:SG	2.49	0.53
22:BA:2127:G:C4'	22:BA:2128:G:OP1	2.55	0.53
22:DA:2093:G:O2'	22:DA:2094:A:H5'	2.08	0.53
13:AM:16:VAL:HG13	13:AM:41:GLU:HB2	1.91	0.53
24:BC:252:THR:HG22	24:BC:253:LYS:H	1.73	0.53
22:DA:995:C:C5	38:DQ:57:PHE:CE2	2.97	0.53
1:AA:1319:A:C5	1:AA:1323:G:C4	2.97	0.53
1:CA:582:C:C2	1:CA:760:G:N1	2.77	0.53
19:AS:40:ILE:HG12	19:AS:71:LEU:HD23	1.89	0.53
1:CA:436:C:C2	1:CA:437:U:C5	2.97	0.53
19:AS:44:MET:HA	19:AS:47:LEU:HD12	1.91	0.53
19:CS:10:PHE:O	19:CS:39:THR:OG1	2.26	0.53
22:DA:2557:G:H2'	22:DA:2558:C:C6	2.43	0.53
1:CA:501:C:H1'	1:CA:549:C:H1'	1.91	0.53
4:AD:170:TRP:O	4:AD:183:LYS:HB3	2.09	0.53
22:DA:543:G:C2	22:DA:551:G:C5	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:2:GLN:O	29:DH:3:VAL:HG22	2.09	0.53
4:CD:196:ASN:HB3	4:CD:198:HIS:CD2	2.43	0.53
22:DA:1462:C:C2	22:DA:1463:C:C5	2.96	0.53
22:BA:2153:C:H2'	22:BA:2154:A:O4'	2.09	0.53
22:DA:125:A:OP2	50:D2:19:ARG:NH2	2.42	0.53
22:DA:471:A:OP1	26:DE:79:ARG:NH1	2.41	0.53
22:BA:2346:A:H4'	22:BA:2347:C:OP2	2.09	0.53
22:DA:1679:A:N6	58:DA:3439:HOH:O	2.41	0.53
29:BH:147:VAL:CG1	29:BH:149:GLU:HG3	2.36	0.53
1:AA:1406:U:C6	1:AA:1407:C:C5	2.97	0.53
22:DA:60:G:C5	22:DA:62:U:C4	2.97	0.53
22:DA:684:G:OP1	50:D2:16:HIS:CE1	2.62	0.53
4:AD:23:SER:HB2	4:AD:110:THR:HB	1.90	0.53
5:CE:115:LEU:O	5:CE:120:VAL:HG23	2.09	0.53
22:DA:53:A:N7	22:DA:54:G:N7	2.57	0.53
22:DA:55:G:C2	22:DA:56:A:C8	2.95	0.53
1:AA:545:C:O2	1:AA:545:C:H2'	2.09	0.53
22:DA:511:U:O4	22:DA:512:G:N1	2.42	0.53
24:DC:204:VAL:O	24:DC:205:LEU:HB2	2.08	0.53
1:AA:316:C:O2	1:AA:316:C:H2'	2.08	0.53
31:DJ:30:THR:HG22	31:DJ:31:GLU:N	2.23	0.53
6:CF:18:VAL:O	6:CF:21:MET:N	2.41	0.53
1:CA:898:G:N2	1:CA:901:A:OP2	2.40	0.53
22:DA:1220:G:C2	22:DA:1230:A:C2	2.97	0.53
22:DA:1231:U:H2'	22:DA:1232:G:C8	2.43	0.53
2:AB:186:ILE:HA	2:AB:200:ILE:O	2.08	0.53
22:DA:61:C:OP1	46:DY:44:LYS:HD3	2.08	0.53
22:DA:1790:C:O2'	24:DC:208:ALA:HB2	2.09	0.53
27:BF:36:LEU:HD21	27:BF:99:PHE:CE2	2.44	0.53
22:DA:2332:C:OP1	44:DW:77:ARG:NH2	2.42	0.53
22:DA:1350:C:C2	22:DA:1382:G:C2	2.97	0.53
22:BA:2355:G:O3'	44:BW:24:LYS:NZ	2.41	0.53
29:DH:103:VAL:HA	29:DH:106:ALA:HB3	1.89	0.53
1:AA:791:G:N2	1:AA:1497:G:O3'	2.39	0.53
39:DR:101:ILE:O	39:DR:103:ALA:N	2.42	0.53
53:B5:78:ILE:HG23	53:B5:78:ILE:O	2.09	0.53
1:AA:1422:G:O3'	32:BK:49:ARG:NH2	2.36	0.53
22:DA:2032:G:H1'	25:DD:150:GLN:NE2	2.23	0.53
22:BA:1483:G:C6	22:BA:1484:U:C4	2.96	0.53
31:BJ:64:VAL:HG13	31:BJ:68:LYS:HB2	1.90	0.53
2:AB:79:ALA:C	2:AB:82:ASP:OD2	2.48	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2134:A:OP2	22:DA:2157:G:N2	2.38	0.53
22:DA:846:U:HO2'	22:DA:847:U:P	2.32	0.53
1:AA:683:G:N2	11:AK:39:GLY:O	2.42	0.53
22:DA:1805:A:N3	22:DA:1813:G:N2	2.57	0.53
6:AF:79:ARG:HA	6:AF:79:ARG:NE	2.23	0.53
22:DA:2428:G:H5''	22:DA:2429:G:OP1	2.09	0.53
12:AL:3:THR:CG2	12:AL:4:VAL:N	2.71	0.53
52:B4:26:ILE:HD13	52:B4:26:ILE:N	2.24	0.53
11:CK:51:GLY:O	11:CK:52:PHE:O	2.27	0.53
1:CA:160:A:H2'	1:CA:161:A:O4'	2.09	0.53
22:DA:2691:C:HO2'	22:DA:2871:U:HO2'	1.57	0.53
39:BR:3:ALA:HB3	39:BR:59:ILE:HD11	1.90	0.53
22:DA:235:U:C4	22:DA:236:C:C5	2.96	0.53
29:DH:37:VAL:CG2	29:DH:38:PRO:HD2	2.39	0.53
1:AA:594:U:C4	1:AA:595:A:C6	2.96	0.53
5:AE:45:ARG:HA	5:AE:72:ILE:O	2.09	0.53
28:BG:10:VAL:HG23	28:BG:48:ASN:O	2.08	0.53
1:AA:615:G:C2	1:AA:616:G:C8	2.97	0.53
34:DM:31:PHE:CD2	34:DM:113:ALA:HB2	2.44	0.53
1:CA:223:A:C6	1:CA:224:U:C4	2.97	0.53
20:CT:84:ASN:HA	20:CT:87:ALA:HB3	1.90	0.53
1:AA:375:U:OP1	16:AP:70:ARG:NH1	2.42	0.53
1:AA:978:A:C5	1:AA:1318:A:C6	2.96	0.53
22:DA:1359:A:C8	22:DA:1373:A:C2	2.97	0.53
22:DA:54:G:C2	22:DA:55:G:C8	2.96	0.53
22:DA:1791:A:C8	22:DA:1792:G:C8	2.96	0.53
1:AA:91:U:C2	1:AA:92:U:H1'	2.44	0.53
53:B5:52:PRO:O	53:B5:53:ARG:HB2	2.09	0.53
22:BA:2057:G:C6	22:BA:2058:A:C6	2.97	0.53
22:BA:2334:U:O4	36:BO:16:ARG:HD3	2.09	0.53
1:CA:577:G:C8	1:CA:816:A:N1	2.77	0.53
22:DA:1323:C:N4	22:DA:1324:G:O6	2.41	0.53
22:DA:586:A:N1	22:DA:809:G:O2'	2.31	0.53
35:DN:79:LEU:O	35:DN:81:ASN:N	2.39	0.53
22:DA:1194:A:C2'	22:DA:1195:G:O5'	2.57	0.53
51:D3:45:ARG:N	51:D3:46:PRO:HD2	2.24	0.53
22:BA:281:C:H2'	22:BA:282:A:C8	2.43	0.53
2:CB:19:GLN:HB3	2:CB:189:THR:OG1	2.08	0.53
22:BA:1082:U:H5''	30:BI:119:GLY:HA2	1.90	0.53
37:DP:39:ARG:HG3	37:DP:40:LEU:H	1.73	0.53
5:AE:90:THR:HG22	5:AE:91:GLY:N	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1321:A:N6	22:DA:1322:A:C2	2.77	0.53
27:DF:111:ILE:HB	27:DF:114:PHE:HB2	1.90	0.53
22:DA:1736:U:H2'	22:DA:1737:G:O4'	2.09	0.53
22:DA:720:U:H2'	22:DA:721:A:C8	2.44	0.53
1:AA:313:A:H2'	1:AA:314:C:C6	2.44	0.53
22:DA:457:A:N1	22:DA:470:A:H5''	2.24	0.53
22:DA:371:A:N3	45:DX:61:LYS:NZ	2.57	0.53
1:CA:1031:C:H4'	1:CA:1032:G:C2	2.43	0.53
12:CL:102:LEU:HD12	12:CL:102:LEU:N	2.24	0.53
48:D0:54:VAL:O	48:D0:56:ALA:N	2.42	0.53
53:B5:66:PRO:HG2	53:B5:194:ILE:CB	2.39	0.53
1:CA:322:C:O2	1:CA:332:G:N2	2.41	0.53
22:BA:1433:A:O2'	22:BA:1434:A:H5'	2.09	0.53
22:DA:1109:C:H5''	22:DA:1110:G:OP2	2.09	0.53
29:DH:40:THR:O	29:DH:41:LYS:C	2.48	0.53
1:AA:1157:A:C4	1:AA:1181:G:N1	2.77	0.53
33:BL:91:ASP:HB3	33:BL:93:ASN:O	2.08	0.53
4:CD:4:TYR:CE2	4:CD:11:LEU:HD11	2.44	0.53
22:DA:350:G:C2	22:DA:351:C:C2	2.97	0.53
22:DA:16:C:C3'	48:D0:11:SER:HG	2.18	0.53
17:CQ:52:GLU:HG2	17:CQ:53:CYS:H	1.74	0.53
40:BS:37:THR:HG22	40:BS:38:TYR:CE1	2.44	0.53
22:BA:644:A:H2'	22:BA:645:C:O4'	2.09	0.53
22:DA:1525:A:H2'	22:DA:1526:C:O4'	2.09	0.53
19:AS:4:SER:O	19:AS:6:LYS:N	2.42	0.53
25:DD:56:LYS:O	25:DD:58:ASN:N	2.42	0.53
7:CG:8:GLY:O	7:CG:9:GLN:HB3	2.09	0.53
22:DA:1445:G:C2	22:DA:1547:C:N3	2.77	0.53
1:AA:76:G:H2'	1:AA:76:G:N3	2.23	0.53
27:DF:16:LEU:HD11	27:DF:169:LEU:HD12	1.90	0.53
47:BZ:37:GLU:O	47:BZ:38:ARG:HD3	2.09	0.53
22:DA:2502:G:H5'	22:DA:2503:A:H5''	1.91	0.52
13:AM:11:ASP:O	13:AM:12:HIS:CB	2.57	0.52
22:DA:307:G:N2	22:DA:310:A:C8	2.76	0.52
22:DA:487:C:C2	22:DA:494:G:N2	2.77	0.52
1:AA:877:G:N2	8:AH:2:SER:N	2.57	0.52
41:DT:38:ALA:O	41:DT:39:THR:HB	2.09	0.52
22:DA:2199:A:C5	22:DA:2225:A:C6	2.97	0.52
1:AA:90:C:C2	1:AA:91:U:C6	2.97	0.52
53:B5:50:ILE:O	53:B5:52:PRO:HD3	2.08	0.52
3:AC:141:ALA:O	3:AC:146:ALA:HB3	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1607:C:O2	22:DA:1621:U:C5	2.61	0.52
22:BA:528:A:H2	22:BA:2043:C:H5'	1.74	0.52
42:DU:96:PHE:CZ	42:DU:103:ILE:HG12	2.44	0.52
1:AA:268:U:H2'	1:AA:269:C:C6	2.44	0.52
24:BC:141:VAL:CG1	24:BC:190:ALA:HB1	2.39	0.52
22:BA:1735:A:C4	22:BA:1736:U:C6	2.97	0.52
27:BF:108:VAL:HG13	27:BF:114:PHE:CZ	2.44	0.52
22:DA:475:C:N3	22:DA:481:G:C6	2.77	0.52
21:CU:12:PHE:O	21:CU:13:ASP:CB	2.57	0.52
10:CJ:27:GLU:O	10:CJ:27:GLU:HG2	2.08	0.52
1:AA:1324:A:C6	1:AA:1325:C:C4	2.98	0.52
3:AC:42:TYR:CZ	3:AC:90:VAL:HG21	2.44	0.52
35:BN:37:THR:HG22	35:BN:110:MET:CE	2.38	0.52
22:DA:962:G:C2'	22:DA:963:U:H5'	2.39	0.52
1:CA:714:G:H2'	1:CA:715:A:C8	2.43	0.52
23:BB:33:G:O2'	23:BB:34:A:H5'	2.09	0.52
36:DO:64:TYR:O	36:DO:67:ASN:ND2	2.41	0.52
4:AD:68:LEU:HD22	4:AD:68:LEU:N	2.23	0.52
33:BL:100:ILE:O	33:BL:100:ILE:HD12	2.09	0.52
22:BA:1794:A:H2'	22:BA:1795:C:C6	2.44	0.52
1:CA:1314:C:C5	19:CS:6:LYS:HE2	2.44	0.52
1:CA:328:C:O2	1:CA:328:C:C2'	2.58	0.52
22:BA:12:U:O2	22:BA:12:U:H2'	2.09	0.52
22:DA:488:G:N2	22:DA:493:G:C6	2.75	0.52
22:DA:2204:G:C5	22:DA:2221:G:C2	2.98	0.52
22:DA:2226:C:H2'	22:DA:2227:A:O4'	2.09	0.52
22:DA:2208:C:O2	22:DA:2217:G:C2	2.62	0.52
1:CA:949:A:C2	1:CA:1233:G:N3	2.77	0.52
22:BA:1084:A:C5	22:BA:1085:A:C6	2.97	0.52
4:AD:25:VAL:HG12	4:AD:26:ARG:N	2.24	0.52
2:AB:161:LEU:HD12	2:AB:181:ILE:CG2	2.39	0.52
50:B2:43:THR:O	50:B2:44:VAL:CG1	2.56	0.52
10:CJ:35:GLN:O	10:CJ:36:VAL:HB	2.10	0.52
1:AA:701:U:H4'	1:AA:702:A:O5'	2.09	0.52
22:BA:1846:G:N2	22:BA:1895:C:C2	2.78	0.52
22:BA:2406:A:C2	33:BL:69:ARG:NH2	2.77	0.52
8:AH:125:ILE:O	8:AH:125:ILE:CG1	2.58	0.52
22:DA:2069:G:N2	22:DA:2443:C:C2	2.77	0.52
30:BI:116:ASP:O	30:BI:117:MET:CB	2.56	0.52
30:BI:117:MET:SD	30:BI:129:ILE:HD11	2.49	0.52
10:CJ:85:ASP:HA	10:CJ:88:MET:HB2	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1923:U:H2'	22:DA:1924:C:C6	2.44	0.52
22:DA:2808:G:H4'	22:DA:2809:A:O5'	2.09	0.52
4:AD:34:ILE:O	4:AD:35:GLU:CB	2.57	0.52
2:CB:68:LEU:HD13	2:CB:161:LEU:HD13	1.89	0.52
2:AB:147:SER:O	2:AB:148:LEU:HB2	2.09	0.52
29:BH:77:THR:HA	29:BH:143:ILE:O	2.09	0.52
2:AB:56:GLU:HA	2:AB:59:LYS:HB3	1.92	0.52
14:AN:14:VAL:HA	14:AN:60:GLN:OE1	2.09	0.52
1:CA:1191:A:H5''	3:CC:4:LYS:HE3	1.90	0.52
30:DI:51:LYS:N	30:DI:51:LYS:HD3	2.23	0.52
8:CH:105:SER:O	8:CH:123:GLY:HA3	2.09	0.52
5:CE:38:VAL:HG12	5:CE:117:VAL:HG21	1.91	0.52
39:DR:66:HIS:CG	39:DR:94:THR:HG23	2.44	0.52
29:DH:72:ILE:O	29:DH:72:ILE:HG22	2.09	0.52
14:AN:46:LEU:O	14:AN:47:LYS:C	2.47	0.52
1:CA:1022:A:C6	1:CA:1023:U:C4	2.97	0.52
1:AA:1130:A:O3'	9:AI:5:GLN:NE2	2.41	0.52
22:DA:1262:A:C6	22:DA:1263:U:N3	2.77	0.52
22:DA:572:A:H5''	22:DA:573:U:OP2	2.09	0.52
22:DA:46:G:C2	22:DA:47:C:C5	2.97	0.52
1:AA:1157:A:C5	1:AA:1181:G:C6	2.98	0.52
22:DA:455:C:N3	22:DA:472:A:H2'	2.25	0.52
1:CA:1080:A:OP1	5:CE:52:LYS:CE	2.57	0.52
22:DA:78:U:OP2	46:DY:2:LYS:HD2	2.09	0.52
22:DA:193:U:C4	22:DA:194:G:N7	2.77	0.52
6:AF:15:SER:O	6:AF:18:VAL:HG23	2.08	0.52
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.44	0.52
2:AB:119:THR:O	2:AB:120:GLN:HB2	2.08	0.52
2:AB:148:LEU:HA	2:AB:151:ILE:HG22	1.91	0.52
1:AA:661:G:N2	1:AA:662:U:C2	2.77	0.52
16:CP:51:ARG:C	16:CP:51:ARG:HD3	2.30	0.52
37:BP:22:PRO:HD3	37:BP:50:ILE:HD12	1.92	0.52
1:CA:987:G:C6	1:CA:988:G:C5	2.96	0.52
48:B0:34:SER:OG	48:B0:36:GLU:HG3	2.09	0.52
28:DG:96:ALA:N	28:DG:128:GLN:O	2.42	0.52
6:CF:88:MET:SD	6:CF:90:MET:SD	3.08	0.52
38:BQ:79:PHE:CZ	38:BQ:83:LEU:HD11	2.44	0.52
1:CA:81:A:H2'	1:CA:82:G:C8	2.44	0.52
22:DA:2711:A:N6	22:DA:2714:G:N7	2.57	0.52
22:BA:2211:A:C2'	22:BA:2212:A:OP1	2.58	0.52
3:AC:22:TRP:CZ2	3:AC:32:ASN:HB3	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1213:A:C5	1:CA:1215:G:C4	2.97	0.52
22:DA:1356:G:N2	22:DA:1357:C:H1'	2.24	0.52
1:AA:64:G:C8	1:AA:99:C:C4	2.97	0.52
22:DA:2019:A:H4'	38:DQ:34:VAL:CG2	2.39	0.52
3:AC:6:HIS:CD2	3:AC:7:PRO:HD2	2.44	0.52
22:DA:1783:A:C6	22:DA:2587:A:C2	2.97	0.52
8:AH:9:ASP:OD1	8:AH:13:ARG:HD2	2.09	0.52
13:CM:14:HIS:HB2	13:CM:17:ILE:CD1	2.40	0.52
1:AA:1157:A:C6	1:AA:1180:A:C5	2.97	0.52
11:AK:23:ILE:HG22	11:AK:32:VAL:HG22	1.90	0.52
29:DH:31:VAL:CB	29:DH:32:PRO:CD	2.86	0.52
2:CB:50:PHE:CD1	2:CB:54:LEU:HD23	2.44	0.52
1:AA:109:A:C6	1:AA:326:G:C6	2.97	0.52
22:BA:137:U:H2'	22:BA:140:C:N1	2.24	0.52
22:DA:631:A:N3	22:DA:2415:G:O2'	2.32	0.52
27:DF:142:ASP:O	27:DF:145:LYS:N	2.42	0.52
22:BA:2534:A:C2'	22:BA:2535:G:O5'	2.58	0.52
5:AE:109:GLY:HA2	5:AE:112:ARG:HB3	1.90	0.52
29:DH:34:GLY:O	29:DH:35:LYS:HB2	2.09	0.52
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.91	0.52
41:BT:16:VAL:O	41:BT:17:SER:HB3	2.09	0.52
26:BE:149:ILE:CD1	26:BE:172:ALA:HA	2.38	0.52
1:CA:1243:C:N4	1:CA:1244:G:O6	2.42	0.52
1:AA:587:G:N2	1:AA:755:G:C5	2.77	0.52
1:CA:425:G:H2'	1:CA:426:U:O4'	2.09	0.52
23:DB:87:U:O2'	23:DB:88:C:H5'	2.08	0.52
22:BA:1818:U:OP2	24:BC:156:ARG:NH1	2.43	0.52
22:BA:753:A:H2'	22:BA:754:U:H6	1.75	0.52
22:DA:2189:U:H2'	22:DA:2190:G:H5'	1.91	0.52
24:BC:57:GLY:HA2	24:BC:213:TRP:HA	1.90	0.52
1:CA:1095:U:P	58:CA:1855:HOH:O	2.67	0.52
22:DA:2845:U:H5''	37:DP:52:ASN:O	2.09	0.52
22:DA:2624:G:H2'	22:DA:2625:G:O4'	2.10	0.52
32:DK:11:ALA:O	32:DK:12:ASP:HB3	2.09	0.52
1:CA:1480:A:H2'	1:CA:1481:U:O4'	2.09	0.52
1:CA:1286:U:O2	1:CA:1286:U:H2'	2.09	0.52
34:BM:24:THR:HG23	34:BM:24:THR:O	2.10	0.52
22:DA:2234:G:C6	22:DA:2235:G:N7	2.78	0.52
15:CO:27:VAL:O	15:CO:31:LEU:HD12	2.09	0.52
52:D4:16:ILE:HD13	52:D4:25:VAL:HG22	1.91	0.52
1:CA:1277:C:O2'	1:CA:1279:G:H1'	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:90:LEU:O	12:CL:93:VAL:HG22	2.09	0.52
22:DA:740:C:H5'	22:DA:1784:A:C3'	2.40	0.52
1:CA:485:U:OP2	1:CA:485:U:H4'	2.09	0.52
17:CQ:15:ASP:HA	17:CQ:21:ILE:HD12	1.90	0.52
1:AA:428:G:O4'	1:AA:430:A:C8	2.63	0.52
5:CE:106:ILE:HG13	5:CE:123:VAL:O	2.10	0.52
22:DA:2720:U:OP1	37:DP:53:ARG:NH2	2.42	0.52
17:AQ:15:ASP:C	17:AQ:17:MET:SD	2.88	0.52
22:DA:2209:G:C4	22:DA:2216:G:N2	2.78	0.52
22:DA:2209:G:C2	22:DA:2216:G:N3	2.77	0.52
22:DA:190:A:C6	22:DA:191:A:C2	2.97	0.52
1:CA:1141:C:O2'	1:CA:1142:G:OP2	2.23	0.52
22:DA:1208:C:C4	22:DA:1209:U:C5	2.97	0.52
30:BI:39:CYS:O	30:BI:43:ASN:HB2	2.10	0.52
1:CA:369:G:OP2	1:CA:388:G:N1	2.39	0.52
1:CA:793:U:O2	1:CA:1516:G:H4'	2.10	0.52
22:BA:1494:A:C2'	22:BA:1495:A:O5'	2.57	0.52
1:AA:844:G:N3	1:AA:845:A:N7	2.57	0.52
1:AA:771:G:O2'	1:AA:772:U:H5'	2.09	0.52
1:AA:142:G:N3	1:AA:142:G:H2'	2.25	0.52
22:DA:931:U:OP1	47:DZ:30:ARG:NH1	2.42	0.52
29:BH:51:ARG:NH1	29:BH:55:GLU:OE1	2.43	0.52
8:AH:79:SER:HA	8:AH:85:ILE:HG12	1.91	0.52
1:CA:813:U:H2'	1:CA:814:A:H5''	1.91	0.52
23:BB:37:C:C5	23:BB:38:C:C4	2.97	0.52
1:CA:38:G:C2	1:CA:397:A:C2	2.98	0.52
1:CA:41:G:H2'	1:CA:42:G:C8	2.44	0.52
12:AL:56:ARG:NH1	12:AL:62:GLU:HG3	2.24	0.52
1:CA:1328:C:H5''	13:CM:28:THR:HG21	1.90	0.52
22:BA:1680:U:H2'	22:BA:1681:G:O4'	2.09	0.52
22:BA:2339:C:H2'	22:BA:2340:A:C8	2.44	0.52
2:AB:109:GLN:N	2:AB:109:GLN:OE1	2.42	0.52
22:DA:497:A:H2'	22:DA:498:G:O4'	2.09	0.52
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.43	0.52
24:DC:157:SER:O	24:DC:158:ALA:C	2.48	0.52
3:AC:22:TRP:CD1	3:AC:59:ARG:HD3	2.45	0.52
1:AA:982:U:H4'	1:AA:983:A:H5'	1.89	0.52
1:AA:408:A:C2	1:AA:435:A:C2	2.97	0.52
22:DA:971:G:H2'	22:DA:972:A:O4'	2.09	0.52
29:DH:23:ALA:O	29:DH:27:ARG:N	2.38	0.52
1:AA:1160:G:N3	1:AA:1161:C:C6	2.78	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2874:C:H2'	22:DA:2875:C:C6	2.44	0.52
22:BA:2430:A:H5'	22:BA:2431:U:OP2	2.09	0.52
1:AA:328:C:C2'	1:AA:328:C:O2	2.58	0.52
46:BY:59:GLU:O	46:BY:59:GLU:HG2	2.08	0.52
22:DA:481:G:C2	22:DA:507:A:C4	2.98	0.52
21:CU:12:PHE:O	21:CU:13:ASP:HB2	2.10	0.52
1:AA:49:U:O4	1:AA:365:U:C5	2.63	0.52
22:DA:1213:A:O2'	22:DA:1239:G:O4'	2.28	0.52
29:DH:34:GLY:O	29:DH:35:LYS:HD2	2.10	0.52
1:AA:173:U:C2	1:AA:197:A:N1	2.77	0.52
22:BA:1115:G:N3	22:BA:1116:G:C8	2.78	0.52
1:CA:1478:U:H2'	1:CA:1479:C:C6	2.44	0.52
9:CI:30:ILE:HA	9:CI:65:ILE:HG13	1.92	0.52
34:DM:106:ASP:OD2	34:DM:107:GLY:N	2.42	0.52
13:AM:71:ARG:NH2	27:BF:136:ILE:HG22	2.23	0.52
1:CA:1092:A:C2	1:CA:1183:U:O2	2.62	0.52
22:DA:535:G:O2'	38:DQ:53:ARG:HG3	2.10	0.52
14:AN:41:ARG:HG3	14:AN:42:TRP:N	2.25	0.52
22:DA:374:A:C6	22:DA:401:A:C8	2.98	0.52
22:BA:304:U:H2'	22:BA:305:C:C6	2.45	0.52
22:DA:2214:C:C2	22:DA:2215:C:C6	2.98	0.52
24:DC:87:ARG:NH1	24:DC:87:ARG:HB3	2.24	0.52
22:DA:1494:A:H2'	22:DA:1495:A:C8	2.45	0.52
23:DB:21:G:N2	23:DB:63:C:C2	2.78	0.52
32:DK:113:MET:SD	32:DK:116:ILE:HD11	2.50	0.52
1:CA:1072:G:C5	1:CA:1073:U:C4	2.97	0.52
22:BA:2477:U:O2	52:B4:4:ARG:NH2	2.43	0.52
22:DA:488:G:H2'	22:DA:489:G:H2'	1.92	0.52
1:AA:1145:A:O2'	1:AA:1146:A:H5''	2.08	0.52
1:AA:73:C:C2	1:AA:74:A:C8	2.97	0.52
31:DJ:81:ILE:HG12	31:DJ:82:GLY:N	2.23	0.52
22:DA:2547:A:H2'	22:DA:2548:U:C6	2.44	0.52
22:DA:2880:C:C2	22:DA:2881:U:C5	2.97	0.52
22:DA:449:A:C5	22:DA:450:G:C8	2.97	0.52
22:DA:188:G:N2	22:DA:209:C:C2	2.78	0.52
13:AM:64:VAL:O	13:AM:69:LEU:HB2	2.10	0.52
22:DA:830:G:C2	22:DA:2448:A:N7	2.78	0.52
1:AA:1362:A:H5''	1:AA:1363:A:OP2	2.10	0.52
22:DA:1060:U:OP2	30:DI:75:PRO:HA	2.10	0.52
1:CA:211:G:N3	1:CA:211:G:H2'	2.25	0.52
22:BA:1754:A:N6	22:BA:1755:A:C6	2.78	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:49:MET:O	2:AB:53:ALA:HB2	2.10	0.52
1:CA:409:U:H2'	1:CA:410:G:O4'	2.09	0.52
4:CD:32:CYS:O	4:CD:33:LYS:HB3	2.10	0.52
46:BY:23:ARG:O	46:BY:24:GLU:C	2.46	0.52
1:AA:315:A:C8	1:AA:330:C:H5'	2.45	0.52
1:AA:202:G:N2	1:AA:216:U:O2	2.42	0.52
1:CA:765:G:N1	1:CA:812:G:H1'	2.23	0.52
1:CA:772:U:O2'	1:CA:773:G:H5'	2.09	0.52
34:DM:121:ALA:O	34:DM:123:LYS:N	2.43	0.52
22:DA:1695:G:H3'	22:DA:1695:G:N3	2.25	0.52
22:BA:26:G:H1'	22:BA:514:A:N6	2.25	0.52
22:DA:2722:G:H4'	35:DN:4:ARG:HB2	1.90	0.52
34:DM:78:LEU:O	34:DM:79:ALA:HB3	2.10	0.52
30:BI:16:GLY:CA	30:BI:51:LYS:HB3	2.40	0.52
13:AM:6:GLY:C	13:AM:8:ASN:N	2.59	0.52
40:BS:25:ARG:NH2	40:BS:74:ILE:O	2.43	0.52
15:AO:30:ALA:HA	15:AO:85:LEU:HD21	1.92	0.52
1:CA:774:G:C5	1:CA:775:G:N7	2.77	0.52
32:BK:86:LEU:HD23	32:BK:86:LEU:N	2.25	0.52
1:CA:1364:U:C2'	1:CA:1364:U:O2	2.57	0.52
42:BU:49:VAL:O	42:BU:49:VAL:HG13	2.09	0.52
22:BA:1046:A:H4'	22:BA:1046:A:OP2	2.08	0.52
23:DB:100:G:H2'	23:DB:101:A:O4'	2.10	0.52
43:DV:9:ARG:NH2	43:DV:17:SER:OG	2.42	0.52
29:BH:94:ILE:HD12	29:BH:98:ASP:HB3	1.92	0.52
2:AB:88:ASP:C	2:AB:89:GLN:HG3	2.29	0.52
22:DA:116:C:C5	22:DA:117:G:N7	2.78	0.52
13:AM:16:VAL:HG13	13:AM:34:LEU:HD13	1.92	0.52
17:AQ:12:VAL:O	17:AQ:13:VAL:HG12	2.10	0.52
22:BA:1422:G:C6	22:BA:1423:G:C5	2.98	0.52
4:CD:107:PHE:CD2	4:CD:145:ILE:HD11	2.45	0.52
30:BI:72:LYS:N	30:BI:72:LYS:HD3	2.24	0.52
22:BA:1883:U:O4	22:BA:1884:G:N1	2.43	0.52
22:DA:1838:C:C6	22:DA:1899:A:C6	2.98	0.52
22:DA:2308:G:C5'	22:DA:2309:A:OP2	2.57	0.52
1:AA:181:A:N6	1:AA:195:A:C8	2.78	0.52
22:DA:1032:A:H4'	52:D4:16:ILE:HD12	1.91	0.52
28:BG:94:TYR:HA	28:BG:106:SER:O	2.10	0.52
7:CG:40:GLU:O	7:CG:44:TYR:CD2	2.63	0.52
24:BC:77:VAL:HG23	24:BC:114:ASP:O	2.09	0.52
29:DH:25:TYR:CZ	29:DH:30:LEU:HD21	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:273:U:C2'	1:CA:274:A:H5'	2.39	0.52
8:AH:95:VAL:HG12	8:AH:96:MET:N	2.25	0.52
1:CA:202:G:H2'	1:CA:203:G:O4'	2.10	0.52
24:DC:247:PRO:HB2	24:DC:248:TRP:CZ3	2.44	0.52
13:AM:40:ALA:O	13:AM:43:VAL:HG22	2.10	0.52
22:BA:2415:G:C5	22:BA:2416:C:C5	2.98	0.52
22:DA:2679:A:C2	22:DA:2680:U:C2	2.97	0.52
1:CA:115:G:H4'	1:CA:116:A:O5'	2.10	0.52
22:DA:2050:C:C4	22:DA:2051:A:C6	2.98	0.52
22:BA:1153:C:N4	22:BA:1154:G:C6	2.78	0.52
22:BA:1916:A:H2'	22:BA:1917:U:O4'	2.10	0.52
1:AA:977:A:H1'	1:AA:982:U:O4	2.10	0.52
12:CL:93:VAL:O	12:CL:93:VAL:HG23	2.10	0.52
22:DA:2146:C:H5''	22:DA:2147:A:OP1	2.10	0.52
13:AM:16:VAL:CG1	13:AM:41:GLU:HB2	2.39	0.52
22:DA:1776:G:C2	22:DA:1789:A:N3	2.78	0.52
7:AG:130:ASN:HA	7:AG:135:VAL:HG11	1.91	0.52
10:AJ:51:VAL:O	10:AJ:62:ARG:HA	2.09	0.52
22:BA:2097:A:C2	22:BA:2098:U:C4	2.97	0.52
23:DB:14:U:O2	23:DB:14:U:C2'	2.58	0.52
51:D3:34:THR:CG2	51:D3:35:LYS:N	2.71	0.52
1:CA:756:C:H2'	1:CA:757:U:C5'	2.40	0.52
22:DA:1526:C:N4	22:DA:1527:G:C6	2.78	0.52
25:BD:177:VAL:CG2	25:BD:177:VAL:O	2.58	0.52
24:BC:225:MET:CE	24:BC:230:HIS:HB2	2.40	0.52
28:DG:169:VAL:O	28:DG:169:VAL:HG12	2.07	0.52
22:DA:1847:A:C2'	22:DA:1848:A:OP2	2.58	0.52
1:AA:1311:A:C2	1:AA:1327:C:N3	2.77	0.52
18:CR:32:TYR:C	18:CR:33:ILE:HG22	2.30	0.52
1:AA:772:U:H2'	1:AA:773:G:O5'	2.10	0.52
1:AA:662:U:H2'	1:AA:663:A:C8	2.45	0.52
22:BA:287:G:H2'	22:BA:288:U:C6	2.45	0.52
1:CA:39:G:N2	1:CA:40:C:C2	2.78	0.52
17:AQ:50:ASN:O	17:AQ:51:ASN:O	2.28	0.52
18:AR:48:ARG:HD2	18:AR:48:ARG:N	2.23	0.52
42:DU:34:VAL:HG13	42:DU:67:VAL:HG23	1.92	0.52
1:CA:981:U:H5	1:CA:982:U:HO2'	1.57	0.52
29:BH:2:GLN:O	29:BH:3:VAL:HG22	2.10	0.52
22:BA:1182:G:H2'	22:BA:1183:U:O4'	2.09	0.52
4:CD:131:ASN:CG	4:CD:131:ASN:O	2.48	0.52
1:CA:624:C:H2'	1:CA:625:U:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:91:GLY:O	28:DG:94:TYR:CD2	2.63	0.52
41:BT:43:ILE:O	41:BT:47:VAL:HG23	2.10	0.52
3:CC:10:ILE:HD12	14:CN:98:LYS:HG3	1.92	0.52
22:BA:2502:G:C5'	22:BA:2503:A:H5''	2.39	0.52
22:DA:380:G:N2	22:DA:395:U:O2	2.43	0.52
26:DE:77:ILE:CG1	26:DE:77:ILE:O	2.58	0.52
1:AA:340:U:H2'	1:AA:341:C:C6	2.45	0.52
30:DI:53:LEU:HD21	30:DI:82:LYS:HE2	1.91	0.52
22:BA:574:A:H4'	22:BA:575:A:O5'	2.10	0.52
1:AA:977:A:O2'	1:AA:979:C:OP2	2.28	0.52
14:CN:52:PRO:O	14:CN:53:ARG:CB	2.58	0.52
1:CA:1211:U:O2'	1:CA:1212:U:P	2.68	0.52
5:AE:104:GLY:HA3	5:AE:122:ASN:HA	1.92	0.52
22:DA:1783:A:H5'	22:DA:2608:G:H4'	1.91	0.52
39:DR:81:LYS:N	39:DR:81:LYS:HD3	2.25	0.52
22:BA:686:U:H4'	22:BA:687:C:OP2	2.09	0.52
22:BA:1731:G:C2	22:BA:1733:G:C4	2.98	0.52
22:DA:27:G:N2	22:DA:512:G:H1'	2.25	0.52
22:BA:265:A:N1	22:BA:427:U:O2'	2.31	0.52
33:DL:100:ILE:CG1	33:DL:100:ILE:O	2.58	0.52
17:CQ:47:HIS:HB2	17:CQ:67:LEU:HD13	1.91	0.52
22:DA:147:C:N4	22:DA:148:U:O4	2.43	0.52
32:BK:118:LEU:O	32:BK:119:ALA:HB3	2.09	0.52
40:BS:29:VAL:HG13	40:BS:55:ILE:HD11	1.91	0.52
1:AA:157:U:C2'	1:AA:158:G:H5'	2.40	0.52
1:AA:468:A:C2	1:AA:469:C:C5	2.98	0.52
22:BA:948:C:O2	22:BA:984:A:O2'	2.28	0.52
2:AB:120:GLN:O	2:AB:120:GLN:HG2	2.10	0.52
22:BA:1502:A:C2	22:BA:1503:A:C4	2.98	0.52
39:BR:59:ILE:HG12	39:BR:101:ILE:HD12	1.92	0.52
1:AA:457:G:C6	1:AA:458:U:C2	2.98	0.52
37:DP:28:VAL:HG12	37:DP:30:VAL:HG23	1.92	0.52
27:DF:55:ALA:HA	27:DF:58:ALA:HB3	1.92	0.52
1:CA:555:U:H2'	1:CA:556:C:C6	2.44	0.52
22:BA:764:A:H3'	22:BA:765:C:H5'	1.91	0.52
49:B1:35:GLU:HG2	49:B1:50:LYS:HG3	1.92	0.52
16:AP:20:VAL:HG21	16:AP:32:PHE:CG	2.45	0.52
2:AB:23:TRP:CZ3	2:AB:25:PRO:HA	2.44	0.51
22:BA:1912:A:C2	22:BA:1919:A:C4	2.97	0.51
1:CA:780:A:C2	1:CA:803:G:N1	2.78	0.51
22:DA:1570:A:H2'	22:DA:1571:A:C8	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:7:PRO:O	3:AC:11:ARG:HG3	2.10	0.51
22:DA:1343:G:C6	22:DA:1344:U:O4	2.63	0.51
5:CE:106:ILE:HD11	5:CE:124:LEU:HD23	1.91	0.51
22:DA:2107:G:C2	22:DA:2183:A:C2	2.98	0.51
22:DA:410:G:C2	22:DA:2407:A:C5	2.98	0.51
22:BA:1187:G:OP2	58:BA:3371:HOH:O	2.19	0.51
13:AM:3:ARG:HG3	13:AM:4:ILE:N	2.25	0.51
10:CJ:25:ILE:O	10:CJ:25:ILE:HD13	2.11	0.51
36:BO:88:LYS:O	36:BO:89:ASP:HB2	2.11	0.51
25:BD:103:ASP:O	25:BD:104:VAL:HG22	2.09	0.51
4:AD:37:ALA:HA	4:AD:42:GLY:HA3	1.91	0.51
22:DA:321:U:OP2	26:DE:130:LYS:HA	2.10	0.51
1:CA:1034:G:H2'	1:CA:1035:A:C8	2.44	0.51
2:AB:186:ILE:HD11	2:AB:204:ASP:HA	1.92	0.51
22:BA:1344:U:O2'	22:BA:1345:C:P	2.69	0.51
6:CF:88:MET:HE1	18:CR:64:TYR:CD2	2.45	0.51
2:AB:28:LYS:N	2:AB:29:PRO:CD	2.73	0.51
22:BA:1638:C:H4'	22:BA:2710:C:O2	2.10	0.51
22:BA:373:U:OP1	45:BX:54:LYS:NZ	2.43	0.51
2:AB:51:ASN:O	2:AB:52:GLU:HB2	2.10	0.51
1:CA:1273:C:H2'	1:CA:1274:A:O4'	2.09	0.51
1:AA:1307:U:C2	1:AA:1308:U:C6	2.98	0.51
22:DA:1726:C:H2'	22:DA:1727:C:H6	1.74	0.51
22:BA:323:C:O2	26:BE:163:ASN:ND2	2.43	0.51
22:BA:2728:U:O2'	22:BA:2729:G:OP2	2.25	0.51
22:BA:2637:U:C2'	22:BA:2638:G:H5'	2.40	0.51
28:BG:38:ASN:O	28:BG:39:ASP:HB2	2.10	0.51
13:AM:95:LEU:HB3	13:AM:96:PRO:HD2	1.92	0.51
22:BA:832:U:H2'	22:BA:833:A:C8	2.45	0.51
54:D6:4:PRO:HG2	54:D6:7:004:CD2	2.40	0.51
2:CB:103:ASN:O	2:CB:103:ASN:CG	2.48	0.51
1:AA:1492:A:OP1	12:AL:44:LYS:HA	2.08	0.51
14:AN:47:LYS:O	14:AN:49:GLN:N	2.43	0.51
5:AE:159:LYS:O	8:AH:64:LYS:NZ	2.41	0.51
25:BD:13:ARG:NH2	25:BD:15:PHE:CZ	2.78	0.51
22:DA:370:G:O2'	22:DA:423:A:H3'	2.11	0.51
2:AB:72:THR:O	2:AB:73:LYS:CB	2.58	0.51
22:DA:1793:C:N4	58:DA:3783:HOH:O	2.43	0.51
22:BA:1869:G:O2'	22:BA:1872:A:N6	2.44	0.51
22:DA:1364:G:N7	45:DX:2:SER:N	2.58	0.51
6:CF:97:THR:O	6:CF:98:GLU:CB	2.57	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1182:G:H2'	22:DA:1183:U:O4'	2.10	0.51
1:CA:451:A:C8	1:CA:452:A:C6	2.98	0.51
22:DA:291:G:N1	22:DA:350:G:N7	2.59	0.51
2:AB:40:ILE:N	2:AB:40:ILE:HD13	2.25	0.51
29:BH:110:VAL:HG22	29:BH:114:GLU:HB2	1.90	0.51
29:BH:97:ARG:HD2	1:CA:369:G:O2'	2.10	0.51
22:DA:1773:A:N7	22:DA:1829:A:H1'	2.24	0.51
22:BA:1250:G:OP2	33:BL:21:ARG:NH2	2.43	0.51
2:AB:68:LEU:HD21	2:AB:92:VAL:HG23	1.92	0.51
1:AA:697:U:C5	1:AA:698:G:C8	2.98	0.51
1:CA:575:G:C6	1:CA:821:G:N7	2.78	0.51
1:AA:468:A:C2	1:AA:469:C:C4	2.98	0.51
22:DA:1694:C:H4'	22:DA:1695:G:O5'	2.09	0.51
33:DL:68:SER:O	33:DL:69:ARG:HB2	2.10	0.51
40:DS:85:ILE:HG22	40:DS:86:MET:N	2.24	0.51
22:BA:2388:A:H5'	22:BA:2389:G:OP2	2.10	0.51
24:DC:131:PRO:HB2	24:DC:133:ARG:HG2	1.91	0.51
46:DY:9:LYS:HB3	46:DY:12:GLU:HG3	1.92	0.51
18:CR:67:LEU:HD23	18:CR:67:LEU:N	2.25	0.51
22:DA:646:U:H3'	22:DA:647:G:C4'	2.41	0.51
22:BA:871:U:H2'	22:BA:872:U:C6	2.45	0.51
34:DM:59:ARG:O	34:DM:59:ARG:CD	2.59	0.51
9:AI:61:LEU:N	9:AI:61:LEU:CD2	2.72	0.51
20:CT:71:LYS:HE3	20:CT:75:HIS:CE1	2.45	0.51
1:CA:872:A:C4	1:CA:874:G:C8	2.98	0.51
22:BA:244:A:C2	22:BA:255:A:C4	2.98	0.51
45:DX:17:ASN:HB2	45:DX:25:THR:HB	1.92	0.51
22:DA:2056:G:C2	22:DA:2057:G:C8	2.98	0.51
22:DA:2571:U:C4	22:DA:2574:G:C8	2.99	0.51
1:AA:859:G:H2'	1:AA:860:A:C8	2.45	0.51
22:DA:310:A:O2'	22:DA:311:A:P	2.65	0.51
22:BA:1169:A:N1	22:BA:1180:U:O4	2.43	0.51
9:AI:57:MET:N	9:AI:57:MET:SD	2.83	0.51
29:DH:121:VAL:O	29:DH:122:LEU:HB2	2.11	0.51
22:DA:1646:C:H5''	22:DA:1647:U:C5'	2.40	0.51
22:DA:747:U:O2	22:DA:2014:A:H1'	2.10	0.51
53:B5:65:LEU:HD11	53:B5:191:ARG:CA	2.41	0.51
1:AA:1157:A:C4	1:AA:1181:G:C6	2.98	0.51
4:AD:161:LEU:HD22	4:AD:161:LEU:N	2.26	0.51
4:AD:124:MET:CE	4:AD:146:ARG:HD2	2.40	0.51
22:DA:1993:U:H4'	25:DD:133:THR:HG21	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:51:ASN:O	17:CQ:52:GLU:O	2.28	0.51
22:DA:1773:A:N3	22:DA:1978:A:C2	2.78	0.51
22:DA:2379:G:C6	22:DA:2380:C:C4	2.99	0.51
6:CF:16:GLU:O	6:CF:18:VAL:N	2.43	0.51
1:AA:842:U:H3'	1:AA:843:U:C5'	2.40	0.51
22:DA:1466:U:O2'	22:DA:1546:G:O2'	2.02	0.51
17:CQ:60:GLU:HB3	17:CQ:76:VAL:HG23	1.92	0.51
3:AC:126:ARG:O	3:AC:127:ARG:HB2	2.09	0.51
23:DB:76:G:OP1	43:DV:9:ARG:NH2	2.40	0.51
46:BY:54:LYS:O	46:BY:58:ASN:HB2	2.10	0.51
1:AA:736:C:H2'	1:AA:737:C:C6	2.45	0.51
11:AK:35:THR:OG1	11:AK:41:ALA:N	2.44	0.51
22:BA:45:G:C5'	22:BA:46:G:OP1	2.58	0.51
4:CD:105:MET:SD	4:CD:143:VAL:HG13	2.51	0.51
27:BF:143:TYR:O	27:BF:146:VAL:HG22	2.11	0.51
22:BA:1840:G:C6	22:BA:1841:U:C4	2.98	0.51
22:BA:500:G:N2	22:BA:502:A:H3'	2.25	0.51
41:BT:48:GLN:O	41:BT:52:GLU:HA	2.11	0.51
1:CA:50:A:N6	1:CA:361:G:H4'	2.26	0.51
27:BF:21:ASN:O	27:BF:21:ASN:CG	2.48	0.51
4:CD:48:LEU:HD23	4:CD:53:VAL:N	2.25	0.51
29:BH:99:ILE:O	29:BH:103:VAL:CG2	2.58	0.51
22:BA:2211:A:O2'	22:BA:2212:A:P	2.69	0.51
22:BA:1918:A:HO2'	22:BA:1920:C:N4	2.07	0.51
22:BA:1179:G:N7	22:BA:1180:U:O4'	2.44	0.51
10:AJ:37:ARG:HB2	10:AJ:75:ASP:HB3	1.91	0.51
2:CB:206:ALA:C	2:CB:208:ARG:N	2.64	0.51
22:DA:972:A:C6	22:DA:973:A:C6	2.98	0.51
4:AD:150:LYS:O	4:AD:152:GLN:N	2.43	0.51
4:AD:153:SER:O	4:AD:155:VAL:N	2.44	0.51
42:DU:96:PHE:CE1	42:DU:103:ILE:CG1	2.92	0.51
22:DA:945:A:C8	22:DA:2448:A:C2	2.98	0.51
1:AA:554:A:H5'	12:AL:26:ALA:HB1	1.92	0.51
1:AA:109:A:H4'	1:AA:110:C:OP2	2.10	0.51
22:DA:537:G:C6	22:DA:555:G:C2	2.98	0.51
4:CD:173:VAL:O	4:CD:174:ASP:HB3	2.10	0.51
2:AB:68:LEU:CD2	2:AB:92:VAL:HG23	2.40	0.51
22:BA:1439:A:C2	22:BA:1553:A:C4	2.98	0.51
22:DA:2415:G:C5	22:DA:2416:C:C4	2.98	0.51
22:DA:1240:U:HO2'	22:DA:1241:A:P	2.33	0.51
7:AG:71:PRO:O	7:AG:96:ARG:CG	2.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:773:G:C2	1:CA:807:A:C2	2.99	0.51
2:CB:91:PHE:O	2:CB:150:GLY:HA3	2.11	0.51
5:CE:83:HIS:CD2	8:CH:96:MET:HE2	2.45	0.51
26:DE:83:VAL:HG11	26:DE:86:ALA:HA	1.93	0.51
4:AD:170:TRP:CD2	4:AD:186:PRO:HG3	2.45	0.51
24:BC:227:PRO:HA	24:BC:233:GLY:HA2	1.91	0.51
22:DA:222:A:H3'	22:DA:421:C:H5'	1.91	0.51
22:DA:2440:C:C4	22:DA:2441:U:H1'	2.44	0.51
30:DI:117:MET:SD	30:DI:125:MET:HG2	2.51	0.51
2:CB:186:ILE:HA	2:CB:200:ILE:O	2.10	0.51
22:BA:1197:G:H2'	22:BA:1198:U:C6	2.46	0.51
28:DG:24:ILE:HD11	28:DG:43:VAL:HG11	1.92	0.51
45:BX:33:LEU:O	45:BX:34:HIS:CG	2.63	0.51
22:BA:1866:A:N7	22:BA:1867:G:C8	2.79	0.51
22:BA:995:C:H5'	22:BA:995:C:H6	1.75	0.51
10:AJ:17:LEU:HD23	10:AJ:18:ILE:N	2.25	0.51
22:DA:1301:A:C5	22:DA:1303:G:C8	2.99	0.51
20:CT:44:LYS:NZ	20:CT:86:LEU:O	2.31	0.51
28:DG:12:PRO:HD2	28:DG:15:VAL:HG21	1.92	0.51
29:BH:94:ILE:CG2	29:BH:99:ILE:CG1	2.88	0.51
1:CA:1074:G:O2'	2:CB:102:THR:CG2	2.58	0.51
1:AA:1317:C:H4'	14:AN:49:GLN:CG	2.40	0.51
22:BA:1022:G:N7	31:BJ:68:LYS:HE2	2.25	0.51
1:CA:991:U:H4'	1:CA:992:U:H5''	1.92	0.51
5:CE:101:GLU:HA	5:CE:122:ASN:HB2	1.93	0.51
22:DA:1187:G:H5''	39:DR:83:TYR:CE2	2.45	0.51
22:DA:777:G:N3	22:DA:778:G:C8	2.78	0.51
17:CQ:46:VAL:CG2	17:CQ:61:ILE:HD11	2.41	0.51
29:DH:53:GLU:O	29:DH:54:LEU:C	2.49	0.51
17:AQ:16:LYS:CG	17:AQ:16:LYS:O	2.59	0.51
22:DA:450:G:N1	22:DA:454:A:OP2	2.33	0.51
22:DA:2283:C:C5	22:DA:2389:G:C4	2.98	0.51
13:AM:69:LEU:HG	13:AM:73:ILE:HD11	1.93	0.51
1:AA:104:G:N3	1:AA:105:G:C8	2.78	0.51
1:CA:72:A:C5	1:CA:73:C:C5	2.99	0.51
22:BA:977:G:C6	58:BA:3596:HOH:O	2.58	0.51
22:DA:2326:C:H1'	22:DA:2327:A:OP1	2.10	0.51
22:DA:868:U:C4	22:DA:869:G:N7	2.78	0.51
30:DI:75:PRO:HG2	30:DI:78:VAL:HG21	1.92	0.51
1:CA:207:C:C2'	1:CA:207:C:O2	2.58	0.51
5:CE:57:PRO:O	5:CE:60:ILE:HG13	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:35:GLN:HB2	10:CJ:78:GLU:HB2	1.92	0.51
29:BH:85:GLY:HA2	29:BH:91:PHE:CE2	2.46	0.51
22:DA:249:C:P	22:DA:2394:C:HO2'	2.33	0.51
22:DA:2898:U:O2'	31:DJ:134:ALA:O	2.27	0.51
22:BA:2318:G:C6	22:BA:2319:G:C6	2.99	0.51
22:DA:982:C:H4'	22:DA:983:A:OP1	2.11	0.51
1:CA:811:C:C4	1:CA:812:G:C6	2.99	0.51
10:CJ:87:LEU:HD13	10:CJ:88:MET:N	2.25	0.51
20:AT:44:LYS:HB3	20:AT:87:ALA:HB1	1.93	0.51
1:AA:1269:A:C2	1:AA:1313:U:O4'	2.64	0.51
22:BA:1082:U:H5''	30:BI:119:GLY:CA	2.40	0.51
22:DA:594:U:H2'	22:DA:595:C:C6	2.46	0.51
22:BA:959:A:C6	22:BA:960:A:N1	2.79	0.51
46:DY:28:LEU:HD22	46:DY:37:LEU:HD11	1.91	0.51
42:DU:34:VAL:HG13	42:DU:67:VAL:CG2	2.39	0.51
8:AH:5:ASP:OD2	8:AH:8:ALA:HB2	2.10	0.51
24:BC:200:HIS:O	24:BC:203:ARG:HG2	2.11	0.51
7:CG:116:MET:HA	7:CG:119:ARG:HD3	1.92	0.51
45:DX:7:VAL:HG23	45:DX:51:VAL:HG12	1.92	0.51
22:DA:577:G:O2'	22:DA:1254:A:OP1	2.28	0.51
22:BA:1832:C:N4	22:BA:1833:C:C4	2.79	0.51
22:BA:2228:G:H2'	22:BA:2229:U:C6	2.46	0.51
9:CI:12:ARG:CD	9:CI:107:ASP:HB3	2.41	0.51
10:AJ:28:THR:HG22	10:AJ:86:ALA:HB1	1.90	0.51
16:AP:19:VAL:CG1	16:AP:37:GLY:C	2.79	0.51
22:DA:757:G:H2'	22:DA:757:G:N3	2.25	0.51
16:AP:76:LYS:HG3	16:AP:76:LYS:O	2.10	0.51
12:AL:51:LYS:CD	12:AL:51:LYS:N	2.74	0.51
23:DB:7:G:H5'	36:DO:29:HIS:CE1	2.44	0.51
22:DA:485:C:N4	22:DA:496:G:C6	2.78	0.51
22:DA:2356:U:O3'	44:DW:20:ARG:HD3	2.10	0.51
22:BA:877:A:O2'	22:BA:900:A:N6	2.41	0.51
44:DW:23:VAL:HG22	44:DW:38:VAL:HG13	1.91	0.51
29:BH:117:LEU:CD2	29:BH:121:VAL:N	2.70	0.51
29:BH:132:PHE:O	29:BH:139:PHE:HB3	2.11	0.51
2:CB:99:GLY:O	2:CB:103:ASN:N	2.42	0.51
22:BA:1031:G:H4'	52:B4:6:SER:HB2	1.92	0.51
38:BQ:89:GLU:H	39:BR:49:ILE:CD1	2.23	0.51
22:DA:2199:A:C4	22:DA:2225:A:C2	2.98	0.51
30:DI:72:LYS:HG3	30:DI:116:ASP:CG	2.30	0.51
1:AA:545:C:C2'	1:AA:546:A:H5'	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1288:A:N6	1:CA:1289:A:N6	2.59	0.51
26:BE:119:ILE:HB	26:BE:187:VAL:CG2	2.40	0.51
27:BF:107:ALA:O	27:BF:110:ARG:N	2.43	0.51
16:AP:5:ARG:HA	16:AP:68:SER:OG	2.10	0.51
46:BY:45:GLN:O	46:BY:46:VAL:CB	2.58	0.51
22:DA:2798:U:H4'	22:DA:2799:A:H5'	1.93	0.51
22:BA:752:A:H3'	50:B2:1:MET:SD	2.50	0.51
29:DH:26:ALA:HA	29:DH:30:LEU:HB2	1.92	0.51
10:AJ:19:ASP:HA	10:AJ:22:THR:HB	1.92	0.51
1:AA:558:G:C5	1:AA:559:A:C2	2.99	0.51
1:AA:192:A:C6	1:AA:193:C:C4	2.99	0.51
22:DA:1286:A:N6	22:DA:1329:U:C2	2.79	0.51
18:CR:46:GLY:O	18:CR:47:THR:O	2.29	0.51
1:AA:774:G:C4	1:AA:775:G:C8	2.98	0.51
22:DA:546:U:O2	22:DA:546:U:H3'	2.11	0.51
4:CD:160:GLU:O	4:CD:163:GLU:HB2	2.11	0.51
1:CA:724:G:OP2	1:CA:833:G:O2'	2.24	0.51
41:BT:1:MET:O	41:BT:2:ILE:HG13	2.10	0.51
5:CE:19:ASN:HB2	5:CE:34:THR:OG1	2.09	0.51
20:CT:54:MET:HE1	20:CT:58:VAL:HG21	1.92	0.51
22:BA:404:A:H1'	22:BA:405:U:OP2	2.10	0.51
27:BF:23:ASN:N	27:BF:23:ASN:OD1	2.41	0.51
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.11	0.51
29:BH:100:ALA:CB	29:BH:112:LYS:HA	2.41	0.51
6:CF:13:ASP:O	6:CF:15:SER:N	2.43	0.51
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.46	0.51
2:CB:102:THR:HG23	2:CB:102:THR:O	2.10	0.51
22:BA:1075:C:H2'	22:BA:1076:C:C6	2.46	0.51
3:AC:22:TRP:CD1	3:AC:59:ARG:CD	2.94	0.51
39:BR:66:HIS:CE1	39:BR:94:THR:CG2	2.94	0.51
22:DA:579:G:C5'	22:DA:2018:G:OP2	2.59	0.51
22:DA:2134:A:C2	22:DA:2135:A:C8	2.99	0.51
9:CI:45:ARG:HG2	9:CI:46:MET:N	2.26	0.51
1:CA:718:A:H5'	11:CK:119:ASN:ND2	2.26	0.51
41:BT:67:VAL:HG22	41:BT:76:ARG:CG	2.41	0.51
1:AA:397:A:C6	1:AA:548:G:N7	2.78	0.51
1:AA:1277:C:O2'	1:AA:1279:G:C8	2.63	0.51
2:CB:16:PHE:N	2:CB:16:PHE:CD1	2.79	0.51
1:CA:72:A:C6	1:CA:73:C:N4	2.79	0.51
22:DA:26:G:C6	22:DA:27:G:N1	2.78	0.51
12:AL:86:ARG:HA	12:AL:94:ARG:HA	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:251:GLN:HG2	24:DC:255:LYS:HB2	1.93	0.51
2:CB:20:THR:OG1	2:CB:21:ARG:N	2.44	0.51
23:DB:95:U:OP2	43:DV:19:ARG:NH1	2.43	0.51
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.10	0.51
7:CG:78:ARG:HB2	7:CG:85:TYR:HB2	1.93	0.51
1:AA:469:C:C4	1:AA:470:C:C4	2.99	0.51
32:DK:91:SER:O	32:DK:92:GLU:O	2.29	0.51
22:DA:1290:C:N3	22:DA:1291:C:C5	2.79	0.51
26:DE:52:VAL:HG21	26:DE:81:GLY:CA	2.40	0.51
1:AA:663:A:C2	1:AA:743:A:C2	2.99	0.51
22:DA:2537:U:H2'	22:DA:2538:C:C6	2.46	0.51
22:DA:1881:C:H2'	22:DA:1882:U:O4'	2.10	0.51
25:DD:90:PHE:CE2	25:DD:96:ILE:HD11	2.45	0.51
1:CA:392:C:C2	1:CA:393:A:C8	2.98	0.51
22:BA:776:G:C8	22:BA:793:A:C2	2.99	0.51
15:AO:64:ARG:NH2	15:AO:68:ASP:OD1	2.44	0.51
22:BA:1694:C:H4'	22:BA:1695:G:H5''	1.92	0.51
29:BH:117:LEU:CD2	29:BH:121:VAL:CA	2.89	0.51
1:AA:829:G:N3	1:AA:830:G:C8	2.79	0.51
1:CA:1499:A:H3'	58:CA:1883:HOH:O	2.10	0.51
1:AA:1406:U:C5	1:AA:1407:C:C4	2.99	0.51
22:DA:2584:U:H3'	22:DA:2585:U:H5''	1.93	0.51
1:CA:1002:G:C4	1:CA:1003:G:C8	2.98	0.51
11:AK:126:LYS:HA	21:AU:34:ARG:HH21	1.75	0.51
13:AM:16:VAL:HG13	13:AM:41:GLU:CB	2.40	0.51
1:CA:406:G:C2	1:CA:407:U:C6	2.99	0.51
22:BA:2139:U:C2	22:BA:2140:G:C8	2.99	0.51
1:CA:17:U:H2'	1:CA:18:C:C6	2.45	0.51
22:DA:2378:A:N7	22:DA:2379:G:H1'	2.25	0.51
27:BF:107:ALA:N	27:BF:109:PRO:HD2	2.26	0.51
4:CD:157:ALA:O	4:CD:161:LEU:HD22	2.11	0.51
1:AA:1442:G:H2'	1:AA:1443:C:C6	2.46	0.51
1:AA:645:G:C6	1:AA:646:G:N7	2.78	0.51
22:DA:17:G:H4'	38:DQ:25:TYR:CE1	2.46	0.51
27:BF:132:VAL:HG22	27:BF:152:LEU:CB	2.41	0.51
22:DA:483:A:C8	42:DU:45:HIS:CD2	2.99	0.51
22:BA:2598:A:H2'	22:BA:2599:G:O5'	2.11	0.51
1:AA:626:G:H2'	1:AA:627:G:O4'	2.10	0.51
22:DA:315:G:H2'	22:DA:316:C:O4'	2.11	0.51
11:AK:51:GLY:O	11:AK:52:PHE:O	2.28	0.51
14:CN:2:ALA:O	14:CN:3:LYS:CB	2.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:193:PRO:O	2:AB:195:GLY:N	2.37	0.51
22:BA:1045:C:H3'	22:BA:1046:A:H5'	1.93	0.51
18:AR:48:ARG:N	18:AR:48:ARG:CD	2.73	0.51
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.10	0.51
1:AA:914:A:C2	1:AA:915:A:C8	2.99	0.51
53:B5:100:ILE:HG22	53:B5:104:ILE:CB	2.41	0.51
1:AA:1126:U:C6	1:AA:1281:C:N3	2.79	0.51
1:CA:940:C:N4	1:CA:941:G:O6	2.44	0.51
19:CS:29:LYS:CB	19:CS:30:PRO:HD2	2.40	0.51
5:CE:90:THR:HG22	5:CE:91:GLY:N	2.25	0.51
1:CA:1192:C:C5	1:CA:1193:G:C8	2.99	0.51
22:BA:1668:A:H4'	22:BA:1669:A:O5'	2.10	0.51
47:DZ:6:LYS:HB2	47:DZ:58:GLU:HG3	1.91	0.51
1:AA:792:A:N3	1:AA:794:A:C5	2.78	0.51
40:DS:22:ASP:OD1	40:DS:22:ASP:N	2.44	0.51
22:DA:2418:A:H2'	22:DA:2419:U:O4'	2.10	0.51
2:AB:95:ARG:NH1	2:AB:97:LEU:HA	2.26	0.51
5:AE:74:VAL:HG11	5:AE:144:LEU:HB3	1.93	0.51
23:DB:64:G:H2'	23:DB:65:U:C6	2.46	0.51
22:BA:430:A:H5''	22:BA:431:U:OP2	2.11	0.51
2:AB:21:ARG:NE	2:AB:21:ARG:HA	2.25	0.51
25:BD:13:ARG:HD2	25:BD:15:PHE:CZ	2.46	0.51
38:BQ:88:VAL:HG13	39:BR:49:ILE:HD11	1.93	0.51
18:CR:59:ILE:O	18:CR:63:ARG:HD2	2.10	0.51
7:CG:68:ASN:O	7:CG:138:ARG:NH2	2.44	0.51
1:CA:920:U:C2	1:CA:921:U:C5	2.99	0.51
40:BS:96:ILE:CD1	40:BS:98:LYS:HG3	2.41	0.51
21:CU:10:GLU:CB	21:CU:11:PRO:HD3	2.41	0.51
8:AH:113:ASP:O	8:AH:117:ARG:HB2	2.10	0.51
22:DA:195:A:C6	22:DA:198:C:C5	2.98	0.51
5:CE:50:TYR:O	5:CE:51:GLY:O	2.29	0.51
22:DA:2297:A:N1	22:DA:2321:U:H5	2.08	0.51
28:DG:118:PRO:HG3	28:DG:144:VAL:CG2	2.41	0.51
1:AA:142:G:C6	1:AA:143:A:C5	2.99	0.51
22:BA:2648:G:H2'	22:BA:2649:C:C6	2.46	0.51
9:AI:36:GLU:HA	9:AI:40:GLY:HA3	1.92	0.51
22:DA:2266:A:C2	22:DA:2272:U:C5	2.99	0.51
46:DY:28:LEU:HD12	46:DY:46:VAL:HG21	1.93	0.51
29:DH:5:LEU:HA	29:DH:36:ALA:HA	1.93	0.51
46:DY:1:MET:N	46:DY:4:LYS:HD3	2.26	0.51
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1084:G:C5	1:AA:1085:U:C4	2.99	0.51
22:DA:621:A:C5	22:DA:622:G:H1'	2.45	0.51
1:AA:429:U:H4'	1:AA:430:A:OP1	2.11	0.51
16:AP:46:LYS:CD	16:AP:47:GLU:N	2.73	0.51
16:AP:47:GLU:O	16:AP:48:GLU:O	2.29	0.51
1:AA:92:U:H2'	1:AA:93:U:C6	2.46	0.51
28:BG:80:THR:CG2	28:BG:81:GLU:N	2.72	0.51
33:BL:89:VAL:O	33:BL:94:THR:HG21	2.10	0.51
1:AA:276:G:OP1	17:AQ:17:MET:HE2	2.10	0.51
22:DA:2216:G:H2'	22:DA:2217:G:C8	2.46	0.51
22:DA:764:A:N1	22:DA:1789:A:O2'	2.38	0.51
33:BL:109:LYS:HG2	33:BL:126:ARG:CB	2.41	0.51
22:DA:1622:G:H2'	22:DA:1623:G:O4'	2.10	0.51
22:BA:1085:A:C6	22:BA:1086:A:N6	2.79	0.51
22:BA:2191:A:N1	22:BA:2192:U:C4	2.79	0.51
22:DA:1171:G:N2	22:DA:1178:C:O2	2.42	0.51
29:BH:14:SER:OG	29:BH:17:ASP:OD1	2.29	0.51
22:BA:1738:G:HO2'	22:BA:1739:A:P	2.33	0.51
4:AD:166:GLU:O	4:AD:167:LYS:HB2	2.11	0.51
22:BA:1754:A:C8	37:BP:94:LYS:HE2	2.45	0.51
9:AI:43:THR:O	9:AI:44:ALA:HB3	2.11	0.51
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.41	0.51
1:CA:32:A:H2'	1:CA:32:A:N3	2.25	0.51
1:AA:1533:C:H4'	1:AA:1534:A:O5'	2.11	0.51
29:BH:83:LYS:HA	29:BH:148:ALA:HA	1.93	0.51
22:DA:1324:G:C2	22:DA:1328:A:C6	2.99	0.51
2:AB:50:PHE:HA	2:AB:53:ALA:HB3	1.93	0.51
24:DC:68:LYS:HD3	24:DC:149:GLY:O	2.11	0.51
39:DR:56:GLY:O	39:DR:58:VAL:HG12	2.11	0.51
22:DA:249:C:O5'	22:DA:2394:C:O2'	2.29	0.51
1:AA:989:U:C2'	1:AA:990:C:O5'	2.59	0.51
1:AA:724:G:C2	1:AA:725:G:C8	2.98	0.51
16:AP:77:GLU:C	16:AP:79:ASN:H	2.13	0.51
1:CA:756:C:C2'	1:CA:757:U:H5'	2.41	0.51
2:AB:187:VAL:HG23	2:AB:187:VAL:O	2.11	0.51
30:BI:116:ASP:O	30:BI:117:MET:HB2	2.10	0.51
39:BR:14:VAL:HG13	39:BR:15:SER:N	2.26	0.51
22:BA:1672:A:C2	22:BA:2582:G:H5'	2.46	0.51
22:BA:2267:A:H5''	22:BA:2268:A:H5'	1.93	0.51
1:CA:106:C:O2	1:CA:379:C:H5'	2.10	0.51
1:AA:141:G:N2	1:AA:142:G:H1'	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1096:C:O2'	1:AA:1097:C:H5'	2.11	0.51
22:DA:875:G:N2	22:DA:903:C:C2	2.79	0.51
22:BA:2561:U:O3'	32:BK:40:LYS:HE2	2.10	0.51
22:DA:2186:G:C5	22:DA:2187:U:C5	2.99	0.51
9:CI:31:ASN:HA	9:CI:66:THR:HG22	1.92	0.51
1:AA:760:G:C5	1:AA:761:G:C8	2.99	0.51
22:DA:2744:G:C6	22:DA:2761:A:C6	2.98	0.51
22:BA:1665:A:H2'	22:BA:1666:G:O4'	2.11	0.51
22:BA:483:A:C8	22:BA:484:C:C5	2.99	0.51
24:DC:260:ASN:O	24:DC:261:LYS:HB2	2.11	0.51
22:DA:1745:A:C2	22:DA:1746:A:C8	2.99	0.51
22:DA:1383:A:C2	22:DA:1384:A:C5	2.99	0.51
46:BY:35:GLY:O	46:BY:36:GLN:O	2.29	0.51
22:DA:2334:U:C4	36:DO:16:ARG:HD3	2.46	0.51
1:CA:502:A:H2'	1:CA:503:C:O4'	2.11	0.51
52:B4:4:ARG:HD2	52:B4:6:SER:O	2.10	0.50
39:BR:49:ILE:O	39:BR:51:VAL:O	2.29	0.50
1:AA:411:A:C6	1:AA:429:U:C4	2.98	0.50
5:CE:80:THR:HA	5:CE:120:VAL:HG12	1.93	0.50
22:DA:2142:A:N6	22:DA:2143:C:N4	2.59	0.50
22:DA:2199:A:N7	22:DA:2225:A:C6	2.79	0.50
17:AQ:16:LYS:O	17:AQ:17:MET:HE3	2.11	0.50
24:BC:15:HIS:O	24:BC:204:VAL:CG2	2.59	0.50
6:CF:38:ARG:HG3	6:CF:63:ASN:HB2	1.93	0.50
22:DA:2341:G:C6	22:DA:2342:C:C4	2.99	0.50
12:AL:22:PRO:C	12:AL:24:LEU:N	2.65	0.50
12:CL:39:THR:HA	12:CL:50:ARG:O	2.10	0.50
17:CQ:47:HIS:HA	17:CQ:71:LYS:HE2	1.94	0.50
22:DA:749:A:C6	22:DA:1618:A:C2	2.99	0.50
22:DA:193:U:C5	22:DA:194:G:N7	2.80	0.50
3:AC:97:VAL:HB	3:AC:98:PRO:CD	2.41	0.50
22:DA:2443:C:H2'	22:DA:2444:G:O4'	2.11	0.50
22:BA:990:A:H5''	22:BA:991:C:P	2.51	0.50
12:AL:110:ARG:NH2	12:AL:117:TYR:CE2	2.78	0.50
22:DA:633:A:H5''	33:DL:70:LYS:HD2	1.93	0.50
17:AQ:81:LYS:N	17:AQ:81:LYS:HD3	2.26	0.50
1:CA:252:U:O4	1:CA:253:A:N6	2.44	0.50
23:DB:6:G:H2'	23:DB:7:G:O4'	2.11	0.50
22:DA:485:C:N3	22:DA:496:G:C2	2.79	0.50
22:DA:988:A:P	47:DZ:12:SER:HB3	2.51	0.50
22:BA:2665:A:C2	22:BA:2666:C:C6	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:448:A:C4	1:AA:487:A:C2	2.98	0.50
53:B5:83:LYS:HB3	53:B5:87:ALA:HB3	1.93	0.50
22:BA:1654:A:OP2	35:BN:1:MET:HA	2.11	0.50
22:BA:839:U:H2'	22:BA:840:C:C6	2.47	0.50
22:DA:2025:C:H2'	22:DA:2026:U:C6	2.47	0.50
37:DP:55:LEU:HA	37:DP:77:HIS:CD2	2.46	0.50
27:DF:131:GLY:HA2	27:DF:153:ASP:HA	1.93	0.50
22:DA:770:G:O4'	22:DA:1379:U:C5	2.64	0.50
3:AC:167:TRP:HE3	3:AC:167:TRP:C	2.15	0.50
22:DA:996:A:C2	22:DA:997:G:C8	2.99	0.50
4:AD:91:LEU:HD11	4:AD:195:ILE:HD11	1.93	0.50
22:DA:680:C:H2'	22:DA:681:G:C8	2.46	0.50
7:AG:64:VAL:O	7:AG:68:ASN:ND2	2.43	0.50
22:BA:1917:U:O2	22:BA:1918:A:O4'	2.29	0.50
22:DA:1353:A:O2'	22:DA:1354:A:H5'	2.12	0.50
22:BA:998:C:C3'	58:BA:3363:HOH:O	2.59	0.50
1:CA:1144:G:H5''	1:CA:1145:A:OP2	2.11	0.50
1:CA:1279:G:O2'	1:CA:1281:C:OP2	2.26	0.50
10:CJ:41:PRO:O	10:CJ:42:LEU:HB2	2.11	0.50
22:DA:2264:C:C2	22:DA:2277:G:N2	2.78	0.50
5:CE:100:SER:O	5:CE:101:GLU:C	2.49	0.50
1:AA:872:A:C4	1:AA:874:G:N7	2.79	0.50
22:DA:2345:G:C6	22:DA:2347:C:N4	2.79	0.50
2:AB:33:GLY:HA3	2:AB:40:ILE:H	1.76	0.50
22:DA:533:G:O5'	38:DQ:24:TYR:CD1	2.65	0.50
22:BA:63:A:C2	22:BA:64:A:C5	2.99	0.50
1:AA:188:C:O2	1:AA:188:C:C2'	2.59	0.50
10:CJ:19:ASP:HA	10:CJ:22:THR:HB	1.92	0.50
22:DA:1080:A:N6	22:DA:1087:G:OP2	2.44	0.50
22:BA:996:A:OP2	38:BQ:93:LYS:HD3	2.11	0.50
1:CA:8:A:N6	4:CD:206:LYS:HB3	2.27	0.50
35:BN:79:LEU:O	35:BN:80:PHE:HB2	2.11	0.50
38:BQ:36:PHE:CZ	38:BQ:40:ILE:HD11	2.46	0.50
1:CA:165:G:N2	1:CA:166:U:O2	2.44	0.50
1:CA:620:C:C6	4:CD:132:ILE:HD13	2.46	0.50
1:CA:1172:C:H2'	1:CA:1173:U:C6	2.46	0.50
43:BV:10:LYS:HG2	43:BV:11:GLU:HG3	1.92	0.50
22:DA:627:A:C6	22:DA:637:A:C8	2.99	0.50
12:CL:3:THR:O	12:CL:6:GLN:N	2.44	0.50
4:AD:83:LYS:HD3	4:AD:84:GLY:N	2.27	0.50
25:DD:35:THR:O	25:DD:36:GLN:HB2	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:72:G:O2'	23:DB:104:A:N6	2.43	0.50
13:CM:4:ILE:HA	13:CM:57:ARG:CZ	2.42	0.50
26:BE:189:THR:O	26:BE:190:ALA:C	2.49	0.50
42:DU:54:GLN:N	42:DU:55:PRO:HD3	2.27	0.50
22:DA:224:U:OP2	22:DA:408:G:N2	2.44	0.50
22:DA:579:G:C2	22:DA:1262:A:C6	3.00	0.50
1:AA:1160:G:O2'	1:AA:1161:C:P	2.70	0.50
22:DA:2546:U:O4'	22:DA:2565:A:C2	2.64	0.50
22:BA:1379:U:OP1	22:BA:1379:U:C5	2.64	0.50
22:BA:1778:U:H2'	22:BA:1784:A:N6	2.25	0.50
1:AA:702:A:H3'	1:AA:703:G:C5'	2.40	0.50
13:AM:29:ARG:O	13:AM:33:ILE:HG12	2.11	0.50
32:DK:99:ILE:HD13	32:DK:118:LEU:HD12	1.93	0.50
21:CU:12:PHE:N	21:CU:12:PHE:CD1	2.78	0.50
1:CA:243:A:C2	1:CA:246:A:C8	2.99	0.50
1:CA:756:C:C4	1:CA:757:U:C5	2.99	0.50
22:DA:948:C:O2	22:DA:984:A:O2'	2.27	0.50
1:CA:844:G:N3	1:CA:844:G:H2'	2.27	0.50
1:CA:1028:C:C6	1:CA:1034:G:N2	2.80	0.50
26:DE:52:VAL:HB	26:DE:74:LYS:HD3	1.93	0.50
35:DN:20:MET:HG2	35:DN:21:PHE:CD2	2.46	0.50
1:AA:790:A:C6	1:AA:791:G:C6	3.00	0.50
22:DA:2235:G:C4	22:DA:2236:U:C6	3.00	0.50
22:DA:931:U:O4	22:DA:1184:U:O4'	2.30	0.50
14:AN:36:ALA:HB2	14:AN:41:ARG:HE	1.75	0.50
1:CA:775:G:C2'	1:CA:776:G:H5'	2.41	0.50
8:AH:95:VAL:O	8:AH:96:MET:C	2.49	0.50
1:CA:1300:G:C6	1:CA:1335:U:C6	2.98	0.50
22:BA:1173:U:C2'	22:BA:1174:U:O5'	2.59	0.50
1:AA:1466:C:H2'	1:AA:1467:C:O4'	2.11	0.50
7:AG:120:LEU:O	7:AG:124:LEU:HD23	2.10	0.50
49:B1:17:THR:HG21	49:B1:42:VAL:HB	1.94	0.50
29:BH:66:ASN:OD1	29:BH:138:VAL:HG21	2.11	0.50
1:AA:864:A:N1	1:AA:865:A:C2	2.79	0.50
32:BK:2:ILE:HG23	32:BK:6:THR:HG21	1.93	0.50
22:DA:396:G:C1'	45:DX:29:PHE:HB3	2.42	0.50
40:BS:73:LYS:HB2	40:BS:106:VAL:HB	1.94	0.50
42:BU:54:GLN:N	42:BU:55:PRO:CD	2.75	0.50
32:DK:1:MET:HG2	32:DK:32:TYR:CD2	2.46	0.50
43:BV:61:LEU:HD13	43:BV:61:LEU:N	2.26	0.50
22:DA:2518:A:H2'	22:DA:2518:A:N3	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:4:GLU:HA	41:DT:7:LEU:HB2	1.93	0.50
10:AJ:10:LEU:O	10:AJ:71:LEU:HA	2.11	0.50
31:DJ:53:TYR:CD2	31:DJ:121:LYS:HA	2.46	0.50
22:DA:121:G:H1'	22:DA:131:A:N1	2.26	0.50
22:DA:1594:U:H2'	22:DA:1595:C:C6	2.47	0.50
29:BH:80:ILE:O	29:BH:147:VAL:N	2.44	0.50
22:BA:831:G:C6	22:BA:832:U:C4	2.99	0.50
22:BA:1342:A:OP1	41:BT:40:LYS:NZ	2.43	0.50
14:CN:51:LEU:O	14:CN:53:ARG:N	2.44	0.50
12:CL:80:ILE:HD12	12:CL:97:THR:CG2	2.41	0.50
1:CA:734:G:C6	1:CA:735:C:C4	2.99	0.50
35:DN:69:ARG:O	35:DN:70:THR:HG23	2.12	0.50
22:BA:2326:C:H1'	22:BA:2327:A:OP1	2.11	0.50
22:BA:2075:U:C2'	22:BA:2077:A:OP2	2.59	0.50
12:AL:24:LEU:HG	12:AL:25:GLU:H	1.75	0.50
22:DA:2267:A:H5''	22:DA:2268:A:H5'	1.93	0.50
2:CB:117:LEU:HB3	2:CB:141:LEU:HD11	1.92	0.50
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.11	0.50
22:DA:1805:A:N3	24:DC:50:THR:HB	2.26	0.50
24:BC:36:LYS:O	24:BC:37:ASN:HB2	2.11	0.50
17:AQ:52:GLU:N	17:AQ:52:GLU:OE1	2.44	0.50
27:BF:108:VAL:HG11	27:BF:176:PRO:HG2	1.91	0.50
1:AA:1138:G:C2	1:AA:1140:C:C5	2.98	0.50
22:BA:65:U:H2'	22:BA:66:C:H6	1.76	0.50
22:DA:1973:G:C5	22:DA:1974:C:C4	3.00	0.50
25:DD:104:VAL:O	25:DD:105:LYS:HB3	2.12	0.50
1:AA:198:G:C5	1:AA:220:G:C2	3.00	0.50
19:AS:64:ASP:O	19:AS:65:GLU:HB3	2.11	0.50
22:BA:1670:C:C5	22:BA:1671:U:C4	2.99	0.50
22:DA:2307:G:H4'	22:DA:2308:G:O5'	2.12	0.50
22:DA:1722:A:C2	22:DA:1739:A:H1'	2.46	0.50
22:DA:460:A:C2	22:DA:470:A:C4	3.00	0.50
22:DA:770:G:H1'	22:DA:1379:U:C4	2.47	0.50
10:AJ:9:ARG:O	10:AJ:98:VAL:HA	2.11	0.50
23:DB:84:G:N2	23:DB:93:C:C2	2.79	0.50
50:B2:10:LEU:O	50:B2:14:ARG:HG3	2.11	0.50
22:BA:2869:G:H2'	22:BA:2870:C:O4'	2.10	0.50
27:DF:70:ALA:HB3	27:DF:80:ARG:O	2.11	0.50
8:CH:126:ILE:CD1	8:CH:126:ILE:N	2.73	0.50
1:AA:418:C:N4	58:AA:1718:HOH:O	2.45	0.50
1:CA:68:G:C6	1:CA:69:G:H1'	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1926:U:H2'	22:DA:1928:A:N7	2.26	0.50
30:BI:103:ARG:HB3	30:BI:142:ASP:HA	1.93	0.50
28:DG:111:HIS:O	28:DG:111:HIS:ND1	2.43	0.50
1:AA:1251:A:H2'	1:AA:1252:A:O4'	2.11	0.50
25:DD:39:ASP:CG	25:DD:40:LEU:N	2.64	0.50
14:AN:64:CYS:HB2	14:AN:80:SER:HB3	1.93	0.50
22:BA:608:A:C6	22:BA:609:A:C6	3.00	0.50
31:DJ:76:HIS:CE1	31:DJ:85:LYS:HB2	2.46	0.50
22:BA:878:A:H5'	22:BA:879:G:OP2	2.12	0.50
29:DH:44:ILE:O	29:DH:48:GLU:HB2	2.11	0.50
22:DA:306:U:C5	22:DA:307:G:C5	3.00	0.50
22:BA:1915:U:H2'	22:BA:1916:A:O4'	2.11	0.50
22:DA:1360:G:C2	22:DA:1361:G:H1'	2.46	0.50
1:AA:796:C:OP1	11:AK:126:LYS:HG3	2.11	0.50
22:DA:1599:U:O4	22:DA:1600:C:N4	2.45	0.50
17:CQ:12:VAL:HG21	17:CQ:54:GLY:O	2.11	0.50
22:DA:348:A:C6	22:DA:349:U:C4	2.99	0.50
20:AT:67:ILE:HG13	20:AT:71:LYS:CG	2.41	0.50
4:AD:153:SER:O	4:AD:154:ARG:C	2.50	0.50
1:AA:254:G:OP1	17:AQ:70:THR:CB	2.60	0.50
22:DA:362:A:C5	22:DA:363:G:C8	3.00	0.50
13:AM:73:ILE:O	13:AM:76:SER:OG	2.27	0.50
1:CA:666:G:C5	1:CA:741:G:C6	3.00	0.50
22:BA:2191:A:C6	22:BA:2192:U:C4	2.99	0.50
17:CQ:50:ASN:O	17:CQ:52:GLU:N	2.44	0.50
27:BF:119:ALA:HB2	27:BF:177:PHE:CD1	2.46	0.50
14:CN:21:PHE:CD2	14:CN:25:ALA:HB2	2.45	0.50
8:AH:125:ILE:HD11	8:AH:128:TYR:CE1	2.47	0.50
4:AD:132:ILE:O	4:AD:132:ILE:HG13	2.12	0.50
25:BD:101:PHE:O	25:BD:103:ASP:N	2.45	0.50
22:DA:690:G:H1'	22:DA:779:U:O3'	2.12	0.50
1:AA:1270:G:O3'	1:AA:1314:C:H5'	2.11	0.50
22:DA:2298:A:C4	22:DA:2321:U:C5	2.99	0.50
22:BA:2564:A:C6	22:BA:2565:A:N1	2.80	0.50
1:CA:96:U:HO2'	1:CA:97:G:P	2.35	0.50
2:CB:130:THR:HB	2:CB:132:LYS:HB3	1.94	0.50
30:DI:18:ALA:O	30:DI:19:ASN:HB3	2.11	0.50
22:DA:1738:G:O2'	22:DA:1739:A:O5'	2.29	0.50
13:AM:6:GLY:O	13:AM:8:ASN:N	2.45	0.50
2:CB:163:VAL:HG23	2:CB:185:ALA:HB2	1.93	0.50
22:DA:404:A:C4'	22:DA:405:U:OP2	2.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:148:G:H2'	1:AA:149:A:O5'	2.12	0.50
1:AA:1477:U:H2'	1:AA:1478:U:C6	2.45	0.50
1:AA:751:U:H1'	15:AO:23:GLY:O	2.11	0.50
30:BI:108:GLU:HA	30:BI:111:GLN:HB3	1.92	0.50
20:CT:24:ARG:O	20:CT:27:MET:HG3	2.12	0.50
33:BL:20:GLY:HA2	33:BL:28:GLY:HA2	1.92	0.50
22:BA:1203:U:H1'	33:BL:4:ASN:HB3	1.94	0.50
1:AA:827:U:C4	1:AA:870:U:C2	3.00	0.50
15:AO:2:SER:O	15:AO:3:LEU:CB	2.58	0.50
25:BD:40:LEU:O	25:BD:41:ALA:C	2.50	0.50
22:BA:1005:C:C4	22:BA:1143:A:N3	2.79	0.50
26:BE:77:ILE:O	26:BE:77:ILE:HG22	2.11	0.50
22:DA:7:G:H4'	31:DJ:15:TRP:CH2	2.46	0.50
2:AB:21:ARG:C	2:AB:23:TRP:N	2.62	0.50
22:DA:1439:A:C8	22:DA:1440:U:C5	3.00	0.50
22:BA:1078:U:H5''	22:BA:1079:C:OP1	2.12	0.50
22:DA:70:G:N2	22:DA:71:A:N1	2.58	0.50
22:DA:2131:U:H5'	22:DA:2132:U:H5''	1.93	0.50
22:DA:1404:C:O2'	22:DA:1405:U:H5'	2.11	0.50
18:CR:59:ILE:HG22	18:CR:63:ARG:HD2	1.93	0.50
41:DT:27:SER:O	41:DT:29:THR:N	2.45	0.50
22:BA:2131:U:H5'	22:BA:2132:U:H5''	1.93	0.50
17:CQ:8:LEU:HB2	17:CQ:61:ILE:HG21	1.90	0.50
4:AD:32:CYS:SG	4:AD:33:LYS:N	2.85	0.50
50:D2:44:VAL:HG13	50:D2:45:SER:N	2.26	0.50
12:CL:25:GLU:CD	12:CL:27:CYS:SG	2.90	0.50
22:DA:2217:G:C4	22:DA:2218:G:C8	2.99	0.50
22:DA:1178:C:H2'	22:DA:1179:G:C8	2.47	0.50
1:AA:1109:C:P	3:AC:176:HIS:CE1	3.05	0.50
22:BA:1263:U:H2'	22:BA:1264:A:C8	2.46	0.50
42:BU:41:LEU:CD2	42:BU:62:GLU:HG3	2.41	0.50
30:DI:28:LEU:HD13	30:DI:38:PHE:CD2	2.47	0.50
1:AA:1322:C:O2'	1:AA:1323:G:OP2	2.23	0.50
22:DA:391:A:C5	22:DA:392:U:C5	3.00	0.50
1:CA:135:C:O2	16:CP:1:MET:HB2	2.10	0.50
1:AA:1462:C:C2	1:AA:1463:U:C6	3.00	0.50
22:DA:1917:U:C2'	22:DA:1918:A:H5'	2.41	0.50
22:DA:2331:G:N2	22:DA:2385:C:C2	2.79	0.50
22:DA:1333:G:C2	22:DA:1334:G:C8	2.99	0.50
22:BA:959:A:C6	22:BA:960:A:C6	2.99	0.50
22:DA:126:A:OP2	50:D2:19:ARG:HG3	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:38:ASN:O	28:BG:39:ASP:CB	2.59	0.50
25:BD:39:ASP:CG	25:BD:40:LEU:N	2.64	0.50
17:AQ:8:LEU:HD23	17:AQ:25:ILE:HD12	1.94	0.50
1:AA:151:A:H2'	1:AA:152:A:O4'	2.12	0.50
22:BA:196:A:O2'	22:BA:805:G:O6	2.18	0.50
22:DA:2466:C:OP1	52:D4:4:ARG:HB3	2.11	0.50
37:DP:46:VAL:HG12	37:DP:47:VAL:N	2.26	0.50
3:AC:40:ARG:NH1	3:AC:57:ILE:HD12	2.27	0.50
3:CC:174:PRO:O	3:CC:176:HIS:N	2.45	0.50
6:AF:14:GLN:OE1	6:AF:17:GLN:HB2	2.11	0.50
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.46	0.50
22:BA:1429:G:O2'	22:BA:1430:G:H5'	2.12	0.50
13:AM:11:ASP:O	13:AM:12:HIS:HB2	2.12	0.50
22:DA:1440:U:H2'	22:DA:1441:G:O4'	2.12	0.50
1:CA:1360:A:C2	1:CA:1361:G:H1'	2.47	0.50
35:BN:69:ARG:C	35:BN:70:THR:HG23	2.32	0.50
14:AN:10:GLU:OE2	14:AN:61:ARG:HB3	2.11	0.50
22:DA:942:G:H4'	22:DA:1190:G:H5'	1.92	0.50
9:AI:120:LYS:HG3	9:AI:123:ARG:HB3	1.93	0.50
1:CA:644:U:C2	1:CA:645:G:C8	2.99	0.50
22:DA:2262:U:C2	22:DA:2279:G:N2	2.80	0.50
22:BA:980:A:C6	22:BA:981:A:N1	2.80	0.50
22:DA:1121:C:C2	22:DA:1122:G:C8	3.00	0.50
2:AB:111:ILE:N	2:AB:111:ILE:CD1	2.75	0.50
1:CA:411:A:C6	1:CA:429:U:C5	3.00	0.50
21:AU:4:ILE:HA	21:AU:20:LYS:HE3	1.92	0.50
1:AA:11:G:C5	1:AA:12:U:C5	2.99	0.50
22:DA:1432:G:C2	22:DA:1433:A:C4	3.00	0.50
22:BA:1570:A:C6	22:BA:1571:A:C6	3.00	0.50
32:BK:116:ILE:O	32:BK:118:LEU:O	2.30	0.50
22:DA:1567:G:H2'	24:DC:85:PRO:HG3	1.93	0.50
35:BN:45:ARG:HG2	35:BN:95:THR:HG21	1.94	0.50
29:DH:127:GLU:HG3	29:DH:145:ASN:HA	1.93	0.50
2:AB:18:HIS:O	2:AB:19:GLN:HB2	2.11	0.50
36:DO:115:LEU:O	36:DO:117:PHE:N	2.45	0.50
20:CT:58:VAL:HG13	20:CT:72:ALA:CB	2.42	0.50
22:DA:627:A:OP1	33:DL:78:ARG:NH1	2.45	0.50
22:DA:1870:C:C3'	22:DA:1871:A:H5'	2.41	0.50
22:DA:2665:A:N3	22:DA:2665:A:H2'	2.27	0.50
1:AA:4:U:O2	1:AA:4:U:H2'	2.11	0.50
22:DA:1255:U:C5	26:DE:68:ALA:HA	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:438:U:C2	1:AA:494:G:C6	2.99	0.50
37:DP:4:ILE:O	37:DP:8:LEU:HB2	2.11	0.50
22:BA:1786:A:C4	22:BA:1938:A:C6	3.00	0.50
21:CU:32:VAL:HG12	21:CU:32:VAL:O	2.11	0.50
40:DS:41:LYS:O	40:DS:42:LYS:C	2.50	0.50
33:BL:77:ILE:HD11	33:BL:101:ILE:HG21	1.94	0.50
28:DG:86:LYS:HB3	28:DG:165:ALA:HB3	1.92	0.50
48:D0:44:THR:C	48:D0:46:ASP:H	2.15	0.50
44:BW:49:ALA:O	44:BW:50:ASN:HB2	2.10	0.50
1:CA:784:A:H2'	1:CA:785:G:C8	2.47	0.50
1:AA:444:G:C6	1:AA:445:G:N7	2.79	0.50
1:CA:324:G:N2	1:CA:327:A:C8	2.80	0.50
22:BA:1925:C:H4'	22:BA:1926:U:C5	2.47	0.50
1:AA:374:A:H5''	1:AA:452:A:H2	1.77	0.50
22:DA:2133:G:H2'	22:DA:2157:G:H22	1.77	0.50
22:DA:821:A:H4'	58:DA:3344:HOH:O	2.11	0.50
23:BB:90:C:H2'	23:BB:91:C:O5'	2.12	0.50
22:DA:972:A:N1	22:DA:973:A:N6	2.60	0.50
22:BA:201:C:OP1	45:BX:18:ARG:NH1	2.45	0.50
22:DA:297:G:H5''	42:DU:85:PHE:CB	2.42	0.50
12:CL:44:LYS:HB2	12:CL:45:PRO:HD3	1.94	0.50
38:DQ:76:TYR:OH	38:DQ:92:ARG:NH1	2.45	0.50
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.46	0.50
1:CA:582:C:N3	1:CA:760:G:C6	2.80	0.50
1:AA:724:G:N1	1:AA:725:G:C5	2.80	0.50
22:DA:2195:U:C2	22:DA:2196:C:C6	3.00	0.50
22:DA:2195:U:O2'	22:DA:2196:C:H5'	2.12	0.50
1:AA:1379:G:C6	1:AA:1380:U:C4	2.99	0.50
27:BF:2:ALA:O	27:BF:4:LEU:N	2.45	0.50
15:AO:46:HIS:O	15:AO:48:LYS:N	2.35	0.50
29:DH:5:LEU:HD11	29:DH:13:GLY:HA2	1.93	0.50
24:BC:240:PHE:O	24:BC:242:LYS:HG2	2.12	0.50
1:CA:1163:A:C2	1:CA:1174:G:C2	3.00	0.50
16:CP:52:LEU:HD21	16:CP:57:ILE:CD1	2.41	0.50
22:BA:2669:G:O2'	22:BA:2670:A:H5'	2.11	0.50
44:DW:33:ALA:N	44:DW:64:ASP:OD1	2.44	0.50
22:DA:727:A:H2'	22:DA:728:G:C8	2.47	0.50
33:DL:92:LEU:HA	33:DL:125:LEU:HD11	1.93	0.50
22:BA:923:G:H4'	44:BW:29:GLU:HG2	1.93	0.50
11:AK:107:ILE:HD11	11:AK:110:ILE:HD11	1.94	0.50
32:BK:4:GLU:O	32:BK:5:GLN:HB2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:563:A:N7	1:CA:567:G:H1'	2.26	0.50
22:BA:509:C:O3'	58:BA:3779:HOH:O	2.19	0.50
22:DA:43:G:N2	22:DA:437:U:C6	2.79	0.50
3:AC:144:LEU:HD13	3:AC:144:LEU:N	2.27	0.50
7:CG:90:GLU:OE1	7:CG:90:GLU:N	2.44	0.50
22:BA:1798:U:OP2	24:BC:271:ARG:NH2	2.35	0.50
23:DB:32:U:C2	23:DB:51:G:N2	2.80	0.50
16:AP:56:ARG:O	16:AP:59:HIS:N	2.44	0.50
22:BA:1667:G:O2'	22:BA:1991:U:O4	2.20	0.50
22:DA:2704:C:C4	22:DA:2705:A:C5	3.00	0.50
24:DC:158:ALA:HA	24:DC:195:VAL:HG22	1.94	0.50
1:CA:515:G:H2'	1:CA:516:U:O4'	2.11	0.50
1:AA:1317:C:H4'	14:AN:49:GLN:HG2	1.93	0.50
22:BA:1171:G:C5	22:BA:1172:C:C4	3.00	0.50
1:CA:1213:A:C6	1:CA:1215:G:N3	2.80	0.50
1:AA:499:A:H4'	1:AA:500:G:OP1	2.12	0.50
22:DA:569:U:H4'	22:DA:946:C:O2	2.12	0.50
22:DA:2014:A:H2'	22:DA:2015:A:C8	2.47	0.50
39:DR:83:TYR:C	39:DR:83:TYR:CD1	2.85	0.50
1:AA:1157:A:C5	1:AA:1180:A:C6	3.00	0.50
33:BL:93:ASN:O	33:BL:94:THR:HB	2.12	0.50
20:AT:68:HIS:HB3	20:AT:69:LYS:HE3	1.93	0.50
22:DA:669:G:N2	22:DA:670:A:N1	2.60	0.50
22:DA:1731:G:N1	22:DA:1733:G:C4	2.80	0.50
22:DA:1669:A:H3'	22:DA:1669:A:N3	2.27	0.50
2:AB:106:THR:O	2:AB:107:VAL:CB	2.60	0.50
30:DI:20:PRO:HB2	30:DI:23:PRO:HD2	1.93	0.50
27:BF:107:ALA:C	27:BF:109:PRO:HD2	2.33	0.50
22:DA:479:A:C8	22:DA:481:G:C8	3.00	0.50
32:DK:118:LEU:HD23	32:DK:118:LEU:N	2.26	0.50
22:DA:570:G:H2'	22:DA:571:U:H5'	1.93	0.50
22:BA:2547:A:H5''	32:BK:29:HIS:NE2	2.27	0.50
1:AA:1035:A:C2	1:AA:1036:A:C5	2.99	0.50
31:DJ:94:ALA:O	31:DJ:95:ARG:C	2.50	0.50
34:DM:31:PHE:CD2	34:DM:113:ALA:CB	2.95	0.50
1:CA:774:G:C5	1:CA:775:G:C8	3.00	0.50
28:BG:40:ALA:HB2	28:BG:58:TYR:CD1	2.47	0.50
1:AA:1010:U:H2'	1:AA:1011:C:C6	2.47	0.50
22:BA:2443:C:O2'	22:BA:2444:G:H5'	2.11	0.50
21:AU:53:VAL:O	21:AU:54:LYS:HB2	2.12	0.50
1:CA:840:C:N3	1:CA:842:U:H4'	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:82:LEU:O	11:CK:82:LEU:HD23	2.12	0.50
22:DA:2815:C:H2'	22:DA:2816:G:O4'	2.12	0.50
2:CB:123:ASP:O	2:CB:124:GLY:O	2.29	0.50
29:BH:99:ILE:O	29:BH:99:ILE:HG22	2.12	0.49
2:AB:21:ARG:O	2:AB:22:TYR:C	2.50	0.49
35:DN:1:MET:CE	35:DN:1:MET:N	2.71	0.49
1:AA:502:A:H2'	1:AA:503:C:O4'	2.12	0.49
23:DB:58:A:H2'	23:DB:59:A:O4'	2.13	0.49
11:AK:76:GLU:HA	22:BA:2141:G:P	2.52	0.49
22:DA:972:A:N1	22:DA:973:A:C6	2.81	0.49
22:DA:776:G:N7	22:DA:793:A:C4	2.80	0.49
22:DA:210:C:OP1	50:D2:29:GLN:NE2	2.46	0.49
1:AA:1118:U:H5'	9:AI:106:ARG:HG3	1.94	0.49
22:BA:1385:A:C4	22:BA:1386:C:C5	3.00	0.49
1:AA:1277:C:O2'	1:AA:1279:G:H8	1.93	0.49
4:AD:30:THR:C	4:AD:31:LYS:HD3	2.33	0.49
17:CQ:69:LYS:O	17:CQ:70:THR:CB	2.59	0.49
22:DA:1272:A:C5	22:DA:1618:A:H1'	2.47	0.49
1:AA:1379:G:C5	1:AA:1380:U:C5	3.00	0.49
25:DD:33:ARG:NH1	25:DD:53:GLY:O	2.45	0.49
25:BD:103:ASP:O	25:BD:105:LYS:N	2.41	0.49
24:BC:247:PRO:HD2	24:BC:248:TRP:CZ3	2.47	0.49
22:DA:2690:U:O2'	22:DA:2872:A:H1'	2.12	0.49
22:BA:78:U:H2'	22:BA:79:C:C6	2.47	0.49
22:DA:460:A:H2'	22:DA:461:C:O4'	2.12	0.49
5:CE:38:VAL:HG12	5:CE:39:VAL:N	2.27	0.49
22:BA:2563:U:H1'	22:BA:2566:A:N6	2.26	0.49
46:BY:49:ASP:O	46:BY:52:ARG:N	2.45	0.49
22:BA:441:U:H2'	22:BA:442:G:C8	2.47	0.49
1:CA:162:A:H2'	1:CA:163:C:O4'	2.11	0.49
9:CI:28:ILE:HB	9:CI:35:LEU:HB2	1.92	0.49
22:DA:2882:A:H5'	35:DN:96:ARG:HB2	1.93	0.49
36:BO:28:VAL:HG22	36:BO:29:HIS:N	2.27	0.49
1:CA:1206:G:C6	1:CA:1207:G:C5	3.01	0.49
1:AA:704:A:N6	1:AA:705:G:C6	2.80	0.49
42:BU:99:ASN:OD1	42:BU:99:ASN:C	2.50	0.49
22:DA:2409:G:C6	22:DA:2410:G:C5	3.00	0.49
3:CC:64:ILE:HG22	3:CC:97:VAL:HG23	1.94	0.49
1:AA:1242:G:C6	1:AA:1243:C:C4	3.00	0.49
22:DA:2061:G:C8	22:DA:2501:C:H4'	2.47	0.49
22:DA:2840:C:OP1	35:DN:53:THR:OG1	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:25:VAL:HG22	42:DU:36:VAL:HG22	1.93	0.49
22:BA:2189:U:H2'	22:BA:2190:G:H1'	1.95	0.49
6:AF:6:ILE:C	6:AF:7:VAL:HG12	2.32	0.49
12:AL:59:ASN:OD1	12:AL:59:ASN:C	2.48	0.49
1:CA:206:C:H2'	1:CA:207:C:C5'	2.42	0.49
33:DL:53:GLY:O	33:DL:54:GLN:O	2.29	0.49
2:CB:119:THR:O	2:CB:120:GLN:HB3	2.12	0.49
2:AB:96:TRP:CZ3	2:AB:175:GLU:OE2	2.65	0.49
6:AF:18:VAL:N	6:AF:19:PRO:CD	2.75	0.49
16:AP:11:ALA:O	16:AP:12:LYS:C	2.50	0.49
1:AA:1378:C:C5	1:AA:1379:G:C8	3.00	0.49
22:BA:1159:U:C2'	22:BA:1160:G:H5'	2.42	0.49
19:AS:5:LEU:C	19:AS:6:LYS:HG3	2.31	0.49
29:BH:43:ASN:O	29:BH:46:PHE:HB3	2.12	0.49
1:AA:1228:C:OP2	13:AM:107:ARG:NH2	2.37	0.49
1:CA:8:A:N6	4:CD:54:GLN:OE1	2.45	0.49
22:DA:2624:G:H1'	48:D0:19:HIS:CE1	2.46	0.49
22:BA:2502:G:H5''	22:BA:2503:A:H5''	1.93	0.49
34:DM:59:ARG:HD3	34:DM:59:ARG:O	2.11	0.49
22:DA:1379:U:OP1	22:DA:1379:U:C6	2.65	0.49
12:CL:3:THR:O	12:CL:4:VAL:C	2.50	0.49
13:CM:3:ARG:C	13:CM:4:ILE:HG12	2.32	0.49
10:AJ:10:LEU:HG	10:AJ:98:VAL:HG12	1.94	0.49
22:BA:2394:C:C4	22:BA:2395:C:C4	3.00	0.49
1:AA:1000:A:C2	1:AA:1041:G:C2	2.99	0.49
22:BA:2110:G:N2	22:BA:2180:U:C2	2.80	0.49
22:BA:2849:U:N3	22:BA:2867:G:O4'	2.45	0.49
22:BA:1742:U:H2'	22:BA:1743:G:O5'	2.12	0.49
22:BA:593:U:H2'	22:BA:594:U:C6	2.46	0.49
46:BY:9:LYS:HB3	46:BY:12:GLU:HG3	1.93	0.49
41:BT:61:LEU:C	41:BT:61:LEU:HD12	2.32	0.49
24:DC:51:THR:O	24:DC:54:ILE:HG13	2.12	0.49
2:CB:96:TRP:CE3	2:CB:97:LEU:O	2.65	0.49
22:BA:2033:A:P	58:BA:3480:HOH:O	2.66	0.49
29:DH:81:ALA:C	29:DH:149:GLU:HB3	2.33	0.49
1:AA:1130:A:C2	1:AA:1146:A:C5	3.01	0.49
22:DA:2612:C:H5''	22:DA:2613:U:P	2.52	0.49
22:DA:845:A:H5'	22:DA:846:U:OP2	2.12	0.49
22:BA:1384:A:H5''	22:BA:1385:A:OP2	2.12	0.49
10:AJ:52:LEU:HD11	10:AJ:58:ASN:O	2.12	0.49
22:DA:1607:C:H4'	22:DA:1608:A:O5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:830:G:C6	22:DA:2448:A:C8	3.00	0.49
22:DA:2843:G:C2	22:DA:2875:C:N3	2.80	0.49
22:DA:2345:G:H4'	22:DA:2346:A:H5''	1.94	0.49
1:CA:33:A:C2	1:CA:34:C:C2	3.00	0.49
29:BH:83:LYS:HD2	1:CA:55:A:O2'	2.13	0.49
4:CD:22:LYS:O	4:CD:24:GLY:N	2.46	0.49
10:AJ:6:ILE:HD12	10:AJ:76:ILE:HB	1.93	0.49
51:D3:32:ILE:HG22	51:D3:32:ILE:O	2.12	0.49
32:BK:107:LEU:C	32:BK:109:SER:N	2.65	0.49
22:DA:1203:U:H4'	33:DL:3:LEU:HB3	1.94	0.49
22:DA:2469:A:H4'	34:DM:55:ARG:HD3	1.93	0.49
22:BA:2615:U:C2'	22:BA:2616:C:O5'	2.60	0.49
21:AU:25:LYS:O	21:AU:27:GLY:N	2.45	0.49
2:CB:35:ARG:O	2:CB:37:LYS:N	2.45	0.49
1:AA:1035:A:H2'	1:AA:1036:A:C1'	2.42	0.49
22:DA:1320:C:N4	22:DA:1331:G:N7	2.59	0.49
46:DY:46:VAL:O	46:DY:50:VAL:HG23	2.13	0.49
1:CA:321:A:C8	1:CA:328:C:C2	3.00	0.49
22:BA:1564:C:O2'	22:BA:1565:C:H5'	2.12	0.49
16:AP:19:VAL:HG13	16:AP:37:GLY:C	2.33	0.49
22:DA:2744:G:C6	22:DA:2761:A:N6	2.80	0.49
25:DD:36:GLN:HA	25:DD:92:VAL:HG22	1.94	0.49
9:CI:13:LYS:O	9:CI:14:SER:HB3	2.12	0.49
22:BA:2478:A:H5'	52:B4:32:LYS:HD3	1.94	0.49
22:BA:1356:G:C2	22:BA:1357:C:C2	3.00	0.49
22:BA:1268:A:H2'	22:BA:1269:A:O4'	2.12	0.49
9:AI:115:LYS:O	9:AI:116:VAL:C	2.50	0.49
1:CA:1365:G:H2'	1:CA:1366:C:O4'	2.13	0.49
1:CA:182:A:C5	1:CA:184:G:N7	2.81	0.49
22:BA:1939:U:OP1	22:BA:2604:U:O2'	2.29	0.49
22:DA:729:G:OP2	24:DC:207:LYS:NZ	2.44	0.49
15:AO:27:VAL:O	15:AO:31:LEU:HG	2.12	0.49
22:DA:914:G:H5'	22:DA:915:C:OP2	2.12	0.49
22:BA:2182:U:H2'	22:BA:2183:A:C8	2.47	0.49
29:BH:86:ASP:O	29:BH:87:GLU:HB2	2.11	0.49
1:CA:1096:C:C2	1:CA:1097:C:C5	3.01	0.49
1:AA:1408:A:H5'	22:BA:1912:A:N6	2.27	0.49
1:CA:558:G:P	58:CA:1730:HOH:O	2.65	0.49
22:BA:1176:U:H2'	22:BA:1177:G:N9	2.27	0.49
22:DA:527:C:H4'	22:DA:528:A:O5'	2.12	0.49
23:BB:91:C:OP2	34:BM:18:ARG:HG2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2145:C:H5''	22:DA:2146:C:OP1	2.11	0.49
22:DA:2111:U:C4	22:DA:2147:A:C2	3.00	0.49
22:DA:2286:G:C4'	22:DA:2287:A:O5'	2.58	0.49
36:BO:67:ASN:HA	36:BO:102:ARG:HD3	1.94	0.49
22:DA:451:U:H2'	22:DA:453:A:N7	2.28	0.49
1:CA:949:A:C2	1:CA:1233:G:C4	3.00	0.49
22:DA:1177:G:H2'	22:DA:1178:C:O4'	2.12	0.49
39:DR:49:ILE:CD1	39:DR:52:PRO:HA	2.43	0.49
2:AB:181:ILE:O	2:AB:183:VAL:HG23	2.12	0.49
51:B3:27:ALA:O	51:B3:28:ASN:CB	2.60	0.49
22:DA:920:A:OP1	47:DZ:19:LYS:HE3	2.11	0.49
22:DA:1665:A:C6	22:DA:1666:G:C5	3.00	0.49
1:CA:811:C:C5	1:CA:812:G:C6	3.00	0.49
47:DZ:10:THR:HG23	47:DZ:11:ARG:HG3	1.94	0.49
35:BN:118:ARG:O	35:BN:120:GLU:N	2.45	0.49
4:AD:105:MET:CB	4:AD:107:PHE:CE2	2.96	0.49
1:AA:246:A:C2	1:AA:282:A:C6	3.01	0.49
1:AA:616:G:N2	1:AA:617:G:C4	2.80	0.49
22:DA:2211:A:H1'	22:DA:2212:A:OP1	2.12	0.49
22:DA:222:A:H3'	22:DA:421:C:C5'	2.43	0.49
1:CA:1190:G:H5'	3:CC:176:HIS:CE1	2.46	0.49
32:DK:47:ILE:HB	32:DK:48:PRO:HD2	1.93	0.49
33:DL:117:THR:HG22	33:DL:118:THR:N	2.26	0.49
38:BQ:41:LYS:HG3	38:BQ:45:TYR:CE2	2.47	0.49
27:BF:73:SER:OG	27:BF:80:ARG:HA	2.12	0.49
1:AA:878:A:OP2	8:AH:80:ARG:NH1	2.45	0.49
22:DA:244:A:C2	22:DA:255:A:C4	3.01	0.49
1:CA:448:A:C4	1:CA:487:A:C2	3.01	0.49
12:AL:114:ARG:HB2	12:AL:114:ARG:CZ	2.42	0.49
28:DG:129:THR:C	28:DG:130:GLU:HG2	2.31	0.49
22:BA:2646:C:OP2	22:BA:2732:G:O2'	2.27	0.49
22:BA:2094:A:C2	22:BA:2196:C:C2	3.01	0.49
1:AA:828:U:O4	1:AA:859:G:C8	2.66	0.49
22:BA:1094:U:O4	22:BA:1097:U:OP2	2.30	0.49
22:BA:1921:G:N3	22:BA:1922:G:C8	2.80	0.49
14:AN:43:ASN:C	14:AN:45:VAL:N	2.66	0.49
1:CA:1279:G:H4'	1:CA:1280:A:OP1	2.12	0.49
1:AA:1004:A:H2'	1:AA:1005:A:O4'	2.13	0.49
22:DA:2013:A:N1	22:DA:2014:A:C2	2.80	0.49
39:DR:80:ARG:C	39:DR:82:HIS:H	2.15	0.49
22:DA:45:G:N2	22:DA:434:U:C2	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:295:G:C2	22:DA:296:U:C5	3.00	0.49
22:BA:2309:A:C6	22:BA:2310:C:C4	3.00	0.49
33:DL:81:ASP:O	33:DL:82:LEU:CB	2.60	0.49
17:AQ:12:VAL:O	17:AQ:22:VAL:O	2.31	0.49
17:CQ:13:VAL:HG12	17:CQ:22:VAL:HG13	1.94	0.49
29:BH:91:PHE:O	1:CA:55:A:C6	2.66	0.49
22:BA:2517:C:C5	22:BA:2542:A:C5	2.99	0.49
28:DG:45:HIS:O	28:DG:46:ALA:CB	2.60	0.49
22:DA:1388:G:N2	22:DA:1389:G:H1'	2.28	0.49
22:BA:1800:C:H3'	24:BC:146:MET:HE1	1.94	0.49
3:CC:42:TYR:CZ	3:CC:90:VAL:HG21	2.47	0.49
22:DA:2024:G:OP2	22:DA:2034:U:H4'	2.12	0.49
22:DA:1390:U:C2'	22:DA:1391:U:H5'	2.43	0.49
22:DA:1057:A:C2	22:DA:1082:U:N3	2.81	0.49
24:DC:267:ILE:CG2	24:DC:267:ILE:O	2.61	0.49
50:D2:18:PHE:O	50:D2:19:ARG:C	2.50	0.49
9:CI:12:ARG:O	9:CI:12:ARG:HG3	2.13	0.49
4:AD:17:THR:CG2	4:AD:18:ASP:N	2.74	0.49
13:AM:14:HIS:HB2	13:AM:17:ILE:HD12	1.94	0.49
7:CG:60:GLU:HA	7:CG:63:GLU:HB3	1.94	0.49
1:AA:532:A:N6	3:AC:192:THR:OG1	2.46	0.49
1:AA:203:G:O2'	1:AA:465:A:N1	2.45	0.49
26:DE:136:GLN:O	26:DE:138:LEU:N	2.45	0.49
49:B1:47:VAL:HG13	49:B1:48:ILE:N	2.27	0.49
22:DA:2305:U:C4	27:DF:152:LEU:HA	2.48	0.49
7:AG:13:LEU:N	7:AG:13:LEU:HD22	2.27	0.49
33:BL:124:GLY:C	33:BL:125:LEU:HD12	2.33	0.49
1:CA:1221:G:O3'	19:CS:77:THR:HG21	2.11	0.49
22:DA:2066:C:H5''	58:DA:3505:HOH:O	2.11	0.49
22:DA:2785:C:H2'	22:DA:2786:U:O4'	2.13	0.49
22:DA:2062:A:C5	54:D6:1:MHW:CB	2.96	0.49
2:AB:21:ARG:O	2:AB:23:TRP:HB3	2.13	0.49
22:DA:1047:G:N2	22:DA:1110:G:O2'	2.46	0.49
22:BA:1092:C:H2'	22:BA:1093:G:O4'	2.12	0.49
12:AL:44:LYS:CB	12:AL:45:PRO:HD3	2.43	0.49
21:AU:34:ARG:NH2	21:AU:35:ARG:HD2	2.28	0.49
22:BA:1000:A:C6	22:BA:1001:A:C6	3.00	0.49
10:CJ:40:ILE:HG22	10:CJ:42:LEU:HG	1.94	0.49
22:DA:118:A:N7	22:DA:119:A:C8	2.80	0.49
22:BA:687:C:H2'	22:BA:688:U:O4'	2.12	0.49
22:DA:846:U:O2'	22:DA:847:U:P	2.70	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:627:A:P	33:BL:78:ARG:NH1	2.85	0.49
6:CF:38:ARG:HB3	6:CF:97:THR:HG23	1.95	0.49
1:AA:544:G:C5	1:AA:545:C:C5	3.01	0.49
1:AA:1493:A:HO2'	1:AA:1494:G:P	2.33	0.49
22:DA:919:U:H2'	22:DA:920:A:O4'	2.12	0.49
43:BV:6:ALA:HB1	43:BV:40:ILE:CG2	2.42	0.49
22:BA:1439:A:OP2	58:BA:3636:HOH:O	2.20	0.49
30:BI:79:LEU:HD22	30:BI:109:ILE:HG22	1.95	0.49
22:DA:2651:C:O2'	22:DA:2652:C:H5'	2.12	0.49
1:AA:1133:G:C6	1:AA:1134:G:N7	2.80	0.49
22:BA:947:A:O2'	22:BA:984:A:C2	2.66	0.49
18:CR:22:ASP:OD1	18:CR:23:TYR:N	2.45	0.49
30:DI:10:LYS:HB2	30:DI:56:PRO:CB	2.43	0.49
28:DG:176:LYS:O	28:DG:177:LYS:CB	2.61	0.49
1:CA:203:G:N2	1:CA:215:C:C2	2.80	0.49
22:BA:2415:G:C4	22:BA:2416:C:C6	3.00	0.49
22:DA:1299:G:H5'	22:DA:1301:A:O4'	2.12	0.49
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.48	0.49
22:DA:626:A:C2	33:DL:78:ARG:HD3	2.47	0.49
1:CA:1219:A:N6	1:CA:1220:G:O6	2.46	0.49
28:BG:118:PRO:O	28:BG:119:ALA:C	2.51	0.49
1:AA:1484:C:O2'	22:BA:1961:C:H5'	2.13	0.49
22:DA:753:A:H2'	22:DA:754:U:C6	2.48	0.49
8:CH:52:GLU:O	8:CH:58:GLU:N	2.46	0.49
29:DH:112:LYS:CG	29:DH:113:SER:N	2.76	0.49
22:DA:1304:A:C6	22:DA:1305:C:C4	2.99	0.49
31:DJ:7:LYS:O	31:DJ:11:VAL:HG23	2.11	0.49
22:DA:2714:G:P	58:DA:3548:HOH:O	2.66	0.49
22:BA:573:U:O2'	22:BA:574:A:H3'	2.12	0.49
1:AA:374:A:H5''	1:AA:452:A:C2	2.48	0.49
6:AF:91:ARG:O	6:AF:92:THR:CB	2.60	0.49
1:CA:1211:U:O4'	1:CA:1213:A:C2	2.65	0.49
1:CA:992:U:C6	1:CA:1043:G:N7	2.81	0.49
2:AB:82:ASP:C	2:AB:84:ALA:N	2.65	0.49
21:CU:35:ARG:NH2	58:CU:101:HOH:O	2.44	0.49
4:CD:192:SER:O	4:CD:193:ALA:HB3	2.13	0.49
22:DA:53:A:C8	22:DA:54:G:N7	2.81	0.49
22:DA:410:G:H2'	22:DA:2407:A:C8	2.47	0.49
35:BN:112:TYR:CG	48:B0:55:ILE:HD11	2.47	0.49
9:AI:46:MET:N	9:AI:46:MET:SD	2.75	0.49
22:BA:1405:U:C2	22:BA:1406:U:C5	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:55:THR:C	8:AH:57:PRO:HD3	2.32	0.49
22:DA:1731:G:H2'	22:DA:1732:C:H3'	1.94	0.49
1:CA:572:A:H5'	1:CA:573:A:P	2.53	0.49
1:CA:429:U:H4'	1:CA:430:A:OP1	2.11	0.49
21:CU:9:ASN:N	21:CU:12:PHE:HE2	2.11	0.49
1:CA:972:C:H4'	10:CJ:59:LYS:CG	2.43	0.49
1:AA:724:G:C4	1:AA:725:G:C8	3.01	0.49
24:BC:225:MET:HE3	24:BC:230:HIS:HB2	1.95	0.49
1:AA:198:G:C4	1:AA:199:A:C8	3.01	0.49
22:BA:864:G:O2'	22:BA:865:C:H5'	2.12	0.49
8:AH:49:PHE:HB3	8:AH:61:LEU:CD2	2.43	0.49
8:AH:96:MET:C	8:AH:98:GLY:H	2.15	0.49
40:DS:85:ILE:CG2	40:DS:86:MET:N	2.76	0.49
32:DK:1:MET:HB2	32:DK:67:LYS:HG3	1.94	0.49
8:CH:126:ILE:HD12	8:CH:126:ILE:N	2.27	0.49
1:CA:154:U:C2'	1:CA:155:A:H5'	2.42	0.49
22:BA:1469:A:C2	22:BA:1470:A:C4	3.00	0.49
22:BA:1292:G:H2'	22:BA:1293:C:C6	2.48	0.49
22:DA:1083:U:O2	22:DA:1086:A:N1	2.46	0.49
2:CB:190:ASN:OD1	2:CB:191:SER:N	2.45	0.49
22:BA:682:G:H5'	50:B2:26:ASN:CG	2.33	0.49
1:CA:1222:G:OP2	1:CA:1322:C:N4	2.46	0.49
30:BI:10:LYS:HB3	30:BI:56:PRO:HB2	1.95	0.49
22:DA:1009:A:O2'	22:DA:1153:C:H4'	2.12	0.49
1:AA:131:A:C2	1:AA:132:C:C4	3.00	0.49
52:D4:19:ARG:O	52:D4:20:ASP:CB	2.61	0.49
35:DN:87:PHE:CD1	35:DN:90:ARG:HD2	2.48	0.49
22:BA:480:A:OP2	42:BU:44:LYS:HE2	2.13	0.49
53:B5:65:LEU:HD11	53:B5:191:ARG:CB	2.43	0.49
17:CQ:46:VAL:HG22	17:CQ:61:ILE:HD11	1.94	0.49
1:AA:1161:C:H2'	1:AA:1162:C:H6	1.77	0.49
24:BC:182:ARG:HH21	24:BC:182:ARG:HG3	1.76	0.49
25:DD:12:THR:HG21	37:DP:5:ILE:HG23	1.95	0.49
22:BA:1871:A:C8	22:BA:1872:A:C6	3.00	0.49
23:DB:48:U:H2'	23:DB:49:C:C6	2.48	0.49
22:BA:1386:C:H2'	22:BA:1387:A:C8	2.48	0.49
22:BA:2310:C:C4	27:BF:77:PHE:CZ	3.01	0.49
22:DA:1936:A:N6	22:DA:1963:U:C4	2.81	0.49
22:DA:2262:U:H1'	22:DA:2328:A:H1'	1.94	0.49
24:DC:72:ASP:HA	24:DC:118:SER:O	2.13	0.49
2:AB:33:GLY:O	2:AB:34:ALA:HB2	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:118:A:N3	22:BA:178:G:H1'	2.28	0.49
5:AE:137:VAL:O	5:AE:137:VAL:CG2	2.60	0.49
22:DA:1805:A:N3	22:DA:1813:G:C2	2.81	0.49
33:BL:30:THR:O	33:BL:33:ARG:HG2	2.13	0.49
27:DF:108:VAL:N	27:DF:109:PRO:HD2	2.28	0.49
1:AA:22:G:C5	1:AA:23:C:C5	3.00	0.49
1:CA:246:A:C4	1:CA:279:A:C6	3.00	0.49
22:DA:2896:C:C4	22:DA:2897:U:C5	3.01	0.49
10:CJ:15:HIS:HB3	10:CJ:70:HIS:CD2	2.47	0.49
1:AA:481:G:O2'	1:AA:483:C:N4	2.42	0.49
2:AB:16:PHE:O	2:AB:41:ILE:HD12	2.13	0.49
1:AA:102:G:N1	1:AA:103:U:C4	2.81	0.49
22:DA:1581:G:C5	22:DA:1582:C:N4	2.81	0.49
22:DA:1581:G:C6	22:DA:1582:C:N4	2.80	0.49
51:D3:45:ARG:N	51:D3:46:PRO:CD	2.76	0.49
28:DG:118:PRO:O	28:DG:119:ALA:C	2.51	0.49
22:DA:2835:A:C2	22:DA:2879:A:N7	2.81	0.49
1:CA:158:G:C6	1:CA:164:G:C6	3.00	0.49
22:DA:1276:A:N1	22:DA:1295:C:C2	2.80	0.49
22:DA:2236:U:H2'	22:DA:2237:G:O4'	2.13	0.49
1:AA:792:A:H4'	1:AA:793:U:O5'	2.12	0.49
23:DB:84:G:N2	23:DB:93:C:O2	2.46	0.49
34:BM:132:THR:HG22	34:BM:133:LYS:N	2.28	0.49
16:AP:39:PHE:CD2	16:AP:74:LEU:HD11	2.48	0.49
9:CI:25:ASN:O	9:CI:27:LYS:N	2.45	0.49
1:AA:1293:C:H2'	1:AA:1294:G:O4'	2.13	0.49
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.95	0.49
22:DA:538:A:O2'	31:DJ:8:PRO:CG	2.60	0.49
22:DA:851:C:O2'	47:DZ:43:ALA:O	2.29	0.49
1:AA:604:G:C6	1:AA:635:A:N1	2.81	0.49
1:CA:748:G:H2'	1:CA:749:A:C8	2.47	0.49
22:BA:1956:U:H2'	22:BA:1957:C:H5'	1.94	0.49
1:AA:229:U:O2'	1:AA:230:G:H5'	2.12	0.49
36:BO:24:THR:HG22	36:BO:42:PRO:HD3	1.95	0.49
42:BU:61:LYS:HE3	42:BU:61:LYS:HA	1.93	0.49
22:BA:1644:C:O2	22:BA:1644:C:H2'	2.11	0.49
22:BA:894:U:H2'	22:BA:895:U:C6	2.48	0.49
22:DA:307:G:N1	22:DA:310:A:OP2	2.45	0.49
22:BA:1917:U:C5	22:BA:1918:A:C6	3.01	0.49
1:CA:1002:G:C5	1:CA:1003:G:C8	3.01	0.49
39:BR:66:HIS:CE1	39:BR:94:THR:HB	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:113:ARG:O	2:AB:117:LEU:HB2	2.12	0.49
22:BA:684:G:C6	22:BA:774:G:C4	3.01	0.49
11:CK:126:LYS:O	11:CK:127:ARG:HB2	2.13	0.49
33:BL:85:VAL:HG11	33:BL:94:THR:CG2	2.42	0.49
24:BC:204:VAL:HG23	24:BC:204:VAL:O	2.13	0.49
22:DA:2373:G:C6	22:DA:2374:C:N4	2.81	0.49
22:DA:1097:U:O2	30:DI:9:VAL:HG11	2.13	0.49
1:CA:451:A:H61	1:CA:481:G:H5'	1.77	0.49
4:AD:122:ALA:HA	4:AD:146:ARG:HG3	1.95	0.49
22:BA:1588:G:C2	22:BA:1589:U:C6	3.01	0.49
22:DA:1805:A:O2'	24:DC:50:THR:HA	2.12	0.49
10:AJ:35:GLN:O	10:AJ:36:VAL:O	2.31	0.49
23:DB:94:A:H2'	23:DB:95:U:O4'	2.12	0.49
8:AH:125:ILE:HD11	8:AH:128:TYR:CZ	2.48	0.49
1:CA:130:A:O2'	1:CA:131:A:O5'	2.31	0.49
1:AA:588:G:N1	1:AA:589:U:C2	2.81	0.49
1:AA:102:G:C2	1:AA:103:U:C5	3.00	0.49
15:CO:19:ALA:O	15:CO:20:ASN:CB	2.61	0.49
19:CS:80:TYR:O	19:CS:81:ARG:HB2	2.13	0.49
22:BA:2316:G:O2'	27:BF:125:ARG:NH1	2.46	0.49
22:DA:2331:G:N2	22:DA:2385:C:C6	2.80	0.49
1:AA:8:A:C6	4:AD:206:LYS:HB3	2.48	0.49
22:BA:1985:C:O2	22:BA:1985:C:H2'	2.12	0.49
1:AA:1307:U:C2	1:AA:1308:U:C5	3.01	0.49
34:BM:135:VAL:O	34:BM:136:MET:O	2.30	0.49
22:DA:2184:A:H2'	22:DA:2185:U:C6	2.46	0.49
1:CA:355:C:C4	1:CA:356:A:N7	2.80	0.49
11:CK:65:VAL:O	11:CK:68:GLU:HB2	2.12	0.49
24:DC:93:LEU:HD13	24:DC:103:TYR:CE1	2.48	0.49
22:DA:1064:C:N3	22:DA:1074:G:N2	2.59	0.49
22:DA:1483:G:C6	22:DA:1484:U:C4	3.00	0.49
11:AK:112:ASP:OD1	11:AK:112:ASP:C	2.51	0.49
22:BA:868:U:C4	22:BA:869:G:N7	2.81	0.49
26:BE:108:ILE:HD11	26:BE:180:LEU:HD13	1.94	0.49
29:BH:121:VAL:H	29:BH:122:LEU:HB2	1.77	0.49
29:BH:139:PHE:O	29:BH:140:ALA:HB2	2.13	0.49
14:AN:46:LEU:HD12	14:AN:46:LEU:C	2.32	0.49
22:DA:1262:A:N3	48:D0:7:LYS:NZ	2.57	0.49
1:CA:671:G:O2'	1:CA:672:U:H5'	2.13	0.49
29:DH:21:VAL:CG2	29:DH:22:LYS:N	2.76	0.49
37:DP:113:ARG:O	37:DP:114:LEU:C	2.50	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1820:U:O2	24:DC:200:HIS:HB3	2.12	0.49
1:CA:577:G:C2	1:CA:578:C:C6	3.01	0.49
30:DI:8:TYR:HB3	30:DI:59:ILE:O	2.12	0.49
22:DA:1095:A:H2'	22:DA:1096:A:C4	2.48	0.49
30:DI:75:PRO:HG2	30:DI:78:VAL:CG2	2.42	0.49
4:AD:124:MET:HE2	4:AD:146:ARG:HD2	1.95	0.49
2:AB:106:THR:O	2:AB:107:VAL:HG23	2.13	0.49
2:AB:67:ILE:O	2:AB:68:LEU:CB	2.59	0.49
22:DA:309:A:H1'	22:DA:329:G:N3	2.27	0.49
26:BE:106:LYS:HG3	26:BE:200:LEU:HG	1.94	0.49
4:CD:145:ILE:CG2	4:CD:150:LYS:HA	2.43	0.49
1:AA:1319:A:C4	1:AA:1323:G:C8	3.01	0.49
4:AD:36:GLN:O	4:AD:37:ALA:HB2	2.13	0.49
8:CH:13:ARG:HD3	8:CH:27:MET:HB3	1.94	0.49
32:DK:34:GLY:O	32:DK:35:VAL:C	2.51	0.49
29:DH:72:ILE:O	29:DH:141:LYS:O	2.30	0.49
22:BA:1045:C:C3'	22:BA:1046:A:H5'	2.42	0.49
2:CB:185:ALA:O	2:CB:200:ILE:HB	2.13	0.49
1:CA:1055:A:C6	1:CA:1206:G:C5	3.01	0.49
1:AA:1039:G:O2'	1:AA:1040:U:H5'	2.13	0.49
36:BO:24:THR:HG22	36:BO:42:PRO:CG	2.43	0.49
22:DA:2359:C:O2'	51:D3:54:ASP:OD2	2.22	0.49
22:BA:907:G:H2'	22:BA:908:C:O5'	2.13	0.49
6:CF:8:PHE:CE1	6:CF:60:VAL:HB	2.48	0.49
36:DO:104:GLN:O	36:DO:107:ALA:N	2.46	0.49
22:BA:742:A:H2'	22:BA:743:A:C8	2.48	0.49
1:CA:1014:A:H5'	19:CS:14:HIS:CD2	2.47	0.49
22:BA:1338:G:N7	41:BT:66:LYS:NZ	2.61	0.49
15:AO:56:LEU:O	15:AO:56:LEU:HD12	2.12	0.49
26:DE:196:VAL:O	26:DE:196:VAL:HG12	2.11	0.49
9:CI:127:PHE:CD1	9:CI:127:PHE:C	2.86	0.49
23:DB:9:G:O2'	36:DO:45:SER:OG	2.28	0.49
22:BA:532:A:H2'	38:BQ:28:ARG:NH1	2.27	0.49
1:AA:1537:U:C4	1:AA:1538:C:C4	3.00	0.49
30:DI:101:ILE:O	30:DI:102:SER:HB3	2.12	0.49
18:AR:37:GLY:O	18:AR:63:ARG:NH2	2.45	0.49
22:BA:523:C:O2'	22:BA:524:G:H5'	2.13	0.49
22:BA:2198:A:C2	29:BH:29:PHE:HB2	2.48	0.49
14:CN:36:ALA:HB2	14:CN:42:TRP:CH2	2.47	0.48
22:DA:60:G:C6	22:DA:74:A:C6	3.01	0.48
1:AA:453:G:H2'	1:AA:454:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1176:U:H2'	22:BA:1177:G:C8	2.48	0.48
1:CA:1215:G:C6	1:CA:1216:A:C5	3.00	0.48
22:DA:1355:G:O2'	22:DA:1356:G:H5'	2.12	0.48
22:DA:333:G:C5	22:DA:334:C:C5	3.01	0.48
4:AD:9:LEU:HD21	4:AD:22:LYS:HB2	1.94	0.48
1:AA:874:G:C5	1:AA:875:U:C5	3.01	0.48
37:DP:89:ARG:HD2	37:DP:113:ARG:NH1	2.27	0.48
33:BL:85:VAL:CG1	33:BL:94:THR:CG2	2.91	0.48
9:AI:120:LYS:HG3	9:AI:123:ARG:CB	2.43	0.48
2:AB:161:LEU:HD12	2:AB:181:ILE:HG21	1.95	0.48
33:DL:81:ASP:O	33:DL:82:LEU:CD2	2.61	0.48
10:CJ:6:ILE:HD11	10:CJ:79:PRO:HA	1.95	0.48
5:AE:136:VAL:HG22	5:AE:137:VAL:N	2.28	0.48
43:BV:80:HIS:ND1	43:BV:81:PRO:HD2	2.28	0.48
22:BA:1556:C:O2'	22:BA:1557:C:H5'	2.12	0.48
22:DA:657:U:C2	22:DA:658:U:C5	3.01	0.48
22:DA:77:G:H5''	46:DY:2:LYS:HB3	1.95	0.48
22:DA:1817:G:O2'	22:DA:1818:U:H5'	2.12	0.48
10:AJ:32:THR:OG1	10:AJ:33:GLY:N	2.46	0.48
22:BA:2887:A:H5'	22:BA:2888:C:OP2	2.13	0.48
1:CA:755:G:C2	1:CA:756:C:C5	3.01	0.48
22:BA:947:A:O2'	22:BA:984:A:H2	1.96	0.48
1:AA:66:A:H4'	1:AA:173:U:C5	2.48	0.48
1:CA:1092:A:N1	1:CA:1183:U:O2	2.46	0.48
22:DA:186:G:C2	22:DA:211:C:C2	3.01	0.48
1:AA:1307:U:N3	1:AA:1308:U:C5	2.81	0.48
4:AD:91:LEU:HD21	4:AD:195:ILE:CD1	2.43	0.48
21:AU:6:VAL:O	21:AU:6:VAL:HG23	2.14	0.48
1:AA:998:C:H2'	1:AA:999:C:C6	2.48	0.48
30:BI:44:ALA:O	30:BI:45:LYS:HD3	2.12	0.48
26:BE:40:ARG:HD2	26:BE:92:HIS:CD2	2.48	0.48
13:AM:19:LEU:O	13:AM:25:VAL:HG21	2.13	0.48
1:CA:454:G:N2	1:CA:479:U:O2	2.44	0.48
1:AA:402:G:C5	1:AA:403:C:C5	3.01	0.48
28:DG:35:ARG:NE	28:DG:71:LEU:HD22	2.28	0.48
22:DA:2734:A:C8	22:DA:2735:G:C8	3.01	0.48
36:BO:25:ARG:HG3	36:BO:27:VAL:HG12	1.94	0.48
1:CA:977:A:H3'	1:CA:977:A:N3	2.28	0.48
1:AA:618:C:H1'	16:AP:14:ARG:NH1	2.28	0.48
22:DA:950:G:H2'	22:DA:951:C:O4'	2.13	0.48
12:AL:43:LYS:HG3	12:AL:44:LYS:HD3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:489:G:HO2'	22:DA:491:G:H8	1.61	0.48
9:AI:50:GLN:C	9:AI:52:LEU:H	2.17	0.48
27:BF:158:THR:HG22	27:BF:160:ALA:H	1.78	0.48
3:AC:7:PRO:HG2	3:AC:184:TYR:CD2	2.47	0.48
38:BQ:112:LYS:CD	39:BR:48:LYS:HD2	2.43	0.48
4:AD:190:ASP:O	4:AD:191:LEU:HD12	2.13	0.48
5:AE:82:GLN:HG2	5:AE:150:PRO:HB3	1.95	0.48
22:DA:204:A:C8	22:DA:206:U:C2	3.01	0.48
6:CF:37:HIS:O	6:CF:38:ARG:HB3	2.13	0.48
22:DA:2812:G:N2	22:DA:2889:C:C2	2.80	0.48
29:BH:91:PHE:HB3	1:CA:55:A:C4	2.49	0.48
46:BY:6:LEU:HD13	46:BY:56:LEU:HD22	1.95	0.48
21:CU:11:PRO:O	21:CU:12:PHE:CB	2.62	0.48
2:AB:219:ALA:HA	2:AB:222:ARG:NH2	2.28	0.48
22:DA:77:G:OP1	46:DY:52:ARG:HD3	2.12	0.48
22:DA:2196:C:O2'	22:DA:2197:U:H5'	2.13	0.48
22:DA:937:C:C2	22:DA:938:G:C8	3.01	0.48
1:CA:806:C:O2'	1:CA:807:A:H5'	2.13	0.48
22:DA:2773:C:OP1	25:DD:171:THR:OG1	2.26	0.48
32:DK:113:MET:O	32:DK:116:ILE:HG13	2.13	0.48
1:AA:1126:U:O2	1:AA:1280:A:H5"	2.12	0.48
26:BE:104:ALA:O	26:BE:108:ILE:HG23	2.13	0.48
22:DA:1865:U:C5	22:DA:1875:G:C2	3.01	0.48
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.13	0.48
22:DA:2718:G:C6	22:DA:2719:G:C4	3.01	0.48
1:AA:287:U:C2	1:AA:288:A:C8	3.01	0.48
10:AJ:41:PRO:O	10:AJ:42:LEU:HB3	2.13	0.48
53:B5:55:SER:HB3	53:B5:203:GLU:CB	2.43	0.48
45:DX:40:VAL:HG22	45:DX:45:ARG:O	2.13	0.48
8:AH:89:LYS:HG3	8:AH:90:ASP:H	1.79	0.48
1:CA:31:G:O4'	1:CA:306:A:C2	2.66	0.48
1:AA:592:G:C2	1:AA:593:U:C2	3.01	0.48
1:CA:295:C:C4	1:CA:296:U:C5	3.00	0.48
9:AI:130:ARG:NH1	9:AI:130:ARG:HB3	2.28	0.48
1:CA:84:U:O2'	1:CA:85:U:H5'	2.13	0.48
22:DA:2432:A:N1	45:DX:21:ALA:HA	2.28	0.48
1:AA:828:U:C4	1:AA:859:G:C4	3.01	0.48
24:DC:160:THR:CG2	24:DC:177:ARG:HG2	2.43	0.48
22:BA:1079:C:C4	22:BA:1088:A:C2	3.01	0.48
22:BA:1914:C:C2	22:BA:1915:U:C6	3.01	0.48
22:BA:1916:A:H2'	22:BA:1917:U:C1'	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:992:U:O4'	1:CA:993:G:N2	2.46	0.48
1:CA:1160:G:O2'	1:CA:1161:C:P	2.71	0.48
4:AD:190:ASP:O	4:AD:191:LEU:O	2.30	0.48
23:BB:24:G:N2	23:BB:28:C:C2	2.81	0.48
22:DA:84:A:H4'	22:DA:85:G:H4'	1.95	0.48
17:AQ:17:MET:HG2	17:AQ:20:SER:HB3	1.95	0.48
22:DA:847:U:O2	22:DA:847:U:H2'	2.13	0.48
6:CF:38:ARG:CG	6:CF:63:ASN:HB2	2.43	0.48
1:AA:104:G:C2	1:AA:105:G:N7	2.81	0.48
6:AF:7:VAL:CG2	6:AF:7:VAL:O	2.59	0.48
22:DA:2164:C:H2'	22:DA:2165:C:H6	1.75	0.48
4:AD:157:ALA:O	4:AD:160:GLU:HB3	2.13	0.48
22:DA:1530:G:N2	22:DA:1542:U:C2	2.81	0.48
1:CA:254:G:H4'	17:CQ:20:SER:HB2	1.96	0.48
22:DA:1469:A:C2	22:DA:1470:A:C4	3.01	0.48
1:AA:316:C:N3	1:AA:317:U:C5	2.81	0.48
21:CU:10:GLU:N	21:CU:12:PHE:CE2	2.81	0.48
22:DA:192:C:P	58:DA:3740:HOH:O	2.70	0.48
5:AE:115:LEU:CG	5:AE:120:VAL:HG21	2.43	0.48
22:DA:2033:A:H4'	22:DA:2034:U:OP1	2.13	0.48
1:AA:1379:G:C4	1:AA:1380:U:C5	3.01	0.48
20:AT:44:LYS:HD3	20:AT:87:ALA:HA	1.94	0.48
27:BF:105:THR:HG23	27:BF:106:ILE:CG2	2.43	0.48
22:BA:1716:U:C2'	22:BA:1717:A:H5'	2.43	0.48
19:CS:40:ILE:HA	19:CS:44:MET:SD	2.53	0.48
30:DI:39:CYS:HA	30:DI:42:PHE:HB3	1.94	0.48
46:DY:28:LEU:HB3	46:DY:43:LEU:HD23	1.94	0.48
23:DB:62:C:H2'	23:DB:63:C:C6	2.47	0.48
13:AM:91:HIS:HA	13:AM:109:ARG:NH2	2.29	0.48
9:AI:61:LEU:N	9:AI:61:LEU:HD22	2.29	0.48
44:DW:38:VAL:CG2	44:DW:80:ILE:CD1	2.91	0.48
22:BA:1260:A:C6	22:BA:1261:C:C4	3.01	0.48
1:CA:525:C:N4	1:CA:526:C:N4	2.61	0.48
8:AH:39:VAL:CG1	8:AH:112:THR:HG22	2.43	0.48
6:CF:99:ALA:O	6:CF:100:SER:CB	2.61	0.48
2:CB:152:LYS:HG3	2:CB:153:ASP:N	2.28	0.48
1:CA:198:G:O2'	1:CA:199:A:H5'	2.12	0.48
1:AA:568:G:O6	12:AL:2:ALA:HB2	2.13	0.48
22:DA:636:G:C6	33:DL:111:ILE:HD11	2.48	0.48
10:CJ:57:VAL:HG22	10:CJ:58:ASN:H	1.78	0.48
1:AA:787:A:H2'	1:AA:788:U:O5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1553:A:N7	22:DA:1555:G:C6	2.81	0.48
22:DA:3:U:H2'	22:DA:4:U:O4'	2.13	0.48
1:AA:1405:G:H1'	1:AA:1519:A:O4'	2.13	0.48
38:DQ:98:ILE:HG22	38:DQ:106:PHE:HB2	1.95	0.48
1:AA:1535:C:H2'	1:AA:1536:C:C6	2.47	0.48
22:DA:1211:C:H5''	22:DA:1212:G:C8	2.47	0.48
2:AB:10:LEU:HD23	2:AB:10:LEU:C	2.33	0.48
8:AH:51:VAL:O	8:AH:51:VAL:HG22	2.12	0.48
21:AU:35:ARG:O	21:AU:36:GLU:C	2.51	0.48
12:CL:61:PHE:CD1	12:CL:61:PHE:N	2.82	0.48
7:AG:129:GLU:O	7:AG:130:ASN:C	2.51	0.48
22:DA:188:G:C2	22:DA:209:C:C2	3.02	0.48
9:AI:81:HIS:NE2	9:AI:104:VAL:O	2.47	0.48
22:DA:2387:U:H1'	44:DW:41:ARG:HD3	1.95	0.48
4:CD:148:LYS:CD	4:CD:148:LYS:H	2.26	0.48
17:AQ:12:VAL:CG1	17:AQ:55:ILE:HA	2.43	0.48
4:AD:171:LEU:O	4:AD:171:LEU:HD12	2.12	0.48
22:BA:1936:A:H2	22:BA:1943:U:N3	2.10	0.48
4:AD:99:ASP:OD2	4:AD:115:ARG:NH2	2.46	0.48
22:BA:1439:A:C2	22:BA:1553:A:C5	3.01	0.48
1:CA:409:U:OP1	4:CD:24:GLY:HA3	2.12	0.48
36:BO:7:ARG:CG	36:BO:96:GLY:HA3	2.44	0.48
4:CD:90:LEU:CD2	4:CD:200:ILE:HD11	2.43	0.48
1:AA:1133:G:N2	1:AA:1142:G:C4	2.81	0.48
8:AH:125:ILE:CD1	8:AH:128:TYR:CE1	2.96	0.48
7:CG:78:ARG:O	7:CG:79:ARG:HB2	2.13	0.48
22:DA:2040:G:H2'	22:DA:2041:U:O4'	2.13	0.48
11:AK:52:PHE:CB	11:AK:56:ARG:HB3	2.42	0.48
19:AS:4:SER:HB2	19:AS:5:LEU:HD12	1.95	0.48
4:AD:38:PRO:HD2	4:AD:42:GLY:CA	2.44	0.48
49:B1:16:GLY:O	49:B1:17:THR:O	2.31	0.48
22:DA:1593:A:C2	22:DA:1594:U:C2	3.01	0.48
1:AA:152:A:N6	1:AA:170:U:C2	2.80	0.48
22:DA:2533:U:OP1	22:DA:2665:A:O2'	2.27	0.48
36:BO:53:THR:HB	36:BO:65:THR:HG22	1.95	0.48
26:BE:44:ARG:HG2	26:BE:45:ALA:N	2.28	0.48
24:DC:33:LEU:C	24:DC:64:ILE:HD12	2.33	0.48
13:CM:79:ARG:O	13:CM:83:LEU:HD23	2.13	0.48
30:DI:14:ALA:O	30:DI:16:GLY:N	2.45	0.48
1:AA:32:A:OP1	1:AA:398:U:H1'	2.13	0.48
24:DC:24:LEU:HD21	24:DC:90:ASN:ND2	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1927:A:C6	22:BA:1928:A:C6	3.01	0.48
22:BA:1744:A:H2'	22:BA:1745:A:O4'	2.14	0.48
47:DZ:41:THR:HG23	47:DZ:44:ILE:HG12	1.95	0.48
1:AA:126:G:H2'	1:AA:127:G:O4'	2.13	0.48
6:CF:93:LYS:HG2	6:CF:93:LYS:O	2.13	0.48
32:BK:58:LEU:HD23	32:BK:59:LYS:O	2.13	0.48
43:BV:36:ALA:O	43:BV:93:ARG:NH2	2.43	0.48
22:BA:1879:C:C4	22:BA:1880:U:C4	3.01	0.48
1:AA:590:U:H2'	1:AA:591:U:C6	2.49	0.48
30:DI:123:GLU:O	30:DI:127:ARG:CZ	2.61	0.48
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.49	0.48
22:DA:2304:G:N2	22:DA:2313:C:C2	2.81	0.48
22:BA:2740:A:C6	22:BA:2741:A:C6	3.01	0.48
22:DA:2550:G:C6	22:DA:2551:C:N4	2.81	0.48
1:CA:1144:G:C2	1:CA:1145:A:C2	3.01	0.48
23:DB:31:C:H5'	27:DF:26:MET:CE	2.43	0.48
1:CA:209:U:H2'	1:CA:209:U:O2	2.13	0.48
1:CA:734:G:C2	1:CA:735:C:C6	3.02	0.48
11:AK:74:VAL:C	11:AK:76:GLU:N	2.65	0.48
22:DA:2287:A:C8	22:DA:2289:G:C8	3.01	0.48
1:CA:1302:C:C4	13:CM:17:ILE:CD1	2.97	0.48
22:DA:1792:G:O2'	22:DA:1793:C:H5'	2.13	0.48
1:AA:107:G:H2'	1:AA:108:G:H5''	1.96	0.48
3:AC:83:ASP:O	3:AC:84:VAL:C	2.52	0.48
9:CI:51:PRO:HB3	9:CI:84:THR:HG23	1.95	0.48
39:DR:52:PRO:O	39:DR:53:PHE:CB	2.60	0.48
22:DA:1196:C:H1'	22:DA:1226:A:C4	2.49	0.48
22:BA:139:U:O2'	22:BA:141:G:N1	2.37	0.48
17:CQ:14:SER:C	17:CQ:17:MET:HE1	2.33	0.48
17:CQ:52:GLU:HG2	17:CQ:53:CYS:SG	2.53	0.48
13:AM:29:ARG:NH1	13:AM:63:PHE:HB2	2.28	0.48
22:DA:1798:U:O2'	22:DA:1802:A:N3	2.46	0.48
38:BQ:50:ARG:O	38:BQ:54:LYS:CE	2.60	0.48
22:DA:676:A:C2	22:DA:2070:A:O4'	2.67	0.48
1:AA:1270:G:C6	1:AA:1271:A:C5	3.01	0.48
22:DA:158:U:O2	22:DA:169:G:N1	2.45	0.48
22:BA:388:G:N7	22:BA:390:U:C2'	2.77	0.48
22:DA:1248:G:N7	26:DE:46:GLN:NE2	2.61	0.48
22:DA:2211:A:C1'	22:DA:2212:A:OP1	2.60	0.48
22:DA:2212:A:C2	22:DA:2214:C:N4	2.81	0.48
53:B5:83:LYS:HB3	53:B5:87:ALA:CB	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:753:A:C2	22:DA:754:U:C2	3.01	0.48
22:DA:1139:G:N3	22:DA:1143:A:H2	2.11	0.48
22:BA:283:G:C5	22:BA:284:U:C5	3.02	0.48
10:AJ:66:GLU:HB3	14:AN:99:ALA:CB	2.42	0.48
22:DA:2599:G:C8	24:DC:236:GLU:HB2	2.48	0.48
1:CA:643:C:H5'	8:CH:32:LEU:HD13	1.95	0.48
22:BA:2709:G:OP1	35:BN:18:GLN:NE2	2.46	0.48
1:CA:945:G:N3	1:CA:945:G:H2'	2.29	0.48
1:CA:945:G:C2	1:CA:946:A:C8	3.00	0.48
22:BA:1972:G:N2	22:BA:1973:G:C5	2.82	0.48
16:CP:36:VAL:O	16:CP:36:VAL:HG13	2.13	0.48
1:CA:291:U:H2'	1:CA:291:U:O2	2.14	0.48
22:BA:146:A:H2'	22:BA:147:C:O4'	2.14	0.48
1:CA:690:G:H2'	1:CA:691:G:O4'	2.13	0.48
26:DE:149:ILE:HG23	26:DE:188:MET:HG2	1.96	0.48
34:BM:2:LEU:O	34:BM:3:GLN:HB3	2.14	0.48
22:BA:435:C:H2'	22:BA:436:C:H5'	1.95	0.48
29:BH:86:ASP:CB	1:CA:359:G:O2'	2.59	0.48
22:DA:2060:A:O4'	22:DA:2502:G:H1'	2.14	0.48
1:AA:1407:C:O2'	22:BA:1912:A:C6	2.63	0.48
35:BN:58:ASP:CG	35:BN:63:ARG:NH2	2.64	0.48
14:AN:43:ASN:O	14:AN:45:VAL:N	2.47	0.48
1:CA:1000:A:C2	1:CA:1041:G:N2	2.82	0.48
5:AE:100:SER:O	5:AE:101:GLU:C	2.52	0.48
41:DT:38:ALA:O	41:DT:39:THR:CB	2.61	0.48
22:DA:2612:C:C5'	22:DA:2613:U:OP1	2.62	0.48
22:BA:1189:A:H2'	22:BA:1190:G:O4'	2.13	0.48
4:AD:147:GLU:HA	4:AD:150:LYS:HD3	1.96	0.48
1:CA:976:G:C2	1:CA:1363:A:C2	3.02	0.48
9:CI:50:GLN:N	9:CI:51:PRO:HD2	2.29	0.48
22:BA:2377:A:H2'	22:BA:2378:A:H5'	1.95	0.48
42:DU:39:ILE:HG22	42:DU:39:ILE:O	2.12	0.48
1:CA:950:U:H2'	1:CA:951:G:C8	2.48	0.48
22:BA:31:C:O3'	22:BA:1238:G:H5''	2.14	0.48
22:DA:1924:C:H2'	22:DA:1925:C:O4'	2.13	0.48
46:BY:46:VAL:O	46:BY:47:ARG:C	2.51	0.48
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.14	0.48
29:DH:127:GLU:HG3	29:DH:144:VAL:O	2.13	0.48
37:DP:31:TRP:C	37:DP:32:VAL:HG12	2.34	0.48
22:BA:1867:G:O2'	22:BA:1868:C:H5'	2.13	0.48
33:DL:111:ILE:N	33:DL:111:ILE:HD12	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:30:SER:O	8:AH:31:LYS:C	2.51	0.48
49:D1:21:TYR:CE2	49:D1:38:LYS:HD2	2.49	0.48
44:BW:66:LYS:HD2	44:BW:85:GLU:HB3	1.96	0.48
26:BE:91:ASP:OD1	26:BE:93:SER:OG	2.31	0.48
1:AA:389:A:C6	1:AA:390:U:H1'	2.48	0.48
22:BA:1930:G:N2	22:BA:1968:G:H2'	2.28	0.48
1:AA:299:G:O6	58:AA:1840:HOH:O	2.18	0.48
2:AB:210:VAL:O	2:AB:211:THR:C	2.51	0.48
24:BC:97:LYS:HE3	24:BC:97:LYS:HA	1.96	0.48
13:CM:58:ASP:OD1	13:CM:58:ASP:C	2.51	0.48
27:BF:67:ILE:O	27:BF:67:ILE:HD12	2.14	0.48
22:BA:2343:U:HO2'	22:BA:2373:G:HO2'	1.59	0.48
27:DF:170:LEU:O	27:DF:175:PHE:HB3	2.13	0.48
22:BA:2742:G:OP2	52:B4:24:ARG:NH1	2.47	0.48
41:BT:57:VAL:HG22	41:BT:58:VAL:N	2.27	0.48
1:CA:1003:G:C2	1:CA:1038:C:N3	2.82	0.48
1:AA:797:C:OP2	11:AK:126:LYS:HE2	2.13	0.48
9:AI:51:PRO:HB3	9:AI:84:THR:HG23	1.95	0.48
1:CA:485:U:O2	1:CA:485:U:O4'	2.32	0.48
22:DA:942:G:H2'	22:DA:943:A:H5'	1.96	0.48
4:AD:23:SER:O	4:AD:24:GLY:O	2.32	0.48
1:AA:96:U:HO2'	1:AA:97:G:P	2.37	0.48
22:DA:2092:U:H4'	22:DA:2093:G:H5''	1.96	0.48
53:B5:65:LEU:HD21	53:B5:191:ARG:CB	2.44	0.48
35:DN:22:ARG:HG3	35:DN:70:THR:HA	1.94	0.48
22:DA:448:U:H4'	22:DA:449:A:OP2	2.13	0.48
22:DA:36:G:H4'	22:DA:451:U:C2	2.48	0.48
30:BI:130:GLU:HB3	30:BI:134:ARG:HH21	1.79	0.48
1:CA:73:C:HO2'	1:CA:74:A:C5'	2.25	0.48
22:DA:2326:C:C1'	22:DA:2327:A:OP1	2.62	0.48
22:DA:2345:G:C5	22:DA:2347:C:C5	3.02	0.48
1:CA:206:C:H2'	1:CA:207:C:C4'	2.44	0.48
21:CU:12:PHE:CD1	21:CU:13:ASP:N	2.82	0.48
1:AA:65:A:C4	1:AA:381:C:C5	3.01	0.48
22:BA:846:U:C2'	22:BA:847:U:OP2	2.62	0.48
1:CA:1379:G:N7	7:CG:2:PRO:HB2	2.28	0.48
1:AA:208:U:C5	1:AA:210:C:N3	2.82	0.48
13:CM:11:ASP:O	13:CM:12:HIS:HB2	2.14	0.48
1:CA:811:C:H4'	1:CA:900:A:N6	2.28	0.48
22:BA:983:A:C6	22:BA:984:A:C2	3.02	0.48
40:DS:106:VAL:HG12	40:DS:107:VAL:N	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:5:HIS:O	27:BF:8:TYR:HB3	2.14	0.48
32:DK:92:GLU:O	32:DK:93:GLN:CB	2.62	0.48
1:AA:1272:G:H2'	1:AA:1273:C:O4'	2.13	0.48
8:CH:96:MET:HB2	8:CH:99:LEU:O	2.13	0.48
1:CA:1533:C:H4'	1:CA:1534:A:OP1	2.14	0.48
1:CA:350:G:C6	1:CA:351:G:C6	3.02	0.48
43:DV:42:LEU:N	43:DV:42:LEU:HD23	2.28	0.48
7:CG:42:ILE:HG21	7:CG:116:MET:HG3	1.95	0.48
1:AA:913:A:H4'	1:AA:914:A:OP1	2.12	0.48
22:DA:396:G:O4'	45:DX:29:PHE:HB3	2.12	0.48
22:BA:196:A:C4	22:BA:805:G:C6	3.02	0.48
22:BA:2394:C:OP2	51:B3:30:ARG:HD3	2.14	0.48
1:CA:1422:G:C2	1:CA:1423:G:C8	3.01	0.48
2:AB:206:ALA:O	2:AB:210:VAL:HG22	2.13	0.48
24:BC:78:VAL:HG21	24:BC:110:LEU:CD2	2.44	0.48
24:DC:117:GLN:N	24:DC:128:ASN:OD1	2.47	0.48
7:CG:4:ARG:HG3	7:CG:5:ARG:N	2.28	0.48
7:AG:146:GLU:HA	7:AG:149:LYS:HB2	1.96	0.48
22:DA:1627:G:C2	22:DA:1628:G:N7	2.82	0.48
11:CK:45:ALA:HB3	11:CK:70:CYS:HB2	1.96	0.48
22:BA:1764:C:C2'	22:BA:1765:U:H5'	2.43	0.48
42:DU:12:ILE:HG13	42:DU:21:LYS:O	2.13	0.48
22:DA:199:A:N6	22:DA:2434:A:C5	2.82	0.48
22:BA:1288:G:C4	22:BA:1327:A:C2	3.01	0.48
44:BW:20:ARG:HD2	44:BW:20:ARG:N	2.28	0.48
1:AA:512:U:H2'	1:AA:513:C:C6	2.48	0.48
22:BA:1916:A:H2'	22:BA:1917:U:H4'	1.94	0.48
22:DA:58:G:C2	22:DA:70:G:C2	3.01	0.48
1:CA:803:G:C5	1:CA:804:U:C4	3.02	0.48
22:DA:1360:G:N1	22:DA:1361:G:H1'	2.28	0.48
22:DA:320:A:H2'	26:DE:131:THR:HG21	1.95	0.48
22:DA:1598:A:C2'	22:DA:1599:U:H5'	2.43	0.48
31:DJ:80:HIS:O	31:DJ:81:ILE:C	2.52	0.48
38:BQ:24:TYR:O	38:BQ:25:TYR:HB2	2.12	0.48
37:DP:5:ILE:HG22	37:DP:6:LYS:N	2.29	0.48
17:AQ:16:LYS:HG3	17:AQ:16:LYS:O	2.12	0.48
1:CA:145:G:C2	1:CA:146:G:C8	3.01	0.48
19:AS:34:TRP:O	19:AS:36:ARG:N	2.47	0.48
4:CD:173:VAL:HG13	4:CD:174:ASP:N	2.28	0.48
6:CF:86:ARG:HH11	6:CF:86:ARG:HG2	1.78	0.48
10:CJ:52:LEU:HB2	14:CN:81:ARG:HD2	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:18:ILE:HG23	10:CJ:19:ASP:N	2.29	0.48
22:DA:1682:G:N3	22:DA:1757:A:H1'	2.28	0.48
4:AD:13:ARG:HD2	4:AD:34:ILE:HA	1.96	0.48
22:DA:321:U:H4'	26:DE:159:LEU:O	2.14	0.48
1:AA:1263:C:H2'	1:AA:1264:U:O4'	2.14	0.48
22:BA:71:A:H5''	22:BA:72:U:H3'	1.96	0.48
22:BA:303:G:C5	22:BA:304:U:C5	3.02	0.48
44:DW:38:VAL:HG21	44:DW:80:ILE:CD1	2.44	0.48
1:CA:1066:C:C4	1:CA:1067:A:C6	3.02	0.48
22:DA:136:G:N2	22:DA:144:A:C5	2.81	0.48
18:AR:67:LEU:O	18:AR:68:LEU:HG	2.14	0.48
1:CA:754:C:OP1	15:CO:72:ARG:NH2	2.47	0.48
31:DJ:25:LEU:CD1	31:DJ:100:VAL:HG12	2.44	0.48
5:AE:13:GLU:CB	5:AE:39:VAL:HG12	2.44	0.48
29:BH:135:HIS:CD2	29:BH:137:GLU:HG3	2.48	0.48
1:AA:785:G:N2	1:AA:798:U:C2	2.82	0.48
22:DA:892:A:H2'	22:DA:892:A:N3	2.28	0.48
1:AA:996:A:C2	1:AA:997:U:C4	3.02	0.48
36:BO:52:SER:O	36:BO:55:GLU:HG2	2.13	0.48
22:BA:520:G:H2'	22:BA:521:U:C6	2.48	0.48
29:BH:103:VAL:HG21	29:BH:132:PHE:CZ	2.49	0.48
22:DA:602:A:N3	22:DA:655:A:C2	2.82	0.48
18:CR:25:ASP:C	18:CR:27:ALA:N	2.65	0.48
1:AA:1077:G:N1	1:AA:1081:A:C6	2.82	0.48
9:CI:129:LYS:O	9:CI:130:ARG:CD	2.61	0.48
6:AF:68:GLN:HA	6:AF:71:ILE:HG22	1.95	0.48
3:CC:153:VAL:CG2	3:CC:157:LEU:HD21	2.44	0.48
22:DA:1651:G:H4'	35:DN:39:PRO:HG2	1.96	0.48
12:CL:92:GLY:O	12:CL:93:VAL:C	2.51	0.48
22:DA:563:A:C6	22:DA:2018:G:C4	3.02	0.48
1:CA:735:C:H2'	1:CA:736:C:C6	2.49	0.48
22:DA:973:A:O4'	22:DA:1188:U:C6	2.67	0.48
37:DP:89:ARG:O	37:DP:112:GLU:HA	2.14	0.48
10:AJ:61:ALA:O	10:AJ:62:ARG:HB2	2.13	0.48
4:AD:30:THR:O	4:AD:31:LYS:C	2.53	0.48
22:DA:2262:U:OP1	44:DW:41:ARG:NH2	2.47	0.48
33:DL:101:ILE:HD12	33:DL:105:ILE:HG21	1.95	0.48
22:DA:1998:A:H2'	22:DA:1999:C:O4'	2.14	0.48
1:AA:524:G:C6	1:AA:525:C:C4	3.01	0.48
22:DA:1338:G:O6	41:DT:66:LYS:NZ	2.33	0.48
22:DA:2847:U:H2'	22:DA:2848:G:H5'	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1490:U:H2'	1:CA:1491:G:C8	2.48	0.48
6:CF:14:GLN:C	6:CF:16:GLU:H	2.16	0.48
1:AA:1142:G:C4	1:AA:1143:G:H1'	2.49	0.48
1:AA:596:A:C5	1:AA:645:G:N2	2.82	0.48
12:AL:3:THR:HB	12:AL:6:GLN:HG3	1.95	0.48
22:DA:2023:C:O2'	22:DA:2024:G:H5'	2.14	0.48
22:DA:984:A:H5''	22:DA:985:C:OP2	2.14	0.48
11:CK:23:ILE:HG22	11:CK:32:VAL:HG22	1.95	0.48
1:AA:1125:U:C5	1:AA:1127:G:C6	3.01	0.48
45:BX:77:LYS:HE3	45:BX:78:TYR:N	2.29	0.48
22:DA:1847:A:O2'	22:DA:1848:A:P	2.72	0.48
35:BN:117:ASP:O	35:BN:119:SER:N	2.47	0.48
1:AA:663:A:N1	1:AA:743:A:C2	2.82	0.48
22:BA:1700:A:H5'	22:BA:1701:A:OP2	2.13	0.48
35:DN:12:ARG:O	35:DN:17:ARG:NH2	2.47	0.48
22:BA:11:C:H2'	22:BA:12:U:H5'	1.94	0.48
22:BA:753:A:OP1	50:B2:1:MET:CE	2.62	0.48
45:DX:43:GLU:O	45:DX:44:LYS:C	2.51	0.48
42:BU:72:ILE:HD13	42:BU:96:PHE:CE1	2.49	0.48
22:BA:1441:G:H2'	22:BA:1442:U:C6	2.48	0.48
22:DA:1258:U:H2'	22:DA:1259:G:C8	2.48	0.48
19:AS:45:ILE:HG23	19:AS:63:THR:HA	1.96	0.48
1:CA:649:A:H2'	1:CA:650:G:O4'	2.14	0.48
19:CS:4:SER:O	19:CS:5:LEU:HB2	2.12	0.48
22:BA:211:C:OP1	50:B2:25:LYS:NZ	2.32	0.48
1:CA:240:G:OP1	1:CA:240:G:H4'	2.14	0.48
19:CS:67:VAL:O	19:CS:67:VAL:HG12	2.13	0.48
22:BA:1314:C:O2	22:BA:1314:C:H2'	2.14	0.48
22:BA:1796:U:H2'	22:BA:1797:G:H8	1.79	0.48
19:AS:29:LYS:O	19:AS:30:PRO:O	2.32	0.48
22:DA:2353:G:H2'	22:DA:2354:C:O4'	2.13	0.48
24:BC:76:ALA:HB2	24:BC:96:TYR:CD2	2.49	0.48
54:D6:3:DBB:HB3	54:D6:4:PRO:O	2.14	0.48
22:DA:1109:C:C4	22:DA:1110:G:O6	2.67	0.48
22:BA:1916:A:C5	22:BA:1917:U:C6	3.02	0.48
3:AC:22:TRP:CB	3:AC:59:ARG:HG2	2.43	0.48
1:AA:478:A:H2'	1:AA:479:U:O4'	2.14	0.48
3:CC:155:GLY:O	3:CC:156:ARG:C	2.53	0.48
1:AA:1005:A:H2'	1:AA:1006:G:O4'	2.14	0.48
4:CD:192:SER:HB2	4:CD:195:ILE:CG1	2.44	0.48
22:BA:2591:C:P	24:BC:238:ARG:HG3	2.54	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:55:G:C6	22:DA:116:C:N3	2.81	0.48
1:CA:1295:U:H2'	1:CA:1296:C:C6	2.49	0.48
4:AD:95:GLU:OE1	4:AD:191:LEU:HD22	2.14	0.48
9:AI:45:ARG:O	9:AI:48:VAL:HG23	2.14	0.48
22:DA:2209:G:N2	22:DA:2216:G:N3	2.61	0.48
1:AA:7:A:N6	5:AE:97:GLN:OE1	2.47	0.48
22:DA:122:G:H2'	22:DA:123:G:O4'	2.13	0.48
22:DA:1608:A:C6	22:DA:1611:C:C5	3.02	0.48
22:DA:82:U:C2	22:DA:83:A:N7	2.82	0.48
30:DI:57:VAL:HG23	30:DI:71:THR:N	2.29	0.48
22:DA:1223:G:N2	22:DA:1226:A:OP2	2.43	0.48
29:DH:117:LEU:HD11	29:DH:130:VAL:HG22	1.95	0.48
1:CA:463:U:H3'	1:CA:464:U:C6	2.48	0.48
1:AA:1073:U:O2'	2:AB:103:ASN:OD1	2.23	0.48
22:BA:15:G:C6	22:BA:16:C:C4	3.02	0.48
2:AB:61:ALA:HA	2:AB:65:GLY:CA	2.44	0.48
45:DX:58:VAL:HG12	45:DX:59:ILE:N	2.29	0.48
33:DL:50:PHE:CE1	33:DL:52:GLY:O	2.67	0.48
27:BF:57:LEU:HD21	27:BF:152:LEU:HD11	1.95	0.48
1:AA:880:C:O2'	1:AA:881:G:H5'	2.14	0.48
27:BF:105:THR:HG22	27:BF:106:ILE:HG23	1.96	0.48
1:AA:142:G:H3'	1:AA:143:A:H8	1.78	0.48
30:DI:46:THR:HG22	30:DI:51:LYS:HG3	1.96	0.48
13:AM:40:ALA:HB3	13:AM:43:VAL:HG13	1.96	0.48
2:CB:199:VAL:C	2:CB:200:ILE:HD12	2.33	0.48
20:CT:51:PHE:CD2	20:CT:51:PHE:C	2.87	0.48
3:CC:172:ARG:NH1	3:CC:174:PRO:HG3	2.29	0.48
22:BA:508:A:H4'	22:BA:509:C:OP2	2.14	0.48
2:AB:206:ALA:O	2:AB:208:ARG:N	2.46	0.48
24:BC:75:PRO:HG2	24:BC:97:LYS:HD2	1.96	0.48
18:AR:43:ARG:HG2	18:AR:44:ILE:HD13	1.95	0.48
2:CB:164:ILE:HG23	2:CB:165:ASP:N	2.29	0.48
22:DA:2179:C:H2'	22:DA:2180:U:C6	2.49	0.48
22:DA:1605:C:O2	22:DA:1610:A:O2'	2.29	0.48
23:DB:78:A:C6	23:DB:99:A:C8	3.02	0.48
35:DN:106:ASP:OD1	35:DN:107:ASN:N	2.47	0.48
26:DE:23:PHE:CG	26:DE:111:GLU:HG3	2.49	0.48
23:BB:43:C:O2	27:BF:92:ARG:NH2	2.47	0.48
1:AA:310:G:H5''	16:AP:31:ARG:HB2	1.95	0.48
20:CT:65:GLY:CA	20:CT:68:HIS:CE1	2.97	0.48
22:DA:486:C:C2	22:DA:495:G:N2	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.95	0.48
36:BO:14:ALA:O	36:BO:18:LEU:HB2	2.14	0.48
22:BA:1952:A:C5	32:BK:22:ILE:HG21	2.48	0.48
21:AU:47:ARG:HA	21:AU:47:ARG:HE	1.79	0.48
24:DC:108:LYS:HA	24:DC:196:GLY:HA2	1.95	0.48
5:AE:83:HIS:HB2	5:AE:84:PRO:HD2	1.96	0.48
1:AA:829:G:C6	1:AA:858:G:N2	2.82	0.47
1:AA:695:A:H2'	1:AA:696:A:O4'	2.14	0.47
22:DA:2127:G:H2'	22:DA:2128:G:C8	2.49	0.47
5:AE:80:THR:OG1	5:AE:81:LEU:N	2.45	0.47
12:CL:55:VAL:HG12	12:CL:57:LEU:HD23	1.96	0.47
1:CA:373:A:N3	1:CA:374:A:C8	2.82	0.47
40:DS:55:ILE:CG2	40:DS:66:ILE:HD12	2.44	0.47
2:AB:33:GLY:HA3	2:AB:40:ILE:N	2.29	0.47
22:BA:1734:G:C2	22:BA:1735:A:C8	3.02	0.47
22:BA:2151:U:H2'	22:BA:2152:G:C8	2.49	0.47
22:BA:140:C:O2	22:BA:140:C:O4'	2.30	0.47
1:CA:216:U:H2'	1:CA:217:C:C6	2.49	0.47
11:AK:102:ALA:O	11:AK:103:ALA:C	2.52	0.47
22:DA:478:A:C2	22:DA:480:A:C4	3.02	0.47
22:BA:1495:A:O2'	22:BA:1496:A:H5'	2.13	0.47
11:CK:112:ASP:OD1	11:CK:114:THR:HG23	2.14	0.47
1:AA:1324:A:C2	1:AA:1325:C:C2	3.02	0.47
4:CD:26:ARG:HG3	4:CD:27:ALA:N	2.28	0.47
22:DA:391:A:C4	22:DA:392:U:C6	3.02	0.47
22:BA:2555:U:C5	22:BA:2556:C:C2	3.02	0.47
26:BE:149:ILE:C	26:BE:149:ILE:HD12	2.34	0.47
37:BP:31:TRP:CZ2	37:BP:40:LEU:CD1	2.97	0.47
41:BT:11:LEU:HD21	41:BT:46:ALA:CB	2.44	0.47
20:CT:83:ILE:HD12	20:CT:84:ASN:N	2.29	0.47
22:BA:877:A:C2	22:BA:899:A:C2	3.02	0.47
22:BA:609:A:H2'	22:BA:610:C:O4'	2.14	0.47
22:DA:1869:G:C2	22:DA:1873:G:N1	2.82	0.47
32:BK:4:GLU:O	32:BK:5:GLN:CB	2.62	0.47
22:BA:1355:G:C2	22:BA:1356:G:C8	3.02	0.47
22:BA:907:G:C2'	22:BA:908:C:O5'	2.62	0.47
1:AA:787:A:C2'	1:AA:788:U:O5'	2.62	0.47
17:AQ:5:ILE:HG22	17:AQ:5:ILE:O	2.12	0.47
41:DT:72:GLN:O	41:DT:73:ARG:C	2.53	0.47
5:CE:72:ILE:HD13	5:CE:145:GLU:HG3	1.96	0.47
32:BK:21:CYS:HA	32:BK:41:ILE:HG22	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DV:44:HIS:CE1	43:DV:85:LYS:HB2	2.49	0.47
22:DA:1532:A:C2	22:DA:1540:G:C6	3.02	0.47
22:DA:189:G:C4	22:DA:205:G:N2	2.82	0.47
1:CA:123:U:O2'	1:CA:290:C:H1'	2.14	0.47
22:BA:2116:G:C6	22:BA:2171:A:N6	2.81	0.47
3:CC:30:ALA:HB1	14:CN:65:ARG:NH2	2.29	0.47
23:BB:54:G:H21	27:BF:26:MET:CE	2.27	0.47
22:BA:2176:A:C6	22:BA:2177:C:N4	2.82	0.47
6:AF:39:LEU:O	6:AF:40:GLU:HG3	2.14	0.47
42:DU:35:ILE:HG22	42:DU:35:ILE:O	2.14	0.47
39:BR:74:ILE:CD1	39:BR:74:ILE:N	2.77	0.47
1:AA:1428:A:H2'	1:AA:1429:A:O4'	2.14	0.47
22:BA:1074:G:C5	22:BA:1075:C:C4	3.02	0.47
2:CB:211:THR:HA	2:CB:214:LEU:HB2	1.95	0.47
1:CA:1125:U:C6	10:CJ:40:ILE:HD13	2.48	0.47
36:DO:33:ARG:O	36:DO:34:HIS:CG	2.67	0.47
22:BA:686:U:H2'	22:BA:788:A:N1	2.29	0.47
1:CA:64:G:C2	1:CA:67:C:N4	2.82	0.47
1:AA:1118:U:H5''	9:AI:106:ARG:HG3	1.96	0.47
4:AD:177:LYS:O	4:AD:178:MET:HB2	2.14	0.47
22:DA:85:G:OP1	42:DU:7:ARG:N	2.46	0.47
11:CK:20:VAL:O	11:CK:35:THR:HG22	2.14	0.47
15:CO:56:LEU:O	15:CO:59:MET:HB2	2.13	0.47
22:BA:714:U:C2'	22:BA:716:A:N7	2.77	0.47
30:BI:130:GLU:HB3	30:BI:134:ARG:NH2	2.30	0.47
10:AJ:52:LEU:HD22	10:AJ:62:ARG:HG2	1.97	0.47
22:DA:1176:U:H2'	22:DA:1177:G:N9	2.29	0.47
22:DA:88:G:C2	22:DA:89:A:C8	3.01	0.47
39:DR:49:ILE:HD13	39:DR:52:PRO:HA	1.96	0.47
1:CA:211:G:O2'	1:CA:212:G:C4'	2.62	0.47
7:CG:92:ARG:HB3	7:CG:93:PRO:HD2	1.97	0.47
22:DA:522:A:C6	22:DA:523:C:N3	2.82	0.47
22:BA:1846:G:C2	22:BA:1895:C:C2	3.02	0.47
16:AP:51:ARG:HB3	16:AP:51:ARG:CZ	2.44	0.47
22:DA:500:G:C2	22:DA:502:A:C8	3.02	0.47
27:DF:106:ILE:HD11	27:DF:139:PRO:CG	2.44	0.47
22:BA:1422:G:C5	22:BA:1423:G:N7	2.82	0.47
1:CA:1491:G:C6	1:CA:1492:A:C6	3.01	0.47
27:BF:28:VAL:O	27:BF:28:VAL:HG13	2.14	0.47
4:CD:145:ILE:N	4:CD:145:ILE:HD12	2.29	0.47
25:DD:101:PHE:O	25:DD:102:ALA:C	2.51	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:91:ASP:C	9:AI:91:ASP:OD1	2.52	0.47
22:DA:532:A:N1	22:DA:2020:A:H1'	2.29	0.47
22:DA:2322:A:C5	22:DA:2323:G:C8	3.02	0.47
22:DA:1082:U:P	30:DI:124:ALA:HB1	2.54	0.47
48:D0:55:ILE:O	48:D0:56:ALA:HB3	2.15	0.47
7:CG:8:GLY:O	7:CG:9:GLN:CB	2.62	0.47
15:CO:27:VAL:HG13	15:CO:31:LEU:CD1	2.44	0.47
37:DP:54:GLY:O	37:DP:77:HIS:NE2	2.47	0.47
13:CM:54:ASP:HA	13:CM:57:ARG:CB	2.44	0.47
41:DT:2:ILE:HG23	41:DT:3:ARG:C	2.34	0.47
22:DA:1869:G:C3'	22:DA:1870:C:H5'	2.43	0.47
24:DC:51:THR:CG2	24:DC:54:ILE:HD11	2.44	0.47
19:AS:32:ARG:HA	19:AS:50:ALA:HB3	1.95	0.47
1:AA:604:G:C2	1:AA:635:A:C2	3.02	0.47
22:BA:1954:G:O2'	22:BA:1956:U:O4	2.24	0.47
30:DI:101:ILE:HG22	30:DI:102:SER:N	2.29	0.47
22:DA:1866:A:N7	22:DA:1867:G:C8	2.83	0.47
22:DA:228:C:H4'	22:DA:229:C:H5''	1.96	0.47
22:BA:447:A:C4	22:BA:473:G:N7	2.82	0.47
22:BA:1826:G:H2'	22:BA:1827:U:H6	1.79	0.47
22:DA:1753:G:C2	22:DA:1756:G:C2	3.03	0.47
7:CG:26:PHE:HB2	7:CG:101:MET:SD	2.54	0.47
31:BJ:5:THR:HG22	31:BJ:45:THR:HG21	1.95	0.47
24:BC:264:ASP:O	24:BC:265:LYS:C	2.52	0.47
34:DM:24:THR:O	34:DM:101:VAL:CG2	2.62	0.47
22:BA:54:G:C5	22:BA:55:G:C8	3.02	0.47
1:CA:826:C:H2'	1:CA:827:U:C6	2.49	0.47
22:DA:1632:A:C2	22:DA:1633:G:C2	3.02	0.47
3:AC:73:PRO:HG3	3:AC:105:GLU:HG3	1.96	0.47
22:BA:1491:G:C6	22:BA:1500:G:C2	3.02	0.47
22:BA:2166:U:O4	22:BA:2170:A:N7	2.47	0.47
1:CA:104:G:C2	1:CA:105:G:C8	3.02	0.47
22:BA:416:U:C4	22:BA:417:C:C4	3.02	0.47
22:BA:229:C:N3	22:BA:230:G:H1'	2.30	0.47
1:CA:1117:A:O2'	9:CI:108:ALA:HB2	2.15	0.47
4:CD:20:PHE:N	4:CD:20:PHE:CD1	2.81	0.47
1:AA:10:A:OP2	5:AE:131:THR:HG21	2.13	0.47
26:DE:181:ILE:HG23	33:DL:2:ARG:HD3	1.96	0.47
11:AK:17:SER:HA	11:AK:79:ILE:HA	1.95	0.47
11:AK:97:ILE:HG13	11:AK:98:ARG:N	2.28	0.47
29:BH:116:ARG:O	29:BH:118:PRO:HD3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1002:G:H2'	1:CA:1003:G:O4'	2.14	0.47
22:DA:2159:G:H2'	22:DA:2160:C:C6	2.49	0.47
1:AA:500:G:H2'	1:AA:501:C:C6	2.49	0.47
5:CE:137:VAL:O	5:CE:138:ARG:HB3	2.09	0.47
22:DA:572:A:H3'	22:DA:573:U:O4'	2.14	0.47
11:AK:31:ILE:HD12	11:AK:32:VAL:N	2.29	0.47
53:B5:52:PRO:HG3	53:B5:205:ALA:O	2.14	0.47
30:BI:127:ARG:HA	30:BI:130:GLU:CG	2.44	0.47
10:AJ:57:VAL:O	10:AJ:58:ASN:HB2	2.15	0.47
1:AA:1238:A:C2	1:AA:1303:C:H4'	2.49	0.47
1:CA:1288:A:O2'	1:CA:1352:C:O3'	2.32	0.47
30:DI:54:PRO:HG2	30:DI:78:VAL:HG21	1.96	0.47
1:CA:819:A:H4'	1:CA:820:U:OP2	2.15	0.47
22:DA:503:A:N3	22:DA:506:G:C8	2.83	0.47
22:DA:1431:A:C6	22:DA:1432:G:C5	3.03	0.47
22:DA:1432:G:N2	22:DA:1433:A:C4	2.82	0.47
1:AA:209:U:C4'	1:AA:210:C:OP2	2.62	0.47
22:BA:2254:C:H2'	22:BA:2255:G:H5'	1.95	0.47
10:CJ:88:MET:O	10:CJ:89:ARG:HB2	2.14	0.47
29:DH:62:LEU:HD22	29:DH:62:LEU:O	2.14	0.47
9:AI:90:TYR:O	9:AI:91:ASP:CB	2.62	0.47
27:BF:8:TYR:HA	27:BF:12:VAL:CG2	2.44	0.47
1:CA:1166:G:O2'	1:CA:1169:A:N6	2.46	0.47
37:BP:31:TRP:CD2	37:BP:40:LEU:HD12	2.49	0.47
22:DA:1231:U:H2'	22:DA:1232:G:H8	1.78	0.47
22:DA:2323:G:C6	22:DA:2324:U:C4	3.03	0.47
1:CA:174:A:C2	1:CA:175:C:H1'	2.49	0.47
53:B5:66:PRO:CG	53:B5:194:ILE:CB	2.93	0.47
22:DA:1494:A:H2'	22:DA:1495:A:O4'	2.14	0.47
10:AJ:18:ILE:CG2	10:AJ:19:ASP:N	2.77	0.47
1:AA:704:A:C6	1:AA:705:G:C5	3.02	0.47
30:DI:101:ILE:O	30:DI:102:SER:CB	2.61	0.47
22:BA:1491:G:N2	22:BA:1492:G:C4	2.83	0.47
22:BA:417:C:H2'	22:BA:418:C:H6	1.80	0.47
6:CF:66:ALA:HB1	6:CF:67:PRO:HD2	1.96	0.47
22:DA:1453:A:N1	35:DN:74:GLU:HG3	2.29	0.47
14:AN:21:PHE:O	14:AN:22:ALA:HB3	2.13	0.47
47:DZ:42:PRO:HA	47:DZ:45:ARG:HB2	1.96	0.47
9:AI:95:ARG:HA	9:AI:98:LEU:HB2	1.96	0.47
41:BT:69:ARG:CB	41:BT:74:ILE:HG22	2.45	0.47
3:AC:19:ASN:OD1	3:AC:19:ASN:N	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:67:ILE:HG22	10:AJ:67:ILE:O	2.14	0.47
22:DA:68:G:H2'	22:DA:69:C:O4'	2.15	0.47
22:BA:2452:C:C4	22:BA:2453:A:C6	3.02	0.47
1:CA:1147:C:O2	9:CI:18:ARG:NH2	2.47	0.47
22:BA:1074:G:C6	22:BA:1075:C:C4	3.02	0.47
22:BA:1094:U:C4	22:BA:1097:U:OP2	2.67	0.47
1:CA:1317:C:O2'	14:CN:49:GLN:HG2	2.14	0.47
22:DA:732:C:H2'	22:DA:733:G:O4'	2.14	0.47
1:AA:1004:A:OP1	1:AA:1024:G:O6	2.32	0.47
22:DA:2013:A:N1	22:DA:2014:A:N3	2.62	0.47
22:DA:2226:C:C4	22:DA:2227:A:C5	3.02	0.47
22:DA:85:G:P	42:DU:7:ARG:HB2	2.54	0.47
1:AA:1059:C:N3	1:AA:1060:U:C5	2.82	0.47
22:DA:1620:G:C6	22:DA:1621:U:C4	3.02	0.47
30:DI:57:VAL:HG22	30:DI:58:VAL:N	2.29	0.47
5:CE:149:SER:OG	5:CE:152:MET:HG3	2.15	0.47
22:DA:511:U:O3'	22:DA:1215:G:N2	2.47	0.47
1:AA:684:U:O2'	11:AK:40:ASN:O	2.33	0.47
29:BH:111:ALA:O	29:BH:114:GLU:HB2	2.13	0.47
22:BA:141:G:H5''	22:BA:142:A:C6	2.49	0.47
4:AD:98:LEU:O	4:AD:99:ASP:C	2.52	0.47
1:CA:369:G:OP2	1:CA:388:G:N2	2.47	0.47
22:DA:1314:C:H2'	22:DA:1314:C:O2	2.13	0.47
22:BA:2517:C:C2	22:BA:2542:A:N6	2.82	0.47
22:DA:2847:U:C5	22:DA:2848:G:C5	3.03	0.47
22:DA:2394:C:OP2	51:D3:30:ARG:NH2	2.48	0.47
45:DX:54:LYS:HA	45:DX:57:ARG:HB2	1.95	0.47
22:DA:195:A:C5	22:DA:198:C:C5	3.03	0.47
22:BA:2704:C:H2'	22:BA:2705:A:O4'	2.15	0.47
1:CA:1028:C:OP2	1:CA:1028:C:C6	2.67	0.47
26:BE:59:PRO:CD	26:BE:71:GLY:O	2.62	0.47
1:AA:595:A:C6	1:AA:641:U:C6	3.03	0.47
1:CA:302:G:O2'	1:CA:556:C:H5''	2.15	0.47
53:B5:100:ILE:CG2	53:B5:104:ILE:CB	2.92	0.47
33:BL:101:ILE:HG13	33:BL:102:GLY:N	2.29	0.47
8:AH:51:VAL:HA	8:AH:58:GLU:O	2.14	0.47
5:CE:109:GLY:O	5:CE:110:ALA:HB3	2.14	0.47
11:CK:63:ALA:CB	11:CK:92:GLY:HA2	2.44	0.47
11:CK:97:ILE:HG13	11:CK:98:ARG:N	2.29	0.47
24:DC:111:LYS:NZ	24:DC:114:ASP:OD1	2.43	0.47
22:DA:2350:C:H2'	22:DA:2351:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:451:U:C2	22:BA:453:A:N7	2.82	0.47
22:DA:2637:U:C4	22:DA:2638:G:C6	3.02	0.47
22:DA:1053:C:C2	22:DA:1107:G:C2	3.02	0.47
26:DE:109:LEU:O	26:DE:112:LEU:N	2.47	0.47
1:CA:263:A:P	20:CT:74:ARG:NH1	2.88	0.47
28:BG:127:THR:HG22	28:BG:128:GLN:N	2.30	0.47
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.49	0.47
16:CP:3:THR:HG22	16:CP:4:ILE:N	2.29	0.47
17:CQ:4:LYS:HG2	17:CQ:5:ILE:N	2.28	0.47
22:DA:1577:C:H2'	22:DA:1578:U:O4'	2.14	0.47
1:CA:1260:G:OP1	1:CA:1284:C:O2'	2.21	0.47
12:AL:81:LEU:HB2	12:AL:102:LEU:HD22	1.96	0.47
8:CH:49:PHE:C	8:CH:49:PHE:CD1	2.88	0.47
24:BC:174:LEU:HD13	24:BC:174:LEU:N	2.30	0.47
17:CQ:11:ARG:HA	17:CQ:58:VAL:HA	1.97	0.47
20:CT:78:ASN:O	20:CT:82:GLN:HG2	2.14	0.47
45:BX:7:VAL:HG23	45:BX:51:VAL:HG12	1.97	0.47
56:DA:3001:VIF:C02	56:DA:3001:VIF:O02	2.63	0.47
6:CF:15:SER:CB	6:CF:44:ARG:NH1	2.78	0.47
2:CB:96:TRP:CE2	2:CB:172:ALA:HB2	2.50	0.47
22:BA:1923:U:O2'	22:BA:1924:C:H5'	2.15	0.47
22:BA:572:A:P	58:BA:3572:HOH:O	2.72	0.47
1:AA:452:A:H2'	1:AA:453:G:H5'	1.96	0.47
22:BA:1180:U:O2'	22:BA:1181:U:H5'	2.14	0.47
1:CA:1002:G:C6	1:CA:1003:G:C5	3.03	0.47
21:AU:41:PRO:O	21:AU:45:ARG:HD3	2.15	0.47
37:DP:53:ARG:O	37:DP:56:HIS:N	2.47	0.47
1:CA:146:G:N2	1:CA:147:G:H1'	2.29	0.47
1:CA:728:A:C6	1:CA:729:A:C6	3.02	0.47
22:DA:2164:C:H2'	22:DA:2165:C:C5	2.48	0.47
22:DA:1096:A:H2'	22:DA:1097:U:H5''	1.95	0.47
22:DA:1530:G:C2	22:DA:1542:U:O2	2.68	0.47
42:DU:13:VAL:HG21	42:DU:39:ILE:HG23	1.95	0.47
12:CL:38:TYR:HB2	12:CL:52:VAL:CG1	2.43	0.47
1:CA:255:G:P	17:CQ:71:LYS:HZ2	2.38	0.47
22:BA:588:U:O4	22:BA:670:A:H1'	2.14	0.47
30:DI:28:LEU:C	30:DI:28:LEU:HD12	2.34	0.47
22:DA:1323:C:N4	22:DA:1324:G:C6	2.82	0.47
11:CK:87:LYS:HA	11:CK:114:THR:HG22	1.97	0.47
2:AB:104:TRP:CH2	2:AB:154:MET:HB3	2.49	0.47
1:AA:724:G:C6	1:AA:725:G:N7	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:756:C:C2	1:CA:757:U:C6	3.03	0.47
1:AA:1368:A:OP2	9:AI:114:LYS:HD3	2.15	0.47
22:DA:157:C:H2'	22:DA:158:U:O4'	2.14	0.47
2:AB:149:GLY:O	2:AB:151:ILE:N	2.47	0.47
22:BA:2714:G:C2'	22:BA:2715:C:H5'	2.45	0.47
19:CS:75:ALA:N	19:CS:76:PRO:HD3	2.29	0.47
22:DA:443:A:C8	26:DE:40:ARG:HD3	2.49	0.47
36:DO:92:PHE:HB2	36:DO:117:PHE:CD1	2.49	0.47
5:AE:45:ARG:HG2	5:AE:73:ASN:HB3	1.96	0.47
43:DV:26:PHE:CZ	43:DV:42:LEU:HD12	2.50	0.47
2:AB:95:ARG:HG2	2:AB:95:ARG:HH11	1.78	0.47
23:DB:65:U:O4	23:DB:108:A:H1'	2.15	0.47
22:BA:1429:G:C2'	22:BA:1430:G:O5'	2.62	0.47
22:DA:2734:A:N6	22:DA:2770:G:O2'	2.42	0.47
1:AA:186:C:H2'	1:AA:187:G:O4'	2.14	0.47
22:DA:1491:G:C6	22:DA:1500:G:C2	3.03	0.47
17:CQ:38:ILE:CG2	17:CQ:39:LYS:N	2.78	0.47
22:DA:1684:G:C2	22:DA:1705:A:C2	3.03	0.47
22:DA:1436:G:C2	22:DA:1437:C:H1'	2.49	0.47
36:DO:74:VAL:O	36:DO:78:VAL:HG23	2.14	0.47
22:DA:1489:C:HO2'	22:DA:1490:A:C5'	2.26	0.47
21:CU:51:SER:O	21:CU:52:ALA:C	2.51	0.47
1:CA:841:C:H2'	1:CA:843:U:O4'	2.14	0.47
20:AT:81:ALA:O	20:AT:85:LYS:HG2	2.13	0.47
2:AB:131:LYS:HE2	2:AB:131:LYS:HA	1.95	0.47
1:AA:1446:A:N6	1:AA:1447:A:N6	2.62	0.47
29:BH:86:ASP:H	1:CA:359:G:H4'	1.79	0.47
14:CN:41:ARG:NH2	14:CN:43:ASN:OD1	2.47	0.47
1:CA:829:G:C6	1:CA:858:G:N2	2.82	0.47
22:BA:1177:G:C2'	22:BA:1178:C:O5'	2.63	0.47
1:CA:1255:G:N1	1:CA:1279:G:C8	2.82	0.47
12:CL:24:LEU:HB2	12:CL:59:ASN:OD1	2.14	0.47
23:DB:56:G:H4'	23:DB:57:A:OP1	2.15	0.47
41:DT:39:THR:O	41:DT:40:LYS:C	2.53	0.47
1:CA:483:C:H2'	1:CA:484:G:C8	2.50	0.47
1:CA:734:G:N3	1:CA:735:C:C6	2.83	0.47
40:DS:84:ARG:HB2	40:DS:96:ILE:CG1	2.44	0.47
22:DA:142:A:N6	22:DA:143:C:N4	2.62	0.47
5:AE:82:GLN:OE1	5:AE:148:ASN:O	2.32	0.47
22:BA:2310:C:H2'	22:BA:2311:A:C5'	2.44	0.47
1:CA:1298:U:O2	1:CA:1298:U:C2'	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:20:TYR:O	14:AN:23:LYS:HB3	2.14	0.47
7:CG:151:PHE:O	7:CG:152:ALA:CB	2.62	0.47
1:AA:687:A:C5	1:AA:701:U:C5	3.02	0.47
3:AC:206:GLU:O	3:AC:207:ILE:HG22	2.15	0.47
24:DC:204:VAL:O	24:DC:206:GLY:N	2.47	0.47
22:DA:477:A:C2'	22:DA:478:A:O5'	2.63	0.47
13:CM:40:ALA:O	13:CM:41:GLU:C	2.52	0.47
28:BG:121:ILE:HD11	28:BG:140:VAL:HG12	1.96	0.47
22:DA:833:A:H2'	22:DA:834:G:C8	2.50	0.47
2:AB:104:TRP:CZ2	2:AB:154:MET:HB3	2.49	0.47
45:DX:10:LYS:HE3	45:DX:54:LYS:CD	2.44	0.47
22:DA:194:G:P	58:DA:3758:HOH:O	2.73	0.47
28:DG:123:ALA:HB2	28:DG:133:LEU:HA	1.97	0.47
12:CL:29:GLN:O	12:CL:30:LYS:HG2	2.15	0.47
33:DL:135:ILE:HG22	33:DL:140:GLY:HA2	1.96	0.47
1:AA:1042:A:H2'	1:AA:1043:G:O4'	2.15	0.47
46:DY:28:LEU:CD1	46:DY:46:VAL:HG21	2.44	0.47
22:DA:12:U:O2	22:DA:12:U:C2'	2.63	0.47
22:DA:1738:G:HO2'	22:DA:1739:A:P	2.37	0.47
1:CA:328:C:H4'	1:CA:329:A:H5''	1.97	0.47
6:CF:88:MET:CE	18:CR:64:TYR:CD2	2.97	0.47
44:DW:45:PHE:CD1	44:DW:80:ILE:HD11	2.49	0.47
22:DA:2536:G:C6	22:DA:2537:U:N3	2.83	0.47
1:AA:914:A:C4	1:AA:915:A:C8	3.02	0.47
29:DH:5:LEU:HD13	29:DH:13:GLY:HA3	1.96	0.47
13:CM:54:ASP:HA	13:CM:57:ARG:HB3	1.96	0.47
41:DT:7:LEU:CD2	41:DT:46:ALA:HA	2.45	0.47
22:DA:2816:G:N3	22:DA:2883:A:O2'	2.39	0.47
30:DI:123:GLU:HG3	30:DI:123:GLU:O	2.15	0.47
22:DA:1488:C:N3	22:DA:1489:C:C5	2.82	0.47
22:BA:1196:C:H1'	22:BA:1226:A:C4	2.50	0.47
17:CQ:27:ARG:CG	17:CQ:40:ARG:HB3	2.45	0.47
52:D4:30:GLU:HG3	52:D4:32:LYS:HB2	1.97	0.47
1:CA:1299:A:O2'	1:CA:1301:U:O4'	2.23	0.47
48:D0:40:ARG:O	48:D0:41:HIS:HB2	2.15	0.47
32:DK:18:ARG:HB2	32:DK:45:GLU:HB3	1.97	0.47
22:DA:269:C:O2	22:DA:269:C:H2'	2.15	0.47
24:DC:252:THR:HG22	24:DC:253:LYS:N	2.29	0.47
1:AA:1049:U:OP1	58:AA:1781:HOH:O	2.20	0.47
22:DA:734:A:C5	22:DA:735:A:C8	3.03	0.47
1:CA:888:G:H4'	1:CA:1488:G:O2'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BW:32:LEU:O	44:BW:33:ALA:C	2.53	0.47
36:BO:36:TYR:N	36:BO:36:TYR:CD1	2.81	0.47
25:BD:68:PHE:CE2	25:BD:75:ALA:HA	2.49	0.47
43:BV:63:ILE:HD12	43:BV:72:VAL:HG21	1.96	0.47
2:CB:128:LYS:O	2:CB:129:LEU:HB2	2.14	0.47
49:D1:4:GLY:O	49:D1:6:ARG:N	2.48	0.47
11:CK:85:MET:HA	11:CK:111:THR:O	2.14	0.47
29:BH:117:LEU:HD23	29:BH:121:VAL:HA	1.95	0.47
13:AM:10:PRO:O	13:AM:11:ASP:HB3	2.15	0.47
30:BI:10:LYS:CB	30:BI:56:PRO:HB2	2.45	0.47
22:BA:1073:A:C2'	22:BA:1074:G:H5''	2.44	0.47
12:AL:43:LYS:CG	12:AL:44:LYS:HD3	2.45	0.47
22:BA:1922:G:C2	22:BA:1923:U:C6	3.02	0.47
22:DA:732:C:C5	22:DA:733:G:N7	2.83	0.47
22:DA:1358:G:C8	22:DA:1371:G:O6	2.68	0.47
22:DA:319:G:H2'	22:DA:320:A:O4'	2.15	0.47
22:DA:2114:A:C2	22:DA:2115:G:H1'	2.50	0.47
1:AA:1026:G:C6	1:AA:1027:C:N3	2.83	0.47
10:CJ:65:TYR:HB3	14:CN:96:LEU:HD11	1.96	0.47
1:AA:97:G:C5	1:AA:98:A:H1'	2.50	0.47
39:DR:81:LYS:O	39:DR:82:HIS:C	2.53	0.47
22:DA:2093:G:C5	22:DA:2225:A:C8	3.03	0.47
45:DX:3:ARG:HG2	45:DX:33:LEU:HD22	1.97	0.47
7:AG:27:VAL:HG23	7:AG:28:ASN:N	2.29	0.47
16:AP:46:LYS:CD	16:AP:47:GLU:H	2.28	0.47
22:BA:973:A:H5'	22:BA:1188:U:H1'	1.96	0.47
22:DA:2567:G:H2'	22:DA:2568:U:C6	2.50	0.47
1:CA:496:A:C2	1:CA:497:G:C5	3.02	0.47
22:DA:2683:C:OP1	37:DP:56:HIS:HB3	2.14	0.47
17:AQ:17:MET:CG	17:AQ:20:SER:HB3	2.44	0.47
22:DA:2217:G:C5	22:DA:2218:G:N7	2.83	0.47
22:DA:933:A:H5'	22:DA:934:U:OP2	2.14	0.47
22:DA:1312:U:N3	22:DA:1603:A:C6	2.83	0.47
33:DL:58:TYR:O	51:D3:13:ARG:HD3	2.14	0.47
1:CA:1266:G:N1	1:CA:1270:G:C6	2.83	0.47
3:AC:83:ASP:O	3:AC:85:GLU:N	2.48	0.47
22:BA:1056:G:H5''	22:BA:1057:A:C4'	2.45	0.47
22:BA:1090:A:H2'	22:BA:1091:G:C5'	2.42	0.47
1:AA:105:G:H2'	1:AA:106:C:C6	2.50	0.47
22:DA:1171:G:C2	22:DA:1179:G:C6	3.03	0.47
22:DA:1223:G:OP2	39:DR:68:ARG:NH1	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:14:SER:O	29:BH:15:LEU:CB	2.61	0.47
22:BA:1587:G:C5	22:BA:1588:G:N7	2.82	0.47
1:AA:213:G:C8	1:AA:214:C:C5	3.02	0.47
6:AF:9:MET:CE	18:AR:65:LEU:HD22	2.45	0.47
1:CA:309:A:H5''	16:CP:29:ASN:O	2.15	0.47
22:DA:465:G:C6	22:DA:466:A:C6	3.02	0.47
22:DA:1091:G:C2	22:DA:1092:C:C4	3.02	0.47
29:BH:97:ARG:NH1	1:CA:369:G:O2'	2.48	0.47
22:DA:1805:A:H1'	24:DC:50:THR:O	2.15	0.47
1:AA:205:A:N3	1:AA:205:A:H2'	2.29	0.47
1:AA:349:A:O2'	1:AA:350:G:H5'	2.15	0.47
27:BF:108:VAL:N	27:BF:109:PRO:CD	2.78	0.47
22:DA:671:C:C2'	22:DA:672:C:O5'	2.63	0.47
22:DA:2415:G:C5	22:DA:2416:C:C5	3.02	0.47
1:CA:269:C:H2'	1:CA:270:A:C8	2.49	0.47
8:AH:78:VAL:HG11	8:AH:125:ILE:HD11	1.96	0.47
27:BF:132:VAL:O	27:BF:132:VAL:HG23	2.15	0.47
22:BA:2702:G:H2'	22:BA:2703:C:C6	2.49	0.47
38:BQ:9:ILE:O	38:BQ:13:ARG:HG3	2.14	0.47
20:AT:80:THR:O	20:AT:83:ILE:HG13	2.14	0.47
4:AD:35:GLU:O	4:AD:38:PRO:HD3	2.15	0.47
1:CA:1027:C:N4	1:CA:1034:G:N1	2.62	0.47
1:AA:957:U:C2	1:AA:959:A:OP2	2.67	0.47
22:BA:71:A:H5'	22:BA:73:A:C8	2.50	0.47
22:DA:2324:U:O2	22:DA:2385:C:C5	2.68	0.47
22:DA:30:G:C5	22:DA:31:C:C4	3.03	0.47
22:DA:126:A:N7	22:DA:127:A:N1	2.63	0.47
43:DV:42:LEU:HD12	43:DV:47:VAL:HG21	1.96	0.47
8:AH:96:MET:O	8:AH:98:GLY:N	2.43	0.47
41:BT:51:PHE:O	41:BT:52:GLU:C	2.53	0.47
7:CG:113:ASP:HB2	7:CG:119:ARG:HG3	1.96	0.47
22:DA:2536:G:C5	22:DA:2537:U:C4	3.03	0.47
2:AB:94:HIS:O	2:AB:95:ARG:C	2.52	0.47
22:BA:1839:G:C8	22:BA:1927:A:C1'	2.97	0.47
22:DA:1435:G:O2'	22:DA:1436:G:H5'	2.15	0.47
22:DA:2824:C:C4	22:DA:2825:G:C5	3.03	0.47
16:CP:79:ASN:O	16:CP:80:LYS:HB2	2.15	0.47
22:BA:1013:C:OP2	58:BA:3606:HOH:O	2.20	0.47
22:BA:2233:U:H2'	22:BA:2234:G:C8	2.49	0.47
25:BD:38:LYS:O	25:BD:46:ARG:HA	2.14	0.47
16:AP:4:ILE:HG13	16:AP:21:VAL:HG22	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:103:ARG:O	30:DI:107:GLN:HB2	2.15	0.47
22:DA:1833:C:C4	22:DA:1834:U:C4	3.02	0.47
8:AH:22:LYS:HE2	8:AH:22:LYS:HA	1.97	0.47
11:CK:44:TRP:O	11:CK:44:TRP:CE3	2.68	0.47
8:AH:41:LYS:HD2	8:AH:48:ASP:HA	1.97	0.47
22:BA:2526:G:C2'	52:B4:1:MET:H1	2.24	0.47
27:DF:176:PRO:O	27:DF:177:PHE:HB2	2.15	0.47
17:AQ:53:CYS:SG	17:AQ:75:LEU:CD2	3.03	0.47
22:DA:874:G:C2	22:DA:904:G:C2	3.02	0.47
24:DC:125:LYS:HB2	24:DC:126:PRO:HD2	1.95	0.47
1:CA:801:U:H2'	1:CA:802:A:C8	2.49	0.47
1:AA:29:U:O2'	1:AA:30:U:H5'	2.14	0.47
1:CA:622:A:H5''	1:CA:623:C:OP2	2.15	0.47
22:BA:603:A:C8	22:BA:655:A:C6	3.03	0.47
23:DB:68:C:O2'	23:DB:69:G:H5'	2.15	0.47
1:CA:851:G:C2	1:CA:852:G:C8	3.03	0.47
22:DA:377:G:C6	22:DA:378:C:C4	3.03	0.47
1:CA:1397:C:O2'	1:CA:1398:A:OP1	2.29	0.47
33:BL:96:LYS:NZ	33:BL:103:ILE:O	2.41	0.47
2:AB:133:GLU:O	2:AB:137:ARG:N	2.47	0.47
12:CL:51:LYS:N	12:CL:51:LYS:HD2	2.30	0.47
26:DE:22:ASP:N	26:DE:22:ASP:OD1	2.48	0.47
31:DJ:77:HIS:HA	31:DJ:83:GLY:O	2.15	0.47
34:BM:72:PRO:HB3	34:BM:92:TRP:CZ3	2.50	0.47
26:BE:61:ARG:NH2	26:BE:64:GLY:HA3	2.29	0.47
27:BF:100:PHE:O	27:BF:104:ILE:HD13	2.14	0.47
30:BI:22:PRO:HB2	30:BI:23:PRO:HD3	1.97	0.47
1:CA:412:A:HO2'	1:CA:413:G:C5'	2.20	0.47
23:DB:58:A:C8	23:DB:59:A:N7	2.83	0.47
22:DA:2747:G:O2'	28:DG:67:THR:HG22	2.15	0.47
5:CE:104:GLY:HA3	5:CE:122:ASN:HA	1.97	0.47
22:DA:46:G:C2'	22:DA:47:C:O5'	2.63	0.47
22:DA:2200:C:H2'	22:DA:2201:G:H8	1.79	0.47
7:AG:24:ALA:HA	7:AG:27:VAL:HG22	1.96	0.47
12:CL:25:GLU:C	12:CL:27:CYS:N	2.65	0.47
1:CA:818:G:O2'	1:CA:819:A:H5'	2.12	0.47
22:DA:1332:G:C6	22:DA:1609:A:N7	2.83	0.47
1:CA:1512:U:O2'	1:CA:1513:A:H5'	2.14	0.47
31:DJ:30:THR:CG2	31:DJ:31:GLU:N	2.78	0.47
28:BG:121:ILE:HD12	28:BG:141:ILE:CG2	2.45	0.47
2:CB:134:ALA:O	2:CB:138:THR:HG23	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:485:U:O4'	1:AA:485:U:O2	2.31	0.47
22:BA:65:U:H2'	22:BA:66:C:C6	2.50	0.47
22:DA:938:G:C2	22:DA:939:G:N7	2.83	0.47
8:AH:11:LEU:HD11	8:AH:127:CYS:HB3	1.97	0.47
22:DA:303:G:C2	22:DA:315:G:C2	3.02	0.47
10:CJ:84:VAL:O	10:CJ:88:MET:HB2	2.15	0.47
50:D2:30:VAL:O	50:D2:34:ARG:HG3	2.15	0.47
27:BF:105:THR:HG23	27:BF:106:ILE:HG23	1.96	0.47
23:BB:30:C:OP1	36:BO:3:LYS:NZ	2.46	0.47
27:BF:136:ILE:N	27:BF:136:ILE:HD12	2.29	0.47
18:AR:47:THR:OG1	18:AR:48:ARG:N	2.48	0.47
6:CF:59:TYR:HE2	18:CR:67:LEU:HD22	1.80	0.47
44:DW:37:ILE:HG22	44:DW:38:VAL:HG22	1.97	0.47
8:CH:78:VAL:HG12	8:CH:79:SER:N	2.30	0.47
16:CP:52:LEU:HD23	16:CP:53:ASP:N	2.29	0.47
22:BA:2180:U:H5''	22:BA:2181:U:OP2	2.15	0.47
2:AB:210:VAL:HG23	2:AB:211:THR:N	2.30	0.47
22:DA:1435:G:C2'	22:DA:1436:G:H5'	2.44	0.47
22:DA:2229:U:H2'	22:DA:2230:G:H8	1.80	0.47
35:DN:49:GLU:N	35:DN:50:PRO:CD	2.78	0.47
1:AA:100:G:N7	1:AA:101:A:N7	2.62	0.47
22:DA:438:G:C6	22:DA:439:A:C6	3.02	0.47
1:CA:861:G:C5	1:CA:862:C:C5	3.03	0.47
32:BK:92:GLU:N	32:BK:92:GLU:OE1	2.48	0.47
24:BC:33:LEU:HD13	24:BC:103:TYR:CD2	2.50	0.47
1:AA:605:U:O2'	1:AA:606:G:H5'	2.14	0.47
22:DA:1415:U:C2	22:DA:1588:G:C2	3.02	0.47
13:CM:63:PHE:O	13:CM:65:VAL:HG13	2.15	0.47
29:BH:89:LYS:HD3	1:CA:359:G:OP1	2.15	0.47
1:AA:1129:C:O2'	1:AA:1139:G:N7	2.43	0.47
22:DA:1570:A:C6	22:DA:1571:A:C6	3.03	0.47
2:AB:86:SER:HG	2:AB:87:CYS:HG	1.61	0.47
22:DA:783:A:H8	22:DA:784:G:H4'	1.79	0.47
22:DA:1597:A:O3'	22:DA:1598:A:H8	1.98	0.47
22:DA:1599:U:C4	22:DA:1600:C:N4	2.83	0.47
4:AD:155:VAL:HG11	4:AD:178:MET:HE1	1.97	0.47
22:DA:39:G:N2	22:DA:441:U:C2	2.83	0.47
9:CI:84:THR:HA	9:CI:87:LEU:HD12	1.96	0.47
1:AA:1301:U:C5	1:AA:1303:C:C5	3.02	0.47
22:DA:1730:C:OP1	22:DA:1730:C:H4'	2.15	0.47
9:AI:78:ALA:O	9:AI:81:HIS:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:543:U:O2'	1:AA:544:G:H5'	2.15	0.47
1:CA:790:A:C6	1:CA:791:G:C6	3.02	0.47
1:CA:403:C:O2'	1:CA:404:G:H5'	2.15	0.47
1:AA:206:C:H2'	1:AA:207:C:O4'	2.14	0.47
22:BA:360:U:C4	22:BA:361:G:O6	2.68	0.47
2:CB:20:THR:O	2:CB:21:ARG:NH1	2.48	0.47
1:CA:970:C:OP1	10:CJ:59:LYS:NZ	2.40	0.47
32:BK:113:MET:SD	32:BK:116:ILE:HD11	2.54	0.47
36:BO:78:VAL:HG23	36:BO:79:ALA:N	2.30	0.47
30:BI:76:ALA:HB1	30:BI:129:ILE:HG23	1.96	0.47
22:BA:2694:G:H2'	22:BA:2695:U:H6	1.79	0.47
22:BA:1883:U:C2'	22:BA:1884:G:H5'	2.45	0.47
22:DA:2893:A:O4'	22:DA:2894:G:C2	2.68	0.47
22:DA:2773:C:H2'	22:DA:2774:C:H6	1.80	0.47
2:AB:164:ILE:O	2:AB:186:ILE:HG12	2.15	0.47
22:DA:2235:G:C5	22:DA:2236:U:C5	3.03	0.47
1:AA:1280:A:H3'	1:AA:1281:C:H5'	1.97	0.47
22:DA:705:A:C2	22:DA:727:A:O4'	2.67	0.47
9:CI:28:ILE:CG2	9:CI:35:LEU:HB2	2.45	0.47
19:AS:29:LYS:HB3	19:AS:30:PRO:HD2	1.97	0.47
35:DN:106:ASP:C	35:DN:106:ASP:OD1	2.53	0.47
24:DC:108:LYS:N	24:DC:194:GLU:O	2.48	0.47
1:AA:369:G:C2	1:AA:370:C:C6	3.02	0.47
1:CA:517:G:C5'	1:CA:519:C:C2	2.98	0.47
22:BA:1361:G:C6	22:BA:1362:C:N4	2.83	0.47
22:BA:285:G:N2	22:BA:286:U:H1'	2.30	0.47
28:BG:176:LYS:O	28:BG:177:LYS:HB2	2.14	0.47
22:DA:2543:G:N3	22:DA:2765:A:H2'	2.30	0.47
1:CA:1418:A:C2	1:CA:1483:A:C2	3.03	0.47
1:AA:1330:U:O4	1:AA:1331:G:N1	2.48	0.47
26:DE:155:GLU:O	26:DE:158:PHE:N	2.48	0.47
22:BA:1042:G:C6	22:BA:1043:C:C4	3.03	0.47
42:DU:19:LYS:HG2	42:DU:19:LYS:O	2.15	0.47
28:DG:107:LEU:O	28:DG:152:ARG:NH2	2.48	0.47
32:DK:63:VAL:HB	32:DK:103:VAL:HG12	1.97	0.47
7:AG:108:ALA:HB2	7:AG:123:GLU:HG3	1.96	0.47
1:CA:1410:A:H2'	1:CA:1411:C:C6	2.49	0.47
1:AA:828:U:O2	2:AB:25:PRO:HG2	2.15	0.47
1:AA:374:A:C5	1:AA:375:U:C5	3.03	0.47
12:CL:61:PHE:N	12:CL:61:PHE:HD1	2.13	0.47
1:CA:1159:U:C4	1:CA:1182:G:C5	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:734:G:C4	1:CA:735:C:C5	3.03	0.47
22:DA:2289:G:C2	22:DA:2290:G:C8	3.03	0.47
22:DA:2563:U:O4'	22:DA:2566:A:N6	2.48	0.47
1:AA:255:G:C5	1:AA:256:U:C5	3.03	0.47
1:CA:976:G:N2	1:CA:1363:A:C2	2.83	0.47
9:CI:57:MET:O	9:CI:60:LYS:N	2.47	0.47
6:CF:38:ARG:HG3	6:CF:62:MET:O	2.14	0.47
1:CA:632:U:O2	1:CA:632:U:C2'	2.62	0.47
22:DA:2371:G:C2	22:DA:2372:U:C5	3.03	0.47
22:DA:290:U:N3	22:DA:291:G:N7	2.63	0.47
22:DA:1675:C:C5	22:DA:1676:A:C5	3.03	0.47
53:B5:214:TYR:O	53:B5:215:VAL:CB	2.63	0.47
10:CJ:35:GLN:O	10:CJ:36:VAL:CB	2.62	0.47
22:DA:1469:A:N1	22:DA:1470:A:C6	2.82	0.47
4:CD:37:ALA:HA	4:CD:42:GLY:HA3	1.97	0.47
22:DA:630:G:C3'	22:DA:631:A:H5''	2.45	0.47
25:DD:114:LYS:HE2	25:DD:196:ALA:HA	1.97	0.47
22:DA:1818:U:H2'	24:DC:156:ARG:CD	2.45	0.47
1:AA:597:G:C2	1:AA:644:U:C2	3.03	0.47
22:DA:2726:A:HO2'	22:DA:2727:A:C5'	2.23	0.47
22:DA:1240:U:O2'	22:DA:1241:A:O5'	2.30	0.47
22:DA:2069:G:C2	22:DA:2443:C:C2	3.03	0.47
27:DF:31:VAL:CG1	27:DF:97:TRP:CH2	2.98	0.47
1:CA:679:C:C2	1:CA:712:A:C2	3.03	0.47
22:DA:2868:A:C6	22:DA:2869:G:C6	3.03	0.47
41:BT:11:LEU:HD23	41:BT:11:LEU:N	2.30	0.47
22:BA:2346:A:H3'	22:BA:2347:C:H5''	1.96	0.47
47:BZ:38:ARG:HB3	47:BZ:44:ILE:HD12	1.97	0.47
19:CS:6:LYS:HB2	19:CS:7:LYS:HE3	1.97	0.47
9:CI:30:ILE:HA	9:CI:65:ILE:O	2.15	0.47
33:DL:92:LEU:HD23	33:DL:125:LEU:HD12	1.97	0.47
26:DE:23:PHE:CD1	26:DE:111:GLU:HG3	2.49	0.47
22:DA:1576:U:O2'	22:DA:1577:C:H5'	2.15	0.47
22:DA:269:C:N3	22:DA:270:A:C8	2.83	0.47
26:BE:61:ARG:HD2	26:BE:63:LYS:O	2.14	0.47
22:BA:190:A:C4	22:BA:207:A:C2	3.02	0.47
25:BD:146:ILE:HD12	25:BD:161:MET:CE	2.45	0.47
19:CS:15:LEU:HD13	19:CS:33:THR:HG21	1.96	0.47
22:BA:1047:G:N2	22:BA:1110:G:C4	2.83	0.47
16:AP:1:MET:SD	16:AP:1:MET:O	2.72	0.47
40:DS:40:ASN:OD1	40:DS:40:ASN:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1875:G:H2'	22:BA:1876:A:OP2	2.14	0.47
1:CA:78:A:N6	1:CA:79:G:C6	2.84	0.47
26:DE:108:ILE:HD11	26:DE:180:LEU:HB3	1.97	0.47
4:AD:144:SER:HA	4:AD:179:GLU:HA	1.96	0.47
22:BA:2742:G:P	52:B4:24:ARG:HH12	2.38	0.46
22:DA:310:A:H5''	42:DU:15:THR:CG2	2.45	0.46
22:BA:1070:A:C2'	22:BA:1097:U:OP1	2.62	0.46
22:BA:1098:A:N7	22:BA:1099:G:O6	2.48	0.46
22:BA:1924:C:O2	22:BA:1926:U:O4	2.33	0.46
22:BA:1179:G:C8	22:BA:1180:U:O4'	2.68	0.46
35:DN:2:ARG:O	35:DN:3:HIS:C	2.52	0.46
11:AK:126:LYS:CA	21:AU:34:ARG:HH21	2.29	0.46
12:CL:116:LYS:O	12:CL:117:TYR:CB	2.62	0.46
12:CL:74:LEU:HD21	12:CL:104:CYS:SG	2.55	0.46
22:DA:2201:G:N3	22:DA:2202:U:C6	2.83	0.46
1:AA:1161:C:H2'	1:AA:1162:C:C6	2.51	0.46
24:DC:210:ALA:HA	24:DC:213:TRP:NE1	2.29	0.46
24:BC:125:LYS:HB2	24:BC:126:PRO:HD2	1.97	0.46
3:AC:83:ASP:O	3:AC:86:LYS:N	2.48	0.46
1:AA:1014:A:N7	1:AA:1015:G:C6	2.83	0.46
22:DA:2341:G:C6	22:DA:2342:C:N3	2.83	0.46
1:CA:919:A:C2	1:CA:920:U:C5	3.03	0.46
22:DA:2346:A:H3'	22:DA:2347:C:H5''	1.96	0.46
22:DA:749:A:C5	22:DA:750:A:C8	3.02	0.46
22:DA:570:G:C4	22:DA:2030:A:N7	2.83	0.46
1:AA:1441:A:C2'	1:AA:1442:G:O5'	2.63	0.46
22:BA:2615:U:H2'	22:BA:2616:C:O5'	2.14	0.46
22:BA:2020:A:H5'	48:B0:9:THR:HG22	1.97	0.46
30:BI:9:VAL:HG23	30:BI:59:ILE:HG13	1.95	0.46
22:DA:61:C:H4'	46:DY:43:LEU:HD12	1.97	0.46
22:DA:2214:C:H2'	22:DA:2214:C:O2	2.15	0.46
17:AQ:50:ASN:O	17:AQ:51:ASN:C	2.53	0.46
22:BA:696:G:O2'	22:BA:697:G:H5'	2.15	0.46
22:DA:2097:A:C2	22:DA:2193:G:C2	3.04	0.46
20:CT:30:THR:O	20:CT:34:LYS:HG2	2.14	0.46
1:AA:1525:G:OP1	11:AK:122:ARG:NH2	2.48	0.46
1:CA:1394:A:C5	1:CA:1501:C:H4'	2.50	0.46
42:BU:73:PHE:CZ	42:BU:78:GLY:HA2	2.50	0.46
9:AI:28:ILE:HG13	9:AI:63:LEU:HD21	1.97	0.46
1:AA:807:A:C5	1:AA:808:C:C5	3.03	0.46
22:DA:2062:A:C5	54:D6:1:MHW:CG2	2.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:15:SER:HB2	6:CF:44:ARG:NH1	2.30	0.46
29:DH:41:LYS:O	29:DH:44:ILE:HG12	2.15	0.46
1:CA:1105:A:C2	1:CA:1106:G:C5	3.03	0.46
22:BA:1917:U:C2	22:BA:1918:A:O4'	2.68	0.46
8:AH:2:SER:C	8:AH:4:GLN:N	2.67	0.46
35:DN:2:ARG:O	35:DN:5:LYS:HG3	2.15	0.46
22:DA:1351:C:H1'	22:DA:1381:G:N2	2.30	0.46
12:CL:80:ILE:HD12	12:CL:97:THR:HG22	1.97	0.46
1:AA:501:C:H2'	1:AA:502:A:C8	2.50	0.46
22:DA:822:G:O6	22:DA:943:A:H2	1.99	0.46
1:AA:427:U:C4	1:AA:428:G:C6	3.02	0.46
22:BA:2142:A:H2'	22:BA:2143:C:C5	2.51	0.46
22:DA:2838:G:C6	22:DA:2839:G:C5	3.03	0.46
7:AG:69:VAL:HG12	7:AG:135:VAL:HA	1.96	0.46
7:AG:99:LEU:O	7:AG:100:ALA:C	2.54	0.46
22:BA:626:A:H2'	33:BL:78:ARG:NH1	2.31	0.46
42:DU:96:PHE:CZ	42:DU:103:ILE:CG1	2.98	0.46
9:AI:9:THR:O	9:AI:17:ALA:O	2.32	0.46
1:AA:1353:G:C2	1:AA:1354:U:C6	3.03	0.46
44:DW:21:LEU:HD11	44:DW:41:ARG:HG3	1.97	0.46
25:BD:12:THR:HG21	37:BP:9:GLU:CG	2.46	0.46
22:DA:858:G:N2	22:DA:919:U:O4	2.46	0.46
22:BA:1737:G:C6	22:BA:1738:G:N1	2.83	0.46
16:AP:38:PHE:CD1	16:AP:38:PHE:C	2.88	0.46
22:DA:1716:U:C5	22:DA:1743:G:C2	3.03	0.46
1:AA:723:U:O2'	1:AA:855:U:H4'	2.14	0.46
22:DA:1917:U:H2'	22:DA:1918:A:H5'	1.97	0.46
21:CU:40:LYS:HB3	21:CU:41:PRO:HD3	1.98	0.46
14:CN:3:LYS:HD3	14:CN:6:MET:HG2	1.96	0.46
22:BA:1577:C:H2'	22:BA:1578:U:O4'	2.15	0.46
15:CO:67:LEU:HD23	15:CO:78:TYR:CE2	2.49	0.46
2:AB:27:MET:HE1	2:AB:193:PRO:HB3	1.97	0.46
10:AJ:19:ASP:OD1	10:AJ:19:ASP:N	2.44	0.46
22:DA:875:G:H2'	22:DA:876:C:O4'	2.15	0.46
23:DB:71:C:H2'	23:DB:72:G:H5'	1.95	0.46
1:CA:182:A:C8	1:CA:184:G:N7	2.83	0.46
22:DA:2784:U:O4	22:DA:2785:C:N4	2.48	0.46
10:AJ:41:PRO:O	10:AJ:42:LEU:CB	2.63	0.46
22:BA:1905:C:N4	22:BA:1930:G:N1	2.63	0.46
1:CA:1259:C:N4	1:CA:1260:G:C4	2.83	0.46
1:AA:1328:C:H2'	1:AA:1329:A:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.50	0.46
44:BW:61:ALA:CB	44:BW:82:ILE:CD1	2.94	0.46
51:D3:7:VAL:O	51:D3:10:ALA:HB3	2.16	0.46
1:AA:896:C:O2'	1:AA:897:C:H5'	2.15	0.46
1:AA:560:A:H5'	1:AA:566:G:N2	2.30	0.46
1:AA:673:A:H2'	1:AA:674:G:C8	2.51	0.46
49:B1:33:LYS:HA	49:B1:52:ALA:HB3	1.96	0.46
22:BA:2178:C:H2'	22:BA:2179:C:C5	2.51	0.46
52:D4:12:ARG:NH1	52:D4:12:ARG:HB2	2.30	0.46
26:DE:187:VAL:HG12	26:DE:187:VAL:O	2.14	0.46
1:AA:343:U:H2'	1:AA:345:C:C5	2.50	0.46
22:DA:2244:U:H2'	22:DA:2245:U:O4'	2.16	0.46
24:DC:160:THR:H	24:DC:195:VAL:HG13	1.79	0.46
22:BA:1062:G:N2	22:BA:1077:A:C2	2.82	0.46
1:CA:1003:G:N2	1:CA:1038:C:C2	2.83	0.46
22:DA:2550:G:O6	22:DA:2551:C:N4	2.49	0.46
1:CA:1126:U:C6	1:CA:1281:C:C4	3.03	0.46
22:BA:544:C:H5'	22:BA:545:U:OP2	2.14	0.46
22:DA:2286:G:H5'	22:DA:2287:A:O4'	2.15	0.46
1:CA:496:A:H2'	1:CA:497:G:N7	2.29	0.46
22:DA:37:C:H2'	22:DA:38:A:C8	2.50	0.46
9:CI:26:GLY:CA	9:CI:61:LEU:O	2.63	0.46
22:DA:1608:A:C5	22:DA:1611:C:C5	3.04	0.46
22:BA:526:A:O2'	22:BA:2043:C:O2	2.25	0.46
22:BA:1057:A:N3	22:BA:1086:A:C2	2.84	0.46
2:AB:62:SER:C	2:AB:64:LYS:N	2.69	0.46
1:AA:1256:A:N6	1:AA:1277:C:N3	2.63	0.46
12:AL:22:PRO:C	12:AL:24:LEU:H	2.19	0.46
22:DA:1034:G:C6	22:DA:1035:U:N3	2.83	0.46
22:DA:1141:U:OP2	31:DJ:65:THR:OG1	2.24	0.46
42:BU:39:ILE:O	42:BU:41:LEU:HG	2.15	0.46
22:DA:1666:G:O3'	32:DK:6:THR:HG23	2.15	0.46
22:DA:1843:C:H4'	24:DC:251:GLN:NE2	2.30	0.46
22:DA:477:A:H2'	22:DA:478:A:O5'	2.15	0.46
21:CU:20:LYS:HA	21:CU:20:LYS:HZ3	1.79	0.46
39:DR:58:VAL:O	39:DR:102:SER:HB2	2.15	0.46
4:CD:26:ARG:HD2	4:CD:31:LYS:CE	2.46	0.46
1:AA:1212:U:O2	1:AA:1212:U:H2'	2.15	0.46
24:DC:29:PRO:HG3	24:DC:63:ARG:CZ	2.45	0.46
16:AP:78:VAL:O	16:AP:79:ASN:HB2	2.15	0.46
22:DA:202:U:H2'	22:DA:203:A:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:220:G:C5	1:AA:221:C:C5	3.03	0.46
24:DC:141:VAL:O	24:DC:162:VAL:N	2.40	0.46
2:AB:147:SER:O	2:AB:148:LEU:HG	2.16	0.46
35:BN:108:ALA:HB3	35:BN:110:MET:CE	2.46	0.46
30:DI:46:THR:CG2	30:DI:51:LYS:HG3	2.45	0.46
2:AB:211:THR:O	2:AB:215:GLY:N	2.44	0.46
22:BA:1827:U:H2'	22:BA:1828:G:O5'	2.16	0.46
16:CP:78:VAL:O	16:CP:80:LYS:N	2.47	0.46
17:AQ:75:LEU:CD1	17:AQ:75:LEU:C	2.84	0.46
34:DM:2:LEU:O	34:DM:3:GLN:CB	2.64	0.46
22:BA:1444:G:C2	22:BA:1548:A:C2	3.04	0.46
1:CA:445:G:C2	1:CA:446:G:C8	3.04	0.46
1:AA:598:U:H4'	8:AH:86:TYR:CD2	2.50	0.46
33:BL:23:ILE:O	33:BL:24:GLY:C	2.53	0.46
30:BI:64:ASP:O	30:BI:66:SER:N	2.48	0.46
32:BK:43:ILE:CG2	32:BK:54:LYS:HA	2.45	0.46
25:DD:14:ILE:HG12	25:DD:24:VAL:HG21	1.96	0.46
1:CA:1010:U:C2	1:CA:1020:G:N1	2.83	0.46
22:DA:1385:A:C2	22:DA:1386:C:C2	3.03	0.46
1:AA:26:A:H2'	1:AA:27:G:H5'	1.97	0.46
29:BH:132:PHE:CD2	29:BH:142:VAL:CG2	2.99	0.46
29:BH:80:ILE:HG21	29:BH:94:ILE:CG1	2.45	0.46
22:BA:1060:U:H4'	22:BA:1061:U:H3'	1.97	0.46
22:BA:2580:U:C5	22:BA:2581:G:O6	2.69	0.46
10:AJ:8:ILE:HG13	10:AJ:74:VAL:HG11	1.97	0.46
22:DA:1362:C:N4	22:DA:1363:C:C4	2.84	0.46
22:DA:2127:G:C2	22:DA:2162:G:C8	3.03	0.46
1:AA:262:A:H2'	1:AA:263:A:C8	2.50	0.46
22:DA:2208:C:O2	22:DA:2217:G:N2	2.48	0.46
1:CA:683:G:H2'	1:CA:684:U:O4'	2.15	0.46
22:DA:204:A:O4'	22:DA:206:U:C6	2.68	0.46
1:CA:666:G:C5	1:CA:741:G:N1	2.84	0.46
10:AJ:53:ILE:HD11	14:AN:85:ARG:NH1	2.31	0.46
9:AI:17:ALA:HB2	9:AI:67:VAL:CG2	2.45	0.46
1:AA:545:C:H5'	4:AD:69:GLU:CG	2.45	0.46
22:DA:288:U:H2'	22:DA:289:G:C8	2.51	0.46
22:BA:142:A:H2'	22:BA:143:C:C6	2.50	0.46
22:BA:142:A:N7	22:BA:143:C:C4	2.83	0.46
2:AB:106:THR:O	2:AB:107:VAL:HB	2.14	0.46
24:DC:16:VAL:HG22	24:DC:206:GLY:HA3	1.97	0.46
22:BA:361:G:HO2'	22:BA:362:A:H8	1.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:43:VAL:O	13:CM:43:VAL:HG23	2.16	0.46
24:DC:147:LYS:O	24:DC:150:LYS:HB3	2.15	0.46
1:CA:756:C:N3	1:CA:757:U:C6	2.83	0.46
25:DD:105:LYS:O	25:DD:177:VAL:HG12	2.16	0.46
22:DA:2103:C:C2	22:DA:2104:C:C5	3.03	0.46
1:CA:439:U:H4'	4:CD:121:LYS:CD	2.45	0.46
18:CR:33:ILE:HA	18:CR:40:VAL:HG23	1.96	0.46
22:BA:27:G:C2	22:BA:512:G:N3	2.84	0.46
23:DB:43:C:O2	27:DF:92:ARG:NH2	2.47	0.46
28:DG:38:ASN:HB3	28:DG:41:VAL:HG23	1.98	0.46
1:CA:1149:C:C4	1:CA:1150:A:C6	3.03	0.46
1:CA:1533:C:OP1	1:CA:1533:C:H4'	2.15	0.46
22:BA:1584:U:C2'	22:BA:1584:U:O2	2.63	0.46
22:DA:236:C:H4'	22:DA:431:U:O2'	2.16	0.46
1:CA:775:G:O2'	1:CA:776:G:H5'	2.16	0.46
1:CA:1342:C:H2'	1:CA:1343:G:C8	2.50	0.46
1:CA:941:G:C2	1:CA:1343:G:C2	3.03	0.46
1:CA:109:A:C6	1:CA:327:A:C6	3.03	0.46
30:DI:133:ALA:C	30:DI:138:LEU:HD12	2.36	0.46
30:DI:80:LEU:HD11	30:DI:133:ALA:HB2	1.96	0.46
2:AB:14:VAL:HG23	2:AB:208:ARG:NH2	2.30	0.46
11:CK:34:ILE:HG13	11:CK:70:CYS:SG	2.54	0.46
22:BA:1442:U:H2'	22:BA:1443:U:C6	2.50	0.46
22:BA:1827:U:C2'	22:BA:1828:G:O5'	2.63	0.46
1:AA:1446:A:C2'	1:AA:1447:A:H5'	2.46	0.46
1:AA:36:C:OP1	12:AL:120:LYS:HE3	2.15	0.46
52:B4:10:LEU:HB2	52:B4:33:HIS:CE1	2.50	0.46
1:AA:1371:G:P	9:AI:13:LYS:HD3	2.55	0.46
30:BI:49:ILE:O	30:BI:50:GLU:HB2	2.16	0.46
22:BA:920:A:C6	22:BA:921:C:C4	3.03	0.46
16:CP:6:LEU:CD1	16:CP:71:VAL:HG23	2.46	0.46
25:DD:3:GLY:C	25:DD:82:PHE:CE1	2.89	0.46
12:AL:41:THR:HG22	12:AL:48:ALA:O	2.16	0.46
1:AA:1135:U:C2	1:AA:1137:C:N3	2.83	0.46
1:AA:233:C:H2'	1:AA:234:C:C6	2.51	0.46
50:D2:10:LEU:O	50:D2:14:ARG:HG3	2.15	0.46
11:CK:77:TYR:CD1	11:CK:77:TYR:N	2.83	0.46
31:DJ:71:ASP:O	31:DJ:73:VAL:HG23	2.15	0.46
2:CB:221:VAL:O	2:CB:223:GLU:N	2.48	0.46
9:CI:81:HIS:O	9:CI:85:ARG:HB2	2.16	0.46
22:BA:2748:A:C2	22:BA:2757:A:C4	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:57:VAL:CG2	41:BT:58:VAL:N	2.78	0.46
22:DA:223:A:C4	22:DA:408:G:H1'	2.51	0.46
22:DA:1359:A:N1	22:DA:1360:G:H1'	2.31	0.46
11:AK:126:LYS:HA	21:AU:34:ARG:NH2	2.30	0.46
2:AB:88:ASP:OD1	2:AB:88:ASP:N	2.48	0.46
22:DA:2573:C:OP2	58:DA:3709:HOH:O	2.20	0.46
22:DA:2136:G:C2	22:DA:2156:G:H1'	2.50	0.46
35:DN:84:GLY:N	35:DN:85:PRO:HD2	2.31	0.46
10:CJ:65:TYR:CB	14:CN:96:LEU:HD11	2.46	0.46
22:DA:1271:G:N7	22:DA:1325:U:H5	2.14	0.46
22:BA:2532:G:N2	22:BA:2663:G:O2'	2.49	0.46
22:DA:609:A:C5	22:DA:610:C:C2	3.04	0.46
22:BA:528:A:C2	22:BA:2042:A:H2'	2.51	0.46
1:AA:251:G:C6	1:AA:266:G:O6	2.69	0.46
9:CI:114:LYS:HG3	9:CI:120:LYS:HA	1.97	0.46
22:BA:1735:A:C2	22:BA:1736:U:C6	3.04	0.46
22:BA:589:U:H2'	22:BA:590:A:C8	2.50	0.46
10:AJ:36:VAL:HG12	10:AJ:36:VAL:O	2.14	0.46
26:DE:28:VAL:O	26:DE:32:VAL:HG23	2.15	0.46
16:CP:1:MET:HG2	16:CP:2:VAL:N	2.31	0.46
22:DA:663:G:O6	22:DA:664:G:C6	2.68	0.46
15:CO:27:VAL:HG13	15:CO:31:LEU:HD11	1.97	0.46
22:BA:2339:C:H2'	22:BA:2340:A:H8	1.79	0.46
4:CD:119:SER:O	4:CD:131:ASN:OD1	2.34	0.46
1:AA:1306:A:C4	1:AA:1307:U:C6	3.03	0.46
1:CA:503:C:H2'	1:CA:504:C:C6	2.51	0.46
22:BA:1005:C:O2	22:BA:1005:C:H2'	2.15	0.46
12:AL:101:ALA:O	12:AL:102:LEU:C	2.54	0.46
26:BE:79:ARG:O	26:BE:80:SER:CB	2.64	0.46
8:CH:30:SER:OG	8:CH:33:LYS:HG3	2.15	0.46
1:AA:665:A:C2	1:AA:732:C:C4	3.03	0.46
22:DA:265:A:H4'	22:DA:266:G:OP1	2.16	0.46
22:BA:1664:A:H1'	22:BA:2726:A:N1	2.30	0.46
22:BA:2350:C:H2'	22:BA:2351:G:O4'	2.16	0.46
22:DA:181:A:H1'	22:DA:435:C:O4'	2.16	0.46
22:BA:852:U:H2'	22:BA:853:C:C6	2.51	0.46
22:DA:2580:U:H5''	22:DA:2581:G:OP2	2.15	0.46
20:CT:43:ASP:HB3	20:CT:46:ALA:HB3	1.96	0.46
1:CA:598:U:H4'	8:CH:86:TYR:CD1	2.51	0.46
1:AA:1048:G:N3	1:AA:1050:G:C8	2.83	0.46
1:AA:660:C:OP1	15:AO:5:THR:HG21	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1431:A:C5	1:AA:1432:G:C6	3.04	0.46
2:CB:30:PHE:CD1	2:CB:30:PHE:N	2.82	0.46
22:BA:2901:C:N4	22:BA:2902:C:C4	2.83	0.46
22:DA:2514:U:H2'	22:DA:2515:C:C6	2.51	0.46
29:BH:37:VAL:CG2	29:BH:38:PRO:HD2	2.45	0.46
24:DC:158:ALA:HB1	24:DC:197:ASN:O	2.15	0.46
1:AA:1410:A:H2'	1:AA:1411:C:C6	2.50	0.46
22:BA:572:A:C2	22:BA:2033:A:C2	3.03	0.46
3:CC:156:ARG:HD3	3:CC:160:ALA:O	2.15	0.46
45:DX:27:ARG:NE	45:DX:28:ARG:O	2.48	0.46
39:BR:48:LYS:O	39:BR:49:ILE:C	2.54	0.46
22:DA:2142:A:C6	22:DA:2143:C:C4	3.04	0.46
1:CA:1151:A:C2	1:CA:1152:A:C4	3.04	0.46
22:BA:1747:U:H2'	22:BA:1748:C:H6	1.79	0.46
25:DD:13:ARG:HD2	25:DD:15:PHE:CE2	2.51	0.46
11:CK:40:ASN:O	11:CK:41:ALA:HB3	2.15	0.46
1:CA:178:C:H2'	1:CA:179:A:O4'	2.15	0.46
1:CA:1133:G:N3	1:CA:1133:G:H2'	2.30	0.46
12:AL:25:GLU:O	12:AL:27:CYS:N	2.49	0.46
22:BA:1605:C:C2'	22:BA:1606:C:H5'	2.46	0.46
2:CB:85:LEU:O	2:CB:85:LEU:CG	2.64	0.46
22:BA:1735:A:C2	22:BA:1736:U:C1'	2.98	0.46
22:DA:1028:A:H61	22:DA:1125:G:H2'	1.77	0.46
5:CE:155:ALA:HB1	8:CH:66:PHE:CE2	2.51	0.46
22:DA:1754:A:C6	22:DA:1755:A:C6	3.04	0.46
22:DA:1754:A:H4'	37:DP:99:TYR:CE2	2.50	0.46
22:DA:1090:A:C6	22:DA:1091:G:N7	2.84	0.46
22:DA:308:G:C6	22:DA:309:A:C6	3.03	0.46
36:BO:7:ARG:HG3	36:BO:96:GLY:HA3	1.97	0.46
32:BK:34:GLY:O	32:BK:35:VAL:C	2.53	0.46
16:AP:67:ILE:HG23	16:AP:71:VAL:HG12	1.98	0.46
22:BA:858:G:C4	22:BA:2268:A:C2	3.03	0.46
22:DA:1838:C:C5	22:DA:1899:A:C6	3.03	0.46
2:AB:203:ASN:OD1	2:AB:204:ASP:N	2.48	0.46
37:DP:39:ARG:HG3	37:DP:40:LEU:N	2.31	0.46
22:DA:404:A:C1'	22:DA:405:U:OP2	2.63	0.46
1:AA:493:A:N7	1:AA:494:G:C6	2.84	0.46
1:CA:754:C:H3'	1:CA:754:C:O2	2.15	0.46
17:AQ:5:ILE:O	17:AQ:6:ARG:HB2	2.16	0.46
1:CA:1259:C:O2'	1:CA:1283:U:O2	2.30	0.46
20:AT:82:GLN:O	20:AT:85:LYS:HB2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1135:U:C2'	1:AA:1136:C:O5'	2.64	0.46
34:DM:56:ALA:C	34:DM:58:LYS:H	2.19	0.46
38:BQ:101:PHE:O	38:BQ:102:ASP:HB2	2.15	0.46
22:DA:155:A:H2'	22:DA:156:A:C8	2.51	0.46
1:AA:586:C:O3'	8:AH:81:PRO:HB3	2.16	0.46
32:BK:38:ILE:HD11	32:BK:112:PHE:HZ	1.81	0.46
22:BA:2690:U:C4	22:BA:2873:A:N1	2.84	0.46
3:AC:169:ARG:O	3:AC:169:ARG:NE	2.48	0.46
22:BA:1647:U:H3'	22:BA:1647:U:P	2.56	0.46
27:DF:85:ILE:HG13	27:DF:85:ILE:O	2.16	0.46
29:DH:60:GLU:HA	29:DH:60:GLU:OE2	2.15	0.46
38:DQ:94:ILE:HD13	39:DR:11:GLN:HB2	1.96	0.46
29:BH:94:ILE:HG23	29:BH:98:ASP:HB2	1.98	0.46
22:DA:2062:A:C6	54:D6:1:MHW:CA	2.99	0.46
22:BA:1061:U:C3'	22:BA:1062:G:H5'	2.44	0.46
22:BA:1910:G:N1	22:BA:1921:G:C5	2.84	0.46
2:CB:17:GLY:O	2:CB:40:ILE:HA	2.15	0.46
2:AB:84:ALA:O	2:AB:89:GLN:OE1	2.34	0.46
22:DA:1266:G:OP1	48:D0:16:ARG:NE	2.48	0.46
41:DT:17:SER:O	41:DT:18:GLU:C	2.54	0.46
22:BA:780:G:H2'	22:BA:782:A:N7	2.31	0.46
5:CE:137:VAL:HA	5:CE:140:THR:OG1	2.15	0.46
7:AG:17:LYS:HD3	7:AG:18:PHE:CE2	2.51	0.46
1:AA:82:G:O6	1:AA:87:C:N4	2.48	0.46
1:AA:91:U:C5	1:AA:92:U:C5	3.03	0.46
22:DA:2880:C:N3	22:DA:2881:U:C5	2.83	0.46
4:AD:147:GLU:HA	4:AD:150:LYS:HD2	1.96	0.46
1:AA:276:G:P	17:AQ:17:MET:HE2	2.56	0.46
11:CK:35:THR:OG1	11:CK:40:ASN:N	2.48	0.46
31:BJ:80:HIS:O	31:BJ:81:ILE:C	2.54	0.46
30:BI:124:ALA:C	30:BI:126:THR:N	2.69	0.46
33:BL:109:LYS:HG2	33:BL:126:ARG:HB2	1.98	0.46
22:DA:1366:A:C2	22:DA:1367:A:C4	3.04	0.46
1:CA:73:C:O2'	1:CA:74:A:P	2.73	0.46
1:AA:1353:G:C2	1:AA:1354:U:C5	3.04	0.46
22:DA:553:G:H2'	22:DA:554:U:O4'	2.16	0.46
42:DU:72:ILE:HD11	42:DU:83:VAL:HG23	1.97	0.46
22:BA:1734:G:H2'	22:BA:1735:A:H8	1.81	0.46
22:DA:503:A:N6	22:DA:505:A:N6	2.63	0.46
2:AB:53:ALA:O	2:AB:57:LEU:HB2	2.15	0.46
38:DQ:110:VAL:HG12	38:DQ:114:LYS:HD2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1164:G:C2	1:AA:1173:U:O2	2.69	0.46
1:CA:1491:G:H5''	12:CL:44:LYS:HD2	1.98	0.46
7:AG:80:VAL:O	7:AG:81:GLY:C	2.53	0.46
46:BY:22:LEU:O	46:BY:23:ARG:C	2.54	0.46
22:DA:1817:G:C2'	22:DA:1818:U:H5'	2.45	0.46
29:DH:34:GLY:O	29:DH:35:LYS:CG	2.64	0.46
1:CA:821:G:H2'	1:CA:822:U:H6	1.80	0.46
4:CD:64:ILE:HG22	4:CD:65:TYR:CD1	2.50	0.46
22:DA:387:U:O2	22:DA:388:G:N7	2.49	0.46
1:CA:21:G:H2'	1:CA:22:G:C8	2.51	0.46
5:AE:111:MET:HE1	5:AE:125:ALA:HB1	1.98	0.46
1:AA:1227:A:C2'	1:AA:1228:C:O5'	2.64	0.46
14:AN:9:ARG:O	14:AN:13:ARG:HG3	2.16	0.46
11:CK:113:VAL:HB	18:CR:73:ARG:NH2	2.30	0.46
22:DA:542:C:N3	22:DA:551:G:O6	2.48	0.46
22:DA:7:G:H2'	22:DA:8:C:O4'	2.16	0.46
9:CI:28:ILE:HG21	9:CI:35:LEU:HB2	1.97	0.46
22:BA:2196:C:O2'	22:BA:2197:U:H5'	2.16	0.46
1:AA:230:G:C6	1:AA:231:U:C4	3.03	0.46
22:BA:1930:G:H22	22:BA:1968:G:H2'	1.81	0.46
22:DA:144:A:N3	22:DA:144:A:H2'	2.30	0.46
41:BT:69:ARG:HA	41:BT:74:ILE:HA	1.98	0.46
9:AI:63:LEU:N	9:AI:63:LEU:CD2	2.78	0.46
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.50	0.46
13:CM:106:ALA:O	13:CM:110:LYS:HB3	2.16	0.46
41:DT:64:LYS:HA	41:DT:79:ASP:OD2	2.15	0.46
24:DC:138:GLY:N	24:DC:164:ILE:O	2.48	0.46
2:CB:60:ILE:O	2:CB:65:GLY:N	2.48	0.46
22:DA:2282:G:C5	22:DA:2425:A:N1	2.84	0.46
22:BA:570:G:H2'	22:BA:2030:A:C8	2.50	0.46
1:CA:186:C:O4'	20:CT:76:LYS:HD2	2.15	0.46
28:DG:98:VAL:HG22	28:DG:125:CYS:SG	2.56	0.46
22:BA:2512:C:H2'	22:BA:2513:A:O4'	2.16	0.46
22:BA:1300:G:H4'	22:BA:1301:A:H5'	1.97	0.46
1:AA:1147:C:O2	9:AI:18:ARG:NH1	2.47	0.46
14:AN:54:ASP:OD1	14:AN:59:ARG:NH1	2.49	0.46
7:AG:49:THR:O	7:AG:53:ARG:HB3	2.16	0.46
8:AH:10:MET:HE1	8:AH:33:LYS:HA	1.97	0.46
22:BA:1770:G:C5	22:BA:1983:G:C6	3.04	0.46
1:AA:1377:A:C5	7:AG:7:ILE:HD11	2.51	0.46
26:DE:25:GLU:OE1	33:DL:6:LEU:HA	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:77:HIS:O	12:CL:78:SER:OG	2.33	0.46
22:BA:164:C:H2'	22:BA:165:A:O4'	2.15	0.46
2:CB:99:GLY:HA2	2:CB:102:THR:HG22	1.98	0.46
12:AL:43:LYS:O	12:AL:44:LYS:C	2.54	0.46
1:CA:1323:G:H2'	1:CA:1324:A:O4'	2.16	0.46
22:DA:370:G:OP2	58:DA:3560:HOH:O	2.21	0.46
21:AU:40:LYS:HA	21:AU:43:THR:HG23	1.98	0.46
39:BR:39:LEU:O	39:BR:49:ILE:HG23	2.16	0.46
39:BR:49:ILE:HB	39:BR:52:PRO:CA	2.46	0.46
22:BA:1747:U:O2'	22:BA:1748:C:H5'	2.16	0.46
22:DA:347:A:N1	22:DA:348:A:C5	2.84	0.46
22:DA:36:G:C6	22:DA:37:C:C4	3.04	0.46
30:BI:125:MET:O	30:BI:128:SER:OG	2.33	0.46
1:AA:652:U:C2	1:AA:752:G:N2	2.83	0.46
22:DA:511:U:O2'	22:DA:1215:G:N2	2.49	0.46
39:DR:54:VAL:HG12	39:DR:55:ASP:N	2.31	0.46
22:BA:747:U:N3	22:BA:2613:U:C4	2.84	0.46
2:AB:35:ARG:HB3	2:AB:40:ILE:HD11	1.97	0.46
53:B5:41:THR:O	53:B5:215:VAL:CB	2.64	0.46
53:B5:40:GLU:HG2	53:B5:181:PHE:CB	2.45	0.46
19:CS:55:ARG:CZ	19:CS:79:THR:CG2	2.93	0.46
17:CQ:51:ASN:ND2	17:CQ:51:ASN:O	2.49	0.46
1:CA:216:U:H5''	1:CA:464:U:H4'	1.98	0.46
22:DA:480:A:O3'	42:DU:44:LYS:HG3	2.15	0.46
2:AB:217:VAL:O	2:AB:220:THR:HG22	2.15	0.46
1:CA:692:U:H1'	1:CA:695:A:N7	2.30	0.46
1:CA:1118:U:H1'	1:CA:1179:A:C5	2.51	0.46
24:BC:162:VAL:HG22	24:BC:176:LEU:HA	1.98	0.46
1:AA:1268:G:C6	1:AA:1269:A:N6	2.84	0.46
1:AA:1314:C:N4	19:AS:4:SER:HA	2.31	0.46
12:AL:116:LYS:O	12:AL:117:TYR:CB	2.64	0.46
22:DA:635:C:O2'	22:DA:639:U:OP1	2.34	0.46
11:CK:27:PHE:CZ	11:CK:89:PRO:HG2	2.51	0.46
1:CA:157:U:O2'	1:CA:158:G:H5'	2.16	0.46
22:DA:1691:C:C4	22:DA:1692:U:C5	3.03	0.46
22:BA:2086:U:H2'	22:BA:2087:G:C8	2.51	0.46
22:BA:1583:A:HO2'	22:BA:1584:U:P	2.39	0.46
1:AA:680:C:C2	1:AA:711:G:C2	3.04	0.46
1:AA:405:U:O4	4:AD:2:ALA:N	2.48	0.46
22:DA:2212:A:C2	22:DA:2214:C:C4	3.03	0.46
23:DB:66:A:N6	23:DB:107:G:H2'	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:296:U:C2	1:CA:297:G:C8	3.03	0.46
1:AA:125:U:O2'	1:AA:126:G:H5'	2.16	0.46
1:AA:1446:A:H2'	1:AA:1447:A:H5'	1.97	0.46
1:CA:518:C:H4'	1:CA:519:C:O5'	2.15	0.46
1:AA:1330:U:C4	1:AA:1331:G:C6	3.04	0.46
1:CA:597:G:C8	1:CA:598:U:C5	3.03	0.46
16:CP:19:VAL:HG12	16:CP:37:GLY:C	2.37	0.46
45:BX:66:THR:O	45:BX:69:ALA:HB3	2.16	0.46
1:AA:1375:A:C5	1:AA:1376:U:C5	3.04	0.46
22:BA:541:A:C6	22:BA:542:C:C4	3.04	0.46
6:AF:95:ALA:O	6:AF:96:VAL:HG13	2.16	0.46
1:CA:181:A:C5	1:CA:194:C:C5	3.04	0.46
38:DQ:47:TYR:CE2	38:DQ:51:ARG:NH2	2.84	0.46
22:BA:1946:U:C2	22:BA:1947:C:C6	3.04	0.46
22:BA:1637:A:H5'	22:BA:1760:C:O2'	2.15	0.46
31:DJ:39:LYS:HA	31:DJ:39:LYS:HE3	1.97	0.46
22:DA:2499:C:N4	22:DA:2500:U:O4	2.48	0.46
22:DA:651:G:OP1	51:D3:19:LYS:HB2	2.15	0.46
22:DA:1274:A:N3	22:DA:1297:C:H1'	2.31	0.46
24:DC:266:PHE:CD1	24:DC:266:PHE:N	2.84	0.46
1:AA:577:G:C8	1:AA:816:A:C6	3.03	0.46
29:BH:90:LEU:HD23	29:BH:93:SER:HA	1.97	0.46
1:CA:1042:A:H2'	1:CA:1043:G:C1'	2.46	0.46
22:BA:2579:C:O2'	22:BA:2580:U:H5'	2.15	0.46
12:CL:110:ARG:NE	12:CL:117:TYR:CE2	2.84	0.46
23:DB:58:A:N7	23:DB:59:A:C5	2.83	0.46
1:CA:6:G:H2'	5:CE:124:LEU:CD2	2.46	0.46
22:DA:118:A:N7	22:DA:119:A:N7	2.64	0.46
22:DA:609:A:H2'	22:DA:610:C:O4'	2.15	0.46
22:BA:2185:U:H2'	22:BA:2186:G:H5'	1.96	0.46
22:DA:995:C:C6	38:DQ:57:PHE:CE2	3.04	0.46
22:DA:614:A:H4'	22:DA:616:A:N7	2.30	0.46
1:CA:212:G:C2	1:CA:213:G:C8	3.04	0.46
4:CD:166:GLU:O	4:CD:167:LYS:HB2	2.14	0.46
1:CA:1225:A:C2'	1:CA:1225:A:N3	2.79	0.46
30:DI:22:PRO:HB2	30:DI:23:PRO:HD3	1.98	0.46
1:CA:951:G:C2	1:CA:1231:G:C2	3.04	0.46
1:CA:583:A:C2	1:CA:759:A:C5	3.04	0.46
22:BA:1850:G:C5	22:BA:1851:U:C4	3.04	0.46
1:AA:844:G:N3	1:AA:845:A:C8	2.84	0.46
22:DA:2429:G:OP2	22:DA:2430:A:OP2	2.33	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:137:U:H1'	1:CA:227:G:N2	2.29	0.46
20:AT:44:LYS:HG2	20:AT:87:ALA:HA	1.98	0.46
22:DA:2511:U:C4	22:DA:2512:C:C4	3.04	0.46
1:CA:1089:G:C4	1:CA:1090:U:C6	3.04	0.46
1:CA:158:G:C6	1:CA:159:G:C5	3.04	0.46
2:AB:200:ILE:O	2:AB:201:PRO:O	2.33	0.46
15:CO:10:LYS:O	15:CO:14:GLU:HG3	2.16	0.46
1:CA:940:C:H2'	1:CA:941:G:C8	2.51	0.46
21:CU:24:GLU:HG3	21:CU:28:VAL:HG21	1.96	0.46
1:CA:295:C:C2	1:CA:296:U:C6	3.04	0.46
22:DA:189:G:P	45:DX:26:LYS:HE2	2.56	0.46
1:CA:1239:A:H4'	1:CA:1240:U:H5''	1.96	0.46
6:AF:90:MET:HG2	18:AR:61:ARG:NH2	2.31	0.46
21:AU:22:SER:C	21:AU:23:CYS:SG	2.94	0.46
22:DA:1428:C:C4	22:DA:1569:A:H5''	2.51	0.46
51:D3:4:ILE:HG21	51:D3:63:PRO:HG3	1.97	0.46
22:BA:1100:C:H2'	22:BA:1101:U:C5	2.51	0.46
1:CA:585:G:C6	1:CA:586:C:C4	3.04	0.46
15:AO:24:SER:O	15:AO:25:THR:C	2.54	0.46
13:AM:58:ASP:O	13:AM:61:ALA:HB3	2.16	0.46
1:CA:110:C:C4	1:CA:111:G:C5	3.04	0.46
1:CA:1115:U:H2'	1:CA:1116:U:H6	1.80	0.46
14:AN:6:MET:HB3	14:AN:63:ARG:NH2	2.31	0.46
32:BK:88:ASN:C	32:BK:88:ASN:OD1	2.55	0.46
50:D2:6:GLN:HA	50:D2:6:GLN:OE1	2.16	0.46
18:CR:45:THR:OG1	18:CR:45:THR:O	2.33	0.46
27:BF:149:VAL:O	27:BF:149:VAL:HG23	2.16	0.46
22:DA:1673:G:C2'	22:DA:1674:G:H5'	2.46	0.46
22:BA:1816:C:C5	24:BC:62:TYR:CE2	3.04	0.46
13:AM:114:LYS:HB2	13:AM:115:PRO:HD3	1.98	0.46
29:BH:79:THR:HG23	29:BH:147:VAL:HB	1.98	0.46
2:AB:24:ASN:O	2:AB:25:PRO:C	2.54	0.46
22:DA:491:G:C6	22:DA:492:A:C5	3.04	0.46
1:AA:982:U:H4'	1:AA:983:A:O5'	2.15	0.46
1:AA:1124:G:H2'	1:AA:1145:A:C6	2.51	0.46
23:DB:29:A:N1	23:DB:56:G:C6	2.84	0.46
39:BR:49:ILE:CB	39:BR:52:PRO:C	2.85	0.46
22:DA:143:C:O2	41:DT:1:MET:N	2.49	0.46
1:AA:254:G:OP1	17:AQ:68:SER:OG	2.33	0.46
4:AD:58:LYS:HG2	4:AD:203:LEU:HD22	1.98	0.46
22:DA:1006:C:P	58:DA:3780:HOH:O	2.74	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:94:THR:CG2	33:DL:95:LEU:N	2.79	0.46
12:AL:21:VAL:O	12:AL:21:VAL:HG13	2.16	0.46
22:DA:286:U:H2'	22:DA:287:G:C8	2.51	0.46
43:BV:14:LYS:HD2	43:BV:18:ARG:HH11	1.81	0.46
17:CQ:19:LYS:CD	17:CQ:49:GLU:HA	2.46	0.46
22:DA:475:C:O2	22:DA:481:G:N1	2.49	0.46
1:CA:457:G:N2	1:CA:476:U:C2	2.84	0.46
11:CK:88:GLY:H	11:CK:114:THR:HG22	1.81	0.46
22:DA:137:U:H2'	22:DA:140:C:N1	2.31	0.46
1:CA:951:G:C6	1:CA:1231:G:C6	3.04	0.46
4:CD:102:VAL:HG13	4:CD:107:PHE:HB2	1.98	0.46
27:BF:38:MET:HG3	27:BF:152:LEU:CD1	2.46	0.46
1:AA:880:C:OP1	12:AL:9:ARG:NH2	2.46	0.46
1:CA:772:U:C2'	1:CA:773:G:H5'	2.45	0.46
19:AS:3:ARG:O	19:AS:4:SER:HB2	2.16	0.46
22:BA:372:G:C8	45:BX:61:LYS:HD2	2.51	0.46
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.51	0.46
53:B5:212:SER:CB	53:B5:221:PRO:CB	2.94	0.46
2:CB:67:ILE:HG22	2:CB:68:LEU:N	2.31	0.46
25:DD:193:VAL:HB	25:DD:194:PRO:CD	2.46	0.46
22:DA:2869:G:H2'	22:DA:2870:C:O4'	2.16	0.46
1:CA:527:G:N1	1:CA:528:C:C5	2.84	0.46
22:BA:1984:G:C5	22:BA:1985:C:C5	3.03	0.46
22:DA:1992:G:N2	22:DA:1996:C:O2'	2.49	0.46
22:DA:963:U:H2'	22:DA:964:C:C6	2.51	0.46
22:BA:11:C:C2'	22:BA:12:U:H5'	2.45	0.46
30:BI:47:ASP:HA	30:BI:51:LYS:HD2	1.98	0.46
1:CA:1272:G:N2	1:CA:1273:C:H1'	2.31	0.46
20:CT:55:GLN:N	20:CT:56:PRO:HD2	2.31	0.46
22:DA:379:G:C6	22:DA:396:G:C6	3.04	0.46
41:DT:2:ILE:CG2	41:DT:4:GLU:HG3	2.46	0.46
1:CA:1108:G:H5''	3:CC:176:HIS:CD2	2.50	0.46
9:CI:28:ILE:HG23	9:CI:63:LEU:HD11	1.98	0.46
1:AA:1302:C:C4	13:AM:17:ILE:HD13	2.51	0.46
45:DX:41:GLU:O	45:DX:44:LYS:HD2	2.15	0.46
2:CB:71:GLY:O	2:CB:93:ASN:HA	2.16	0.46
1:CA:597:G:H2'	1:CA:598:U:H5'	1.96	0.46
41:DT:74:ILE:HD12	41:DT:75:GLY:N	2.31	0.46
44:DW:48:GLY:O	44:DW:49:ALA:C	2.55	0.46
22:DA:96:C:H4'	46:DY:41:HIS:CD2	2.51	0.46
22:DA:2138:G:C2	22:DA:2154:A:N3	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:46:ASN:ND2	12:AL:89:ASP:OD2	2.49	0.46
46:DY:35:GLY:C	46:DY:36:GLN:HG3	2.36	0.46
3:AC:34:ASP:O	3:AC:38:LYS:HB2	2.15	0.46
22:BA:1464:G:H2'	22:BA:1465:G:C8	2.50	0.46
13:CM:96:PRO:HA	13:CM:109:ARG:HG2	1.97	0.46
31:DJ:17:VAL:HG23	31:DJ:55:ILE:HB	1.97	0.46
22:DA:806:C:H2'	22:DA:807:U:C6	2.50	0.46
45:BX:36:HIS:CD2	45:BX:56:MET:CE	2.99	0.46
5:AE:56:VAL:N	5:AE:57:PRO:HD2	2.31	0.46
23:BB:99:A:H2'	23:BB:99:A:N3	2.31	0.46
26:DE:7:ASP:N	26:DE:7:ASP:OD1	2.49	0.46
24:BC:20:VAL:HG22	24:BC:20:VAL:O	2.14	0.46
12:AL:90:LEU:HB3	12:AL:93:VAL:CG2	2.45	0.46
7:CG:11:LYS:O	7:CG:12:ILE:C	2.55	0.46
22:BA:1914:C:H2'	22:BA:1915:U:O5'	2.16	0.45
6:AF:4:TYR:CD2	6:AF:71:ILE:HD13	2.51	0.45
2:AB:87:CYS:HB2	2:AB:89:GLN:CD	2.37	0.45
1:CA:1255:G:C6	1:CA:1279:G:N7	2.84	0.45
22:BA:2800:A:C2	22:BA:2895:G:H1'	2.51	0.45
1:AA:1026:G:C2	1:AA:1027:C:O2	2.69	0.45
5:CE:103:THR:O	5:CE:122:ASN:HA	2.16	0.45
5:CE:99:ALA:HB2	5:CE:124:LEU:CD1	2.45	0.45
22:DA:2111:U:O2	22:DA:2111:U:O4'	2.34	0.45
1:CA:142:G:C2	1:CA:143:A:H1'	2.51	0.45
22:DA:82:U:H5'	22:DA:296:U:C5'	2.46	0.45
41:BT:64:LYS:N	41:BT:64:LYS:HD3	2.30	0.45
1:CA:729:A:C4	1:CA:730:G:C8	3.04	0.45
33:DL:95:LEU:O	33:DL:100:ILE:CG2	2.64	0.45
22:DA:524:G:C5	22:DA:525:U:C5	3.04	0.45
27:BF:108:VAL:N	27:BF:109:PRO:HD2	2.32	0.45
22:DA:308:G:C8	22:DA:501:A:H1'	2.51	0.45
46:BY:22:LEU:O	46:BY:23:ARG:O	2.34	0.45
22:BA:1353:A:C8	22:BA:1378:A:N6	2.85	0.45
40:BS:29:VAL:HG11	40:BS:55:ILE:HD11	1.97	0.45
1:CA:755:G:C2	1:CA:756:C:C6	3.05	0.45
22:DA:305:C:C2	22:DA:313:G:N1	2.85	0.45
22:DA:1465:G:H2'	22:DA:1466:U:C6	2.51	0.45
1:CA:1244:G:C2	1:CA:1294:G:C2	3.04	0.45
1:AA:1270:G:N1	1:AA:1271:A:C5	2.84	0.45
22:DA:2468:A:C2	22:DA:2481:G:C2	3.04	0.45
22:BA:1717:A:C2	22:BA:1718:G:H1'	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2297:A:C6	22:DA:2320:U:C6	3.04	0.45
1:AA:1062:U:H2'	1:AA:1063:C:C5	2.52	0.45
22:DA:1102:C:H2'	22:DA:1103:A:C8	2.51	0.45
27:DF:12:VAL:O	27:DF:16:LEU:HG	2.15	0.45
1:CA:774:G:C6	1:CA:775:G:C5	3.03	0.45
10:AJ:11:LYS:HB3	10:AJ:71:LEU:HD13	1.98	0.45
1:AA:705:G:C5	1:AA:706:A:C8	3.03	0.45
49:B1:48:ILE:H	49:B1:48:ILE:HD12	1.80	0.45
1:AA:591:U:OP2	8:AH:31:LYS:HD2	2.16	0.45
20:CT:69:LYS:HB2	20:CT:70:ASN:OD1	2.17	0.45
22:BA:1826:G:O2'	22:BA:1971:U:OP2	2.35	0.45
22:DA:2097:A:N6	22:DA:2193:G:C6	2.84	0.45
9:AI:12:ARG:O	9:AI:13:LYS:C	2.54	0.45
5:AE:154:ALA:O	5:AE:158:GLY:N	2.49	0.45
7:AG:137:LYS:O	7:AG:141:VAL:HG23	2.16	0.45
3:CC:22:TRP:CH2	3:CC:29:PHE:CE1	3.04	0.45
22:DA:469:G:O6	50:D2:37:LYS:NZ	2.42	0.45
6:AF:45:ARG:HB3	6:AF:59:TYR:CD1	2.51	0.45
34:DM:124:LEU:HD23	34:DM:124:LEU:N	2.31	0.45
1:AA:523:A:C2	1:AA:527:G:C6	3.04	0.45
6:CF:50:PRO:CD	18:CR:74:HIS:HB3	2.46	0.45
12:CL:108:LYS:O	12:CL:109:ASP:HB2	2.16	0.45
1:AA:1075:U:O3'	2:AB:174:LYS:NZ	2.47	0.45
1:AA:19:A:C2	1:AA:917:G:C5	3.04	0.45
13:CM:37:ALA:CB	13:CM:56:LEU:HG	2.47	0.45
36:DO:18:LEU:O	36:DO:22:GLY:N	2.47	0.45
8:AH:40:LEU:HB2	8:AH:46:ILE:HD11	1.98	0.45
30:DI:90:SER:HB3	30:DI:93:PRO:HG3	1.98	0.45
29:BH:90:LEU:HD21	29:BH:93:SER:HA	1.97	0.45
29:BH:94:ILE:HG23	29:BH:98:ASP:CB	2.47	0.45
22:DA:622:G:H2'	22:DA:623:C:C6	2.50	0.45
10:AJ:8:ILE:O	10:AJ:73:LEU:O	2.35	0.45
22:DA:1355:G:C2'	22:DA:1356:G:H5'	2.45	0.45
1:CA:537:G:H2'	1:CA:538:G:C8	2.51	0.45
22:BA:545:U:H2'	22:BA:546:U:O3'	2.16	0.45
22:DA:2128:G:O6	22:DA:2160:C:C4	2.68	0.45
2:CB:53:ALA:C	2:CB:54:LEU:HD22	2.37	0.45
22:DA:526:A:C6	22:DA:2626:C:H4'	2.51	0.45
4:AD:167:LYS:O	4:AD:168:PRO:O	2.34	0.45
1:CA:255:G:C2	1:CA:256:U:C5	3.05	0.45
22:DA:1609:A:N3	22:DA:1616:A:O4'	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:480:A:N3	22:DA:480:A:H2'	2.31	0.45
22:DA:856:G:C2	22:DA:922:C:N3	2.84	0.45
1:CA:1309:G:C6	1:CA:1329:A:N1	2.84	0.45
24:DC:61:ALA:O	24:DC:63:ARG:NH2	2.49	0.45
34:DM:38:ARG:HG3	34:DM:98:PRO:HD3	1.98	0.45
22:BA:2598:A:C2'	22:BA:2599:G:O5'	2.64	0.45
11:CK:23:ILE:HG22	11:CK:32:VAL:HG13	1.98	0.45
11:AK:53:ARG:N	11:AK:56:ARG:HB2	2.31	0.45
1:AA:1367:C:P	9:AI:114:LYS:NZ	2.89	0.45
45:BX:78:TYR:CG	45:BX:78:TYR:OXT	2.68	0.45
22:DA:607:U:O4	22:DA:620:G:H5'	2.16	0.45
19:CS:36:ARG:HG2	19:CS:51:VAL:HG13	1.98	0.45
19:CS:51:VAL:O	19:CS:58:VAL:HG12	2.16	0.45
1:AA:594:U:O4	1:AA:595:A:C6	2.68	0.45
27:DF:16:LEU:HD11	27:DF:169:LEU:CD1	2.46	0.45
22:DA:535:G:C6	22:DA:559:G:C6	3.04	0.45
22:BA:870:U:N3	22:BA:871:U:C5	2.84	0.45
2:CB:200:ILE:HG22	2:CB:200:ILE:O	2.16	0.45
22:DA:1744:A:C5	22:DA:1745:A:C5	3.04	0.45
25:BD:39:ASP:CG	25:BD:40:LEU:H	2.20	0.45
33:DL:111:ILE:C	33:DL:131:ALA:HB2	2.36	0.45
22:BA:1839:G:C8	22:BA:1927:A:H1'	2.51	0.45
32:BK:39:ILE:HG13	32:BK:41:ILE:HG23	1.97	0.45
22:DA:1965:C:H3'	22:DA:1966:A:C8	2.51	0.45
1:AA:1539:C:O3'	21:AU:18:ARG:HB3	2.16	0.45
1:CA:1069:C:H2'	1:CA:1070:U:O4'	2.16	0.45
7:AG:75:VAL:HB	7:AG:86:GLN:HG3	1.97	0.45
22:DA:2660:A:H2'	22:DA:2661:G:O4'	2.16	0.45
22:BA:854:C:C2'	22:BA:855:G:H5'	2.45	0.45
22:BA:1400:U:O2'	22:BA:1401:G:H5'	2.16	0.45
27:DF:136:ILE:HA	27:DF:141:ILE:HG21	1.97	0.45
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.52	0.45
12:CL:75:GLN:O	12:CL:76:GLU:C	2.54	0.45
30:BI:21:SER:HA	30:BI:25:GLY:HA2	1.98	0.45
25:BD:129:THR:HG23	25:BD:140:HIS:O	2.17	0.45
1:CA:1323:G:H4'	1:CA:1362:A:C2	2.50	0.45
5:AE:101:GLU:CB	5:AE:122:ASN:HB2	2.46	0.45
22:DA:1355:G:C6	22:DA:1377:G:N2	2.83	0.45
41:DT:39:THR:C	41:DT:41:ALA:N	2.69	0.45
41:DT:21:SER:O	41:DT:22:THR:C	2.54	0.45
5:CE:115:LEU:HG	5:CE:123:VAL:HG21	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2200:C:O2	22:DA:2226:C:N4	2.49	0.45
50:D2:12:ARG:NH2	50:D2:44:VAL:CG1	2.79	0.45
24:BC:182:ARG:NH2	24:BC:182:ARG:CG	2.75	0.45
24:BC:182:ARG:HH21	24:BC:182:ARG:HG2	1.81	0.45
30:BI:124:ALA:O	30:BI:127:ARG:N	2.49	0.45
1:CA:890:G:O2'	1:CA:891:U:P	2.74	0.45
1:AA:652:U:O4	1:AA:752:G:O2'	2.25	0.45
5:CE:82:GLN:OE1	5:CE:150:PRO:CD	2.64	0.45
4:AD:157:ALA:O	4:AD:161:LEU:HD22	2.17	0.45
1:CA:938:A:N6	1:CA:939:G:C5	2.84	0.45
33:DL:82:LEU:HB2	33:DL:90:VAL:HG21	1.98	0.45
22:DA:526:A:O5'	58:DA:3246:HOH:O	2.20	0.45
22:DA:289:G:N2	22:DA:352:A:C2	2.85	0.45
22:DA:1675:C:N3	25:DD:133:THR:HG21	2.31	0.45
22:BA:1935:G:O2'	22:BA:1936:A:H5'	2.16	0.45
17:CQ:70:THR:HG22	17:CQ:71:LYS:H	1.80	0.45
32:DK:2:ILE:CD1	32:DK:6:THR:HG21	2.46	0.45
10:AJ:36:VAL:HG22	10:AJ:76:ILE:HG12	1.99	0.45
22:DA:856:G:C2	22:DA:922:C:C2	3.05	0.45
22:DA:77:G:H4'	46:DY:56:LEU:HD21	1.98	0.45
7:CG:2:PRO:O	7:CG:3:ARG:C	2.54	0.45
5:AE:149:SER:O	5:AE:153:VAL:HG12	2.16	0.45
10:AJ:29:ALA:HA	10:AJ:32:THR:CG2	2.45	0.45
29:DH:34:GLY:O	29:DH:35:LYS:CD	2.65	0.45
1:AA:468:A:H5'	1:AA:469:C:OP2	2.17	0.45
22:DA:982:C:H5''	22:DA:983:A:P	2.56	0.45
22:DA:303:G:C6	22:DA:304:U:N3	2.84	0.45
22:DA:1545:A:C8	22:DA:1546:G:C8	3.05	0.45
20:AT:83:ILE:HD12	20:AT:84:ASN:N	2.31	0.45
22:BA:1842:G:C5	22:BA:1843:C:C5	3.03	0.45
35:BN:32:GLU:OE1	35:BN:118:ARG:HA	2.16	0.45
22:DA:158:U:O2	22:DA:169:G:C2	2.70	0.45
21:CU:14:VAL:O	21:CU:16:LEU:HG	2.16	0.45
2:CB:67:ILE:HD13	2:CB:160:ALA:HB3	1.99	0.45
2:AB:149:GLY:O	2:AB:152:LYS:N	2.49	0.45
2:AB:151:ILE:O	2:AB:153:ASP:N	2.49	0.45
22:BA:1014:A:C6	22:BA:1015:U:C4	3.04	0.45
22:BA:1283:G:N1	22:BA:1286:A:OP2	2.49	0.45
22:DA:2740:A:N6	22:DA:2764:A:C8	2.85	0.45
8:AH:59:LEU:HD13	8:AH:60:GLU:N	2.32	0.45
23:DB:7:G:C5'	36:DO:29:HIS:CE1	2.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:729:G:H2'	22:DA:1775:U:H1'	1.98	0.45
29:DH:112:LYS:HG2	29:DH:113:SER:N	2.32	0.45
2:AB:10:LEU:HD23	2:AB:11:LYS:N	2.32	0.45
2:CB:60:ILE:HD12	2:CB:61:ALA:N	2.31	0.45
22:DA:2661:G:C6	22:DA:2662:A:C6	3.04	0.45
22:DA:796:C:H2'	22:DA:797:G:C8	2.52	0.45
34:DM:67:VAL:HG11	34:DM:96:ILE:CD1	2.46	0.45
22:DA:751:A:C6	22:DA:789:A:C6	3.05	0.45
23:DB:35:C:C2'	23:DB:36:C:O5'	2.65	0.45
43:BV:43:ASP:OD1	43:BV:44:HIS:N	2.49	0.45
31:DJ:84:ILE:O	31:DJ:84:ILE:HG23	2.16	0.45
34:BM:97:GLN:N	34:BM:97:GLN:NE2	2.64	0.45
22:BA:974:G:H2'	22:BA:974:G:N3	2.32	0.45
6:AF:67:PRO:O	6:AF:69:GLU:N	2.48	0.45
1:AA:172:A:C6	1:AA:174:A:C8	3.05	0.45
22:BA:1789:A:P	24:BC:221:ARG:HH11	2.40	0.45
1:AA:630:A:O2'	1:AA:631:C:H5'	2.17	0.45
22:BA:348:A:H2'	22:BA:349:U:O4'	2.17	0.45
25:DD:150:GLN:C	25:DD:151:THR:O	2.52	0.45
14:AN:47:LYS:HD2	19:AS:13:LEU:HD21	1.99	0.45
22:BA:1167:C:H2'	22:BA:1168:G:H5''	1.98	0.45
22:BA:1171:G:C6	22:BA:1172:C:N3	2.85	0.45
22:DA:1363:C:O2'	22:DA:1809:A:N3	2.47	0.45
2:AB:80:VAL:CA	2:AB:82:ASP:OD2	2.64	0.45
23:DB:57:A:C2	27:DF:26:MET:SD	3.08	0.45
22:BA:2017:U:H4'	48:B0:5:GLN:O	2.16	0.45
22:DA:38:A:C6	22:DA:39:G:C5	3.04	0.45
31:BJ:81:ILE:CG2	31:BJ:82:GLY:N	2.73	0.45
22:BA:1731:G:N1	22:BA:1733:G:C5	2.84	0.45
1:AA:960:U:H2'	1:AA:1225:A:H62	1.81	0.45
1:CA:577:G:C2	1:CA:578:C:C5	3.05	0.45
22:DA:945:A:C4	22:DA:2448:A:C2	3.04	0.45
14:CN:57:PRO:O	14:CN:59:ARG:N	2.49	0.45
1:AA:554:A:H2'	1:AA:555:U:H6	1.82	0.45
1:AA:934:C:H4'	1:AA:935:A:OP1	2.16	0.45
1:AA:212:G:C2	1:AA:213:G:C5	3.04	0.45
10:CJ:33:GLY:O	10:CJ:34:ALA:HB2	2.17	0.45
34:BM:47:GLU:OE2	34:BM:51:ARG:NE	2.49	0.45
22:DA:1027:A:C5	22:DA:1126:A:C2	3.04	0.45
22:DA:465:G:C6	22:DA:466:A:N6	2.85	0.45
6:CF:9:MET:HB2	6:CF:85:ILE:HG13	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1416:G:O2'	22:BA:1417:C:H6	2.00	0.45
10:CJ:52:LEU:HD23	10:CJ:62:ARG:HG3	1.98	0.45
1:CA:879:C:H2'	1:CA:880:C:O5'	2.16	0.45
23:BB:41:G:H5''	27:BF:66:LEU:CD1	2.47	0.45
25:DD:4:LEU:HD22	25:DD:101:PHE:CE2	2.52	0.45
22:DA:304:U:H2'	22:DA:305:C:C6	2.51	0.45
1:CA:510:A:H5''	1:CA:511:C:P	2.56	0.45
25:BD:105:LYS:O	25:BD:177:VAL:HG13	2.16	0.45
25:BD:4:LEU:HD22	25:BD:101:PHE:HE1	1.80	0.45
1:AA:102:G:N3	1:AA:103:U:C6	2.85	0.45
5:CE:15:LEU:C	5:CE:15:LEU:CD1	2.84	0.45
30:BI:57:VAL:CG2	30:BI:58:VAL:N	2.80	0.45
1:CA:1536:C:H2'	1:CA:1537:U:O4'	2.16	0.45
23:DB:84:G:C2	23:DB:93:C:C2	3.03	0.45
1:AA:1478:U:H2'	1:AA:1479:C:C6	2.51	0.45
36:DO:39:VAL:HG23	36:DO:78:VAL:CG1	2.46	0.45
36:DO:53:THR:HG23	36:DO:74:VAL:HG21	1.98	0.45
2:CB:87:CYS:O	2:CB:89:GLN:N	2.48	0.45
22:DA:2119:A:C2	22:DA:2169:A:H2'	2.52	0.45
1:CA:258:G:H2'	1:CA:259:G:O4'	2.16	0.45
22:DA:2461:A:C2	22:DA:2490:G:N2	2.84	0.45
1:CA:909:A:H2'	1:CA:910:C:O4'	2.16	0.45
15:CO:15:PHE:CZ	15:CO:85:LEU:HD11	2.51	0.45
1:CA:731:G:H5'	1:CA:766:A:H4'	1.96	0.45
7:CG:53:ARG:NH2	7:CG:122:ASN:OD1	2.44	0.45
22:DA:906:U:C2'	22:DA:907:G:O5'	2.65	0.45
22:BA:2514:U:H2'	22:BA:2515:C:C6	2.51	0.45
22:BA:2243:U:O2'	22:BA:2244:U:H5'	2.17	0.45
22:DA:2122:U:H2'	22:DA:2123:G:C8	2.51	0.45
26:DE:175:ILE:O	26:DE:175:ILE:HG13	2.16	0.45
22:BA:2884:U:O4'	22:BA:2884:U:O2	2.32	0.45
40:DS:63:GLY:O	40:DS:64:ALA:HB3	2.15	0.45
34:BM:69:PRO:O	34:BM:70:ASP:CB	2.65	0.45
22:BA:332:A:C2	22:BA:335:C:C5	3.05	0.45
1:AA:719:C:H1'	18:AR:38:LYS:HG2	1.99	0.45
1:AA:1337:G:C5'	1:AA:1338:G:OP1	2.64	0.45
29:DH:83:LYS:HG3	29:DH:149:GLU:HG3	1.93	0.45
22:DA:1268:A:H2'	22:DA:1269:A:O4'	2.17	0.45
10:AJ:7:ARG:HD3	10:AJ:73:LEU:HD21	1.98	0.45
22:DA:2199:A:C4	22:DA:2225:A:N1	2.85	0.45
1:AA:922:G:C6	1:AA:923:A:C6	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:49:ARG:NH2	9:CI:53:GLU:HA	2.31	0.45
1:AA:657:U:O2	15:AO:22:THR:HG22	2.15	0.45
22:DA:2079:U:C2'	22:DA:2080:A:O4'	2.64	0.45
1:CA:169:C:H2'	1:CA:170:U:C6	2.52	0.45
1:CA:1140:C:O2'	1:CA:1141:C:P	2.74	0.45
22:BA:2377:A:O2'	22:BA:2378:A:H5'	2.15	0.45
22:BA:197:A:H62	22:BA:2430:A:H2'	1.80	0.45
19:CS:79:THR:O	19:CS:79:THR:OG1	2.33	0.45
27:DF:108:VAL:N	27:DF:109:PRO:CD	2.79	0.45
22:BA:1419:A:C4	22:BA:1421:G:C8	3.05	0.45
22:DA:2415:G:C2	22:DA:2416:C:C2	3.05	0.45
28:BG:141:ILE:C	28:BG:141:ILE:HD12	2.37	0.45
4:CD:29:ASP:C	4:CD:31:LYS:N	2.69	0.45
1:AA:720:C:N4	1:AA:721:G:C2	2.84	0.45
1:AA:215:C:H2'	1:AA:216:U:O4'	2.17	0.45
22:BA:1672:A:N6	22:BA:1673:G:C6	2.84	0.45
22:BA:2508:G:C4	22:BA:2509:G:C8	3.04	0.45
11:AK:89:PRO:HA	21:AU:25:LYS:HE2	1.99	0.45
1:CA:1028:C:H2'	1:CA:1028:C:O2	2.16	0.45
22:BA:2749:A:OP1	28:BG:2:SER:N	2.50	0.45
22:DA:1838:C:C4	22:DA:1899:A:C4	3.04	0.45
5:CE:96:MET:HE3	5:CE:96:MET:HB3	1.71	0.45
22:DA:1737:G:C6	22:DA:1738:G:N1	2.85	0.45
39:DR:24:LYS:HA	39:DR:94:THR:OG1	2.17	0.45
2:AB:95:ARG:HG2	2:AB:95:ARG:NH1	2.32	0.45
23:DB:106:G:H2'	23:DB:107:G:O4'	2.16	0.45
22:DA:1926:U:H1'	22:DA:1929:G:C6	2.52	0.45
21:CU:24:GLU:OE1	21:CU:24:GLU:N	2.49	0.45
1:AA:1040:U:H2'	1:AA:1041:G:C8	2.51	0.45
1:AA:999:C:H2'	1:AA:1000:A:C8	2.52	0.45
1:CA:355:C:H2'	1:CA:356:A:O4'	2.17	0.45
22:BA:1880:U:H2'	22:BA:1881:C:C6	2.51	0.45
22:DA:228:C:C5'	22:DA:229:C:C6	3.00	0.45
11:CK:59:THR:HA	11:CK:91:PRO:HB3	1.99	0.45
22:BA:2120:G:N2	22:BA:2179:C:C2	2.85	0.45
1:CA:110:C:N4	1:CA:111:G:C6	2.84	0.45
22:DA:2365:G:H4'	44:DW:60:PHE:CE2	2.52	0.45
22:BA:1376:C:H2'	22:BA:1377:G:O4'	2.17	0.45
36:DO:49:VAL:HG12	36:DO:50:ALA:N	2.32	0.45
22:BA:2771:C:H2'	22:BA:2772:C:C6	2.51	0.45
22:BA:2039:U:H2'	22:BA:2040:G:H8	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:70:ARG:HG3	7:CG:96:ARG:HG2	1.97	0.45
32:BK:47:ILE:HB	32:BK:48:PRO:CD	2.46	0.45
4:CD:187:GLU:N	4:CD:190:ASP:OD2	2.50	0.45
26:BE:5:LEU:HD13	26:BE:10:SER:O	2.17	0.45
3:AC:68:ILE:HD11	3:AC:101:ILE:HD11	1.99	0.45
22:BA:1411:U:H2'	22:BA:1412:U:O4'	2.16	0.45
29:DH:86:ASP:C	29:DH:88:GLY:H	2.19	0.45
1:CA:1409:C:H4'	22:DA:1915:U:O4	2.17	0.45
23:BB:116:G:H4'	36:BO:54:VAL:HG13	1.98	0.45
22:BA:1081:U:H2'	22:BA:1081:U:O2	2.15	0.45
1:CA:522:C:H2'	1:CA:522:C:O2	2.16	0.45
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.17	0.45
22:DA:765:C:C4	22:DA:766:U:C4	3.05	0.45
1:CA:1134:G:C2	1:CA:1135:U:H1'	2.51	0.45
2:CB:217:VAL:HG12	2:CB:218:ALA:N	2.31	0.45
7:CG:22:LEU:HA	7:CG:25:LYS:NZ	2.30	0.45
25:BD:125:TRP:CE3	25:BD:160:LYS:HD3	2.51	0.45
23:DB:115:A:H2'	23:DB:116:G:C8	2.52	0.45
16:AP:2:VAL:CG2	16:AP:65:ALA:HB2	2.45	0.45
6:CF:13:ASP:C	6:CF:15:SER:H	2.19	0.45
29:DH:39:ALA:O	29:DH:41:LYS:N	2.47	0.45
22:BA:1061:U:O4	30:BI:11:LEU:HA	2.17	0.45
22:BA:1916:A:C2'	22:BA:1917:U:H4'	2.47	0.45
1:AA:1130:A:N3	1:AA:1146:A:C4	2.85	0.45
22:DA:1651:G:C2	22:DA:2007:U:C2	3.04	0.45
22:DA:226:A:N6	22:DA:227:A:N1	2.64	0.45
22:DA:319:G:C4	22:DA:333:G:N2	2.84	0.45
26:DE:131:THR:HG22	26:DE:160:ALA:O	2.15	0.45
21:CU:35:ARG:CG	21:CU:36:GLU:N	2.80	0.45
1:AA:430:A:OP1	4:AD:9:LEU:HB2	2.16	0.45
35:DN:65:LEU:HD11	35:DN:69:ARG:NH2	2.32	0.45
17:AQ:15:ASP:HA	17:AQ:21:ILE:HD11	1.98	0.45
22:BA:1731:G:C4	22:BA:1733:G:C8	3.04	0.45
25:BD:149:ASN:OD1	25:BD:150:GLN:N	2.50	0.45
1:CA:451:A:OP2	16:CP:70:ARG:NH1	2.48	0.45
22:DA:329:G:O4'	22:DA:477:A:H1'	2.17	0.45
22:DA:503:A:C2	22:DA:506:G:C5	3.04	0.45
38:DQ:76:TYR:CE1	38:DQ:80:ILE:HG13	2.52	0.45
22:BA:1452:G:C4	22:BA:2702:G:C6	3.05	0.45
22:DA:1581:G:C5	22:DA:1582:C:C5	3.05	0.45
27:BF:52:ASN:HB3	27:BF:147:ASP:OD2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:31:TRP:CE3	37:BP:40:LEU:HD12	2.51	0.45
29:BH:40:THR:O	29:BH:42:LYS:N	2.48	0.45
1:AA:457:G:H5'	1:AA:458:U:OP2	2.17	0.45
1:CA:320:A:H2'	1:CA:321:A:C1'	2.47	0.45
1:CA:82:G:N2	1:CA:88:U:O2	2.50	0.45
23:DB:5:U:H2'	23:DB:6:G:C8	2.52	0.45
31:DJ:11:VAL:HG12	31:DJ:12:LYS:N	2.31	0.45
22:BA:1696:G:C6	22:BA:1697:G:C4	3.04	0.45
1:AA:1405:G:O4'	1:AA:1519:A:H4'	2.16	0.45
22:DA:961:C:C2	22:DA:2031:A:C6	3.05	0.45
8:AH:111:MET:SD	8:AH:116:ALA:HA	2.57	0.45
22:BA:2660:A:H2'	22:BA:2661:G:O4'	2.17	0.45
33:BL:19:LEU:HD22	33:BL:31:GLY:O	2.15	0.45
22:BA:460:A:H2'	22:BA:461:C:O4'	2.17	0.45
12:AL:35:THR:C	12:AL:36:ARG:HD2	2.36	0.45
2:CB:162:PHE:HA	2:CB:184:PHE:O	2.17	0.45
39:BR:16:GLU:OE1	39:BR:100:GLY:HA2	2.16	0.45
1:CA:543:U:O2'	1:CA:544:G:H5'	2.16	0.45
3:CC:165:THR:OG1	3:CC:166:GLU:N	2.47	0.45
22:DA:900:A:C2	22:DA:901:C:H1'	2.51	0.45
45:BX:15:GLY:C	45:BX:27:ARG:HG2	2.37	0.45
33:BL:9:ALA:HB3	33:BL:12:SER:OG	2.17	0.45
25:DD:168:GLU:O	25:DD:170:VAL:HG22	2.16	0.45
6:CF:25:TYR:CD1	6:CF:25:TYR:N	2.85	0.45
7:AG:62:PHE:C	7:AG:62:PHE:CD1	2.90	0.45
11:CK:72:ASP:O	11:CK:73:ALA:HB3	2.15	0.45
6:AF:64:VAL:HG12	6:AF:65:GLU:N	2.32	0.45
1:CA:35:G:O2'	12:CL:115:SER:O	2.33	0.45
29:DH:147:VAL:HG12	29:DH:148:ALA:N	2.32	0.45
42:DU:49:VAL:HG13	42:DU:53:ASN:O	2.17	0.45
3:CC:72:ARG:HB3	3:CC:75:ILE:HG22	1.99	0.45
1:CA:797:C:O2'	1:CA:798:U:H5'	2.17	0.45
3:CC:126:ARG:O	3:CC:127:ARG:CB	2.64	0.45
29:BH:72:ILE:HG23	29:BH:142:VAL:HG22	1.99	0.45
22:BA:760:G:H4'	22:BA:1776:G:OP1	2.16	0.45
22:DA:491:G:C5	22:DA:492:A:C5	3.05	0.45
14:CN:49:GLN:C	14:CN:51:LEU:H	2.20	0.45
1:CA:1280:A:C8	10:CJ:42:LEU:HD23	2.51	0.45
22:DA:579:G:H5'	22:DA:2018:G:OP2	2.16	0.45
39:DR:80:ARG:O	39:DR:82:HIS:N	2.46	0.45
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1151:A:N3	1:CA:1152:A:N7	2.65	0.45
22:DA:444:C:C2	22:DA:445:C:C5	3.05	0.45
22:DA:277:G:H1'	22:DA:361:G:O6	2.16	0.45
22:BA:2520:C:O2'	22:BA:2521:C:H5'	2.17	0.45
22:DA:1786:A:H3'	22:DA:1787:A:C8	2.51	0.45
4:AD:58:LYS:HG2	4:AD:203:LEU:CD2	2.46	0.45
22:DA:1208:C:C4	22:DA:1209:U:C4	3.05	0.45
22:BA:2150:C:H2'	22:BA:2151:U:O4'	2.15	0.45
10:CJ:34:ALA:O	10:CJ:78:GLU:HB3	2.17	0.45
16:AP:51:ARG:HB3	16:AP:51:ARG:NH1	2.32	0.45
22:DA:147:C:C4	22:DA:148:U:C4	3.05	0.45
22:BA:1360:G:O6	22:BA:1372:U:C2	2.70	0.45
22:BA:359:G:C6	22:BA:360:U:C4	3.04	0.45
30:BI:106:LEU:HA	30:BI:109:ILE:HB	1.99	0.45
22:DA:533:G:C5'	38:DQ:24:TYR:CE1	3.00	0.45
46:BY:21:LEU:O	46:BY:22:LEU:O	2.35	0.45
22:DA:658:U:N3	22:DA:659:G:N7	2.65	0.45
1:AA:1140:C:O2'	1:AA:1141:C:P	2.75	0.45
7:CG:103:TRP:CE3	7:CG:137:LYS:HG2	2.52	0.45
1:AA:1402:C:O2	1:AA:1500:A:N1	2.50	0.45
17:CQ:7:THR:HG21	17:CQ:60:GLU:OE1	2.17	0.45
1:AA:8:A:C5	4:AD:206:LYS:HB3	2.52	0.45
29:BH:12:LEU:HG	29:BH:13:GLY:N	2.31	0.45
26:DE:83:VAL:CG1	26:DE:86:ALA:HA	2.46	0.45
22:DA:1248:G:C5	38:DQ:3:ARG:HB2	2.52	0.45
22:BA:102:U:H4'	22:BA:103:A:OP1	2.16	0.45
19:AS:15:LEU:HB2	19:AS:33:THR:HG21	1.99	0.45
1:CA:774:G:C4	1:CA:775:G:C8	3.04	0.45
18:AR:42:SER:OG	18:AR:47:THR:HG23	2.16	0.45
1:AA:1306:A:C2	1:AA:1307:U:H1'	2.52	0.45
22:BA:2848:G:N3	22:BA:2867:G:C2	2.85	0.45
22:DA:2784:U:H4'	25:DD:42:ASN:O	2.17	0.45
22:DA:136:G:N2	22:DA:144:A:N7	2.65	0.45
23:BB:54:G:H21	27:BF:26:MET:HE2	1.80	0.45
16:CP:67:ILE:HG23	16:CP:71:VAL:CG1	2.47	0.45
22:DA:2119:A:C2	22:DA:2170:A:C4	3.04	0.45
42:DU:52:LEU:O	42:DU:53:ASN:CG	2.55	0.45
1:CA:983:A:OP1	14:CN:9:ARG:NH2	2.50	0.45
22:DA:2695:U:O2'	22:DA:2696:U:H5'	2.17	0.45
37:DP:49:ALA:O	37:DP:60:THR:N	2.47	0.45
12:CL:16:VAL:O	12:CL:17:ALA:O	2.35	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:223:A:H2'	1:AA:224:U:C6	2.52	0.45
2:AB:128:LYS:HG3	2:AB:129:LEU:N	2.31	0.45
17:CQ:80:GLU:O	17:CQ:81:LYS:HG3	2.17	0.45
8:CH:65:TYR:N	8:CH:65:TYR:CD1	2.84	0.45
31:DJ:62:VAL:HG22	31:DJ:63:ALA:N	2.32	0.45
35:BN:52:ILE:HG21	35:BN:94:TYR:CD2	2.52	0.45
22:DA:2314:A:O4'	27:DF:155:THR:HG21	2.17	0.45
22:DA:2711:A:N6	22:DA:2714:G:C8	2.85	0.45
22:DA:1378:A:C2'	22:DA:1380:G:N7	2.80	0.45
1:AA:451:A:C8	1:AA:452:A:N1	2.85	0.45
1:AA:786:G:C2	1:AA:797:C:C2	3.04	0.45
1:AA:1024:G:C2'	1:AA:1025:U:O5'	2.65	0.45
1:CA:1181:G:O2'	1:CA:1182:G:C8	2.56	0.45
7:CG:68:ASN:O	7:CG:138:ARG:CZ	2.65	0.45
17:CQ:57:ASP:OD1	17:CQ:57:ASP:N	2.49	0.45
5:CE:121:HIS:O	5:CE:122:ASN:HB3	2.16	0.45
11:AK:43:GLY:HA3	11:AK:74:VAL:HG13	1.99	0.45
40:DS:84:ARG:HB2	40:DS:96:ILE:HG12	1.97	0.45
22:DA:1509:A:C4	22:DA:1510:G:N7	2.84	0.45
45:DX:33:LEU:CD2	45:DX:50:ARG:CZ	2.95	0.45
1:CA:1049:U:H4'	1:CA:1050:G:O5'	2.16	0.45
22:DA:2209:G:N3	22:DA:2216:G:N2	2.64	0.45
22:DA:1394:U:H2'	22:DA:1395:A:O4'	2.17	0.45
29:DH:31:VAL:CG1	29:DH:32:PRO:HD3	2.47	0.45
22:DA:1364:G:N2	22:DA:1367:A:OP2	2.44	0.45
22:DA:208:C:H2'	22:DA:209:C:C6	2.52	0.45
10:AJ:52:LEU:CB	14:AN:81:ARG:HE	2.29	0.45
2:AB:63:ARG:O	2:AB:64:LYS:CB	2.62	0.45
22:BA:2309:A:C6	22:BA:2310:C:N4	2.85	0.45
1:AA:1505:G:P	58:AA:1869:HOH:O	2.75	0.45
14:AN:20:TYR:CE1	14:AN:52:PRO:HG2	2.51	0.45
30:BI:18:ALA:HB2	30:BI:42:PHE:CZ	2.52	0.45
22:DA:800:A:N1	22:DA:802:A:C8	2.85	0.45
11:AK:69:ARG:CD	22:BA:2146:C:N3	2.80	0.45
1:AA:625:U:O2'	1:AA:626:G:H5'	2.17	0.45
22:DA:2070:A:H2'	22:DA:2071:A:C8	2.52	0.45
1:AA:866:C:N3	1:AA:867:G:H1'	2.32	0.45
45:BX:68:LEU:HD13	45:BX:78:TYR:CE1	2.52	0.45
22:BA:1671:U:O2'	22:BA:1673:G:N7	2.46	0.45
22:DA:158:U:O4	22:DA:159:G:C6	2.70	0.45
22:BA:1501:G:C2'	22:BA:1502:A:H5'	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1487:U:O2	22:BA:1503:A:C2	2.70	0.45
17:AQ:81:LYS:O	17:AQ:82:ALA:C	2.56	0.45
23:DB:42:C:C4	27:DF:88:LYS:HE3	2.52	0.45
1:AA:1122:U:C4	1:AA:1123:U:C5	3.05	0.45
22:BA:2323:G:O2'	22:BA:2324:U:H5'	2.16	0.45
36:DO:117:PHE:CD1	36:DO:117:PHE:C	2.89	0.45
22:DA:125:A:H3'	50:D2:19:ARG:HG3	1.99	0.45
33:BL:100:ILE:CG1	33:BL:100:ILE:O	2.64	0.45
22:DA:2234:G:C5	22:DA:2235:G:C8	3.05	0.45
49:B1:50:LYS:O	49:B1:51:GLU:HB3	2.16	0.45
12:CL:3:THR:HB	12:CL:6:GLN:HG3	1.99	0.45
1:CA:1108:G:H2'	1:CA:1108:G:N3	2.31	0.45
36:BO:24:THR:HG22	36:BO:42:PRO:HG3	1.99	0.45
22:BA:1796:U:H2'	22:BA:1797:G:C8	2.51	0.45
22:DA:67:U:H2'	22:DA:68:G:O4'	2.17	0.45
22:DA:1436:G:N2	22:DA:1557:C:C2	2.85	0.45
17:AQ:53:CYS:SG	17:AQ:75:LEU:HD23	2.57	0.45
22:BA:1789:A:OP1	24:BC:221:ARG:HD3	2.17	0.45
34:BM:68:PHE:O	34:BM:69:PRO:O	2.34	0.45
8:AH:105:SER:HB2	8:AH:126:ILE:HD11	1.98	0.45
22:BA:271:G:C4'	22:BA:272:A:OP1	2.65	0.45
22:DA:2632:A:O2'	22:DA:2633:G:H5'	2.15	0.45
1:AA:1387:G:C6	1:AA:1388:C:N4	2.85	0.45
1:CA:449:G:H2'	1:CA:450:G:C8	2.52	0.45
31:DJ:20:ALA:HA	31:DJ:23:LYS:HG3	1.99	0.45
37:DP:62:ARG:CZ	37:DP:101:ARG:HA	2.46	0.45
37:DP:62:ARG:NH1	37:DP:101:ARG:HA	2.31	0.45
27:DF:73:SER:HB2	27:DF:81:GLN:CB	2.46	0.45
31:BJ:74:TYR:CD1	31:BJ:92:MET:HG3	2.52	0.45
22:DA:2885:G:N2	48:D0:32:LYS:HB2	2.32	0.45
4:AD:125:VAL:O	4:AD:127:GLY:N	2.46	0.45
4:AD:126:ASN:HA	4:AD:142:VAL:HG23	1.98	0.45
7:CG:148:ASN:C	7:CG:150:ALA:H	2.20	0.45
22:DA:924:G:C2	22:DA:925:A:C4	3.04	0.45
31:DJ:138:GLN:HG3	31:DJ:138:GLN:O	2.17	0.45
29:DH:15:LEU:N	29:DH:15:LEU:HD22	2.32	0.45
5:CE:76:LEU:HD12	5:CE:76:LEU:H	1.81	0.45
42:DU:38:GLY:HA2	42:DU:41:LEU:CD2	2.47	0.45
1:AA:716:A:H1'	11:AK:120:GLY:HA2	1.98	0.45
29:DH:93:SER:HB3	29:DH:123:ARG:HG3	1.99	0.45
19:AS:23:VAL:HG12	19:AS:24:GLU:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:76:GLU:HA	29:BH:142:VAL:CG1	2.46	0.45
22:DA:687:C:C2	22:DA:788:A:O4'	2.70	0.45
22:DA:60:G:C4	22:DA:74:A:C2	3.05	0.45
1:CA:993:G:H2'	1:CA:995:C:H41	1.81	0.45
39:BR:37:GLU:HG2	39:BR:53:PHE:CD2	2.52	0.45
34:BM:18:ARG:HH21	34:BM:18:ARG:HG2	1.82	0.45
1:AA:411:A:C4	1:AA:413:G:O4'	2.70	0.45
5:CE:101:GLU:OE2	5:CE:103:THR:HA	2.17	0.45
22:DA:1265:A:O4'	22:DA:1267:U:C6	2.70	0.45
22:BA:2131:U:OP1	22:BA:2132:U:H3'	2.17	0.45
22:DA:53:A:N7	22:DA:54:G:C8	2.84	0.45
22:DA:1510:G:C2	22:DA:1511:G:C4	3.04	0.45
36:BO:31:THR:HG22	36:BO:34:HIS:H	1.82	0.45
1:AA:1349:A:OP1	9:AI:123:ARG:N	2.49	0.45
1:AA:346:G:P	32:BK:105:ARG:NH1	2.90	0.45
22:DA:1306:C:C2	22:DA:1307:A:C8	3.05	0.45
39:DR:68:ARG:HD3	39:DR:92:TRP:CZ2	2.52	0.45
1:CA:791:G:C5	1:CA:792:A:N7	2.85	0.45
30:DI:20:PRO:HB2	30:DI:23:PRO:HG2	1.99	0.45
11:AK:102:ALA:C	11:AK:104:GLY:N	2.69	0.45
2:AB:47:VAL:C	2:AB:49:MET:N	2.69	0.45
4:CD:35:GLU:O	4:CD:37:ALA:N	2.47	0.45
4:CD:9:LEU:HG	4:CD:32:CYS:SG	2.57	0.45
4:CD:27:ALA:O	4:CD:31:LYS:NZ	2.50	0.45
1:AA:1140:C:HO2'	1:AA:1141:C:P	2.40	0.45
33:DL:56:PRO:HD2	33:DL:59:ARG:HB2	1.99	0.45
1:AA:723:U:H5''	21:AU:49:LYS:HG2	1.98	0.45
46:BY:11:VAL:O	46:BY:15:ASN:ND2	2.43	0.45
1:CA:131:A:H2'	1:CA:132:C:C6	2.52	0.45
22:DA:391:A:C8	22:DA:392:U:C5	3.05	0.45
22:BA:2552:U:C2	22:BA:2554:U:H5'	2.52	0.45
22:BA:319:G:C5	22:BA:333:G:C2	3.05	0.45
1:AA:587:G:N2	1:AA:755:G:C8	2.85	0.45
1:AA:142:G:H3'	1:AA:143:A:C8	2.51	0.45
22:BA:2825:G:C2'	22:BA:2826:A:H5'	2.47	0.45
22:BA:559:G:H2'	22:BA:560:C:O4'	2.17	0.45
22:BA:753:A:H2'	22:BA:754:U:C6	2.52	0.45
22:DA:2210:U:O2	22:DA:2212:A:C8	2.70	0.45
22:DA:1059:G:H4'	30:DI:117:MET:HE3	1.99	0.45
29:DH:5:LEU:CD1	29:DH:13:GLY:CA	2.95	0.45
22:BA:2559:C:O2'	22:BA:2560:A:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2186:G:C5	22:DA:2187:U:C4	3.05	0.45
22:DA:396:G:H1'	45:DX:29:PHE:HB3	1.99	0.45
9:CI:13:LYS:HG2	9:CI:13:LYS:O	2.17	0.45
2:AB:210:VAL:HG23	2:AB:211:THR:H	1.81	0.45
20:CT:68:HIS:HB3	20:CT:69:LYS:HG3	1.99	0.45
32:BK:91:SER:O	32:BK:93:GLN:HG2	2.17	0.45
1:CA:1483:A:N1	22:DA:1959:G:O2'	2.43	0.45
22:BA:2039:U:H2'	22:BA:2040:G:C8	2.52	0.45
25:BD:125:TRP:CD2	25:BD:160:LYS:HD3	2.52	0.45
12:AL:35:THR:O	12:AL:36:ARG:HD2	2.16	0.45
35:DN:37:THR:OG1	35:DN:40:LYS:HB2	2.16	0.45
40:BS:23:LEU:HD11	48:B0:22:LEU:HD12	1.99	0.45
3:CC:19:ASN:HA	3:CC:56:VAL:HG13	1.99	0.45
1:CA:642:A:C5	8:CH:107:SER:HA	2.52	0.45
38:BQ:81:ASN:O	38:BQ:84:LYS:HB3	2.16	0.45
1:CA:1416:G:N2	1:CA:1485:U:H1'	2.31	0.45
25:DD:125:TRP:CE3	25:DD:160:LYS:HD3	2.52	0.45
22:DA:1563:U:H2'	22:DA:1564:C:C6	2.52	0.45
4:CD:59:GLN:OE1	4:CD:59:GLN:HA	2.17	0.45
1:CA:899:C:OP1	1:CA:899:C:H6	1.99	0.45
6:CF:51:ILE:O	6:CF:51:ILE:HG12	2.17	0.45
21:AU:5:LYS:HG3	21:AU:5:LYS:O	2.16	0.45
25:DD:28:GLU:HA	25:DD:185:ASN:O	2.16	0.45
16:AP:52:LEU:O	16:AP:54:LEU:N	2.50	0.45
22:BA:2820:A:C2'	22:BA:2821:A:OP1	2.65	0.45
17:CQ:10:GLY:HA3	17:CQ:25:ILE:HD13	1.99	0.45
22:BA:2031:A:C6	22:BA:2498:C:H1'	2.52	0.45
25:DD:151:THR:HG22	25:DD:152:PRO:HD3	1.99	0.45
1:CA:1074:G:H4'	2:CB:103:ASN:HB3	1.98	0.45
18:CR:24:LYS:C	18:CR:26:ILE:H	2.20	0.45
24:BC:232:HIS:NE2	24:BC:244:PRO:HA	2.32	0.45
22:BA:1917:U:C3'	22:BA:1918:A:H5'	2.46	0.45
22:BA:1924:C:H2'	22:BA:1925:C:C5'	2.46	0.45
22:BA:572:A:H5''	22:BA:573:U:OP2	2.16	0.45
9:CI:129:LYS:O	9:CI:130:ARG:HD2	2.16	0.45
1:AA:374:A:C5'	1:AA:452:A:H2	2.30	0.45
22:BA:1176:U:H4'	22:BA:1176:U:OP1	2.17	0.45
22:DA:2550:G:C6	22:DA:2551:C:C4	3.05	0.45
22:DA:1358:G:H1'	22:DA:1374:G:N2	2.32	0.45
22:DA:1373:A:H2'	22:DA:1374:G:O4'	2.17	0.45
22:DA:1352:U:C5	22:DA:1377:G:C6	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:998:C:P	38:BQ:92:ARG:NH2	2.89	0.45
1:AA:71:A:O2'	1:AA:72:A:OP2	2.32	0.45
1:CA:564:C:C4	1:CA:565:U:C4	3.05	0.45
22:DA:1990:C:H2'	22:DA:1991:U:O4'	2.16	0.45
29:DH:1:MET:CE	29:DH:27:ARG:NH1	2.80	0.45
1:AA:1157:A:N7	1:AA:1180:A:N6	2.65	0.45
22:BA:1778:U:H2'	22:BA:1784:A:H62	1.82	0.45
22:BA:1730:C:H4'	22:BA:1730:C:OP1	2.13	0.45
1:CA:664:G:H2'	1:CA:666:G:OP1	2.17	0.45
22:BA:2097:A:C2	22:BA:2193:G:C6	3.05	0.45
22:BA:2186:G:C2'	22:BA:2187:U:O5'	2.65	0.45
1:CA:292:G:O2'	1:CA:608:A:N6	2.45	0.45
37:BP:114:LEU:O	37:BP:115:ASN:HB3	2.17	0.45
1:CA:33:A:H2'	1:CA:34:C:H6	1.82	0.45
13:AM:3:ARG:O	13:AM:4:ILE:O	2.34	0.45
30:DI:20:PRO:HB2	30:DI:23:PRO:CG	2.47	0.45
1:CA:794:A:C5	1:CA:795:C:C4	3.05	0.45
30:DI:29:GLY:HA2	30:DI:33:VAL:HB	1.98	0.45
1:CA:477:C:H2'	1:CA:478:A:C8	2.52	0.45
1:AA:463:U:H3'	1:AA:464:U:C6	2.52	0.45
5:AE:152:MET:O	5:AE:156:LYS:HG3	2.16	0.45
1:AA:1442:G:C2	1:AA:1443:C:C2	3.05	0.45
1:AA:166:U:H3'	1:AA:167:A:H8	1.79	0.45
5:AE:114:VAL:HG22	5:AE:115:LEU:N	2.32	0.45
22:DA:600:G:OP1	26:DE:24:ASN:ND2	2.46	0.45
22:DA:1526:C:C4	22:DA:1527:G:C5	3.05	0.45
25:BD:104:VAL:O	25:BD:105:LYS:CB	2.65	0.45
26:DE:128:ALA:O	26:DE:130:LYS:N	2.50	0.45
1:AA:602:A:C2	1:AA:603:U:C2	3.05	0.45
5:CE:15:LEU:HD12	5:CE:15:LEU:O	2.17	0.45
15:CO:70:LEU:HD22	15:CO:78:TYR:HB2	1.97	0.45
4:AD:2:ALA:O	4:AD:68:LEU:HD21	2.17	0.45
13:AM:96:PRO:N	13:AM:109:ARG:HG2	2.31	0.45
12:AL:51:LYS:N	12:AL:51:LYS:HD3	2.31	0.45
1:AA:559:A:H2'	1:AA:559:A:N3	2.31	0.45
22:BA:1174:U:O2	22:BA:1174:U:O4'	2.35	0.45
41:DT:2:ILE:HG23	41:DT:4:GLU:N	2.32	0.45
26:BE:108:ILE:HD11	26:BE:180:LEU:HB3	1.98	0.45
26:DE:149:ILE:CD1	26:DE:172:ALA:HA	2.46	0.45
22:BA:2176:A:C5	22:BA:2177:C:N4	2.85	0.45
3:AC:73:PRO:CG	3:AC:105:GLU:HG3	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:116:GLN:HG3	4:CD:120:HIS:CE1	2.52	0.45
16:CP:43:ALA:O	16:CP:46:LYS:CG	2.65	0.45
1:AA:747:A:C6	1:AA:748:G:C6	3.05	0.45
24:DC:130:LEU:HD12	24:DC:135:ILE:HG13	1.98	0.45
1:AA:1057:G:O3'	3:AC:197:GLY:HA3	2.17	0.45
38:DQ:50:ARG:O	38:DQ:54:LYS:HE3	2.17	0.45
26:BE:23:PHE:CD1	26:BE:111:GLU:HG3	2.52	0.45
26:BE:25:GLU:O	26:BE:26:ALA:C	2.55	0.45
22:BA:2420:C:H5''	49:B1:8:LYS:NZ	2.32	0.45
4:CD:183:LYS:HB2	4:CD:183:LYS:HE2	1.89	0.45
25:BD:108:ASP:OD1	25:BD:206:ALA:HA	2.16	0.45
5:AE:77:ASN:O	5:AE:78:ASN:CB	2.66	0.45
22:BA:2455:G:C6	22:BA:2456:C:N4	2.85	0.45
1:AA:1077:G:C6	1:AA:1081:A:C6	3.05	0.44
22:DA:1439:A:N7	22:DA:1552:A:H2	2.15	0.44
22:DA:2004:G:P	58:DA:3798:HOH:O	2.71	0.44
11:AK:126:LYS:HD3	11:AK:126:LYS:H	1.81	0.44
22:DA:2018:G:O2'	22:DA:2019:A:H5'	2.17	0.44
22:DA:822:G:H5''	58:DA:3344:HOH:O	2.17	0.44
1:CA:401:C:OP2	4:CD:70:ARG:CD	2.64	0.44
1:AA:255:G:H4'	17:AQ:19:LYS:HD2	1.98	0.44
22:DA:442:G:N2	26:DE:43:THR:O	2.49	0.44
22:BA:716:A:N6	22:BA:717:C:C4	2.85	0.44
1:CA:4:U:C2'	1:CA:4:U:O2	2.64	0.44
22:DA:297:G:H2'	22:DA:298:G:O4'	2.17	0.44
1:CA:374:A:OP1	1:CA:452:A:N1	2.50	0.44
33:DL:77:ILE:HG23	33:DL:81:ASP:OD1	2.16	0.44
22:BA:1588:G:C2	22:BA:1589:U:C5	3.04	0.44
6:AF:9:MET:HE1	18:AR:65:LEU:HB3	1.99	0.44
22:DA:523:C:H2'	22:DA:524:G:C8	2.52	0.44
49:D1:51:GLU:O	49:D1:52:ALA:HB2	2.16	0.44
22:BA:1494:A:H2'	22:BA:1495:A:O5'	2.15	0.44
22:DA:533:G:C6	22:DA:534:U:C4	3.05	0.44
1:CA:268:U:N3	1:CA:269:C:C4	2.85	0.44
1:AA:1141:C:HO2'	1:AA:1142:G:C5'	2.28	0.44
22:DA:2897:U:H2'	22:DA:2898:U:C6	2.52	0.44
1:AA:855:U:H2'	1:AA:856:C:C6	2.52	0.44
22:DA:2040:G:C2	22:DA:2041:U:C2	3.05	0.44
1:CA:898:G:O2'	1:CA:900:A:N7	2.35	0.44
22:DA:1846:G:H3'	22:DA:1847:A:C8	2.52	0.44
1:AA:1326:U:H2'	1:AA:1327:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DX:64:ILE:O	45:DX:68:LEU:HG	2.17	0.44
46:DY:50:VAL:O	46:DY:54:LYS:HG3	2.17	0.44
27:DF:8:TYR:OH	27:DF:29:PRO:O	2.32	0.44
1:AA:457:G:C6	1:AA:458:U:N3	2.85	0.44
22:DA:482:A:H1'	22:DA:498:G:N2	2.33	0.44
23:DB:76:G:H2'	23:DB:77:U:O4'	2.17	0.44
10:AJ:18:ILE:HG23	10:AJ:19:ASP:N	2.31	0.44
22:BA:899:A:HO2'	22:BA:900:A:H8	1.62	0.44
1:AA:558:G:C4	1:AA:559:A:C2	3.04	0.44
14:AN:72:GLY:O	14:AN:80:SER:HA	2.18	0.44
46:BY:9:LYS:CB	46:BY:12:GLU:HG3	2.47	0.44
22:DA:1867:G:O6	22:DA:1875:G:C2	2.71	0.44
22:DA:1140:C:O4'	22:DA:1143:A:C2	2.70	0.44
11:CK:59:THR:CA	11:CK:91:PRO:HB3	2.48	0.44
11:CK:84:VAL:HG11	11:CK:97:ILE:HG22	1.99	0.44
2:AB:132:LYS:O	2:AB:136:MET:HB2	2.17	0.44
32:BK:87:LEU:HD13	32:BK:92:GLU:HB3	1.99	0.44
22:DA:1385:A:H4'	22:DA:1386:C:OP1	2.17	0.44
7:CG:66:LEU:HD23	7:CG:70:ARG:NE	2.32	0.44
22:DA:327:G:H2'	22:DA:328:U:O4'	2.16	0.44
1:AA:918:A:H2'	1:AA:919:A:C8	2.52	0.44
43:BV:89:ILE:HG21	43:BV:91:PHE:CZ	2.52	0.44
9:AI:6:TYR:CD1	9:AI:89:GLU:HB3	2.52	0.44
24:DC:78:VAL:HG21	24:DC:110:LEU:HD21	1.99	0.44
1:CA:1446:A:N6	1:CA:1447:A:H62	2.14	0.44
43:DV:63:ILE:HG13	43:DV:72:VAL:CG2	2.47	0.44
18:CR:34:THR:CG2	18:CR:38:LYS:HB2	2.47	0.44
36:DO:71:ALA:O	36:DO:75:GLY:N	2.45	0.44
24:BC:28:LYS:HB3	24:BC:29:PRO:HD2	1.99	0.44
22:BA:2223:G:OP1	24:BC:171:TYR:OH	2.28	0.44
30:DI:49:ILE:O	30:DI:50:GLU:HB2	2.17	0.44
34:DM:20:LEU:N	34:DM:20:LEU:HD22	2.32	0.44
48:B0:20:ASP:OD1	48:B0:20:ASP:N	2.50	0.44
22:BA:2766:A:N3	22:BA:2766:A:H2'	2.31	0.44
26:BE:155:GLU:HA	26:BE:155:GLU:OE1	2.17	0.44
45:BX:2:SER:O	45:BX:4:VAL:N	2.49	0.44
3:CC:121:THR:OG1	3:CC:189:ALA:N	2.49	0.44
22:BA:945:A:C4	22:BA:2448:A:C2	3.06	0.44
1:CA:1072:G:OP1	5:CE:62:LYS:NZ	2.50	0.44
22:DA:1441:G:H2'	22:DA:1442:U:C6	2.52	0.44
8:AH:47:GLU:HB2	8:AH:62:THR:HG22	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:2:SER:C	8:AH:4:GLN:H	2.19	0.44
1:AA:1144:G:N1	1:AA:1145:A:H2	2.15	0.44
11:AK:126:LYS:C	21:AU:34:ARG:NH2	2.71	0.44
1:AA:73:C:O2'	1:AA:74:A:C5'	2.65	0.44
1:AA:1002:G:C2	1:AA:1003:G:H1'	2.52	0.44
22:DA:1782:U:O4'	22:DA:2609:U:C2	2.70	0.44
39:BR:51:VAL:O	39:BR:52:PRO:O	2.35	0.44
22:DA:942:G:C2'	22:DA:943:A:H5'	2.47	0.44
6:CF:3:HIS:O	6:CF:92:THR:HA	2.17	0.44
35:DN:71:ARG:CG	35:DN:71:ARG:HH21	2.30	0.44
22:DA:85:G:OP2	42:DU:28:VAL:HG12	2.18	0.44
22:BA:2057:G:C6	22:BA:2058:A:C5	3.05	0.44
5:AE:148:ASN:ND2	8:AH:73:GLU:OE1	2.50	0.44
9:CI:49:ARG:C	9:CI:49:ARG:HD3	2.37	0.44
22:DA:1310:G:H1'	22:DA:1611:C:H5''	1.99	0.44
22:DA:1310:G:O6	22:DA:1311:G:C2	2.71	0.44
22:DA:1606:C:O2'	22:DA:1607:C:OP2	2.32	0.44
22:DA:1606:C:O2'	22:DA:1607:C:P	2.75	0.44
22:BA:2187:U:H2'	22:BA:2188:U:C1'	2.47	0.44
1:CA:151:A:H2'	1:CA:152:A:O4'	2.18	0.44
22:DA:88:G:C6	22:DA:89:A:N7	2.85	0.44
4:AD:160:GLU:C	4:AD:162:ALA:N	2.70	0.44
31:DJ:3:THR:HG22	31:DJ:4:PHE:N	2.32	0.44
22:DA:2371:G:C2	22:DA:2372:U:C6	3.05	0.44
22:DA:301:G:N2	22:DA:302:C:O2	2.50	0.44
1:AA:213:G:N7	1:AA:214:C:C4	2.86	0.44
6:AF:9:MET:CG	6:AF:86:ARG:HB2	2.47	0.44
22:BA:587:C:N3	33:BL:33:ARG:NH2	2.63	0.44
1:CA:571:U:H5'	1:CA:819:A:C5	2.52	0.44
1:AA:351:G:H1'	1:AA:352:C:OP1	2.16	0.44
1:AA:351:G:H4'	1:AA:352:C:OP2	2.15	0.44
22:DA:672:C:N4	22:DA:673:C:N4	2.65	0.44
24:DC:145:GLU:CA	24:DC:152:GLY:HA2	2.47	0.44
22:DA:2415:G:C6	22:DA:2416:C:N3	2.85	0.44
1:AA:1163:A:C2	1:AA:1174:G:C2	3.05	0.44
46:DY:11:VAL:O	46:DY:15:ASN:CG	2.55	0.44
1:CA:879:C:C2'	1:CA:880:C:O5'	2.64	0.44
1:AA:987:G:C2	1:AA:988:G:C8	3.05	0.44
1:AA:600:A:C2	1:AA:601:G:C5	3.05	0.44
22:BA:1014:A:C2	22:BA:1149:G:C2	3.05	0.44
22:DA:1916:A:C2	22:DA:1917:U:C2	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1056:G:N1	22:DA:1102:C:OP2	2.49	0.44
22:DA:2110:G:H5'	22:DA:2118:U:C2	2.52	0.44
1:AA:142:G:C6	1:AA:143:A:C4	3.05	0.44
22:DA:894:U:C4	22:DA:895:U:C5	3.05	0.44
1:CA:493:A:C6	1:CA:494:G:N1	2.86	0.44
27:DF:8:TYR:O	27:DF:12:VAL:HB	2.16	0.44
1:CA:337:G:H2'	1:CA:338:A:C8	2.51	0.44
10:AJ:17:LEU:HD23	10:AJ:17:LEU:C	2.37	0.44
1:AA:4:U:O2	1:AA:4:U:C2'	2.63	0.44
1:CA:296:U:C4	1:CA:297:G:N7	2.86	0.44
22:BA:1967:C:H2'	22:BA:1968:G:H5'	1.99	0.44
7:AG:145:ALA:O	7:AG:146:GLU:HB3	2.16	0.44
14:AN:21:PHE:HA	14:AN:25:ALA:HB3	1.98	0.44
22:DA:1688:U:C4	22:DA:1698:A:C2	3.05	0.44
22:BA:1464:G:C6	22:BA:1465:G:C6	3.06	0.44
7:CG:11:LYS:N	7:CG:11:LYS:HD2	2.31	0.44
8:AH:105:SER:O	8:AH:123:GLY:HA3	2.17	0.44
1:CA:237:G:OP1	17:CQ:42:THR:OG1	2.31	0.44
3:CC:83:ASP:O	3:CC:85:GLU:N	2.50	0.44
5:CE:66:LYS:O	5:CE:69:ARG:O	2.35	0.44
22:DA:416:U:H2'	22:DA:417:C:O4'	2.16	0.44
41:DT:82:LYS:HG2	41:DT:83:ALA:N	2.32	0.44
51:D3:52:LYS:HA	51:D3:55:LEU:HD12	1.99	0.44
24:DC:25:HIS:N	24:DC:81:LEU:O	2.47	0.44
22:BA:2857:G:N2	22:BA:2860:A:OP2	2.47	0.44
22:DA:2635:A:H5'	25:DD:79:LEU:HB2	1.98	0.44
8:CH:53:GLY:C	8:CH:54:ASP:CG	2.76	0.44
22:BA:936:A:H2'	22:BA:937:C:C6	2.52	0.44
22:BA:1394:U:H2'	22:BA:1395:A:O4'	2.17	0.44
22:DA:2052:A:OP1	25:DD:146:ILE:HG12	2.17	0.44
26:DE:126:VAL:HG21	26:DE:134:LEU:HB2	1.99	0.44
22:DA:1277:G:H2'	22:DA:1278:C:O4'	2.17	0.44
1:AA:406:G:O5'	4:AD:5:LEU:HD21	2.17	0.44
22:DA:1828:G:P	58:DA:3453:HOH:O	2.75	0.44
22:BA:1365:A:O5'	45:BX:28:ARG:NH2	2.50	0.44
22:BA:2082:A:H2'	22:BA:2083:G:O4'	2.17	0.44
22:BA:1144:A:C6	22:BA:1145:C:C4	3.06	0.44
50:D2:46:LYS:HD3	50:D2:46:LYS:C	2.38	0.44
49:D1:39:PHE:CG	49:D1:40:ASP:N	2.86	0.44
25:BD:1:MET:HG3	25:BD:205:PRO:HG2	1.99	0.44
16:AP:53:ASP:C	16:AP:53:ASP:OD1	2.55	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:987:C:H2'	22:BA:988:A:O4'	2.17	0.44
11:AK:19:GLY:O	11:AK:82:LEU:HA	2.16	0.44
1:AA:858:G:O2'	1:AA:859:G:H5''	2.18	0.44
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.80	0.44
24:BC:70:ASN:O	24:BC:71:LYS:C	2.54	0.44
12:CL:64:THR:HG23	12:CL:93:VAL:HA	1.99	0.44
8:AH:6:PRO:O	8:AH:9:ASP:HB3	2.18	0.44
22:DA:2108:A:C2	22:DA:2182:U:C2	3.06	0.44
9:AI:30:ILE:HB	9:AI:65:ILE:HD11	1.99	0.44
22:DA:410:G:H2'	22:DA:2407:A:N7	2.32	0.44
4:AD:190:ASP:C	4:AD:191:LEU:HG	2.37	0.44
22:BA:301:G:OP1	22:BA:301:G:H4'	2.18	0.44
22:BA:2262:U:H4'	22:BA:2328:A:C2	2.53	0.44
1:CA:177:G:C6	1:CA:178:C:N4	2.85	0.44
14:CN:61:ARG:O	14:CN:62:ASN:CB	2.62	0.44
42:DU:13:VAL:HG21	42:DU:39:ILE:HD12	1.99	0.44
22:BA:1262:A:C6	22:BA:1263:U:C4	3.05	0.44
22:BA:142:A:H2'	22:BA:143:C:O5'	2.18	0.44
6:CF:86:ARG:NH1	6:CF:86:ARG:CG	2.75	0.44
24:DC:17:VAL:CB	24:DC:204:VAL:HG22	2.48	0.44
4:CD:38:PRO:HD2	4:CD:42:GLY:CA	2.47	0.44
22:BA:2305:U:O2	27:BF:151:GLY:HA3	2.18	0.44
22:BA:1449:G:H2'	22:BA:1450:G:O5'	2.17	0.44
30:BI:110:ALA:O	30:BI:113:LYS:HG3	2.17	0.44
4:AD:106:GLY:O	4:AD:158:ALA:HB1	2.16	0.44
22:DA:634:C:OP2	33:DL:70:LYS:HD3	2.16	0.44
35:BN:103:ARG:HD3	35:BN:110:MET:HE3	1.99	0.44
8:CH:27:MET:HB2	8:CH:28:PRO:HD2	2.00	0.44
1:CA:1029:U:O2	1:CA:1029:U:H2'	2.16	0.44
1:CA:38:G:N2	1:CA:397:A:C4	2.84	0.44
22:BA:1786:A:H1'	22:BA:1938:A:N6	2.32	0.44
27:DF:38:MET:HG3	27:DF:152:LEU:HB3	1.98	0.44
16:AP:39:PHE:CG	16:AP:39:PHE:O	2.70	0.44
26:DE:196:VAL:O	26:DE:196:VAL:CG1	2.65	0.44
1:AA:1429:A:C4	1:AA:1430:A:C8	3.05	0.44
22:DA:2636:C:H2'	22:DA:2637:U:C6	2.52	0.44
1:CA:518:C:H2'	1:CA:530:G:C8	2.52	0.44
22:BA:695:G:C2	22:BA:696:G:C8	3.06	0.44
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.51	0.44
24:DC:69:ARG:NH2	24:DC:116:ILE:HD12	2.32	0.44
26:BE:46:GLN:O	26:BE:88:ARG:NH1	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:57:LYS:CG	29:BH:58:LEU:N	2.81	0.44
27:BF:31:VAL:HG23	27:BF:96:MET:SD	2.58	0.44
22:DA:1767:G:O6	22:DA:1986:C:N4	2.51	0.44
42:DU:82:ARG:O	42:DU:97:LYS:CG	2.66	0.44
12:AL:38:TYR:HB2	12:AL:52:VAL:HG23	1.98	0.44
22:BA:2602:A:H4'	22:BA:2603:G:OP2	2.17	0.44
1:CA:651:C:N4	1:CA:753:A:OP2	2.51	0.44
29:BH:62:LEU:O	29:BH:62:LEU:HD12	2.17	0.44
43:DV:30:ILE:HG12	43:DV:91:PHE:HB2	1.99	0.44
22:DA:2152:G:H2'	22:DA:2153:C:C6	2.52	0.44
22:BA:2280:G:C2	22:BA:2281:A:C8	3.05	0.44
27:DF:17:MET:O	27:DF:21:ASN:HA	2.17	0.44
29:BH:100:ALA:HB2	29:BH:115:VAL:HG21	1.98	0.44
1:AA:858:G:O6	1:AA:869:G:C8	2.70	0.44
22:DA:2711:A:C6	22:DA:2714:G:C8	3.05	0.44
22:BA:2741:A:O3'	52:B4:36:ARG:NH1	2.50	0.44
21:AU:41:PRO:HA	21:AU:44:GLU:HB2	2.00	0.44
10:CJ:67:ILE:HG13	14:CN:96:LEU:HD13	1.99	0.44
5:CE:104:GLY:O	5:CE:105:ILE:CB	2.65	0.44
13:AM:34:LEU:HD23	13:AM:39:ILE:HB	2.00	0.44
22:DA:1707:G:C6	22:DA:1708:C:N3	2.86	0.44
42:DU:98:SER:O	42:DU:99:ASN:CB	2.65	0.44
1:CA:632:U:H3'	1:CA:633:G:H5'	1.99	0.44
1:CA:866:C:H4'	1:CA:919:A:H5'	1.98	0.44
1:CA:607:A:C2	1:CA:608:A:C4	3.05	0.44
16:CP:29:ASN:N	16:CP:29:ASN:OD1	2.50	0.44
8:CH:64:LYS:HB3	8:CH:71:VAL:HG21	1.99	0.44
30:DI:24:VAL:CG2	30:DI:28:LEU:HD23	2.48	0.44
22:DA:2379:G:C6	22:DA:2380:C:N4	2.85	0.44
22:DA:2847:U:C2'	22:DA:2848:G:H5'	2.47	0.44
2:AB:66:LYS:HG2	2:AB:156:GLY:O	2.18	0.44
46:BY:16:THR:HA	46:BY:19:LEU:HB2	1.99	0.44
29:BH:31:VAL:N	29:BH:32:PRO:CD	2.80	0.44
12:AL:4:VAL:O	12:AL:8:VAL:HG23	2.17	0.44
22:DA:2033:A:OP1	22:DA:2033:A:H2'	2.17	0.44
22:DA:2039:U:H2'	22:DA:2040:G:C8	2.53	0.44
22:DA:600:G:C8	22:DA:601:C:C5	3.05	0.44
1:CA:702:A:C6	22:DA:1848:A:C6	3.06	0.44
23:DB:39:A:H2'	23:DB:40:U:C5	2.53	0.44
38:DQ:83:LEU:O	38:DQ:86:ALA:HB3	2.16	0.44
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1101:A:H4'	1:CA:1102:A:O5'	2.17	0.44
22:BA:215:G:H4'	22:BA:216:A:H4'	2.00	0.44
22:DA:1248:G:N3	38:DQ:3:ARG:HG3	2.32	0.44
37:DP:103:ARG:HG2	37:DP:107:ALA:HB1	1.98	0.44
39:BR:42:ALA:HA	39:BR:46:GLU:CB	2.48	0.44
22:DA:595:C:O2	22:DA:663:G:C2	2.70	0.44
12:CL:86:ARG:HD2	12:CL:88:LYS:N	2.32	0.44
1:CA:1479:C:C2	1:CA:1480:A:C8	3.05	0.44
22:DA:484:C:N4	22:DA:497:A:C2	2.85	0.44
43:DV:9:ARG:CG	43:DV:41:GLU:HB3	2.47	0.44
29:DH:25:TYR:O	29:DH:29:PHE:HB3	2.18	0.44
22:BA:2637:U:H2'	22:BA:2638:G:H5'	1.99	0.44
1:AA:1126:U:O4'	1:AA:1281:C:O2	2.36	0.44
23:DB:71:C:C2	23:DB:106:G:C2	3.05	0.44
8:CH:78:VAL:N	8:CH:126:ILE:O	2.50	0.44
14:AN:64:CYS:SG	14:AN:67:THR:OG1	2.57	0.44
21:CU:28:VAL:O	21:CU:32:VAL:HG23	2.18	0.44
11:AK:110:ILE:HB	21:AU:6:VAL:CG2	2.48	0.44
26:BE:108:ILE:HG13	26:BE:109:LEU:N	2.31	0.44
45:DX:40:VAL:CG2	45:DX:45:ARG:O	2.65	0.44
22:DA:1139:G:O2'	22:DA:1140:C:H5'	2.17	0.44
41:BT:69:ARG:HB3	41:BT:74:ILE:HG22	1.99	0.44
22:BA:2453:A:O5'	22:BA:2453:A:H8	2.00	0.44
1:CA:517:G:H5'	1:CA:519:C:C2	2.51	0.44
1:AA:1329:A:C2'	1:AA:1330:U:H5'	2.46	0.44
22:DA:2138:G:N2	22:DA:2154:A:H1'	2.33	0.44
1:AA:19:A:N3	1:AA:917:G:C2	2.86	0.44
1:AA:1539:C:H5''	21:AU:18:ARG:CB	2.47	0.44
22:BA:2039:U:O2'	22:BA:2040:G:H5'	2.16	0.44
6:AF:29:ILE:HG23	6:AF:66:ALA:HB2	2.00	0.44
1:AA:1457:G:H2'	1:AA:1458:G:O4'	2.18	0.44
1:CA:1078:U:C5	1:CA:1079:G:C5	3.05	0.44
44:DW:46:HIS:N	44:DW:78:LYS:O	2.39	0.44
22:BA:2258:C:H4'	22:BA:2259:U:OP2	2.16	0.44
3:CC:103:ILE:N	3:CC:103:ILE:HD12	2.33	0.44
47:BZ:13:ALA:O	47:BZ:21:LYS:HE2	2.17	0.44
1:AA:244:U:O4	1:AA:906:A:H1'	2.17	0.44
1:AA:829:G:C6	1:AA:858:G:C2	3.05	0.44
1:AA:1032:G:C5'	1:AA:1033:G:OP2	2.66	0.44
9:AI:57:MET:HA	9:AI:60:LYS:HB2	1.99	0.44
1:AA:1005:A:H3'	1:AA:1006:G:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:48:LYS:HG2	39:BR:48:LYS:O	2.15	0.44
1:CA:505:G:C6	1:CA:535:A:C2	3.05	0.44
22:DA:46:G:N3	22:DA:47:C:C6	2.86	0.44
1:CA:1302:C:C4	13:CM:17:ILE:HD11	2.53	0.44
7:AG:40:GLU:O	7:AG:44:TYR:CD2	2.71	0.44
22:DA:38:A:H4'	26:DE:45:ALA:HB2	2.00	0.44
7:AG:69:VAL:HG23	7:AG:100:ALA:HB1	1.99	0.44
3:AC:82:GLU:O	3:AC:85:GLU:HB3	2.16	0.44
3:AC:85:GLU:OE1	3:AC:88:ARG:CZ	2.65	0.44
9:CI:46:MET:O	9:CI:49:ARG:HB3	2.18	0.44
9:CI:52:LEU:HD13	9:CI:57:MET:HG2	1.98	0.44
9:CI:57:MET:O	9:CI:60:LYS:HB2	2.18	0.44
9:CI:87:LEU:C	9:CI:89:GLU:H	2.21	0.44
41:BT:64:LYS:HA	41:BT:79:ASP:OD1	2.18	0.44
22:BA:2186:G:H2'	22:BA:2187:U:C6	2.53	0.44
22:DA:1176:U:C4	22:DA:1177:G:C6	3.05	0.44
22:DA:1067:A:O5'	22:DA:1068:G:OP2	2.35	0.44
22:DA:724:U:C4	22:DA:725:G:C6	3.06	0.44
22:DA:1332:G:N3	22:DA:1332:G:H2'	2.32	0.44
1:CA:474:G:N1	1:CA:475:C:C2	2.85	0.44
4:CD:23:SER:CB	4:CD:109:ALA:O	2.66	0.44
22:BA:2293:G:H2'	22:BA:2294:G:O4'	2.17	0.44
22:BA:846:U:O2'	22:BA:847:U:P	2.75	0.44
26:DE:150:THR:C	26:DE:192:ALA:HB2	2.37	0.44
2:AB:65:GLY:C	2:AB:66:LYS:HD3	2.38	0.44
1:AA:724:G:N3	1:AA:725:G:C8	2.85	0.44
22:DA:200:U:C6	22:DA:201:C:C6	3.06	0.44
25:BD:104:VAL:HG23	25:BD:105:LYS:N	2.32	0.44
21:AU:14:VAL:CG1	21:AU:16:LEU:CD2	2.96	0.44
1:AA:1463:U:H2'	1:AA:1464:U:C6	2.53	0.44
22:DA:1219:U:H2'	22:DA:1220:G:C8	2.52	0.44
1:AA:1401:G:C2	1:AA:1402:C:H1'	2.53	0.44
17:AQ:80:GLU:C	17:AQ:81:LYS:HD3	2.38	0.44
1:CA:39:G:N1	1:CA:40:C:C4	2.86	0.44
22:BA:1840:G:C2	22:BA:1841:U:C2	3.06	0.44
25:DD:92:VAL:CG1	25:DD:93:GLY:N	2.80	0.44
3:AC:191:THR:OG1	3:AC:192:THR:N	2.50	0.44
1:AA:1329:A:H2'	1:AA:1330:U:H5'	2.00	0.44
1:CA:444:G:C6	1:CA:445:G:N7	2.86	0.44
1:AA:665:A:C2	1:AA:732:C:C5	3.05	0.44
1:AA:1050:G:H2'	1:AA:1050:G:N3	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:181:A:N6	1:CA:195:A:OP2	2.51	0.44
22:DA:95:A:H2'	22:DA:96:C:O5'	2.18	0.44
7:CG:25:LYS:O	7:CG:29:ILE:HG12	2.17	0.44
22:BA:1536:C:O4'	22:BA:1537:G:C2	2.70	0.44
22:DA:2787:C:O4'	25:DD:63:PRO:HA	2.18	0.44
22:BA:1185:G:H5''	22:BA:1186:G:OP1	2.17	0.44
22:DA:2519:U:C6	22:DA:2542:A:N6	2.85	0.44
22:DA:2544:G:H5'	22:DA:2645:G:C2	2.52	0.44
22:BA:96:C:H4'	46:BY:41:HIS:CD2	2.53	0.44
15:CO:89:ARG:NH1	22:DA:716:A:OP1	2.49	0.44
22:DA:176:A:N7	22:DA:177:G:C6	2.86	0.44
1:CA:468:A:N3	1:CA:468:A:O4'	2.50	0.44
22:BA:68:G:H2'	22:BA:69:C:O4'	2.18	0.44
49:B1:4:GLY:C	49:B1:6:ARG:H	2.20	0.44
1:CA:681:A:C2	1:CA:710:G:C4	3.05	0.44
3:CC:43:LEU:HD21	3:CC:68:ILE:HD11	2.00	0.44
13:AM:80:LEU:HD21	13:AM:87:ARG:NE	2.32	0.44
22:DA:2061:G:H2'	22:DA:2501:C:O2'	2.17	0.44
13:AM:11:ASP:O	13:AM:12:HIS:CG	2.69	0.44
14:AN:45:VAL:HG23	14:AN:46:LEU:H	1.83	0.44
1:AA:824:G:H1'	8:AH:2:SER:CA	2.48	0.44
22:BA:998:C:P	38:BQ:92:ARG:HH21	2.41	0.44
22:DA:527:C:H2'	22:DA:2779:U:O2	2.18	0.44
12:CL:99:ARG:HD2	12:CL:104:CYS:SG	2.58	0.44
22:DA:1343:G:C5	22:DA:1344:U:O4	2.70	0.44
35:DN:56:LYS:NZ	35:DN:87:PHE:HB3	2.32	0.44
4:AD:22:LYS:O	4:AD:23:SER:C	2.56	0.44
11:AK:70:CYS:O	11:AK:74:VAL:HG22	2.17	0.44
22:DA:52:A:N3	22:DA:178:G:N2	2.55	0.44
1:AA:81:A:O2'	1:AA:89:U:O2	2.19	0.44
36:BO:30:ARG:HG2	36:BO:31:THR:N	2.33	0.44
22:BA:301:G:P	42:BU:82:ARG:NH1	2.91	0.44
22:DA:1394:U:H6	22:DA:1394:U:H3'	1.83	0.44
22:DA:2283:C:N4	22:DA:2389:G:C5	2.86	0.44
22:DA:2859:G:H2'	22:DA:2860:A:C8	2.52	0.44
1:AA:973:G:H1'	10:AJ:56:HIS:HD2	1.83	0.44
24:DC:200:HIS:O	24:DC:203:ARG:HG2	2.17	0.44
41:BT:67:VAL:HG22	41:BT:76:ARG:HG2	1.99	0.44
22:DA:1178:C:N4	22:DA:1180:U:N3	2.65	0.44
1:CA:1350:A:N1	1:CA:1351:U:C2	2.85	0.44
22:DA:289:G:H2'	22:DA:290:U:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1676:A:C6	22:DA:1677:A:C5	3.05	0.44
2:CB:117:LEU:HD23	2:CB:141:LEU:HG	1.99	0.44
6:AF:52:ASN:O	6:AF:53:LYS:CB	2.65	0.44
1:CA:608:A:H2'	1:CA:609:A:O4'	2.17	0.44
22:BA:1754:A:N1	22:BA:2716:C:O2'	2.41	0.44
5:CE:156:LYS:HD3	8:CH:71:VAL:HG22	2.00	0.44
29:BH:97:ARG:O	29:BH:101:ASP:HB2	2.17	0.44
46:BY:23:ARG:O	46:BY:24:GLU:O	2.36	0.44
22:DA:574:A:H4'	22:DA:575:A:O5'	2.18	0.44
14:CN:23:LYS:HG3	14:CN:24:ARG:N	2.33	0.44
5:AE:115:LEU:O	5:AE:116:GLU:C	2.56	0.44
1:AA:146:G:C2	1:AA:177:G:N7	2.86	0.44
35:BN:20:MET:HE1	35:BN:40:LYS:HE2	2.00	0.44
1:AA:1312:G:N2	1:AA:1313:U:C2	2.86	0.44
22:DA:1582:C:O2'	22:DA:1585:C:N3	2.35	0.44
1:AA:1449:C:H2'	1:AA:1450:U:O4'	2.18	0.44
22:DA:1584:U:C2'	22:DA:1584:U:O2	2.65	0.44
22:DA:219:A:N7	22:DA:220:G:N7	2.66	0.44
45:DX:78:TYR:OXT	45:DX:78:TYR:CD1	2.70	0.44
28:DG:118:PRO:CG	28:DG:144:VAL:HG21	2.48	0.44
19:AS:51:VAL:HG22	19:AS:71:LEU:HD13	1.99	0.44
22:DA:1663:G:C6	22:DA:1992:G:C8	3.06	0.44
1:CA:40:C:H2'	1:CA:41:G:O4'	2.17	0.44
22:BA:870:U:C4	22:BA:871:U:C5	3.06	0.44
7:CG:116:MET:O	7:CG:120:LEU:N	2.49	0.44
44:DW:36:ILE:HG22	44:DW:37:ILE:N	2.32	0.44
22:DA:728:G:C2	22:DA:730:A:C4	3.05	0.44
22:BA:682:G:H5'	50:B2:26:ASN:OD1	2.17	0.44
22:DA:1553:A:N7	22:DA:1555:G:C5	2.86	0.44
22:DA:2304:G:C2	22:DA:2313:C:N3	2.86	0.44
1:CA:519:C:H2'	1:CA:520:A:O4'	2.18	0.44
8:AH:10:MET:CE	8:AH:33:LYS:HA	2.48	0.44
1:CA:731:G:O2'	1:CA:732:C:H5'	2.18	0.44
22:DA:699:A:H2'	22:DA:700:G:O4'	2.17	0.44
52:D4:36:ARG:HG2	52:D4:37:GLN:H	1.82	0.44
2:AB:144:LEU:HD23	2:AB:144:LEU:N	2.33	0.44
1:AA:1289:A:H5'	1:AA:1290:G:OP2	2.17	0.44
22:BA:2804:U:H2'	22:BA:2805:C:C6	2.53	0.44
38:DQ:27:ALA:HB1	38:DQ:31:VAL:CG2	2.48	0.44
7:CG:55:GLY:O	7:CG:56:LYS:O	2.35	0.44
1:AA:57:G:H2'	1:AA:58:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:825:A:H2'	22:BA:826:U:O4'	2.18	0.44
27:DF:52:ASN:HB3	27:DF:150:ARG:NH1	2.32	0.44
1:CA:1450:U:O2'	1:CA:1451:U:H2'	2.17	0.44
24:DC:107:PRO:HB3	24:DC:142:HIS:CE1	2.53	0.44
9:CI:47:VAL:O	9:CI:80:ARG:HG2	2.18	0.44
1:AA:765:G:C6	1:AA:812:G:C4	3.05	0.44
22:BA:2403:C:C2	22:BA:2404:U:C6	3.06	0.44
22:DA:21:A:N1	22:DA:520:G:C6	2.85	0.44
8:CH:18:GLN:NE2	8:CH:70:ALA:HB1	2.32	0.44
1:CA:1112:C:N4	3:CC:178:LEU:HD23	2.33	0.44
28:DG:137:ASP:HB3	28:DG:140:VAL:HG23	2.00	0.44
22:BA:311:A:C6	22:BA:328:U:C4	3.05	0.44
25:BD:55:LYS:HD3	25:BD:60:VAL:HG22	1.99	0.44
1:AA:353:A:C2'	1:AA:354:G:OP2	2.66	0.44
1:CA:1502:A:H5'	1:CA:1504:G:N7	2.33	0.44
22:DA:1407:G:N2	22:DA:1596:A:C4	2.85	0.44
29:BH:89:LYS:CE	29:BH:124:THR:HG22	2.48	0.44
36:DO:36:TYR:CD2	36:DO:36:TYR:N	2.86	0.44
2:AB:24:ASN:HA	2:AB:25:PRO:HD2	1.86	0.44
13:AM:12:HIS:HA	13:AM:44:LYS:HE3	1.99	0.44
9:CI:128:SER:O	9:CI:129:LYS:C	2.56	0.44
22:DA:487:C:N4	22:DA:488:G:C6	2.86	0.44
1:CA:1216:A:OP1	14:CN:5:SER:HB2	2.18	0.44
1:CA:995:C:N3	1:CA:1046:A:O2'	2.46	0.44
12:CL:87:VAL:O	12:CL:89:ASP:N	2.51	0.44
22:DA:45:G:H4'	22:DA:46:G:O4'	2.18	0.44
1:CA:1036:A:H2'	1:CA:1036:A:N3	2.32	0.44
22:DA:2838:G:O2'	35:DN:45:ARG:CZ	2.66	0.44
22:DA:1340:U:C5	22:DA:1603:A:C8	3.05	0.44
29:DH:32:PRO:HB3	45:DX:39:TRP:HB3	1.99	0.44
22:BA:1384:A:H1'	22:BA:1405:U:C1'	2.47	0.44
22:BA:2190:G:H3'	22:BA:2191:A:H8	1.83	0.44
1:CA:1141:C:O2'	1:CA:1142:G:P	2.76	0.44
1:AA:258:G:C4	1:AA:259:G:C8	3.05	0.44
42:DU:13:VAL:HB	42:DU:18:ASP:O	2.17	0.44
5:CE:56:VAL:N	5:CE:57:PRO:CD	2.80	0.44
3:AC:206:GLU:O	3:AC:207:ILE:O	2.35	0.44
1:CA:216:U:H4'	1:CA:464:U:H4'	2.00	0.44
22:DA:1665:A:N6	22:DA:1666:G:C6	2.86	0.44
22:BA:1851:U:C4	22:BA:1852:U:C5	3.05	0.44
24:DC:124:ILE:CD1	24:DC:136:PRO:HD3	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:41:ILE:HG21	2:AB:202:GLY:HA2	2.00	0.44
20:AT:84:ASN:HA	20:AT:87:ALA:HB3	2.00	0.44
40:DS:73:LYS:CB	40:DS:106:VAL:HB	2.47	0.44
1:CA:1088:G:C4	1:CA:1089:G:C8	3.05	0.44
20:CT:33:LYS:O	20:CT:36:TYR:CD2	2.70	0.44
22:DA:1655:A:C2	22:DA:1656:C:H1'	2.52	0.44
22:DA:1663:G:C6	22:DA:1992:G:N7	2.86	0.44
29:DH:37:VAL:HG22	29:DH:38:PRO:HD2	1.98	0.44
22:BA:2727:A:C6	22:BA:2728:U:O4	2.71	0.44
41:BT:1:MET:HB2	41:BT:2:ILE:HD12	2.00	0.44
22:DA:769:U:C4	22:DA:770:G:N7	2.86	0.44
1:CA:1346:A:O3'	1:CA:1347:G:H4'	2.17	0.44
22:DA:2784:U:N3	22:DA:2785:C:C4	2.86	0.44
22:DA:2784:U:C4	22:DA:2785:C:N4	2.86	0.44
35:DN:107:ASN:O	35:DN:107:ASN:ND2	2.51	0.44
22:DA:1688:U:H1'	22:DA:1701:A:C6	2.52	0.44
22:BA:851:C:H2'	22:BA:852:U:C6	2.53	0.44
34:BM:70:ASP:OD1	34:BM:70:ASP:C	2.56	0.44
2:AB:128:LYS:O	2:AB:129:LEU:C	2.56	0.44
22:DA:2314:A:C2	22:DA:2315:G:C4	3.06	0.44
25:DD:30:GLU:HG2	25:DD:185:ASN:ND2	2.32	0.44
4:CD:116:GLN:HG3	4:CD:120:HIS:ND1	2.33	0.44
29:BH:57:LYS:HG3	29:BH:58:LEU:N	2.33	0.44
26:BE:125:SER:OG	26:BE:126:VAL:N	2.50	0.44
24:DC:34:LEU:O	24:DC:35:GLU:HB3	2.17	0.44
22:BA:749:A:C6	22:BA:1618:A:C2	3.06	0.44
22:DA:662:G:O3'	33:DL:16:GLY:HA2	2.17	0.44
22:DA:49:A:C8	22:DA:51:G:C2	3.06	0.44
24:BC:108:LYS:HD2	24:BC:194:GLU:OE1	2.18	0.44
1:AA:1168:U:C2'	1:AA:1168:U:O2	2.66	0.44
1:AA:612:C:H2'	1:AA:613:C:C6	2.53	0.44
4:AD:143:VAL:O	4:AD:143:VAL:CG2	2.65	0.44
8:AH:75:ILE:HG23	8:AH:75:ILE:O	2.18	0.44
22:DA:2729:G:H2'	22:DA:2730:C:O4'	2.18	0.44
22:DA:1127:A:N7	22:DA:2488:G:O2'	2.48	0.44
7:AG:63:GLU:O	7:AG:67:GLU:N	2.50	0.44
27:DF:122:PHE:O	27:DF:123:ASP:C	2.56	0.44
22:BA:2683:C:H4'	25:BD:13:ARG:NH1	2.32	0.44
22:DA:1361:G:N3	22:DA:1362:C:C6	2.85	0.44
22:DA:2043:C:H1'	22:DA:2779:U:O4	2.18	0.44
45:DX:30:LEU:HB3	45:DX:31:PRO:HD2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:686:U:O4	50:B2:12:ARG:HB2	2.17	0.44
16:AP:45:GLU:O	16:AP:46:LYS:O	2.35	0.44
11:AK:91:PRO:O	11:AK:93:ARG:N	2.51	0.44
4:AD:151:LYS:CB	4:AD:156:LYS:HE3	2.48	0.44
22:BA:1406:U:C2'	22:BA:1407:G:O5'	2.66	0.44
39:DR:52:PRO:O	39:DR:53:PHE:CG	2.70	0.44
4:AD:123:ILE:H	4:AD:123:ILE:HD13	1.81	0.44
29:BH:4:ILE:HG23	29:BH:17:ASP:O	2.17	0.44
22:BA:1721:G:O2'	22:BA:1739:A:N6	2.50	0.44
22:BA:1414:C:C4	22:BA:1415:U:H5	2.35	0.44
22:BA:1588:G:N3	22:BA:1589:U:C6	2.86	0.44
22:BA:1935:G:C6	22:BA:1962:C:C6	3.06	0.44
1:CA:254:G:C4	1:CA:255:G:C8	3.06	0.44
22:DA:1718:G:C6	22:DA:1743:G:N3	2.86	0.44
30:DI:17:MET:HB3	30:DI:20:PRO:HB3	1.99	0.44
17:AQ:48:ASP:O	17:AQ:48:ASP:OD1	2.36	0.44
1:CA:1521:C:N3	1:CA:1522:U:C5	2.85	0.44
1:CA:769:G:H4'	1:CA:1513:A:H4'	2.00	0.44
27:DF:142:ASP:O	27:DF:143:TYR:C	2.56	0.44
11:AK:111:THR:HA	21:AU:4:ILE:O	2.18	0.44
22:DA:575:A:C2	22:DA:576:U:C5	3.06	0.44
1:AA:330:C:O2'	1:AA:331:G:H5'	2.17	0.44
22:DA:2195:U:N3	22:DA:2196:C:C5	2.86	0.44
1:AA:177:G:OP2	20:AT:60:ARG:NH1	2.51	0.44
1:CA:1244:G:C6	1:CA:1245:C:C4	3.06	0.44
1:AA:728:A:N6	1:AA:729:A:N6	2.65	0.44
27:BF:3:LYS:O	27:BF:6:ASP:HB2	2.18	0.44
26:DE:58:LYS:HG3	26:DE:70:SER:O	2.18	0.44
11:CK:52:PHE:CE1	11:CK:62:ALA:HB1	2.52	0.44
22:DA:2552:U:C2	22:DA:2554:U:C5'	3.01	0.44
22:DA:2799:A:O2'	22:DA:2800:A:H5''	2.18	0.44
1:CA:1536:C:C5	1:CA:1537:U:C5	3.06	0.44
22:DA:1740:G:H2'	22:DA:1741:C:O4'	2.17	0.44
22:DA:1445:G:N2	22:DA:1547:C:C2	2.85	0.44
13:AM:6:GLY:C	13:AM:8:ASN:H	2.21	0.44
24:DC:246:THR:C	24:DC:248:TRP:H	2.21	0.44
22:DA:1726:C:H2'	22:DA:1727:C:C6	2.51	0.44
1:CA:50:A:H1'	1:CA:52:C:O4'	2.18	0.44
22:BA:1742:U:C2'	22:BA:1743:G:O5'	2.66	0.44
8:AH:41:LYS:O	8:AH:44:GLY:N	2.48	0.44
2:AB:136:MET:N	2:AB:136:MET:SD	2.91	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:71:ASP:O	31:DJ:73:VAL:CG2	2.66	0.44
16:CP:5:ARG:O	16:CP:19:VAL:HA	2.17	0.44
22:BA:1100:C:H2'	22:BA:1101:U:C6	2.53	0.44
22:DA:1671:U:O2'	22:DA:1673:G:N7	2.41	0.44
26:BE:5:LEU:O	26:BE:6:LYS:HB3	2.17	0.44
1:AA:1386:G:H2'	1:AA:1387:G:C8	2.53	0.44
22:DA:2152:G:H2'	22:DA:2153:C:O4'	2.18	0.44
22:BA:2102:G:H5'	22:BA:2103:C:OP2	2.18	0.44
22:DA:2836:U:H2'	22:DA:2837:A:C8	2.52	0.44
38:BQ:109:LEU:HD11	39:BR:40:MET:CE	2.48	0.44
22:DA:2732:G:O2'	22:DA:2733:A:H5'	2.18	0.44
22:BA:2687:U:H2'	22:BA:2688:G:O4'	2.18	0.44
20:CT:62:ALA:HA	20:CT:67:ILE:HG22	2.00	0.44
22:DA:1712:U:H2'	22:DA:1713:A:C8	2.53	0.44
18:CR:49:ALA:O	18:CR:50:LYS:C	2.56	0.44
31:BJ:58:ASN:HA	31:BJ:126:ALA:O	2.18	0.44
22:BA:1590:A:H2'	22:BA:1591:A:H8	1.83	0.44
22:BA:976:G:N3	22:BA:976:G:H2'	2.33	0.44
5:AE:117:VAL:HG23	5:AE:118:ALA:N	2.33	0.44
1:AA:404:G:H4'	1:AA:439:U:O2	2.17	0.44
29:BH:89:LYS:HE3	29:BH:124:THR:HG22	1.99	0.44
29:BH:99:ILE:CD1	29:BH:117:LEU:HD13	2.48	0.44
22:BA:1912:A:O5'	22:BA:1913:A:P	2.75	0.44
22:BA:1915:U:C2	22:BA:1916:A:C8	3.06	0.44
22:BA:1918:A:H4'	22:BA:1919:A:OP1	2.18	0.44
1:AA:1032:G:H3'	1:AA:1033:G:O4'	2.18	0.44
1:AA:374:A:C6	1:AA:375:U:C4	3.06	0.44
12:CL:82:ILE:HD11	12:CL:95:TYR:HB2	1.99	0.44
22:DA:1263:U:C5	22:DA:1264:A:N6	2.86	0.44
48:D0:13:ARG:HG3	48:D0:16:ARG:NH1	2.32	0.44
22:DA:973:A:H5''	39:DR:81:LYS:HG3	1.99	0.44
6:CF:64:VAL:HG12	6:CF:65:GLU:H	1.82	0.44
22:DA:2204:G:C5	22:DA:2221:G:N2	2.86	0.44
22:DA:669:G:N2	22:DA:670:A:C2	2.86	0.44
4:AD:150:LYS:O	4:AD:152:GLN:HG2	2.17	0.44
4:AD:155:VAL:CG1	4:AD:178:MET:HE1	2.48	0.44
22:DA:35:G:N2	22:DA:450:G:HI'	2.32	0.44
29:DH:31:VAL:CB	29:DH:32:PRO:HD3	2.47	0.44
22:DA:1307:A:H2'	22:DA:1308:A:O4'	2.18	0.44
22:BA:1087:G:N2	22:BA:1090:A:C8	2.86	0.44
22:BA:2098:U:H2'	22:BA:2099:U:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2075:U:O2	22:BA:2077:A:C8	2.70	0.44
30:DI:57:VAL:HG22	30:DI:58:VAL:H	1.83	0.44
1:AA:1504:G:H4'	1:AA:1505:G:C4	2.53	0.44
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.33	0.44
33:DL:101:ILE:O	33:DL:105:ILE:HG13	2.18	0.44
12:AL:63:VAL:CG2	12:AL:95:TYR:CE1	3.01	0.44
22:BA:1735:A:C2	22:BA:1736:U:H1'	2.53	0.44
22:DA:1829:A:H2'	24:DC:15:HIS:CE1	2.53	0.44
22:BA:587:C:C6	22:BA:671:C:H1'	2.53	0.44
2:AB:67:ILE:HG21	2:AB:69:PHE:CE1	2.52	0.44
22:DA:1287:A:H2'	22:DA:1288:G:H5'	2.00	0.44
6:AF:79:ARG:O	6:AF:80:PHE:C	2.56	0.44
27:DF:106:ILE:C	27:DF:109:PRO:HD2	2.38	0.44
4:CD:38:PRO:HD2	4:CD:42:GLY:HA3	2.00	0.44
1:AA:22:G:C6	1:AA:23:C:C4	3.06	0.44
1:CA:695:A:OP2	11:CK:54:GLY:HA2	2.17	0.44
1:AA:1211:U:H1'	1:AA:1213:A:C2	2.52	0.44
13:CM:11:ASP:HA	13:CM:45:ILE:HB	2.00	0.44
22:BA:983:A:N6	22:BA:984:A:N1	2.66	0.44
25:DD:33:ARG:HB3	25:DD:95:SER:OG	2.17	0.44
30:BI:112:THR:O	30:BI:113:LYS:C	2.56	0.44
22:DA:2511:U:C4	22:DA:2512:C:C5	3.06	0.44
21:CU:14:VAL:HG12	21:CU:16:LEU:HD23	1.99	0.44
22:DA:196:A:C2'	22:DA:805:G:O6	2.66	0.44
1:AA:587:G:N2	1:AA:755:G:C4	2.86	0.44
22:DA:233:A:C2	22:DA:234:U:H1'	2.53	0.44
21:CU:26:ALA:HB1	21:CU:30:ALA:HB2	2.00	0.44
26:DE:49:ARG:O	26:DE:74:LYS:HD2	2.18	0.44
22:DA:1319:C:C2'	22:DA:1320:C:H5'	2.48	0.44
1:CA:158:G:C5	1:CA:159:G:N7	2.86	0.44
36:DO:90:VAL:HG23	36:DO:117:PHE:HB3	1.99	0.44
20:CT:79:LEU:O	20:CT:83:ILE:HG23	2.18	0.44
20:CT:47:ALA:HB1	20:CT:83:ILE:HG22	1.99	0.44
22:BA:1566:A:O4'	24:BC:213:TRP:CD1	2.70	0.44
1:CA:1375:A:C5	1:CA:1376:U:C5	3.06	0.44
22:BA:2344:U:H4'	22:BA:2345:G:OP1	2.17	0.44
22:BA:1968:G:O2'	22:BA:1969:A:O4'	2.29	0.44
41:DT:73:ARG:HA	41:DT:73:ARG:CZ	2.48	0.44
2:CB:222:ARG:CZ	2:CB:223:GLU:HB2	2.48	0.44
1:AA:665:A:N1	1:AA:732:C:C4	2.86	0.44
14:AN:16:LEU:HD12	14:AN:54:ASP:HB2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:97:GLN:N	34:BM:97:GLN:CD	2.71	0.44
1:AA:174:A:C2'	1:AA:175:C:H5'	2.48	0.44
22:BA:1789:A:OP2	24:BC:221:ARG:NH1	2.51	0.44
1:CA:983:A:N3	1:CA:983:A:C2'	2.81	0.44
22:DA:2729:G:O2'	25:DD:191:GLY:HA3	2.17	0.44
24:DC:148:PRO:CD	24:DC:185:GLU:OE2	2.66	0.44
22:DA:2813:A:H2'	22:DA:2814:A:C8	2.52	0.44
6:CF:42:TRP:CZ2	6:CF:61:LEU:HB2	2.52	0.44
22:BA:39:G:H2'	22:BA:40:U:C6	2.53	0.44
1:CA:770:C:O2'	1:CA:771:G:H5'	2.18	0.44
39:DR:12:HIS:CE1	39:DR:22:LEU:HD22	2.53	0.44
34:DM:136:MET:O	43:DV:79:ARG:NH2	2.51	0.44
5:AE:19:ASN:O	5:AE:33:PHE:HA	2.17	0.44
10:CJ:37:ARG:O	10:CJ:38:GLY:O	2.36	0.44
48:B0:43:ILE:HG22	48:B0:49:TYR:HB2	2.00	0.44
1:CA:126:G:C2'	1:CA:127:G:O5'	2.66	0.44
24:DC:163:GLN:HB3	24:DC:175:ARG:HB3	1.99	0.44
22:BA:2070:A:H2'	22:BA:2071:A:O4'	2.17	0.44
30:DI:81:LYS:HE3	30:DI:81:LYS:HB2	1.90	0.44
39:DR:69:GLY:O	39:DR:70:GLU:C	2.56	0.44
26:DE:153:LEU:HB2	26:DE:171:ASP:HB2	2.00	0.44
43:DV:38:LEU:HB3	43:DV:40:ILE:HD11	2.00	0.44
20:AT:15:GLU:OE2	20:AT:18:ARG:NE	2.49	0.44
22:BA:2756:U:H1'	22:BA:2757:A:H5''	2.00	0.43
12:AL:44:LYS:HB2	12:AL:44:LYS:NZ	2.32	0.43
22:BA:1915:U:H2'	22:BA:1916:A:H8	1.79	0.43
22:DA:1154:G:OP1	38:DQ:58:ARG:HD3	2.18	0.43
22:DA:1651:G:N2	22:DA:1652:A:H1'	2.33	0.43
35:DN:1:MET:HE3	35:DN:1:MET:N	2.31	0.43
22:DA:2134:A:N3	22:DA:2159:G:H1'	2.33	0.43
41:DT:40:LYS:NZ	41:DT:58:VAL:O	2.46	0.43
49:D1:17:THR:HG21	49:D1:42:VAL:HB	1.99	0.43
1:AA:1182:G:H4'	1:AA:1183:U:H5'	1.99	0.43
1:AA:119:A:C4	1:AA:240:G:N7	2.86	0.43
41:BT:67:VAL:HG22	41:BT:76:ARG:HG3	2.00	0.43
22:DA:2342:C:H2'	22:DA:2343:U:O4'	2.18	0.43
1:AA:104:G:N1	1:AA:105:G:N7	2.66	0.43
1:CA:1133:G:O6	1:CA:1141:C:N4	2.50	0.43
22:DA:27:G:HO2'	22:DA:28:A:P	2.37	0.43
39:DR:39:LEU:O	39:DR:49:ILE:HG12	2.18	0.43
30:BI:39:CYS:N	30:BI:42:PHE:HB3	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1071:G:P	22:BA:1071:G:H8	2.41	0.43
26:BE:196:VAL:HG13	26:BE:200:LEU:CD2	2.46	0.43
27:BF:170:LEU:O	27:BF:173:PHE:HB2	2.18	0.43
6:CF:14:GLN:O	6:CF:16:GLU:N	2.51	0.43
8:AH:93:PRO:HG3	8:AH:125:ILE:HD13	1.98	0.43
40:BS:59:GLU:HA	40:BS:64:ALA:HA	2.00	0.43
16:AP:79:ASN:O	16:AP:80:LYS:HE3	2.18	0.43
2:AB:148:LEU:HA	2:AB:151:ILE:CG2	2.48	0.43
1:AA:954:G:C6	1:AA:955:U:N3	2.85	0.43
8:AH:50:LYS:O	8:AH:60:GLU:N	2.50	0.43
22:DA:1831:G:C5	22:DA:1832:C:C4	3.06	0.43
22:DA:72:U:C6	46:DY:54:LYS:HD3	2.53	0.43
6:CF:59:TYR:HE2	18:CR:67:LEU:CD2	2.31	0.43
1:CA:1300:G:O6	1:CA:1334:G:H3'	2.18	0.43
22:BA:1005:C:C5	22:BA:1143:A:C4	3.05	0.43
22:BA:1429:G:H2'	22:BA:1430:G:O5'	2.18	0.43
1:AA:438:U:C2	1:AA:494:G:N1	2.86	0.43
27:BF:80:ARG:O	27:BF:83:TYR:HB2	2.18	0.43
22:DA:1553:A:C5	22:DA:1555:G:C5	3.06	0.43
22:BA:1879:C:N4	22:BA:1880:U:C4	2.86	0.43
22:BA:447:A:C5	22:BA:473:G:C5	3.06	0.43
2:AB:132:LYS:CG	2:AB:133:GLU:N	2.81	0.43
32:BK:92:GLU:HG3	32:BK:111:LYS:NZ	2.33	0.43
49:B1:34:LEU:HB3	49:B1:52:ALA:HB2	2.00	0.43
1:CA:446:G:N3	1:CA:446:G:H2'	2.33	0.43
49:B1:6:ARG:HD3	49:B1:24:THR:OG1	2.18	0.43
22:BA:259:G:O2'	22:BA:260:G:H5'	2.18	0.43
53:B5:68:GLY:O	53:B5:69:LEU:HB2	2.17	0.43
3:AC:23:PHE:CD1	3:AC:24:ALA:N	2.86	0.43
22:DA:1981:A:H5''	22:DA:1982:U:OP2	2.17	0.43
38:BQ:105:ALA:O	38:BQ:108:ALA:HB3	2.18	0.43
1:AA:1202:U:C2	1:AA:1203:C:C6	3.06	0.43
22:BA:657:U:H2'	22:BA:658:U:C6	2.53	0.43
22:BA:2:G:H2'	22:BA:3:U:H6	1.82	0.43
22:BA:2400:G:H2'	22:BA:2401:U:O4'	2.18	0.43
22:BA:1016:G:C6	22:BA:1017:G:N7	2.85	0.43
1:AA:306:A:H2'	1:AA:307:C:O4'	2.18	0.43
18:CR:51:TYR:O	18:CR:53:ARG:N	2.51	0.43
22:BA:60:G:C8	22:BA:62:U:C6	3.06	0.43
1:CA:657:U:O2	15:CO:22:THR:HG23	2.18	0.43
40:DS:39:THR:CG2	40:DS:44:ALA:HB2	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:930:C:C4	1:CA:931:C:C5	3.05	0.43
40:DS:46:LEU:O	40:DS:50:VAL:HG23	2.18	0.43
22:DA:2473:U:O2	22:DA:2473:U:H2'	2.18	0.43
2:CB:181:ILE:HD13	2:CB:181:ILE:N	2.33	0.43
40:DS:61:ASN:O	40:DS:62:ASP:CB	2.65	0.43
35:DN:29:VAL:HG13	35:DN:83:LEU:CD1	2.48	0.43
53:B5:44:VAL:HG23	53:B5:179:ALA:HB2	2.00	0.43
1:AA:944:G:O2'	1:AA:1339:A:N6	2.51	0.43
1:CA:1144:G:N2	1:CA:1145:A:C2	2.86	0.43
22:DA:2840:C:H5''	35:DN:53:THR:CG2	2.48	0.43
1:CA:1160:G:O6	1:CA:1181:G:C6	2.71	0.43
1:CA:66:A:C4'	1:CA:173:U:C4	3.01	0.43
1:AA:1160:G:C2	1:AA:1161:C:C6	3.06	0.43
22:DA:35:G:H1'	22:DA:454:A:C4	2.53	0.43
20:AT:25:ARG:O	20:AT:29:ARG:CG	2.66	0.43
22:DA:1993:U:C2	22:DA:1994:C:C6	3.06	0.43
50:B2:44:VAL:HG13	50:B2:44:VAL:O	2.17	0.43
22:BA:1413:A:O2'	22:BA:1414:C:H5'	2.18	0.43
22:BA:1846:G:O3'	22:BA:1847:A:O4'	2.36	0.43
22:BA:142:A:C6	22:BA:143:C:N3	2.86	0.43
6:AF:38:ARG:NH1	6:AF:99:ALA:HB3	2.33	0.43
24:DC:145:GLU:HG2	24:DC:152:GLY:N	2.34	0.43
22:DA:2658:C:H5''	28:DG:158:LYS:CD	2.47	0.43
1:AA:989:U:H2'	1:AA:990:C:O5'	2.19	0.43
16:AP:61:VAL:HG22	16:AP:67:ILE:HD11	2.00	0.43
15:CO:29:VAL:HG13	15:CO:63:ARG:HG3	2.01	0.43
22:DA:1087:G:C2	22:DA:1089:A:C2	3.06	0.43
32:BK:28:SER:O	32:BK:29:HIS:HB2	2.17	0.43
24:DC:9:THR:O	24:DC:10:SER:HB3	2.17	0.43
3:AC:42:TYR:OH	3:AC:90:VAL:HG21	2.18	0.43
22:BA:2824:C:C4	22:BA:2825:G:C5	3.05	0.43
29:DH:127:GLU:CG	29:DH:144:VAL:O	2.65	0.43
1:CA:1532:U:N3	1:CA:1533:C:C5	2.86	0.43
22:DA:373:U:C2	22:DA:374:A:C8	3.07	0.43
22:BA:181:A:H1'	22:BA:435:C:O4'	2.17	0.43
17:AQ:5:ILE:O	17:AQ:6:ARG:CB	2.65	0.43
24:BC:91:ILE:HD12	24:BC:103:TYR:CD1	2.53	0.43
1:AA:1431:A:C6	1:AA:1432:G:C6	3.06	0.43
1:CA:194:C:O2'	1:CA:195:A:H5'	2.17	0.43
43:DV:63:ILE:HG13	43:DV:72:VAL:HG22	2.00	0.43
6:CF:42:TRP:CD1	6:CF:42:TRP:N	2.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DV:38:LEU:HD23	43:DV:40:ILE:CD1	2.47	0.43
33:DL:114:GLY:O	33:DL:115:GLU:C	2.56	0.43
2:AB:182:PRO:O	2:AB:197:ASP:OD1	2.36	0.43
32:BK:68:GLY:HA3	32:BK:77:ILE:O	2.19	0.43
49:B1:11:LEU:HD23	49:B1:11:LEU:N	2.33	0.43
49:B1:12:VAL:HG12	49:B1:13:SER:N	2.33	0.43
7:CG:69:VAL:HG21	7:CG:104:ILE:HD11	1.99	0.43
34:DM:34:LYS:NZ	43:DV:81:PRO:O	2.33	0.43
5:AE:25:VAL:O	5:AE:26:LYS:C	2.56	0.43
1:CA:121:U:H3'	1:CA:122:G:H5'	2.00	0.43
40:BS:46:LEU:O	40:BS:50:VAL:HG23	2.18	0.43
1:AA:685:G:N1	1:AA:686:U:O4	2.51	0.43
46:BY:14:LEU:HA	46:BY:17:GLU:HB3	2.00	0.43
31:BJ:84:ILE:O	31:BJ:84:ILE:HG23	2.18	0.43
51:B3:4:ILE:HG22	51:B3:5:LYS:N	2.32	0.43
1:CA:1053:G:O5'	1:CA:1054:C:H3'	2.18	0.43
3:CC:79:LYS:O	3:CC:81:GLY:N	2.51	0.43
22:DA:2223:G:H2'	22:DA:2224:G:H5'	2.00	0.43
29:BH:96:THR:O	29:BH:100:ALA:N	2.50	0.43
29:BH:80:ILE:HG21	29:BH:94:ILE:HG13	2.00	0.43
22:BA:830:G:C4	22:BA:2448:A:C5	3.07	0.43
2:CB:174:LYS:HG2	2:CB:175:GLU:N	2.31	0.43
1:AA:478:A:H2'	1:AA:479:U:C5'	2.49	0.43
1:CA:1318:A:O2'	19:CS:37:ARG:HD3	2.17	0.43
22:DA:1651:G:N2	22:DA:2007:U:C2	2.87	0.43
22:DA:1352:U:H5	58:DA:3395:HOH:O	1.99	0.43
1:AA:64:G:N2	1:AA:67:C:C4	2.86	0.43
10:CJ:74:VAL:HG12	10:CJ:75:ASP:N	2.32	0.43
12:CL:58:THR:CG2	12:CL:59:ASN:N	2.81	0.43
22:DA:2747:G:O6	22:DA:2755:C:H5''	2.18	0.43
14:CN:93:ILE:HG21	14:CN:96:LEU:HD22	1.99	0.43
1:AA:75:G:C6	1:AA:96:U:O4	2.70	0.43
22:DA:46:G:H2'	22:DA:47:C:O5'	2.19	0.43
22:DA:2095:A:H2'	22:DA:2095:A:N3	2.33	0.43
22:DA:2199:A:C6	22:DA:2200:C:N3	2.85	0.43
9:AI:30:ILE:HA	9:AI:65:ILE:O	2.18	0.43
22:DA:513:A:C2	22:DA:514:A:C8	3.07	0.43
7:AG:23:LEU:O	7:AG:27:VAL:HG22	2.19	0.43
7:AG:17:LYS:HD2	7:AG:44:TYR:CD1	2.53	0.43
22:BA:2659:G:OP2	28:BG:158:LYS:NZ	2.50	0.43
53:B5:50:ILE:CG2	53:B5:51:ASP:H	2.30	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:56:LEU:O	15:CO:57:LEU:C	2.55	0.43
1:AA:781:A:H5'	1:AA:782:A:OP2	2.18	0.43
22:BA:2190:G:C6	22:BA:2191:A:C5	3.07	0.43
30:DI:8:TYR:CD1	30:DI:8:TYR:O	2.72	0.43
22:DA:2262:U:OP2	44:DW:16:SER:HB2	2.16	0.43
22:DA:867:C:C5	22:DA:868:U:C5	3.06	0.43
29:BH:27:ARG:O	29:BH:28:ASN:CB	2.66	0.43
14:AN:51:LEU:CB	14:AN:52:PRO:HD2	2.47	0.43
1:CA:1077:G:N1	1:CA:1081:A:C6	2.87	0.43
22:DA:1998:A:H4'	22:DA:2724:U:O2'	2.19	0.43
37:BP:113:ARG:O	37:BP:114:LEU:O	2.36	0.43
17:CQ:50:ASN:O	17:CQ:51:ASN:C	2.56	0.43
21:CU:53:VAL:HG22	21:CU:54:LYS:H	1.82	0.43
1:AA:11:G:C5	1:AA:12:U:C4	3.07	0.43
51:D3:31:HIS:CE1	51:D3:32:ILE:CD1	3.01	0.43
22:DA:658:U:C2	22:DA:659:G:C8	3.07	0.43
22:DA:657:U:O2'	22:DA:658:U:H5'	2.19	0.43
29:BH:1:MET:HE3	29:BH:23:ALA:HA	2.00	0.43
22:DA:2864:G:H2'	22:DA:2865:U:O4'	2.18	0.43
33:BL:129:LYS:O	33:BL:130:GLY:C	2.57	0.43
22:DA:936:A:H2'	22:DA:937:C:C6	2.53	0.43
1:AA:601:G:H2'	1:AA:602:A:C8	2.52	0.43
22:DA:1797:G:N2	22:DA:1823:G:C4	2.86	0.43
29:BH:9:VAL:O	29:BH:10:ALA:O	2.36	0.43
32:BK:79:PHE:CD1	37:BP:70:VAL:HG22	2.53	0.43
22:DA:1691:C:N4	22:DA:1692:U:O4	2.52	0.43
2:AB:31:ILE:HD13	2:AB:39:HIS:CD2	2.53	0.43
46:DY:28:LEU:CD2	46:DY:37:LEU:HD11	2.48	0.43
1:CA:1029:U:O2	1:CA:1031:C:O2	2.36	0.43
28:DG:94:TYR:HA	28:DG:106:SER:O	2.18	0.43
49:B1:35:GLU:CG	49:B1:50:LYS:HG3	2.48	0.43
30:DI:127:ARG:HA	30:DI:130:GLU:HB2	1.99	0.43
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.52	0.43
1:AA:29:U:H5'	1:AA:296:U:OP1	2.18	0.43
23:DB:13:G:H1	23:DB:69:G:HO2'	1.59	0.43
1:AA:1048:G:O6	1:AA:1209:C:N4	2.50	0.43
22:DA:2436:G:C2	22:DA:2437:G:C8	3.07	0.43
23:DB:46:A:C5	23:DB:47:C:C5	3.06	0.43
22:DA:786:C:H4'	22:DA:1780:A:N7	2.33	0.43
22:BA:2045:C:O3'	48:B0:15:MET:HB3	2.19	0.43
22:DA:1751:U:H2'	22:DA:1752:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1505:A:H2'	22:BA:1506:U:O4'	2.18	0.43
42:BU:7:ARG:O	42:BU:8:ASP:O	2.36	0.43
22:DA:682:G:N3	22:DA:682:G:H2'	2.33	0.43
33:DL:76:GLU:O	33:DL:76:GLU:HG3	2.17	0.43
1:AA:1347:G:HO2'	1:AA:1348:U:P	2.40	0.43
1:CA:963:G:O2'	1:CA:964:A:H5'	2.18	0.43
22:BA:1239:G:H2'	22:BA:1240:U:O4'	2.17	0.43
25:DD:176:ASP:HB2	25:DD:190:LYS:HB3	2.01	0.43
36:BO:51:ALA:O	36:BO:74:VAL:HG13	2.19	0.43
29:BH:76:GLU:HA	29:BH:142:VAL:HG12	2.00	0.43
22:DA:2781:A:H5''	22:DA:2782:G:O5'	2.17	0.43
1:CA:1104:G:C6	1:CA:1105:A:C5	3.06	0.43
22:BA:1059:G:C6	22:BA:1080:A:C2	3.07	0.43
22:BA:1097:U:H3'	22:BA:1098:A:H4'	1.99	0.43
22:BA:1021:A:N6	22:BA:1142:A:H61	2.16	0.43
22:BA:1001:A:H2'	22:BA:1002:G:O4'	2.18	0.43
1:CA:1124:G:N2	1:CA:1127:G:N2	2.65	0.43
12:CL:59:ASN:HD22	12:CL:59:ASN:N	2.16	0.43
23:DB:29:A:C2	23:DB:56:G:C2	3.05	0.43
22:BA:480:A:H2'	22:BA:481:G:OP1	2.18	0.43
22:BA:533:G:H5'	38:BQ:24:TYR:CD1	2.54	0.43
22:DA:2838:G:C6	22:DA:2839:G:C6	3.07	0.43
20:AT:68:HIS:C	20:AT:69:LYS:HG3	2.37	0.43
6:CF:35:LYS:HG3	6:CF:37:HIS:NE2	2.33	0.43
22:BA:1057:A:N6	22:BA:1087:G:OP2	2.51	0.43
22:DA:1730:C:O2'	22:DA:1731:G:C2	2.72	0.43
1:AA:1278:G:H4'	1:AA:1279:G:C8	2.53	0.43
1:CA:1138:G:N2	1:CA:1140:C:N4	2.66	0.43
22:BA:2375:G:N2	22:BA:2378:A:OP2	2.46	0.43
22:DA:909:A:C6	22:DA:912:C:C2	3.06	0.43
22:DA:1034:G:C6	22:DA:1035:U:C4	3.06	0.43
22:DA:149:A:H2'	22:DA:150:U:O4'	2.18	0.43
17:CQ:49:GLU:C	17:CQ:50:ASN:CG	2.76	0.43
42:BU:39:ILE:O	42:BU:41:LEU:N	2.51	0.43
1:CA:456:A:C6	1:CA:457:G:C5	3.06	0.43
31:DJ:31:GLU:HG3	31:DJ:142:ILE:HD11	2.00	0.43
22:DA:533:G:H5'	38:DQ:24:TYR:CD1	2.53	0.43
1:CA:898:G:C6	1:CA:902:G:O6	2.71	0.43
22:DA:303:G:C2	22:DA:304:U:C2	3.07	0.43
2:AB:41:ILE:HG12	2:AB:42:ASN:N	2.34	0.43
19:AS:3:ARG:O	19:AS:4:SER:CB	2.64	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:706:A:C1'	11:CK:31:ILE:HD11	2.48	0.43
22:BA:1014:A:C5	22:BA:1015:U:C4	3.06	0.43
38:DQ:79:PHE:CZ	38:DQ:83:LEU:HD11	2.53	0.43
1:AA:1042:A:H2'	1:AA:1043:G:C1'	2.49	0.43
22:BA:77:G:H2'	22:BA:78:U:O4'	2.18	0.43
22:BA:12:U:C2'	22:BA:12:U:O2	2.61	0.43
34:DM:107:GLY:C	34:DM:108:VAL:HG22	2.38	0.43
22:BA:1197:G:H2'	22:BA:1198:U:H6	1.82	0.43
22:BA:877:A:C6	22:BA:899:A:C6	3.06	0.43
1:CA:165:G:C2	1:CA:166:U:C2	3.06	0.43
33:BL:20:GLY:CA	33:BL:28:GLY:HA2	2.48	0.43
22:BA:196:A:C4	22:BA:805:G:O6	2.72	0.43
1:CA:1347:G:O2'	1:CA:1348:U:P	2.75	0.43
1:CA:1422:G:H5'	32:DK:48:PRO:HG3	1.99	0.43
1:AA:133:U:H1'	1:AA:230:G:N2	2.33	0.43
22:DA:228:C:H5''	22:DA:229:C:C6	2.53	0.43
22:BA:2243:U:H2'	22:BA:2244:U:C6	2.53	0.43
9:AI:6:TYR:HB3	9:AI:89:GLU:HB3	2.00	0.43
22:DA:21:A:N1	22:DA:520:G:C5	2.87	0.43
31:BJ:12:LYS:HE2	31:BJ:14:ASP:OD1	2.19	0.43
1:AA:459:A:H2'	1:AA:460:A:C8	2.53	0.43
1:AA:1248:A:C2	9:AI:72:ILE:HD11	2.54	0.43
17:AQ:46:VAL:HG11	17:AQ:61:ILE:HG12	2.00	0.43
1:AA:130:A:N7	17:AQ:65:ARG:HB2	2.32	0.43
17:AQ:65:ARG:HB2	17:AQ:66:PRO:HD2	2.00	0.43
22:BA:810:U:C2	33:BL:29:LYS:O	2.71	0.43
22:DA:2539:C:H4'	52:D4:3:VAL:HG11	2.00	0.43
45:DX:69:ALA:O	45:DX:72:ARG:HB3	2.18	0.43
33:BL:35:HIS:O	33:BL:36:LYS:HB2	2.17	0.43
22:DA:1821:A:C5	22:DA:1822:C:C5	3.06	0.43
27:BF:14:LYS:O	27:BF:18:THR:HG23	2.17	0.43
22:DA:1478:G:O2'	22:DA:1479:G:H5'	2.18	0.43
45:DX:47:VAL:HG12	45:DX:47:VAL:O	2.19	0.43
19:AS:10:PHE:CD1	19:AS:11:ILE:N	2.87	0.43
1:AA:1171:A:C2	1:AA:1172:C:C2	3.06	0.43
29:BH:103:VAL:O	29:BH:108:VAL:O	2.37	0.43
22:DA:2711:A:N6	22:DA:2714:G:C5	2.86	0.43
22:BA:1059:G:H3'	22:BA:1060:U:H2'	2.00	0.43
22:DA:58:G:N2	22:DA:59:U:H1'	2.33	0.43
22:BA:1178:C:O3'	22:BA:1179:G:C8	2.71	0.43
22:BA:1169:A:C2	22:BA:1181:U:O2	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1145:A:HO2'	1:AA:1146:A:C5'	2.27	0.43
9:AI:84:THR:HG21	9:AI:103:PHE:HB3	2.01	0.43
1:AA:826:C:H5'	8:AH:13:ARG:CZ	2.48	0.43
1:AA:872:A:C4	1:AA:874:G:C8	3.06	0.43
22:DA:187:G:N1	22:DA:210:C:N3	2.66	0.43
22:DA:56:A:C2	22:DA:57:C:C2	3.07	0.43
22:DA:2093:G:N2	22:DA:2094:A:C4	2.86	0.43
37:DP:91:ALA:HB2	37:DP:113:ARG:HG3	1.98	0.43
37:DP:113:ARG:O	37:DP:114:LEU:HD23	2.19	0.43
16:AP:42:ILE:O	16:AP:43:ALA:C	2.57	0.43
32:DK:28:SER:O	32:DK:29:HIS:HB2	2.18	0.43
20:AT:67:ILE:CG1	20:AT:71:LYS:HG2	2.49	0.43
22:DA:2283:C:C4	22:DA:2389:G:C4	3.06	0.43
27:BF:79:ILE:HG21	27:BF:85:ILE:HD12	1.99	0.43
22:DA:1857:G:C2	22:DA:1884:G:C4	3.07	0.43
15:AO:20:ASN:O	15:AO:22:THR:N	2.52	0.43
1:AA:554:A:H2'	1:AA:555:U:C6	2.53	0.43
18:AR:25:ASP:O	18:AR:26:ILE:C	2.57	0.43
31:DJ:64:VAL:HG23	31:DJ:65:THR:N	2.34	0.43
9:CI:120:LYS:HG3	9:CI:120:LYS:O	2.18	0.43
4:AD:168:PRO:HG2	4:AD:171:LEU:HD11	2.01	0.43
22:BA:1847:A:H2'	22:BA:1848:A:C8	2.53	0.43
22:BA:142:A:C8	22:BA:142:A:OP2	2.71	0.43
1:CA:464:U:C2	1:CA:466:A:OP2	2.71	0.43
2:AB:70:VAL:HG21	2:AB:96:TRP:CD1	2.53	0.43
38:DQ:110:VAL:CG1	38:DQ:114:LYS:HD2	2.49	0.43
21:CU:10:GLU:HB2	21:CU:11:PRO:HD3	1.99	0.43
16:AP:36:VAL:O	16:AP:36:VAL:CG1	2.67	0.43
40:BS:51:LEU:O	40:BS:55:ILE:HD12	2.18	0.43
10:CJ:25:ILE:O	10:CJ:25:ILE:HG23	2.18	0.43
36:BO:37:ALA:HB3	36:BO:78:VAL:HG11	2.00	0.43
22:DA:1953:A:H1'	22:DA:2560:A:O4'	2.18	0.43
3:CC:42:TYR:CE1	3:CC:46:GLU:CG	3.02	0.43
35:DN:72:ASP:CG	35:DN:75:ILE:HG12	2.39	0.43
40:DS:29:VAL:HG21	40:DS:107:VAL:CG2	2.49	0.43
22:DA:2474:U:H2'	22:DA:2474:U:O2	2.17	0.43
1:AA:1462:C:C4	1:AA:1463:U:C4	3.06	0.43
2:AB:147:SER:OG	2:AB:147:SER:O	2.37	0.43
25:DD:111:GLY:HA3	25:DD:194:PRO:HB2	1.99	0.43
1:AA:992:U:C2	1:AA:1043:G:N7	2.87	0.43
22:DA:2110:G:H3'	22:DA:2118:U:O2'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2564:A:OP1	22:BA:2648:G:H4'	2.19	0.43
3:CC:141:ALA:O	3:CC:146:ALA:HB3	2.19	0.43
2:AB:71:GLY:HA2	2:AB:164:ILE:HG22	2.00	0.43
19:AS:42:PRO:C	19:AS:44:MET:H	2.21	0.43
22:DA:2235:G:N2	22:DA:2236:U:H1'	2.34	0.43
22:DA:186:G:C2	22:DA:211:C:O2	2.72	0.43
22:BA:1867:G:C2'	22:BA:1868:C:H5'	2.49	0.43
7:CG:30:LEU:HD11	7:CG:116:MET:HE2	2.01	0.43
22:BA:404:A:C8	22:BA:406:G:C6	3.07	0.43
1:CA:892:A:C6	1:CA:893:C:C4	3.06	0.43
22:DA:1383:A:O2'	22:DA:1384:A:O5'	2.29	0.43
26:BE:193:VAL:O	26:BE:197:GLU:HB2	2.18	0.43
32:DK:31:ARG:HB3	32:DK:32:TYR:CD1	2.53	0.43
27:DF:70:ALA:CB	27:DF:80:ARG:O	2.67	0.43
22:BA:1469:A:H2'	22:BA:1470:A:C8	2.52	0.43
1:CA:748:G:H2'	1:CA:749:A:H8	1.84	0.43
1:CA:280:C:N3	17:CQ:40:ARG:HA	2.33	0.43
1:CA:1397:C:O4'	1:CA:1397:C:O2	2.37	0.43
1:CA:862:C:C4	1:CA:863:U:C5	3.06	0.43
3:CC:29:PHE:O	3:CC:33:LEU:HB2	2.19	0.43
13:CM:39:ILE:HG13	13:CM:56:LEU:HD21	2.00	0.43
45:DX:69:ALA:O	45:DX:72:ARG:N	2.51	0.43
29:BH:41:LYS:HA	29:BH:44:ILE:HG12	2.01	0.43
13:CM:72:GLU:O	13:CM:76:SER:OG	2.36	0.43
53:B5:174:ALA:O	53:B5:175:PRO:CB	2.66	0.43
46:DY:45:GLN:O	46:DY:47:ARG:N	2.52	0.43
1:CA:721:G:H4'	1:CA:722:G:O5'	2.18	0.43
48:B0:48:TYR:CZ	48:B0:53:LYS:HD2	2.53	0.43
15:CO:82:ILE:HG13	15:CO:83:GLU:N	2.33	0.43
40:BS:1:MET:N	40:BS:109:ASP:OD1	2.52	0.43
1:CA:652:U:O2'	1:CA:653:U:OP2	2.30	0.43
22:BA:1206:G:C5	22:BA:1207:C:C5	3.06	0.43
45:BX:13:VAL:HG23	45:BX:29:PHE:HB2	2.00	0.43
22:BA:1686:C:C2'	22:BA:1687:G:H5'	2.48	0.43
40:DS:95:ARG:HG3	40:DS:95:ARG:O	2.19	0.43
47:DZ:3:LYS:CD	47:DZ:3:LYS:N	2.82	0.43
31:DJ:58:ASN:HA	31:DJ:126:ALA:O	2.17	0.43
31:DJ:58:ASN:OD1	31:DJ:127:GLY:O	2.36	0.43
40:DS:6:LYS:HA	40:DS:103:ILE:O	2.18	0.43
29:BH:94:ILE:CD1	29:BH:98:ASP:HB3	2.48	0.43
22:BA:2031:A:N1	22:BA:2498:C:H1'	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1406:U:C2'	1:AA:1407:C:H5'	2.49	0.43
1:AA:979:C:C6	1:AA:1318:A:N1	2.87	0.43
22:BA:1180:U:H2'	22:BA:1181:U:C5'	2.49	0.43
1:AA:71:A:N3	1:AA:72:A:C8	2.85	0.43
1:CA:1127:G:H5'	1:CA:1280:A:O2'	2.18	0.43
9:AI:50:GLN:CB	9:AI:51:PRO:CD	2.96	0.43
1:AA:1108:G:H2'	1:AA:1108:G:N3	2.34	0.43
35:DN:53:THR:HA	35:DN:56:LYS:HG3	2.01	0.43
22:DA:777:G:N7	22:DA:793:A:C2	2.82	0.43
11:AK:86:VAL:HG12	11:AK:93:ARG:NH1	2.34	0.43
22:DA:1365:A:H3'	22:DA:1366:A:C8	2.53	0.43
1:AA:1153:G:C4	1:AA:1154:G:C8	3.07	0.43
42:DU:72:ILE:HD12	42:DU:81:ASP:O	2.19	0.43
1:CA:407:U:H2'	1:CA:408:A:C8	2.54	0.43
22:DA:301:G:C2	22:DA:302:C:N3	2.87	0.43
24:DC:72:ASP:O	24:DC:74:ILE:N	2.44	0.43
46:BY:56:LEU:O	46:BY:56:LEU:HD12	2.18	0.43
22:DA:1288:G:C8	22:DA:1327:A:C6	3.06	0.43
22:BA:1992:G:H4'	22:BA:1993:U:OP1	2.19	0.43
22:DA:247:G:N7	22:DA:249:C:N1	2.66	0.43
1:AA:463:U:O2	1:AA:463:U:H2'	2.17	0.43
16:AP:78:VAL:HG13	16:AP:78:VAL:O	2.17	0.43
22:DA:2852:G:H2'	22:DA:2853:C:O4'	2.18	0.43
4:CD:12:SER:HA	4:CD:19:LEU:CD1	2.48	0.43
1:AA:624:C:H2'	1:AA:625:U:H6	1.84	0.43
22:DA:600:G:H5''	26:DE:27:LEU:HD22	2.01	0.43
24:BC:209:GLY:O	24:BC:210:ALA:C	2.55	0.43
25:BD:62:LYS:N	25:BD:63:PRO:CD	2.81	0.43
22:BA:1856:U:C4	22:BA:1857:G:C6	3.06	0.43
27:DF:4:LEU:HD11	27:DF:101:GLU:HB2	2.01	0.43
35:BN:36:THR:HG23	35:BN:37:THR:O	2.18	0.43
1:AA:142:G:O6	1:AA:143:A:C6	2.72	0.43
22:DA:2309:A:C6	22:DA:2310:C:N3	2.86	0.43
46:DY:46:VAL:HG12	46:DY:46:VAL:O	2.18	0.43
22:DA:2558:C:C2'	22:DA:2559:C:H5'	2.49	0.43
16:CP:38:PHE:CE2	16:CP:51:ARG:HD2	2.53	0.43
9:CI:19:VAL:HG22	9:CI:65:ILE:HG22	2.00	0.43
22:BA:1045:C:H3'	22:BA:1046:A:C5'	2.48	0.43
22:DA:545:U:H3'	22:DA:545:U:O2	2.19	0.43
1:CA:1067:A:H4'	1:CA:1068:G:O5'	2.18	0.43
2:CB:184:PHE:CE2	2:CB:198:PHE:CD2	3.05	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:29:ILE:HG21	6:AF:64:VAL:CG1	2.48	0.43
6:CF:39:LEU:HD12	6:CF:40:GLU:N	2.33	0.43
22:DA:419:U:N3	22:DA:420:C:C5	2.87	0.43
15:CO:58:ARG:O	15:CO:62:GLN:HB2	2.19	0.43
1:AA:43:C:H2'	1:AA:44:A:O4'	2.18	0.43
22:BA:1635:A:C6	22:BA:1636:U:C2	3.06	0.43
37:DP:23:GLY:O	37:DP:90:GLY:HA3	2.18	0.43
22:BA:2776:A:H4'	22:BA:2778:A:OP1	2.18	0.43
3:CC:47:LEU:HB3	3:CC:50:ALA:HB3	1.99	0.43
37:DP:79:PRO:O	37:DP:80:VAL:C	2.56	0.43
14:AN:3:LYS:O	14:AN:4:GLN:C	2.56	0.43
22:BA:2256:G:O2'	22:BA:2257:U:H5'	2.19	0.43
22:BA:1316:U:C2	22:BA:1337:G:N2	2.86	0.43
41:DT:69:ARG:NH1	41:DT:69:ARG:HB3	2.33	0.43
39:BR:29:THR:HG22	39:BR:29:THR:O	2.19	0.43
24:BC:161:TYR:CD1	24:BC:161:TYR:O	2.72	0.43
2:CB:23:TRP:O	2:CB:23:TRP:CD1	2.71	0.43
3:CC:28:GLU:OE1	3:CC:28:GLU:N	2.52	0.43
22:BA:515:A:C8	22:BA:516:C:C6	3.07	0.43
22:DA:2427:C:OP1	58:DA:3696:HOH:O	2.21	0.43
22:DA:2062:A:H2	56:DA:3001:VIF:H12	1.83	0.43
52:B4:19:ARG:HG3	52:B4:24:ARG:HD2	2.00	0.43
22:DA:622:G:OP2	58:DA:3292:HOH:O	2.21	0.43
1:CA:991:U:C4	1:CA:1212:U:O4'	2.72	0.43
1:AA:1144:G:N1	1:AA:1145:A:C2	2.87	0.43
22:DA:408:G:C6	22:DA:409:G:C5	3.07	0.43
9:AI:49:ARG:O	9:AI:50:GLN:C	2.57	0.43
1:AA:501:C:H2'	1:AA:502:A:H8	1.83	0.43
1:AA:261:U:C5	20:AT:74:ARG:NH1	2.87	0.43
5:CE:36:LEU:HD23	5:CE:133:PRO:HB2	2.01	0.43
5:CE:133:PRO:CA	5:CE:136:VAL:HG12	2.48	0.43
4:AD:147:GLU:O	4:AD:148:LYS:C	2.56	0.43
11:CK:22:HIS:CE1	11:CK:35:THR:HG21	2.54	0.43
1:CA:976:G:P	1:CA:1358:U:O2'	2.76	0.43
30:BI:122:ILE:HA	30:BI:125:MET:SD	2.59	0.43
22:DA:190:A:H2'	22:DA:191:A:O4'	2.19	0.43
1:AA:1059:C:C2	1:AA:1060:U:C6	3.07	0.43
1:AA:658:C:C1'	15:AO:22:THR:HG21	2.48	0.43
22:BA:2297:A:C2	22:BA:2298:A:C8	3.07	0.43
9:CI:119:ARG:O	9:CI:120:LYS:HB3	2.19	0.43
22:DA:1669:A:O4'	32:DK:5:GLN:HG3	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:154:ALA:O	5:CE:155:ALA:C	2.57	0.43
22:DA:533:G:C5'	38:DQ:24:TYR:CD1	3.01	0.43
22:BA:1850:G:C6	22:BA:1851:U:C4	3.06	0.43
22:DA:197:A:N6	22:DA:2430:A:H2'	2.32	0.43
40:BS:63:GLY:O	40:BS:64:ALA:CB	2.67	0.43
32:BK:107:LEU:C	32:BK:109:SER:H	2.22	0.43
1:AA:1269:A:N1	1:AA:1312:G:O2'	2.42	0.43
4:AD:34:ILE:O	4:AD:35:GLU:HB2	2.19	0.43
21:CU:14:VAL:HG12	21:CU:16:LEU:CD2	2.49	0.43
21:CU:14:VAL:HG12	21:CU:16:LEU:CG	2.47	0.43
1:CA:247:G:C6	1:CA:278:G:N1	2.86	0.43
25:DD:172:VAL:CG2	25:DD:194:PRO:HD3	2.49	0.43
22:BA:1082:U:H5'	30:BI:119:GLY:CA	2.48	0.43
38:DQ:48:ARG:NE	38:DQ:49:ASP:OD1	2.48	0.43
22:BA:2415:G:H2'	22:BA:2416:C:H6	1.83	0.43
42:DU:67:VAL:HA	42:DU:70:VAL:HG22	2.00	0.43
22:BA:2727:A:C2'	22:BA:2728:U:H5'	2.48	0.43
22:DA:1301:A:C6	22:DA:1303:G:C4	3.07	0.43
22:DA:1285:A:N6	22:DA:1329:U:C6	2.87	0.43
22:DA:1383:A:H2'	22:DA:1384:A:C8	2.53	0.43
9:CI:28:ILE:CB	9:CI:35:LEU:HB2	2.49	0.43
1:CA:183:C:O2'	1:CA:184:G:O5'	2.36	0.43
28:BG:176:LYS:O	28:BG:177:LYS:CB	2.66	0.43
22:BA:1042:G:C5	22:BA:1043:C:C5	3.06	0.43
22:BA:1875:G:C2'	22:BA:1876:A:OP2	2.67	0.43
30:DI:91:GLY:O	30:DI:93:PRO:HD3	2.19	0.43
22:BA:974:G:N9	22:BA:989:G:N2	2.67	0.43
3:AC:64:ILE:HG12	3:AC:66:VAL:HG23	1.99	0.43
1:AA:685:G:C2	1:AA:686:U:C4	3.06	0.43
22:DA:1401:G:C5	22:DA:1402:U:C4	3.06	0.43
1:AA:1089:G:C2'	1:AA:1090:U:H5'	2.49	0.43
1:CA:9:G:H5'	5:CE:108:GLY:HA3	2.01	0.43
43:BV:50:MET:HE2	43:BV:56:PHE:HE1	1.84	0.43
37:DP:21:ARG:HB3	37:DP:22:PRO:HD2	2.01	0.43
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.18	0.43
22:DA:254:G:OP2	51:D3:5:LYS:NZ	2.52	0.43
28:BG:64:GLN:NE2	58:BG:201:HOH:O	2.51	0.43
1:CA:28:A:H2'	1:CA:29:U:O4'	2.19	0.43
22:DA:2464:G:H2'	22:DA:2465:C:O4'	2.19	0.43
22:DA:1842:G:O4'	24:DC:243:HIS:NE2	2.51	0.43
28:DG:113:VAL:CG1	28:DG:114:ASP:N	2.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2850:A:OP2	22:DA:2866:U:N3	2.39	0.43
4:AD:4:TYR:CE2	4:AD:6:GLY:O	2.71	0.43
4:AD:62:ARG:HG3	4:AD:72:PHE:CD2	2.54	0.43
36:BO:33:ARG:CG	36:BO:33:ARG:O	2.67	0.43
24:BC:83:TYR:CD2	24:BC:83:TYR:C	2.91	0.43
22:DA:284:U:H2'	22:DA:284:U:O2	2.18	0.43
21:CU:47:ARG:HE	21:CU:47:ARG:HA	1.84	0.43
22:BA:591:U:O2	51:B3:2:PRO:HD2	2.19	0.43
26:DE:179:SER:HA	26:DE:182:ALA:HB3	2.00	0.43
1:AA:529:G:H4'	1:AA:533:A:C2	2.53	0.43
22:BA:1153:C:N4	22:BA:1154:G:N1	2.67	0.43
56:DA:3001:VIF:H6	56:DA:3001:VIF:H7	1.65	0.43
22:BA:1482:G:N2	22:BA:1483:G:C4	2.87	0.43
1:AA:1031:C:O2'	1:AA:1032:G:P	2.77	0.43
22:DA:2242:G:C6	22:DA:2243:U:C4	3.07	0.43
35:BN:70:THR:OG1	35:BN:71:ARG:N	2.52	0.43
22:DA:299:A:N7	22:DA:300:A:C6	2.87	0.43
12:CL:21:VAL:HG12	12:CL:95:TYR:CE1	2.52	0.43
1:AA:826:C:H5'	8:AH:13:ARG:NH1	2.34	0.43
1:AA:408:A:OP1	4:AD:110:THR:CG2	2.66	0.43
22:BA:2141:G:O6	22:BA:2142:A:C2	2.72	0.43
22:DA:54:G:C6	22:DA:55:G:N7	2.86	0.43
22:DA:1510:G:C6	22:DA:1511:G:C5	3.06	0.43
1:AA:1118:U:H2'	1:AA:1119:C:O4'	2.19	0.43
53:B5:50:ILE:HG22	53:B5:51:ASP:H	1.81	0.43
22:DA:142:A:H2'	22:DA:143:C:C6	2.53	0.43
5:AE:97:GLN:O	5:AE:123:VAL:HG12	2.19	0.43
1:CA:1269:A:C2	1:CA:1313:U:O4'	2.72	0.43
22:DA:1785:A:N1	22:DA:1787:A:H1'	2.34	0.43
12:AL:23:ALA:C	12:AL:24:LEU:O	2.57	0.43
22:BA:2297:A:N1	22:BA:2321:U:H5	2.16	0.43
14:AN:23:LYS:HG2	14:AN:24:ARG:N	2.34	0.43
1:AA:258:G:C5	1:AA:259:G:N7	2.86	0.43
2:CB:82:ASP:H	2:CB:85:LEU:HB3	1.83	0.43
22:DA:1036:G:C6	22:DA:1120:G:C5	3.07	0.43
19:CS:55:ARG:NE	19:CS:79:THR:HG22	2.34	0.43
2:AB:70:VAL:HG23	2:AB:92:VAL:HB	2.01	0.43
1:CA:476:U:C2'	1:CA:477:C:H5'	2.48	0.43
4:CD:145:ILE:HG21	4:CD:150:LYS:HA	2.00	0.43
1:AA:1141:C:HO2'	1:AA:1142:G:P	2.37	0.43
45:DX:32:ASN:ND2	45:DX:53:ALA:HB2	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1567:G:O2'	24:DC:63:ARG:NH1	2.51	0.43
43:DV:51:GLN:HA	43:DV:56:PHE:HB2	2.00	0.43
40:BS:59:GLU:HA	40:BS:64:ALA:CB	2.49	0.43
22:BA:2703:C:H2'	22:BA:2704:C:H6	1.82	0.43
12:AL:3:THR:HG22	12:AL:5:ASN:N	2.33	0.43
1:CA:805:C:H2'	1:CA:806:C:H6	1.84	0.43
1:CA:807:A:N7	1:CA:808:C:C4	2.87	0.43
22:DA:1544:A:C6	22:DA:1545:A:C6	3.06	0.43
41:DT:62:VAL:CG1	41:DT:63:VAL:N	2.82	0.43
3:CC:182:ILE:HD13	3:CC:203:PHE:HA	2.01	0.43
22:DA:1823:G:C8	58:DA:3653:HOH:O	2.57	0.43
5:CE:94:VAL:CG1	5:CE:111:MET:CE	2.97	0.43
1:AA:1044:A:C5	1:AA:1045:C:H1'	2.54	0.43
23:DB:42:C:C5	23:DB:43:C:C5	3.07	0.43
1:CA:76:G:C2	1:CA:95:C:N3	2.87	0.43
22:BA:1082:U:O4'	30:BI:118:THR:HB	2.19	0.43
1:CA:252:U:H5'	1:CA:253:A:OP2	2.19	0.43
19:CS:6:LYS:CB	19:CS:7:LYS:HE3	2.49	0.43
1:CA:1092:A:C6	1:CA:1183:U:O2	2.72	0.43
1:CA:116:A:C2	1:CA:117:G:H1'	2.54	0.43
20:CT:58:VAL:HG13	20:CT:72:ALA:HB1	2.01	0.43
26:DE:149:ILE:HG13	26:DE:188:MET:HE3	2.01	0.43
49:D1:21:TYR:CD2	49:D1:38:LYS:HD2	2.54	0.43
22:DA:1490:A:H2'	22:DA:1490:A:N3	2.34	0.43
22:BA:2526:G:O2'	52:B4:1:MET:N	2.27	0.43
2:CB:89:GLN:OE1	2:CB:221:VAL:HB	2.19	0.43
46:DY:31:GLN:CG	46:DY:36:GLN:HB2	2.48	0.43
16:AP:53:ASP:OD1	16:AP:55:ASP:OD2	2.36	0.43
22:BA:515:A:C8	22:BA:516:C:C5	3.07	0.43
42:BU:97:LYS:O	42:BU:98:SER:CB	2.66	0.43
30:BI:29:GLY:O	30:BI:30:GLN:HG3	2.19	0.43
22:DA:183:C:HO2'	22:DA:432:A:HO2'	1.63	0.43
39:BR:67:GLY:C	39:BR:93:PHE:CE1	2.91	0.43
22:DA:1447:C:H2'	22:DA:1448:G:C8	2.54	0.43
22:BA:395:U:O2'	22:BA:396:G:N7	2.42	0.43
28:DG:69:ARG:NH1	28:DG:73:ASN:HB2	2.34	0.43
3:CC:23:PHE:CD1	10:CJ:97:ASP:HB2	2.53	0.43
33:BL:62:PRO:CG	51:B3:25:LYS:HD3	2.48	0.43
22:DA:2677:G:C2	22:DA:2731:G:C2	3.06	0.43
22:BA:1593:A:H2'	22:BA:1594:U:O4'	2.19	0.43
3:AC:71:ALA:O	3:AC:72:ARG:HG2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2721:A:H2'	22:BA:2722:G:O4'	2.18	0.43
3:CC:61:ALA:O	3:CC:62:LYS:HB2	2.18	0.43
22:BA:420:C:O2'	22:BA:421:C:H5'	2.19	0.43
3:CC:111:LEU:HD21	3:CC:144:LEU:HB2	2.01	0.43
44:BW:52:GLY:HA3	44:BW:60:PHE:CE1	2.54	0.43
33:DL:106:GLU:O	33:DL:107:PHE:CD1	2.72	0.43
22:BA:1999:C:H2'	22:BA:2000:C:O4'	2.19	0.43
24:BC:260:ASN:O	24:BC:260:ASN:OD1	2.37	0.43
22:BA:760:G:H2'	22:BA:761:A:O4'	2.19	0.43
29:DH:82:SER:O	29:DH:83:LYS:C	2.57	0.43
20:CT:3:ASN:O	20:CT:4:ILE:C	2.57	0.43
21:AU:37:PHE:HA	21:AU:40:LYS:HE3	2.01	0.43
2:AB:74:ARG:O	2:AB:75:ALA:HB2	2.19	0.43
22:BA:1000:A:C4	22:BA:1155:A:C6	3.07	0.43
22:DA:1344:U:HO2'	22:DA:1345:C:P	2.38	0.43
41:DT:23:ALA:O	41:DT:27:SER:N	2.51	0.43
4:AD:95:GLU:OE2	4:AD:100:ASN:ND2	2.50	0.43
42:DU:25:VAL:HA	42:DU:36:VAL:HA	2.00	0.43
22:DA:846:U:O2'	22:DA:847:U:C5'	2.67	0.43
22:BA:2262:U:H4'	22:BA:2328:A:H2	1.84	0.43
24:DC:199:GLU:O	24:DC:200:HIS:C	2.57	0.43
22:DA:2386:A:H2'	22:DA:2387:U:C6	2.53	0.43
22:DA:2387:U:H1'	44:DW:41:ARG:NE	2.34	0.43
42:DU:4:LYS:HG2	42:DU:85:PHE:CE2	2.53	0.43
22:DA:352:A:C6	22:DA:353:C:N3	2.86	0.43
11:AK:38:GLN:O	11:AK:39:GLY:C	2.56	0.43
1:CA:207:C:H5''	1:CA:208:U:OP2	2.18	0.43
22:DA:2681:C:C2	22:DA:2724:U:O4	2.72	0.43
2:CB:144:LEU:HD23	2:CB:144:LEU:N	2.34	0.43
16:AP:38:PHE:CE2	16:AP:51:ARG:HB2	2.53	0.43
49:D1:9:ILE:HG13	49:D1:10:LYS:N	2.33	0.43
27:DF:104:ILE:O	27:DF:109:PRO:HD3	2.18	0.43
10:CJ:52:LEU:CD2	10:CJ:59:LYS:HA	2.49	0.43
1:AA:464:U:C2	1:AA:466:A:H5''	2.53	0.43
22:DA:192:C:C4	22:DA:193:U:C2	3.06	0.43
1:AA:1442:G:H2'	1:AA:1443:C:H6	1.81	0.43
1:CA:228:A:H4'	16:CP:63:GLN:HG2	2.01	0.43
41:DT:61:LEU:C	41:DT:61:LEU:HD12	2.39	0.43
22:BA:1672:A:C6	22:BA:1673:G:C6	3.07	0.43
5:CE:83:HIS:NE2	8:CH:96:MET:HE3	2.34	0.43
22:DA:218:A:C2	22:DA:219:A:C4	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1513:A:H2'	1:AA:1514:G:C8	2.54	0.43
1:CA:158:G:C4	1:CA:159:G:C8	3.07	0.43
22:DA:1693:U:H4'	22:DA:1694:C:OP2	2.19	0.43
30:BI:61:VAL:HG12	30:BI:62:TYR:N	2.34	0.43
46:DY:24:GLU:HB3	46:DY:46:VAL:HG21	2.01	0.43
1:CA:436:C:O2	1:CA:436:C:H2'	2.18	0.43
28:BG:10:VAL:HG13	28:BG:10:VAL:O	2.19	0.43
22:DA:186:G:N1	22:DA:211:C:C2	2.87	0.43
22:BA:2710:C:P	58:BA:3553:HOH:O	2.76	0.43
45:DX:7:VAL:HG12	45:DX:8:THR:N	2.33	0.43
1:CA:68:G:C5	1:CA:69:G:HI'	2.53	0.43
15:AO:2:SER:O	15:AO:3:LEU:HB2	2.18	0.43
22:DA:2657:A:C4	22:DA:2665:A:C6	3.07	0.43
1:AA:1242:G:C5	1:AA:1243:C:C5	3.07	0.43
1:CA:1222:G:O6	58:CA:1864:HOH:O	2.21	0.43
19:AS:29:LYS:CB	19:AS:30:PRO:HD2	2.49	0.43
22:DA:2824:C:N4	22:DA:2825:G:N7	2.67	0.43
17:AQ:75:LEU:HD12	17:AQ:75:LEU:C	2.38	0.43
1:AA:1330:U:O4	1:AA:1331:G:C6	2.71	0.43
1:AA:659:U:H2'	1:AA:660:C:C6	2.54	0.43
46:DY:31:GLN:O	46:DY:32:ALA:C	2.57	0.43
23:BB:78:A:H2'	23:BB:79:G:O4'	2.19	0.43
22:DA:661:A:H2'	22:DA:662:G:O4'	2.19	0.43
28:DG:52:PHE:CE2	28:DG:69:ARG:HA	2.53	0.43
22:DA:974:G:HI'	22:DA:975:A:C8	2.54	0.43
22:BA:1050:A:C2	22:BA:2751:G:C5	3.07	0.43
22:BA:811:U:C2	22:BA:1251:C:C5	3.07	0.43
26:BE:137:LYS:NZ	26:BE:141:MET:SD	2.92	0.43
27:BF:121:SER:HB2	27:BF:128:TYR:CE1	2.54	0.43
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.18	0.43
37:BP:27:GLU:HA	37:BP:43:PHE:O	2.19	0.43
37:BP:26:VAL:HG23	37:BP:27:GLU:N	2.33	0.43
1:CA:107:G:H2'	1:CA:108:G:H5''	2.00	0.43
23:BB:2:G:C2	23:BB:119:A:C2	3.07	0.43
26:DE:152:GLU:O	26:DE:154:ASP:N	2.51	0.43
1:AA:1360:A:C8	14:AN:58:SER:HB3	2.54	0.43
2:AB:207:ILE:HD13	2:AB:207:ILE:N	2.33	0.43
22:DA:675:A:H4'	26:DE:62:GLN:OE1	2.19	0.43
22:BA:1528:A:H2'	22:BA:1529:G:O4'	2.19	0.43
22:DA:655:A:H4'	22:DA:656:G:H5'	2.01	0.43
22:DA:621:A:C6	22:DA:622:G:HI'	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1406:U:H2'	1:AA:1407:C:H5'	2.00	0.43
22:BA:1911:U:H2'	22:BA:1918:A:N1	2.34	0.43
1:CA:1317:C:O2'	14:CN:49:GLN:CG	2.67	0.43
39:BR:25:LEU:H	39:BR:94:THR:CG2	2.32	0.43
21:CU:36:GLU:CG	21:CU:37:PHE:H	2.31	0.43
4:CD:202:GLU:OE1	5:CE:105:ILE:CG2	2.67	0.43
5:CE:133:PRO:O	5:CE:137:VAL:CG1	2.67	0.43
1:CA:1296:C:H5''	1:CA:1297:G:OP2	2.18	0.43
42:DU:9:ASP:OD1	42:DU:9:ASP:C	2.57	0.43
22:DA:207:A:H2'	22:DA:208:C:O4'	2.18	0.43
22:BA:1384:A:H1'	22:BA:1405:U:H1'	1.99	0.43
10:AJ:53:ILE:HG12	14:AN:85:ARG:CZ	2.49	0.43
41:BT:88:LYS:O	41:BT:89:GLU:CB	2.67	0.43
17:AQ:12:VAL:HG11	17:AQ:55:ILE:HA	2.00	0.43
19:CS:55:ARG:NH2	19:CS:79:THR:HG22	2.34	0.43
22:BA:142:A:H2'	22:BA:143:C:O4'	2.19	0.43
40:BS:37:THR:CG2	40:BS:38:TYR:CE1	3.01	0.43
2:AB:70:VAL:O	2:AB:70:VAL:HG13	2.18	0.43
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.54	0.43
1:CA:793:U:HO2'	1:CA:1516:G:C1'	2.31	0.43
22:BA:359:G:C5	22:BA:360:U:C5	3.07	0.43
32:DK:118:LEU:O	32:DK:119:ALA:CB	2.63	0.43
13:CM:19:LEU:HG	13:CM:34:LEU:HD21	2.00	0.43
22:BA:1436:G:N2	22:BA:1557:C:C2	2.86	0.43
47:BZ:10:THR:HG22	47:BZ:54:MET:HA	2.01	0.43
27:BF:171:ALA:C	27:BF:173:PHE:N	2.72	0.43
22:DA:102:U:O4	46:DY:3:ALA:HB3	2.19	0.43
22:DA:2428:G:H5''	22:DA:2429:G:P	2.59	0.43
1:CA:15:G:O4'	5:CE:29:ARG:NH2	2.52	0.43
1:AA:202:G:O2'	1:AA:468:A:H2'	2.18	0.43
1:AA:469:C:C5	1:AA:470:C:C5	3.07	0.43
22:DA:981:A:H1'	22:DA:2037:A:O4'	2.18	0.43
26:DE:24:ASN:O	26:DE:28:VAL:HG23	2.18	0.43
29:DH:62:LEU:HD13	29:DH:63:ALA:N	2.34	0.43
9:AI:91:ASP:OD1	9:AI:93:SER:N	2.49	0.43
22:BA:1670:C:H3'	22:BA:1671:U:C6	2.53	0.43
1:AA:1260:G:OP1	1:AA:1284:C:O2'	2.35	0.43
1:CA:927:G:OP2	1:CA:927:G:H4'	2.18	0.43
22:BA:790:U:O2'	22:BA:791:C:P	2.77	0.43
19:AS:15:LEU:O	19:AS:19:VAL:HG23	2.18	0.43
1:CA:1537:U:C4	1:CA:1538:C:N4	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:560:C:O2	38:BQ:48:ARG:NH1	2.51	0.43
22:BA:1853:A:N6	22:BA:1889:A:C4	2.87	0.43
22:DA:1462:C:N3	22:DA:1463:C:C5	2.86	0.43
1:CA:301:G:H2'	1:CA:302:G:C8	2.54	0.43
2:CB:123:ASP:O	2:CB:124:GLY:C	2.58	0.43
26:DE:149:ILE:CG2	26:DE:188:MET:HG2	2.48	0.43
22:BA:1826:G:C5	22:BA:1827:U:C5	3.07	0.43
1:AA:10:A:OP2	5:AE:131:THR:OG1	2.37	0.43
30:BI:22:PRO:CB	30:BI:23:PRO:HD3	2.49	0.43
22:DA:170:U:N3	22:DA:171:U:C5	2.86	0.43
1:AA:1386:G:H2'	1:AA:1387:G:H8	1.83	0.43
27:BF:34:ILE:HD11	27:BF:96:MET:HG3	2.01	0.43
2:CB:23:TRP:O	2:CB:23:TRP:CG	2.72	0.43
22:DA:967:U:H2'	22:DA:968:C:C6	2.54	0.43
29:BH:45:GLU:HA	29:BH:48:GLU:HB2	2.01	0.43
13:CM:77:ILE:O	13:CM:81:MET:HG3	2.18	0.43
7:AG:133:THR:O	7:AG:136:LYS:HB3	2.19	0.43
22:BA:1964:G:H4'	22:BA:1965:C:OP2	2.18	0.43
22:BA:1192:G:O2'	22:BA:1193:G:H5'	2.18	0.43
43:BV:13:GLY:O	43:BV:17:SER:OG	2.33	0.43
1:CA:282:A:C8	1:CA:283:U:C5	3.07	0.43
28:BG:28:GLY:O	28:BG:29:LYS:C	2.57	0.43
48:D0:25:VAL:HG13	48:D0:26:THR:N	2.34	0.43
22:BA:2076:U:O4'	22:BA:2076:U:O2	2.37	0.43
13:CM:47:GLU:HG3	13:CM:47:GLU:O	2.18	0.43
22:BA:1067:A:N3	22:BA:1067:A:H2'	2.33	0.43
49:B1:40:ASP:C	49:B1:40:ASP:OD1	2.57	0.43
1:AA:1346:A:C8	7:AG:10:ARG:NH2	2.87	0.43
51:D3:15:LYS:HD3	51:D3:23:LYS:HE2	2.00	0.43
22:DA:2516:A:N6	22:DA:2517:C:N4	2.67	0.43
1:AA:1176:A:H2'	1:AA:1177:G:C8	2.53	0.43
22:BA:2557:G:H2'	22:BA:2558:C:C6	2.53	0.43
22:DA:2061:G:N1	56:DA:3001:VIF:H19	2.33	0.42
22:DA:1045:C:H1'	22:DA:1047:G:C6	2.54	0.42
13:AM:11:ASP:OD1	13:AM:45:ILE:HB	2.19	0.42
22:BA:1124:G:H1'	52:B4:38:GLY:OXT	2.18	0.42
22:BA:2747:G:O2'	28:BG:67:THR:HB	2.19	0.42
22:DA:306:U:O4	22:DA:307:G:C6	2.71	0.42
22:BA:1098:A:N7	22:BA:1099:G:C6	2.87	0.42
22:BA:1925:C:C4'	22:BA:1926:U:C4	3.02	0.42
1:CA:1361:G:C2	1:CA:1362:A:N7	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:76:ALA:O	2:AB:80:VAL:HG23	2.19	0.42
10:CJ:7:ARG:HD3	10:CJ:75:ASP:OD2	2.18	0.42
4:CD:100:ASN:O	4:CD:104:ARG:HG2	2.19	0.42
22:DA:618:G:N3	22:DA:618:G:H2'	2.34	0.42
38:BQ:86:ALA:O	38:BQ:87:SER:HB2	2.19	0.42
5:CE:102:GLY:O	5:CE:104:GLY:CA	2.66	0.42
4:AD:152:GLN:O	4:AD:153:SER:C	2.57	0.42
30:BI:122:ILE:HG23	30:BI:125:MET:SD	2.59	0.42
1:AA:1299:A:C5	1:AA:1301:U:O2	2.71	0.42
1:AA:781:A:C5	1:AA:802:A:C2	3.06	0.42
22:DA:2889:C:H2'	22:DA:2890:G:C8	2.54	0.42
39:DR:51:VAL:O	39:DR:52:PRO:C	2.56	0.42
1:CA:922:G:H4'	5:CE:25:VAL:HA	2.01	0.42
34:DM:1:MET:HE1	34:DM:44:ARG:HG3	2.00	0.42
4:AD:116:GLN:NE2	4:AD:120:HIS:CE1	2.87	0.42
22:BA:1723:G:O6	22:BA:1737:G:H1'	2.19	0.42
22:BA:1722:A:N6	22:BA:1738:G:H1'	2.34	0.42
5:CE:157:ARG:C	5:CE:159:LYS:N	2.72	0.42
17:CQ:45:HIS:O	17:CQ:71:LYS:HA	2.18	0.42
22:DA:749:A:C5	22:DA:1618:A:C2	3.07	0.42
30:DI:20:PRO:HG2	30:DI:24:VAL:HG23	1.99	0.42
22:DA:479:A:H1'	22:DA:481:G:H5'	2.01	0.42
18:CR:35:GLU:HB2	21:CU:19:PHE:CZ	2.54	0.42
21:CU:4:ILE:N	21:CU:4:ILE:HD13	2.34	0.42
2:CB:21:ARG:C	2:CB:22:TYR:CD1	2.92	0.42
38:DQ:72:ASN:CB	38:DQ:110:VAL:HG11	2.49	0.42
22:DA:568:U:H2'	22:DA:570:G:OP2	2.18	0.42
4:CD:150:LYS:O	4:CD:151:LYS:C	2.57	0.42
2:AB:104:TRP:CZ2	2:AB:154:MET:CB	3.02	0.42
1:AA:1216:A:H2'	1:AA:1217:C:H6	1.84	0.42
22:DA:1816:C:H3'	24:DC:62:TYR:CE1	2.54	0.42
16:AP:67:ILE:HG23	16:AP:71:VAL:CG1	2.49	0.42
22:BA:2885:G:H2'	22:BA:2886:A:O4'	2.19	0.42
16:CP:2:VAL:HA	16:CP:22:ALA:O	2.19	0.42
27:DF:31:VAL:HG11	27:DF:97:TRP:CH2	2.54	0.42
22:DA:2512:C:H2'	22:DA:2513:A:O4'	2.18	0.42
30:BI:97:LYS:HB3	30:BI:139:VAL:CG2	2.49	0.42
1:AA:1087:G:N2	1:AA:1088:G:C4	2.87	0.42
1:CA:1385:G:H2'	1:CA:1386:G:O4'	2.18	0.42
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.18	0.42
22:BA:1565:C:N4	22:BA:1567:G:C2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:17:LEU:HD21	10:AJ:96:VAL:HG22	2.01	0.42
2:AB:95:ARG:HH12	2:AB:97:LEU:HA	1.83	0.42
23:DB:71:C:C2'	23:DB:72:G:H5'	2.49	0.42
21:CU:24:GLU:HG3	21:CU:28:VAL:CG2	2.49	0.42
1:CA:109:A:O2'	1:CA:326:G:N2	2.51	0.42
27:DF:151:GLY:O	27:DF:152:LEU:HB3	2.18	0.42
22:DA:1866:A:C4	22:DA:1876:A:C6	3.07	0.42
30:DI:103:ARG:O	30:DI:107:GLN:N	2.49	0.42
8:CH:30:SER:O	8:CH:31:LYS:C	2.56	0.42
38:DQ:47:TYR:CD1	38:DQ:47:TYR:C	2.92	0.42
1:AA:814:A:N7	1:AA:816:A:C4	2.87	0.42
23:BB:78:A:H61	23:BB:98:G:C2'	2.32	0.42
22:DA:1965:C:OP1	22:DA:1966:A:H2'	2.19	0.42
1:AA:631:C:H3'	1:AA:632:U:H5'	2.01	0.42
3:AC:43:LEU:HD21	3:AC:68:ILE:HD11	2.01	0.42
22:DA:1914:C:H2'	22:DA:1915:U:O4'	2.19	0.42
7:CG:148:ASN:C	7:CG:150:ALA:N	2.72	0.42
22:BA:2856:A:N6	22:BA:2857:G:C6	2.87	0.42
22:BA:1750:G:O2'	22:BA:2860:A:N1	2.47	0.42
25:DD:62:LYS:N	25:DD:63:PRO:CD	2.82	0.42
22:DA:176:A:C5	22:DA:177:G:C6	3.07	0.42
2:AB:140:GLU:O	2:AB:144:LEU:HG	2.18	0.42
1:CA:121:U:H3'	1:CA:122:G:C5'	2.48	0.42
37:DP:80:VAL:HG12	37:DP:81:VAL:N	2.33	0.42
44:BW:38:VAL:HG23	44:BW:59:LEU:HB2	2.01	0.42
15:CO:42:HIS:O	15:CO:45:GLU:O	2.37	0.42
22:BA:2845:U:H5''	37:BP:52:ASN:O	2.19	0.42
22:DA:9:G:C6	22:DA:2629:U:C6	3.07	0.42
22:DA:1502:A:C2	22:DA:1503:A:C4	3.07	0.42
44:BW:37:ILE:HG21	44:BW:80:ILE:HG21	2.02	0.42
1:AA:472:U:C4	1:AA:473:U:O4	2.72	0.42
1:AA:1291:U:OP1	7:AG:37:SER:OG	2.25	0.42
20:CT:9:LYS:O	20:CT:12:ILE:HG12	2.19	0.42
1:CA:905:U:C5	1:CA:906:A:C5	3.07	0.42
22:BA:2214:C:H2'	22:BA:2215:C:O4'	2.19	0.42
22:BA:489:G:O4'	22:BA:1284:A:C8	2.72	0.42
1:CA:923:A:H2'	1:CA:924:C:O4'	2.18	0.42
30:BI:80:LEU:HD13	30:BI:136:MET:SD	2.58	0.42
43:BV:65:VAL:HG22	43:BV:65:VAL:O	2.19	0.42
35:BN:106:ASP:C	35:BN:106:ASP:OD1	2.58	0.42
26:BE:115:GLN:HA	26:BE:115:GLN:OE1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:16:ASP:OD1	37:DP:16:ASP:N	2.52	0.42
11:AK:100:LEU:HD12	11:AK:100:LEU:HA	1.93	0.42
22:BA:2226:C:H2'	22:BA:2226:C:O2	2.19	0.42
11:CK:71:ALA:O	11:CK:75:LYS:HG3	2.19	0.42
22:BA:152:A:H2'	22:BA:153:U:C6	2.54	0.42
53:B5:43:GLU:HA	53:B5:178:LYS:HA	1.99	0.42
29:BH:79:THR:CG2	29:BH:147:VAL:CG2	2.97	0.42
1:CA:1097:C:C2	1:CA:1098:C:C6	3.07	0.42
12:AL:44:LYS:HB2	12:AL:45:PRO:HD3	1.99	0.42
22:BA:1915:U:C2'	22:BA:1916:A:H5'	2.49	0.42
21:AU:40:LYS:HB3	21:AU:41:PRO:HD3	2.01	0.42
1:AA:1342:C:O2'	9:AI:126:GLN:HG3	2.19	0.42
9:AI:49:ARG:NH2	9:AI:52:LEU:O	2.50	0.42
1:AA:1037:C:H2'	1:AA:1038:C:C6	2.54	0.42
22:DA:2014:A:H5'	40:DS:94:ASP:OD2	2.19	0.42
22:BA:245:G:O6	51:B3:8:ARG:HD3	2.20	0.42
22:DA:2093:G:N1	22:DA:2094:A:C5	2.87	0.42
22:DA:513:A:N3	22:DA:514:A:C8	2.87	0.42
1:AA:1158:C:C4	1:AA:1160:G:C5	3.08	0.42
22:DA:1826:G:C4	22:DA:1827:U:C5	3.07	0.42
22:BA:1731:G:C5	22:BA:1733:G:N7	2.87	0.42
22:DA:2856:A:C6	22:DA:2857:G:C6	3.08	0.42
1:AA:781:A:H4'	1:AA:1522:U:O2'	2.18	0.42
22:DA:1936:A:H2	22:DA:1943:U:H3	1.65	0.42
9:AI:9:THR:CG2	9:AI:10:GLY:N	2.78	0.42
30:DI:69:PHE:HD1	30:DI:69:PHE:N	2.15	0.42
22:DA:1097:U:C2'	30:DI:9:VAL:HG11	2.48	0.42
22:BA:2298:A:C6	22:BA:2321:U:C4	3.07	0.42
17:AQ:4:LYS:N	17:AQ:4:LYS:HE3	2.34	0.42
2:AB:35:ARG:CB	2:AB:40:ILE:HD11	2.49	0.42
22:BA:1722:A:C4	22:BA:1739:A:C2	3.07	0.42
2:CB:115:LYS:O	2:CB:117:LEU:N	2.52	0.42
2:CB:140:GLU:C	2:CB:144:LEU:HG	2.39	0.42
6:AF:54:LEU:C	6:AF:54:LEU:HD22	2.40	0.42
17:CQ:14:SER:OG	17:CQ:22:VAL:HG12	2.20	0.42
1:CA:571:U:H5''	1:CA:572:A:OP2	2.19	0.42
30:BI:105:GLN:O	30:BI:106:LEU:HB2	2.19	0.42
26:BE:106:LYS:HD2	26:BE:200:LEU:HB3	2.00	0.42
10:CJ:52:LEU:HD23	10:CJ:62:ARG:CG	2.49	0.42
14:CN:80:SER:O	14:CN:81:ARG:C	2.56	0.42
9:CI:91:ASP:C	9:CI:91:ASP:OD1	2.58	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2361:G:OP1	51:D3:26:HIS:HA	2.20	0.42
22:BA:150:U:H2'	22:BA:151:C:H6	1.83	0.42
22:DA:825:A:H4'	22:DA:2428:G:C5	2.54	0.42
1:CA:130:A:C2	1:CA:264:C:C6	3.07	0.42
22:BA:1448:G:C2'	22:BA:1449:G:H5'	2.49	0.42
22:DA:1204:A:C2	22:DA:1240:U:N3	2.87	0.42
4:CD:19:LEU:HD21	4:CD:60:LYS:HG2	2.01	0.42
1:AA:727:G:N2	1:AA:731:G:C4	2.87	0.42
1:CA:1245:C:H2'	1:CA:1246:A:H8	1.83	0.42
21:AU:25:LYS:C	21:AU:27:GLY:H	2.22	0.42
22:DA:1081:U:O3'	30:DI:124:ALA:HB1	2.19	0.42
22:DA:1248:G:C5	26:DE:46:GLN:NE2	2.87	0.42
6:CF:32:ALA:O	6:CF:33:GLU:C	2.57	0.42
22:BA:78:U:OP2	46:BY:2:LYS:CD	2.67	0.42
41:BT:11:LEU:HD21	41:BT:46:ALA:HB3	2.00	0.42
22:DA:593:U:N3	22:DA:594:U:C4	2.88	0.42
1:AA:594:U:O4	1:AA:595:A:N6	2.52	0.42
33:BL:81:ASP:CG	33:BL:100:ILE:HD13	2.39	0.42
33:BL:100:ILE:HG13	33:BL:100:ILE:O	2.17	0.42
1:AA:775:G:O2'	1:AA:776:G:H5'	2.18	0.42
22:DA:2636:C:O5'	25:DD:81:GLU:HB2	2.19	0.42
1:CA:519:C:OP2	12:CL:47:SER:OG	2.37	0.42
1:AA:815:A:O2'	1:AA:816:A:OP1	2.27	0.42
34:BM:69:PRO:O	34:BM:70:ASP:CG	2.57	0.42
3:CC:19:ASN:OD1	3:CC:54:ARG:NE	2.50	0.42
1:AA:918:A:C6	1:AA:919:A:C6	3.07	0.42
27:BF:31:VAL:O	27:BF:31:VAL:CG2	2.66	0.42
20:CT:67:ILE:HA	20:CT:67:ILE:HD12	1.77	0.42
44:BW:51:VAL:HG13	44:BW:60:PHE:O	2.18	0.42
22:DA:1042:G:C6	22:DA:1043:C:C4	3.08	0.42
11:CK:93:ARG:HB3	11:CK:94:GLU:H	1.72	0.42
22:DA:1486:U:C2	22:DA:1504:A:C2	3.06	0.42
1:AA:1381:U:C2'	1:AA:1382:C:H5'	2.50	0.42
20:AT:43:ASP:C	20:AT:43:ASP:OD1	2.57	0.42
1:AA:1417:G:C6	1:AA:1482:G:C6	3.08	0.42
1:CA:865:A:H2	1:CA:918:A:H4'	1.84	0.42
22:BA:1108:U:H2'	22:BA:1109:C:O4'	2.19	0.42
2:CB:180:GLY:O	2:CB:182:PRO:HD3	2.19	0.42
9:CI:17:ALA:HB2	9:CI:67:VAL:HB	2.01	0.42
1:AA:882:C:O2'	1:AA:883:C:H5'	2.19	0.42
12:CL:40:THR:HG22	12:CL:41:THR:N	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:57:ILE:O	20:CT:61:GLN:HG2	2.20	0.42
17:AQ:83:VAL:OXT	17:AQ:83:VAL:HG13	2.18	0.42
22:DA:1537:G:N3	22:DA:1537:G:H3'	2.33	0.42
49:B1:32:GLU:OE2	49:B1:32:GLU:N	2.45	0.42
22:DA:2766:A:N3	22:DA:2766:A:H2'	2.34	0.42
22:BA:1098:A:C6	22:BA:1099:G:C6	3.07	0.42
6:AF:3:HIS:O	6:AF:4:TYR:CG	2.73	0.42
14:AN:46:LEU:CG	14:AN:47:LYS:N	2.81	0.42
22:BA:1179:G:N7	22:BA:1180:U:C1'	2.82	0.42
1:CA:992:U:O4'	1:CA:993:G:C2	2.72	0.42
12:CL:110:ARG:NH1	12:CL:112:GLN:O	2.53	0.42
22:BA:2142:A:H2'	22:BA:2143:C:C6	2.53	0.42
22:DA:161:A:P	22:DA:162:U:H3'	2.60	0.42
1:AA:1181:G:O2'	1:AA:1182:G:C6	2.72	0.42
7:AG:15:ASP:OD1	7:AG:15:ASP:C	2.58	0.42
1:AA:1374:A:O3'	7:AG:28:ASN:ND2	2.53	0.42
7:AG:44:TYR:O	7:AG:48:GLU:N	2.52	0.42
1:CA:604:G:N7	1:CA:605:U:C5	2.87	0.42
13:AM:65:VAL:HG23	13:AM:66:GLU:N	2.33	0.42
10:AJ:52:LEU:CD1	10:AJ:58:ASN:O	2.68	0.42
22:DA:1093:G:H1'	22:DA:1098:A:H61	1.84	0.42
4:AD:160:GLU:C	4:AD:162:ALA:H	2.22	0.42
1:CA:374:A:H5''	1:CA:452:A:C2	2.54	0.42
22:BA:1606:C:O2'	22:BA:1607:C:P	2.76	0.42
22:DA:1272:A:C6	22:DA:1618:A:H1'	2.54	0.42
22:DA:749:A:C2	22:DA:750:A:C8	3.08	0.42
22:DA:140:C:O2	22:DA:140:C:O4'	2.37	0.42
1:CA:1490:U:C2'	1:CA:1491:G:O4'	2.65	0.42
1:AA:1138:G:N3	1:AA:1138:G:H3'	2.33	0.42
45:DX:58:VAL:CG1	45:DX:59:ILE:N	2.82	0.42
24:DC:67:PHE:HB3	24:DC:151:GLY:O	2.19	0.42
22:BA:2703:C:O5'	22:BA:2703:C:H6	2.02	0.42
16:AP:10:GLY:O	16:AP:11:ALA:CB	2.68	0.42
22:DA:1545:A:N7	22:DA:1546:G:C4	2.87	0.42
1:CA:511:C:C2	1:CA:512:U:C6	3.07	0.42
2:AB:148:LEU:C	2:AB:151:ILE:HG22	2.40	0.42
22:BA:1014:A:C2	22:BA:1149:G:N3	2.87	0.42
23:DB:43:C:N4	23:DB:45:A:N1	2.67	0.42
1:AA:181:A:C4	1:AA:194:C:C4	3.07	0.42
6:AF:49:TYR:C	6:AF:49:TYR:CD1	2.92	0.42
31:DJ:105:VAL:HG12	31:DJ:109:LEU:CD1	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:223:A:H2'	1:CA:224:U:C6	2.54	0.42
6:CF:88:MET:HE3	18:CR:64:TYR:CE2	2.54	0.42
22:BA:26:G:H1'	22:BA:514:A:H61	1.84	0.42
1:CA:833:G:C4	1:CA:834:U:C6	3.08	0.42
1:CA:892:A:C5	1:CA:893:C:C5	3.07	0.42
4:AD:91:LEU:HD21	4:AD:195:ILE:HD11	2.01	0.42
1:CA:618:C:H5''	1:CA:619:U:H5''	2.00	0.42
1:AA:1296:C:H5''	1:AA:1297:G:OP2	2.19	0.42
23:DB:9:G:HO2'	36:DO:45:SER:HG	1.60	0.42
23:DB:78:A:H61	23:DB:98:G:C2'	2.31	0.42
22:BA:1826:G:H2'	22:BA:1827:U:O5'	2.20	0.42
22:DA:1959:G:C6	22:DA:1960:A:C5	3.08	0.42
1:CA:597:G:N7	1:CA:598:U:C5	2.87	0.42
1:AA:815:A:H4'	1:AA:817:C:C4	2.54	0.42
25:DD:30:GLU:O	25:DD:52:THR:OG1	2.13	0.42
1:CA:740:U:H4'	15:CO:42:HIS:CD2	2.54	0.42
1:CA:1426:G:H2'	1:CA:1427:C:O4'	2.20	0.42
22:DA:2712:C:C2	22:DA:2715:C:OP1	2.72	0.42
22:BA:1725:U:C5	22:BA:1726:C:C5	3.07	0.42
22:BA:2480:C:C2'	22:BA:2481:G:H5'	2.49	0.42
22:BA:1460:U:H3'	22:BA:1461:C:H5'	2.01	0.42
22:BA:1371:G:N7	58:BA:3403:HOH:O	2.37	0.42
44:DW:34:GLY:N	44:DW:61:ALA:O	2.47	0.42
4:CD:98:LEU:HD22	4:CD:130:VAL:HG12	2.01	0.42
22:BA:289:G:H2'	22:BA:290:U:O4'	2.20	0.42
39:DR:26:ASP:C	39:DR:27:ILE:HG12	2.38	0.42
1:CA:1099:G:H2'	1:CA:1100:C:O4'	2.19	0.42
22:BA:538:A:O2'	31:BJ:8:PRO:HD2	2.19	0.42
37:DP:106:LYS:HD2	37:DP:109:ARG:CZ	2.49	0.42
40:DS:27:LYS:HB2	40:DS:32:ALA:HB2	2.02	0.42
44:BW:10:THR:O	44:BW:11:ARG:HB2	2.20	0.42
35:BN:14:SER:HA	35:BN:17:ARG:NH1	2.35	0.42
17:CQ:63:GLU:N	17:CQ:73:TRP:CE3	2.87	0.42
26:DE:147:LEU:HB3	26:DE:186:VAL:HG22	2.02	0.42
1:CA:778:G:C6	1:CA:779:C:N3	2.88	0.42
5:AE:95:PHE:CD1	5:AE:95:PHE:C	2.92	0.42
18:AR:52:GLN:HA	18:AR:52:GLN:OE1	2.19	0.42
1:AA:819:A:N7	1:AA:1529:G:C2	2.87	0.42
44:BW:53:CYS:O	44:BW:54:GLY:O	2.37	0.42
22:BA:2366:A:H2'	22:BA:2367:G:O4'	2.19	0.42
22:DA:2571:U:N3	22:DA:2574:G:C8	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B4:4:ARG:C	52:B4:37:GLN:NE2	2.72	0.42
22:BA:1077:A:C8	22:BA:1078:U:C4	3.06	0.42
1:AA:1031:C:H4'	1:AA:1032:G:O5'	2.19	0.42
22:DA:319:G:C5	22:DA:333:G:C2	3.08	0.42
22:DA:2127:G:N3	22:DA:2162:G:N7	2.66	0.42
38:BQ:112:LYS:HD3	39:BR:48:LYS:HD2	2.00	0.42
38:BQ:89:GLU:H	39:BR:49:ILE:HD12	1.84	0.42
1:AA:872:A:N7	1:AA:874:G:C8	2.87	0.42
53:B5:64:SER:O	53:B5:65:LEU:HB2	2.18	0.42
9:AI:30:ILE:HD11	9:AI:38:TYR:CE1	2.53	0.42
7:AG:14:PRO:O	7:AG:15:ASP:O	2.37	0.42
22:DA:2838:G:O6	22:DA:2839:G:C6	2.72	0.42
22:BA:2057:G:C5	22:BA:2058:A:C5	3.08	0.42
9:CI:49:ARG:C	9:CI:51:PRO:HD2	2.40	0.42
1:CA:144:G:C6	1:CA:179:A:C2	3.08	0.42
22:BA:2311:A:N7	27:BF:77:PHE:CD1	2.88	0.42
22:BA:2311:A:C2	27:BF:85:ILE:HD11	2.53	0.42
9:AI:81:HIS:O	9:AI:85:ARG:HB2	2.19	0.42
4:AD:19:LEU:CD1	4:AD:63:ARG:HB2	2.49	0.42
1:AA:251:G:C6	1:AA:266:G:C6	3.07	0.42
22:DA:813:U:H1'	22:DA:1226:A:N3	2.35	0.42
22:DA:537:G:C2	22:DA:555:G:N2	2.87	0.42
22:DA:353:C:H2'	22:DA:354:A:C8	2.55	0.42
2:CB:117:LEU:O	2:CB:118:GLU:C	2.57	0.42
22:DA:1668:A:N3	22:DA:1670:C:C4	2.88	0.42
22:BA:670:A:H4'	22:BA:671:C:O5'	2.19	0.42
22:BA:278:A:N1	22:BA:362:A:C8	2.87	0.42
1:CA:582:C:C4	1:CA:760:G:C6	3.07	0.42
1:AA:1210:C:N4	1:AA:1211:U:C4	2.88	0.42
30:BI:19:ASN:N	30:BI:20:PRO:HD3	2.34	0.42
45:DX:10:LYS:HE3	45:DX:54:LYS:HD3	2.01	0.42
30:BI:76:ALA:HB1	30:BI:129:ILE:CG2	2.49	0.42
22:BA:2548:U:C4	22:BA:2549:G:N7	2.87	0.42
25:BD:101:PHE:C	25:BD:103:ASP:N	2.73	0.42
1:AA:1055:A:N3	3:AC:156:ARG:NH1	2.68	0.42
22:BA:1856:U:O4	22:BA:1857:G:C6	2.73	0.42
22:DA:365:U:C4	22:DA:366:C:N4	2.88	0.42
26:DE:48:THR:HG22	26:DE:86:ALA:HB3	2.01	0.42
22:BA:2673:G:C2	22:BA:2674:G:C8	3.07	0.42
1:CA:1537:U:C5	1:CA:1538:C:N4	2.88	0.42
1:CA:438:U:C2	1:CA:494:G:C6	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1328:C:OP1	13:CM:28:THR:HG21	2.19	0.42
1:CA:1328:C:C5'	13:CM:28:THR:HG21	2.49	0.42
43:DV:20:LEU:HD22	43:DV:26:PHE:HA	2.01	0.42
1:CA:872:A:C5	1:CA:874:G:C8	3.07	0.42
16:AP:19:VAL:HG13	16:AP:37:GLY:CA	2.49	0.42
22:DA:1745:A:O2'	22:DA:1746:A:H5'	2.19	0.42
35:BN:78:LYS:C	35:BN:79:LEU:O	2.54	0.42
1:AA:864:A:C6	1:AA:865:A:C2	3.08	0.42
32:DK:31:ARG:CB	32:DK:32:TYR:CD1	3.03	0.42
9:CI:13:LYS:CG	9:CI:13:LYS:O	2.67	0.42
9:CI:13:LYS:O	9:CI:14:SER:CB	2.68	0.42
1:CA:1220:G:H2'	1:CA:1221:G:O4'	2.18	0.42
22:DA:1875:G:H2'	22:DA:1876:A:OP2	2.19	0.42
1:CA:289:G:N1	1:CA:290:C:C4	2.87	0.42
24:BC:174:LEU:N	24:BC:174:LEU:CD1	2.82	0.42
42:DU:19:LYS:CG	42:DU:19:LYS:O	2.68	0.42
49:B1:25:LYS:HD3	49:B1:52:ALA:O	2.20	0.42
16:CP:67:ILE:HG22	16:CP:68:SER:O	2.19	0.42
36:DO:71:ALA:HB2	36:DO:102:ARG:HB2	2.01	0.42
22:DA:1127:A:H2'	22:DA:1128:G:H5''	2.01	0.42
40:DS:7:HIS:CE1	40:DS:46:LEU:HD23	2.54	0.42
22:DA:1401:G:C5	22:DA:1402:U:C5	3.07	0.42
26:DE:178:VAL:HG13	26:DE:179:SER:N	2.34	0.42
22:BA:2002:G:OP1	35:BN:13:ASN:HA	2.19	0.42
20:AT:35:VAL:CG1	20:AT:79:LEU:HD22	2.50	0.42
47:BZ:9:GLN:HB2	47:BZ:29:LEU:HD13	2.00	0.42
1:CA:1262:C:O2'	1:CA:1263:C:H5'	2.19	0.42
19:AS:58:VAL:CG1	19:AS:75:ALA:HB1	2.49	0.42
1:AA:61:G:H2'	1:AA:62:U:O4'	2.19	0.42
22:BA:2680:U:O2'	22:BA:2681:C:H5'	2.19	0.42
23:BB:46:A:H2'	23:BB:47:C:C6	2.54	0.42
53:B5:122:GLY:HA3	53:B5:146:VAL:CB	2.49	0.42
42:DU:16:GLY:O	42:DU:17:LYS:HB2	2.19	0.42
20:CT:64:LYS:HE3	20:CT:64:LYS:HA	2.00	0.42
7:CG:31:MET:O	7:CG:31:MET:HG2	2.20	0.42
8:CH:83:LEU:HD22	8:CH:83:LEU:C	2.39	0.42
22:DA:760:G:C6	22:DA:761:A:C4	3.08	0.42
25:BD:113:SER:O	25:BD:167:ASN:HA	2.20	0.42
26:DE:170:ARG:HG3	26:DE:174:GLY:O	2.19	0.42
1:CA:1235:U:H2'	1:CA:1236:A:O4'	2.20	0.42
3:CC:77:ILE:HA	3:CC:84:VAL:HG23	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:30:ARG:HD2	35:DN:31:HIS:NE2	2.34	0.42
36:BO:100:HIS:O	36:BO:104:GLN:HB3	2.19	0.42
22:BA:945:A:H4'	22:BA:946:C:OP2	2.19	0.42
1:AA:824:G:C2	1:AA:877:G:C2	3.08	0.42
22:DA:1359:A:N7	22:DA:1373:A:C2	2.88	0.42
22:DA:2134:A:C8	22:DA:2158:A:N3	2.87	0.42
1:CA:484:G:N7	1:CA:486:U:H1'	2.34	0.42
39:BR:48:LYS:O	39:BR:50:GLY:N	2.53	0.42
45:DX:33:LEU:HD23	45:DX:50:ARG:CZ	2.50	0.42
11:AK:91:PRO:C	11:AK:93:ARG:H	2.23	0.42
17:AQ:16:LYS:C	17:AQ:17:MET:CE	2.88	0.42
2:CB:169:GLU:O	2:CB:170:HIS:C	2.56	0.42
1:AA:1058:G:C2'	1:AA:1059:C:H5'	2.49	0.42
22:DA:1608:A:C5	22:DA:1611:C:C4	3.08	0.42
1:CA:145:G:N1	1:CA:146:G:N7	2.68	0.42
22:DA:1819:A:H4'	22:DA:1820:U:H5''	2.01	0.42
1:CA:1133:G:C6	1:CA:1142:G:C6	3.08	0.42
22:DA:2262:U:N3	22:DA:2279:G:C2	2.87	0.42
1:CA:405:U:O4	4:CD:2:ALA:N	2.52	0.42
1:CA:1202:U:C2'	1:CA:1203:C:H5'	2.50	0.42
22:BA:1736:U:H2'	22:BA:1737:G:O4'	2.20	0.42
2:CB:115:LYS:C	2:CB:117:LEU:N	2.73	0.42
22:BA:1413:A:C6	22:BA:1414:C:N3	2.87	0.42
1:AA:702:A:C6	22:BA:1847:A:H5'	2.55	0.42
22:DA:1090:A:N1	22:DA:1091:G:N7	2.68	0.42
1:CA:55:A:N7	1:CA:56:U:C5	2.87	0.42
24:DC:14:ARG:HG2	24:DC:15:HIS:CD2	2.55	0.42
46:BY:56:LEU:HA	46:BY:59:GLU:HB3	2.01	0.42
22:BA:2173:A:C8	22:BA:2174:C:C5	3.08	0.42
1:CA:455:G:C6	1:CA:456:A:C6	3.07	0.42
42:DU:10:GLU:OE2	42:DU:73:PHE:CD2	2.73	0.42
4:CD:107:PHE:CD1	4:CD:107:PHE:N	2.86	0.42
4:CD:29:ASP:O	4:CD:31:LYS:NZ	2.43	0.42
1:AA:624:C:H4'	16:AP:11:ALA:HB2	2.02	0.42
22:DA:1464:G:N1	22:DA:1465:G:C5	2.87	0.42
22:DA:690:G:O4'	22:DA:780:G:H5'	2.20	0.42
22:BA:2808:G:C2	22:BA:2891:U:C6	3.08	0.42
21:AU:39:GLU:OE2	21:AU:42:THR:HG21	2.19	0.42
22:DA:1056:G:H5''	22:DA:1057:A:O4'	2.19	0.42
22:BA:2648:G:N2	22:BA:2673:G:H1'	2.34	0.42
22:DA:2796:U:O4	22:DA:2798:U:C4	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:49:PHE:HA	8:AH:60:GLU:O	2.20	0.42
30:BI:61:VAL:CG1	30:BI:62:TYR:N	2.83	0.42
22:DA:75:G:H4'	46:DY:48:ARG:NH1	2.34	0.42
52:D4:16:ILE:HG22	52:D4:17:VAL:N	2.35	0.42
30:BI:16:GLY:HA3	30:BI:51:LYS:HB3	2.01	0.42
13:AM:95:LEU:C	13:AM:109:ARG:HG2	2.39	0.42
1:AA:4:U:H5''	1:AA:5:U:C5	2.55	0.42
22:DA:2305:U:H2'	22:DA:2306:C:O4'	2.20	0.42
11:CK:61:PHE:O	11:CK:65:VAL:HG12	2.20	0.42
30:DI:101:ILE:HG13	30:DI:138:LEU:HD13	2.01	0.42
22:BA:521:U:H2'	22:BA:522:A:C8	2.55	0.42
1:CA:745:G:H5''	1:CA:851:G:O2'	2.19	0.42
44:BW:82:ILE:O	44:BW:82:ILE:HG22	2.20	0.42
22:BA:1300:G:C4	22:BA:1626:A:C2	3.08	0.42
1:CA:375:U:N3	1:CA:376:G:N7	2.67	0.42
1:CA:375:U:C2	1:CA:376:G:C8	3.07	0.42
1:AA:1075:U:OP1	2:AB:102:THR:HG21	2.19	0.42
22:BA:1400:U:C2'	22:BA:1401:G:H5'	2.49	0.42
3:AC:66:VAL:O	3:AC:101:ILE:HA	2.20	0.42
22:DA:1914:C:C5	22:DA:1915:U:C2	3.07	0.42
1:AA:1387:G:H2'	1:AA:1388:C:C6	2.54	0.42
5:AE:77:ASN:O	5:AE:78:ASN:HB3	2.20	0.42
22:DA:21:A:C2	22:DA:520:G:C2	3.08	0.42
29:BH:45:GLU:C	29:BH:47:PHE:N	2.72	0.42
1:AA:1184:G:C6	1:AA:1185:G:N7	2.88	0.42
22:BA:1456:G:C6	22:BA:1457:U:C4	3.07	0.42
36:DO:40:ILE:HG22	36:DO:41:ALA:N	2.34	0.42
22:DA:324:A:N6	22:DA:338:G:O2'	2.49	0.42
44:BW:46:HIS:CE1	44:BW:77:ARG:HD3	2.55	0.42
35:DN:52:ILE:HG21	35:DN:94:TYR:CG	2.55	0.42
28:BG:154:PRO:HD3	28:BG:162:VAL:O	2.19	0.42
22:DA:743:A:H2'	22:DA:744:U:O4'	2.20	0.42
28:BG:52:PHE:N	28:BG:52:PHE:CD1	2.87	0.42
22:BA:1885:A:C5	22:BA:1886:U:C5	3.07	0.42
32:DK:39:ILE:HG13	32:DK:39:ILE:O	2.18	0.42
53:B5:24:ASP:HB3	53:B5:185:LYS:O	2.20	0.42
22:BA:1890:A:C5	22:BA:1891:G:C8	3.07	0.42
22:DA:952:G:C2	22:DA:966:G:C2	3.07	0.42
2:CB:133:GLU:O	2:CB:137:ARG:HB3	2.19	0.42
29:BH:89:LYS:O	29:BH:90:LEU:C	2.58	0.42
1:CA:803:G:C6	1:CA:804:U:N3	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:48:LEU:O	14:AN:50:THR:N	2.52	0.42
22:BA:1170:C:H2'	22:BA:1171:G:C8	2.55	0.42
1:CA:1006:G:OP1	1:CA:1038:C:H5'	2.19	0.42
8:AH:64:LYS:HB3	8:AH:64:LYS:HE2	1.84	0.42
1:CA:1123:U:H2'	1:CA:1124:G:C8	2.55	0.42
12:CL:23:ALA:O	12:CL:24:LEU:O	2.36	0.42
22:BA:2129:C:H2'	22:BA:2130:U:C6	2.54	0.42
22:DA:1826:G:C5	22:DA:1827:U:C4	3.08	0.42
22:DA:2547:A:C8	22:DA:2566:A:C8	3.08	0.42
33:DL:63:LYS:HB3	51:D3:13:ARG:HG3	2.02	0.42
22:DA:279:A:N6	22:DA:361:G:O2'	2.51	0.42
5:AE:81:LEU:HD22	5:AE:81:LEU:N	2.35	0.42
22:DA:123:G:O3'	22:DA:1376:C:H4'	2.19	0.42
22:BA:1731:G:C6	22:BA:1733:G:C6	3.07	0.42
22:DA:1364:G:H1'	22:DA:1368:G:N2	2.35	0.42
22:BA:2307:G:H4'	22:BA:2308:G:O5'	2.20	0.42
42:DU:83:VAL:HG11	42:DU:94:ARG:CD	2.50	0.42
22:DA:2371:G:N1	22:DA:2372:U:C5	2.87	0.42
22:DA:1061:U:H3'	22:DA:1062:G:C5'	2.50	0.42
29:BH:114:GLU:CB	29:BH:133:GLN:O	2.66	0.42
10:CJ:35:GLN:CG	10:CJ:77:VAL:HB	2.49	0.42
1:CA:957:U:O2	1:CA:959:A:C8	2.72	0.42
37:BP:91:ALA:HB2	37:BP:113:ARG:HA	2.01	0.42
1:AA:350:G:O2'	1:AA:351:G:H5'	2.19	0.42
30:DI:20:PRO:HG2	30:DI:24:VAL:CG2	2.49	0.42
4:CD:9:LEU:HD13	4:CD:9:LEU:HA	1.81	0.42
13:CM:19:LEU:HD11	13:CM:33:ILE:HG21	2.01	0.42
22:DA:2650:U:H2'	22:DA:2651:C:C6	2.53	0.42
1:CA:1491:G:H2'	1:CA:1492:A:C8	2.55	0.42
4:CD:58:LYS:CB	4:CD:200:ILE:HB	2.50	0.42
23:DB:37:C:C5	23:DB:38:C:C4	3.07	0.42
22:DA:1239:G:C6	22:DA:1240:U:C4	3.06	0.42
1:CA:1408:A:C2	1:CA:1494:G:C5	3.06	0.42
22:BA:1717:A:C2'	22:BA:1718:G:O5'	2.67	0.42
5:CE:94:VAL:HG13	5:CE:111:MET:CE	2.49	0.42
1:AA:769:G:C2'	1:AA:770:C:H5'	2.49	0.42
29:DH:127:GLU:HA	29:DH:144:VAL:O	2.19	0.42
1:CA:96:U:O2'	1:CA:97:G:O5'	2.37	0.42
22:BA:613:A:C8	22:BA:616:A:C2	3.07	0.42
39:BR:3:ALA:CB	39:BR:59:ILE:HD11	2.49	0.42
29:DH:72:ILE:O	29:DH:72:ILE:CG2	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:D0:18:SER:OG	48:D0:19:HIS:N	2.52	0.42
23:BB:37:C:C5	23:BB:38:C:C5	3.06	0.42
7:CG:15:ASP:OD1	7:CG:44:TYR:OH	2.31	0.42
1:AA:340:U:H2'	1:AA:341:C:H6	1.84	0.42
22:DA:1746:A:H2'	22:DA:1747:U:C6	2.55	0.42
10:AJ:11:LYS:HG3	10:AJ:97:ASP:HB3	2.00	0.42
22:DA:404:A:H1'	22:DA:405:U:OP2	2.19	0.42
22:DA:752:A:O2'	22:DA:753:A:P	2.77	0.42
7:AG:145:ALA:C	7:AG:147:ALA:H	2.22	0.42
22:DA:2097:A:C6	22:DA:2193:G:N1	2.88	0.42
23:BB:78:A:C2	23:BB:99:A:C4	3.08	0.42
1:CA:675:A:OP1	18:CR:74:HIS:CE1	2.72	0.42
40:DS:39:THR:HG22	40:DS:44:ALA:HB2	2.00	0.42
1:CA:1053:G:N7	1:CA:1200:C:H5''	2.34	0.42
42:BU:8:ASP:O	42:BU:9:ASP:OD1	2.38	0.42
17:AQ:65:ARG:HB2	17:AQ:66:PRO:CD	2.50	0.42
46:BY:5:GLU:HA	46:BY:8:GLU:HG3	2.01	0.42
1:AA:647:C:O2'	1:AA:648:A:H5'	2.19	0.42
5:CE:113:ALA:O	5:CE:114:VAL:C	2.58	0.42
4:CD:89:ASN:O	4:CD:92:ALA:HB3	2.19	0.42
22:BA:1199:U:H1'	38:BQ:4:VAL:HG22	2.01	0.42
53:B5:131:ILE:HA	53:B5:135:ARG:CB	2.49	0.42
32:BK:71:ARG:HB3	32:BK:72:PRO:HD2	2.01	0.42
1:AA:291:U:O2'	1:AA:292:G:H5'	2.18	0.42
1:AA:504:C:H1'	1:AA:510:A:C4	2.55	0.42
3:AC:113:ALA:HB1	3:AC:200:VAL:HG22	2.02	0.42
29:DH:69:ALA:HB2	29:DH:138:VAL:HG12	2.02	0.42
3:AC:10:ILE:O	3:AC:10:ILE:HG13	2.20	0.42
1:AA:17:U:H2'	1:AA:18:C:C6	2.55	0.42
1:CA:1399:C:C2	1:CA:1401:G:C5	3.07	0.42
51:D3:16:LYS:HE3	51:D3:20:GLY:O	2.18	0.42
22:BA:897:C:H2'	22:BA:898:C:C6	2.55	0.42
8:AH:26:THR:O	8:AH:27:MET:HB3	2.20	0.42
29:BH:116:ARG:HB3	29:BH:131:SER:O	2.20	0.42
29:BH:118:PRO:O	29:BH:119:ASN:CB	2.68	0.42
52:B4:3:VAL:HG12	52:B4:36:ARG:HB3	2.01	0.42
22:DA:622:G:H2'	22:DA:623:C:H6	1.84	0.42
6:AF:3:HIS:HB2	6:AF:92:THR:HG23	2.00	0.42
1:CA:1213:A:C8	1:CA:1215:G:C6	3.07	0.42
5:AE:157:ARG:C	5:AE:159:LYS:N	2.72	0.42
10:AJ:37:ARG:O	10:AJ:38:GLY:O	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:58:ARG:HA	38:BQ:61:TRP:CE3	2.55	0.42
36:DO:31:THR:O	36:DO:32:PRO:C	2.57	0.42
3:AC:11:ARG:O	3:AC:14:ILE:O	2.37	0.42
1:CA:673:A:C2	1:CA:734:G:C2	3.08	0.42
22:DA:55:G:C2	22:DA:116:C:C2	3.07	0.42
37:DP:91:ALA:HB2	37:DP:113:ARG:CA	2.49	0.42
1:AA:275:G:OP1	17:AQ:16:LYS:HE2	2.19	0.42
29:DH:31:VAL:HG12	29:DH:32:PRO:HD3	2.02	0.42
22:DA:1376:C:C5'	58:DA:3398:HOH:O	2.64	0.42
22:BA:713:G:C6	22:BA:714:U:C4	3.08	0.42
20:AT:21:ASN:O	20:AT:25:ARG:HB2	2.20	0.42
22:DA:204:A:C8	22:DA:206:U:N3	2.88	0.42
9:CI:57:MET:HB3	9:CI:61:LEU:HD21	2.01	0.42
22:BA:2311:A:C2	27:BF:41:GLY:CA	3.02	0.42
1:AA:397:A:C5	1:AA:548:G:C8	3.07	0.42
1:CA:728:A:N1	1:CA:729:A:C6	2.87	0.42
39:DR:52:PRO:C	39:DR:53:PHE:CG	2.93	0.42
1:CA:1288:A:O2'	1:CA:1352:C:O2'	2.31	0.42
1:CA:1431:A:C5	1:CA:1432:G:C6	3.08	0.42
22:DA:554:U:O4	22:DA:555:G:C6	2.73	0.42
16:CP:70:ARG:O	16:CP:74:LEU:HD23	2.19	0.42
6:AF:9:MET:HE3	18:AR:65:LEU:HD22	2.01	0.42
22:DA:1754:A:N6	22:DA:1755:A:N1	2.67	0.42
22:BA:138:U:OP2	22:BA:139:U:H2'	2.20	0.42
22:BA:142:A:O2'	22:BA:143:C:H5'	2.20	0.42
2:AB:107:VAL:O	2:AB:111:ILE:HD13	2.19	0.42
1:CA:1226:C:C4	13:CM:103:LYS:HA	2.54	0.42
22:BA:359:G:H2'	22:BA:360:U:O4'	2.20	0.42
2:AB:57:LEU:O	2:AB:60:ILE:HG13	2.19	0.42
22:BA:1676:A:C2	22:BA:1993:U:H5'	2.55	0.42
13:CM:16:VAL:CG1	13:CM:41:GLU:HB3	2.50	0.42
13:CM:40:ALA:O	13:CM:43:VAL:HG22	2.19	0.42
1:CA:1491:G:C5	1:CA:1492:A:C6	3.08	0.42
1:CA:952:U:OP1	1:CA:972:C:N4	2.52	0.42
22:DA:78:U:H2'	22:DA:79:C:O4'	2.20	0.42
22:DA:677:A:C2	22:DA:802:A:C2	3.07	0.42
43:DV:51:GLN:HB3	43:DV:56:PHE:CG	2.54	0.42
13:CM:45:ILE:O	13:CM:45:ILE:HG22	2.20	0.42
35:DN:117:ASP:O	35:DN:118:ARG:HG3	2.19	0.42
1:CA:197:A:C5	1:CA:221:C:H4'	2.54	0.42
22:DA:1757:A:N1	22:DA:1762:A:H2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:106:VAL:CG1	40:DS:107:VAL:N	2.81	0.42
22:BA:226:A:C6	22:BA:227:A:C6	3.08	0.42
22:DA:1232:G:H2'	22:DA:1233:C:C6	2.55	0.42
22:DA:2322:A:N7	22:DA:2323:G:N7	2.67	0.42
19:CS:40:ILE:HB	19:CS:66:MET:O	2.20	0.42
1:AA:661:G:C2	1:AA:662:U:C2	3.08	0.42
9:AI:36:GLU:HA	9:AI:40:GLY:CA	2.50	0.42
2:CB:62:SER:O	2:CB:64:LYS:N	2.53	0.42
22:BA:1853:A:C5	22:BA:1889:A:C6	3.07	0.42
27:BF:36:LEU:O	27:BF:89:VAL:N	2.51	0.42
22:DA:452:G:C8	26:DE:53:THR:HG21	2.55	0.42
27:DF:28:VAL:HG22	27:DF:29:PRO:HD2	2.02	0.42
1:CA:338:A:C5	1:CA:339:C:C5	3.08	0.42
13:AM:71:ARG:CZ	27:BF:136:ILE:HG22	2.49	0.42
1:AA:915:A:H2'	1:AA:916:U:O4'	2.20	0.42
1:AA:760:G:N7	1:AA:761:G:C8	2.88	0.42
22:DA:1383:A:C2	22:DA:1384:A:C4	3.08	0.42
1:CA:1107:C:OP1	3:CC:172:ARG:HG3	2.20	0.42
22:DA:415:A:C2	22:DA:2409:G:C2	3.07	0.42
22:BA:1354:A:H2'	22:BA:1355:G:O4'	2.20	0.42
1:CA:1422:G:O3'	32:DK:49:ARG:NH2	2.52	0.42
22:DA:1085:A:C5	22:DA:1086:A:N6	2.88	0.42
45:DX:40:VAL:CG2	45:DX:43:GLU:HB2	2.49	0.42
43:DV:83:LYS:O	43:DV:85:LYS:N	2.53	0.42
22:DA:2229:U:H2'	22:DA:2230:G:C8	2.55	0.42
22:BA:974:G:C8	22:BA:989:G:C2	3.07	0.42
42:DU:41:LEU:HB3	42:DU:60:GLU:HG2	2.00	0.42
17:AQ:23:VAL:HG21	17:AQ:61:ILE:HD11	2.02	0.42
1:AA:1171:A:H2'	1:AA:1172:C:C6	2.55	0.42
44:BW:52:GLY:O	44:BW:59:LEU:HA	2.20	0.42
51:D3:15:LYS:HB3	51:D3:23:LYS:HE2	2.01	0.42
22:BA:2470:G:O6	22:BA:2476:A:O2'	2.22	0.42
1:AA:1372:U:C4	1:AA:1373:G:C5	3.08	0.42
1:AA:283:U:C5	1:AA:284:C:C5	3.08	0.42
22:BA:2014:A:H2'	22:BA:2015:A:C8	2.55	0.42
17:CQ:31:HIS:CD2	17:CQ:34:TYR:CD2	3.08	0.42
22:BA:1458:U:H5'	22:BA:1459:G:N3	2.34	0.42
10:CJ:11:LYS:HG2	10:CJ:71:LEU:CD1	2.50	0.42
33:DL:124:GLY:HA2	33:DL:144:GLU:HA	2.01	0.42
26:DE:97:ASN:HB2	26:DE:100:MET:SD	2.60	0.42
19:CS:73:GLU:HB2	19:CS:74:PHE:CD2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2488:G:C6	22:BA:2489:U:C4	3.08	0.42
27:BF:133:ARG:O	27:BF:134:GLU:CB	2.65	0.42
53:B5:79:ALA:HB3	53:B5:95:VAL:HG11	2.00	0.42
22:BA:1575:C:H2'	22:BA:1576:U:O4'	2.20	0.42
1:CA:390:U:C2	1:CA:391:G:C8	3.08	0.42
43:BV:1:MET:SD	43:BV:1:MET:C	2.98	0.42
22:BA:2051:A:H8	22:BA:2051:A:OP2	2.03	0.42
38:DQ:61:TRP:CD2	38:DQ:93:LYS:HA	2.54	0.42
1:CA:676:A:C2	1:CA:677:U:C2	3.07	0.42
22:BA:1069:A:O2'	22:BA:1070:A:H2'	2.19	0.42
22:BA:1088:A:H5''	22:BA:1088:A:N3	2.33	0.42
1:CA:1216:A:H2'	1:CA:1217:C:C6	2.55	0.42
22:DA:579:G:C2	22:DA:1262:A:C5	3.07	0.42
29:DH:121:VAL:O	29:DH:122:LEU:CB	2.67	0.42
21:CU:34:ARG:CD	21:CU:35:ARG:HB2	2.50	0.42
5:CE:122:ASN:CG	5:CE:123:VAL:N	2.73	0.42
22:DA:2566:A:H4'	22:DA:2567:G:H5''	2.02	0.42
20:AT:67:ILE:HG13	20:AT:71:LYS:HD3	2.01	0.42
22:DA:1317:G:H2'	22:DA:1318:U:O4'	2.20	0.42
5:AE:81:LEU:HD23	5:AE:123:VAL:HG13	2.02	0.42
22:DA:206:U:C2	22:DA:207:A:C8	3.07	0.42
1:CA:666:G:C6	1:CA:741:G:C5	3.08	0.42
6:CF:38:ARG:NH2	6:CF:98:GLU:O	2.50	0.42
4:CD:4:TYR:CZ	4:CD:6:GLY:HA3	2.55	0.42
39:DR:39:LEU:HA	39:DR:49:ILE:CG2	2.47	0.42
5:CE:25:VAL:HG22	5:CE:28:GLY:O	2.19	0.42
22:DA:2347:C:H2'	22:DA:2348:U:C6	2.55	0.42
1:CA:1202:U:H2'	1:CA:1203:C:H5'	2.01	0.42
6:AF:51:ILE:O	6:AF:52:ASN:CB	2.67	0.42
10:CJ:78:GLU:CD	10:CJ:80:THR:HG1	2.23	0.42
22:DA:704:G:H1'	22:DA:726:G:N2	2.34	0.42
6:AF:76:THR:O	6:AF:77:THR:C	2.57	0.42
13:CM:16:VAL:HG13	13:CM:34:LEU:HD12	2.02	0.42
22:DA:2650:U:C2	22:DA:2671:G:N2	2.87	0.42
14:CN:27:LEU:C	14:CN:31:ILE:HD13	2.40	0.42
22:DA:425:G:C2	22:DA:426:C:C4	3.07	0.42
43:DV:57:TYR:HA	43:DV:74:ALA:HB3	2.01	0.42
10:CJ:25:ILE:O	10:CJ:25:ILE:CD1	2.68	0.42
24:BC:222:GLY:HA3	24:BC:230:HIS:ND1	2.35	0.42
1:AA:1311:A:C2'	1:AA:1312:G:O5'	2.67	0.42
18:CR:33:ILE:O	18:CR:33:ILE:HG12	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:321:U:C6	26:DE:159:LEU:CD2	3.02	0.42
1:CA:1162:C:C2	1:CA:1175:G:C2	3.08	0.42
1:AA:1009:U:O2	1:AA:1021:A:C2	2.73	0.42
30:DI:121:ASP:O	30:DI:124:ALA:HB3	2.20	0.42
22:DA:2834:G:O6	22:DA:2879:A:O2'	2.32	0.42
22:BA:77:G:N2	22:BA:110:G:H1'	2.34	0.42
22:DA:543:G:N2	22:DA:551:G:C8	2.87	0.42
15:AO:85:LEU:HD13	15:AO:85:LEU:HA	1.92	0.42
30:DI:125:MET:HA	30:DI:128:SER:HB3	2.01	0.42
5:AE:44:GLY:HA2	5:AE:74:VAL:HG23	2.01	0.42
1:AA:1251:A:C5	1:AA:1252:A:N7	2.88	0.42
1:AA:1476:A:H2'	1:AA:1477:U:O4'	2.20	0.42
9:CI:28:ILE:HG23	9:CI:63:LEU:CD1	2.50	0.42
22:BA:594:U:H2'	22:BA:595:C:C6	2.55	0.42
11:AK:88:GLY:H	11:AK:114:THR:HG22	1.84	0.42
43:DV:44:HIS:NE2	43:DV:85:LYS:HB2	2.35	0.42
28:BG:125:CYS:HB3	28:BG:127:THR:O	2.19	0.42
28:BG:125:CYS:HB3	28:BG:130:GLU:O	2.20	0.42
1:AA:1049:U:O2	1:AA:1201:A:C5	2.72	0.42
9:AI:20:PHE:O	9:AI:63:LEU:HA	2.20	0.42
22:BA:2244:U:O2'	22:BA:2245:U:H5'	2.20	0.42
1:AA:353:A:H2'	1:AA:354:G:OP2	2.20	0.42
22:BA:2:G:H2'	22:BA:3:U:C6	2.55	0.42
22:BA:1456:G:C5	22:BA:1457:U:C5	3.08	0.42
1:AA:31:G:O2'	1:AA:48:C:N4	2.52	0.42
22:DA:2805:C:H2'	22:DA:2806:C:C6	2.55	0.42
23:DB:96:G:C5	23:DB:97:C:C5	3.08	0.42
22:BA:829:A:N7	22:BA:2247:A:O2'	2.47	0.42
30:BI:5:VAL:HA	30:BI:8:TYR:OH	2.20	0.42
24:DC:237:GLY:O	24:DC:239:ASN:N	2.53	0.42
22:DA:260:G:C6	22:DA:261:G:N7	2.87	0.42
22:BA:2055:C:H5'	22:BA:2056:G:O5'	2.19	0.42
1:CA:1082:A:OP2	5:CE:23:LYS:HE2	2.20	0.42
22:DA:2776:A:C6	22:DA:2778:A:C6	3.07	0.42
22:DA:748:G:C8	40:DS:89:ALA:HB1	2.55	0.42
1:CA:204:G:H2'	1:CA:205:A:O4'	2.20	0.42
4:AD:114:ALA:HA	4:AD:117:LEU:HD12	2.01	0.42
2:AB:32:PHE:CG	2:AB:32:PHE:O	2.73	0.42
3:AC:103:ILE:HD12	3:AC:103:ILE:O	2.20	0.42
16:AP:16:PHE:CD1	16:AP:16:PHE:C	2.92	0.42
28:BG:24:ILE:HG21	28:BG:72:LEU:HD21	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:21:ARG:HD3	26:DE:106:LYS:HB3	2.01	0.42
29:BH:139:PHE:O	29:BH:140:ALA:HB3	2.20	0.42
25:DD:150:GLN:O	25:DD:150:GLN:HG3	2.17	0.42
29:DH:41:LYS:HE2	29:DH:44:ILE:CD1	2.50	0.42
1:CA:1072:G:C2	1:CA:1104:G:C2	3.07	0.42
2:CB:102:THR:HB	2:CB:175:GLU:HG2	2.02	0.42
24:DC:160:THR:N	24:DC:195:VAL:HG13	2.35	0.42
22:BA:1076:C:H2'	22:BA:1077:A:N9	2.35	0.42
22:BA:571:U:C5	22:BA:575:A:C6	3.08	0.42
21:CU:34:ARG:HE	21:CU:35:ARG:HB2	1.85	0.42
22:BA:245:G:H2'	22:BA:246:C:H6	1.84	0.42
22:DA:142:A:C5	22:DA:143:C:N4	2.87	0.42
11:CK:35:THR:HG1	11:CK:40:ASN:H	1.68	0.42
29:DH:32:PRO:HB3	45:DX:39:TRP:CD1	2.54	0.42
1:AA:1299:A:N3	1:AA:1299:A:C2'	2.79	0.42
1:CA:143:A:H5'	1:CA:144:G:C5'	2.50	0.42
1:CA:1133:G:N3	1:CA:1142:G:C2	2.87	0.42
22:DA:1180:U:H5'	22:DA:1181:U:OP2	2.19	0.42
1:CA:921:U:H2'	1:CA:922:G:O4'	2.20	0.42
22:DA:2327:A:H2'	22:DA:2328:A:C8	2.54	0.42
22:DA:2330:G:N2	22:DA:2386:A:C2	2.87	0.42
4:CD:148:LYS:H	4:CD:148:LYS:CE	2.33	0.42
1:AA:257:G:O2'	1:AA:258:G:H5'	2.20	0.42
22:BA:618:G:C6	22:BA:619:G:C4	3.08	0.42
6:AF:85:ILE:O	6:AF:86:ARG:HG2	2.20	0.42
37:DP:99:TYR:CE2	37:DP:100:LEU:HD21	2.55	0.42
32:DK:6:THR:O	32:DK:8:LEU:HD12	2.20	0.42
2:AB:103:ASN:ND2	2:AB:106:THR:HB	2.34	0.42
1:CA:1520:C:H2'	1:CA:1521:C:C6	2.55	0.42
1:AA:1173:U:OP1	7:AG:5:ARG:NH1	2.52	0.42
1:CA:880:C:C2'	1:CA:881:G:H5'	2.50	0.42
22:DA:271:G:C2	22:DA:367:G:C2	3.07	0.42
24:DC:67:PHE:CE2	24:DC:156:ARG:NH2	2.88	0.42
22:BA:2786:U:P	25:BD:70:LYS:HZ1	2.40	0.42
1:AA:189:A:O2'	1:AA:190:A:H5'	2.19	0.42
33:BL:79:LEU:HD12	33:BL:112:LEU:HD12	2.02	0.42
8:AH:11:LEU:HD11	8:AH:127:CYS:CB	2.49	0.42
1:AA:588:G:C2	1:AA:589:U:C2	3.07	0.42
1:AA:588:G:C6	1:AA:589:U:C2	3.08	0.42
22:DA:2104:C:C2'	22:DA:2105:U:O4'	2.66	0.42
1:AA:102:G:C6	1:AA:103:U:C4	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:278:G:OP2	17:CQ:43:LYS:NZ	2.53	0.42
2:AB:147:SER:O	2:AB:148:LEU:CG	2.68	0.42
3:CC:40:ARG:HA	3:CC:55:ILE:CD1	2.50	0.42
22:BA:2267:A:H5''	22:BA:2268:A:C5'	2.50	0.42
22:DA:2323:G:C5	22:DA:2324:U:C5	3.08	0.42
2:CB:64:LYS:C	2:CB:64:LYS:HD3	2.41	0.42
1:CA:549:C:H2'	1:CA:550:G:O5'	2.20	0.42
1:AA:595:A:C6	1:AA:641:U:C5	3.08	0.42
20:CT:39:ILE:HD11	20:CT:83:ILE:HG22	2.01	0.42
37:DP:30:VAL:HG12	37:DP:31:TRP:O	2.19	0.42
30:DI:113:LYS:O	30:DI:117:MET:HB2	2.20	0.42
3:CC:64:ILE:HG23	3:CC:99:ALA:HB2	2.02	0.42
30:DI:80:LEU:HD13	30:DI:136:MET:SD	2.60	0.42
11:CK:91:PRO:O	11:CK:92:GLY:O	2.38	0.42
1:AA:1446:A:N6	1:AA:1447:A:H62	2.18	0.42
1:AA:1539:C:H5''	21:AU:18:ARG:CG	2.49	0.42
1:AA:612:C:H2'	1:AA:613:C:H6	1.85	0.42
22:DA:2073:C:O2	22:DA:2437:G:C2	2.72	0.42
1:CA:865:A:C2	1:CA:918:A:H4'	2.55	0.42
1:AA:292:G:C2	1:AA:309:A:C2	3.08	0.42
1:CA:1401:G:C2	1:CA:1402:C:H1'	2.55	0.42
22:BA:536:G:C6	22:BA:537:G:C4	3.08	0.42
1:AA:1069:C:H4'	1:AA:1192:C:O2	2.20	0.42
33:DL:19:LEU:HD23	33:DL:31:GLY:O	2.19	0.42
22:DA:2521:C:C2	22:DA:2545:G:N2	2.88	0.42
22:DA:980:A:C4	22:DA:1136:G:O4'	2.73	0.42
1:CA:1441:A:C8	1:CA:1442:G:C8	3.08	0.42
10:CJ:26:VAL:HG21	10:CJ:39:PRO:HG3	2.01	0.42
3:AC:129:MET:HB3	3:AC:132:ARG:HG3	2.01	0.42
1:AA:681:A:C6	1:AA:710:G:C6	3.08	0.42
22:BA:729:G:H4'	22:BA:763:G:C5'	2.49	0.42
22:DA:1199:U:H2'	22:DA:1200:C:C6	2.55	0.42
5:CE:12:GLN:HA	5:CE:12:GLN:OE1	2.19	0.42
5:CE:11:LEU:HG	5:CE:12:GLN:N	2.35	0.42
22:DA:2685:G:C4	22:DA:2686:G:C8	3.07	0.42
30:BI:96:ASP:O	30:BI:98:VAL:HG23	2.19	0.42
17:CQ:75:LEU:C	17:CQ:75:LEU:CD1	2.88	0.42
49:D1:47:VAL:HG12	49:D1:48:ILE:N	2.35	0.42
22:BA:2540:C:H2'	22:BA:2541:A:O4'	2.20	0.42
1:CA:499:A:H4'	1:CA:500:G:OP1	2.19	0.42
1:CA:1130:A:C1'	1:CA:1146:A:C2	3.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:340:A:H2'	22:BA:341:C:C5'	2.50	0.42
29:BH:82:SER:HG	29:BH:90:LEU:HG	1.85	0.42
22:DA:70:G:H5''	22:DA:112:U:O2	2.19	0.42
22:BA:1022:G:C5	22:BA:1140:C:C4	3.07	0.42
1:CA:1125:U:H4'	10:CJ:7:ARG:NH1	2.34	0.42
4:CD:95:GLU:OE2	4:CD:100:ASN:ND2	2.46	0.42
22:DA:300:A:HO2'	22:DA:318:C:HO2'	1.34	0.42
9:AI:57:MET:CG	9:AI:58:VAL:H	2.32	0.42
1:AA:1025:U:H5''	1:AA:1026:G:O5'	2.20	0.42
23:DB:29:A:OP2	36:DO:32:PRO:HD2	2.20	0.42
21:CU:36:GLU:OE2	21:CU:38:TYR:CD2	2.73	0.42
22:BA:2591:C:OP2	24:BC:237:GLY:O	2.38	0.42
22:DA:1190:G:OP1	33:DL:32:GLY:CA	2.68	0.42
22:BA:2130:U:OP2	22:BA:2132:U:O4	2.38	0.42
22:BA:687:C:O2'	22:BA:1780:A:N1	2.44	0.42
22:BA:973:A:P	58:BA:3781:HOH:O	2.78	0.42
20:AT:67:ILE:O	20:AT:68:HIS:C	2.57	0.42
20:AT:67:ILE:HD11	20:AT:71:LYS:CE	2.50	0.42
22:DA:844:A:N3	22:DA:845:A:N7	2.68	0.42
7:AG:69:VAL:HG21	7:AG:104:ILE:HG13	2.02	0.42
22:BA:1731:G:C5	22:BA:1733:G:C8	3.08	0.42
10:AJ:56:HIS:O	10:AJ:57:VAL:HG12	2.20	0.42
22:DA:1623:G:C2	22:DA:1624:U:C6	3.08	0.42
27:BF:41:GLY:HA2	27:BF:85:ILE:HG13	2.02	0.42
1:AA:105:G:N2	1:AA:379:C:O3'	2.53	0.42
40:DS:55:ILE:O	40:DS:58:ALA:HB3	2.20	0.42
22:BA:1721:G:HO2'	22:BA:1722:A:H8	1.67	0.42
4:AD:165:ARG:O	4:AD:166:GLU:C	2.57	0.42
30:BI:18:ALA:CB	30:BI:42:PHE:CZ	3.03	0.42
22:BA:136:G:C6	22:BA:137:U:O4	2.73	0.42
22:BA:770:G:O2'	22:BA:771:G:H5'	2.20	0.42
2:CB:119:THR:O	2:CB:120:GLN:HB2	2.20	0.42
22:DA:480:A:H4'	42:DU:44:LYS:HB2	2.02	0.42
1:CA:582:C:O2	1:CA:760:G:C2	2.73	0.42
22:DA:1818:U:H2'	24:DC:156:ARG:HD3	2.02	0.42
3:AC:97:VAL:CB	3:AC:98:PRO:CD	2.97	0.42
13:CM:11:ASP:HA	13:CM:45:ILE:HD13	2.01	0.42
1:CA:821:G:C4	1:CA:822:U:C5	3.08	0.42
25:DD:104:VAL:HG23	25:DD:105:LYS:H	1.85	0.42
22:DA:1544:A:N1	22:DA:1545:A:C2	2.88	0.42
1:AA:1312:G:C2	1:AA:1326:U:N3	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2582:G:O2'	22:BA:2583:G:H5'	2.20	0.42
1:CA:1540:U:H4'	21:CU:18:ARG:HG2	2.02	0.42
35:BN:32:GLU:CB	35:BN:115:LEU:HD12	2.50	0.42
21:CU:14:VAL:HG13	21:CU:15:ALA:N	2.35	0.42
25:DD:194:PRO:O	25:DD:195:GLY:O	2.38	0.42
1:AA:69:G:H3'	1:AA:70:U:C6	2.55	0.42
28:DG:41:VAL:HG22	28:DG:64:GLN:HB3	2.02	0.42
2:AB:19:GLN:HB3	2:AB:189:THR:OG1	2.19	0.42
22:DA:374:A:C8	22:DA:400:G:N2	2.88	0.42
1:CA:273:U:H2'	1:CA:274:A:H5'	2.02	0.42
1:CA:116:A:C4	1:CA:117:G:C8	3.08	0.42
22:BA:2560:A:C6	22:BA:2561:U:C4	3.08	0.42
22:DA:996:A:O3'	38:DQ:91:ASP:HB2	2.19	0.42
23:DB:84:G:C2	23:DB:93:C:O2	2.73	0.42
22:DA:1483:G:C5	22:DA:1484:U:C5	3.08	0.42
11:AK:112:ASP:CG	11:AK:114:THR:HG23	2.40	0.42
1:CA:1014:A:C4	19:CS:34:TRP:CH2	3.08	0.42
9:AI:130:ARG:HB3	9:AI:130:ARG:CZ	2.50	0.42
31:DJ:25:LEU:HD11	31:DJ:100:VAL:HG12	2.02	0.42
27:DF:117:LEU:CD2	27:DF:176:PRO:HG2	2.50	0.42
16:CP:19:VAL:CG1	16:CP:37:GLY:CA	2.98	0.42
31:DJ:34:ARG:CG	31:DJ:39:LYS:HB2	2.50	0.42
1:AA:1074:G:O3'	2:AB:102:THR:CG2	2.67	0.42
43:BV:43:ASP:OD1	43:BV:43:ASP:C	2.58	0.42
42:DU:51:ALA:O	42:DU:52:LEU:HB2	2.19	0.42
7:AG:63:GLU:O	7:AG:67:GLU:HB2	2.20	0.42
52:D4:3:VAL:O	52:D4:3:VAL:CG2	2.68	0.42
22:BA:1206:G:C6	22:BA:1207:C:C4	3.08	0.42
33:DL:74:THR:HG22	33:DL:107:PHE:HB2	2.01	0.42
51:D3:16:LYS:HE3	51:D3:20:GLY:HA2	2.02	0.42
34:DM:64:TRP:CE3	34:DM:64:TRP:N	2.88	0.42
53:B5:200:HIS:O	53:B5:201:LYS:C	2.58	0.42
1:CA:1456:A:H2'	1:CA:1457:G:O4'	2.20	0.42
22:BA:1651:G:N2	22:BA:2007:U:C2	2.88	0.42
11:CK:67:ALA:HB1	11:CK:100:LEU:HD13	2.02	0.42
22:DA:712:G:C6	22:DA:713:G:C5	3.07	0.42
1:CA:562:U:H1'	12:CL:12:ARG:HG3	2.02	0.42
24:DC:240:PHE:CE1	24:DC:242:LYS:O	2.72	0.42
7:CG:123:GLU:O	7:CG:127:ALA:HB2	2.20	0.42
22:BA:2883:A:OP2	48:B0:50:ARG:NH1	2.52	0.42
1:AA:961:U:OP2	1:AA:1223:C:H1'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:10:GLU:O	14:CN:11:VAL:C	2.58	0.42
22:BA:2473:U:O2	22:BA:2473:U:H2'	2.19	0.42
22:BA:549:G:O4'	22:BA:549:G:N3	2.53	0.42
22:DA:1524:G:H2'	22:DA:1524:G:N3	2.35	0.42
28:BG:89:LEU:CD1	28:BG:89:LEU:N	2.83	0.42
10:CJ:5:ARG:HA	10:CJ:5:ARG:HD3	1.89	0.42
22:DA:2582:G:H2'	22:DA:2582:G:N3	2.35	0.42
22:DA:852:U:H2'	22:DA:853:C:O4'	2.20	0.42
22:DA:1858:A:C2	22:DA:1859:U:C2	3.08	0.42
23:DB:60:C:N4	23:DB:61:G:O6	2.53	0.42
22:DA:2219:U:O2'	22:DA:2220:U:H5'	2.20	0.42
28:BG:46:ALA:O	28:BG:47:ASP:HB2	2.20	0.42
2:AB:21:ARG:NE	2:AB:21:ARG:CA	2.83	0.41
1:AA:1080:A:OP1	5:AE:52:LYS:CE	2.68	0.41
2:CB:210:VAL:HG22	2:CB:211:THR:H	1.85	0.41
22:DA:527:C:OP2	22:DA:2779:U:N3	2.53	0.41
22:DA:2117:A:C2	22:DA:2171:A:N1	2.87	0.41
22:BA:2800:A:H3'	22:BA:2801:G:C5'	2.40	0.41
22:DA:2286:G:C5'	22:DA:2287:A:O4'	2.68	0.41
1:CA:1302:C:C4	13:CM:17:ILE:HD13	2.54	0.41
11:AK:31:ILE:HB	11:AK:46:THR:HG22	2.02	0.41
1:AA:1350:A:P	9:AI:123:ARG:HD3	2.60	0.41
22:DA:449:A:H2'	22:DA:450:G:H5'	2.01	0.41
22:BA:2077:A:C5	22:BA:2435:A:C6	3.08	0.41
1:CA:1138:G:O2'	1:CA:1140:C:H5'	2.20	0.41
22:DA:1068:G:N3	22:DA:1096:A:C5'	2.83	0.41
22:BA:2032:G:H1'	25:BD:150:GLN:OE1	2.18	0.41
29:BH:104:THR:CG2	29:BH:110:VAL:O	2.68	0.41
30:BI:42:PHE:C	30:BI:42:PHE:CD2	2.94	0.41
10:CJ:34:ALA:O	10:CJ:35:GLN:CB	2.68	0.41
1:AA:1217:C:H2'	1:AA:1218:C:C6	2.54	0.41
1:AA:1133:G:C2	1:AA:1142:G:C2	3.08	0.41
33:DL:59:ARG:NH1	33:DL:59:ARG:HB3	2.34	0.41
1:AA:1442:G:C6	1:AA:1443:C:C4	3.09	0.41
22:DA:2195:U:H2'	22:DA:2196:C:H6	1.85	0.41
22:BA:2887:A:H2'	22:BA:2887:A:N3	2.34	0.41
22:BA:2897:U:H2'	22:BA:2898:U:H6	1.85	0.41
27:BF:112:ARG:O	27:BF:113:ASP:HB2	2.20	0.41
22:DA:1238:G:C2	22:DA:1239:G:C8	3.08	0.41
22:DA:391:A:N7	22:DA:392:U:C5	2.88	0.41
22:DA:2103:C:H2'	22:DA:2104:C:C6	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2321:U:H5'	22:DA:2322:A:OP2	2.20	0.41
13:AM:107:ARG:HG2	13:AM:107:ARG:HH11	1.85	0.41
1:AA:194:C:O2'	1:AA:195:A:H5'	2.19	0.41
22:DA:1739:A:C5	22:DA:1740:G:C5	3.07	0.41
1:AA:1308:U:OP1	13:AM:97:VAL:N	2.52	0.41
22:BA:2282:G:H4'	22:BA:2389:G:O2'	2.20	0.41
1:AA:1280:A:C3'	1:AA:1281:C:H5'	2.50	0.41
31:DJ:11:VAL:CG1	31:DJ:12:LYS:N	2.83	0.41
22:DA:1874:C:H3'	22:DA:1875:G:C8	2.55	0.41
2:AB:210:VAL:O	2:AB:212:LEU:N	2.52	0.41
1:CA:1319:A:OP2	19:CS:5:LEU:HD22	2.20	0.41
16:CP:4:ILE:HD11	16:CP:65:ALA:HB1	2.02	0.41
1:AA:1049:U:O4'	1:AA:1201:A:C8	2.73	0.41
1:CA:78:A:C2	1:CA:92:U:O2	2.73	0.41
20:CT:43:ASP:HB3	20:CT:46:ALA:CB	2.50	0.41
7:CG:71:PRO:HD2	7:CG:96:ARG:O	2.20	0.41
5:AE:46:VAL:HG11	5:AE:118:ALA:HB2	2.02	0.41
1:CA:108:G:C6	20:CT:10:ARG:HG2	2.55	0.41
28:BG:24:ILE:O	28:BG:34:THR:HA	2.20	0.41
1:AA:1064:G:O2'	1:AA:1190:G:N2	2.52	0.41
22:DA:412:A:H2'	22:DA:413:C:H5'	2.02	0.41
8:CH:35:ALA:O	8:CH:39:VAL:HG23	2.19	0.41
19:AS:52:HIS:CD2	19:AS:54:GLY:H	2.38	0.41
1:AA:756:C:H2'	1:AA:757:U:O4'	2.20	0.41
22:BA:1836:C:C2'	22:BA:1837:C:H5'	2.50	0.41
36:BO:15:ARG:HH21	36:BO:95:SER:CB	2.33	0.41
34:DM:76:LYS:NZ	34:DM:83:GLY:O	2.50	0.41
22:DA:1710:G:H2'	22:DA:1711:A:O4'	2.20	0.41
34:BM:105:MET:HG2	34:BM:106:ASP:N	2.35	0.41
22:BA:2315:G:OP1	27:BF:33:LYS:NZ	2.47	0.41
23:BB:50:A:H2'	23:BB:51:G:O5'	2.20	0.41
22:BA:1026:G:H2'	22:BA:1027:A:C8	2.55	0.41
22:DA:1844:C:H5'	24:DC:254:GLY:O	2.20	0.41
20:CT:8:LYS:O	20:CT:11:ALA:HB3	2.20	0.41
5:CE:147:MET:HG2	5:CE:147:MET:O	2.20	0.41
54:D6:2:THR:OG1	54:D6:2:THR:O	2.35	0.41
27:DF:135:GLN:N	27:DF:135:GLN:OE1	2.51	0.41
33:DL:40:SER:HB3	58:DL:203:HOH:O	2.21	0.41
17:AQ:41:THR:HG22	17:AQ:42:THR:N	2.35	0.41
22:BA:1153:C:H2'	22:BA:1154:G:O4'	2.20	0.41
22:BA:1073:A:H2'	22:BA:1074:G:H5''	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:11:LEU:HD11	30:BI:27:ALA:O	2.20	0.41
22:BA:1916:A:C2	22:BA:1917:U:H1'	2.55	0.41
1:AA:452:A:N7	1:AA:453:G:C8	2.88	0.41
22:DA:1153:C:H2'	22:DA:1154:G:O4'	2.20	0.41
35:BN:67:PHE:O	35:BN:71:ARG:N	2.52	0.41
2:CB:207:ILE:HG12	2:CB:208:ARG:N	2.34	0.41
1:AA:64:G:N7	1:AA:99:C:C4	2.88	0.41
12:CL:94:ARG:HB2	12:CL:95:TYR:CE2	2.55	0.41
3:AC:11:ARG:O	3:AC:12:LEU:C	2.58	0.41
22:DA:2144:G:N2	22:DA:2146:C:O2	2.53	0.41
22:BA:2127:G:H5'	22:BA:2128:G:OP1	2.19	0.41
13:AM:16:VAL:HA	13:AM:34:LEU:CD1	2.50	0.41
1:CA:98:A:C2	1:CA:99:C:C2	3.09	0.41
17:AQ:16:LYS:HB3	17:AQ:17:MET:HE1	2.02	0.41
20:AT:5:LYS:O	20:AT:6:SER:C	2.59	0.41
1:AA:1298:U:O4'	1:AA:1299:A:C6	2.74	0.41
1:CA:147:G:H2'	1:CA:148:G:C8	2.55	0.41
22:BA:2185:U:C2'	22:BA:2186:G:H5'	2.50	0.41
32:DK:70:ARG:HG2	32:DK:76:VAL:HG23	2.02	0.41
1:CA:577:G:N3	1:CA:578:C:C6	2.89	0.41
22:BA:2075:U:C4	22:BA:2238:G:C6	3.08	0.41
9:AI:10:GLY:HA2	9:AI:81:HIS:ND1	2.34	0.41
1:AA:658:C:H1'	15:AO:22:THR:HG21	2.02	0.41
1:CA:211:G:H21	1:CA:212:G:H1'	1.83	0.41
22:BA:1753:G:OP1	37:BP:93:ARG:HD3	2.20	0.41
22:BA:1936:A:C6	22:BA:1945:G:C4	3.07	0.41
1:CA:463:U:H2'	1:CA:463:U:O2	2.19	0.41
22:DA:1327:A:N6	22:DA:1328:A:C2	2.88	0.41
4:CD:33:LYS:O	4:CD:34:ILE:C	2.58	0.41
22:BA:1421:G:C2	22:BA:1422:G:N7	2.88	0.41
21:AU:4:ILE:N	21:AU:20:LYS:HE3	2.35	0.41
1:AA:1211:U:O2'	1:AA:1212:U:O5'	2.37	0.41
11:AK:27:PHE:CE2	11:AK:89:PRO:CG	3.03	0.41
27:BF:52:ASN:CB	27:BF:147:ASP:OD2	2.68	0.41
1:CA:247:G:C5	1:CA:278:G:C2	3.08	0.41
1:AA:69:G:H5'	1:AA:70:U:P	2.60	0.41
20:AT:58:VAL:HG12	20:AT:72:ALA:HB1	2.02	0.41
1:AA:1475:G:H4'	22:BA:1689:A:H4'	2.02	0.41
1:CA:174:A:C2	1:CA:175:C:C1'	3.03	0.41
1:AA:181:A:C4	1:AA:194:C:N4	2.88	0.41
22:DA:1276:A:C2	22:DA:1295:C:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:959:A:N6	22:BA:960:A:N1	2.68	0.41
22:DA:1664:A:C8	22:DA:1664:A:OP2	2.73	0.41
1:AA:615:G:N3	1:AA:616:G:C8	2.88	0.41
22:BA:44:A:C2	22:BA:45:G:C4	3.08	0.41
1:CA:833:G:C5	1:CA:834:U:C5	3.08	0.41
41:BT:2:ILE:HG23	41:BT:4:GLU:HA	2.01	0.41
41:DT:2:ILE:HA	41:DT:3:ARG:CB	2.50	0.41
22:DA:1500:G:C6	22:DA:1501:G:C5	3.07	0.41
1:AA:100:G:H2'	1:AA:101:A:H5'	2.02	0.41
1:CA:79:G:N2	1:CA:91:U:C2	2.88	0.41
11:CK:77:TYR:O	11:CK:78:GLY:C	2.59	0.41
1:AA:174:A:C2	1:AA:175:C:C1'	3.03	0.41
22:BA:2038:G:H2'	22:BA:2039:U:O4'	2.21	0.41
1:AA:1385:G:O2'	1:AA:1386:G:H5'	2.20	0.41
22:DA:2813:A:H2'	22:DA:2814:A:O4'	2.20	0.41
40:DS:24:ILE:CG2	40:DS:32:ALA:HB1	2.50	0.41
15:CO:49:ASP:OD2	15:CO:52:SER:OG	2.37	0.41
7:AG:127:ALA:O	7:AG:128:ALA:C	2.57	0.41
27:DF:6:ASP:HA	27:DF:9:LYS:HD2	2.01	0.41
1:CA:1461:G:H2'	1:CA:1462:C:O4'	2.20	0.41
22:BA:1479:G:O2'	22:BA:1480:C:H5'	2.19	0.41
22:BA:1205:A:C6	26:BE:165:HIS:HB2	2.55	0.41
22:DA:818:G:O2'	22:DA:819:A:O4'	2.35	0.41
3:CC:179:ARG:O	3:CC:206:GLU:O	2.38	0.41
22:BA:2336:A:N3	22:BA:2385:C:H1'	2.35	0.41
22:BA:2348:U:O2'	22:BA:2349:G:H5'	2.19	0.41
2:CB:126:PHE:CD1	2:CB:126:PHE:C	2.91	0.41
19:AS:70:LYS:HA	19:AS:70:LYS:HD2	1.89	0.41
4:CD:188:ARG:HA	4:CD:188:ARG:HD2	1.80	0.41
29:DH:135:HIS:CG	29:DH:136:SER:N	2.88	0.41
30:DI:83:ALA:O	30:DI:84:ALA:HB2	2.20	0.41
22:BA:1244:A:OP1	33:BL:7:SER:OG	2.37	0.41
22:BA:994:C:H1'	39:BR:10:LYS:HE3	2.02	0.41
29:DH:40:THR:OG1	29:DH:43:ASN:ND2	2.53	0.41
1:AA:478:A:H2'	1:AA:479:U:C4'	2.50	0.41
14:AN:43:ASN:HA	14:AN:45:VAL:HG22	2.03	0.41
1:CA:1216:A:H2'	1:CA:1217:C:H6	1.86	0.41
5:AE:104:GLY:O	5:AE:105:ILE:CG2	2.66	0.41
22:DA:226:A:C2	22:DA:230:G:O6	2.74	0.41
22:DA:1654:A:OP1	35:DN:1:MET:HA	2.20	0.41
22:DA:1351:C:H2'	22:DA:1352:U:C1'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:783:A:C8	22:DA:784:G:H4'	2.55	0.41
8:AH:12:THR:OG1	8:AH:15:ARG:NH2	2.53	0.41
22:DA:119:A:H4'	22:DA:120:U:O5'	2.21	0.41
22:DA:120:U:H3'	22:DA:120:U:OP2	2.21	0.41
22:DA:46:G:N2	22:DA:47:C:N1	2.69	0.41
29:DH:53:GLU:C	29:DH:55:GLU:N	2.72	0.41
11:AK:23:ILE:HD11	11:AK:86:VAL:HG13	2.02	0.41
36:BO:64:TYR:O	36:BO:67:ASN:ND2	2.52	0.41
28:BG:80:THR:HG22	28:BG:81:GLU:H	1.84	0.41
20:AT:69:LYS:NZ	20:AT:69:LYS:HB2	2.36	0.41
48:B0:54:VAL:O	48:B0:55:ILE:C	2.59	0.41
22:DA:41:C:H2'	22:DA:42:A:O4'	2.20	0.41
1:CA:976:G:H5''	1:CA:1358:U:O2'	2.19	0.41
7:AG:135:VAL:O	7:AG:139:GLU:HG2	2.19	0.41
29:DH:31:VAL:HB	29:DH:32:PRO:HD2	2.00	0.41
15:CO:36:ILE:HG23	15:CO:56:LEU:HD11	2.03	0.41
1:AA:346:G:C8	37:BP:37:LYS:HE2	2.55	0.41
22:BA:620:G:H4'	22:BA:621:A:O5'	2.20	0.41
22:BA:1056:G:H5''	22:BA:1057:A:C5'	2.51	0.41
12:CL:33:VAL:O	12:CL:34:CYS:CB	2.68	0.41
22:BA:2077:A:C5	22:BA:2435:A:C5	3.08	0.41
53:B5:47:LYS:C	53:B5:48:LEU:HD23	2.41	0.41
1:CA:939:G:P	7:CG:95:ARG:NH2	2.94	0.41
1:AA:1152:A:O2'	1:AA:1153:G:H5'	2.20	0.41
2:AB:33:GLY:N	2:AB:40:ILE:O	2.53	0.41
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.50	0.41
22:BA:141:G:H3'	22:BA:142:A:C8	2.54	0.41
1:CA:1514:G:C4	1:CA:1515:G:C8	3.09	0.41
4:CD:24:GLY:O	4:CD:161:LEU:HD11	2.19	0.41
21:AU:17:ARG:NH1	21:AU:20:LYS:HG2	2.34	0.41
21:AU:4:ILE:HD13	21:AU:20:LYS:NZ	2.36	0.41
51:D3:30:ARG:O	51:D3:31:HIS:HB3	2.20	0.41
4:CD:124:MET:HG3	4:CD:146:ARG:HG2	2.02	0.41
22:BA:2838:G:O3'	35:BN:46:ARG:HD3	2.20	0.41
22:BA:1105:U:H2'	22:BA:1106:G:H8	1.85	0.41
1:CA:130:A:C2	1:CA:264:C:N1	2.88	0.41
1:AA:880:C:C2'	1:AA:881:G:H5'	2.50	0.41
1:AA:1379:G:C6	1:AA:1380:U:O4	2.73	0.41
1:CA:773:G:C2	1:CA:807:A:N1	2.89	0.41
1:CA:219:U:C2	1:CA:220:G:C8	3.09	0.41
1:AA:1237:C:C4	1:AA:1336:C:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1494:G:O2'	22:DA:1912:A:O2'	2.11	0.41
22:DA:2788:C:O2'	22:DA:2809:A:N3	2.41	0.41
27:BF:124:GLY:O	27:BF:125:ARG:HG2	2.18	0.41
21:CU:29:LEU:HD23	21:CU:29:LEU:C	2.40	0.41
22:BA:674:G:H5''	26:BE:71:GLY:N	2.34	0.41
30:DI:124:ALA:C	30:DI:126:THR:H	2.23	0.41
1:AA:142:G:C6	1:AA:143:A:C6	3.08	0.41
22:BA:2623:G:H4'	22:BA:2825:G:C8	2.55	0.41
35:DN:20:MET:CG	35:DN:21:PHE:N	2.83	0.41
22:DA:558:U:H2'	22:DA:559:G:C8	2.55	0.41
22:BA:1695:G:C8	24:BC:8:PRO:HG2	2.55	0.41
22:BA:2560:A:C5	22:BA:2561:U:C5	3.07	0.41
22:DA:2744:G:N1	22:DA:2761:A:C6	2.88	0.41
11:CK:64:GLN:O	11:CK:68:GLU:HG3	2.20	0.41
22:DA:1874:C:C4	22:DA:1875:G:C6	3.08	0.41
22:BA:283:G:C5	22:BA:284:U:C4	3.09	0.41
22:DA:1632:A:C6	22:DA:1633:G:C6	3.08	0.41
16:CP:4:ILE:CD1	16:CP:65:ALA:HB1	2.50	0.41
22:DA:804:A:H2'	22:DA:806:C:C4	2.55	0.41
34:DM:67:VAL:HG11	34:DM:96:ILE:HD11	2.01	0.41
22:BA:273:G:N2	22:BA:365:U:C2	2.89	0.41
22:BA:2419:U:H2'	22:BA:2420:C:C6	2.55	0.41
34:DM:62:LYS:HD3	34:DM:64:TRP:CZ2	2.55	0.41
7:CG:33:ASP:HB3	7:CG:35:LYS:HE3	2.01	0.41
2:CB:104:TRP:CH2	2:CB:155:GLY:C	2.93	0.41
35:BN:21:PHE:HB3	35:BN:47:VAL:HG21	2.02	0.41
22:BA:189:G:H2'	22:BA:205:G:N2	2.35	0.41
26:DE:113:VAL:HG23	26:DE:118:LEU:HD23	2.01	0.41
22:BA:1652:A:C2	22:BA:2006:C:N3	2.89	0.41
22:DA:1801:A:C5	24:DC:262:ARG:NH2	2.88	0.41
46:DY:5:GLU:HB3	46:DY:8:GLU:OE1	2.20	0.41
41:BT:41:ALA:O	41:BT:44:LYS:N	2.53	0.41
4:AD:40:GLN:OE1	4:AD:41:HIS:CE1	2.74	0.41
22:DA:2756:U:C4	22:DA:2759:G:O6	2.73	0.41
1:CA:743:A:C6	1:CA:744:C:C4	3.08	0.41
22:DA:282:A:C6	22:DA:283:G:C6	3.08	0.41
4:CD:40:GLN:O	4:CD:40:GLN:HG2	2.20	0.41
3:CC:101:ILE:CG2	3:CC:101:ILE:O	2.68	0.41
21:AU:33:ARG:O	21:AU:33:ARG:HG3	2.20	0.41
22:BA:1317:G:C2	22:BA:1336:A:C2	3.08	0.41
5:CE:44:GLY:O	5:CE:45:ARG:O	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:169:GLU:O	2:AB:170:HIS:C	2.59	0.41
29:BH:90:LEU:HD13	29:BH:125:THR:HA	2.03	0.41
1:AA:1491:G:H2'	1:AA:1492:A:O4'	2.20	0.41
22:DA:842:U:C2	22:DA:843:G:C8	3.08	0.41
9:AI:51:PRO:HB2	9:AI:83:ILE:CG2	2.51	0.41
22:DA:2135:A:N6	22:DA:2156:G:O2'	2.53	0.41
22:DA:1345:C:H2'	22:DA:1346:G:O4'	2.20	0.41
35:DN:90:ARG:HG2	35:DN:92:GLY:O	2.21	0.41
18:CR:58:ALA:O	18:CR:59:ILE:C	2.58	0.41
22:DA:515:A:H2'	22:DA:516:C:H5'	2.02	0.41
42:DU:9:ASP:O	42:DU:25:VAL:HG23	2.21	0.41
22:DA:1603:A:OP2	22:DA:1604:C:OP2	2.39	0.41
22:BA:1085:A:N6	22:BA:1086:A:N6	2.69	0.41
27:BF:78:LYS:O	27:BF:79:ILE:HG23	2.21	0.41
33:BL:63:LYS:HA	51:B3:13:ARG:HG3	2.02	0.41
1:CA:1140:C:O2'	1:CA:1141:C:O5'	2.36	0.41
22:DA:863:A:H2'	22:DA:864:G:C8	2.55	0.41
42:BU:39:ILE:O	42:BU:40:ASN:C	2.58	0.41
22:BA:1071:G:O4'	22:BA:1089:A:N7	2.53	0.41
22:DA:750:A:N3	22:DA:750:A:H2'	2.36	0.41
30:DI:28:LEU:HD11	30:DI:35:ILE:HD13	2.02	0.41
1:AA:697:U:C6	1:AA:698:G:C8	3.07	0.41
22:DA:477:A:C4	22:DA:478:A:C8	3.08	0.41
2:AB:54:LEU:N	2:AB:54:LEU:HD22	2.35	0.41
13:CM:33:ILE:HG23	13:CM:59:GLU:CB	2.51	0.41
2:CB:21:ARG:NE	2:CB:21:ARG:HA	2.33	0.41
1:AA:65:A:C2	1:AA:381:C:C6	3.09	0.41
23:DB:94:A:C6	23:DB:95:U:C4	3.08	0.41
22:DA:78:U:OP2	46:DY:2:LYS:CD	2.68	0.41
1:AA:1324:A:C6	1:AA:1325:C:N3	2.88	0.41
1:AA:1216:A:H2'	1:AA:1217:C:C6	2.54	0.41
5:AE:115:LEU:HA	5:AE:115:LEU:HD12	1.92	0.41
40:BS:51:LEU:O	40:BS:54:ALA:HB3	2.19	0.41
1:CA:575:G:O2'	1:CA:821:G:OP2	2.25	0.41
22:DA:983:A:N6	22:DA:984:A:C2	2.88	0.41
22:DA:1525:A:C6	22:DA:1526:C:C4	3.08	0.41
41:DT:12:ARG:O	41:DT:13:ALA:CB	2.68	0.41
20:AT:83:ILE:O	20:AT:87:ALA:HB2	2.19	0.41
22:DA:590:A:C5	22:DA:591:U:C4	3.08	0.41
50:D2:26:ASN:O	50:D2:30:VAL:HG23	2.20	0.41
18:CR:20:GLU:HG3	18:CR:55:LEU:HD13	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:246:A:N3	1:AA:282:A:C6	2.88	0.41
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.54	0.41
22:DA:2190:G:O2'	22:DA:2191:A:H5'	2.20	0.41
30:BI:51:LYS:HB2	30:BI:51:LYS:HE2	1.93	0.41
22:DA:485:C:C4	22:DA:496:G:N1	2.88	0.41
2:AB:93:ASN:OD1	2:AB:94:HIS:ND1	2.52	0.41
23:DB:64:G:C6	23:DB:65:U:C4	3.09	0.41
49:B1:14:SER:HB3	49:B1:48:ILE:O	2.20	0.41
26:BE:108:ILE:CD1	26:BE:180:LEU:HB3	2.51	0.41
22:DA:1875:G:C2'	22:DA:1876:A:OP2	2.68	0.41
22:BA:1904:G:C2'	22:BA:1905:C:H5'	2.51	0.41
31:DJ:24:THR:O	31:DJ:25:LEU:C	2.58	0.41
22:BA:1441:G:H2'	22:BA:1442:U:H6	1.84	0.41
24:BC:261:LYS:HA	24:BC:264:ASP:OD2	2.20	0.41
9:AI:28:ILE:CG1	9:AI:63:LEU:HD21	2.49	0.41
9:AI:63:LEU:N	9:AI:63:LEU:HD22	2.36	0.41
1:CA:598:U:H4'	8:CH:86:TYR:CG	2.56	0.41
1:AA:1377:A:N3	7:AG:2:PRO:HG3	2.35	0.41
1:AA:1539:C:H5''	21:AU:18:ARG:HG3	2.02	0.41
22:BA:310:A:O2'	22:BA:311:A:OP2	2.35	0.41
35:BN:16:HIS:O	35:BN:17:ARG:C	2.58	0.41
22:BA:2489:U:C4	22:BA:2490:G:C6	3.09	0.41
22:DA:2685:G:C5	22:DA:2686:G:N7	2.88	0.41
22:BA:2831:G:OP1	25:BD:56:LYS:NZ	2.50	0.41
22:DA:1878:G:H2'	22:DA:1879:C:O4'	2.20	0.41
52:B4:25:VAL:O	52:B4:34:LYS:HA	2.20	0.41
1:AA:581:G:C8	1:AA:758:C:N4	2.88	0.41
25:BD:14:ILE:HD13	25:BD:24:VAL:HG21	2.03	0.41
1:AA:116:A:H2'	1:AA:117:G:C8	2.55	0.41
6:AF:11:HIS:HA	6:AF:12:PRO:HD2	1.91	0.41
22:BA:2219:U:H2'	22:BA:2220:U:O5'	2.20	0.41
26:DE:88:ARG:HB3	26:DE:89:PRO:HD2	2.03	0.41
23:BB:106:G:H2'	23:BB:107:G:O4'	2.20	0.41
22:BA:1863:G:C6	22:BA:1864:U:N3	2.89	0.41
48:D0:31:ASP:O	48:D0:33:THR:N	2.53	0.41
4:AD:60:LYS:NZ	4:AD:194:ASP:O	2.53	0.41
22:DA:323:C:O4'	22:DA:323:C:O2	2.36	0.41
28:DG:44:LYS:N	28:DG:44:LYS:HE3	2.36	0.41
9:AI:97:GLU:N	9:AI:97:GLU:CD	2.73	0.41
22:DA:1492:G:C4	22:DA:1496:A:N6	2.88	0.41
51:B3:39:LYS:HA	51:B3:42:ARG:NH2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:167:A:H2'	22:BA:168:G:O4'	2.20	0.41
22:DA:2446:G:C2	22:DA:2501:C:C5	3.09	0.41
1:AA:828:U:C2'	1:AA:829:G:O5'	2.69	0.41
22:BA:1009:A:P	31:BJ:39:LYS:NZ	2.93	0.41
1:AA:1128:C:N4	1:AA:1129:C:N4	2.68	0.41
3:AC:7:PRO:HD2	3:AC:184:TYR:CD1	2.55	0.41
35:DN:53:THR:O	35:DN:56:LYS:HB2	2.21	0.41
17:CQ:12:VAL:CG1	17:CQ:21:ILE:HD11	2.51	0.41
1:AA:428:G:C6	1:AA:430:A:N6	2.87	0.41
4:AD:9:LEU:O	4:AD:10:LYS:C	2.59	0.41
11:AK:76:GLU:O	22:BA:2141:G:OP1	2.36	0.41
22:DA:1509:A:C5	22:DA:1510:G:N7	2.89	0.41
1:CA:66:A:H4'	1:CA:173:U:C4	2.55	0.41
36:BO:31:THR:HG22	36:BO:34:HIS:N	2.35	0.41
31:DJ:41:LYS:O	31:DJ:42:ALA:C	2.59	0.41
22:DA:2283:C:C2'	22:DA:2284:A:H5'	2.51	0.41
22:DA:1623:G:C6	22:DA:1624:U:C5	3.09	0.41
4:AD:28:ILE:O	4:AD:29:ASP:C	2.59	0.41
1:CA:577:G:O2'	1:CA:578:C:H5'	2.21	0.41
12:AL:86:ARG:CZ	12:AL:88:LYS:HB3	2.51	0.41
2:CB:118:GLU:HA	2:CB:121:SER:HB2	2.02	0.41
1:AA:212:G:C2	1:AA:213:G:C4	3.08	0.41
6:AF:53:LYS:O	6:AF:54:LEU:HD13	2.20	0.41
9:AI:44:ALA:O	9:AI:47:VAL:HG22	2.21	0.41
12:CL:38:TYR:O	12:CL:39:THR:HG23	2.20	0.41
37:DP:99:TYR:CE2	37:DP:100:LEU:CD2	3.04	0.41
17:CQ:17:MET:CE	17:CQ:20:SER:O	2.69	0.41
15:AO:63:ARG:HG2	15:AO:67:LEU:CD1	2.50	0.41
22:BA:846:U:O2'	22:BA:847:U:C6	2.71	0.41
10:CJ:52:LEU:HD22	10:CJ:59:LYS:HA	2.01	0.41
10:AJ:65:TYR:HB3	14:AN:96:LEU:CD1	2.51	0.41
28:BG:109:PHE:CE1	28:BG:152:ARG:CZ	2.99	0.41
22:DA:77:G:C6	22:DA:78:U:N3	2.89	0.41
1:AA:1133:G:N3	1:AA:1133:G:H2'	2.35	0.41
16:AP:67:ILE:CG2	16:AP:71:VAL:HG12	2.50	0.41
22:BA:2885:G:H2'	22:BA:2886:A:C4'	2.50	0.41
19:CS:63:THR:CG2	19:CS:64:ASP:N	2.83	0.41
1:AA:622:A:N7	1:AA:623:C:C6	2.89	0.41
46:DY:18:LEU:O	46:DY:22:LEU:HB2	2.19	0.41
22:DA:303:G:N1	22:DA:304:U:C2	2.88	0.41
40:DS:4:ILE:HG12	40:DS:106:VAL:HG22	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:439:U:H4'	4:CD:121:LYS:HD2	2.03	0.41
1:AA:1313:U:C2	1:AA:1314:C:C5	3.09	0.41
27:BF:2:ALA:O	27:BF:5:HIS:N	2.53	0.41
42:BU:16:GLY:O	42:BU:18:ASP:N	2.53	0.41
22:DA:2109:U:H5'	22:DA:2110:G:OP2	2.21	0.41
22:BA:1688:U:C5'	22:BA:1689:A:OP1	2.69	0.41
1:AA:1123:U:H4'	10:AJ:39:PRO:HD2	2.02	0.41
46:BY:32:ALA:HB2	46:BY:37:LEU:HD23	2.01	0.41
22:DA:1275:A:H4'	22:DA:1276:A:OP1	2.20	0.41
1:CA:814:A:H4'	1:CA:1511:G:C4'	2.51	0.41
9:CI:19:VAL:HA	9:CI:65:ILE:HG22	2.01	0.41
22:DA:1372:U:O2'	22:DA:2214:C:C6	2.71	0.41
1:CA:624:C:C2	1:CA:625:U:C6	3.07	0.41
10:AJ:66:GLU:HG2	14:AN:99:ALA:HB2	2.02	0.41
22:BA:1327:A:N6	22:BA:1328:A:C2	2.88	0.41
2:CB:165:ASP:HB3	2:CB:168:HIS:HB3	2.02	0.41
41:DT:73:ARG:HA	41:DT:73:ARG:NH2	2.35	0.41
1:CA:110:C:C4	1:CA:111:G:C6	3.09	0.41
22:DA:751:A:C6	22:DA:789:A:C5	3.08	0.41
24:DC:130:LEU:CD1	24:DC:135:ILE:HG13	2.50	0.41
17:AQ:11:ARG:O	17:AQ:23:VAL:HG13	2.20	0.41
22:BA:1965:C:OP1	22:BA:1966:A:O2'	2.30	0.41
24:DC:235:GLY:HA2	24:DC:239:ASN:HB2	2.02	0.41
5:CE:44:GLY:O	5:CE:45:ARG:C	2.59	0.41
1:AA:116:A:H2'	1:AA:117:G:H8	1.84	0.41
22:BA:2005:A:OP1	58:BA:3386:HOH:O	2.22	0.41
1:CA:708:C:O2'	1:CA:709:U:H5'	2.20	0.41
1:CA:167:A:C2'	1:CA:168:G:O5'	2.68	0.41
25:BD:151:THR:HG22	25:BD:152:PRO:CD	2.50	0.41
22:DA:256:A:O2'	22:DA:257:C:H5'	2.20	0.41
22:BA:1478:G:H1	22:BA:1513:U:H3	1.67	0.41
22:DA:667:U:O2	51:D3:2:PRO:HG2	2.20	0.41
42:BU:47:LYS:HA	42:BU:48:PRO:HD2	1.93	0.41
38:BQ:94:ILE:O	38:BQ:98:ILE:HG13	2.21	0.41
22:BA:1595:C:H2'	22:BA:1596:A:O4'	2.20	0.41
22:DA:2861:U:C2	22:DA:2862:G:C8	3.08	0.41
22:BA:1220:G:C2	22:BA:1230:A:C2	3.08	0.41
26:BE:199:MET:HE2	26:BE:199:MET:HB3	1.94	0.41
1:AA:1520:C:C2	1:AA:1521:C:C5	3.09	0.41
34:DM:70:ASP:OD1	34:DM:70:ASP:C	2.59	0.41
22:DA:1118:C:N4	22:DA:1119:U:C4	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DM:36:VAL:HG13	43:DV:82:TYR:CD2	2.55	0.41
1:CA:782:A:C8	1:CA:783:C:C5	3.08	0.41
23:DB:18:G:C2	23:DB:67:G:O6	2.74	0.41
1:CA:508:U:O3'	58:CA:1759:HOH:O	2.22	0.41
29:BH:33:GLN:O	29:BH:35:LYS:N	2.53	0.41
22:DA:1109:C:C4	22:DA:1110:G:C6	3.08	0.41
22:BA:1061:U:C4	30:BI:10:LYS:O	2.73	0.41
5:AE:99:ALA:HB2	5:AE:124:LEU:HG	2.03	0.41
22:DA:1361:G:C5	22:DA:1362:C:C5	3.08	0.41
39:BR:25:LEU:H	39:BR:94:THR:HG23	1.86	0.41
1:CA:66:A:C6	1:CA:67:C:C4	3.08	0.41
1:AA:1160:G:HO2'	1:AA:1161:C:P	2.43	0.41
50:D2:31:LEU:HD21	50:D2:43:THR:CG2	2.50	0.41
4:AD:151:LYS:HB2	4:AD:156:LYS:HE3	2.02	0.41
1:AA:1350:A:C5	1:AA:1351:U:C4	3.09	0.41
22:DA:2208:C:C2	22:DA:2217:G:N2	2.88	0.41
22:DA:37:C:H2'	22:DA:38:A:O4'	2.21	0.41
7:AG:97:ASN:N	7:AG:97:ASN:OD1	2.52	0.41
1:CA:552:U:O2'	12:CL:83:ARG:O	2.38	0.41
22:BA:1090:A:C6	22:BA:1091:G:N7	2.88	0.41
22:DA:2373:G:C6	22:DA:2374:C:C4	3.09	0.41
22:DA:1856:U:O4	22:DA:1857:G:C6	2.73	0.41
1:CA:72:A:C5	1:CA:73:C:C4	3.08	0.41
5:CE:149:SER:O	5:CE:153:VAL:HG13	2.21	0.41
22:DA:1250:G:C5'	38:DQ:6:ARG:HD2	2.50	0.41
12:AL:63:VAL:HG21	12:AL:95:TYR:CD1	2.55	0.41
22:DA:616:A:C2	22:DA:617:G:C1'	3.03	0.41
1:CA:308:C:N4	1:CA:309:A:N6	2.68	0.41
1:CA:369:G:C2	1:CA:370:C:C6	3.09	0.41
24:BC:36:LYS:O	24:BC:37:ASN:CB	2.69	0.41
22:DA:1324:G:O4'	22:DA:1616:A:N6	2.53	0.41
22:BA:359:G:C6	22:BA:360:U:N3	2.88	0.41
43:BV:80:HIS:CD2	43:BV:83:LYS:HG3	2.55	0.41
1:AA:644:U:O2'	1:AA:645:G:H5'	2.21	0.41
10:CJ:19:ASP:HA	10:CJ:22:THR:CB	2.50	0.41
8:AH:76:GLN:O	8:AH:127:CYS:HB2	2.21	0.41
27:DF:46:ASP:HB3	27:DF:49:LEU:HB2	2.02	0.41
22:DA:2024:G:C2	22:DA:2040:G:N3	2.89	0.41
1:CA:811:C:O2'	1:CA:901:A:N1	2.44	0.41
22:DA:2444:G:OP2	26:DE:63:LYS:HE2	2.21	0.41
24:DC:31:ALA:HB3	24:DC:32:PRO:HD3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1197:G:O5'	22:DA:1227:G:O2'	2.37	0.41
1:AA:1335:U:H5'	1:AA:1336:C:H5'	2.02	0.41
4:AD:174:ASP:O	4:AD:175:ALA:CB	2.68	0.41
1:AA:1270:G:C2	1:AA:1271:A:C8	3.09	0.41
1:AA:1314:C:O2'	1:AA:1315:U:H5'	2.21	0.41
35:BN:117:ASP:O	35:BN:118:ARG:C	2.59	0.41
22:BA:2813:A:H2'	22:BA:2814:A:O5'	2.20	0.41
22:BA:2813:A:C2'	22:BA:2814:A:O5'	2.68	0.41
28:DG:144:VAL:HA	28:DG:147:ASP:OD2	2.20	0.41
1:AA:194:C:H2'	1:AA:195:A:H5'	2.02	0.41
2:AB:39:HIS:HB2	2:AB:189:THR:HG21	2.02	0.41
22:BA:929:U:H4'	47:BZ:38:ARG:NH2	2.35	0.41
7:CG:37:SER:HA	7:CG:40:GLU:HG2	2.03	0.41
22:DA:647:G:C5	22:DA:648:G:C5	3.08	0.41
1:AA:864:A:C2	1:AA:865:A:C2	3.09	0.41
49:B1:47:VAL:CG1	49:B1:48:ILE:N	2.83	0.41
1:CA:154:U:H2'	1:CA:155:A:H5'	2.03	0.41
6:CF:93:LYS:C	6:CF:94:HIS:CG	2.93	0.41
1:AA:390:U:H2'	1:AA:391:G:C8	2.56	0.41
22:DA:1422:G:N2	22:DA:1577:C:H1'	2.35	0.41
17:CQ:27:ARG:HG2	17:CQ:40:ARG:HB3	2.02	0.41
22:DA:2824:C:N4	22:DA:2825:G:C5	2.89	0.41
23:DB:68:C:H2'	23:DB:69:G:O4'	2.20	0.41
1:AA:1136:C:O2	1:AA:1136:C:O4'	2.38	0.41
22:BA:164:C:C2'	22:BA:165:A:H5'	2.50	0.41
1:AA:813:U:H2'	1:AA:814:A:H5''	2.03	0.41
17:CQ:25:ILE:HG12	17:CQ:42:THR:O	2.21	0.41
36:DO:71:ALA:HB1	36:DO:106:LEU:HB2	2.01	0.41
22:DA:2742:G:OP1	52:D4:36:ARG:HD3	2.20	0.41
22:DA:2817:U:O2	22:DA:2836:U:H1'	2.21	0.41
1:AA:1190:G:P	3:AC:5:VAL:HB	2.60	0.41
1:CA:431:A:H2'	1:CA:432:A:O4'	2.21	0.41
1:CA:1304:G:N1	1:CA:1305:G:N2	2.69	0.41
42:BU:28:VAL:HG23	42:BU:34:VAL:HG12	2.03	0.41
43:DV:87:GLN:O	43:DV:88:HIS:HB2	2.21	0.41
8:CH:112:THR:HG23	8:CH:115:ALA:HB2	2.03	0.41
8:CH:92:LEU:HD22	8:CH:113:ASP:HB2	2.03	0.41
1:AA:1309:G:C6	1:AA:1310:G:C5	3.09	0.41
12:CL:35:THR:N	12:CL:54:ARG:O	2.54	0.41
41:BT:70:HIS:O	41:BT:71:GLY:O	2.38	0.41
11:CK:116:ILE:O	11:CK:116:ILE:HG22	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:105:LEU:HD23	26:DE:105:LEU:HA	1.95	0.41
42:DU:40:ASN:O	42:DU:42:VAL:N	2.54	0.41
1:CA:36:C:O2'	12:CL:114:ARG:NH2	2.53	0.41
22:DA:861:A:H2'	22:DA:862:G:O4'	2.20	0.41
22:DA:1680:U:O2'	22:DA:1763:G:N7	2.36	0.41
22:BA:1703:G:H2'	22:BA:1704:C:C6	2.56	0.41
32:DK:94:PRO:HG3	32:DK:115:ILE:HG12	2.03	0.41
22:DA:2619:C:O2'	22:DA:2620:C:H5'	2.20	0.41
29:BH:95:GLY:HA2	29:BH:117:LEU:CD2	2.51	0.41
25:DD:148:GLN:HB2	25:DD:152:PRO:HG2	2.01	0.41
22:DA:604:G:C6	22:DA:605:G:C5	3.08	0.41
1:CA:1073:U:H5'	1:CA:1074:G:OP2	2.21	0.41
2:CB:96:TRP:CZ3	2:CB:175:GLU:OE2	2.73	0.41
14:AN:49:GLN:OE1	14:AN:49:GLN:CA	2.67	0.41
22:BA:1178:C:C2'	22:BA:1179:G:N7	2.83	0.41
5:AE:101:GLU:CG	5:AE:101:GLU:O	2.68	0.41
5:AE:101:GLU:HB3	5:AE:122:ASN:HB2	2.02	0.41
32:BK:73:ASP:OD1	32:BK:74:GLY:N	2.54	0.41
1:AA:1124:G:P	10:AJ:38:GLY:HA3	2.60	0.41
22:DA:1809:A:N6	22:DA:1810:A:C6	2.89	0.41
1:CA:1279:G:OP1	10:CJ:9:ARG:NH2	2.54	0.41
1:AA:263:A:OP2	20:AT:74:ARG:NH1	2.52	0.41
23:DB:57:A:H1'	27:DF:27:GLN:HA	2.02	0.41
3:AC:14:ILE:N	3:AC:14:ILE:HD13	2.35	0.41
1:AA:520:A:N1	1:AA:536:C:H1'	2.36	0.41
22:DA:1403:A:H2'	22:DA:1404:C:C6	2.56	0.41
5:CE:122:ASN:O	5:CE:123:VAL:C	2.59	0.41
22:BA:481:G:N3	22:BA:507:A:C2	2.89	0.41
6:CF:3:HIS:ND1	6:CF:65:GLU:HG3	2.36	0.41
22:DA:2204:G:C6	22:DA:2221:G:C2	3.09	0.41
53:B5:65:LEU:HD11	53:B5:191:ARG:HA	2.01	0.41
17:CQ:8:LEU:CD1	17:CQ:8:LEU:N	2.83	0.41
50:D2:43:THR:O	50:D2:44:VAL:CB	2.68	0.41
22:DA:279:A:N7	22:DA:280:U:C5	2.89	0.41
1:CA:552:U:N3	1:CA:553:A:N7	2.69	0.41
33:BL:109:LYS:HG2	33:BL:126:ARG:HB3	2.03	0.41
8:AH:56:LYS:N	8:AH:57:PRO:HD3	2.35	0.41
22:BA:527:C:H4'	22:BA:528:A:O5'	2.20	0.41
1:CA:144:G:C4	1:CA:179:A:C2	3.08	0.41
11:CK:118:HIS:O	11:CK:119:ASN:HB2	2.20	0.41
22:BA:2286:G:C4'	22:BA:2287:A:O5'	2.66	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2340:A:H2'	22:DA:2341:G:C8	2.55	0.41
22:DA:511:U:O4	22:DA:512:G:C6	2.74	0.41
1:CA:790:A:C6	1:CA:791:G:N1	2.89	0.41
2:AB:33:GLY:CA	2:AB:40:ILE:H	2.33	0.41
22:DA:1662:U:O2	22:DA:2687:U:H5'	2.21	0.41
22:BA:2140:G:N3	22:BA:2140:G:C2'	2.82	0.41
6:AF:51:ILE:HG12	6:AF:51:ILE:O	2.19	0.41
22:DA:725:G:C5	22:DA:726:G:C6	3.09	0.41
22:BA:2405:G:O2'	22:BA:2406:A:OP1	2.30	0.41
46:BY:20:ASN:O	46:BY:24:GLU:HB2	2.21	0.41
22:DA:570:G:C2'	22:DA:571:U:H5'	2.50	0.41
1:CA:881:G:C4	1:CA:882:C:C6	3.09	0.41
22:DA:658:U:N3	22:DA:659:G:C8	2.89	0.41
4:CD:151:LYS:O	4:CD:152:GLN:OE1	2.39	0.41
22:DA:1814:G:C6	22:DA:1815:A:N6	2.89	0.41
1:AA:843:U:O4'	1:AA:843:U:O2	2.37	0.41
16:AP:67:ILE:CG2	16:AP:68:SER:N	2.83	0.41
22:DA:197:A:C2	22:DA:198:C:H1'	2.56	0.41
16:AP:77:GLU:C	16:AP:79:ASN:N	2.74	0.41
22:DA:2037:A:C6	22:DA:2038:G:C5	3.08	0.41
22:BA:975:A:C5	22:BA:990:A:N7	2.88	0.41
20:CT:25:ARG:HD2	20:CT:29:ARG:NH1	2.34	0.41
28:DG:133:LEU:HD12	28:DG:133:LEU:O	2.20	0.41
22:BA:2508:G:C2	22:BA:2582:G:C6	3.08	0.41
22:BA:959:A:N1	22:BA:960:A:C2	2.88	0.41
29:DH:2:GLN:O	29:DH:3:VAL:O	2.38	0.41
39:DR:66:HIS:CD2	39:DR:66:HIS:N	2.88	0.41
22:BA:1183:U:H2'	22:BA:1184:U:C6	2.56	0.41
30:BI:103:ARG:HE	30:BI:104:ALA:N	2.19	0.41
22:DA:404:A:O4'	22:DA:405:U:OP2	2.38	0.41
9:CI:28:ILE:HG21	9:CI:35:LEU:HD13	2.03	0.41
22:DA:1434:A:H2'	22:DA:1435:G:C8	2.56	0.41
22:DA:270:A:C2	22:DA:369:U:H4'	2.55	0.41
1:CA:851:G:N3	1:CA:851:G:H2'	2.34	0.41
42:DU:41:LEU:HD13	42:DU:60:GLU:O	2.20	0.41
38:DQ:27:ALA:HB1	38:DQ:31:VAL:HB	2.03	0.41
22:BA:749:A:H4'	22:BA:1271:G:N3	2.35	0.41
22:BA:2480:C:H2'	22:BA:2481:G:H5'	2.02	0.41
46:BY:5:GLU:C	46:BY:7:ARG:N	2.73	0.41
4:CD:197:GLU:O	4:CD:201:VAL:HG23	2.20	0.41
32:DK:73:ASP:O	37:DP:75:GLN:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:121:GLU:HG2	32:DK:122:VAL:HG23	2.02	0.41
1:CA:1434:A:N6	1:CA:1435:G:C6	2.88	0.41
3:CC:6:HIS:C	3:CC:8:ASN:H	2.24	0.41
1:AA:137:U:O2	1:AA:227:G:C2	2.73	0.41
22:BA:1128:G:O4'	22:BA:2516:A:O2'	2.38	0.41
3:CC:37:PHE:HZ	14:CN:90:ARG:NH1	2.19	0.41
33:BL:54:GLN:O	33:BL:55:MET:C	2.59	0.41
25:DD:113:SER:OG	25:DD:167:ASN:N	2.53	0.41
3:CC:66:VAL:O	3:CC:66:VAL:HG12	2.21	0.41
22:BA:892:A:N3	22:BA:892:A:H2'	2.35	0.41
22:DA:2231:U:H2'	22:DA:2232:C:C6	2.56	0.41
41:DT:56:GLU:HB3	41:DT:86:THR:HB	2.02	0.41
1:AA:422:C:H1'	1:AA:423:G:C2	2.56	0.41
22:DA:1774:C:O2	24:DC:11:PRO:HB2	2.21	0.41
34:BM:49:ALA:HB1	34:BM:120:ALA:HB1	2.03	0.41
13:CM:64:VAL:O	13:CM:69:LEU:HD13	2.21	0.41
22:BA:927:A:O2'	47:BZ:39:GLU:OE2	2.30	0.41
29:BH:82:SER:HB3	29:BH:146:VAL:HG12	2.03	0.41
22:DA:621:A:OP2	33:DL:99:ASN:ND2	2.53	0.41
22:BA:1909:C:H5'	22:BA:1910:G:OP2	2.20	0.41
6:AF:93:LYS:O	6:AF:94:HIS:HB2	2.20	0.41
22:BA:1169:A:H2'	22:BA:1170:C:O4'	2.20	0.41
22:BA:1024:G:N2	22:BA:1142:A:H2	2.18	0.41
1:AA:1130:A:C2	1:AA:1146:A:C4	3.08	0.41
35:DN:2:ARG:HD3	35:DN:5:LYS:HB2	2.02	0.41
2:AB:73:LYS:HG3	2:AB:73:LYS:O	2.20	0.41
22:DA:2114:A:H2'	22:DA:2114:A:N3	2.35	0.41
22:DA:1343:G:O6	22:DA:1403:A:N6	2.54	0.41
22:DA:942:G:O2'	22:DA:1189:A:C2'	2.69	0.41
1:CA:736:C:H2'	1:CA:737:C:C6	2.56	0.41
22:DA:2013:A:OP1	40:DS:96:ILE:HA	2.21	0.41
1:AA:1118:U:O4'	1:AA:1179:A:H1'	2.20	0.41
26:DE:98:LYS:O	26:DE:102:ARG:HG3	2.20	0.41
1:AA:90:C:N3	1:AA:91:U:C5	2.89	0.41
11:AK:23:ILE:HD12	11:AK:25:ALA:HB2	2.02	0.41
12:CL:25:GLU:HB3	12:CL:27:CYS:SG	2.60	0.41
37:DP:51:ARG:N	37:DP:58:ALA:O	2.53	0.41
7:AG:139:GLU:CA	7:AG:139:GLU:OE1	2.69	0.41
9:CI:24:GLY:H	9:CI:61:LEU:HA	1.85	0.41
9:CI:84:THR:HB	9:CI:98:LEU:HD21	2.02	0.41
1:CA:718:A:H5'	11:CK:119:ASN:CG	2.41	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2341:G:C6	22:DA:2342:C:N4	2.89	0.41
9:AI:104:VAL:HG23	9:AI:105:THR:N	2.36	0.41
2:CB:18:HIS:CG	2:CB:203:ASN:ND2	2.88	0.41
30:DI:71:THR:HG23	30:DI:72:LYS:N	2.35	0.41
1:CA:1138:G:C6	1:CA:1140:C:C2	3.09	0.41
22:DA:2345:G:H4'	22:DA:2346:A:C5'	2.50	0.41
23:DB:22:U:H2'	23:DB:23:G:C8	2.55	0.41
2:AB:35:ARG:O	2:AB:36:ASN:C	2.59	0.41
37:BP:104:THR:O	37:BP:106:LYS:N	2.54	0.41
22:BA:138:U:OP2	22:BA:139:U:H5''	2.21	0.41
4:CD:173:VAL:O	4:CD:174:ASP:CB	2.67	0.41
29:DH:130:VAL:CG1	29:DH:131:SER:N	2.82	0.41
22:BA:361:G:O2'	22:BA:362:A:H8	2.03	0.41
51:D3:31:HIS:C	51:D3:31:HIS:ND1	2.74	0.41
22:DA:571:U:N3	22:DA:575:A:N7	2.69	0.41
45:DX:54:LYS:O	45:DX:58:VAL:N	2.48	0.41
22:BA:1447:C:H2'	22:BA:1448:G:C8	2.55	0.41
25:BD:104:VAL:CG2	25:BD:105:LYS:N	2.84	0.41
28:DG:159:GLY:HA2	28:DG:169:VAL:HG11	2.03	0.41
39:BR:14:VAL:CG1	39:BR:98:ILE:HG13	2.51	0.41
26:DE:58:LYS:HD3	26:DE:60:TRP:O	2.21	0.41
11:CK:52:PHE:HB3	11:CK:56:ARG:NH2	2.36	0.41
4:AD:107:PHE:C	4:AD:158:ALA:HB1	2.41	0.41
22:BA:1717:A:C5	22:BA:1718:G:C8	3.08	0.41
22:DA:1838:C:H4'	22:DA:1839:G:H8	1.86	0.41
22:DA:635:C:O2'	22:DA:639:U:H5''	2.20	0.41
1:CA:1088:G:C6	1:CA:1089:G:N7	2.89	0.41
13:AM:107:ARG:HH21	13:AM:113:ARG:HB3	1.84	0.41
20:AT:58:VAL:O	20:AT:59:ASP:C	2.58	0.41
22:BA:2154:A:H2'	22:BA:2155:U:C6	2.56	0.41
48:D0:55:ILE:HG22	48:D0:56:ALA:N	2.35	0.41
22:DA:2189:U:O2	22:DA:2189:U:H2'	2.20	0.41
22:BA:1565:C:HO2'	22:BA:1566:A:P	2.44	0.41
1:CA:116:A:OP2	1:CA:116:A:C8	2.73	0.41
22:BA:45:G:H5'	22:BA:46:G:OP1	2.21	0.41
4:CD:49:SER:O	4:CD:53:VAL:HG13	2.21	0.41
45:BX:31:PRO:O	45:BX:33:LEU:N	2.54	0.41
22:DA:1862:G:C2	22:DA:1881:C:C2	3.09	0.41
26:BE:190:ALA:O	26:BE:193:VAL:HB	2.21	0.41
22:BA:1956:U:C2'	22:BA:1957:C:H5'	2.51	0.41
10:AJ:42:LEU:HA	10:AJ:43:PRO:HD2	1.80	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:228:C:H4'	22:DA:229:C:C5'	2.51	0.41
13:CM:60:VAL:HG23	13:CM:65:VAL:HG21	2.02	0.41
1:CA:444:G:C4	1:CA:445:G:C8	3.08	0.41
25:DD:3:GLY:HA3	25:DD:204:LYS:HG2	2.02	0.41
1:CA:376:G:H5'	16:CP:5:ARG:HB2	2.03	0.41
22:DA:765:C:H2'	22:DA:766:U:C6	2.56	0.41
3:CC:56:VAL:C	3:CC:57:ILE:HD12	2.41	0.41
22:DA:715:A:N6	22:DA:716:A:C6	2.88	0.41
22:DA:699:A:H2'	22:DA:700:G:H5'	2.01	0.41
1:CA:771:G:C4	1:CA:809:G:N2	2.89	0.41
40:BS:50:VAL:CG1	40:BS:105:VAL:HG23	2.51	0.41
17:AQ:23:VAL:HG21	17:AQ:61:ILE:CD1	2.51	0.41
22:DA:1401:G:C6	22:DA:1402:U:C4	3.08	0.41
3:CC:6:HIS:O	3:CC:8:ASN:N	2.53	0.41
1:CA:423:G:N3	1:CA:423:G:H3'	2.36	0.41
28:BG:54:PRO:HG3	28:BG:62:TRP:CE2	2.56	0.41
27:DF:44:ILE:CG2	27:DF:79:ILE:HG22	2.51	0.41
23:DB:90:C:H5'	34:DM:18:ARG:HG2	2.01	0.41
22:DA:358:U:C2	22:DA:359:G:C8	3.09	0.41
22:BA:414:C:H2'	22:BA:415:A:C8	2.55	0.41
22:BA:2333:A:H5'	22:BA:2335:A:H1'	2.03	0.41
2:CB:55:ALA:O	2:CB:59:LYS:HB2	2.20	0.41
21:CU:5:LYS:O	21:CU:5:LYS:HD2	2.20	0.41
41:DT:89:GLU:HA	41:DT:89:GLU:OE2	2.20	0.41
37:DP:84:ILE:HG22	37:DP:84:ILE:O	2.19	0.41
18:AR:23:TYR:CE1	18:AR:24:LYS:HG2	2.56	0.41
1:CA:1310:G:H2'	1:CA:1311:A:O4'	2.21	0.41
20:CT:73:ALA:O	20:CT:77:ALA:HB2	2.20	0.41
1:CA:875:U:O2'	8:CH:15:ARG:NH1	2.54	0.41
1:CA:1505:G:H4'	1:CA:1506:U:H5''	2.03	0.41
22:BA:1253:A:C3'	22:BA:1254:A:H5'	2.50	0.41
29:BH:100:ALA:HB2	29:BH:115:VAL:CG2	2.50	0.41
29:BH:132:PHE:CE2	29:BH:142:VAL:CG2	3.04	0.41
22:DA:2058:A:H5''	22:DA:2059:A:OP2	2.21	0.41
22:BA:2742:G:P	52:B4:36:ARG:HH11	2.44	0.41
22:BA:1922:G:N1	22:BA:1923:U:C6	2.89	0.41
22:BA:1923:U:C2	22:BA:1924:C:C6	3.08	0.41
31:BJ:64:VAL:HG11	31:BJ:68:LYS:HB2	2.00	0.41
1:CA:1216:A:OP1	14:CN:5:SER:CB	2.69	0.41
2:CB:17:GLY:O	2:CB:39:HIS:O	2.38	0.41
22:DA:1361:G:C6	22:DA:1362:C:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:64:ARG:O	35:BN:67:PHE:HB3	2.21	0.41
1:AA:696:A:N1	1:AA:797:C:O2'	2.43	0.41
12:CL:65:SER:OG	12:CL:97:THR:HG23	2.20	0.41
22:DA:563:A:H1'	22:DA:2018:G:N2	2.36	0.41
22:DA:2131:U:C2	22:DA:2158:A:N6	2.88	0.41
36:DO:33:ARG:HG2	36:DO:33:ARG:O	2.21	0.41
35:DN:85:PRO:C	35:DN:87:PHE:H	2.23	0.41
11:CK:126:LYS:C	21:CU:34:ARG:CZ	2.89	0.41
11:CK:126:LYS:O	21:CU:34:ARG:CZ	2.68	0.41
1:AA:430:A:C4	1:AA:431:A:C8	3.08	0.41
22:DA:2108:A:H4'	22:DA:2150:C:H4'	2.03	0.41
22:DA:747:U:C5	22:DA:2613:U:C5	3.09	0.41
22:DA:45:G:H5''	22:DA:46:G:H5'	2.03	0.41
22:DA:2199:A:C5	22:DA:2225:A:N1	2.88	0.41
29:DH:1:MET:HB3	29:DH:21:VAL:O	2.20	0.41
1:CA:64:G:C8	1:CA:99:C:C4	3.08	0.41
1:CA:66:A:O4'	1:CA:173:U:C4	2.74	0.41
1:AA:1118:U:C1'	1:AA:1179:A:C4	3.04	0.41
1:AA:1181:G:O2'	1:AA:1182:G:N7	2.51	0.41
20:AT:67:ILE:HG13	20:AT:71:LYS:HG2	2.03	0.41
22:DA:1789:A:H5''	24:DC:219:THR:O	2.21	0.41
22:BA:2326:C:C1'	22:BA:2327:A:OP1	2.68	0.41
10:AJ:52:LEU:HB3	14:AN:81:ARG:HE	1.86	0.41
10:AJ:57:VAL:HG13	10:AJ:58:ASN:N	2.36	0.41
22:DA:1310:G:C2'	22:DA:1311:G:H5'	2.51	0.41
22:BA:2287:A:H2'	22:BA:2287:A:N3	2.36	0.41
1:AA:652:U:C4	1:AA:752:G:N3	2.89	0.41
22:DA:2164:C:O2	22:DA:2164:C:C2'	2.68	0.41
5:CE:149:SER:OG	5:CE:152:MET:CG	2.69	0.41
12:AL:24:LEU:CB	12:AL:59:ASN:HD22	2.34	0.41
42:DU:83:VAL:HG12	42:DU:84:GLY:N	2.35	0.41
1:AA:178:C:H2'	1:AA:179:A:O4'	2.21	0.41
1:AA:971:G:H1'	1:AA:1365:G:O2'	2.20	0.41
3:CC:150:LYS:HB2	3:CC:169:ARG:CG	2.51	0.41
1:AA:212:G:N2	1:AA:213:G:N3	2.69	0.41
34:BM:51:ARG:O	34:BM:55:ARG:HG3	2.21	0.41
22:DA:149:A:C5	22:DA:150:U:C4	3.09	0.41
22:BA:1949:G:C2	22:BA:1958:C:C2	3.09	0.41
1:AA:687:A:C2	1:AA:700:G:N3	2.89	0.41
8:CH:88:ARG:O	8:CH:122:GLY:CA	2.69	0.41
1:AA:1533:C:H5'	1:AA:1534:A:OP1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:120:GLN:O	2:CB:120:GLN:HG2	2.21	0.41
2:AB:96:TRP:HZ3	2:AB:175:GLU:OE2	2.02	0.41
22:DA:1287:A:C2'	22:DA:1288:G:H5'	2.50	0.41
1:CA:781:A:H4'	1:CA:1522:U:O2'	2.21	0.41
11:CK:88:GLY:N	11:CK:114:THR:HG22	2.36	0.41
21:CU:4:ILE:HA	21:CU:20:LYS:HZ1	1.86	0.41
22:DA:629:G:H4'	22:DA:650:C:O2	2.20	0.41
22:DA:2652:C:C4	22:DA:2653:U:C4	3.09	0.41
21:CU:11:PRO:O	21:CU:12:PHE:CG	2.74	0.41
10:AJ:65:TYR:HB2	14:AN:96:LEU:HD11	2.03	0.41
1:CA:997:U:H2'	1:CA:998:C:O4'	2.21	0.41
1:AA:1322:C:O2'	1:AA:1323:G:P	2.79	0.41
22:BA:31:C:O2'	22:BA:32:C:H5'	2.21	0.41
24:DC:202:LEU:HD12	24:DC:202:LEU:HA	1.95	0.41
1:AA:200:G:N1	1:AA:201:G:C5	2.89	0.41
22:DA:1567:G:H4'	24:DC:58:HIS:CE1	2.56	0.41
22:DA:197:A:C8	22:DA:2430:A:C8	3.09	0.41
29:BH:30:LEU:C	29:BH:32:PRO:HD2	2.41	0.41
30:BI:76:ALA:CB	30:BI:129:ILE:HG23	2.51	0.41
28:DG:121:ILE:HD12	28:DG:141:ILE:HG22	2.03	0.41
24:BC:162:VAL:CG2	24:BC:176:LEU:HD23	2.51	0.41
1:CA:1408:A:N1	1:CA:1494:G:C5	2.89	0.41
1:CA:913:A:H4'	1:CA:914:A:H4'	2.03	0.41
22:DA:1845:G:C6	22:DA:1846:G:C5	3.08	0.41
3:CC:130:PHE:CZ	3:CC:131:ARG:CD	3.04	0.41
22:DA:2602:A:OP2	22:DA:2603:G:H5''	2.21	0.41
21:AU:24:GLU:HB3	21:AU:25:LYS:H	1.63	0.41
1:AA:1462:C:C4	1:AA:1463:U:C5	3.09	0.41
1:AA:1403:C:H1'	1:AA:1500:A:N1	2.36	0.41
26:DE:81:GLY:HA2	58:DE:301:HOH:O	2.20	0.41
22:BA:1688:U:H5'	22:BA:1689:A:OP1	2.21	0.41
22:DA:1320:C:N3	22:DA:1333:G:C2	2.89	0.41
1:CA:251:G:H4'	1:CA:252:U:O5'	2.20	0.41
1:CA:1467:C:H2'	1:CA:1468:A:H8	1.84	0.41
1:CA:1534:A:H4'	1:CA:1535:C:H2'	2.02	0.41
22:BA:1985:C:O2	22:BA:1985:C:C2'	2.64	0.41
50:D2:18:PHE:O	50:D2:21:ARG:N	2.54	0.41
1:AA:474:G:C4	1:AA:475:C:C5	3.09	0.41
30:DI:46:THR:O	30:DI:51:LYS:HD3	2.21	0.41
22:DA:374:A:N6	22:DA:400:G:O2'	2.54	0.41
3:CC:5:VAL:HG21	3:CC:10:ILE:HD13	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:28:LYS:HB3	2:AB:29:PRO:HD3	2.03	0.41
4:CD:48:LEU:HD23	4:CD:52:GLY:C	2.41	0.41
27:BF:146:VAL:HG23	27:BF:146:VAL:O	2.21	0.41
22:DA:545:U:H2'	22:DA:546:U:O3'	2.20	0.41
25:DD:35:THR:O	25:DD:36:GLN:CB	2.69	0.41
10:AJ:10:LEU:O	10:AJ:71:LEU:HD13	2.21	0.41
1:CA:1163:A:N3	1:CA:1174:G:C2	2.88	0.41
1:CA:842:U:O2	1:CA:845:A:OP1	2.38	0.41
1:AA:1241:G:C2	1:AA:1242:G:C5	3.09	0.41
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.55	0.41
1:AA:1296:C:H4'	1:AA:1302:C:N4	2.36	0.41
38:BQ:21:ALA:HB1	38:BQ:28:ARG:O	2.21	0.41
1:AA:1537:U:H2'	1:AA:1538:C:O4'	2.21	0.41
13:AM:19:LEU:O	13:AM:22:ILE:HD12	2.21	0.41
1:CA:1158:C:O2	1:CA:1158:C:C2'	2.69	0.41
2:CB:71:GLY:HA2	2:CB:164:ILE:HG22	2.03	0.41
22:DA:486:C:H1'	22:DA:495:G:N2	2.35	0.41
14:AN:25:ALA:O	14:AN:28:LYS:HB3	2.21	0.41
23:DB:13:G:O2'	23:DB:15:A:H5'	2.20	0.41
22:DA:1588:G:C5	22:DA:1589:U:C4	3.09	0.41
13:CM:91:HIS:HA	13:CM:109:ARG:HH21	1.86	0.41
45:BX:36:HIS:HB3	45:BX:38:PHE:CE1	2.55	0.41
22:DA:2119:A:N1	22:DA:2170:A:C5	2.89	0.41
22:BA:271:G:H4'	22:BA:272:A:OP1	2.19	0.41
25:DD:125:TRP:CG	25:DD:160:LYS:HB3	2.56	0.41
40:DS:7:HIS:HB2	40:DS:50:VAL:CG2	2.50	0.41
22:BA:2045:C:C2'	22:BA:2046:G:O5'	2.69	0.41
1:AA:130:A:C8	17:AQ:65:ARG:HD2	2.55	0.41
48:D0:25:VAL:HG13	48:D0:26:THR:H	1.86	0.41
20:AT:43:ASP:OD1	20:AT:46:ALA:N	2.48	0.41
22:BA:2468:A:C2	22:BA:2481:G:C2	3.08	0.41
10:CJ:11:LYS:HG2	10:CJ:71:LEU:HD13	2.02	0.41
7:AG:65:ALA:HA	7:AG:128:ALA:HA	2.03	0.41
25:BD:14:ILE:CD1	25:BD:14:ILE:N	2.84	0.41
22:BA:159:G:O2'	22:BA:167:A:N6	2.45	0.41
1:AA:50:A:O2'	1:AA:360:G:N2	2.54	0.41
28:BG:96:ALA:HB2	28:BG:105:LEU:HD23	2.03	0.41
35:BN:83:LEU:O	35:BN:84:GLY:C	2.59	0.41
22:DA:1146:C:N4	22:DA:1147:A:N6	2.69	0.41
8:CH:10:MET:HE1	8:CH:36:ILE:HB	2.03	0.41
22:BA:734:A:C4	22:BA:735:A:C8	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:641:U:C5	22:BA:642:U:C4	3.08	0.41
44:DW:68:LYS:HE3	44:DW:70:GLU:HG3	2.02	0.41
22:DA:1520:U:O4	22:DA:1521:G:C6	2.74	0.41
32:BK:31:ARG:HD3	32:BK:32:TYR:CZ	2.56	0.41
3:AC:53:SER:HB2	3:AC:112:ASP:OD1	2.21	0.41
26:DE:12:LEU:HD23	26:DE:13:THR:N	2.36	0.41
13:AM:103:LYS:O	13:AM:104:THR:HG23	2.20	0.41
4:CD:44:ARG:NE	4:CD:44:ARG:HA	2.36	0.41
20:AT:34:LYS:HA	20:AT:34:LYS:HD3	1.92	0.41
22:DA:1519:G:H2'	22:DA:1519:G:N3	2.35	0.41
9:CI:33:ARG:HA	9:CI:33:ARG:HD3	1.86	0.41
4:AD:55:LEU:HD23	4:AD:55:LEU:O	2.20	0.41
6:AF:35:LYS:HD3	6:AF:35:LYS:N	2.36	0.41
22:BA:1320:C:N3	22:BA:1331:G:O6	2.54	0.41
5:AE:79:GLY:O	5:AE:121:HIS:N	2.48	0.41
22:DA:1952:A:OP1	32:DK:42:THR:OG1	2.39	0.41
15:AO:69:TYR:O	15:AO:70:LEU:C	2.58	0.41
17:AQ:10:GLY:HA3	17:AQ:24:ALA:O	2.20	0.41
22:BA:2830:C:P	25:BD:59:ARG:HD2	2.61	0.41
28:BG:7:ALA:HA	28:BG:8:PRO:HD3	1.86	0.41
20:AT:28:MET:O	20:AT:32:ILE:HG13	2.21	0.41
1:AA:832:G:C2	1:AA:833:G:C8	3.09	0.41
22:BA:2882:A:OP1	35:BN:96:ARG:HD3	2.21	0.41
33:DL:85:VAL:HG23	33:DL:86:GLU:N	2.36	0.41
1:CA:1448:C:H2'	1:CA:1449:C:C6	2.55	0.41
35:DN:59:SER:O	35:DN:63:ARG:HB2	2.21	0.41
2:CB:11:LYS:O	2:CB:12:ALA:C	2.59	0.41
29:BH:129:GLU:C	29:BH:130:VAL:HG23	2.41	0.41
22:BA:2080:A:C5'	45:BX:19:SER:HB2	2.50	0.41
1:AA:1508:A:H2'	1:AA:1509:C:O4'	2.21	0.41
9:CI:15:SER:OG	9:CI:70:GLY:HA3	2.21	0.41
21:CU:6:VAL:C	21:CU:7:ARG:HG2	2.40	0.41
24:DC:176:LEU:HD12	24:DC:180:GLU:HB3	2.03	0.41
28:DG:10:VAL:HG13	28:DG:10:VAL:O	2.21	0.41
3:AC:8:ASN:OD1	3:AC:8:ASN:C	2.60	0.41
33:BL:127:VAL:HG13	33:BL:131:ALA:HB3	2.03	0.41
22:DA:666:A:H4'	33:DL:48:ARG:NE	2.36	0.41
22:BA:1515:A:H2'	22:BA:1516:G:O4'	2.20	0.41
22:BA:2092:U:H4'	29:BH:24:GLY:HA3	2.03	0.41
11:AK:63:ALA:CB	11:AK:92:GLY:HA3	2.51	0.41
22:DA:1413:A:C2	22:DA:1590:A:C2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:D4:22:VAL:HG12	52:D4:24:ARG:HG3	2.03	0.41
28:DG:87:LEU:HD12	28:DG:87:LEU:N	2.35	0.41
14:CN:50:THR:CG2	19:CS:13:LEU:HG	2.51	0.41
29:BH:90:LEU:HG	29:BH:92:GLY:C	2.42	0.41
25:DD:148:GLN:CD	25:DD:148:GLN:N	2.75	0.41
22:DA:788:A:OP1	22:DA:790:U:O4	2.38	0.41
22:DA:621:A:H2'	22:DA:622:G:O4'	2.21	0.41
22:BA:2210:U:H4'	22:BA:2211:A:H5'	2.03	0.41
22:BA:730:A:C3'	58:BA:3698:HOH:O	2.68	0.41
22:BA:1059:G:H5''	22:BA:1060:U:H3'	2.03	0.41
3:AC:59:ARG:HA	3:AC:63:SER:O	2.20	0.41
1:CA:1022:A:C4	1:CA:1023:U:C5	3.09	0.41
5:AE:157:ARG:CD	8:AH:43:GLU:O	2.67	0.41
22:BA:999:U:O2'	22:BA:1000:A:H5'	2.21	0.41
22:DA:2131:U:O4'	22:DA:2133:G:H1'	2.20	0.41
3:AC:25:ASN:O	3:AC:26:THR:C	2.59	0.41
22:DA:2201:G:H2'	22:DA:2201:G:N3	2.35	0.41
1:AA:107:G:C3'	1:AA:108:G:H5''	2.51	0.41
1:CA:552:U:C2	1:CA:553:A:C8	3.09	0.41
32:BK:102:PRO:HB3	32:BK:121:GLU:CB	2.51	0.41
9:CI:26:GLY:HA2	9:CI:61:LEU:O	2.21	0.41
22:BA:2192:U:C2'	22:BA:2193:G:H5'	2.51	0.41
22:DA:1855:U:C6	22:DA:1856:U:C5	3.09	0.41
9:AI:10:GLY:HA3	9:AI:82:GLY:N	2.36	0.41
1:CA:866:C:C4	1:CA:867:G:H1'	2.56	0.41
22:DA:2355:G:O2'	44:DW:39:ARG:HD2	2.20	0.41
1:AA:436:C:H2'	1:AA:437:U:C6	2.56	0.41
22:DA:612:G:O2'	22:DA:613:A:C8	2.74	0.41
10:CJ:35:GLN:HG2	10:CJ:77:VAL:CB	2.47	0.41
43:BV:14:LYS:CD	43:BV:18:ARG:HH11	2.34	0.41
17:CQ:14:SER:OG	17:CQ:17:MET:CE	2.69	0.41
29:BH:91:PHE:HB3	1:CA:55:A:N3	2.36	0.41
22:BA:1265:A:O3'	22:BA:1266:G:H4'	2.21	0.41
22:BA:846:U:H1'	22:BA:847:U:C5	2.56	0.41
1:CA:246:A:N3	1:CA:279:A:N6	2.69	0.41
1:AA:1212:U:H4'	1:AA:1213:A:C8	2.56	0.41
1:AA:844:G:N1	1:AA:846:G:O2'	2.50	0.41
1:AA:721:G:H4'	1:AA:722:G:C5'	2.51	0.41
27:BF:38:MET:HE1	27:BF:56:ASP:HB3	2.03	0.41
13:CM:18:ALA:HB2	13:CM:45:ILE:HD11	2.03	0.41
1:CA:756:C:O2'	1:CA:757:U:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:982:C:H5'	22:DA:983:A:OP2	2.21	0.41
28:DG:123:ALA:CB	28:DG:133:LEU:HA	2.51	0.41
22:DA:2103:C:N3	22:DA:2104:C:N4	2.68	0.41
40:DS:73:LYS:HB2	40:DS:106:VAL:HB	2.03	0.41
1:AA:1311:A:H2'	1:AA:1312:G:O5'	2.20	0.41
22:DA:1417:C:N3	22:DA:1581:G:O6	2.54	0.41
18:CR:32:TYR:CG	18:CR:55:LEU:HD21	2.56	0.41
22:DA:167:A:H2'	22:DA:168:G:O4'	2.21	0.41
22:BA:2114:A:C2'	22:BA:2114:A:N3	2.83	0.41
5:CE:95:PHE:CG	5:CE:96:MET:N	2.88	0.41
22:BA:2648:G:H2'	22:BA:2649:C:O4'	2.21	0.41
22:BA:102:U:C4	46:BY:2:LYS:HD2	2.56	0.41
46:DY:48:ARG:O	46:DY:51:ALA:HB3	2.20	0.41
1:CA:1093:A:C5	1:CA:1095:U:O4'	2.74	0.41
43:DV:41:GLU:C	43:DV:42:LEU:HD23	2.42	0.41
22:BA:322:A:H4'	22:BA:323:C:OP2	2.21	0.41
22:BA:1866:A:H2'	22:BA:1867:G:H5'	2.03	0.41
20:CT:54:MET:HG3	20:CT:55:GLN:N	2.36	0.41
1:AA:1095:U:H2'	1:AA:1096:C:O4'	2.21	0.41
22:DA:121:G:H8	22:DA:121:G:O5'	2.04	0.41
16:AP:39:PHE:CG	16:AP:74:LEU:HD11	2.56	0.41
22:DA:1069:A:C2	22:DA:1074:G:C8	3.09	0.41
22:BA:1744:A:C2	22:BA:1745:A:H1'	2.56	0.41
1:AA:299:G:H2'	1:AA:300:A:C8	2.55	0.41
20:CT:65:GLY:HA2	20:CT:68:HIS:CE1	2.56	0.41
27:BF:100:PHE:O	27:BF:104:ILE:CD1	2.70	0.41
1:AA:100:G:C2'	1:AA:101:A:H5'	2.51	0.41
22:DA:2244:U:C5	22:DA:2245:U:C5	3.09	0.41
16:CP:6:LEU:N	16:CP:6:LEU:HD12	2.35	0.41
41:DT:64:LYS:HB3	41:DT:76:ARG:NH2	2.35	0.41
22:DA:2119:A:N1	22:DA:2169:A:H2'	2.36	0.41
22:BA:2771:C:H2'	22:BA:2772:C:H6	1.84	0.41
26:BE:23:PHE:CG	26:BE:111:GLU:HG3	2.56	0.41
3:CC:117:ALA:O	3:CC:121:THR:HB	2.21	0.41
2:AB:139:ARG:HG3	2:AB:140:GLU:N	2.35	0.41
1:AA:57:G:H2'	1:AA:58:C:O4'	2.21	0.41
8:CH:18:GLN:HG2	8:CH:63:LEU:HD13	2.03	0.41
28:DG:140:VAL:HG12	28:DG:140:VAL:O	2.21	0.41
4:AD:62:ARG:NE	4:AD:67:VAL:O	2.49	0.41
4:CD:125:VAL:HG22	4:CD:130:VAL:HB	2.02	0.41
1:CA:1401:G:C4	1:CA:1402:C:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:105:MET:CG	34:BM:106:ASP:N	2.83	0.41
5:AE:119:GLY:O	5:AE:121:HIS:ND1	2.53	0.41
29:BH:129:GLU:C	29:BH:130:VAL:CG2	2.90	0.41
7:AG:72:THR:HG23	7:AG:73:VAL:HG22	2.03	0.41
1:AA:552:U:O2'	1:AA:553:A:H5'	2.21	0.41
32:DK:58:LEU:HD11	32:DK:86:LEU:HB3	2.01	0.41
22:DA:2902:C:OP1	22:DA:2903:U:C5	2.73	0.41
1:AA:939:G:H2'	1:AA:940:C:C6	2.56	0.41
30:DI:26:PRO:O	30:DI:30:GLN:HB2	2.20	0.41
19:CS:38:SER:HB2	19:CS:71:LEU:HG	2.03	0.41
49:B1:9:ILE:HG22	49:B1:53:LYS:HB2	2.03	0.41
38:DQ:64:ARG:O	38:DQ:65:ILE:C	2.60	0.41
14:CN:12:LYS:O	14:CN:14:VAL:N	2.54	0.41
9:CI:97:GLU:OE2	9:CI:97:GLU:N	2.54	0.41
8:AH:83:LEU:CD2	8:AH:83:LEU:C	2.89	0.41
25:BD:36:GLN:OE1	25:BD:67:HIS:HE1	2.04	0.41
22:DA:2745:C:O2'	28:DG:139:GLN:O	2.39	0.41
25:BD:121:THR:HB	25:BD:127:PHE:CD2	2.56	0.41
22:BA:251:A:H2'	22:BA:252:G:O4'	2.21	0.41
29:BH:88:GLY:C	29:BH:125:THR:OG1	2.59	0.40
22:BA:830:G:C6	22:BA:2448:A:C8	3.08	0.40
22:BA:1153:C:C4	22:BA:1154:G:C6	3.09	0.40
1:AA:1081:A:OP1	5:AE:21:VAL:HG23	2.21	0.40
22:DA:58:G:C4	22:DA:70:G:N2	2.89	0.40
1:AA:1317:C:OP1	14:AN:56:SER:OG	2.15	0.40
8:AH:47:GLU:HG2	8:AH:64:LYS:HG2	2.03	0.40
22:DA:223:A:H2'	22:DA:408:G:N3	2.36	0.40
22:DA:1360:G:H2'	22:DA:1361:G:H5'	2.02	0.40
1:AA:942:G:C2	1:AA:1342:C:C2	3.09	0.40
22:DA:2114:A:C2	22:DA:2115:G:O4'	2.74	0.40
22:DA:2755:C:C4	52:D4:19:ARG:NH1	2.89	0.40
39:BR:51:VAL:HB	39:BR:52:PRO:CD	2.51	0.40
11:AK:13:ARG:O	11:AK:14:LYS:O	2.39	0.40
39:DR:78:ARG:CB	39:DR:83:TYR:CD1	3.04	0.40
22:DA:581:C:H2'	22:DA:582:A:C8	2.57	0.40
22:DA:668:A:C2	22:DA:670:A:C4	3.09	0.40
17:AQ:70:THR:HG22	17:AQ:71:LYS:N	2.34	0.40
22:DA:277:G:H3'	22:DA:277:G:N3	2.36	0.40
22:DA:362:A:C5	22:DA:363:G:N7	2.89	0.40
42:DU:96:PHE:HB2	42:DU:99:ASN:OD1	2.21	0.40
22:DA:2592:G:OP1	58:DA:3461:HOH:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BX:18:ARG:CZ	45:BX:24:ALA:HB2	2.51	0.40
39:DR:49:ILE:HG22	39:DR:53:PHE:C	2.41	0.40
22:DA:19:A:O2'	22:DA:553:G:H4'	2.21	0.40
1:CA:960:U:C4	1:CA:1225:A:C8	3.09	0.40
9:CI:54:LEU:O	9:CI:55:VAL:HG13	2.21	0.40
30:DI:67:PHE:CD1	30:DI:67:PHE:N	2.89	0.40
22:BA:1494:A:C2	22:BA:1495:A:N9	2.89	0.40
21:CU:8:GLU:OE2	21:CU:12:PHE:CD2	2.73	0.40
21:CU:9:ASN:HB3	21:CU:10:GLU:HG3	2.02	0.40
24:DC:67:PHE:O	24:DC:151:GLY:O	2.39	0.40
23:DB:37:C:C4	23:DB:38:C:C4	3.09	0.40
23:DB:37:C:C4	23:DB:38:C:N3	2.89	0.40
33:BL:112:LEU:HD22	33:BL:130:GLY:HA3	2.03	0.40
1:AA:626:G:O2'	1:AA:627:G:H5'	2.21	0.40
1:AA:1379:G:C6	1:AA:1380:U:C5	3.09	0.40
30:BI:116:ASP:O	30:BI:117:MET:CG	2.69	0.40
20:AT:54:MET:HA	20:AT:57:ILE:HG22	2.03	0.40
11:CK:107:ILE:HD13	11:CK:107:ILE:C	2.42	0.40
41:DT:65:GLY:HA3	41:DT:77:ARG:HB3	2.02	0.40
1:AA:957:U:O2	1:AA:959:A:H8	2.03	0.40
2:AB:148:LEU:CA	2:AB:151:ILE:HG22	2.51	0.40
1:CA:76:G:N2	1:CA:95:C:N3	2.70	0.40
2:AB:101:LEU:HD13	2:AB:101:LEU:HA	1.93	0.40
22:DA:72:U:O2	46:DY:51:ALA:HB1	2.21	0.40
46:DY:54:LYS:O	46:DY:55:THR:C	2.59	0.40
22:DA:235:U:H2'	22:DA:236:C:H5'	2.03	0.40
22:DA:1721:G:HO2'	22:DA:1722:A:P	2.45	0.40
27:DF:8:TYR:OH	27:DF:30:ARG:HA	2.20	0.40
14:AN:36:ALA:HB2	14:AN:41:ARG:NE	2.36	0.40
22:BA:1045:C:O5'	22:BA:1046:A:H5'	2.21	0.40
18:CR:67:LEU:O	18:CR:68:LEU:HG	2.21	0.40
22:DA:1286:A:C6	22:DA:1329:U:C2	3.08	0.40
20:CT:51:PHE:HA	20:CT:54:MET:HG2	2.03	0.40
22:BA:1695:G:N7	24:BC:14:ARG:NH2	2.70	0.40
31:DJ:36:LEU:HD23	31:DJ:121:LYS:HB2	2.03	0.40
1:CA:1458:G:O2'	20:CT:23:SER:HB3	2.21	0.40
22:BA:1429:G:H2'	22:BA:1430:G:H8	1.85	0.40
22:DA:1865:U:C6	22:DA:1875:G:N2	2.90	0.40
1:CA:517:G:C8	1:CA:531:U:C5	3.09	0.40
1:AA:1329:A:H5''	13:AM:26:GLY:N	2.36	0.40
22:DA:2580:U:H5''	25:DD:135:GLY:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2659:G:C4	22:DA:2661:G:OP2	2.75	0.40
1:AA:1385:G:H2'	1:AA:1386:G:O4'	2.21	0.40
25:DD:30:GLU:O	25:DD:31:ALA:C	2.59	0.40
22:DA:327:G:H21	42:DU:68:SER:HB2	1.85	0.40
18:CR:51:TYR:C	18:CR:53:ARG:N	2.73	0.40
22:DA:1485:U:H2'	22:DA:1486:U:C6	2.56	0.40
22:DA:1710:G:C6	22:DA:1749:A:C2	3.09	0.40
22:DA:282:A:C6	22:DA:283:G:C5	3.09	0.40
32:DK:104:THR:HA	32:DK:122:VAL:HB	2.04	0.40
1:AA:422:C:H1'	1:AA:423:G:N2	2.36	0.40
28:DG:87:LEU:HD23	28:DG:162:VAL:CG1	2.51	0.40
25:DD:106:LYS:C	25:DD:107:VAL:HG13	2.41	0.40
25:DD:119:ALA:HB3	25:DD:165:MET:HB3	2.03	0.40
1:AA:1480:A:C6	1:AA:1481:U:C4	3.09	0.40
45:DX:65:ASP:O	45:DX:66:THR:C	2.58	0.40
17:CQ:65:ARG:HA	17:CQ:66:PRO:HD3	1.96	0.40
22:BA:2304:G:N2	27:BF:153:ASP:OD1	2.53	0.40
40:DS:19:LEU:O	48:D0:22:LEU:HD12	2.21	0.40
32:DK:21:CYS:HA	32:DK:41:ILE:HG22	2.03	0.40
2:CB:42:ASN:OD1	2:CB:44:GLU:HB2	2.21	0.40
23:BB:68:C:H2'	23:BB:69:G:O4'	2.21	0.40
6:AF:8:PHE:CZ	6:AF:60:VAL:HG11	2.56	0.40
34:DM:103:TYR:CD1	34:DM:103:TYR:N	2.89	0.40
18:CR:48:ARG:N	18:CR:48:ARG:HD2	2.35	0.40
1:AA:252:U:O4	1:AA:253:A:N6	2.55	0.40
29:DH:96:THR:O	29:DH:98:ASP:N	2.54	0.40
40:DS:17:VAL:HG12	40:DS:76:VAL:HG21	2.02	0.40
1:AA:449:G:C6	1:AA:450:G:C6	3.09	0.40
23:DB:111:U:H2'	23:DB:112:G:C8	2.57	0.40
18:CR:25:ASP:HB3	18:CR:28:THR:HB	2.04	0.40
22:BA:1912:A:OP1	22:BA:1913:A:OP1	2.39	0.40
22:DA:1654:A:P	35:DN:1:MET:HA	2.61	0.40
1:AA:1005:A:C8	1:AA:1024:G:N2	2.87	0.40
22:DA:740:C:C4	22:DA:758:C:O2	2.74	0.40
1:AA:408:A:H2'	1:AA:409:U:O4'	2.21	0.40
11:AK:74:VAL:C	11:AK:76:GLU:H	2.23	0.40
1:AA:75:G:N3	1:AA:75:G:H2'	2.35	0.40
1:AA:1157:A:C2	1:AA:1181:G:C4	3.09	0.40
1:AA:81:A:H2'	1:AA:82:G:H5''	2.03	0.40
22:DA:1312:U:C4	22:DA:1603:A:N6	2.90	0.40
37:BP:33:VAL:HA	37:BP:37:LYS:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1309:G:H4'	50:D2:7:PRO:HB2	2.03	0.40
22:BA:2308:G:C6	22:BA:2311:A:N7	2.89	0.40
39:DR:38:VAL:O	39:DR:53:PHE:HA	2.20	0.40
1:CA:866:C:C4'	1:CA:919:A:H5'	2.52	0.40
22:DA:912:C:C4	22:DA:913:U:O4	2.74	0.40
22:DA:1142:A:C2	22:DA:1144:A:C1'	3.04	0.40
33:DL:110:VAL:CG2	33:DL:127:VAL:HG22	2.51	0.40
22:BA:1606:C:O2'	22:BA:1607:C:C5'	2.69	0.40
1:CA:213:G:C5	1:CA:214:C:C2	3.09	0.40
22:BA:1586:A:N7	22:BA:1587:G:C8	2.89	0.40
5:CE:156:LYS:HA	5:CE:159:LYS:NZ	2.35	0.40
22:DA:1324:G:C2	22:DA:1328:A:N6	2.89	0.40
11:CK:112:ASP:HB3	21:CU:4:ILE:HG22	2.04	0.40
10:AJ:35:GLN:HG2	10:AJ:77:VAL:HB	2.03	0.40
27:BF:171:ALA:C	27:BF:173:PHE:H	2.24	0.40
5:AE:149:SER:HB2	5:AE:152:MET:CB	2.51	0.40
22:BA:1380:G:N2	22:BA:1570:A:N1	2.66	0.40
22:BA:1449:G:C2'	22:BA:1450:G:O5'	2.68	0.40
21:AU:8:GLU:HB3	21:AU:12:PHE:CZ	2.56	0.40
22:BA:1467:U:C4	22:BA:1546:G:N2	2.90	0.40
27:BF:52:ASN:CG	27:BF:147:ASP:OD2	2.60	0.40
22:DA:64:A:H5''	41:DT:77:ARG:HA	2.03	0.40
8:AH:49:PHE:HB3	8:AH:61:LEU:HD23	2.02	0.40
1:CA:159:G:N2	1:CA:161:A:H3'	2.35	0.40
1:CA:1537:U:H2'	1:CA:1538:C:C6	2.56	0.40
30:DI:18:ALA:O	30:DI:19:ASN:CB	2.69	0.40
1:CA:437:U:C2'	1:CA:438:U:H5'	2.51	0.40
22:DA:236:C:H2'	22:DA:237:C:H6	1.86	0.40
1:AA:595:A:C5	1:AA:641:U:C5	3.09	0.40
34:DM:31:PHE:CZ	34:DM:110:GLU:HA	2.56	0.40
13:AM:88:GLY:O	13:AM:91:HIS:N	2.54	0.40
1:AA:735:C:H2'	1:AA:736:C:C6	2.57	0.40
41:BT:2:ILE:HA	41:BT:3:ARG:O	2.21	0.40
1:AA:1091:U:O2	1:AA:1095:U:C2	2.74	0.40
22:DA:2186:G:C6	22:DA:2187:U:C4	3.09	0.40
1:AA:864:A:C6	1:AA:865:A:N1	2.89	0.40
22:DA:1869:G:N2	22:DA:1871:A:O2'	2.55	0.40
22:DA:2533:U:H2'	22:DA:2534:A:O4'	2.21	0.40
15:AO:27:VAL:O	15:AO:28:GLN:C	2.59	0.40
22:BA:1972:G:C2	22:BA:1973:G:N7	2.89	0.40
44:BW:61:ALA:HB1	44:BW:82:ILE:CD1	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DY:31:GLN:HG2	46:DY:36:GLN:HB2	2.02	0.40
3:CC:22:TRP:CH2	3:CC:32:ASN:HB3	2.56	0.40
18:CR:34:THR:HG21	18:CR:38:LYS:HB2	2.04	0.40
1:AA:613:C:O2'	1:AA:614:C:H5'	2.21	0.40
1:AA:472:U:C4	1:AA:473:U:C4	3.09	0.40
25:BD:20:VAL:HG22	32:BK:72:PRO:HB2	2.02	0.40
1:CA:676:A:H2'	1:CA:677:U:C6	2.57	0.40
22:DA:1858:A:C2	22:DA:1859:U:H1'	2.56	0.40
22:BA:189:G:P	45:BX:26:LYS:HE3	2.62	0.40
37:BP:3:ASN:O	37:BP:4:ILE:C	2.58	0.40
22:BA:449:A:C6	22:BA:450:G:C5	3.09	0.40
30:BI:34:ASN:CB	30:BI:37:GLU:HB2	2.51	0.40
4:CD:122:ALA:C	4:CD:123:ILE:HG12	2.41	0.40
22:DA:1969:A:O2'	22:DA:1972:G:N3	2.40	0.40
22:BA:630:G:H5''	22:BA:631:A:OP2	2.21	0.40
1:CA:1306:A:H1'	1:CA:1332:A:N7	2.36	0.40
44:DW:75:LYS:O	44:DW:76:ASN:HB2	2.21	0.40
22:DA:2383:G:C6	22:DA:2384:U:O4	2.74	0.40
1:CA:1195:C:H2'	1:CA:1197:A:O4'	2.20	0.40
12:AL:108:LYS:O	12:AL:109:ASP:HB2	2.21	0.40
27:DF:83:TYR:CG	27:DF:84:PRO:HD2	2.56	0.40
22:DA:1640:A:H2'	22:DA:1641:A:C8	2.56	0.40
22:BA:773:U:O2'	24:BC:48:ARG:HD3	2.22	0.40
23:BB:109:A:C5	23:BB:110:C:C4	3.09	0.40
22:DA:954:G:OP2	34:DM:16:ARG:NH2	2.53	0.40
38:DQ:78:LYS:HE2	38:DQ:117:LEU:HD21	2.02	0.40
3:CC:80:LYS:HE3	3:CC:80:LYS:HA	2.03	0.40
5:AE:15:LEU:O	5:AE:15:LEU:CD1	2.69	0.40
22:BA:1490:A:N3	22:BA:1490:A:H2'	2.35	0.40
39:DR:76:LYS:HB2	39:DR:85:LYS:HB3	2.03	0.40
22:BA:1613:G:O2'	50:B2:3:ARG:HD2	2.20	0.40
22:DA:2057:G:H2'	22:DA:2058:A:O4'	2.21	0.40
22:DA:686:U:H2'	22:DA:788:A:N1	2.36	0.40
22:BA:730:A:H3'	58:BA:3698:HOH:O	2.20	0.40
3:AC:60:PRO:HD2	3:AC:63:SER:O	2.21	0.40
2:AB:78:GLU:C	2:AB:80:VAL:H	2.24	0.40
12:CL:65:SER:HB2	12:CL:82:ILE:HD11	2.03	0.40
12:CL:84:GLY:HA2	12:CL:95:TYR:HD1	1.86	0.40
12:CL:94:ARG:C	12:CL:95:TYR:CG	2.95	0.40
22:DA:2114:A:C2	22:DA:2115:G:C1'	3.04	0.40
23:DB:55:U:O2'	27:DF:26:MET:HB2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:31:THR:HG22	36:DO:33:ARG:N	2.36	0.40
22:DA:1599:U:P	41:DT:40:LYS:HD2	2.61	0.40
11:CK:127:ARG:CB	21:CU:34:ARG:NH1	2.82	0.40
1:AA:97:G:H2'	1:AA:98:A:O4'	2.22	0.40
22:DA:45:G:H5''	22:DA:46:G:H4'	2.03	0.40
4:AD:191:LEU:HD12	4:AD:192:SER:OG	2.22	0.40
1:CA:685:G:O2'	1:CA:686:U:H5'	2.22	0.40
22:DA:142:A:C5	22:DA:143:C:C4	3.09	0.40
22:BA:1056:G:O6	22:BA:1102:C:OP2	2.40	0.40
1:CA:718:A:C6	11:CK:118:HIS:NE2	2.90	0.40
22:DA:2684:U:O4'	32:DK:70:ARG:NH1	2.54	0.40
1:CA:790:A:N6	1:CA:791:G:N1	2.69	0.40
33:DL:81:ASP:OD1	33:DL:100:ILE:HD11	2.21	0.40
2:CB:140:GLU:O	2:CB:141:LEU:C	2.59	0.40
1:AA:168:G:C6	1:AA:169:C:N3	2.90	0.40
49:D1:10:LYS:O	49:D1:51:GLU:HG2	2.20	0.40
22:DA:147:C:C4	22:DA:148:U:O4	2.74	0.40
22:BA:1359:A:C5	22:BA:1373:A:C2	3.10	0.40
22:BA:1422:G:H1'	22:BA:1496:A:N1	2.36	0.40
22:DA:629:G:O6	22:DA:630:G:C6	2.75	0.40
22:BA:847:U:O2	22:BA:934:U:H1'	2.20	0.40
22:DA:2820:A:O2'	25:DD:114:LYS:HD3	2.22	0.40
1:AA:1324:A:C5	1:AA:1325:C:C4	3.09	0.40
22:DA:1431:A:C2	22:DA:1432:G:N9	2.89	0.40
22:DA:2429:G:N7	33:DL:55:MET:HE3	2.36	0.40
22:DA:1455:G:H1'	22:DA:2852:G:H4'	2.04	0.40
10:CJ:19:ASP:HA	10:CJ:22:THR:HG22	2.03	0.40
22:DA:391:A:C5	22:DA:392:U:C6	3.09	0.40
1:AA:626:G:C6	1:AA:627:G:C5	3.09	0.40
22:DA:1757:A:N1	22:DA:1762:A:C2	2.89	0.40
1:AA:1312:G:N7	19:AS:3:ARG:N	2.69	0.40
22:BA:372:G:O2'	22:BA:400:G:O6	2.31	0.40
15:CO:3:LEU:HD13	15:CO:35:GLN:HG2	2.02	0.40
2:CB:161:LEU:HD23	2:CB:176:ALA:HB2	2.04	0.40
22:BA:1501:G:O2'	22:BA:1502:A:H5'	2.21	0.40
45:DX:64:ILE:HD11	45:DX:68:LEU:HD11	2.02	0.40
22:DA:2297:A:N7	22:DA:2320:U:C4	2.90	0.40
17:CQ:7:THR:O	17:CQ:7:THR:HG23	2.21	0.40
5:CE:94:VAL:CG1	5:CE:111:MET:HE3	2.51	0.40
34:BM:42:THR:O	34:BM:46:ILE:HG13	2.21	0.40
4:AD:68:LEU:CD2	4:AD:68:LEU:N	2.83	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:10:VAL:HG12	32:DK:12:ASP:OD1	2.22	0.40
22:BA:2502:G:H5'	22:BA:2503:A:H5''	2.02	0.40
41:BT:1:MET:CB	41:BT:2:ILE:HD12	2.51	0.40
31:DJ:36:LEU:HD11	31:DJ:122:LEU:HD13	2.03	0.40
15:AO:3:LEU:HA	15:AO:3:LEU:HD12	1.93	0.40
6:AF:20:GLY:O	6:AF:24:ARG:HB2	2.21	0.40
6:AF:17:GLN:OE1	6:AF:24:ARG:NH2	2.54	0.40
22:DA:727:A:C5	22:DA:728:G:C6	3.09	0.40
22:BA:2345:G:C4	22:BA:2381:A:C2	3.09	0.40
6:CF:99:ALA:O	6:CF:100:SER:HB3	2.21	0.40
22:BA:1881:C:H2'	22:BA:1882:U:O4'	2.22	0.40
22:BA:435:C:C2'	22:BA:436:C:H5'	2.51	0.40
22:DA:2354:C:O2'	44:DW:35:SER:HA	2.22	0.40
16:CP:75:ILE:O	16:CP:78:VAL:HG12	2.21	0.40
1:AA:1050:G:N2	1:AA:1051:C:C2	2.89	0.40
1:CA:542:G:C2	1:CA:543:U:C5	3.10	0.40
40:BS:19:LEU:HB3	48:B0:22:LEU:HD11	2.04	0.40
9:AI:6:TYR:CD1	9:AI:89:GLU:CB	3.04	0.40
5:AE:117:VAL:CG2	5:AE:118:ALA:N	2.83	0.40
17:AQ:46:VAL:HG22	17:AQ:73:TRP:HB2	2.02	0.40
36:BO:33:ARG:HG2	36:BO:33:ARG:O	2.21	0.40
20:AT:35:VAL:O	20:AT:39:ILE:HD12	2.22	0.40
1:CA:1262:C:C2'	1:CA:1263:C:H5'	2.51	0.40
28:BG:153:ARG:O	28:BG:154:PRO:C	2.60	0.40
22:BA:1837:C:N4	22:BA:1899:A:C8	2.89	0.40
22:DA:1680:U:H2'	22:DA:1681:G:O4'	2.21	0.40
1:AA:1480:A:C5	1:AA:1481:U:C5	3.10	0.40
8:CH:21:ASN:O	8:CH:22:LYS:C	2.58	0.40
22:BA:802:A:C2	22:BA:803:U:C2	3.09	0.40
3:AC:138:VAL:HG12	3:AC:170:GLU:OE2	2.21	0.40
22:BA:721:A:H2'	22:BA:722:A:C8	2.56	0.40
30:BI:55:ILE:HG12	30:BI:74:PRO:HA	2.04	0.40
9:AI:118:LEU:HA	9:AI:125:PRO:HD3	2.03	0.40
33:DL:121:THR:HA	33:DL:141:LYS:HB3	2.03	0.40
22:BA:1392:A:C6	22:BA:1393:A:C6	3.09	0.40
4:AD:196:ASN:O	4:AD:197:GLU:C	2.59	0.40
44:BW:12:ASN:O	44:BW:14:ARG:NH1	2.54	0.40
24:DC:166:ALA:HB3	24:DC:173:THR:HB	2.02	0.40
42:BU:102:THR:CG2	42:BU:103:ILE:N	2.83	0.40
39:DR:96:VAL:HG23	39:DR:96:VAL:O	2.21	0.40
22:BA:2112:G:N3	22:BA:2112:G:H2'	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:57:LEU:HD23	12:AL:57:LEU:HA	1.92	0.40
22:BA:1873:G:N2	22:BA:1874:C:C2	2.90	0.40
23:DB:113:C:H1'	36:DO:46:GLU:HA	2.04	0.40
42:DU:59:VAL:CG1	42:DU:61:LYS:HD3	2.51	0.40
1:AA:858:G:O2'	1:AA:859:G:C5'	2.69	0.40
41:BT:40:LYS:HD3	41:BT:58:VAL:O	2.21	0.40
1:AA:452:A:N6	1:AA:480:U:C2	2.84	0.40
22:BA:1171:G:N2	22:BA:1179:G:C6	2.89	0.40
22:DA:1008:A:H4'	22:DA:1009:A:OP1	2.21	0.40
22:DA:1351:C:O2'	22:DA:1571:A:H1'	2.21	0.40
22:DA:528:A:N1	22:DA:2043:C:O5'	2.53	0.40
22:DA:782:A:H4'	22:DA:783:A:O5'	2.22	0.40
24:DC:221:ARG:NH1	24:DC:224:ALA:HB2	2.36	0.40
41:DT:39:THR:HG23	41:DT:42:GLU:H	1.85	0.40
41:DT:21:SER:O	41:DT:24:MET:N	2.52	0.40
4:CD:202:GLU:O	4:CD:203:LEU:C	2.60	0.40
22:BA:481:G:O2'	22:BA:507:A:N1	2.44	0.40
22:DA:1187:G:HO2'	22:DA:1188:U:P	2.45	0.40
22:DA:116:C:C4	22:DA:117:G:C8	3.10	0.40
22:DA:117:G:N1	22:DA:119:A:N6	2.70	0.40
53:B5:204:GLY:O	53:B5:205:ALA:HB3	2.21	0.40
1:CA:687:A:N3	1:CA:688:G:H1'	2.36	0.40
22:DA:35:G:C1'	22:DA:454:A:N3	2.85	0.40
22:BA:626:A:H2'	33:BL:78:ARG:CZ	2.52	0.40
22:BA:1871:A:N7	22:BA:1872:A:N1	2.70	0.40
1:CA:143:A:H5'	1:CA:144:G:O5'	2.21	0.40
22:DA:82:U:H5'	22:DA:296:U:H5''	2.03	0.40
22:BA:2187:U:C2'	22:BA:2188:U:O4'	2.69	0.40
1:AA:545:C:O2	1:AA:545:C:C2'	2.67	0.40
22:DA:89:A:N1	22:DA:90:U:N3	2.70	0.40
22:BA:585:G:H5''	22:BA:586:A:P	2.62	0.40
50:B2:44:VAL:O	50:B2:44:VAL:CG1	2.70	0.40
17:AQ:22:VAL:HA	17:AQ:44:LEU:O	2.21	0.40
5:CE:56:VAL:O	5:CE:59:ALA:HB3	2.21	0.40
40:BS:96:ILE:HD11	40:BS:98:LYS:HG3	2.03	0.40
1:CA:1515:G:C2	1:CA:1516:G:C5	3.10	0.40
30:BI:83:ALA:HB1	30:BI:109:ILE:CD1	2.52	0.40
6:AF:98:GLU:HG2	6:AF:99:ALA:H	1.86	0.40
22:DA:2802:G:C6	22:DA:2803:G:C5	3.09	0.40
22:BA:934:U:H2'	22:BA:935:C:C6	2.57	0.40
22:DA:833:A:OP2	33:DL:39:LYS:NZ	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:28:ILE:O	4:CD:29:ASP:O	2.39	0.40
22:DA:1431:A:C2	22:DA:1432:G:C4	3.09	0.40
24:BC:168:ASP:O	24:BC:169:GLY:C	2.60	0.40
24:BC:146:MET:CG	24:BC:154:LEU:HD21	2.52	0.40
1:AA:722:G:N7	1:AA:724:G:H1'	2.36	0.40
24:DC:147:LYS:HB2	24:DC:150:LYS:CD	2.51	0.40
22:DA:2853:C:H2'	22:DA:2854:G:C8	2.56	0.40
1:CA:821:G:H2'	1:CA:822:U:C6	2.56	0.40
1:CA:773:G:C4	1:CA:807:A:N1	2.90	0.40
1:AA:946:A:N1	1:AA:947:G:C6	2.89	0.40
22:DA:1464:G:C5	22:DA:1465:G:N7	2.90	0.40
25:BD:103:ASP:OD1	25:BD:104:VAL:N	2.54	0.40
22:DA:1682:G:C2	22:DA:1757:A:O4'	2.75	0.40
22:DA:167:A:C2	22:DA:168:G:H1'	2.57	0.40
1:CA:312:C:H2'	1:CA:313:A:O4'	2.21	0.40
2:CB:19:GLN:O	2:CB:38:VAL:HG23	2.21	0.40
17:AQ:81:LYS:CA	17:AQ:81:LYS:HE2	2.51	0.40
20:CT:37:ALA:O	20:CT:40:GLU:HB3	2.22	0.40
6:CF:6:ILE:HG22	6:CF:7:VAL:N	2.36	0.40
1:AA:181:A:H1'	1:AA:194:C:N4	2.36	0.40
22:BA:1343:G:C6	22:BA:1344:U:C4	3.10	0.40
22:DA:632:A:H4'	33:DL:68:SER:HB2	2.03	0.40
22:BA:1817:G:H2'	22:BA:1818:U:H5'	2.03	0.40
30:BI:16:GLY:HA2	30:BI:51:LYS:HB3	2.04	0.40
8:AH:95:VAL:CG1	8:AH:96:MET:N	2.84	0.40
20:CT:55:GLN:N	20:CT:56:PRO:CD	2.84	0.40
1:AA:1084:G:C4	1:AA:1085:U:C5	3.10	0.40
22:DA:1744:A:C4	22:DA:1745:A:C8	3.09	0.40
1:CA:1458:G:H5'	20:CT:27:MET:HB3	2.02	0.40
22:BA:1355:G:C4	22:BA:1356:G:C8	3.09	0.40
1:CA:184:G:N2	1:CA:185:U:C2	2.89	0.40
27:BF:67:ILE:O	27:BF:67:ILE:CG1	2.70	0.40
22:DA:136:G:C2	22:DA:144:A:C5	3.09	0.40
1:CA:860:A:N6	1:CA:861:G:C2	2.90	0.40
22:BA:989:G:C8	47:BZ:14:ILE:HD11	2.57	0.40
1:CA:467:U:H3'	1:CA:468:A:H5''	2.04	0.40
49:B1:10:LYS:C	49:B1:11:LEU:HD23	2.41	0.40
1:AA:1248:A:C5	1:AA:1249:C:C5	3.09	0.40
48:B0:48:TYR:CE2	48:B0:53:LYS:HB2	2.56	0.40
22:BA:1050:A:C2	22:BA:2751:G:C4	3.09	0.40
1:AA:510:A:H5''	1:AA:511:C:OP1	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:423:G:N2	1:CA:424:G:C8	2.90	0.40
20:AT:34:LYS:N	20:AT:34:LYS:HE2	2.36	0.40
15:AO:87:LEU:O	15:AO:88:ARG:HB3	2.20	0.40
1:AA:892:A:O2'	1:AA:1415:G:H4'	2.21	0.40
22:DA:2452:C:C4	22:DA:2453:A:C6	3.09	0.40
1:AA:575:G:O2'	1:AA:821:G:H5'	2.22	0.40
39:DR:34:GLU:HG2	39:DR:60:LYS:HG2	2.03	0.40
1:AA:949:A:O2'	1:AA:950:U:H5'	2.22	0.40
22:DA:2206:C:O2'	22:DA:2207:C:H5'	2.21	0.40
10:AJ:92:LEU:O	10:AJ:93:ALA:HB3	2.22	0.40
10:CJ:83:THR:O	10:CJ:83:THR:HG23	2.21	0.40
41:DT:91:GLN:O	41:DT:91:GLN:NE2	2.54	0.40
5:CE:16:ILE:HD12	5:CE:16:ILE:N	2.37	0.40
23:BB:114:C:H1'	36:BO:47:VAL:HG11	2.03	0.40
22:BA:2360:G:H1'	33:BL:60:ARG:HD3	2.04	0.40
22:DA:80:G:N2	22:DA:81:G:H1'	2.36	0.40
29:BH:120:GLY:HA2	29:BH:122:LEU:HA	2.04	0.40
22:BA:1068:G:H2'	22:BA:1069:A:H5'	2.03	0.40
22:BA:571:U:C4	22:BA:575:A:C5	3.09	0.40
1:AA:454:G:N2	1:AA:479:U:O2	2.54	0.40
22:DA:1373:A:C4	22:DA:1374:G:H1'	2.56	0.40
22:DA:1570:A:H5'	24:DC:36:LYS:HB3	2.04	0.40
9:AI:84:THR:HG21	9:AI:103:PHE:CB	2.50	0.40
1:AA:1026:G:C2	1:AA:1027:C:C2	3.09	0.40
23:DB:29:A:N3	23:DB:56:G:C2	2.89	0.40
22:DA:1779:U:C5	22:DA:1784:A:N7	2.85	0.40
1:CA:717:U:O2'	1:CA:734:G:O4'	2.30	0.40
17:CQ:21:ILE:O	17:CQ:21:ILE:HG23	2.20	0.40
22:DA:1326:U:O4	22:DA:1647:U:H1'	2.20	0.40
4:AD:23:SER:O	4:AD:24:GLY:C	2.60	0.40
22:DA:118:A:H1'	22:DA:178:G:O4'	2.21	0.40
6:CF:3:HIS:CE1	6:CF:65:GLU:HG3	2.56	0.40
11:AK:91:PRO:C	11:AK:93:ARG:N	2.75	0.40
22:BA:2531:A:C6	22:BA:2532:G:C5	3.10	0.40
22:DA:84:A:C2	22:DA:98:G:N3	2.90	0.40
22:DA:1776:G:C6	22:DA:1789:A:C2	3.10	0.40
22:DA:190:A:C8	22:DA:204:A:N6	2.90	0.40
1:CA:890:G:HO2'	1:CA:891:U:P	2.39	0.40
1:CA:741:G:C4	1:CA:742:G:C8	3.10	0.40
22:BA:1056:G:C2	22:BA:1102:C:C5	3.10	0.40
42:DU:103:ILE:N	42:DU:103:ILE:HD12	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:290:U:C2	22:DA:291:G:N7	2.90	0.40
22:BA:1588:G:C4	22:BA:1589:U:C5	3.10	0.40
5:CE:156:LYS:CD	8:CH:71:VAL:HG13	2.51	0.40
22:DA:149:A:C5	22:DA:150:U:C5	3.09	0.40
22:DA:151:C:H2'	22:DA:152:A:C8	2.55	0.40
17:CQ:17:MET:N	17:CQ:17:MET:SD	2.94	0.40
13:AM:3:ARG:HG2	13:AM:57:ARG:NH1	2.37	0.40
22:DA:703:U:C5	22:DA:704:G:C6	3.09	0.40
22:DA:478:A:C2	22:DA:480:A:C5	3.10	0.40
22:DA:649:G:H2'	22:DA:650:C:C6	2.57	0.40
1:CA:815:A:H4'	1:CA:817:C:C4	2.56	0.40
1:CA:583:A:C6	1:CA:759:A:N7	2.90	0.40
22:BA:2461:A:H1'	22:BA:2492:U:C2	2.57	0.40
1:AA:1167:A:N7	1:AA:1169:A:C5	2.90	0.40
22:BA:2020:A:H5'	48:B0:9:THR:HG21	2.03	0.40
22:BA:858:G:O2'	22:BA:2268:A:H1'	2.21	0.40
21:CU:26:ALA:HA	21:CU:29:LEU:HB3	2.03	0.40
26:DE:47:LYS:O	26:DE:83:VAL:HB	2.21	0.40
6:CF:32:ALA:O	6:CF:34:GLY:N	2.53	0.40
18:CR:71:THR:OG1	18:CR:72:ASP:N	2.55	0.40
23:DB:21:G:N2	23:DB:63:C:O2	2.55	0.40
22:BA:43:G:C2'	22:BA:44:A:H5'	2.52	0.40
1:CA:619:U:C2	4:CD:132:ILE:HD12	2.57	0.40
1:AA:149:A:C5	1:AA:150:U:C5	3.09	0.40
22:DA:2704:C:H2'	22:DA:2705:A:O4'	2.21	0.40
24:BC:76:ALA:HB2	24:BC:96:TYR:HA	2.04	0.40
32:BK:92:GLU:O	32:BK:93:GLN:HB2	2.21	0.40
1:CA:78:A:C6	1:CA:79:G:C5	3.09	0.40
48:B0:15:MET:O	48:B0:18:SER:HB3	2.21	0.40
1:CA:1426:G:C4	1:CA:1475:G:C2	3.09	0.40
1:CA:1460:C:N4	1:CA:1461:G:C6	2.90	0.40
2:CB:10:LEU:HD21	2:CB:12:ALA:O	2.21	0.40
23:BB:109:A:C6	23:BB:110:C:C4	3.09	0.40
46:DY:16:THR:O	46:DY:19:LEU:HB2	2.21	0.40
1:CA:896:C:H2'	1:CA:897:C:H5'	2.03	0.40
7:AG:84:THR:O	7:AG:85:TYR:O	2.39	0.40
53:B5:21:TYR:O	53:B5:22:THR:HG23	2.21	0.40
53:B5:73:VAL:HB	53:B5:75:VAL:HG23	2.02	0.40
27:BF:138:PHE:HA	27:BF:139:PRO:HD3	1.91	0.40
22:BA:2009:A:OP1	40:BS:41:LYS:HE2	2.21	0.40
22:BA:1799:G:O2'	24:BC:180:GLU:OE2	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:666:A:H4'	33:BL:48:ARG:HD3	2.04	0.40
11:AK:87:LYS:HE3	11:AK:113:VAL:HG23	2.04	0.40
22:BA:2447:G:C2	22:BA:2501:C:N4	2.89	0.40
22:BA:1674:G:N2	22:BA:1677:A:N1	2.59	0.40
22:BA:498:G:O2'	42:BU:45:HIS:NE2	2.54	0.40
22:DA:1280:G:C6	22:DA:1281:G:C5	3.10	0.40
1:CA:371:A:H1'	1:CA:482:A:H1'	2.02	0.40
22:BA:1232:G:C5	22:BA:1233:C:C5	3.09	0.40
3:CC:167:TRP:C	3:CC:167:TRP:HE3	2.25	0.40
1:AA:963:G:N3	1:AA:963:G:H2'	2.37	0.40
22:DA:2311:A:HO2'	22:DA:2312:U:P	2.44	0.40
22:BA:1157:G:N2	22:BA:1158:C:C2	2.89	0.40
22:DA:2641:G:OP1	31:DJ:78:THR:HG22	2.21	0.40
10:CJ:91:ASP:O	10:CJ:92:LEU:HG	2.22	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

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%)	127 (59%)	39 (18%)	50 (23%)	0	0
2	CB	216/218 (99%)	137 (63%)	46 (21%)	33 (15%)	0	0
3	AC	204/206 (99%)	149 (73%)	34 (17%)	21 (10%)	1	1
3	CC	204/206 (99%)	149 (73%)	44 (22%)	11 (5%)	2	7
4	AD	203/205 (99%)	135 (66%)	38 (19%)	30 (15%)	0	0
4	CD	203/205 (99%)	150 (74%)	32 (16%)	21 (10%)	1	1
5	AE	148/150 (99%)	105 (71%)	23 (16%)	20 (14%)	0	1
5	CE	148/150 (99%)	92 (62%)	36 (24%)	20 (14%)	0	1
6	AF	98/100 (98%)	60 (61%)	25 (26%)	13 (13%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
6	CF	98/100 (98%)	66 (67%)	17 (17%)	15 (15%)	0	0
7	AG	149/151 (99%)	111 (74%)	25 (17%)	13 (9%)	1	2
7	CG	149/151 (99%)	119 (80%)	18 (12%)	12 (8%)	1	2
8	AH	127/129 (98%)	88 (69%)	32 (25%)	7 (6%)	2	6
8	CH	127/129 (98%)	102 (80%)	16 (13%)	9 (7%)	1	3
9	AI	125/127 (98%)	89 (71%)	20 (16%)	16 (13%)	0	1
9	CI	125/127 (98%)	86 (69%)	28 (22%)	11 (9%)	1	2
10	AJ	96/98 (98%)	63 (66%)	15 (16%)	18 (19%)	0	0
10	CJ	96/98 (98%)	70 (73%)	15 (16%)	11 (12%)	0	1
11	AK	115/117 (98%)	84 (73%)	20 (17%)	11 (10%)	1	1
11	CK	115/117 (98%)	81 (70%)	25 (22%)	9 (8%)	1	2
12	AL	121/123 (98%)	92 (76%)	20 (16%)	9 (7%)	1	3
12	CL	121/123 (98%)	88 (73%)	18 (15%)	15 (12%)	0	1
13	AM	112/114 (98%)	87 (78%)	12 (11%)	13 (12%)	0	1
13	CM	112/114 (98%)	81 (72%)	23 (20%)	8 (7%)	1	3
14	AN	92/100 (92%)	58 (63%)	19 (21%)	15 (16%)	0	0
14	CN	92/100 (92%)	60 (65%)	15 (16%)	17 (18%)	0	0
15	AO	86/88 (98%)	68 (79%)	15 (17%)	3 (4%)	4	15
15	CO	86/88 (98%)	72 (84%)	10 (12%)	4 (5%)	3	9
16	AP	80/82 (98%)	54 (68%)	13 (16%)	13 (16%)	0	0
16	CP	80/82 (98%)	61 (76%)	14 (18%)	5 (6%)	2	4
17	AQ	78/80 (98%)	52 (67%)	21 (27%)	5 (6%)	2	4
17	CQ	78/80 (98%)	56 (72%)	13 (17%)	9 (12%)	0	1
18	AR	53/55 (96%)	39 (74%)	12 (23%)	2 (4%)	4	13
18	CR	53/55 (96%)	34 (64%)	12 (23%)	7 (13%)	0	1
19	AS	77/79 (98%)	50 (65%)	18 (23%)	9 (12%)	0	1
19	CS	77/79 (98%)	60 (78%)	12 (16%)	5 (6%)	1	4
20	AT	83/85 (98%)	66 (80%)	11 (13%)	6 (7%)	1	3
20	CT	83/85 (98%)	62 (75%)	16 (19%)	5 (6%)	2	5
21	AU	49/51 (96%)	28 (57%)	8 (16%)	13 (26%)	0	0
21	CU	49/51 (96%)	24 (49%)	12 (24%)	13 (26%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
24	BC	269/271 (99%)	217 (81%)	42 (16%)	10 (4%)	4	14
24	DC	269/271 (99%)	205 (76%)	47 (18%)	17 (6%)	2	4
25	BD	207/209 (99%)	180 (87%)	22 (11%)	5 (2%)	7	25
25	DD	207/209 (99%)	162 (78%)	33 (16%)	12 (6%)	2	5
26	BE	199/201 (99%)	172 (86%)	22 (11%)	5 (2%)	7	24
26	DE	199/201 (99%)	158 (79%)	30 (15%)	11 (6%)	2	6
27	BF	175/177 (99%)	144 (82%)	22 (13%)	9 (5%)	2	8
27	DF	175/177 (99%)	133 (76%)	29 (17%)	13 (7%)	1	3
28	BG	174/176 (99%)	150 (86%)	19 (11%)	5 (3%)	6	19
28	DG	174/176 (99%)	136 (78%)	30 (17%)	8 (5%)	3	9
29	BH	147/149 (99%)	89 (60%)	37 (25%)	21 (14%)	0	1
29	DH	147/149 (99%)	100 (68%)	32 (22%)	15 (10%)	1	1
30	BI	139/141 (99%)	82 (59%)	37 (27%)	20 (14%)	0	1
30	DI	139/141 (99%)	77 (55%)	47 (34%)	15 (11%)	0	1
31	BJ	140/142 (99%)	125 (89%)	14 (10%)	1 (1%)	26	62
31	DJ	140/142 (99%)	119 (85%)	13 (9%)	8 (6%)	2	6
32	BK	120/122 (98%)	97 (81%)	15 (12%)	8 (7%)	1	4
32	DK	120/122 (98%)	94 (78%)	19 (16%)	7 (6%)	2	5
33	BL	141/143 (99%)	110 (78%)	25 (18%)	6 (4%)	3	10
33	DL	141/143 (99%)	96 (68%)	33 (23%)	12 (8%)	1	2
34	BM	134/136 (98%)	124 (92%)	8 (6%)	2 (2%)	13	40
34	DM	134/136 (98%)	108 (81%)	18 (13%)	8 (6%)	2	5
35	BN	118/120 (98%)	106 (90%)	9 (8%)	3 (2%)	7	24
35	DN	118/120 (98%)	97 (82%)	13 (11%)	8 (7%)	1	4
36	BO	114/116 (98%)	93 (82%)	18 (16%)	3 (3%)	7	22
36	DO	114/116 (98%)	87 (76%)	20 (18%)	7 (6%)	2	5
37	BP	112/114 (98%)	100 (89%)	7 (6%)	5 (4%)	3	10
37	DP	112/114 (98%)	84 (75%)	15 (13%)	13 (12%)	0	1
38	BQ	115/117 (98%)	111 (96%)	1 (1%)	3 (3%)	7	22
38	DQ	115/117 (98%)	97 (84%)	16 (14%)	2 (2%)	11	36
39	BR	101/103 (98%)	86 (85%)	6 (6%)	9 (9%)	1	2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
39	DR	101/103 (98%)	74 (73%)	20 (20%)	7 (7%)	1	3
40	BS	108/110 (98%)	95 (88%)	10 (9%)	3 (3%)	6	21
40	DS	108/110 (98%)	84 (78%)	16 (15%)	8 (7%)	1	3
41	BT	91/93 (98%)	72 (79%)	13 (14%)	6 (7%)	1	4
41	DT	91/93 (98%)	54 (59%)	23 (25%)	14 (15%)	0	0
42	BU	100/102 (98%)	79 (79%)	12 (12%)	9 (9%)	1	2
42	DU	100/102 (98%)	68 (68%)	19 (19%)	13 (13%)	0	1
43	BV	92/94 (98%)	86 (94%)	6 (6%)	0	100	100
43	DV	92/94 (98%)	77 (84%)	13 (14%)	2 (2%)	8	28
44	BW	74/76 (97%)	69 (93%)	2 (3%)	3 (4%)	3	11
44	DW	73/76 (96%)	64 (88%)	7 (10%)	2 (3%)	6	21
45	BX	75/77 (97%)	70 (93%)	4 (5%)	1 (1%)	15	44
45	DX	75/77 (97%)	52 (69%)	16 (21%)	7 (9%)	1	1
46	BY	61/63 (97%)	42 (69%)	13 (21%)	6 (10%)	1	1
46	DY	61/63 (97%)	39 (64%)	18 (30%)	4 (7%)	1	4
47	BZ	56/58 (97%)	53 (95%)	3 (5%)	0	100	100
47	DZ	56/58 (97%)	48 (86%)	5 (9%)	3 (5%)	2	7
48	B0	54/56 (96%)	43 (80%)	9 (17%)	2 (4%)	4	14
48	D0	54/56 (96%)	36 (67%)	15 (28%)	3 (6%)	2	6
49	B1	48/50 (96%)	37 (77%)	9 (19%)	2 (4%)	3	11
49	D1	48/50 (96%)	37 (77%)	8 (17%)	3 (6%)	2	4
50	B2	44/46 (96%)	39 (89%)	4 (9%)	1 (2%)	8	26
50	D2	44/46 (96%)	35 (80%)	7 (16%)	2 (4%)	3	10
51	B3	62/64 (97%)	57 (92%)	4 (6%)	1 (2%)	12	38
51	D3	62/64 (97%)	46 (74%)	14 (23%)	2 (3%)	5	17
52	B4	36/38 (95%)	33 (92%)	3 (8%)	0	100	100
52	D4	36/38 (95%)	32 (89%)	3 (8%)	1 (3%)	6	21
53	B5	183/228 (80%)	100 (55%)	50 (27%)	33 (18%)	0	0
54	B6	2/7 (29%)	2 (100%)	0	0	100	100
54	D6	2/7 (29%)	0	1 (50%)	1 (50%)	0	0
All	All	11422/11686 (98%)	8617 (75%)	1868 (16%)	937 (8%)	1	2



All (937) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	16	PHE
2	AB	21	ARG
2	AB	22	TYR
2	AB	25	PRO
2	AB	34	ALA
2	AB	64	LYS
2	AB	73	LYS
2	AB	74	ARG
2	AB	75	ALA
2	AB	76	ALA
2	AB	107	VAL
2	AB	116	ASP
2	AB	120	GLN
2	AB	126	PHE
2	AB	129	LEU
2	AB	134	ALA
2	AB	148	LEU
2	AB	152	LYS
2	AB	155	GLY
2	AB	201	PRO
2	AB	210	VAL
2	AB	211	THR
2	AB	220	THR
3	AC	15	VAL
3	AC	18	TRP
3	AC	26	THR
3	AC	61	ALA
3	AC	101	ILE
3	AC	127	ARG
3	AC	140	ASN
3	AC	141	ALA
4	AD	23	SER
4	AD	24	GLY
4	AD	29	ASP
4	AD	33	LYS
4	AD	35	GLU
4	AD	125	VAL
4	AD	151	LYS
4	AD	154	ARG
4	AD	160	GLU
4	AD	168	PRO
4	AD	174	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
4	AD	175	ALA
4	AD	191	LEU
4	AD	192	SER
5	AE	12	GLN
5	AE	100	SER
5	AE	158	GLY
6	AF	7	VAL
6	AF	68	GLN
6	AF	91	ARG
6	AF	92	THR
6	AF	98	GLU
6	AF	99	ALA
7	AG	5	ARG
7	AG	15	ASP
7	AG	56	LYS
7	AG	85	TYR
7	AG	130	ASN
8	AH	3	MET
8	AH	4	GLN
8	AH	67	GLN
9	AI	41	ARG
9	AI	44	ALA
9	AI	50	GLN
9	AI	72	ILE
9	AI	91	ASP
10	AJ	32	THR
10	AJ	34	ALA
10	AJ	36	VAL
10	AJ	57	VAL
10	AJ	61	ALA
10	AJ	92	LEU
10	AJ	101	SER
11	AK	14	LYS
11	AK	39	GLY
11	AK	41	ALA
11	AK	52	PHE
11	AK	73	ALA
12	AL	24	LEU
12	AL	26	ALA
12	AL	44	LYS
12	AL	123	LYS
13	AM	4	ILE

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Mol	Chain	Res	Type
13	AM	12	HIS
13	AM	112	PRO
14	AN	34	VAL
14	AN	45	VAL
14	AN	47	LYS
14	AN	52	PRO
14	AN	53	ARG
14	AN	62	ASN
14	AN	92	GLU
15	AO	20	ASN
15	AO	73	LYS
16	AP	11	ALA
16	AP	43	ALA
16	AP	46	LYS
16	AP	48	GLU
16	AP	50	THR
16	AP	53	ASP
16	AP	68	SER
17	AQ	18	GLU
17	AQ	51	ASN
19	AS	4	SER
19	AS	5	LEU
19	AS	29	LYS
19	AS	30	PRO
19	AS	65	GLU
20	AT	4	ILE
20	AT	6	SER
20	AT	70	ASN
21	AU	10	GLU
21	AU	24	GLU
21	AU	36	GLU
21	AU	38	TYR
21	AU	40	LYS
24	BC	71	LYS
24	BC	261	LYS
24	BC	265	LYS
25	BD	152	PRO
26	BE	8	ALA
27	BF	3	LYS
27	BF	41	GLY
27	BF	176	PRO
28	BG	119	ALA

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Mol	Chain	Res	Type
28	BG	175	LYS
29	BH	10	ALA
29	BH	34	GLY
29	BH	53	GLU
29	BH	87	GLU
29	BH	90	LEU
29	BH	118	PRO
29	BH	121	VAL
29	BH	140	ALA
30	BI	19	ASN
30	BI	45	LYS
30	BI	58	VAL
30	BI	63	ALA
30	BI	75	PRO
30	BI	83	ALA
30	BI	113	LYS
30	BI	117	MET
30	BI	134	ARG
32	BK	35	VAL
32	BK	75	SER
33	BL	69	ARG
33	BL	88	GLY
33	BL	94	THR
33	BL	115	GLU
34	BM	69	PRO
35	BN	118	ARG
37	BP	94	LYS
37	BP	114	LEU
38	BQ	7	GLY
38	BQ	25	TYR
38	BQ	102	ASP
39	BR	49	ILE
39	BR	51	VAL
39	BR	53	PHE
39	BR	57	GLY
41	BT	89	GLU
42	BU	8	ASP
46	BY	22	LEU
46	BY	23	ARG
46	BY	24	GLU
46	BY	36	GLN
46	BY	46	VAL

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Mol	Chain	Res	Type
49	B1	17	THR
50	B2	44	VAL
53	B5	51	ASP
53	B5	62	THR
53	B5	86	GLU
53	B5	126	SER
53	B5	134	PRO
53	B5	154	ILE
53	B5	174	ALA
53	B5	175	PRO
53	B5	181	PHE
53	B5	183	PRO
53	B5	205	ALA
53	B5	214	TYR
53	B5	215	VAL
53	B5	221	PRO
2	CB	16	PHE
2	CB	36	ASN
2	CB	124	GLY
2	CB	170	HIS
2	CB	193	PRO
2	CB	194	ASP
2	CB	207	ILE
2	CB	208	ARG
2	CB	220	THR
3	CC	66	VAL
3	CC	146	ALA
3	CC	156	ARG
4	CD	23	SER
4	CD	29	ASP
4	CD	32	CYS
4	CD	153	SER
5	CE	45	ARG
5	CE	98	PRO
5	CE	100	SER
5	CE	103	THR
5	CE	105	ILE
5	CE	123	VAL
5	CE	138	ARG
6	CF	55	HIS
6	CF	56	LYS
6	CF	86	ARG

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Mol	Chain	Res	Type
6	CF	91	ARG
6	CF	92	THR
6	CF	93	LYS
6	CF	98	GLU
7	CG	9	GLN
7	CG	56	LYS
7	CG	130	ASN
9	CI	41	ARG
9	CI	103	PHE
9	CI	120	LYS
10	CJ	35	GLN
10	CJ	38	GLY
10	CJ	57	VAL
10	CJ	89	ARG
10	CJ	92	LEU
11	CK	52	PHE
11	CK	127	ARG
12	CL	4	VAL
12	CL	15	LYS
12	CL	23	ALA
12	CL	24	LEU
12	CL	26	ALA
12	CL	43	LYS
12	CL	44	LYS
12	CL	76	GLU
12	CL	77	HIS
12	CL	89	ASP
12	CL	93	VAL
12	CL	117	TYR
13	CM	11	ASP
13	CM	41	GLU
14	CN	29	ALA
14	CN	34	VAL
14	CN	52	PRO
14	CN	53	ARG
14	CN	92	GLU
15	CO	73	LYS
17	CQ	13	VAL
17	CQ	51	ASN
17	CQ	52	GLU
18	CR	26	ILE
18	CR	47	THR

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Mol	Chain	Res	Type
19	CS	5	LEU
20	CT	4	ILE
20	CT	6	SER
20	CT	68	HIS
21	CU	9	ASN
21	CU	12	PHE
21	CU	24	GLU
21	CU	40	LYS
21	CU	53	VAL
24	DC	10	SER
24	DC	58	HIS
24	DC	71	LYS
24	DC	122	ALA
24	DC	239	ASN
24	DC	251	GLN
25	DD	105	LYS
25	DD	151	THR
25	DD	152	PRO
26	DE	83	VAL
26	DE	153	LEU
27	DF	9	LYS
27	DF	21	ASN
27	DF	123	ASP
28	DG	20	ASN
29	DH	3	VAL
29	DH	10	ALA
29	DH	33	GLN
29	DH	35	LYS
29	DH	41	LYS
29	DH	53	GLU
29	DH	54	LEU
29	DH	83	LYS
29	DH	109	GLU
30	DI	7	ALA
30	DI	101	ILE
30	DI	102	SER
30	DI	106	LEU
30	DI	115	ALA
31	DJ	25	LEU
31	DJ	42	ALA
31	DJ	81	ILE
31	DJ	95	ARG

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Mol	Chain	Res	Type
32	DK	35	VAL
32	DK	92	GLU
32	DK	108	ARG
33	DL	54	GLN
33	DL	115	GLU
34	DM	69	PRO
35	DN	2	ARG
35	DN	3	HIS
35	DN	88	ALA
35	DN	118	ARG
36	DO	34	HIS
36	DO	116	GLN
37	DP	36	SER
37	DP	66	ASN
37	DP	80	VAL
40	DS	29	VAL
40	DS	62	ASP
40	DS	67	ASP
40	DS	107	VAL
41	DT	18	GLU
41	DT	21	SER
41	DT	22	THR
41	DT	39	THR
41	DT	40	LYS
41	DT	77	ARG
42	DU	41	LEU
42	DU	55	PRO
42	DU	89	ASP
44	DW	20	ARG
45	DX	32	ASN
45	DX	62	LYS
46	DY	61	ALA
47	DZ	14	ILE
49	D1	16	GLY
50	D2	44	VAL
52	D4	20	ASP
2	AB	33	GLY
2	AB	68	LEU
2	AB	83	ALA
2	AB	117	LEU
2	AB	124	GLY
2	AB	150	GLY

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Mol	Chain	Res	Type
2	AB	183	VAL
2	AB	194	ASP
2	AB	207	ILE
2	AB	212	LEU
3	AC	3	GLN
3	AC	17	PRO
3	AC	139	GLN
3	AC	206	GLU
4	AD	10	LYS
4	AD	17	THR
4	AD	34	ILE
4	AD	161	LEU
4	AD	169	THR
5	AE	51	GLY
5	AE	101	GLU
5	AE	109	GLY
5	AE	110	ALA
5	AE	116	GLU
5	AE	138	ARG
5	AE	151	GLU
6	AF	6	ILE
6	AF	36	ILE
6	AF	69	GLU
7	AG	81	GLY
8	AH	50	LYS
8	AH	100	GLY
9	AI	13	LYS
9	AI	57	MET
9	AI	58	VAL
9	AI	59	GLU
9	AI	116	VAL
10	AJ	38	GLY
10	AJ	41	PRO
10	AJ	74	VAL
11	AK	72	ASP
11	AK	103	ALA
12	AL	25	GLU
12	AL	89	ASP
13	AM	7	ILE
13	AM	11	ASP
13	AM	47	GLU
14	AN	28	LYS

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Mol	Chain	Res	Type
14	AN	42	TRP
14	AN	48	LEU
14	AN	49	GLN
16	AP	80	LYS
17	AQ	68	SER
17	AQ	70	THR
18	AR	26	ILE
19	AS	35	SER
20	AT	5	LYS
20	AT	68	HIS
21	AU	26	ALA
21	AU	27	GLY
21	AU	35	ARG
21	AU	37	PHE
24	BC	38	SER
24	BC	122	ALA
24	BC	124	ILE
24	BC	205	LEU
24	BC	236	GLU
25	BD	105	LYS
26	BE	86	ALA
27	BF	172	ALA
28	BG	39	ASP
29	BH	3	VAL
29	BH	11	ASN
29	BH	14	SER
29	BH	15	LEU
29	BH	66	ASN
29	BH	119	ASN
30	BI	4	LYS
30	BI	24	VAL
30	BI	60	THR
30	BI	65	ARG
31	BJ	81	ILE
32	BK	91	SER
32	BK	108	ARG
33	BL	114	GLY
34	BM	58	LYS
35	BN	119	SER
36	BO	60	GLU
36	BO	87	ILE
37	BP	35	GLY

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Mol	Chain	Res	Type
37	BP	105	GLY
39	BR	31	GLU
39	BR	55	ASP
41	BT	18	GLU
41	BT	71	GLY
42	BU	9	ASP
42	BU	40	ASN
44	BW	54	GLY
46	BY	57	LEU
48	B0	55	ILE
53	B5	60	ARG
53	B5	67	HIS
53	B5	136	GLY
2	CB	13	GLY
2	CB	17	GLY
2	CB	34	ALA
2	CB	35	ARG
2	CB	41	ILE
2	CB	116	ASP
2	CB	120	GLN
2	CB	166	ALA
2	CB	222	ARG
3	CC	12	LEU
3	CC	127	ARG
3	CC	175	LEU
3	CC	192	THR
4	CD	4	TYR
4	CD	28	ILE
4	CD	35	GLU
4	CD	175	ALA
5	CE	12	GLN
5	CE	51	GLY
5	CE	99	ALA
5	CE	101	GLU
5	CE	142	ASP
6	CF	14	GLN
6	CF	15	SER
7	CG	84	THR
7	CG	146	GLU
8	CH	31	LYS
8	CH	89	LYS
9	CI	26	GLY

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Mol	Chain	Res	Type
10	CJ	36	VAL
10	CJ	41	PRO
11	CK	78	GLY
11	CK	92	GLY
12	CL	17	ALA
12	CL	34	CYS
13	CM	12	HIS
13	CM	25	VAL
13	CM	111	GLY
14	CN	22	ALA
14	CN	59	ARG
14	CN	62	ASN
15	CO	20	ASN
16	CP	24	SER
16	CP	77	GLU
16	CP	80	LYS
17	CQ	5	ILE
17	CQ	20	SER
17	CQ	76	VAL
18	CR	21	ILE
18	CR	71	THR
20	CT	67	ILE
21	CU	10	GLU
21	CU	13	ASP
21	CU	52	ALA
24	DC	29	PRO
24	DC	143	ASN
24	DC	158	ALA
24	DC	240	PHE
25	DD	31	ALA
25	DD	36	GLN
25	DD	57	ALA
25	DD	94	GLN
25	DD	195	GLY
26	DE	86	ALA
27	DF	31	VAL
27	DF	79	ILE
27	DF	143	TYR
27	DF	148	ARG
27	DF	176	PRO
28	DG	8	PRO
28	DG	119	ALA

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Mol	Chain	Res	Type
28	DG	159	GLY
28	DG	175	LYS
29	DH	31	VAL
29	DH	77	THR
29	DH	118	PRO
30	DI	15	ALA
30	DI	72	LYS
30	DI	84	ALA
31	DJ	127	GLY
33	DL	4	ASN
33	DL	29	LYS
33	DL	53	GLY
33	DL	111	ILE
34	DM	122	ALA
35	DN	70	THR
35	DN	104	ALA
36	DO	114	GLY
37	DP	24	ASP
37	DP	105	GLY
38	DQ	102	ASP
39	DR	50	GLY
39	DR	102	SER
40	DS	63	GLY
42	DU	9	ASP
42	DU	53	ASN
42	DU	57	GLY
42	DU	98	SER
42	DU	102	THR
44	DW	49	ALA
46	DY	57	LEU
47	DZ	53	PHE
48	D0	55	ILE
49	D1	52	ALA
50	D2	45	SER
2	AB	13	GLY
2	AB	43	LEU
2	AB	95	ARG
2	AB	128	LYS
2	AB	182	PRO
2	AB	193	PRO
3	AC	146	ALA
3	AC	166	GLU

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Mol	Chain	Res	Type
4	AD	43	ALA
4	AD	109	ALA
4	AD	182	PHE
4	AD	193	ALA
5	AE	45	ARG
5	AE	78	ASN
6	AF	56	LYS
6	AF	93	LYS
6	AF	95	ALA
8	AH	96	MET
9	AI	9	THR
10	AJ	29	ALA
10	AJ	43	PRO
10	AJ	75	ASP
11	AK	108	THR
13	AM	48	LEU
13	AM	114	LYS
14	AN	44	ALA
16	AP	12	LYS
16	AP	44	SER
16	AP	49	GLY
18	AR	50	LYS
19	AS	43	ASN
20	AT	7	ALA
26	BE	200	LEU
27	BF	45	ALA
28	BG	79	VAL
28	BG	152	ARG
29	BH	9	VAL
29	BH	30	LEU
29	BH	85	GLY
29	BH	93	SER
29	BH	105	ALA
30	BI	6	GLN
30	BI	7	ALA
30	BI	98	VAL
36	BO	88	LYS
39	BR	52	PRO
40	BS	64	ALA
40	BS	65	ASP
41	BT	17	SER
41	BT	52	GLU

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Mol	Chain	Res	Type
44	BW	11	ARG
53	B5	65	LEU
53	B5	66	PRO
53	B5	90	ALA
53	B5	180	SER
53	B5	182	PRO
2	CB	12	ALA
2	CB	19	GLN
2	CB	51	ASN
2	CB	126	PHE
2	CB	203	ASN
2	CB	209	ALA
3	CC	80	LYS
3	CC	89	LYS
4	CD	5	LEU
4	CD	36	GLN
4	CD	47	ARG
4	CD	148	LYS
4	CD	154	ARG
4	CD	174	ASP
5	CE	24	THR
5	CE	113	ALA
5	CE	122	ASN
5	CE	147	MET
6	CF	13	ASP
6	CF	17	GLN
7	CG	3	ARG
8	CH	54	ASP
8	CH	83	LEU
9	CI	23	PRO
9	CI	58	VAL
10	CJ	17	LEU
10	CJ	95	GLY
11	CK	15	GLN
12	CL	88	LYS
13	CM	7	ILE
13	CM	114	LYS
14	CN	13	ARG
14	CN	23	LYS
14	CN	58	SER
16	CP	79	ASN
19	CS	6	LYS

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Mol	Chain	Res	Type
19	CS	28	LYS
19	CS	32	ARG
24	DC	35	GLU
24	DC	203	ARG
24	DC	205	LEU
26	DE	18	THR
26	DE	24	ASN
26	DE	61	ARG
26	DE	62	GLN
26	DE	122	GLU
27	DF	103	LEU
27	DF	177	PHE
28	DG	12	PRO
28	DG	28	GLY
29	DH	16	GLY
29	DH	40	THR
30	DI	93	PRO
30	DI	100	LYS
32	DK	48	PRO
33	DL	69	ARG
34	DM	3	GLN
34	DM	58	LYS
34	DM	79	ALA
34	DM	110	GLU
36	DO	57	ALA
36	DO	77	ALA
37	DP	111	LYS
37	DP	114	LEU
40	DS	69	LEU
41	DT	7	LEU
41	DT	42	GLU
41	DT	73	ARG
42	DU	20	GLY
43	DV	84	PRO
45	DX	42	SER
45	DX	70	GLU
48	D0	32	LYS
2	AB	19	GLN
2	AB	53	ALA
2	AB	97	LEU
2	AB	166	ALA
3	AC	51	SER

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Mol	Chain	Res	Type
3	AC	84	VAL
3	AC	143	ARG
4	AD	25	VAL
4	AD	32	CYS
4	AD	153	SER
4	AD	167	LYS
5	AE	75	ALA
5	AE	115	LEU
5	AE	122	ASN
5	AE	157	ARG
7	AG	12	ILE
7	AG	77	SER
7	AG	78	ARG
7	AG	100	ALA
9	AI	25	ASN
9	AI	51	PRO
9	AI	88	MET
9	AI	120	LYS
10	AJ	17	LEU
10	AJ	33	GLY
10	AJ	35	GLN
10	AJ	42	LEU
11	AK	89	PRO
11	AK	127	ARG
13	AM	64	VAL
13	AM	67	GLY
14	AN	4	GLN
14	AN	91	GLY
15	AO	25	THR
19	AS	6	LYS
19	AS	9	PRO
21	AU	23	CYS
25	BD	102	ALA
26	BE	6	LYS
26	BE	18	THR
27	BF	71	ARG
27	BF	174	ASP
27	BF	175	PHE
29	BH	83	LYS
30	BI	72	LYS
32	BK	5	GLN
32	BK	93	GLN

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Mol	Chain	Res	Type
32	BK	119	ALA
35	BN	106	ASP
39	BR	24	LYS
40	BS	12	SER
41	BT	25	GLU
42	BU	17	LYS
42	BU	52	LEU
44	BW	33	ALA
45	BX	32	ASN
48	B0	26	THR
51	B3	28	ASN
53	B5	53	ARG
53	B5	151	GLY
53	B5	224	ARG
2	CB	63	ARG
2	CB	86	SER
2	CB	136	MET
2	CB	141	LEU
4	CD	30	THR
4	CD	165	ARG
4	CD	192	SER
5	CE	102	GLY
6	CF	63	ASN
7	CG	82	GLY
8	CH	67	GLN
9	CI	55	VAL
9	CI	129	LYS
10	CJ	90	LEU
11	CK	126	LYS
13	CM	24	GLY
14	CN	3	LYS
14	CN	81	ARG
15	CO	46	HIS
17	CQ	12	VAL
17	CQ	53	CYS
18	CR	34	THR
20	CT	7	ALA
21	CU	11	PRO
21	CU	36	GLU
25	DD	174	SER
26	DE	129	PRO
26	DE	199	MET

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Mol	Chain	Res	Type
27	DF	175	PHE
28	DG	46	ALA
29	DH	9	VAL
30	DI	134	ARG
32	DK	93	GLN
33	DL	25	SER
34	DM	23	GLY
36	DO	90	VAL
37	DP	84	ILE
37	DP	94	LYS
39	DR	7	SER
39	DR	31	GLU
39	DR	70	GLU
39	DR	81	LYS
40	DS	65	ASP
41	DT	28	ASN
41	DT	33	LYS
41	DT	41	ALA
42	DU	7	ARG
42	DU	99	ASN
45	DX	44	LYS
45	DX	51	VAL
46	DY	36	GLN
54	D6	4	PRO
2	AB	20	THR
2	AB	133	GLU
2	AB	161	LEU
3	AC	12	LEU
3	AC	54	ARG
4	AD	101	VAL
5	AE	24	THR
6	AF	54	LEU
7	AG	14	PRO
7	AG	140	ASP
9	AI	107	ASP
10	AJ	100	ILE
16	AP	79	ASN
21	AU	25	LYS
25	BD	2	ILE
30	BI	48	SER
32	BK	110	GLU
33	BL	86	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
39	BR	50	GLY
42	BU	39	ILE
42	BU	98	SER
53	B5	176	VAL
53	B5	207	GLY
53	B5	210	LEU
53	B5	213	VAL
2	CB	76	ALA
2	CB	149	GLY
3	CC	7	PRO
3	CC	84	VAL
4	CD	10	LYS
4	CD	37	ALA
4	CD	85	ASN
6	CF	95	ALA
7	CG	8	GLY
7	CG	12	ILE
7	CG	113	ASP
7	CG	140	ASP
9	CI	13	LYS
10	CJ	42	LEU
14	CN	50	THR
14	CN	64	CYS
15	CO	18	ASP
17	CQ	17	MET
18	CR	25	ASP
18	CR	52	GLN
21	CU	51	SER
24	DC	253	LYS
25	DD	199	SER
26	DE	53	THR
27	DF	174	ASP
30	DI	13	VAL
31	DJ	39	LYS
32	DK	110	GLU
33	DL	94	THR
33	DL	112	LEU
33	DL	138	ALA
37	DP	95	ALA
39	DR	53	PHE
43	DV	81	PRO
46	DY	37	LEU

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Mol	Chain	Res	Type
2	AB	36	ASN
3	AC	66	VAL
3	AC	157	LEU
4	AD	37	ALA
5	AE	26	LYS
5	AE	88	VAL
7	AG	9	GLN
8	AH	78	VAL
12	AL	102	LEU
14	AN	31	ILE
16	AP	10	GLY
21	AU	31	GLU
21	AU	52	ALA
27	BF	146	VAL
29	BH	120	GLY
37	BP	4	ILE
49	B1	52	ALA
2	CB	33	GLY
2	CB	82	ASP
4	CD	167	LYS
5	CE	126	LYS
6	CF	18	VAL
8	CH	57	PRO
8	CH	97	ALA
14	CN	11	VAL
14	CN	27	LEU
21	CU	39	GLU
21	CU	41	PRO
24	DC	172	VAL
24	DC	238	ARG
25	DD	86	GLU
25	DD	194	PRO
27	DF	149	VAL
32	DK	120	PRO
33	DL	140	GLY
35	DN	86	ARG
35	DN	109	PRO
37	DP	79	PRO
38	DQ	87	SER
47	DZ	4	THR
48	D0	45	ALA
2	AB	80	VAL

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Mol	Chain	Res	Type
2	AB	224	GLY
13	AM	111	GLY
17	AQ	13	VAL
25	BD	104	VAL
53	B5	146	VAL
53	B5	204	GLY
9	CI	104	VAL
11	CK	120	GLY
16	CP	42	ILE
24	DC	247	PRO
31	DJ	46	PRO
34	DM	57	VAL
41	DT	65	GLY
42	DU	47	LYS
42	DU	58	ILE
49	D1	5	ILE
51	D3	20	GLY
2	AB	149	GLY
12	AL	22	PRO
53	B5	141	PRO
5	CE	158	GLY
8	CH	75	ILE
11	CK	91	PRO
31	DJ	64	VAL
36	DO	66	GLY
51	D3	58	VAL
12	AL	98	VAL
13	AM	6	GLY
6	CF	60	VAL
7	CG	14	PRO
8	CH	120	GLY
37	DP	5	ILE
37	DP	32	VAL
40	DS	66	ILE
5	AE	102	GLY
13	AM	10	PRO
30	BI	21	SER
42	BU	54	GLN
53	B5	104	ILE
2	CB	182	PRO
5	CE	150	PRO
9	CI	50	GLN

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Mol	Chain	Res	Type
19	CS	30	PRO
30	DI	5	VAL
30	DI	140	VAL
45	DX	7	VAL
4	AD	7	PRO
11	AK	16	VAL
24	BC	169	GLY
24	BC	234	GLY
30	BI	52	GLY
42	BU	50	PRO
11	CK	117	PRO
30	DI	86	ILE
41	DT	13	ALA

### 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%)	134 (74%)	46 (26%)	0	2
2	CB	180/180 (100%)	131 (73%)	49 (27%)	0	1
3	AC	170/170 (100%)	128 (75%)	42 (25%)	1	2
3	CC	170/170 (100%)	136 (80%)	34 (20%)	1	5
4	AD	172/172 (100%)	135 (78%)	37 (22%)	1	3
4	CD	172/172 (100%)	140 (81%)	32 (19%)	2	6
5	AE	113/113 (100%)	82 (73%)	31 (27%)	0	1
5	CE	113/113 (100%)	86 (76%)	27 (24%)	1	2
6	AF	87/87 (100%)	64 (74%)	23 (26%)	0	1
6	CF	87/87 (100%)	63 (72%)	24 (28%)	0	1
7	AG	124/124 (100%)	91 (73%)	33 (27%)	0	1
7	CG	124/124 (100%)	86 (69%)	38 (31%)	0	1
8	AH	104/104 (100%)	84 (81%)	20 (19%)	2	5
8	CH	104/104 (100%)	82 (79%)	22 (21%)	1	4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
9	AI	105/105 (100%)	71 (68%)	34 (32%)	0	1
9	CI	105/105 (100%)	73 (70%)	32 (30%)	0	1
10	AJ	86/86 (100%)	65 (76%)	21 (24%)	1	2
10	CJ	86/86 (100%)	68 (79%)	18 (21%)	1	4
11	AK	90/90 (100%)	70 (78%)	20 (22%)	1	3
11	CK	90/90 (100%)	65 (72%)	25 (28%)	0	1
12	AL	103/103 (100%)	86 (84%)	17 (16%)	3	8
12	CL	103/103 (100%)	81 (79%)	22 (21%)	1	3
13	AM	92/92 (100%)	70 (76%)	22 (24%)	1	2
13	CM	92/92 (100%)	66 (72%)	26 (28%)	0	1
14	AN	79/83 (95%)	64 (81%)	15 (19%)	2	5
14	CN	79/83 (95%)	67 (85%)	12 (15%)	3	10
15	AO	75/76 (99%)	61 (81%)	14 (19%)	2	6
15	CO	75/76 (99%)	59 (79%)	16 (21%)	1	4
16	AP	65/65 (100%)	50 (77%)	15 (23%)	1	3
16	CP	65/65 (100%)	49 (75%)	16 (25%)	1	2
17	AQ	74/74 (100%)	53 (72%)	21 (28%)	0	1
17	CQ	74/74 (100%)	49 (66%)	25 (34%)	0	0
18	AR	48/48 (100%)	36 (75%)	12 (25%)	1	2
18	CR	48/48 (100%)	38 (79%)	10 (21%)	1	4
19	AS	70/70 (100%)	56 (80%)	14 (20%)	1	5
19	CS	70/70 (100%)	57 (81%)	13 (19%)	2	6
20	AT	65/65 (100%)	49 (75%)	16 (25%)	1	2
20	CT	65/65 (100%)	48 (74%)	17 (26%)	0	1
21	AU	44/44 (100%)	25 (57%)	19 (43%)	0	0
21	CU	44/44 (100%)	27 (61%)	17 (39%)	0	0
24	BC	216/216 (100%)	189 (88%)	27 (12%)	6	17
24	DC	216/216 (100%)	180 (83%)	36 (17%)	3	8
25	BD	164/164 (100%)	152 (93%)	12 (7%)	17	44
25	DD	164/164 (100%)	147 (90%)	17 (10%)	9	25
26	BE	165/165 (100%)	139 (84%)	26 (16%)	3	9

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
26	DE	165/165 (100%)	135 (82%)	30 (18%)	2	6
27	BF	148/148 (100%)	114 (77%)	34 (23%)	1	3
27	DF	148/148 (100%)	123 (83%)	25 (17%)	2	7
28	BG	137/137 (100%)	125 (91%)	12 (9%)	12	35
28	DG	137/137 (100%)	117 (85%)	20 (15%)	4	11
29	BH	114/114 (100%)	88 (77%)	26 (23%)	1	3
29	DH	114/114 (100%)	88 (77%)	26 (23%)	1	3
30	BI	109/109 (100%)	76 (70%)	33 (30%)	0	1
30	DI	109/109 (100%)	78 (72%)	31 (28%)	0	1
31	BJ	116/116 (100%)	103 (89%)	13 (11%)	7	22
31	DJ	116/116 (100%)	96 (83%)	20 (17%)	2	7
32	BK	103/103 (100%)	90 (87%)	13 (13%)	5	17
32	DK	103/103 (100%)	96 (93%)	7 (7%)	20	49
33	BL	102/102 (100%)	88 (86%)	14 (14%)	4	13
33	DL	102/102 (100%)	85 (83%)	17 (17%)	3	8
34	BM	109/109 (100%)	101 (93%)	8 (7%)	17	44
34	DM	109/109 (100%)	100 (92%)	9 (8%)	14	38
35	BN	100/100 (100%)	89 (89%)	11 (11%)	8	23
35	DN	100/100 (100%)	78 (78%)	22 (22%)	1	3
36	BO	86/86 (100%)	68 (79%)	18 (21%)	1	4
36	DO	86/86 (100%)	73 (85%)	13 (15%)	3	10
37	BP	99/99 (100%)	90 (91%)	9 (9%)	12	33
37	DP	99/99 (100%)	84 (85%)	15 (15%)	3	10
38	BQ	89/89 (100%)	81 (91%)	8 (9%)	12	34
38	DQ	89/89 (100%)	76 (85%)	13 (15%)	4	11
39	BR	84/84 (100%)	73 (87%)	11 (13%)	5	15
39	DR	84/84 (100%)	66 (79%)	18 (21%)	1	3
40	BS	93/93 (100%)	80 (86%)	13 (14%)	4	13
40	DS	93/93 (100%)	81 (87%)	12 (13%)	5	16
41	BT	80/80 (100%)	65 (81%)	15 (19%)	2	6
41	DT	80/80 (100%)	65 (81%)	15 (19%)	2	6

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
42	BU	83/83 (100%)	70 (84%)	13 (16%)	3	9
42	DU	83/83 (100%)	65 (78%)	18 (22%)	1	3
43	BV	78/78 (100%)	69 (88%)	9 (12%)	7	21
43	DV	78/78 (100%)	64 (82%)	14 (18%)	2	6
44	BW	57/58 (98%)	52 (91%)	5 (9%)	12	35
44	DW	56/58 (97%)	51 (91%)	5 (9%)	12	34
45	BX	67/67 (100%)	55 (82%)	12 (18%)	2	6
45	DX	67/67 (100%)	54 (81%)	13 (19%)	2	5
46	BY	55/55 (100%)	47 (86%)	8 (14%)	4	11
46	DY	55/55 (100%)	40 (73%)	15 (27%)	0	1
47	BZ	48/48 (100%)	45 (94%)	3 (6%)	22	53
47	DZ	48/48 (100%)	38 (79%)	10 (21%)	1	4
48	B0	47/47 (100%)	43 (92%)	4 (8%)	13	36
48	D0	47/47 (100%)	43 (92%)	4 (8%)	13	36
49	B1	45/45 (100%)	40 (89%)	5 (11%)	8	23
49	D1	45/45 (100%)	40 (89%)	5 (11%)	8	23
50	B2	38/38 (100%)	34 (90%)	4 (10%)	8	24
50	D2	38/38 (100%)	30 (79%)	8 (21%)	1	4
51	B3	51/51 (100%)	48 (94%)	3 (6%)	24	57
51	D3	51/51 (100%)	44 (86%)	7 (14%)	4	13
52	B4	34/34 (100%)	27 (79%)	7 (21%)	1	4
52	D4	34/34 (100%)	29 (85%)	5 (15%)	4	11
53	B5	61/180 (34%)	46 (75%)	15 (25%)	1	2
54	B6	2/2 (100%)	2 (100%)	0	100	100
54	D6	2/2 (100%)	2 (100%)	0	100	100
All	All	9390/9522 (99%)	7602 (81%)	1788 (19%)	2	5

All (1788) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	14	VAL
2	AB	15	HIS
2	AB	16	PHE

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Mol	Chain	Res	Type
2	AB	21	ARG
2	AB	27	MET
2	AB	32	PHE
2	AB	41	ILE
2	AB	43	LEU
2	AB	50	PHE
2	AB	54	LEU
2	AB	56	GLU
2	AB	60	ILE
2	AB	64	LYS
2	AB	66	LYS
2	AB	68	LEU
2	AB	85	LEU
2	AB	88	ASP
2	AB	95	ARG
2	AB	100	MET
2	AB	101	LEU
2	AB	107	VAL
2	AB	111	ILE
2	AB	117	LEU
2	AB	122	GLN
2	AB	126	PHE
2	AB	129	LEU
2	AB	132	LYS
2	AB	133	GLU
2	AB	135	LEU
2	AB	136	MET
2	AB	140	GLU
2	AB	144	LEU
2	AB	148	LEU
2	AB	152	LYS
2	AB	153	ASP
2	AB	159	ASP
2	AB	161	LEU
2	AB	164	ILE
2	AB	186	ILE
2	AB	188	ASP
2	AB	199	VAL
2	AB	207	ILE
2	AB	208	ARG
2	AB	213	TYR
2	AB	225	ARG

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Mol	Chain	Res	Type
2	AB	226	SER
3	AC	3	GLN
3	AC	5	VAL
3	AC	14	ILE
3	AC	16	LYS
3	AC	18	TRP
3	AC	19	ASN
3	AC	20	SER
3	AC	21	THR
3	AC	25	ASN
3	AC	26	THR
3	AC	27	LYS
3	AC	28	GLU
3	AC	29	PHE
3	AC	33	LEU
3	AC	37	PHE
3	AC	38	LYS
3	AC	41	GLN
3	AC	52	VAL
3	AC	55	ILE
3	AC	58	GLU
3	AC	59	ARG
3	AC	69	HIS
3	AC	75	ILE
3	AC	88	ARG
3	AC	93	ASP
3	AC	107	ARG
3	AC	122	SER
3	AC	127	ARG
3	AC	131	ARG
3	AC	139	GLN
3	AC	142	MET
3	AC	143	ARG
3	AC	144	LEU
3	AC	151	VAL
3	AC	165	THR
3	AC	167	TRP
3	AC	168	TYR
3	AC	185	ASN
3	AC	186	THR
3	AC	191	THR
3	AC	202	ILE

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Mol	Chain	Res	Type
3	AC	207	ILE
4	AD	5	LEU
4	AD	13	ARG
4	AD	23	SER
4	AD	31	LYS
4	AD	32	CYS
4	AD	34	ILE
4	AD	35	GLU
4	AD	44	ARG
4	AD	47	ARG
4	AD	55	LEU
4	AD	58	LYS
4	AD	63	ARG
4	AD	69	GLU
4	AD	93	LEU
4	AD	103	TYR
4	AD	104	ARG
4	AD	111	ARG
4	AD	116	GLN
4	AD	119	SER
4	AD	123	ILE
4	AD	132	ILE
4	AD	142	VAL
4	AD	143	VAL
4	AD	148	LYS
4	AD	150	LYS
4	AD	151	LYS
4	AD	161	LEU
4	AD	163	GLU
4	AD	164	GLN
4	AD	172	GLU
4	AD	173	VAL
4	AD	177	LYS
4	AD	190	ASP
4	AD	195	ILE
4	AD	198	HIS
4	AD	205	SER
4	AD	206	LYS
5	AE	10	GLU
5	AE	14	LYS
5	AE	15	LEU
5	AE	18	VAL

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Mol	Chain	Res	Type
5	AE	19	ASN
5	AE	21	VAL
5	AE	25	VAL
5	AE	26	LYS
5	AE	37	THR
5	AE	38	VAL
5	AE	43	ASN
5	AE	46	VAL
5	AE	72	ILE
5	AE	73	ASN
5	AE	74	VAL
5	AE	83	HIS
5	AE	85	VAL
5	AE	100	SER
5	AE	115	LEU
5	AE	122	ASN
5	AE	123	VAL
5	AE	124	LEU
5	AE	126	LYS
5	AE	130	SER
5	AE	134	ILE
5	AE	136	VAL
5	AE	140	THR
5	AE	142	ASP
5	AE	147	MET
5	AE	149	SER
5	AE	153	VAL
6	AF	5	GLU
6	AF	7	VAL
6	AF	14	GLN
6	AF	15	SER
6	AF	17	GLN
6	AF	24	ARG
6	AF	35	LYS
6	AF	39	LEU
6	AF	51	ILE
6	AF	52	ASN
6	AF	53	LYS
6	AF	54	LEU
6	AF	55	HIS
6	AF	62	MET
6	AF	68	GLN

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Mol	Chain	Res	Type
6	AF	72	ASP
6	AF	84	VAL
6	AF	85	ILE
6	AF	86	ARG
6	AF	87	SER
6	AF	93	LYS
6	AF	96	VAL
6	AF	98	GLU
7	AG	4	ARG
7	AG	6	VAL
7	AG	10	ARG
7	AG	13	LEU
7	AG	22	LEU
7	AG	23	LEU
7	AG	32	VAL
7	AG	36	LYS
7	AG	43	VAL
7	AG	47	LEU
7	AG	48	GLU
7	AG	49	THR
7	AG	50	LEU
7	AG	56	LYS
7	AG	59	LEU
7	AG	63	GLU
7	AG	70	ARG
7	AG	76	LYS
7	AG	78	ARG
7	AG	79	ARG
7	AG	80	VAL
7	AG	83	SER
7	AG	90	GLU
7	AG	91	VAL
7	AG	111	ARG
7	AG	115	SER
7	AG	120	LEU
7	AG	125	SER
7	AG	135	VAL
7	AG	136	LYS
7	AG	138	ARG
7	AG	139	GLU
7	AG	142	HIS
8	AH	3	MET

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Mol	Chain	Res	Type
8	AH	7	ILE
8	AH	22	LYS
8	AH	38	ASN
8	AH	42	GLU
8	AH	46	ILE
8	AH	51	VAL
8	AH	54	ASP
8	AH	59	LEU
8	AH	60	GLU
8	AH	75	ILE
8	AH	77	ARG
8	AH	83	LEU
8	AH	89	LYS
8	AH	104	VAL
8	AH	108	LYS
8	AH	111	MET
8	AH	121	LEU
8	AH	125	ILE
8	AH	129	VAL
9	AI	14	SER
9	AI	22	LYS
9	AI	30	ILE
9	AI	36	GLU
9	AI	39	PHE
9	AI	43	THR
9	AI	46	MET
9	AI	47	VAL
9	AI	48	VAL
9	AI	49	ARG
9	AI	55	VAL
9	AI	57	MET
9	AI	60	LYS
9	AI	61	LEU
9	AI	63	LEU
9	AI	64	TYR
9	AI	65	ILE
9	AI	68	LYS
9	AI	85	ARG
9	AI	88	MET
9	AI	89	GLU
9	AI	90	TYR
9	AI	94	LEU

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Mol	Chain	Res	Type
9	AI	97	GLU
9	AI	99	ARG
9	AI	106	ARG
9	AI	111	VAL
9	AI	114	LYS
9	AI	115	LYS
9	AI	116	VAL
9	AI	119	ARG
9	AI	127	PHE
9	AI	129	LYS
9	AI	130	ARG
10	AJ	6	ILE
10	AJ	8	ILE
10	AJ	11	LYS
10	AJ	17	LEU
10	AJ	19	ASP
10	AJ	27	GLU
10	AJ	40	ILE
10	AJ	45	ARG
10	AJ	46	LYS
10	AJ	50	THR
10	AJ	52	LEU
10	AJ	57	VAL
10	AJ	59	LYS
10	AJ	63	ASP
10	AJ	69	THR
10	AJ	73	LEU
10	AJ	84	VAL
10	AJ	89	ARG
10	AJ	91	ASP
10	AJ	92	LEU
10	AJ	102	LEU
11	AK	16	VAL
11	AK	17	SER
11	AK	23	ILE
11	AK	31	ILE
11	AK	52	PHE
11	AK	58	SER
11	AK	65	VAL
11	AK	76	GLU
11	AK	81	ASN
11	AK	97	ILE

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Mol	Chain	Res	Type
11	AK	100	LEU
11	AK	108	THR
11	AK	111	THR
11	AK	112	ASP
11	AK	114	THR
11	AK	119	ASN
11	AK	126	LYS
11	AK	127	ARG
11	AK	128	ARG
11	AK	129	VAL
12	AL	10	LYS
12	AL	12	ARG
12	AL	15	LYS
12	AL	16	VAL
12	AL	29	GLN
12	AL	33	VAL
12	AL	36	ARG
12	AL	44	LYS
12	AL	54	ARG
12	AL	56	ARG
12	AL	58	THR
12	AL	62	GLU
12	AL	89	ASP
12	AL	102	LEU
12	AL	105	SER
12	AL	114	ARG
12	AL	121	ARG
13	AM	4	ILE
13	AM	11	ASP
13	AM	13	LYS
13	AM	16	VAL
13	AM	29	ARG
13	AM	34	LEU
13	AM	42	ASP
13	AM	44	LYS
13	AM	59	GLU
13	AM	63	PHE
13	AM	65	VAL
13	AM	71	ARG
13	AM	72	GLU
13	AM	75	MET
13	AM	79	ARG

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Mol	Chain	Res	Type
13	AM	80	LEU
13	AM	87	ARG
13	AM	90	ARG
13	AM	93	ARG
13	AM	103	LYS
13	AM	107	ARG
13	AM	113	ARG
14	AN	10	GLU
14	AN	14	VAL
14	AN	24	ARG
14	AN	26	GLU
14	AN	28	LYS
14	AN	31	ILE
14	AN	46	LEU
14	AN	49	GLN
14	AN	51	LEU
14	AN	59	ARG
14	AN	69	ARG
14	AN	81	ARG
14	AN	85	ARG
14	AN	98	LYS
14	AN	100	SER
15	AO	6	GLU
15	AO	17	ARG
15	AO	22	THR
15	AO	31	LEU
15	AO	35	GLN
15	AO	38	HIS
15	AO	39	LEU
15	AO	40	GLN
15	AO	67	LEU
15	AO	83	GLU
15	AO	85	LEU
15	AO	87	LEU
15	AO	88	ARG
15	AO	89	ARG
16	AP	1	MET
16	AP	2	VAL
16	AP	6	LEU
16	AP	8	ARG
16	AP	18	GLN
16	AP	19	VAL

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Mol	Chain	Res	Type
16	AP	20	VAL
16	AP	36	VAL
16	AP	46	LYS
16	AP	51	ARG
16	AP	63	GLN
16	AP	70	ARG
16	AP	75	ILE
16	AP	78	VAL
16	AP	80	LYS
17	AQ	4	LYS
17	AQ	13	VAL
17	AQ	17	MET
17	AQ	21	ILE
17	AQ	25	ILE
17	AQ	27	ARG
17	AQ	29	VAL
17	AQ	30	LYS
17	AQ	38	ILE
17	AQ	40	ARG
17	AQ	42	THR
17	AQ	51	ASN
17	AQ	52	GLU
17	AQ	55	ILE
17	AQ	59	VAL
17	AQ	61	ILE
17	AQ	68	SER
17	AQ	69	LYS
17	AQ	70	THR
17	AQ	75	LEU
17	AQ	81	LYS
18	AR	25	ASP
18	AR	29	LEU
18	AR	30	LYS
18	AR	31	ASN
18	AR	33	ILE
18	AR	34	THR
18	AR	43	ARG
18	AR	44	ILE
18	AR	48	ARG
18	AR	55	LEU
18	AR	61	ARG
18	AR	71	THR

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Mol	Chain	Res	Type
19	AS	6	LYS
19	AS	13	LEU
19	AS	21	LYS
19	AS	24	GLU
19	AS	27	ASP
19	AS	29	LYS
19	AS	33	THR
19	AS	51	VAL
19	AS	55	ARG
19	AS	58	VAL
19	AS	63	THR
19	AS	65	GLU
19	AS	70	LYS
19	AS	71	LEU
20	AT	3	ASN
20	AT	5	LYS
20	AT	6	SER
20	AT	8	LYS
20	AT	10	ARG
20	AT	12	ILE
20	AT	16	LYS
20	AT	24	ARG
20	AT	27	MET
20	AT	29	ARG
20	AT	34	LYS
20	AT	36	TYR
20	AT	54	MET
20	AT	69	LYS
20	AT	70	ASN
20	AT	74	ARG
21	AU	9	ASN
21	AU	10	GLU
21	AU	12	PHE
21	AU	13	ASP
21	AU	16	LEU
21	AU	18	ARG
21	AU	19	PHE
21	AU	20	LYS
21	AU	23	CYS
21	AU	25	LYS
21	AU	28	VAL
21	AU	33	ARG

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Mol	Chain	Res	Type
21	AU	34	ARG
21	AU	36	GLU
21	AU	37	PHE
21	AU	38	TYR
21	AU	46	LYS
21	AU	47	ARG
21	AU	54	LYS
24	BC	5	LYS
24	BC	13	ARG
24	BC	20	VAL
24	BC	24	LEU
24	BC	63	ARG
24	BC	64	ILE
24	BC	97	LYS
24	BC	105	LEU
24	BC	111	LYS
24	BC	121	ASP
24	BC	125	LYS
24	BC	147	LYS
24	BC	156	ARG
24	BC	164	ILE
24	BC	172	VAL
24	BC	174	LEU
24	BC	177	ARG
24	BC	182	ARG
24	BC	183	LYS
24	BC	195	VAL
24	BC	199	GLU
24	BC	203	ARG
24	BC	205	LEU
24	BC	225	MET
24	BC	258	ARG
24	BC	265	LYS
24	BC	268	VAL
25	BD	4	LEU
25	BD	12	THR
25	BD	14	ILE
25	BD	70	LYS
25	BD	89	GLU
25	BD	95	SER
25	BD	97	SER
25	BD	133	THR

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Mol	Chain	Res	Type
25	BD	141	ARG
25	BD	177	VAL
25	BD	183	GLU
25	BD	186	LEU
26	BE	9	GLN
26	BE	10	SER
26	BE	12	LEU
26	BE	44	ARG
26	BE	63	LYS
26	BE	88	ARG
26	BE	94	GLN
26	BE	107	SER
26	BE	108	ILE
26	BE	111	GLU
26	BE	115	GLN
26	BE	116	ASP
26	BE	120	VAL
26	BE	123	LYS
26	BE	131	THR
26	BE	136	GLN
26	BE	146	VAL
26	BE	149	ILE
26	BE	159	LEU
26	BE	176	ASP
26	BE	180	LEU
26	BE	185	LYS
26	BE	187	VAL
26	BE	194	LYS
26	BE	198	GLU
26	BE	200	LEU
27	BF	3	LYS
27	BF	14	LYS
27	BF	18	THR
27	BF	21	ASN
27	BF	23	ASN
27	BF	34	ILE
27	BF	35	THR
27	BF	36	LEU
27	BF	44	ILE
27	BF	48	LYS
27	BF	49	LEU
27	BF	66	LEU

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Mol	Chain	Res	Type
27	BF	81	GLN
27	BF	83	TYR
27	BF	85	ILE
27	BF	89	VAL
27	BF	95	ARG
27	BF	104	ILE
27	BF	105	THR
27	BF	106	ILE
27	BF	112	ARG
27	BF	113	ASP
27	BF	120	LYS
27	BF	133	ARG
27	BF	141	ILE
27	BF	147	ASP
27	BF	152	LEU
27	BF	153	ASP
27	BF	154	ILE
27	BF	157	THR
27	BF	158	THR
27	BF	161	LYS
27	BF	164	GLU
27	BF	174	ASP
28	BG	3	ARG
28	BG	11	VAL
28	BG	27	LYS
28	BG	30	ASN
28	BG	67	THR
28	BG	77	ILE
28	BG	87	LEU
28	BG	106	SER
28	BG	124	GLU
28	BG	152	ARG
28	BG	155	GLU
28	BG	170	ARG
29	BH	1	MET
29	BH	3	VAL
29	BH	6	LEU
29	BH	12	LEU
29	BH	15	LEU
29	BH	27	ARG
29	BH	50	ARG
29	BH	60	GLU

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Mol	Chain	Res	Type
29	BH	62	LEU
29	BH	66	ASN
29	BH	75	LEU
29	BH	77	THR
29	BH	79	THR
29	BH	86	ASP
29	BH	91	PHE
29	BH	112	LYS
29	BH	119	ASN
29	BH	122	LEU
29	BH	123	ARG
29	BH	125	THR
29	BH	129	GLU
29	BH	131	SER
29	BH	137	GLU
29	BH	142	VAL
29	BH	145	ASN
29	BH	146	VAL
30	BI	8	TYR
30	BI	9	VAL
30	BI	11	LEU
30	BI	17	MET
30	BI	24	VAL
30	BI	28	LEU
30	BI	31	GLN
30	BI	34	ASN
30	BI	38	PHE
30	BI	45	LYS
30	BI	48	SER
30	BI	50	GLU
30	BI	58	VAL
30	BI	60	THR
30	BI	62	TYR
30	BI	68	THR
30	BI	69	PHE
30	BI	72	LYS
30	BI	73	THR
30	BI	82	LYS
30	BI	86	ILE
30	BI	87	LYS
30	BI	95	LYS
30	BI	96	ASP

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Mol	Chain	Res	Type
30	BI	97	LYS
30	BI	100	LYS
30	BI	101	ILE
30	BI	103	ARG
30	BI	108	GLU
30	BI	123	GLU
30	BI	132	THR
30	BI	134	ARG
30	BI	141	GLU
31	BJ	1	MET
31	BJ	5	THR
31	BJ	23	LYS
31	BJ	30	THR
31	BJ	40	HIS
31	BJ	43	GLU
31	BJ	61	LYS
31	BJ	64	VAL
31	BJ	69	ARG
31	BJ	96	ARG
31	BJ	101	ILE
31	BJ	111	LYS
31	BJ	124	VAL
32	BK	21	CYS
32	BK	44	LYS
32	BK	45	GLU
32	BK	49	ARG
32	BK	58	LEU
32	BK	86	LEU
32	BK	88	ASN
32	BK	90	ASN
32	BK	91	SER
32	BK	92	GLU
32	BK	108	ARG
32	BK	117	SER
32	BK	121	GLU
33	BL	35	HIS
33	BL	40	SER
33	BL	60	ARG
33	BL	69	ARG
33	BL	82	LEU
33	BL	85	VAL
33	BL	86	GLU

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Mol	Chain	Res	Type
33	BL	89	VAL
33	BL	91	ASP
33	BL	93	ASN
33	BL	100	ILE
33	BL	115	GLU
33	BL	136	GLU
33	BL	144	GLU
34	BM	1	MET
34	BM	22	GLN
34	BM	24	THR
34	BM	55	ARG
34	BM	59	ARG
34	BM	70	ASP
34	BM	115	GLU
34	BM	126	ILE
35	BN	2	ARG
35	BN	8	ARG
35	BN	15	SER
35	BN	69	ARG
35	BN	70	THR
35	BN	71	ARG
35	BN	74	GLU
35	BN	76	VAL
35	BN	96	ARG
35	BN	118	ARG
35	BN	120	GLU
36	BO	3	LYS
36	BO	4	LYS
36	BO	9	ARG
36	BO	17	LYS
36	BO	18	LEU
36	BO	24	THR
36	BO	25	ARG
36	BO	31	THR
36	BO	36	TYR
36	BO	43	ASN
36	BO	45	SER
36	BO	47	VAL
36	BO	54	VAL
36	BO	56	LYS
36	BO	65	THR
36	BO	83	LEU

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Mol	Chain	Res	Type
36	BO	88	LYS
36	BO	89	ASP
37	BP	6	LYS
37	BP	29	LYS
37	BP	63	LYS
37	BP	68	GLU
37	BP	73	VAL
37	BP	93	ARG
37	BP	103	ARG
37	BP	110	ILE
37	BP	114	LEU
38	BQ	6	ARG
38	BQ	30	ARG
38	BQ	51	ARG
38	BQ	58	ARG
38	BQ	85	LYS
38	BQ	112	LYS
38	BQ	114	LYS
38	BQ	117	LEU
39	BR	10	LYS
39	BR	40	MET
39	BR	46	GLU
39	BR	48	LYS
39	BR	60	LYS
39	BR	64	VAL
39	BR	74	ILE
39	BR	84	ARG
39	BR	85	LYS
39	BR	94	THR
39	BR	102	SER
40	BS	7	HIS
40	BS	11	ARG
40	BS	19	LEU
40	BS	31	GLN
40	BS	53	SER
40	BS	59	GLU
40	BS	69	LEU
40	BS	74	ILE
40	BS	86	MET
40	BS	97	LEU
40	BS	107	VAL
40	BS	108	SER

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Mol	Chain	Res	Type
40	BS	109	ASP
41	BT	9	LYS
41	BT	11	LEU
41	BT	12	ARG
41	BT	18	GLU
41	BT	22	THR
41	BT	30	ILE
41	BT	33	LYS
41	BT	34	VAL
41	BT	36	LYS
41	BT	49	LYS
41	BT	54	GLU
41	BT	73	ARG
41	BT	76	ARG
41	BT	86	THR
41	BT	89	GLU
42	BU	7	ARG
42	BU	9	ASP
42	BU	26	LYS
42	BU	31	SER
42	BU	33	LYS
42	BU	36	VAL
42	BU	47	LYS
42	BU	52	LEU
42	BU	61	LYS
42	BU	68	SER
42	BU	77	THR
42	BU	91	LYS
42	BU	99	ASN
43	BV	1	MET
43	BV	10	LYS
43	BV	17	SER
43	BV	29	ILE
43	BV	34	LYS
43	BV	41	GLU
43	BV	61	LEU
43	BV	65	VAL
43	BV	70	ILE
44	BW	20	ARG
44	BW	38	VAL
44	BW	39	ARG
44	BW	55	ARG

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Mol	Chain	Res	Type
44	BW	72	LYS
45	BX	2	SER
45	BX	18	ARG
45	BX	25	THR
45	BX	28	ARG
45	BX	42	SER
45	BX	43	GLU
45	BX	45	ARG
45	BX	48	THR
45	BX	54	LYS
45	BX	64	ILE
45	BX	76	GLU
45	BX	77	LYS
46	BY	6	LEU
46	BY	16	THR
46	BY	22	LEU
46	BY	29	ARG
46	BY	37	LEU
46	BY	56	LEU
46	BY	58	ASN
46	BY	59	GLU
47	BZ	3	LYS
47	BZ	36	VAL
47	BZ	57	VAL
48	B0	23	THR
48	B0	29	SER
48	B0	40	ARG
48	B0	53	LYS
49	B1	8	LYS
49	B1	11	LEU
49	B1	25	LYS
49	B1	46	HIS
49	B1	51	GLU
50	B2	16	HIS
50	B2	21	ARG
50	B2	42	LEU
50	B2	45	SER
51	B3	15	LYS
51	B3	30	ARG
51	B3	31	HIS
52	B4	4	ARG
52	B4	6	SER

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Mol	Chain	Res	Type
52	B4	9	LYS
52	B4	18	LYS
52	B4	23	ILE
52	B4	26	ILE
52	B4	37	GLN
53	B5	21	TYR
53	B5	23	ILE
53	B5	35	THR
53	B5	38	PHE
53	B5	41	THR
53	B5	47	LYS
53	B5	48	LEU
53	B5	59	VAL
53	B5	62	THR
53	B5	64	SER
53	B5	65	LEU
53	B5	73	VAL
53	B5	76	LEU
53	B5	78	ILE
53	B5	88	GLU
2	CB	11	LYS
2	CB	15	HIS
2	CB	16	PHE
2	CB	20	THR
2	CB	21	ARG
2	CB	24	ASN
2	CB	27	MET
2	CB	40	ILE
2	CB	43	LEU
2	CB	49	MET
2	CB	50	PHE
2	CB	66	LYS
2	CB	67	ILE
2	CB	68	LEU
2	CB	77	SER
2	CB	78	GLU
2	CB	80	VAL
2	CB	85	LEU
2	CB	88	ASP
2	CB	94	HIS
2	CB	95	ARG
2	CB	96	TRP

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Mol	Chain	Res	Type
2	CB	102	THR
2	CB	103	ASN
2	CB	106	THR
2	CB	116	ASP
2	CB	117	LEU
2	CB	122	GLN
2	CB	125	THR
2	CB	126	PHE
2	CB	127	ASP
2	CB	130	THR
2	CB	142	GLU
2	CB	144	LEU
2	CB	145	GLU
2	CB	148	LEU
2	CB	157	LEU
2	CB	163	VAL
2	CB	174	LYS
2	CB	179	LEU
2	CB	187	VAL
2	CB	192	ASP
2	CB	205	ASP
2	CB	207	ILE
2	CB	210	VAL
2	CB	213	TYR
2	CB	220	THR
2	CB	222	ARG
2	CB	225	ARG
3	CC	3	GLN
3	CC	16	LYS
3	CC	18	TRP
3	CC	29	PHE
3	CC	32	ASN
3	CC	33	LEU
3	CC	36	ASP
3	CC	37	PHE
3	CC	38	LYS
3	CC	43	LEU
3	CC	45	LYS
3	CC	53	SER
3	CC	55	ILE
3	CC	70	THR
3	CC	80	LYS

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Mol	Chain	Res	Type
3	CC	103	ILE
3	CC	107	ARG
3	CC	110	GLU
3	CC	119	SER
3	CC	120	ILE
3	CC	121	THR
3	CC	131	ARG
3	CC	140	ASN
3	CC	151	VAL
3	CC	153	VAL
3	CC	167	TRP
3	CC	168	TYR
3	CC	170	GLU
3	CC	172	ARG
3	CC	175	LEU
3	CC	179	ARG
3	CC	192	THR
3	CC	193	TYR
3	CC	206	GLU
4	CD	8	LYS
4	CD	9	LEU
4	CD	10	LYS
4	CD	17	THR
4	CD	32	CYS
4	CD	48	LEU
4	CD	50	ASP
4	CD	54	GLN
4	CD	55	LEU
4	CD	56	ARG
4	CD	58	LYS
4	CD	59	GLN
4	CD	74	ASN
4	CD	75	TYR
4	CD	83	LYS
4	CD	104	ARG
4	CD	142	VAL
4	CD	148	LYS
4	CD	152	GLN
4	CD	155	VAL
4	CD	159	LEU
4	CD	160	GLU
4	CD	161	LEU

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Mol	Chain	Res	Type
4	CD	177	LYS
4	CD	183	LYS
4	CD	191	LEU
4	CD	192	SER
4	CD	195	ILE
4	CD	198	HIS
4	CD	200	ILE
4	CD	203	LEU
4	CD	206	LYS
5	CE	15	LEU
5	CE	18	VAL
5	CE	26	LYS
5	CE	29	ARG
5	CE	32	SER
5	CE	45	ARG
5	CE	52	LYS
5	CE	65	GLU
5	CE	66	LYS
5	CE	76	LEU
5	CE	77	ASN
5	CE	86	LYS
5	CE	96	MET
5	CE	97	GLN
5	CE	101	GLU
5	CE	105	ILE
5	CE	114	VAL
5	CE	115	LEU
5	CE	120	VAL
5	CE	121	HIS
5	CE	124	LEU
5	CE	131	THR
5	CE	137	VAL
5	CE	140	THR
5	CE	149	SER
5	CE	151	GLU
5	CE	156	LYS
6	CF	1	MET
6	CF	2	ARG
6	CF	9	MET
6	CF	15	SER
6	CF	24	ARG
6	CF	26	THR

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Mol	Chain	Res	Type
6	CF	30	THR
6	CF	35	LYS
6	CF	36	ILE
6	CF	38	ARG
6	CF	51	ILE
6	CF	53	LYS
6	CF	54	LEU
6	CF	55	HIS
6	CF	62	MET
6	CF	63	ASN
6	CF	64	VAL
6	CF	79	ARG
6	CF	80	PHE
6	CF	85	ILE
6	CF	87	SER
6	CF	89	VAL
6	CF	93	LYS
6	CF	97	THR
7	CG	3	ARG
7	CG	4	ARG
7	CG	6	VAL
7	CG	10	ARG
7	CG	11	LYS
7	CG	12	ILE
7	CG	22	LEU
7	CG	23	LEU
7	CG	30	LEU
7	CG	38	THR
7	CG	45	SER
7	CG	47	LEU
7	CG	48	GLU
7	CG	53	ARG
7	CG	59	LEU
7	CG	62	PHE
7	CG	67	GLU
7	CG	69	VAL
7	CG	70	ARG
7	CG	72	THR
7	CG	73	VAL
7	CG	75	VAL
7	CG	78	ARG
7	CG	84	THR

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Mol	Chain	Res	Type
7	CG	87	VAL
7	CG	91	VAL
7	CG	92	ARG
7	CG	94	VAL
7	CG	97	ASN
7	CG	120	LEU
7	CG	125	SER
7	CG	126	ASP
7	CG	129	GLU
7	CG	133	THR
7	CG	136	LYS
7	CG	140	ASP
7	CG	142	HIS
7	CG	146	GLU
8	CH	13	ARG
8	CH	22	LYS
8	CH	31	LYS
8	CH	47	GLU
8	CH	49	PHE
8	CH	54	ASP
8	CH	55	THR
8	CH	59	LEU
8	CH	67	GLN
8	CH	73	GLU
8	CH	74	SER
8	CH	75	ILE
8	CH	77	ARG
8	CH	83	LEU
8	CH	87	LYS
8	CH	89	LYS
8	CH	92	LEU
8	CH	104	VAL
8	CH	111	MET
8	CH	112	THR
8	CH	121	LEU
8	CH	125	ILE
9	CI	9	THR
9	CI	13	LYS
9	CI	18	ARG
9	CI	21	ILE
9	CI	28	ILE
9	CI	32	GLN

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Mol	Chain	Res	Type
9	CI	33	ARG
9	CI	36	GLU
9	CI	39	PHE
9	CI	43	THR
9	CI	45	ARG
9	CI	48	VAL
9	CI	49	ARG
9	CI	55	VAL
9	CI	57	MET
9	CI	61	LEU
9	CI	62	ASP
9	CI	63	LEU
9	CI	68	LYS
9	CI	80	ARG
9	CI	85	ARG
9	CI	88	MET
9	CI	89	GLU
9	CI	90	TYR
9	CI	94	LEU
9	CI	97	GLU
9	CI	99	ARG
9	CI	100	LYS
9	CI	105	THR
9	CI	115	LYS
9	CI	127	PHE
9	CI	129	LYS
10	CJ	5	ARG
10	CJ	16	ARG
10	CJ	22	THR
10	CJ	25	ILE
10	CJ	26	VAL
10	CJ	27	GLU
10	CJ	32	THR
10	CJ	59	LYS
10	CJ	63	ASP
10	CJ	77	VAL
10	CJ	80	THR
10	CJ	83	THR
10	CJ	84	VAL
10	CJ	87	LEU
10	CJ	89	ARG
10	CJ	91	ASP

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Mol	Chain	Res	Type
10	CJ	92	LEU
10	CJ	102	LEU
11	CK	14	LYS
11	CK	15	GLN
11	CK	17	SER
11	CK	31	ILE
11	CK	64	GLN
11	CK	65	VAL
11	CK	74	VAL
11	CK	77	TYR
11	CK	80	LYS
11	CK	81	ASN
11	CK	82	LEU
11	CK	83	GLU
11	CK	86	VAL
11	CK	93	ARG
11	CK	96	THR
11	CK	100	LEU
11	CK	101	ASN
11	CK	106	ARG
11	CK	107	ILE
11	CK	108	THR
11	CK	109	ASN
11	CK	110	ILE
11	CK	126	LYS
11	CK	127	ARG
11	CK	128	ARG
12	CL	3	THR
12	CL	4	VAL
12	CL	5	ASN
12	CL	10	LYS
12	CL	12	ARG
12	CL	16	VAL
12	CL	18	LYS
12	CL	20	ASN
12	CL	29	GLN
12	CL	34	CYS
12	CL	35	THR
12	CL	44	LYS
12	CL	58	THR
12	CL	59	ASN
12	CL	63	VAL

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Mol	Chain	Res	Type
12	CL	82	ILE
12	CL	86	ARG
12	CL	89	ASP
12	CL	94	ARG
12	CL	97	THR
12	CL	110	ARG
12	CL	121	ARG
13	CM	8	ASN
13	CM	14	HIS
13	CM	19	LEU
13	CM	29	ARG
13	CM	31	LYS
13	CM	41	GLU
13	CM	48	LEU
13	CM	53	ILE
13	CM	54	ASP
13	CM	58	ASP
13	CM	59	GLU
13	CM	60	VAL
13	CM	63	PHE
13	CM	66	GLU
13	CM	72	GLU
13	CM	74	SER
13	CM	76	SER
13	CM	80	LEU
13	CM	83	LEU
13	CM	90	ARG
13	CM	91	HIS
13	CM	92	ARG
13	CM	93	ARG
13	CM	100	GLN
13	CM	101	ARG
13	CM	102	THR
14	CN	4	GLN
14	CN	16	LEU
14	CN	18	ASP
14	CN	21	PHE
14	CN	23	LYS
14	CN	26	GLU
14	CN	28	LYS
14	CN	48	LEU
14	CN	49	GLN

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Mol	Chain	Res	Type
14	CN	60	GLN
14	CN	67	THR
14	CN	80	SER
15	CO	6	GLU
15	CO	10	LYS
15	CO	13	SER
15	CO	17	ARG
15	CO	18	ASP
15	CO	26	GLU
15	CO	35	GLN
15	CO	38	HIS
15	CO	39	LEU
15	CO	62	GLN
15	CO	64	ARG
15	CO	67	LEU
15	CO	70	LEU
15	CO	85	LEU
15	CO	87	LEU
15	CO	88	ARG
16	CP	1	MET
16	CP	2	VAL
16	CP	5	ARG
16	CP	18	GLN
16	CP	25	ARG
16	CP	29	ASN
16	CP	31	ARG
16	CP	36	VAL
16	CP	46	LYS
16	CP	48	GLU
16	CP	51	ARG
16	CP	57	ILE
16	CP	69	ASP
16	CP	74	LEU
16	CP	77	GLU
16	CP	80	LYS
17	CQ	4	LYS
17	CQ	5	ILE
17	CQ	12	VAL
17	CQ	13	VAL
17	CQ	14	SER
17	CQ	17	MET
17	CQ	23	VAL

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Mol	Chain	Res	Type
17	CQ	25	ILE
17	CQ	28	PHE
17	CQ	33	ILE
17	CQ	36	LYS
17	CQ	38	ILE
17	CQ	40	ARG
17	CQ	41	THR
17	CQ	48	ASP
17	CQ	50	ASN
17	CQ	52	GLU
17	CQ	55	ILE
17	CQ	57	ASP
17	CQ	62	ARG
17	CQ	65	ARG
17	CQ	69	LYS
17	CQ	75	LEU
17	CQ	79	VAL
17	CQ	81	LYS
18	CR	20	GLU
18	CR	26	ILE
18	CR	29	LEU
18	CR	33	ILE
18	CR	45	THR
18	CR	47	THR
18	CR	57	ARG
18	CR	61	ARG
18	CR	63	ARG
18	CR	67	LEU
19	CS	5	LEU
19	CS	6	LYS
19	CS	11	ILE
19	CS	14	HIS
19	CS	19	VAL
19	CS	21	LYS
19	CS	23	VAL
19	CS	33	THR
19	CS	36	ARG
19	CS	39	THR
19	CS	43	ASN
19	CS	49	ILE
19	CS	56	GLN
20	CT	6	SER

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Mol	Chain	Res	Type
20	CT	8	LYS
20	CT	12	ILE
20	CT	15	GLU
20	CT	23	SER
20	CT	24	ARG
20	CT	27	MET
20	CT	29	ARG
20	CT	36	TYR
20	CT	49	LYS
20	CT	54	MET
20	CT	58	VAL
20	CT	64	LYS
20	CT	67	ILE
20	CT	69	LYS
20	CT	70	ASN
20	CT	76	LYS
21	CU	5	LYS
21	CU	7	ARG
21	CU	10	GLU
21	CU	12	PHE
21	CU	14	VAL
21	CU	16	LEU
21	CU	19	PHE
21	CU	20	LYS
21	CU	24	GLU
21	CU	25	LYS
21	CU	28	VAL
21	CU	31	GLU
21	CU	34	ARG
21	CU	37	PHE
21	CU	38	TYR
21	CU	43	THR
21	CU	47	ARG
24	DC	20	VAL
24	DC	36	LYS
24	DC	39	LYS
24	DC	46	ASN
24	DC	54	ILE
24	DC	58	HIS
24	DC	64	ILE
24	DC	80	ARG
24	DC	88	SER

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Mol	Chain	Res	Type
24	DC	103	TYR
24	DC	110	LEU
24	DC	111	LYS
24	DC	115	GLN
24	DC	118	SER
24	DC	130	LEU
24	DC	147	LYS
24	DC	153	GLN
24	DC	156	ARG
24	DC	160	THR
24	DC	162	VAL
24	DC	167	ARG
24	DC	168	ASP
24	DC	174	LEU
24	DC	175	ARG
24	DC	178	SER
24	DC	182	ARG
24	DC	189	ARG
24	DC	195	VAL
24	DC	202	LEU
24	DC	204	VAL
24	DC	205	LEU
24	DC	245	VAL
24	DC	250	VAL
24	DC	255	LYS
24	DC	262	ARG
24	DC	267	ILE
25	DD	4	LEU
25	DD	12	THR
25	DD	18	ASP
25	DD	33	ARG
25	DD	39	ASP
25	DD	64	GLU
25	DD	73	VAL
25	DD	84	LEU
25	DD	86	GLU
25	DD	98	VAL
25	DD	103	ASP
25	DD	129	THR
25	DD	138	LEU
25	DD	150	GLN
25	DD	170	VAL

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Mol	Chain	Res	Type
25	DD	183	GLU
25	DD	189	VAL
26	DE	6	LYS
26	DE	22	ASP
26	DE	25	GLU
26	DE	40	ARG
26	DE	41	GLN
26	DE	58	LYS
26	DE	61	ARG
26	DE	69	ARG
26	DE	77	ILE
26	DE	83	VAL
26	DE	84	THR
26	DE	90	GLN
26	DE	105	LEU
26	DE	107	SER
26	DE	108	ILE
26	DE	114	ARG
26	DE	118	LEU
26	DE	126	VAL
26	DE	133	LEU
26	DE	145	ASP
26	DE	149	ILE
26	DE	159	LEU
26	DE	163	ASN
26	DE	164	LEU
26	DE	166	LYS
26	DE	170	ARG
26	DE	173	THR
26	DE	189	THR
26	DE	198	GLU
26	DE	199	MET
27	DF	4	LEU
27	DF	14	LYS
27	DF	21	ASN
27	DF	26	MET
27	DF	28	VAL
27	DF	35	THR
27	DF	36	LEU
27	DF	44	ILE
27	DF	46	ASP
27	DF	52	ASN

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Mol	Chain	Res	Type
27	DF	64	LYS
27	DF	67	ILE
27	DF	74	VAL
27	DF	81	GLN
27	DF	106	ILE
27	DF	110	ARG
27	DF	117	LEU
27	DF	125	ARG
27	DF	129	SER
27	DF	134	GLU
27	DF	149	VAL
27	DF	150	ARG
27	DF	152	LEU
27	DF	157	THR
27	DF	174	ASP
28	DG	11	VAL
28	DG	16	ASP
28	DG	29	LYS
28	DG	30	ASN
28	DG	33	LEU
28	DG	44	LYS
28	DG	45	HIS
28	DG	72	LEU
28	DG	89	LEU
28	DG	95	ARG
28	DG	117	LEU
28	DG	127	THR
28	DG	130	GLU
28	DG	137	ASP
28	DG	149	ARG
28	DG	151	TYR
28	DG	152	ARG
28	DG	155	GLU
28	DG	166	ASP
28	DG	167	GLU
29	DH	7	ASP
29	DH	12	LEU
29	DH	41	LYS
29	DH	42	LYS
29	DH	48	GLU
29	DH	50	ARG
29	DH	53	GLU

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Mol	Chain	Res	Type
29	DH	54	LEU
29	DH	57	LYS
29	DH	62	LEU
29	DH	77	THR
29	DH	78	VAL
29	DH	87	GLU
29	DH	89	LYS
29	DH	94	ILE
29	DH	109	GLU
29	DH	114	GLU
29	DH	116	ARG
29	DH	117	LEU
29	DH	119	ASN
29	DH	121	VAL
29	DH	124	THR
29	DH	125	THR
29	DH	129	GLU
29	DH	142	VAL
29	DH	149	GLU
30	DI	3	LYS
30	DI	4	LYS
30	DI	8	TYR
30	DI	11	LEU
30	DI	17	MET
30	DI	24	VAL
30	DI	31	GLN
30	DI	40	LYS
30	DI	49	ILE
30	DI	55	ILE
30	DI	68	THR
30	DI	69	PHE
30	DI	72	LYS
30	DI	79	LEU
30	DI	80	LEU
30	DI	86	ILE
30	DI	92	LYS
30	DI	96	ASP
30	DI	97	LYS
30	DI	102	SER
30	DI	105	GLN
30	DI	106	LEU
30	DI	117	MET

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Mol	Chain	Res	Type
30	DI	122	ILE
30	DI	123	GLU
30	DI	125	MET
30	DI	126	THR
30	DI	127	ARG
30	DI	128	SER
30	DI	134	ARG
30	DI	136	MET
31	DJ	17	VAL
31	DJ	30	THR
31	DJ	36	LEU
31	DJ	37	ARG
31	DJ	39	LYS
31	DJ	40	HIS
31	DJ	44	TYR
31	DJ	46	PRO
31	DJ	57	LEU
31	DJ	61	LYS
31	DJ	70	THR
31	DJ	76	HIS
31	DJ	81	ILE
31	DJ	86	GLN
31	DJ	109	LEU
31	DJ	118	MET
31	DJ	131	ASN
31	DJ	138	GLN
31	DJ	139	VAL
31	DJ	140	LEU
32	DK	1	MET
32	DK	49	ARG
32	DK	66	LYS
32	DK	86	LEU
32	DK	91	SER
32	DK	104	THR
32	DK	110	GLU
33	DL	2	ARG
33	DL	29	LYS
33	DL	42	SER
33	DL	47	ARG
33	DL	48	ARG
33	DL	59	ARG
33	DL	69	ARG

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Mol	Chain	Res	Type
33	DL	77	ILE
33	DL	78	ARG
33	DL	82	LEU
33	DL	94	THR
33	DL	100	ILE
33	DL	103	ILE
33	DL	118	THR
33	DL	120	VAL
33	DL	126	ARG
33	DL	132	ARG
34	DM	6	ARG
34	DM	60	GLN
34	DM	70	ASP
34	DM	74	THR
34	DM	100	LYS
34	DM	103	TYR
34	DM	108	VAL
34	DM	124	LEU
34	DM	128	THR
35	DN	1	MET
35	DN	2	ARG
35	DN	12	ARG
35	DN	14	SER
35	DN	15	SER
35	DN	18	GLN
35	DN	20	MET
35	DN	33	ILE
35	DN	48	VAL
35	DN	52	ILE
35	DN	53	THR
35	DN	63	ARG
35	DN	65	LEU
35	DN	69	ARG
35	DN	70	THR
35	DN	71	ARG
35	DN	73	ASN
35	DN	76	VAL
35	DN	90	ARG
35	DN	100	CYS
35	DN	114	GLU
35	DN	116	VAL
36	DO	9	ARG

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Mol	Chain	Res	Type
36	DO	18	LEU
36	DO	24	THR
36	DO	26	LEU
36	DO	28	VAL
36	DO	31	THR
36	DO	36	TYR
36	DO	48	LEU
36	DO	52	SER
36	DO	56	LYS
36	DO	78	VAL
36	DO	88	LYS
36	DO	103	VAL
37	DP	4	ILE
37	DP	7	GLN
37	DP	32	VAL
37	DP	34	GLU
37	DP	36	SER
37	DP	37	LYS
37	DP	66	ASN
37	DP	81	VAL
37	DP	83	SER
37	DP	89	ARG
37	DP	92	VAL
37	DP	94	LYS
37	DP	109	ARG
37	DP	110	ILE
37	DP	114	LEU
38	DQ	5	LYS
38	DQ	8	VAL
38	DQ	9	ILE
38	DQ	11	ARG
38	DQ	17	ILE
38	DQ	22	LYS
38	DQ	29	SER
38	DQ	30	ARG
38	DQ	41	LYS
38	DQ	51	ARG
38	DQ	52	GLN
38	DQ	59	GLN
38	DQ	104	VAL
39	DR	25	LEU
39	DR	31	GLU

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Mol	Chain	Res	Type
39	DR	39	LEU
39	DR	40	MET
39	DR	41	ILE
39	DR	43	ASN
39	DR	46	GLU
39	DR	48	LYS
39	DR	49	ILE
39	DR	58	VAL
39	DR	75	VAL
39	DR	79	ARG
39	DR	82	HIS
39	DR	85	LYS
39	DR	90	ARG
39	DR	94	THR
39	DR	97	LYS
39	DR	99	THR
40	DS	3	THR
40	DS	6	LYS
40	DS	19	LEU
40	DS	22	ASP
40	DS	24	ILE
40	DS	40	ASN
40	DS	53	SER
40	DS	67	ASP
40	DS	69	LEU
40	DS	86	MET
40	DS	96	ILE
40	DS	97	LEU
41	DT	3	ARG
41	DT	7	LEU
41	DT	16	VAL
41	DT	22	THR
41	DT	24	MET
41	DT	30	ILE
41	DT	31	VAL
41	DT	32	LEU
41	DT	44	LYS
41	DT	49	LYS
41	DT	52	GLU
41	DT	69	ARG
41	DT	73	ARG
41	DT	77	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
41	DT	89	GLU
42	DU	7	ARG
42	DU	10	GLU
42	DU	11	VAL
42	DU	15	THR
42	DU	18	ASP
42	DU	30	SER
42	DU	34	VAL
42	DU	35	ILE
42	DU	40	ASN
42	DU	41	LEU
42	DU	45	HIS
42	DU	46	GLN
42	DU	49	VAL
42	DU	54	GLN
42	DU	61	LYS
42	DU	72	ILE
42	DU	81	ASP
42	DU	99	ASN
43	DV	1	MET
43	DV	2	PHE
43	DV	3	THR
43	DV	8	VAL
43	DV	29	ILE
43	DV	35	GLU
43	DV	42	LEU
43	DV	45	ASP
43	DV	49	ASN
43	DV	50	MET
43	DV	53	LYS
43	DV	61	LEU
43	DV	63	ILE
43	DV	65	VAL
44	DW	20	ARG
44	DW	30	SER
44	DW	38	VAL
44	DW	41	ARG
44	DW	72	LYS
45	DX	2	SER
45	DX	4	VAL
45	DX	5	CYS
45	DX	11	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
45	DX	23	ASN
45	DX	25	THR
45	DX	33	LEU
45	DX	46	PHE
45	DX	47	VAL
45	DX	51	VAL
45	DX	58	VAL
45	DX	71	LEU
45	DX	76	GLU
46	DY	2	LYS
46	DY	5	GLU
46	DY	6	LEU
46	DY	9	LYS
46	DY	13	GLU
46	DY	14	LEU
46	DY	16	THR
46	DY	21	LEU
46	DY	25	GLN
46	DY	37	LEU
46	DY	38	GLN
46	DY	48	ARG
46	DY	49	ASP
46	DY	56	LEU
46	DY	58	ASN
47	DZ	3	LYS
47	DZ	4	THR
47	DZ	10	THR
47	DZ	25	LEU
47	DZ	31	ARG
47	DZ	39	GLU
47	DZ	41	THR
47	DZ	45	ARG
47	DZ	57	VAL
47	DZ	58	GLU
48	D0	28	LEU
48	D0	37	LYS
48	D0	46	ASP
48	D0	52	ARG
49	D1	5	ILE
49	D1	12	VAL
49	D1	45	GLN
49	D1	46	HIS

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Mol	Chain	Res	Type
49	D1	51	GLU
50	D2	4	THR
50	D2	10	LEU
50	D2	11	LYS
50	D2	24	THR
50	D2	25	LYS
50	D2	44	VAL
50	D2	45	SER
50	D2	46	LYS
51	D3	6	THR
51	D3	23	LYS
51	D3	30	ARG
51	D3	31	HIS
51	D3	34	THR
51	D3	45	ARG
51	D3	47	LYS
52	D4	2	LYS
52	D4	3	VAL
52	D4	12	ARG
52	D4	26	ILE
52	D4	37	GLN

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (41) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	39	HIS
3	AC	6	HIS
5	AE	70	ASN
5	AE	82	GLN
5	AE	89	HIS
9	AI	5	GLN
10	AJ	15	HIS
15	AO	46	HIS
19	AS	52	HIS
24	BC	53	HIS
24	BC	226	ASN
24	BC	251	GLN
29	BH	119	ASN
29	BH	135	HIS
33	BL	35	HIS
33	BL	99	ASN
34	BM	97	GLN

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Mol	Chain	Res	Type
36	BO	29	HIS
36	BO	100	HIS
39	BR	89	HIS
40	BS	15	GLN
45	BX	36	HIS
2	CB	15	HIS
2	CB	103	ASN
3	CC	176	HIS
4	CD	74	ASN
7	CG	130	ASN
10	CJ	70	HIS
18	CR	74	HIS
20	CT	68	HIS
24	DC	15	HIS
27	DF	63	GLN
29	DH	128	HIS
36	DO	100	HIS
40	DS	7	HIS
41	DT	15	HIS
42	DU	74	ASN
46	DY	15	ASN
46	DY	41	HIS
51	D3	31	HIS
52	D4	37	GLN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1537/1539 (99%)	344 (22%)	12 (0%)
1	CA	1538/1539 (99%)	340 (22%)	9 (0%)
22	BA	2895/2903 (99%)	542 (18%)	21 (0%)
22	DA	2895/2903 (99%)	673 (23%)	28 (0%)
23	BB	118/119 (99%)	19 (16%)	0
23	DB	117/119 (98%)	24 (20%)	0
All	All	9100/9122 (99%)	1942 (21%)	70 (0%)

All (1942) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	4	U
1	AA	5	U

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Mol	Chain	Res	Type
1	AA	6	G
1	AA	9	G
1	AA	13	U
1	AA	22	G
1	AA	28	A
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
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	81	A
1	AA	82	G
1	AA	83	C
1	AA	84	U
1	AA	85	U
1	AA	86	G
1	AA	89	U
1	AA	90	C
1	AA	91	U
1	AA	94	G
1	AA	95	C
1	AA	97	G
1	AA	108	G
1	AA	110	C
1	AA	116	A
1	AA	117	G
1	AA	121	U
1	AA	122	G
1	AA	130	A
1	AA	131	A
1	AA	136	C
1	AA	137	U
1	AA	138	G
1	AA	141	G

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Mol	Chain	Res	Type
1	AA	143	A
1	AA	144	G
1	AA	149	A
1	AA	158	G
1	AA	162	A
1	AA	163	C
1	AA	168	G
1	AA	169	C
1	AA	181	A
1	AA	182	A
1	AA	183	C
1	AA	188	C
1	AA	195	A
1	AA	197	A
1	AA	204	G
1	AA	205	A
1	AA	210	C
1	AA	226	G
1	AA	240	G
1	AA	245	U
1	AA	247	G
1	AA	251	G
1	AA	260	G
1	AA	263	A
1	AA	266	G
1	AA	267	C
1	AA	281	G
1	AA	289	G
1	AA	292	G
1	AA	320	A
1	AA	321	A
1	AA	328	C
1	AA	329	A
1	AA	330	C
1	AA	331	G
1	AA	332	G
1	AA	340	U
1	AA	346	G
1	AA	347	G
1	AA	352	C
1	AA	353	A
1	AA	354	G

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Mol	Chain	Res	Type
1	AA	367	U
1	AA	372	C
1	AA	384	G
1	AA	398	U
1	AA	406	G
1	AA	408	A
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	421	U
1	AA	422	C
1	AA	429	U
1	AA	430	A
1	AA	435	A
1	AA	453	G
1	AA	454	G
1	AA	456	A
1	AA	457	G
1	AA	458	U
1	AA	463	U
1	AA	465	A
1	AA	466	A
1	AA	467	U
1	AA	468	A
1	AA	475	C
1	AA	479	U
1	AA	485	U
1	AA	486	U
1	AA	495	A
1	AA	498	A
1	AA	505	G
1	AA	509	A
1	AA	511	C
1	AA	518	C
1	AA	521	G
1	AA	527	G
1	AA	530	G
1	AA	532	A
1	AA	533	A
1	AA	545	C
1	AA	547	A

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Mol	Chain	Res	Type
1	AA	559	A
1	AA	562	U
1	AA	563	A
1	AA	564	C
1	AA	571	U
1	AA	573	A
1	AA	576	C
1	AA	577	G
1	AA	581	G
1	AA	589	U
1	AA	596	A
1	AA	615	G
1	AA	619	U
1	AA	620	C
1	AA	653	U
1	AA	661	G
1	AA	665	A
1	AA	687	A
1	AA	698	G
1	AA	702	A
1	AA	721	G
1	AA	723	U
1	AA	733	G
1	AA	734	G
1	AA	746	A
1	AA	748	G
1	AA	755	G
1	AA	773	G
1	AA	774	G
1	AA	777	A
1	AA	787	A
1	AA	788	U
1	AA	793	U
1	AA	794	A
1	AA	802	A
1	AA	814	A
1	AA	815	A
1	AA	817	C
1	AA	821	G
1	AA	825	A
1	AA	828	U
1	AA	829	G

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Mol	Chain	Res	Type
1	AA	832	G
1	AA	835	U
1	AA	836	G
1	AA	841	C
1	AA	842	U
1	AA	843	U
1	AA	845	A
1	AA	846	G
1	AA	859	G
1	AA	867	G
1	AA	870	U
1	AA	872	A
1	AA	876	C
1	AA	910	C
1	AA	914	A
1	AA	922	G
1	AA	926	G
1	AA	927	G
1	AA	932	C
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	964	A
1	AA	966	G
1	AA	969	A
1	AA	971	G
1	AA	972	C
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	983	A
1	AA	986	U
1	AA	987	G
1	AA	990	C
1	AA	992	U
1	AA	993	G
1	AA	1002	G
1	AA	1003	G
1	AA	1004	A
1	AA	1008	U
1	AA	1009	U
1	AA	1015	G

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Mol	Chain	Res	Type
1	AA	1016	A
1	AA	1022	A
1	AA	1025	U
1	AA	1026	G
1	AA	1027	C
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	1036	A
1	AA	1037	C
1	AA	1042	A
1	AA	1043	G
1	AA	1044	A
1	AA	1047	G
1	AA	1050	G
1	AA	1053	G
1	AA	1054	C
1	AA	1055	A
1	AA	1056	U
1	AA	1061	G
1	AA	1065	U
1	AA	1066	C
1	AA	1086	U
1	AA	1090	U
1	AA	1091	U
1	AA	1092	A
1	AA	1094	G
1	AA	1098	C
1	AA	1101	A
1	AA	1124	G
1	AA	1125	U
1	AA	1127	G
1	AA	1133	G
1	AA	1135	U
1	AA	1136	C
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C

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Mol	Chain	Res	Type
1	AA	1141	C
1	AA	1142	G
1	AA	1143	G
1	AA	1145	A
1	AA	1146	A
1	AA	1149	C
1	AA	1151	A
1	AA	1152	A
1	AA	1154	G
1	AA	1159	U
1	AA	1160	G
1	AA	1161	C
1	AA	1167	A
1	AA	1168	U
1	AA	1171	A
1	AA	1181	G
1	AA	1183	U
1	AA	1184	G
1	AA	1186	G
1	AA	1196	A
1	AA	1197	A
1	AA	1198	G
1	AA	1199	U
1	AA	1200	C
1	AA	1201	A
1	AA	1202	U
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1215	G
1	AA	1227	A
1	AA	1228	C
1	AA	1238	A
1	AA	1239	A
1	AA	1240	U
1	AA	1250	A
1	AA	1253	G
1	AA	1256	A
1	AA	1257	A
1	AA	1258	G
1	AA	1263	C
1	AA	1280	A

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Mol	Chain	Res	Type
1	AA	1286	U
1	AA	1287	A
1	AA	1293	C
1	AA	1298	U
1	AA	1300	G
1	AA	1302	C
1	AA	1304	G
1	AA	1305	G
1	AA	1306	A
1	AA	1320	C
1	AA	1323	G
1	AA	1328	C
1	AA	1332	A
1	AA	1335	U
1	AA	1336	C
1	AA	1337	G
1	AA	1338	G
1	AA	1353	G
1	AA	1363	A
1	AA	1364	U
1	AA	1370	G
1	AA	1378	C
1	AA	1379	G
1	AA	1380	U
1	AA	1382	C
1	AA	1390	U
1	AA	1398	A
1	AA	1441	A
1	AA	1442	G
1	AA	1443	C
1	AA	1446	A
1	AA	1450	U
1	AA	1452	C
1	AA	1453	G
1	AA	1455	G
1	AA	1484	C
1	AA	1493	A
1	AA	1497	G
1	AA	1503	A
1	AA	1505	G
1	AA	1506	U
1	AA	1517	G

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Mol	Chain	Res	Type
1	AA	1529	G
1	AA	1530	G
1	AA	1533	C
1	AA	1534	A
1	AA	1535	C
1	AA	1538	C
22	BA	10	A
22	BA	12	U
22	BA	13	A
22	BA	34	U
22	BA	39	G
22	BA	45	G
22	BA	46	G
22	BA	61	C
22	BA	63	A
22	BA	71	A
22	BA	74	A
22	BA	75	G
22	BA	87	U
22	BA	101	A
22	BA	102	U
22	BA	103	A
22	BA	118	A
22	BA	119	A
22	BA	120	U
22	BA	128	C
22	BA	131	A
22	BA	138	U
22	BA	139	U
22	BA	140	C
22	BA	141	G
22	BA	142	A
22	BA	166	U
22	BA	181	A
22	BA	196	A
22	BA	206	U
22	BA	207	A
22	BA	214	G
22	BA	215	G
22	BA	216	A
22	BA	221	A
22	BA	222	A

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Mol	Chain	Res	Type
22	BA	223	A
22	BA	245	G
22	BA	248	G
22	BA	250	G
22	BA	255	A
22	BA	265	A
22	BA	266	G
22	BA	272	A
22	BA	276	U
22	BA	277	G
22	BA	278	A
22	BA	279	A
22	BA	291	G
22	BA	302	C
22	BA	311	A
22	BA	325	G
22	BA	329	G
22	BA	330	A
22	BA	331	C
22	BA	352	A
22	BA	353	C
22	BA	355	U
22	BA	361	G
22	BA	362	A
22	BA	371	A
22	BA	372	G
22	BA	386	G
22	BA	389	G
22	BA	396	G
22	BA	404	A
22	BA	405	U
22	BA	411	G
22	BA	412	A
22	BA	420	C
22	BA	424	G
22	BA	443	A
22	BA	451	U
22	BA	455	C
22	BA	476	G
22	BA	481	G
22	BA	483	A
22	BA	491	G

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Mol	Chain	Res	Type
22	BA	492	A
22	BA	504	A
22	BA	505	A
22	BA	509	C
22	BA	510	C
22	BA	528	A
22	BA	532	A
22	BA	533	G
22	BA	546	U
22	BA	547	A
22	BA	548	G
22	BA	549	G
22	BA	550	C
22	BA	563	A
22	BA	573	U
22	BA	575	A
22	BA	586	A
22	BA	603	A
22	BA	613	A
22	BA	614	A
22	BA	615	U
22	BA	622	G
22	BA	627	A
22	BA	631	A
22	BA	637	A
22	BA	645	C
22	BA	647	G
22	BA	653	U
22	BA	654	A
22	BA	686	U
22	BA	730	A
22	BA	738	G
22	BA	747	U
22	BA	764	A
22	BA	765	C
22	BA	775	G
22	BA	776	G
22	BA	782	A
22	BA	784	G
22	BA	785	G
22	BA	789	A
22	BA	791	C

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Mol	Chain	Res	Type
22	BA	792	A
22	BA	802	A
22	BA	805	G
22	BA	812	C
22	BA	817	C
22	BA	819	A
22	BA	826	U
22	BA	827	U
22	BA	828	U
22	BA	845	A
22	BA	846	U
22	BA	847	U
22	BA	855	G
22	BA	858	G
22	BA	859	G
22	BA	866	A
22	BA	877	A
22	BA	878	A
22	BA	879	G
22	BA	885	C
22	BA	896	A
22	BA	900	A
22	BA	905	A
22	BA	907	G
22	BA	908	C
22	BA	910	A
22	BA	914	G
22	BA	915	C
22	BA	927	A
22	BA	931	U
22	BA	932	U
22	BA	941	A
22	BA	942	G
22	BA	946	C
22	BA	961	C
22	BA	963	U
22	BA	974	G
22	BA	982	C
22	BA	983	A
22	BA	995	C
22	BA	996	A
22	BA	1012	U

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Mol	Chain	Res	Type
22	BA	1013	C
22	BA	1022	G
22	BA	1026	G
22	BA	1027	A
22	BA	1028	A
22	BA	1033	U
22	BA	1038	G
22	BA	1046	A
22	BA	1047	G
22	BA	1054	A
22	BA	1057	A
22	BA	1058	U
22	BA	1060	U
22	BA	1061	U
22	BA	1062	G
22	BA	1063	G
22	BA	1066	U
22	BA	1067	A
22	BA	1068	G
22	BA	1070	A
22	BA	1071	G
22	BA	1072	C
22	BA	1073	A
22	BA	1074	G
22	BA	1075	C
22	BA	1077	A
22	BA	1078	U
22	BA	1079	C
22	BA	1081	U
22	BA	1088	A
22	BA	1089	A
22	BA	1092	C
22	BA	1097	U
22	BA	1098	A
22	BA	1100	C
22	BA	1103	A
22	BA	1104	C
22	BA	1112	G
22	BA	1128	G
22	BA	1132	U
22	BA	1133	A
22	BA	1135	C

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Mol	Chain	Res	Type
22	BA	1136	G
22	BA	1139	G
22	BA	1142	A
22	BA	1168	G
22	BA	1171	G
22	BA	1172	C
22	BA	1173	U
22	BA	1174	U
22	BA	1175	A
22	BA	1176	U
22	BA	1178	C
22	BA	1179	G
22	BA	1180	U
22	BA	1181	U
22	BA	1182	G
22	BA	1189	A
22	BA	1238	G
22	BA	1253	A
22	BA	1254	A
22	BA	1256	G
22	BA	1266	G
22	BA	1271	G
22	BA	1272	A
22	BA	1280	G
22	BA	1286	A
22	BA	1291	C
22	BA	1300	G
22	BA	1301	A
22	BA	1303	G
22	BA	1305	C
22	BA	1331	G
22	BA	1332	G
22	BA	1345	C
22	BA	1352	U
22	BA	1359	A
22	BA	1365	A
22	BA	1368	G
22	BA	1378	A
22	BA	1379	U
22	BA	1383	A
22	BA	1384	A
22	BA	1386	C

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Mol	Chain	Res	Type
22	BA	1406	U
22	BA	1415	U
22	BA	1416	G
22	BA	1419	A
22	BA	1420	A
22	BA	1427	A
22	BA	1428	C
22	BA	1435	G
22	BA	1450	G
22	BA	1452	G
22	BA	1453	A
22	BA	1461	C
22	BA	1482	G
22	BA	1493	C
22	BA	1495	A
22	BA	1504	A
22	BA	1508	A
22	BA	1510	G
22	BA	1515	A
22	BA	1519	G
22	BA	1523	U
22	BA	1532	A
22	BA	1533	C
22	BA	1534	U
22	BA	1535	A
22	BA	1536	C
22	BA	1554	U
22	BA	1555	G
22	BA	1560	G
22	BA	1564	C
22	BA	1565	C
22	BA	1569	A
22	BA	1578	U
22	BA	1583	A
22	BA	1584	U
22	BA	1585	C
22	BA	1606	C
22	BA	1607	C
22	BA	1608	A
22	BA	1613	G
22	BA	1632	A
22	BA	1634	A

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Mol	Chain	Res	Type
22	BA	1647	U
22	BA	1648	U
22	BA	1649	G
22	BA	1652	A
22	BA	1674	G
22	BA	1688	U
22	BA	1694	C
22	BA	1695	G
22	BA	1703	G
22	BA	1714	U
22	BA	1715	G
22	BA	1717	A
22	BA	1718	G
22	BA	1729	U
22	BA	1730	C
22	BA	1732	C
22	BA	1736	U
22	BA	1738	G
22	BA	1739	A
22	BA	1743	G
22	BA	1744	A
22	BA	1758	U
22	BA	1764	C
22	BA	1766	G
22	BA	1772	A
22	BA	1773	A
22	BA	1776	G
22	BA	1782	U
22	BA	1800	C
22	BA	1801	A
22	BA	1802	A
22	BA	1808	A
22	BA	1813	G
22	BA	1816	C
22	BA	1828	G
22	BA	1829	A
22	BA	1865	U
22	BA	1866	A
22	BA	1870	C
22	BA	1871	A
22	BA	1872	A
22	BA	1873	G

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Mol	Chain	Res	Type
22	BA	1876	A
22	BA	1884	G
22	BA	1885	A
22	BA	1890	A
22	BA	1906	G
22	BA	1909	C
22	BA	1912	A
22	BA	1913	A
22	BA	1914	C
22	BA	1915	U
22	BA	1916	A
22	BA	1917	U
22	BA	1923	U
22	BA	1925	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	1937	A
22	BA	1938	A
22	BA	1955	U
22	BA	1963	U
22	BA	1964	G
22	BA	1965	C
22	BA	1967	C
22	BA	1970	A
22	BA	1972	G
22	BA	1991	U
22	BA	1992	G
22	BA	1993	U
22	BA	1997	C
22	BA	2009	A
22	BA	2010	G
22	BA	2022	U
22	BA	2023	C
22	BA	2031	A
22	BA	2032	G
22	BA	2033	A
22	BA	2038	G
22	BA	2043	C

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Mol	Chain	Res	Type
22	BA	2055	C
22	BA	2056	G
22	BA	2060	A
22	BA	2061	G
22	BA	2062	A
22	BA	2069	G
22	BA	2072	C
22	BA	2077	A
22	BA	2092	U
22	BA	2093	G
22	BA	2098	U
22	BA	2100	G
22	BA	2101	A
22	BA	2102	G
22	BA	2110	G
22	BA	2111	U
22	BA	2112	G
22	BA	2113	U
22	BA	2115	G
22	BA	2116	G
22	BA	2117	A
22	BA	2118	U
22	BA	2119	A
22	BA	2122	U
22	BA	2123	G
22	BA	2126	A
22	BA	2127	G
22	BA	2128	G
22	BA	2132	U
22	BA	2133	G
22	BA	2134	A
22	BA	2136	G
22	BA	2140	G
22	BA	2145	C
22	BA	2147	A
22	BA	2148	G
22	BA	2149	U
22	BA	2157	G
22	BA	2162	G
22	BA	2164	C
22	BA	2165	C
22	BA	2167	U

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Mol	Chain	Res	Type
22	BA	2169	A
22	BA	2170	A
22	BA	2171	A
22	BA	2172	U
22	BA	2173	A
22	BA	2178	C
22	BA	2179	C
22	BA	2181	U
22	BA	2187	U
22	BA	2189	U
22	BA	2190	G
22	BA	2192	U
22	BA	2198	A
22	BA	2204	G
22	BA	2211	A
22	BA	2212	A
22	BA	2220	U
22	BA	2225	A
22	BA	2226	C
22	BA	2238	G
22	BA	2239	G
22	BA	2248	C
22	BA	2255	G
22	BA	2258	C
22	BA	2268	A
22	BA	2269	G
22	BA	2273	A
22	BA	2278	A
22	BA	2283	C
22	BA	2287	A
22	BA	2296	U
22	BA	2297	A
22	BA	2305	U
22	BA	2308	G
22	BA	2309	A
22	BA	2322	A
22	BA	2324	U
22	BA	2325	G
22	BA	2327	A
22	BA	2335	A
22	BA	2340	A
22	BA	2345	G

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Mol	Chain	Res	Type
22	BA	2347	C
22	BA	2354	C
22	BA	2361	G
22	BA	2378	A
22	BA	2383	G
22	BA	2385	C
22	BA	2389	G
22	BA	2402	U
22	BA	2403	C
22	BA	2406	A
22	BA	2424	C
22	BA	2425	A
22	BA	2428	G
22	BA	2429	G
22	BA	2430	A
22	BA	2431	U
22	BA	2435	A
22	BA	2441	U
22	BA	2447	G
22	BA	2448	A
22	BA	2476	A
22	BA	2478	A
22	BA	2490	G
22	BA	2491	U
22	BA	2502	G
22	BA	2505	G
22	BA	2518	A
22	BA	2525	G
22	BA	2529	G
22	BA	2554	U
22	BA	2555	U
22	BA	2566	A
22	BA	2567	G
22	BA	2573	C
22	BA	2576	G
22	BA	2579	C
22	BA	2582	G
22	BA	2584	U
22	BA	2599	G
22	BA	2602	A
22	BA	2603	G
22	BA	2609	U

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Mol	Chain	Res	Type
22	BA	2613	U
22	BA	2615	U
22	BA	2616	C
22	BA	2621	G
22	BA	2629	U
22	BA	2632	A
22	BA	2689	U
22	BA	2690	U
22	BA	2714	G
22	BA	2726	A
22	BA	2729	G
22	BA	2732	G
22	BA	2733	A
22	BA	2744	G
22	BA	2748	A
22	BA	2757	A
22	BA	2760	C
22	BA	2765	A
22	BA	2778	A
22	BA	2791	G
22	BA	2798	U
22	BA	2799	A
22	BA	2800	A
22	BA	2806	C
22	BA	2811	G
22	BA	2814	A
22	BA	2820	A
22	BA	2821	A
22	BA	2825	G
22	BA	2835	A
22	BA	2840	C
22	BA	2858	C
22	BA	2867	G
22	BA	2873	A
22	BA	2874	C
22	BA	2880	C
22	BA	2883	A
22	BA	2884	U
22	BA	2885	G
22	BA	2886	A
22	BA	2887	A
22	BA	2891	U

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Mol	Chain	Res	Type
22	BA	2901	C
22	BA	2903	U
23	BB	9	G
23	BB	15	A
23	BB	16	G
23	BB	25	U
23	BB	35	C
23	BB	37	C
23	BB	41	G
23	BB	44	G
23	BB	45	A
23	BB	46	A
23	BB	56	G
23	BB	66	A
23	BB	67	G
23	BB	84	G
23	BB	89	U
23	BB	99	A
23	BB	105	G
23	BB	109	A
23	BB	119	A
1	CA	5	U
1	CA	6	G
1	CA	8	A
1	CA	9	G
1	CA	17	U
1	CA	19	A
1	CA	31	G
1	CA	32	A
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	51	A
1	CA	56	U
1	CA	70	U
1	CA	71	A
1	CA	73	C
1	CA	74	A
1	CA	80	A
1	CA	83	C
1	CA	84	U
1	CA	85	U

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Mol	Chain	Res	Type
1	CA	87	C
1	CA	88	U
1	CA	91	U
1	CA	93	U
1	CA	94	G
1	CA	95	C
1	CA	97	G
1	CA	108	G
1	CA	116	A
1	CA	117	G
1	CA	120	A
1	CA	121	U
1	CA	122	G
1	CA	124	C
1	CA	130	A
1	CA	131	A
1	CA	137	U
1	CA	142	G
1	CA	143	A
1	CA	144	G
1	CA	154	U
1	CA	155	A
1	CA	156	C
1	CA	179	A
1	CA	182	A
1	CA	183	C
1	CA	189	A
1	CA	195	A
1	CA	197	A
1	CA	204	G
1	CA	207	C
1	CA	208	U
1	CA	210	C
1	CA	211	G
1	CA	212	G
1	CA	226	G
1	CA	240	G
1	CA	241	G
1	CA	245	U
1	CA	247	G
1	CA	251	G
1	CA	266	G

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Mol	Chain	Res	Type
1	CA	267	C
1	CA	280	C
1	CA	289	G
1	CA	294	U
1	CA	298	A
1	CA	315	A
1	CA	316	C
1	CA	321	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	345	C
1	CA	348	G
1	CA	351	G
1	CA	352	C
1	CA	354	G
1	CA	357	G
1	CA	367	U
1	CA	372	C
1	CA	376	G
1	CA	378	G
1	CA	379	C
1	CA	384	G
1	CA	398	U
1	CA	399	G
1	CA	406	G
1	CA	412	A
1	CA	413	G
1	CA	418	C
1	CA	421	U
1	CA	422	C
1	CA	429	U
1	CA	430	A
1	CA	432	A
1	CA	441	A
1	CA	446	G
1	CA	452	A
1	CA	459	A
1	CA	463	U

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Mol	Chain	Res	Type
1	CA	466	A
1	CA	467	U
1	CA	468	A
1	CA	469	C
1	CA	477	C
1	CA	478	A
1	CA	479	U
1	CA	482	A
1	CA	483	C
1	CA	484	G
1	CA	485	U
1	CA	486	U
1	CA	498	A
1	CA	500	G
1	CA	505	G
1	CA	509	A
1	CA	510	A
1	CA	511	C
1	CA	517	G
1	CA	518	C
1	CA	519	C
1	CA	522	C
1	CA	527	G
1	CA	531	U
1	CA	532	A
1	CA	533	A
1	CA	536	C
1	CA	545	C
1	CA	547	A
1	CA	549	C
1	CA	550	G
1	CA	559	A
1	CA	564	C
1	CA	568	G
1	CA	571	U
1	CA	572	A
1	CA	573	A
1	CA	576	C
1	CA	577	G
1	CA	580	C
1	CA	581	G
1	CA	596	A

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Mol	Chain	Res	Type
1	CA	622	A
1	CA	628	G
1	CA	650	G
1	CA	653	U
1	CA	665	A
1	CA	666	G
1	CA	673	A
1	CA	683	G
1	CA	687	A
1	CA	702	A
1	CA	721	G
1	CA	723	U
1	CA	724	G
1	CA	733	G
1	CA	747	A
1	CA	755	G
1	CA	758	C
1	CA	760	G
1	CA	776	G
1	CA	777	A
1	CA	785	G
1	CA	787	A
1	CA	793	U
1	CA	794	A
1	CA	809	G
1	CA	812	G
1	CA	814	A
1	CA	815	A
1	CA	817	C
1	CA	819	A
1	CA	821	G
1	CA	828	U
1	CA	832	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	859	G
1	CA	874	G
1	CA	880	C

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Mol	Chain	Res	Type
1	CA	885	G
1	CA	902	G
1	CA	914	A
1	CA	919	A
1	CA	922	G
1	CA	926	G
1	CA	934	C
1	CA	945	G
1	CA	960	U
1	CA	966	G
1	CA	967	C
1	CA	969	A
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	987	G
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	994	A
1	CA	995	C
1	CA	996	A
1	CA	1004	A
1	CA	1008	U
1	CA	1009	U
1	CA	1018	G
1	CA	1022	A
1	CA	1025	U
1	CA	1026	G
1	CA	1027	C
1	CA	1028	C
1	CA	1030	U
1	CA	1031	C
1	CA	1032	G
1	CA	1033	G
1	CA	1034	G
1	CA	1037	C
1	CA	1039	G
1	CA	1043	G
1	CA	1044	A
1	CA	1050	G
1	CA	1054	C

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Mol	Chain	Res	Type
1	CA	1065	U
1	CA	1066	C
1	CA	1070	U
1	CA	1071	C
1	CA	1072	G
1	CA	1073	U
1	CA	1080	A
1	CA	1086	U
1	CA	1088	G
1	CA	1091	U
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1104	G
1	CA	1124	G
1	CA	1125	U
1	CA	1126	U
1	CA	1129	C
1	CA	1133	G
1	CA	1134	G
1	CA	1136	C
1	CA	1137	C
1	CA	1139	G
1	CA	1140	C
1	CA	1141	C
1	CA	1142	G
1	CA	1145	A
1	CA	1154	G
1	CA	1155	A
1	CA	1157	A
1	CA	1159	U
1	CA	1160	G
1	CA	1161	C
1	CA	1168	U
1	CA	1178	G
1	CA	1184	G
1	CA	1186	G
1	CA	1193	G
1	CA	1196	A
1	CA	1202	U
1	CA	1212	U
1	CA	1213	A

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Mol	Chain	Res	Type
1	CA	1227	A
1	CA	1230	C
1	CA	1236	A
1	CA	1238	A
1	CA	1240	U
1	CA	1246	A
1	CA	1253	G
1	CA	1256	A
1	CA	1257	A
1	CA	1260	G
1	CA	1269	A
1	CA	1275	A
1	CA	1280	A
1	CA	1285	A
1	CA	1286	U
1	CA	1287	A
1	CA	1292	G
1	CA	1293	C
1	CA	1297	G
1	CA	1299	A
1	CA	1304	G
1	CA	1305	G
1	CA	1317	C
1	CA	1318	A
1	CA	1319	A
1	CA	1320	C
1	CA	1322	C
1	CA	1324	A
1	CA	1331	G
1	CA	1336	C
1	CA	1337	G
1	CA	1338	G
1	CA	1346	A
1	CA	1349	A
1	CA	1353	G
1	CA	1362	A
1	CA	1363	A
1	CA	1364	U
1	CA	1377	A
1	CA	1378	C
1	CA	1379	G
1	CA	1382	C

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Mol	Chain	Res	Type
1	CA	1398	A
1	CA	1418	A
1	CA	1429	A
1	CA	1441	A
1	CA	1442	G
1	CA	1446	A
1	CA	1448	C
1	CA	1452	C
1	CA	1454	G
1	CA	1455	G
1	CA	1475	G
1	CA	1492	A
1	CA	1493	A
1	CA	1497	G
1	CA	1503	A
1	CA	1505	G
1	CA	1506	U
1	CA	1507	A
1	CA	1509	C
1	CA	1517	G
1	CA	1529	G
1	CA	1530	G
1	CA	1533	C
1	CA	1535	C
1	CA	1536	C
22	DA	3	U
22	DA	10	A
22	DA	11	C
22	DA	12	U
22	DA	15	G
22	DA	23	G
22	DA	31	C
22	DA	34	U
22	DA	39	G
22	DA	41	C
22	DA	42	A
22	DA	46	G
22	DA	47	C
22	DA	55	G
22	DA	58	G
22	DA	61	C
22	DA	71	A

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Mol	Chain	Res	Type
22	DA	73	A
22	DA	74	A
22	DA	75	G
22	DA	80	G
22	DA	81	G
22	DA	82	U
22	DA	83	A
22	DA	84	A
22	DA	91	A
22	DA	96	C
22	DA	98	G
22	DA	101	A
22	DA	102	U
22	DA	118	A
22	DA	119	A
22	DA	120	U
22	DA	121	G
22	DA	138	U
22	DA	139	U
22	DA	140	C
22	DA	141	G
22	DA	142	A
22	DA	145	C
22	DA	146	A
22	DA	149	A
22	DA	150	U
22	DA	155	A
22	DA	162	U
22	DA	163	C
22	DA	166	U
22	DA	181	A
22	DA	196	A
22	DA	206	U
22	DA	215	G
22	DA	216	A
22	DA	222	A
22	DA	223	A
22	DA	225	C
22	DA	233	A
22	DA	245	G
22	DA	248	G
22	DA	249	C

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Mol	Chain	Res	Type
22	DA	253	C
22	DA	255	A
22	DA	256	A
22	DA	265	A
22	DA	266	G
22	DA	271	G
22	DA	272	A
22	DA	276	U
22	DA	279	A
22	DA	281	C
22	DA	282	A
22	DA	284	U
22	DA	285	G
22	DA	294	A
22	DA	311	A
22	DA	322	A
22	DA	328	U
22	DA	329	G
22	DA	330	A
22	DA	331	C
22	DA	361	G
22	DA	362	A
22	DA	367	G
22	DA	371	A
22	DA	372	G
22	DA	380	G
22	DA	385	C
22	DA	386	G
22	DA	387	U
22	DA	389	G
22	DA	392	U
22	DA	396	G
22	DA	405	U
22	DA	411	G
22	DA	417	C
22	DA	424	G
22	DA	426	C
22	DA	430	A
22	DA	432	A
22	DA	435	C
22	DA	448	U
22	DA	451	U

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Mol	Chain	Res	Type
22	DA	452	G
22	DA	453	A
22	DA	455	C
22	DA	478	A
22	DA	479	A
22	DA	480	A
22	DA	481	G
22	DA	490	C
22	DA	491	G
22	DA	504	A
22	DA	505	A
22	DA	508	A
22	DA	510	C
22	DA	519	U
22	DA	526	A
22	DA	528	A
22	DA	529	A
22	DA	531	C
22	DA	532	A
22	DA	533	G
22	DA	543	G
22	DA	544	C
22	DA	546	U
22	DA	547	A
22	DA	548	G
22	DA	549	G
22	DA	550	C
22	DA	563	A
22	DA	569	U
22	DA	573	U
22	DA	574	A
22	DA	575	A
22	DA	586	A
22	DA	603	A
22	DA	613	A
22	DA	614	A
22	DA	627	A
22	DA	628	G
22	DA	630	G
22	DA	631	A
22	DA	634	C
22	DA	637	A

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Mol	Chain	Res	Type
22	DA	642	U
22	DA	645	C
22	DA	646	U
22	DA	647	G
22	DA	648	G
22	DA	651	G
22	DA	654	A
22	DA	655	A
22	DA	662	G
22	DA	672	C
22	DA	677	A
22	DA	685	A
22	DA	686	U
22	DA	689	A
22	DA	695	G
22	DA	701	G
22	DA	702	U
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	740	C
22	DA	747	U
22	DA	751	A
22	DA	752	A
22	DA	757	G
22	DA	764	A
22	DA	771	G
22	DA	775	G
22	DA	776	G
22	DA	782	A
22	DA	784	G
22	DA	785	G
22	DA	792	A
22	DA	798	G
22	DA	801	G
22	DA	802	A
22	DA	805	G
22	DA	808	G
22	DA	812	C

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Mol	Chain	Res	Type
22	DA	815	C
22	DA	819	A
22	DA	827	U
22	DA	828	U
22	DA	830	G
22	DA	844	A
22	DA	845	A
22	DA	846	U
22	DA	847	U
22	DA	858	G
22	DA	859	G
22	DA	865	C
22	DA	878	A
22	DA	881	G
22	DA	882	G
22	DA	885	C
22	DA	896	A
22	DA	897	C
22	DA	902	C
22	DA	906	U
22	DA	910	A
22	DA	913	U
22	DA	914	G
22	DA	915	C
22	DA	919	U
22	DA	931	U
22	DA	932	U
22	DA	941	A
22	DA	946	C
22	DA	953	G
22	DA	961	C
22	DA	963	U
22	DA	974	G
22	DA	983	A
22	DA	985	C
22	DA	995	C
22	DA	996	A
22	DA	1012	U
22	DA	1013	C
22	DA	1022	G
22	DA	1025	G
22	DA	1026	G

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Mol	Chain	Res	Type
22	DA	1028	A
22	DA	1033	U
22	DA	1041	G
22	DA	1046	A
22	DA	1047	G
22	DA	1048	A
22	DA	1053	C
22	DA	1058	U
22	DA	1060	U
22	DA	1061	U
22	DA	1062	G
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	1074	G
22	DA	1075	C
22	DA	1077	A
22	DA	1079	C
22	DA	1082	U
22	DA	1088	A
22	DA	1089	A
22	DA	1092	C
22	DA	1094	U
22	DA	1096	A
22	DA	1097	U
22	DA	1098	A
22	DA	1100	C
22	DA	1101	U
22	DA	1104	C
22	DA	1110	G
22	DA	1111	A
22	DA	1112	G
22	DA	1115	G
22	DA	1116	G
22	DA	1119	U
22	DA	1127	A
22	DA	1128	G
22	DA	1130	U
22	DA	1132	U

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Mol	Chain	Res	Type
22	DA	1133	A
22	DA	1135	C
22	DA	1136	G
22	DA	1139	G
22	DA	1142	A
22	DA	1153	C
22	DA	1155	A
22	DA	1156	A
22	DA	1171	G
22	DA	1172	C
22	DA	1175	A
22	DA	1176	U
22	DA	1179	G
22	DA	1180	U
22	DA	1186	G
22	DA	1187	G
22	DA	1197	G
22	DA	1204	A
22	DA	1211	C
22	DA	1212	G
22	DA	1221	C
22	DA	1227	G
22	DA	1230	A
22	DA	1231	U
22	DA	1236	G
22	DA	1238	G
22	DA	1241	A
22	DA	1246	A
22	DA	1250	G
22	DA	1253	A
22	DA	1255	U
22	DA	1256	G
22	DA	1258	U
22	DA	1264	A
22	DA	1266	G
22	DA	1271	G
22	DA	1272	A
22	DA	1276	A
22	DA	1288	G
22	DA	1300	G
22	DA	1301	A
22	DA	1318	U

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Mol	Chain	Res	Type
22	DA	1321	A
22	DA	1345	C
22	DA	1352	U
22	DA	1355	G
22	DA	1359	A
22	DA	1365	A
22	DA	1368	G
22	DA	1372	U
22	DA	1376	C
22	DA	1378	A
22	DA	1379	U
22	DA	1380	G
22	DA	1383	A
22	DA	1384	A
22	DA	1386	C
22	DA	1387	A
22	DA	1391	U
22	DA	1395	A
22	DA	1411	U
22	DA	1416	G
22	DA	1419	A
22	DA	1426	G
22	DA	1428	C
22	DA	1434	A
22	DA	1446	C
22	DA	1451	C
22	DA	1452	G
22	DA	1455	G
22	DA	1456	G
22	DA	1458	U
22	DA	1462	C
22	DA	1471	G
22	DA	1478	G
22	DA	1482	G
22	DA	1483	G
22	DA	1493	C
22	DA	1495	A
22	DA	1504	A
22	DA	1509	A
22	DA	1510	G
22	DA	1511	G
22	DA	1515	A

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Mol	Chain	Res	Type
22	DA	1523	U
22	DA	1527	G
22	DA	1530	G
22	DA	1531	C
22	DA	1533	C
22	DA	1534	U
22	DA	1535	A
22	DA	1536	C
22	DA	1537	G
22	DA	1538	G
22	DA	1540	G
22	DA	1542	U
22	DA	1560	G
22	DA	1564	C
22	DA	1566	A
22	DA	1569	A
22	DA	1576	U
22	DA	1578	U
22	DA	1581	G
22	DA	1582	C
22	DA	1583	A
22	DA	1584	U
22	DA	1585	C
22	DA	1587	G
22	DA	1591	A
22	DA	1599	U
22	DA	1603	A
22	DA	1606	C
22	DA	1607	C
22	DA	1608	A
22	DA	1610	A
22	DA	1613	G
22	DA	1616	A
22	DA	1618	A
22	DA	1619	G
22	DA	1623	G
22	DA	1625	C
22	DA	1626	A
22	DA	1646	C
22	DA	1647	U
22	DA	1648	U
22	DA	1649	G

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Mol	Chain	Res	Type
22	DA	1651	G
22	DA	1660	G
22	DA	1664	A
22	DA	1674	G
22	DA	1694	C
22	DA	1695	G
22	DA	1715	G
22	DA	1722	A
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	1735	A
22	DA	1738	G
22	DA	1739	A
22	DA	1740	G
22	DA	1744	A
22	DA	1750	G
22	DA	1756	G
22	DA	1758	U
22	DA	1764	C
22	DA	1773	A
22	DA	1787	A
22	DA	1791	A
22	DA	1800	C
22	DA	1802	A
22	DA	1808	A
22	DA	1809	A
22	DA	1811	G
22	DA	1814	G
22	DA	1816	C
22	DA	1822	C
22	DA	1829	A
22	DA	1848	A
22	DA	1858	A
22	DA	1869	G
22	DA	1870	C
22	DA	1871	A
22	DA	1872	A
22	DA	1873	G

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Mol	Chain	Res	Type
22	DA	1874	C
22	DA	1876	A
22	DA	1877	A
22	DA	1880	U
22	DA	1883	U
22	DA	1889	A
22	DA	1893	C
22	DA	1903	G
22	DA	1905	C
22	DA	1906	G
22	DA	1913	A
22	DA	1914	C
22	DA	1920	C
22	DA	1924	C
22	DA	1927	A
22	DA	1929	G
22	DA	1930	G
22	DA	1934	C
22	DA	1937	A
22	DA	1938	A
22	DA	1955	U
22	DA	1965	C
22	DA	1967	C
22	DA	1970	A
22	DA	1971	U
22	DA	1972	G
22	DA	1991	U
22	DA	1993	U
22	DA	1997	C
22	DA	2009	A
22	DA	2018	G
22	DA	2020	A
22	DA	2022	U
22	DA	2023	C
22	DA	2031	A
22	DA	2033	A
22	DA	2043	C
22	DA	2055	C
22	DA	2056	G
22	DA	2059	A
22	DA	2060	A
22	DA	2061	G

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Mol	Chain	Res	Type
22	DA	2062	A
22	DA	2069	G
22	DA	2072	C
22	DA	2080	A
22	DA	2083	G
22	DA	2091	C
22	DA	2092	U
22	DA	2093	G
22	DA	2095	A
22	DA	2108	A
22	DA	2110	G
22	DA	2111	U
22	DA	2112	G
22	DA	2113	U
22	DA	2115	G
22	DA	2116	G
22	DA	2117	A
22	DA	2118	U
22	DA	2119	A
22	DA	2125	G
22	DA	2126	A
22	DA	2127	G
22	DA	2128	G
22	DA	2131	U
22	DA	2132	U
22	DA	2133	G
22	DA	2135	A
22	DA	2137	U
22	DA	2146	C
22	DA	2147	A
22	DA	2149	U
22	DA	2158	A
22	DA	2162	G
22	DA	2163	A
22	DA	2164	C
22	DA	2165	C
22	DA	2166	U
22	DA	2169	A
22	DA	2170	A
22	DA	2171	A
22	DA	2172	U
22	DA	2173	A

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Mol	Chain	Res	Type
22	DA	2178	C
22	DA	2179	C
22	DA	2184	A
22	DA	2189	U
22	DA	2190	G
22	DA	2194	U
22	DA	2198	A
22	DA	2203	U
22	DA	2204	G
22	DA	2211	A
22	DA	2212	A
22	DA	2214	C
22	DA	2225	A
22	DA	2226	C
22	DA	2227	A
22	DA	2230	G
22	DA	2238	G
22	DA	2241	A
22	DA	2243	U
22	DA	2246	G
22	DA	2250	G
22	DA	2267	A
22	DA	2268	A
22	DA	2273	A
22	DA	2278	A
22	DA	2283	C
22	DA	2285	C
22	DA	2287	A
22	DA	2289	G
22	DA	2293	G
22	DA	2305	U
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	2316	G
22	DA	2321	U
22	DA	2322	A
22	DA	2324	U
22	DA	2325	G

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Mol	Chain	Res	Type
22	DA	2327	A
22	DA	2333	A
22	DA	2344	U
22	DA	2347	C
22	DA	2350	C
22	DA	2354	C
22	DA	2357	G
22	DA	2361	G
22	DA	2383	G
22	DA	2385	C
22	DA	2388	A
22	DA	2402	U
22	DA	2403	C
22	DA	2406	A
22	DA	2407	A
22	DA	2410	G
22	DA	2422	C
22	DA	2423	U
22	DA	2424	C
22	DA	2425	A
22	DA	2428	G
22	DA	2429	G
22	DA	2430	A
22	DA	2431	U
22	DA	2435	A
22	DA	2441	U
22	DA	2446	G
22	DA	2448	A
22	DA	2449	U
22	DA	2457	U
22	DA	2470	G
22	DA	2474	U
22	DA	2476	A
22	DA	2484	G
22	DA	2491	U
22	DA	2502	G
22	DA	2503	A
22	DA	2504	U
22	DA	2505	G
22	DA	2518	A
22	DA	2525	G
22	DA	2529	G

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Mol	Chain	Res	Type
22	DA	2535	G
22	DA	2547	A
22	DA	2550	G
22	DA	2554	U
22	DA	2559	C
22	DA	2566	A
22	DA	2567	G
22	DA	2572	A
22	DA	2573	C
22	DA	2578	G
22	DA	2581	G
22	DA	2582	G
22	DA	2585	U
22	DA	2586	U
22	DA	2602	A
22	DA	2603	G
22	DA	2609	U
22	DA	2610	C
22	DA	2612	C
22	DA	2613	U
22	DA	2629	U
22	DA	2630	G
22	DA	2636	C
22	DA	2638	G
22	DA	2646	C
22	DA	2663	G
22	DA	2681	C
22	DA	2682	A
22	DA	2689	U
22	DA	2690	U
22	DA	2714	G
22	DA	2716	C
22	DA	2718	G
22	DA	2726	A
22	DA	2727	A
22	DA	2733	A
22	DA	2748	A
22	DA	2751	G
22	DA	2757	A
22	DA	2764	A
22	DA	2765	A
22	DA	2770	G

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Mol	Chain	Res	Type
22	DA	2776	A
22	DA	2778	A
22	DA	2781	A
22	DA	2782	G
22	DA	2791	G
22	DA	2794	C
22	DA	2798	U
22	DA	2799	A
22	DA	2803	G
22	DA	2807	U
22	DA	2809	A
22	DA	2812	G
22	DA	2820	A
22	DA	2823	A
22	DA	2826	A
22	DA	2834	G
22	DA	2861	U
22	DA	2865	U
22	DA	2867	G
22	DA	2873	A
22	DA	2879	A
22	DA	2880	C
22	DA	2883	A
22	DA	2886	A
22	DA	2891	U
22	DA	2903	U
23	DB	13	G
23	DB	15	A
23	DB	22	U
23	DB	24	G
23	DB	31	C
23	DB	35	C
23	DB	36	C
23	DB	44	G
23	DB	51	G
23	DB	56	G
23	DB	64	G
23	DB	66	A
23	DB	73	A
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	94	A
23	DB	98	G
23	DB	99	A
23	DB	105	G
23	DB	109	A
23	DB	110	C
23	DB	113	C

All (70) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	115	G
1	AA	209	U
1	AA	351	G
1	AA	429	U
1	AA	793	U
1	AA	1031	C
1	AA	1049	U
1	AA	1145	A
1	AA	1201	A
1	AA	1211	U
1	AA	1378	C
1	AA	1533	C
22	BA	70	G
22	BA	199	A
22	BA	271	G
22	BA	404	A
22	BA	764	A
22	BA	784	G
22	BA	846	U
22	BA	995	C
22	BA	1078	U
22	BA	1180	U
22	BA	1344	U
22	BA	1378	A
22	BA	1606	C
22	BA	1738	G
22	BA	1757	A
22	BA	2127	G
22	BA	2211	A
22	BA	2286	G

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Mol	Chain	Res	Type
22	BA	2326	C
22	BA	2583	G
22	BA	2873	A
1	CA	96	U
1	CA	115	G
1	CA	209	U
1	CA	429	U
1	CA	723	U
1	CA	1049	U
1	CA	1201	A
1	CA	1211	U
1	CA	1279	G
22	DA	83	A
22	DA	196	A
22	DA	271	G
22	DA	404	A
22	DA	479	A
22	DA	613	A
22	DA	800	A
22	DA	846	U
22	DA	982	C
22	DA	1240	U
22	DA	1275	A
22	DA	1344	U
22	DA	1378	A
22	DA	1606	C
22	DA	1721	G
22	DA	1738	G
22	DA	1847	A
22	DA	2109	U
22	DA	2127	G
22	DA	2146	C
22	DA	2162	G
22	DA	2211	A
22	DA	2225	A
22	DA	2286	G
22	DA	2308	G
22	DA	2326	C
22	DA	2602	A
22	DA	2873	A

## 5.4 Non-standard residues in protein, DNA, RNA chains ⓘ

10 non-standard protein/DNA/RNA residues are modelled in this entry.

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	MHW	B6	1	54	9,9,10	3.14	4 (44%)	8,11,13	2.14	5 (62%)
54	DBB	B6	3	54	4,5,6	0.37	0	3,5,7	4.99	1 (33%)
54	MHU	B6	5	54	13,15,16	2.87	8 (61%)	15,19,21	2.17	1 (6%)
54	04X	B6	6	54	12,16,17	1.75	2 (16%)	11,20,22	4.91	6 (54%)
54	004	B6	7	54	9,10,11	4.09	6 (66%)	10,12,14	1.85	1 (10%)
54	MHW	D6	1	54	9,9,10	3.11	4 (44%)	8,11,13	2.07	4 (50%)
54	DBB	D6	3	54	4,5,6	0.63	0	3,5,7	5.48	2 (66%)
54	MHU	D6	5	54	13,15,16	2.84	7 (53%)	15,19,21	1.82	1 (6%)
54	04X	D6	6	54	12,16,17	1.37	2 (16%)	11,20,22	5.06	7 (63%)
54	004	D6	7	54	9,10,11	3.32	6 (66%)	10,12,14	2.01	2 (20%)

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	MHW	B6	1	54	-	0/2/2/4	0/1/1/1
54	DBB	B6	3	54	-	0/2/4/6	0/0/0/0
54	MHU	B6	5	54	-	0/8/12/14	0/1/1/1
54	04X	B6	6	54	-	0/4/24/26	0/2/2/2
54	004	B6	7	54	-	0/4/6/8	0/1/1/1
54	MHW	D6	1	54	-	0/2/2/4	0/1/1/1
54	DBB	D6	3	54	-	0/2/4/6	0/0/0/0
54	MHU	D6	5	54	-	0/8/12/14	0/1/1/1
54	04X	D6	6	54	-	0/4/24/26	0/2/2/2
54	004	D6	7	54	-	0/4/6/8	0/1/1/1

All (39) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	B6	7	004	CB-CA	-9.16	1.43	1.52
54	D6	7	004	CB-CA	-6.05	1.46	1.52
54	B6	1	MHW	CA-N	-6.00	1.27	1.35
54	D6	1	MHW	CA-N	-5.83	1.27	1.35
54	D6	1	MHW	CG2-CB	-5.11	1.30	1.39
54	B6	1	MHW	CG2-CB	-5.11	1.30	1.39
54	B6	6	04X	CE-N	-4.62	1.40	1.46
54	B6	7	004	CG1-CB	-4.61	1.31	1.39
54	B6	5	MHU	CM-N	-4.08	1.35	1.46
54	D6	7	004	CG1-CB	-3.81	1.32	1.39
54	D6	5	MHU	CM-N	-3.76	1.36	1.46
54	B6	6	04X	CB-CA	-3.37	1.47	1.53
54	D6	6	04X	CE-N	-3.32	1.42	1.46
54	D6	7	004	CD2-CG2	-3.24	1.32	1.38
54	B6	7	004	CD2-CG2	-3.21	1.32	1.38
54	D6	1	MHW	CA-C	-3.02	1.44	1.48
54	B6	1	MHW	CA-C	-2.87	1.44	1.48
54	D6	5	MHU	CD2-CE2	-2.78	1.33	1.38
54	B6	7	004	CD1-CE	-2.73	1.31	1.38
54	D6	7	004	CD1-CE	-2.71	1.31	1.38
54	D6	5	MHU	CE1-CZ	-2.68	1.33	1.39
54	B6	5	MHU	CD2-CE2	-2.67	1.34	1.38
54	D6	6	04X	CB-CA	-2.58	1.48	1.53
54	B6	5	MHU	CZ1-NZ	-2.43	1.39	1.45
54	B6	5	MHU	CZ2-NZ	-2.12	1.40	1.45
54	D6	5	MHU	CZ1-NZ	-2.08	1.40	1.45
54	B6	5	MHU	CE1-CZ	-2.05	1.35	1.39
54	D6	1	MHW	OG1-CB	2.84	1.42	1.36
54	D6	7	004	CD1-CG1	3.07	1.45	1.38
54	B6	1	MHW	OG1-CB	3.11	1.42	1.36
54	B6	7	004	CD1-CG1	3.19	1.45	1.38
54	D6	5	MHU	CE2-CZ	3.26	1.45	1.39
54	B6	7	004	CE-CD2	3.67	1.47	1.38
54	B6	5	MHU	CE2-CZ	3.68	1.46	1.39
54	D6	7	004	CE-CD2	3.88	1.48	1.38
54	B6	5	MHU	CD2-CG	4.02	1.47	1.38
54	D6	5	MHU	CD2-CG	4.23	1.47	1.38
54	D6	5	MHU	CE1-CD1	5.73	1.49	1.38
54	B6	5	MHU	CE1-CD1	5.85	1.49	1.38

All (30) bond angle outliers are listed below:



Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	D6	3	DBB	O-C-CA	-9.12	101.73	125.49
54	B6	3	DBB	O-C-CA	-8.36	103.73	125.49
54	B6	5	MHU	O-C-CA	-7.27	106.23	125.44
54	D6	5	MHU	O-C-CA	-6.15	109.21	125.44
54	D6	6	04X	C2-C1-N1	-4.78	102.88	110.12
54	B6	6	04X	C0-N1-C4	-4.65	104.19	111.07
54	B6	6	04X	C2-C1-N1	-4.24	103.70	110.12
54	D6	6	04X	C3-C4-N1	-3.44	104.91	110.12
54	B6	1	MHW	CD-CE-N	-2.96	118.49	123.44
54	D6	1	MHW	CD-CE-N	-2.67	118.98	123.44
54	D6	6	04X	C0-N1-C4	-2.50	107.37	111.07
54	B6	6	04X	O1-C3-C4	-2.20	106.79	111.84
54	B6	1	MHW	OG1-CB-CA	-2.19	115.70	120.88
54	D6	6	04X	O1-C2-C1	-2.02	107.20	111.84
54	B6	1	MHW	CB-CA-N	2.23	124.60	121.44
54	B6	1	MHW	CG2-CD-CE	2.23	122.36	118.90
54	D6	1	MHW	CG2-CD-CE	2.24	122.38	118.90
54	D6	7	004	CG2-CB-CA	2.44	124.92	120.70
54	D6	1	MHW	OG1-CB-CG2	2.50	126.23	119.35
54	D6	3	DBB	CB-CA-N	2.57	117.83	110.52
54	D6	1	MHW	CB-CA-N	2.70	125.27	121.44
54	B6	1	MHW	OG1-CB-CG2	2.76	126.92	119.35
54	B6	6	04X	C3-O1-C2	3.23	120.78	109.89
54	D6	6	04X	C4-N1-C1	3.29	116.03	108.90
54	B6	6	04X	C4-N1-C1	3.33	116.11	108.90
54	D6	6	04X	C3-O1-C2	3.36	121.21	109.89
54	D6	7	004	CB-CA-N	4.84	123.96	112.54
54	B6	7	004	C-CA-N	5.18	120.37	109.12
54	B6	6	04X	C0-N1-C1	14.01	131.77	111.07
54	D6	6	04X	C0-N1-C1	14.46	132.45	111.07

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

6 monomers are involved in 19 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
54	B6	1	MHW	1	0
54	D6	1	MHW	6	0
54	D6	3	DBB	2	0
54	D6	5	MHU	5	0
54	D6	6	04X	4	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
54	D6	7	004	2	0

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

Of 502 ligands modelled in this entry, 500 are monoatomic - leaving 2 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
56	VIF	BA	3001	-	35,40,40	2.64	13 (37%)	41,55,55	1.96	14 (34%)
56	VIF	DA	3001	-	35,40,40	2.58	13 (37%)	41,55,55	1.95	13 (31%)

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
56	VIF	BA	3001	-	-	0/42/58/58	0/1/3/3
56	VIF	DA	3001	-	-	0/42/58/58	0/1/3/3

All (26) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	BA	3001	VIF	F-C07	-6.45	1.25	1.41
56	DA	3001	VIF	F-C07	-6.07	1.26	1.41
56	BA	3001	VIF	O01-C06	-4.60	1.37	1.44
56	BA	3001	VIF	C11-C09	-4.46	1.43	1.53
56	DA	3001	VIF	O01-C06	-4.36	1.38	1.44
56	BA	3001	VIF	O01-C08	-4.30	1.24	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	DA	3001	VIF	C11-C09	-4.30	1.43	1.53
56	DA	3001	VIF	O01-C08	-4.23	1.24	1.34
56	DA	3001	VIF	O04-C22	-4.13	1.35	1.43
56	DA	3001	VIF	C09-N01	-3.22	1.40	1.47
56	BA	3001	VIF	C09-N01	-3.14	1.40	1.47
56	BA	3001	VIF	O04-C22	-3.13	1.37	1.43
56	BA	3001	VIF	C09-C08	-2.82	1.46	1.52
56	DA	3001	VIF	C23-N	-2.60	1.29	1.37
56	BA	3001	VIF	C13-N01	-2.44	1.43	1.47
56	DA	3001	VIF	C09-C08	-2.40	1.47	1.52
56	BA	3001	VIF	C23-N	-2.28	1.30	1.37
56	BA	3001	VIF	C26-C05	-2.28	1.46	1.53
56	DA	3001	VIF	C13-N01	-2.24	1.43	1.47
56	DA	3001	VIF	C26-C05	-2.24	1.46	1.53
56	DA	3001	VIF	C14-C22	-2.20	1.47	1.52
56	BA	3001	VIF	C12-C13	-2.02	1.44	1.51
56	DA	3001	VIF	C03-N02	4.80	1.41	1.34
56	BA	3001	VIF	C15-N01	4.93	1.43	1.35
56	DA	3001	VIF	C15-N01	5.67	1.44	1.35
56	BA	3001	VIF	C03-N02	6.09	1.43	1.34

All (27) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	DA	3001	VIF	C18-C10-C20	-5.86	116.82	125.75
56	BA	3001	VIF	C18-C10-C20	-4.14	119.44	125.75
56	BA	3001	VIF	C07-C14-C22	-3.96	108.39	113.87
56	DA	3001	VIF	C17-C18-C10	-3.85	114.05	125.31
56	BA	3001	VIF	O03-C15-N01	-3.35	116.90	121.52
56	BA	3001	VIF	C19-C-C16	-3.33	100.87	110.67
56	DA	3001	VIF	C19-C-C16	-2.82	102.36	110.67
56	DA	3001	VIF	C26-C05-C02	-2.75	103.32	110.07
56	BA	3001	VIF	O-C03-N02	-2.69	119.06	122.53
56	BA	3001	VIF	C17-C18-C10	-2.66	117.53	125.31
56	BA	3001	VIF	C26-C05-C02	-2.58	103.75	110.07
56	BA	3001	VIF	O01-C08-O02	-2.39	118.96	123.89
56	DA	3001	VIF	O-C03-N02	-2.23	119.66	122.53
56	DA	3001	VIF	C17-N02-C03	-2.15	119.33	121.76
56	DA	3001	VIF	O01-C08-O02	-2.07	119.63	123.89
56	BA	3001	VIF	F-C07-C14	-2.06	105.02	108.73
56	BA	3001	VIF	C01-C03-N02	2.21	119.95	114.87
56	BA	3001	VIF	C06-O01-C08	2.21	121.86	118.01

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	DA	3001	VIF	C26-C05-C06	2.21	115.30	111.08
56	BA	3001	VIF	C26-C05-C06	2.27	115.42	111.08
56	DA	3001	VIF	C06-C05-C02	2.28	117.22	109.21
56	DA	3001	VIF	C24-C20-C10	2.66	122.53	118.10
56	BA	3001	VIF	C24-C20-C10	2.86	122.86	118.10
56	DA	3001	VIF	O01-C06-C05	3.44	112.94	107.08
56	DA	3001	VIF	C06-O01-C08	3.66	124.39	118.01
56	DA	3001	VIF	O01-C08-C09	3.96	119.17	110.56
56	BA	3001	VIF	O01-C08-C09	4.52	120.38	110.56

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

2 monomers are involved in 13 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
56	BA	3001	VIF	2	0
56	DA	3001	VIF	11	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	1538/1539 (99%)	-0.17	22 (1%) 78 69	13, 50, 135, 180	0
1	CA	1539/1539 (100%)	0.04	49 (3%) 51 39	27, 70, 145, 177	0
2	AB	218/218 (100%)	0.67	20 (9%) 11 5	38, 73, 99, 121	0
2	CB	218/218 (100%)	1.08	57 (26%) 1 0	61, 87, 107, 125	0
3	AC	206/206 (100%)	-0.06	3 (1%) 76 68	33, 57, 78, 93	0
3	CC	206/206 (100%)	0.71	22 (10%) 8 4	48, 78, 95, 105	0
4	AD	205/205 (100%)	0.18	9 (4%) 38 26	32, 55, 79, 105	0
4	CD	205/205 (100%)	-0.15	4 (1%) 68 58	18, 38, 64, 88	0
5	AE	150/150 (100%)	0.00	2 (1%) 79 71	30, 49, 79, 102	0
5	CE	150/150 (100%)	0.12	4 (2%) 58 45	32, 56, 82, 104	0
6	AF	100/100 (100%)	-0.14	1 (1%) 84 77	34, 58, 73, 86	0
6	CF	100/100 (100%)	-0.03	4 (4%) 42 30	44, 74, 93, 105	0
7	AG	151/151 (100%)	0.35	12 (7%) 15 8	54, 77, 96, 102	0
7	CG	151/151 (100%)	2.47	87 (57%) 0 0	81, 100, 109, 114	0
8	AH	129/129 (100%)	-0.11	1 (0%) 87 81	27, 48, 66, 76	0
8	CH	129/129 (100%)	0.18	5 (3%) 43 31	49, 65, 80, 90	0
9	AI	127/127 (100%)	0.89	15 (11%) 6 3	43, 73, 96, 109	0
9	CI	127/127 (100%)	1.41	36 (28%) 1 0	71, 93, 110, 122	0
10	AJ	98/98 (100%)	0.40	6 (6%) 25 15	40, 64, 92, 122	0
10	CJ	98/98 (100%)	2.21	47 (47%) 0 0	72, 93, 111, 125	0
11	AK	117/117 (100%)	0.57	11 (9%) 11 5	27, 65, 91, 115	0
11	CK	117/117 (100%)	0.15	5 (4%) 39 27	39, 66, 79, 93	0
12	AL	123/123 (100%)	0.06	6 (4%) 33 22	18, 35, 65, 96	0
12	CL	123/123 (100%)	0.24	6 (4%) 33 22	38, 52, 78, 98	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	AM	114/114 (100%)	0.18	5 (4%) 38 26	45, 68, 92, 102	0
13	CM	114/114 (100%)	2.64	68 (59%) 0 0	96, 108, 116, 119	0
14	AN	96/100 (96%)	0.73	12 (12%) 5 2	37, 58, 94, 103	0
14	CN	96/100 (96%)	1.93	35 (36%) 0 0	69, 94, 111, 120	0
15	AO	88/88 (100%)	0.03	2 (2%) 64 52	28, 51, 65, 90	0
15	CO	88/88 (100%)	0.08	1 (1%) 82 74	40, 62, 80, 98	0
16	AP	82/82 (100%)	0.29	5 (6%) 25 15	31, 47, 85, 101	0
16	CP	82/82 (100%)	1.02	19 (23%) 1 1	44, 61, 87, 105	0
17	AQ	80/80 (100%)	0.26	3 (3%) 44 32	27, 49, 77, 122	0
17	CQ	80/80 (100%)	0.99	14 (17%) 2 1	44, 75, 97, 102	0
18	AR	55/55 (100%)	-0.13	2 (3%) 46 34	39, 52, 78, 108	0
18	CR	55/55 (100%)	0.10	3 (5%) 29 18	42, 55, 79, 111	0
19	AS	79/79 (100%)	0.73	11 (13%) 4 2	52, 68, 89, 102	0
19	CS	79/79 (100%)	3.64	58 (73%) 0 0	89, 108, 118, 124	0
20	AT	85/85 (100%)	0.34	2 (2%) 62 50	34, 48, 70, 103	0
20	CT	85/85 (100%)	1.15	16 (18%) 2 1	55, 73, 91, 97	0
21	AU	51/51 (100%)	1.35	17 (33%) 0 0	48, 74, 95, 106	0
21	CU	51/51 (100%)	0.68	6 (11%) 6 3	45, 71, 96, 105	0
22	BA	2897/2903 (99%)	0.06	105 (3%) 46 34	0, 13, 130, 195	0
22	DA	2897/2903 (99%)	0.20	88 (3%) 54 41	40, 82, 145, 181	0
23	BB	119/119 (100%)	-0.33	0 100 100	2, 23, 49, 85	0
23	DB	118/119 (99%)	0.07	1 (0%) 87 81	66, 112, 133, 143	0
24	BC	271/271 (100%)	-0.25	0 100 100	3, 19, 36, 51	0
24	DC	271/271 (100%)	0.50	21 (7%) 16 8	43, 61, 77, 89	0
25	BD	209/209 (100%)	-0.34	0 100 100	0, 10, 34, 68	0
25	DD	209/209 (100%)	0.78	26 (12%) 5 2	49, 68, 83, 96	0
26	BE	201/201 (100%)	-0.35	0 100 100	1, 23, 54, 90	0
26	DE	201/201 (100%)	1.43	72 (35%) 0 0	42, 84, 100, 108	0
27	BF	177/177 (100%)	0.03	3 (1%) 73 63	20, 41, 78, 90	0
27	DF	177/177 (100%)	2.99	127 (71%) 0 0	90, 107, 119, 125	0
28	BG	176/176 (100%)	-0.14	1 (0%) 90 86	17, 37, 62, 84	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
28	DG	176/176 (100%)	1.84	68 (38%) 0 0	72, 93, 105, 114	0
29	BH	149/149 (100%)	3.17	81 (54%) 0 0	25, 102, 121, 129	0
29	DH	149/149 (100%)	1.36	41 (27%) 1 0	25, 92, 107, 115	0
30	BI	141/141 (100%)	3.43	94 (66%) 0 0	90, 111, 122, 133	0
30	DI	141/141 (100%)	4.74	116 (82%) 0 0	101, 117, 127, 130	0
31	BJ	142/142 (100%)	-0.42	0 100 100	1, 6, 22, 36	0
31	DJ	142/142 (100%)	0.55	13 (9%) 11 5	50, 66, 79, 96	0
32	BK	122/122 (100%)	-0.48	0 100 100	4, 12, 32, 67	0
32	DK	122/122 (100%)	0.94	21 (17%) 2 1	46, 63, 82, 97	0
33	BL	143/143 (100%)	-0.30	0 100 100	1, 18, 43, 74	0
33	DL	143/143 (100%)	1.63	49 (34%) 0 0	46, 79, 94, 113	0
34	BM	136/136 (100%)	-0.45	0 100 100	1, 9, 29, 84	0
34	DM	136/136 (100%)	0.81	19 (13%) 4 2	45, 69, 82, 101	0
35	BN	120/120 (100%)	-0.35	0 100 100	2, 7, 16, 52	0
35	DN	120/120 (100%)	1.02	22 (18%) 2 1	56, 75, 88, 114	0
36	BO	116/116 (100%)	-0.29	0 100 100	13, 24, 42, 50	0
36	DO	116/116 (100%)	1.85	50 (43%) 0 0	80, 94, 105, 114	0
37	BP	114/114 (100%)	-0.36	0 100 100	6, 18, 42, 64	0
37	DP	114/114 (100%)	0.76	17 (14%) 3 2	57, 69, 86, 91	0
38	BQ	117/117 (100%)	-0.35	0 100 100	1, 4, 13, 31	0
38	DQ	117/117 (100%)	0.64	15 (12%) 5 2	52, 67, 78, 82	0
39	BR	103/103 (100%)	-0.42	0 100 100	0, 11, 33, 66	0
39	DR	103/103 (100%)	1.39	27 (26%) 1 0	51, 77, 88, 99	0
40	BS	110/110 (100%)	-0.36	1 (0%) 85 79	1, 4, 21, 80	0
40	DS	110/110 (100%)	1.63	38 (34%) 0 0	57, 74, 89, 100	0
41	BT	93/93 (100%)	0.04	2 (2%) 65 54	8, 26, 75, 103	0
41	DT	93/93 (100%)	2.49	51 (54%) 0 0	66, 85, 103, 117	0
42	BU	102/102 (100%)	-0.29	2 (1%) 68 58	12, 28, 63, 92	0
42	DU	102/102 (100%)	2.97	57 (55%) 0 0	75, 90, 109, 118	0
43	BV	94/94 (100%)	-0.44	0 100 100	5, 19, 41, 53	0
43	DV	94/94 (100%)	0.90	15 (15%) 3 1	69, 84, 95, 104	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
44	BW	76/76 (100%)	-0.32	0 100 100	4, 12, 27, 54	0
44	DW	75/76 (98%)	1.56	23 (30%) 1 0	60, 80, 90, 105	0
45	BX	77/77 (100%)	-0.30	0 100 100	6, 24, 51, 73	0
45	DX	77/77 (100%)	0.71	11 (14%) 4 2	51, 71, 84, 87	0
46	BY	63/63 (100%)	0.16	5 (7%) 15 8	20, 40, 73, 93	0
46	DY	63/63 (100%)	1.95	27 (42%) 0 0	78, 94, 100, 105	0
47	BZ	58/58 (100%)	-0.29	0 100 100	2, 6, 23, 42	0
47	DZ	58/58 (100%)	0.60	6 (10%) 9 4	58, 71, 81, 94	0
48	B0	56/56 (100%)	-0.35	0 100 100	0, 9, 36, 68	0
48	D0	56/56 (100%)	1.49	17 (30%) 1 0	56, 78, 92, 102	0
49	B1	50/50 (100%)	-0.15	2 (4%) 42 30	17, 29, 49, 77	0
49	D1	50/50 (100%)	1.49	12 (24%) 1 1	69, 84, 93, 103	0
50	B2	46/46 (100%)	-0.23	1 (2%) 65 54	3, 9, 16, 88	0
50	D2	46/46 (100%)	1.46	13 (28%) 1 0	56, 68, 79, 102	0
51	B3	64/64 (100%)	-0.24	0 100 100	4, 9, 16, 31	0
51	D3	64/64 (100%)	1.09	16 (25%) 1 0	57, 71, 80, 81	0
52	B4	38/38 (100%)	-0.23	0 100 100	8, 16, 35, 52	0
52	D4	38/38 (100%)	1.52	13 (34%) 0 0	58, 75, 87, 101	0
53	B5	191/228 (83%)	5.83	184 (96%) 0 0	99, 115, 127, 135	0
54	B6	2/7 (28%)	-0.24	0 100 100	1, 1, 1, 1	0
54	D6	2/7 (28%)	0.50	0 100 100	47, 47, 47, 57	0
All	All	20738/20808 (99%)	0.47	2286 (11%) 7 3	0, 63, 120, 195	0

All (2286) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
30	BI	53	LEU	21.2
29	BH	97	ARG	15.6
30	DI	3	LYS	14.4
30	DI	2	ALA	14.0
30	DI	60	THR	13.9
22	BA	2145	C	13.8
53	B5	111	PHE	13.8
22	BA	2184	A	13.7
22	BA	2144	G	13.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
29	BH	96	THR	13.1
30	DI	59	ILE	13.0
53	B5	132	LEU	12.9
29	BH	136	SER	12.9
53	B5	55	SER	12.7
42	DU	60	GLU	12.3
30	BI	3	LYS	12.2
2	AB	155	GLY	12.0
30	DI	68	THR	11.9
53	B5	218	THR	11.6
29	BH	113	SER	11.6
30	BI	114	ALA	11.6
22	BA	2148	G	11.5
53	B5	182	PRO	11.4
53	B5	207	GLY	11.3
30	BI	2	ALA	11.2
29	BH	130	VAL	11.1
53	B5	225	ILE	11.1
30	DI	7	ALA	11.0
22	BA	2100	G	11.0
29	BH	69	ALA	11.0
19	CS	71	LEU	11.0
53	B5	20	VAL	11.0
53	B5	48	LEU	10.9
22	BA	2104	C	10.9
22	BA	2158	A	10.8
30	DI	6	GLN	10.8
22	BA	2102	G	10.7
53	B5	141	PRO	10.6
29	BH	110	VAL	10.6
17	AQ	83	VAL	10.6
53	B5	179	ALA	10.6
22	BA	2147	A	10.6
30	DI	58	VAL	10.5
53	B5	212	SER	10.5
30	DI	13	VAL	10.5
53	B5	110	ASP	10.4
53	B5	146	VAL	10.4
30	DI	4	LYS	10.4
53	B5	97	GLY	10.3
29	BH	98	ASP	10.2
7	CG	73	VAL	10.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
22	BA	2101	A	10.2
29	BH	54	LEU	10.0
10	AJ	102	LEU	10.0
53	B5	203	GLU	9.9
29	BH	105	ALA	9.9
22	BA	2159	G	9.9
53	B5	62	THR	9.9
30	DI	69	PHE	9.8
53	B5	157	ILE	9.8
22	BA	2178	C	9.8
29	BH	146	VAL	9.7
2	AB	157	LEU	9.7
30	DI	70	VAL	9.7
22	BA	2103	C	9.7
30	DI	67	PHE	9.6
1	AA	1535	C	9.6
42	DU	26	LYS	9.6
30	DI	66	SER	9.6
22	BA	2114	A	9.5
10	CJ	77	VAL	9.5
53	B5	208	THR	9.4
53	B5	199	ALA	9.2
29	BH	106	ALA	9.2
7	CG	62	PHE	9.1
53	B5	217	THR	9.1
9	CI	128	SER	9.1
1	AA	1534	A	9.1
30	DI	61	VAL	9.0
53	B5	183	PRO	9.0
30	BI	4	LYS	9.0
53	B5	67	HIS	8.9
53	B5	107	GLY	8.9
7	CG	66	LEU	8.9
53	B5	72	GLN	8.8
27	DF	122	PHE	8.7
30	BI	13	VAL	8.6
53	B5	95	VAL	8.6
19	CS	66	MET	8.6
53	B5	64	SER	8.6
53	B5	79	ALA	8.6
14	CN	36	ALA	8.6
30	DI	78	VAL	8.5

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Mol	Chain	Res	Type	RSRZ
42	DU	36	VAL	8.5
53	B5	156	GLU	8.5
22	BA	2165	C	8.5
27	DF	35	THR	8.5
53	B5	133	GLY	8.4
19	CS	39	THR	8.4
19	CS	42	PRO	8.4
53	B5	42	VAL	8.4
30	DI	8	TYR	8.3
1	AA	1536	C	8.3
42	DU	48	PRO	8.3
14	CN	51	LEU	8.3
53	B5	174	ALA	8.3
53	B5	84	ILE	8.3
53	B5	109	MET	8.3
30	BI	115	ALA	8.3
22	BA	2183	A	8.3
41	DT	34	VAL	8.2
29	BH	148	ALA	8.2
53	B5	66	PRO	8.2
30	DI	34	ASN	8.2
30	DI	53	LEU	8.2
29	BH	120	GLY	8.2
30	DI	11	LEU	8.2
22	BA	2112	G	8.2
33	DL	92	LEU	8.2
41	DT	36	LYS	8.2
30	DI	54	PRO	8.2
29	BH	112	LYS	8.2
42	DU	12	ILE	8.1
53	B5	65	LEU	8.1
22	BA	2135	A	8.0
22	BA	2143	C	7.9
29	BH	102	ALA	7.9
30	BI	54	PRO	7.9
30	DI	25	GLY	7.8
29	BH	55	GLU	7.8
53	B5	76	LEU	7.8
30	BI	5	VAL	7.7
53	B5	202	PRO	7.7
53	B5	122	GLY	7.7
30	BI	14	ALA	7.7

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Mol	Chain	Res	Type	RSRZ
19	CS	41	PHE	7.7
42	DU	50	PRO	7.7
53	B5	38	PHE	7.6
22	BA	2140	G	7.6
22	BA	2162	G	7.6
30	BI	79	LEU	7.6
22	BA	2136	G	7.6
30	DI	22	PRO	7.6
42	DU	58	ILE	7.6
53	B5	78	ILE	7.6
1	AA	1538	C	7.6
30	BI	12	GLN	7.6
29	DH	12	LEU	7.6
1	CA	1535	C	7.6
30	DI	63	ALA	7.5
22	BA	2127	G	7.5
53	B5	59	VAL	7.5
10	CJ	76	ILE	7.5
20	CT	4	ILE	7.5
27	DF	156	ILE	7.5
22	DA	1537	G	7.4
53	B5	164	PHE	7.4
22	BA	2185	U	7.4
30	BI	55	ILE	7.4
53	B5	94	TYR	7.4
53	B5	121	MET	7.4
27	DF	128	TYR	7.4
41	DT	10	VAL	7.4
9	AI	41	ARG	7.4
26	DE	119	ILE	7.3
20	CT	38	ALA	7.3
1	CA	1032	G	7.3
30	BI	68	THR	7.3
53	B5	143	ALA	7.3
41	DT	55	VAL	7.2
29	BH	124	THR	7.2
29	BH	91	PHE	7.2
53	B5	145	THR	7.2
9	AI	43	THR	7.2
30	DI	28	LEU	7.2
7	CG	87	VAL	7.2
53	B5	223	VAL	7.2

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Mol	Chain	Res	Type	RSRZ
53	B5	54	ARG	7.1
53	B5	213	VAL	7.1
19	CS	43	ASN	7.1
35	DN	28	LEU	7.1
21	AU	38	TYR	7.1
53	B5	63	VAL	7.1
53	B5	222	SER	7.0
22	BA	2138	G	7.0
53	B5	82	GLU	7.0
53	B5	147	GLY	7.0
1	CA	1536	C	7.0
53	B5	131	ILE	7.0
50	D2	46	LYS	7.0
19	CS	30	PRO	7.0
42	DU	51	ALA	7.0
13	CM	86	TYR	6.9
52	D4	10	LEU	6.9
19	CS	29	LYS	6.9
29	BH	119	ASN	6.9
27	DF	176	PRO	6.9
53	B5	165	ARG	6.9
19	CS	40	ILE	6.8
4	CD	25	VAL	6.8
30	BI	52	GLY	6.8
53	B5	77	ALA	6.8
29	BH	101	ASP	6.7
53	B5	210	LEU	6.7
53	B5	108	TRP	6.7
53	B5	173	HIS	6.7
29	DH	15	LEU	6.7
42	DU	77	THR	6.7
53	B5	37	LYS	6.7
19	CS	15	LEU	6.7
13	CM	108	THR	6.7
19	CS	37	ARG	6.7
30	DI	47	ASP	6.7
53	B5	104	ILE	6.6
22	BA	2163	A	6.6
53	B5	81	GLY	6.6
13	CM	10	PRO	6.6
19	CS	72	GLY	6.6
53	B5	52	PRO	6.6

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Mol	Chain	Res	Type	RSRZ
53	B5	93	ASP	6.6
22	BA	2115	G	6.6
53	B5	53	ARG	6.6
29	BH	72	ILE	6.5
28	DG	9	VAL	6.5
1	CA	1539	C	6.5
27	DF	116	GLY	6.5
53	B5	39	ASP	6.5
53	B5	50	ILE	6.5
30	DI	85	GLY	6.5
27	DF	130	MET	6.5
36	DO	24	THR	6.5
42	DU	35	ILE	6.5
53	B5	200	HIS	6.5
19	CS	64	ASP	6.5
10	CJ	74	VAL	6.5
29	BH	115	VAL	6.5
29	BH	144	VAL	6.5
1	AA	1539	C	6.5
50	B2	46	LYS	6.5
53	B5	167	ASP	6.5
42	DU	52	LEU	6.4
53	B5	221	PRO	6.4
27	DF	133	ARG	6.4
22	BA	2153	C	6.4
53	B5	106	ASP	6.4
29	BH	123	ARG	6.4
19	CS	67	VAL	6.4
22	DA	1093	G	6.4
22	BA	2117	A	6.4
29	BH	58	LEU	6.4
30	DI	5	VAL	6.4
30	BI	69	PHE	6.3
29	DH	79	THR	6.3
53	B5	219	MET	6.3
30	DI	30	GLN	6.3
53	B5	61	GLY	6.3
19	CS	38	SER	6.3
13	CM	96	PRO	6.3
30	DI	35	ILE	6.3
22	BA	2157	G	6.3
42	DU	89	ASP	6.2

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Mol	Chain	Res	Type	RSRZ
22	BA	2116	G	6.2
3	CC	79	LYS	6.2
53	B5	170	GLY	6.2
7	CG	151	PHE	6.2
53	B5	73	VAL	6.2
30	DI	29	GLY	6.2
42	DU	57	GLY	6.2
30	BI	67	PHE	6.2
30	BI	11	LEU	6.2
30	DI	64	ASP	6.2
40	DS	92	ARG	6.2
29	DH	142	VAL	6.1
53	B5	98	GLU	6.1
22	BA	2121	G	6.1
48	D0	27	SER	6.1
41	DT	76	ARG	6.1
30	BI	41	ALA	6.1
30	DI	79	LEU	6.1
16	CP	47	GLU	6.1
30	BI	20	PRO	6.1
44	DW	52	GLY	6.1
53	B5	68	GLY	6.1
53	B5	211	ARG	6.1
46	DY	10	SER	6.1
33	DL	144	GLU	6.1
1	AA	78	A	6.1
30	DI	24	VAL	6.1
27	DF	39	GLY	6.0
53	B5	198	GLU	6.0
30	DI	83	ALA	6.0
30	BI	82	LYS	6.0
53	B5	188	ASP	6.0
42	DU	79	LYS	6.0
13	CM	84	GLY	6.0
36	DO	40	ILE	6.0
22	BA	2177	C	6.0
7	CG	18	PHE	6.0
28	DG	105	LEU	6.0
41	DT	71	GLY	6.0
29	BH	121	VAL	5.9
30	DI	17	MET	5.9
30	DI	36	MET	5.9

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Mol	Chain	Res	Type	RSRZ
53	B5	194	ILE	5.9
42	DU	78	GLY	5.9
53	B5	220	GLY	5.9
2	CB	9	MET	5.9
29	BH	129	GLU	5.9
30	BI	101	ILE	5.9
53	B5	134	PRO	5.9
30	DI	45	LYS	5.9
42	DU	43	LYS	5.9
30	DI	18	ALA	5.9
46	BY	63	ALA	5.9
22	BA	2142	A	5.9
19	CS	61	PHE	5.9
22	BA	2160	C	5.9
53	B5	71	LYS	5.9
2	CB	32	PHE	5.9
3	CC	37	PHE	5.9
42	DU	27	ASN	5.9
2	AB	9	MET	5.9
53	B5	195	ARG	5.9
33	DL	70	LYS	5.8
30	DI	62	TYR	5.8
27	DF	79	ILE	5.8
30	DI	126	THR	5.8
22	BA	2139	U	5.8
22	BA	2161	C	5.8
14	AN	21	PHE	5.8
27	DF	114	PHE	5.8
29	BH	68	ARG	5.8
53	B5	204	GLY	5.8
46	DY	14	LEU	5.7
53	B5	150	ILE	5.7
22	BA	2124	G	5.7
13	CM	23	TYR	5.7
2	CB	151	ILE	5.7
7	CG	103	TRP	5.7
38	DQ	29	SER	5.7
53	B5	180	SER	5.7
42	DU	13	VAL	5.7
53	B5	100	ILE	5.7
28	DG	57	GLY	5.7
53	B5	201	LYS	5.7

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Mol	Chain	Res	Type	RSRZ
27	DF	65	PRO	5.7
19	CS	44	MET	5.7
2	CB	132	LYS	5.7
10	CJ	72	ARG	5.7
30	BI	8	TYR	5.7
41	DT	15	HIS	5.6
27	DF	54	ALA	5.6
33	DL	89	VAL	5.6
53	B5	120	VAL	5.6
9	AI	40	GLY	5.6
53	B5	57	GLN	5.6
19	CS	24	GLU	5.6
32	DK	68	GLY	5.6
33	DL	101	ILE	5.6
30	BI	40	LYS	5.6
53	B5	161	ARG	5.6
28	DG	32	GLU	5.6
14	CN	44	ALA	5.6
9	CI	127	PHE	5.6
28	DG	52	PHE	5.6
20	AT	68	HIS	5.6
13	CM	69	LEU	5.6
22	BA	2150	C	5.6
22	DA	1175	A	5.6
30	DI	96	ASP	5.6
22	BA	2113	U	5.6
52	D4	8	LYS	5.6
42	DU	25	VAL	5.6
13	CM	64	VAL	5.5
22	BA	2179	C	5.5
7	CG	88	PRO	5.5
7	CG	59	LEU	5.5
13	CM	95	LEU	5.5
53	B5	160	GLY	5.5
30	BI	48	SER	5.5
16	AP	80	LYS	5.5
41	DT	8	LEU	5.5
30	DI	98	VAL	5.5
53	B5	184	GLU	5.5
22	BA	2123	G	5.5
2	CB	135	LEU	5.5
27	DF	170	LEU	5.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
29	DH	6	LEU	5.5
2	CB	148	LEU	5.5
22	BA	2174	C	5.4
27	DF	13	VAL	5.4
53	B5	214	TYR	5.4
27	DF	157	THR	5.4
30	BI	80	LEU	5.4
22	BA	2146	C	5.4
22	BA	2175	C	5.4
9	CI	130	ARG	5.4
7	CG	72	THR	5.4
45	DX	49	LEU	5.4
29	BH	95	GLY	5.4
53	B5	148	PHE	5.4
49	D1	47	VAL	5.4
29	BH	64	ALA	5.4
10	CJ	71	LEU	5.4
33	DL	106	GLU	5.4
22	BA	2168	G	5.3
48	D0	23	THR	5.3
22	BA	2156	G	5.3
53	B5	45	HIS	5.3
30	DI	65	ARG	5.3
13	CM	63	PHE	5.3
28	DG	45	HIS	5.3
53	B5	169	THR	5.3
22	BA	2125	G	5.3
53	B5	60	ARG	5.3
27	DF	89	VAL	5.3
30	DI	32	GLY	5.3
30	DI	33	VAL	5.3
28	DG	33	LEU	5.3
9	CI	43	THR	5.3
30	BI	133	ALA	5.3
49	D1	53	LYS	5.3
30	DI	38	PHE	5.3
27	DF	76	GLY	5.3
30	BI	39	CYS	5.3
30	DI	42	PHE	5.3
22	BA	2110	G	5.3
10	CJ	26	VAL	5.2
30	DI	15	ALA	5.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
44	DW	38	VAL	5.2
13	CM	85	CYS	5.2
28	DG	84	THR	5.2
40	DS	36	LEU	5.2
43	DV	94	ALA	5.2
1	CA	82	G	5.2
7	CG	54	SER	5.2
14	CN	46	LEU	5.2
22	BA	2120	G	5.2
30	DI	39	CYS	5.2
36	DO	13	ARG	5.2
13	CM	45	ILE	5.2
53	B5	166	ASN	5.2
53	B5	209	PHE	5.2
29	BH	59	ALA	5.2
53	B5	27	ALA	5.2
14	CN	47	LYS	5.2
10	CJ	16	ARG	5.2
53	B5	187	ALA	5.2
53	B5	181	PHE	5.1
2	CB	136	MET	5.1
13	CM	40	ALA	5.1
9	CI	129	LYS	5.1
22	BA	2133	G	5.1
41	DT	35	ALA	5.1
53	B5	87	ALA	5.1
18	CR	20	GLU	5.1
27	DF	21	ASN	5.1
36	DO	117	PHE	5.1
53	B5	49	GLY	5.1
19	CS	48	THR	5.1
30	DI	106	LEU	5.1
53	B5	85	LYS	5.1
30	DI	80	LEU	5.1
27	DF	155	THR	5.1
49	D1	36	LEU	5.1
28	DG	166	ASP	5.1
41	DT	6	ARG	5.1
22	BA	2141	G	5.1
1	CA	1031	C	5.1
25	DD	96	ILE	5.1
53	B5	70	GLY	5.1

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Mol	Chain	Res	Type	RSRZ
41	DT	1	MET	5.0
33	DL	80	SER	5.0
28	DG	50	LEU	5.0
31	DJ	47	HIS	5.0
49	D1	52	ALA	5.0
28	DG	20	ASN	5.0
14	CN	30	ILE	5.0
53	B5	149	ASN	5.0
53	B5	152	GLU	5.0
28	DG	148	LEU	5.0
53	B5	162	ILE	5.0
30	BI	22	PRO	5.0
30	DI	23	PRO	5.0
53	B5	41	THR	5.0
26	DE	175	ILE	5.0
2	AB	156	GLY	5.0
22	BA	2171	A	5.0
30	DI	21	SER	5.0
22	DA	1536	C	5.0
53	B5	96	GLY	5.0
30	BI	116	ASP	5.0
41	DT	81	LYS	5.0
22	BA	2131	U	4.9
29	BH	89	LYS	4.9
53	B5	92	ALA	4.9
50	D2	1	MET	4.9
30	BI	21	SER	4.9
19	CS	68	GLY	4.9
27	DF	38	MET	4.9
12	AL	124	ALA	4.9
36	DO	2	ASP	4.9
53	B5	185	LYS	4.9
7	CG	38	THR	4.9
2	CB	129	LEU	4.9
4	AD	28	ILE	4.9
25	DD	27	ILE	4.9
27	DF	75	ALA	4.9
46	DY	21	LEU	4.9
42	DU	39	ILE	4.9
7	CG	152	ALA	4.9
19	CS	80	TYR	4.9
32	DK	89	ASN	4.9

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Mol	Chain	Res	Type	RSRZ
27	DF	37	ASN	4.9
30	BI	17	MET	4.9
17	CQ	13	VAL	4.9
28	DG	92	VAL	4.9
41	DT	43	ILE	4.8
30	DI	90	SER	4.8
21	CU	45	ARG	4.8
22	DA	1171	G	4.8
29	BH	73	ASN	4.8
7	CG	52	GLN	4.8
30	DI	112	THR	4.8
53	B5	151	GLY	4.8
12	CL	124	ALA	4.8
30	BI	83	ALA	4.8
44	DW	70	GLU	4.8
28	DG	102	VAL	4.8
30	DI	46	THR	4.8
10	CJ	87	LEU	4.8
30	DI	130	GLU	4.8
16	CP	80	LYS	4.8
30	DI	57	VAL	4.8
42	DU	31	SER	4.8
4	AD	37	ALA	4.8
31	DJ	119	PHE	4.8
19	CS	60	VAL	4.8
14	CN	48	LEU	4.8
10	AJ	89	ARG	4.8
7	CG	84	THR	4.8
35	DN	38	LEU	4.8
27	DF	112	ARG	4.8
22	BA	2149	U	4.8
22	BA	2134	A	4.8
10	CJ	90	LEU	4.7
53	B5	126	SER	4.7
30	BI	120	ALA	4.7
30	DI	12	GLN	4.7
30	DI	55	ILE	4.7
42	DU	3	ALA	4.7
53	B5	43	GLU	4.7
42	DU	71	ALA	4.7
53	B5	46	ALA	4.7
53	B5	216	THR	4.7

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Mol	Chain	Res	Type	RSRZ
30	DI	9	VAL	4.7
39	DR	27	ILE	4.7
44	DW	83	GLU	4.7
7	CG	79	ARG	4.7
27	DF	142	ASP	4.7
40	DS	84	ARG	4.7
7	CG	112	GLY	4.7
19	CS	31	LEU	4.7
27	DF	36	LEU	4.7
19	CS	18	LYS	4.7
7	CG	68	ASN	4.7
39	DR	29	THR	4.7
53	B5	142	LYS	4.7
14	CN	52	PRO	4.7
29	BH	86	ASP	4.7
29	BH	87	GLU	4.7
53	B5	56	ASP	4.7
53	B5	99	GLU	4.7
28	DG	174	ALA	4.7
42	DU	80	ALA	4.7
30	BI	100	LYS	4.7
53	B5	215	VAL	4.7
27	DF	86	GLY	4.7
31	DJ	74	TYR	4.6
40	DS	47	VAL	4.6
1	CA	211	G	4.6
29	DH	13	GLY	4.6
36	DO	51	ALA	4.6
27	DF	132	VAL	4.6
29	BH	85	GLY	4.6
22	BA	2189	U	4.6
10	CJ	41	PRO	4.6
22	BA	2172	U	4.6
52	D4	1	MET	4.6
27	DF	173	PHE	4.6
13	CM	115	PRO	4.6
22	BA	2099	U	4.6
14	CN	43	ASN	4.6
13	AM	114	LYS	4.6
29	BH	83	LYS	4.6
2	CB	67	ILE	4.6
26	DE	150	THR	4.6

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Mol	Chain	Res	Type	RSRZ
40	DS	40	ASN	4.6
10	CJ	89	ARG	4.6
29	BH	67	ALA	4.6
1	CA	94	G	4.6
53	B5	192	ALA	4.6
27	DF	147	ASP	4.6
7	CG	60	GLU	4.6
27	DF	22	TYR	4.6
13	CM	8	ASN	4.5
29	BH	139	PHE	4.5
51	D3	37	ALA	4.5
22	BA	2155	U	4.5
2	CB	139	ARG	4.5
14	CN	24	ARG	4.5
29	BH	118	PRO	4.5
27	DF	23	ASN	4.5
50	D2	33	ARG	4.5
32	DK	101	GLY	4.5
35	DN	76	VAL	4.5
29	BH	122	LEU	4.5
22	DA	1073	A	4.5
19	CS	51	VAL	4.5
22	BA	2107	G	4.5
3	CC	193	TYR	4.5
26	DE	17	THR	4.5
1	CA	1312	G	4.5
7	CG	85	TYR	4.5
53	B5	101	ILE	4.5
53	B5	44	VAL	4.5
19	CS	74	PHE	4.5
22	DA	1172	C	4.5
1	CA	1538	C	4.5
14	CN	53	ARG	4.5
42	DU	32	GLY	4.5
53	B5	83	LYS	4.5
20	AT	36	TYR	4.5
19	CS	63	THR	4.5
29	BH	116	ARG	4.5
30	BI	81	LYS	4.5
22	BA	138	U	4.4
28	DG	43	VAL	4.4
53	B5	144	GLY	4.4

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Mol	Chain	Res	Type	RSRZ
8	AH	2	SER	4.4
27	DF	174	ASP	4.4
40	DS	16	LYS	4.4
42	DU	87	PHE	4.4
9	CI	44	ALA	4.4
27	DF	151	GLY	4.4
29	BH	93	SER	4.4
30	BI	87	LYS	4.4
41	DT	2	ILE	4.4
29	DH	47	PHE	4.4
10	CJ	86	ALA	4.4
22	BA	2182	U	4.4
7	CG	83	SER	4.4
53	B5	105	LEU	4.4
14	AN	30	ILE	4.4
27	DF	12	VAL	4.4
21	CU	38	TYR	4.4
7	CG	65	ALA	4.4
26	DE	164	LEU	4.4
19	CS	33	THR	4.4
44	DW	23	VAL	4.4
27	DF	55	ALA	4.4
30	DI	120	ALA	4.4
46	DY	33	ALA	4.4
22	BA	2169	A	4.4
50	D2	42	LEU	4.4
19	CS	28	LYS	4.4
53	B5	74	ARG	4.4
41	DT	60	THR	4.4
53	B5	51	ASP	4.4
14	CN	32	SER	4.4
22	BA	2173	A	4.3
33	DL	77	ILE	4.3
2	CB	92	VAL	4.3
30	BI	71	THR	4.3
30	BI	99	GLY	4.3
30	BI	84	ALA	4.3
34	DM	124	LEU	4.3
35	DN	120	GLU	4.3
30	DI	122	ILE	4.3
35	DN	97	ILE	4.3
30	BI	78	VAL	4.3

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Mol	Chain	Res	Type	RSRZ
27	DF	154	ILE	4.3
14	CN	45	VAL	4.3
53	B5	89	GLU	4.3
30	DI	77	ALA	4.3
27	DF	66	LEU	4.3
29	DH	100	ALA	4.3
28	DG	106	SER	4.3
27	DF	32	GLU	4.3
42	DU	20	GLY	4.3
53	B5	140	ASN	4.3
18	CR	74	HIS	4.3
7	CG	67	GLU	4.3
22	BA	2164	C	4.3
2	CB	83	ALA	4.3
26	DE	144	GLU	4.3
9	CI	64	TYR	4.3
28	DG	56	ASP	4.3
16	AP	81	ALA	4.3
11	CK	43	GLY	4.3
30	DI	52	GLY	4.3
41	DT	40	LYS	4.3
53	B5	80	LYS	4.3
29	BH	132	PHE	4.3
39	DR	35	PHE	4.3
40	DS	85	ILE	4.3
7	CG	91	VAL	4.3
30	DI	43	ASN	4.3
36	DO	106	LEU	4.2
40	DS	54	ALA	4.2
44	DW	63	ALA	4.2
30	BI	75	PRO	4.2
30	DI	51	LYS	4.2
19	CS	59	PRO	4.2
53	B5	91	GLY	4.2
1	AA	87	C	4.2
19	CS	6	LYS	4.2
53	B5	158	LYS	4.2
10	CJ	99	GLN	4.2
42	DU	28	VAL	4.2
13	CM	46	SER	4.2
3	CC	78	GLY	4.2
30	DI	95	LYS	4.2

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Mol	Chain	Res	Type	RSRZ
41	DT	80	TRP	4.2
39	DR	32	THR	4.2
30	DI	72	LYS	4.2
53	B5	155	ARG	4.2
32	DK	112	PHE	4.2
47	DZ	2	ALA	4.2
2	CB	213	TYR	4.2
9	AI	90	TYR	4.2
27	DF	99	PHE	4.2
27	DF	106	ILE	4.2
26	DE	172	ALA	4.2
27	DF	103	LEU	4.2
53	B5	191	ARG	4.2
19	CS	49	ILE	4.2
46	DY	29	ARG	4.2
29	BH	142	VAL	4.2
30	BI	142	ASP	4.2
30	BI	38	PHE	4.1
48	D0	55	ILE	4.1
2	CB	161	LEU	4.1
13	CM	48	LEU	4.1
42	DU	42	VAL	4.1
42	DU	62	GLU	4.1
30	DI	31	GLN	4.1
30	BI	15	ALA	4.1
30	DI	121	ASP	4.1
7	CG	39	ALA	4.1
19	CS	13	LEU	4.1
53	B5	159	ALA	4.1
35	DN	24	MET	4.1
16	CP	39	PHE	4.1
19	CS	11	ILE	4.1
30	DI	86	ILE	4.1
29	BH	5	LEU	4.1
7	CG	5	ARG	4.1
13	CM	109	ARG	4.1
24	DC	27	GLY	4.1
30	DI	48	SER	4.1
27	DF	117	LEU	4.1
53	B5	75	VAL	4.1
2	AB	136	MET	4.1
52	D4	23	ILE	4.1

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Mol	Chain	Res	Type	RSRZ
53	B5	21	TYR	4.1
48	D0	39	LEU	4.1
53	B5	125	GLY	4.1
9	CI	58	VAL	4.1
25	DD	55	LYS	4.1
27	DF	115	ARG	4.1
53	B5	163	GLU	4.1
13	CM	89	LEU	4.0
27	DF	64	LYS	4.0
20	CT	39	ILE	4.0
26	DE	190	ALA	4.0
30	DI	133	ALA	4.0
43	DV	57	TYR	4.0
13	CM	114	LYS	4.0
22	DA	1535	A	4.0
1	AA	86	G	4.0
26	DE	104	ALA	4.0
13	CM	80	LEU	4.0
40	DS	19	LEU	4.0
30	BI	88	SER	4.0
13	CM	33	ILE	4.0
19	CS	47	LEU	4.0
30	DI	140	VAL	4.0
33	DL	90	VAL	4.0
22	BA	2118	U	4.0
22	DA	1067	A	4.0
30	DI	37	GLU	4.0
27	DF	113	ASP	4.0
28	DG	58	TYR	4.0
53	B5	136	GLY	4.0
36	DO	52	SER	4.0
21	CU	47	ARG	4.0
53	B5	69	LEU	4.0
38	DQ	15	LYS	4.0
53	B5	103	LYS	4.0
17	CQ	21	ILE	4.0
28	DG	132	VAL	4.0
42	DU	41	LEU	4.0
7	CG	17	LYS	4.0
21	CU	35	ARG	4.0
9	CI	4	ASN	4.0
37	DP	97	LEU	4.0

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Mol	Chain	Res	Type	RSRZ
39	DR	37	GLU	3.9
14	CN	6	MET	3.9
30	DI	27	ALA	3.9
13	CM	98	ARG	3.9
30	DI	139	VAL	3.9
39	DR	20	VAL	3.9
28	DG	27	LYS	3.9
41	DT	16	VAL	3.9
41	DT	50	LEU	3.9
51	D3	14	PHE	3.9
35	DN	46	ARG	3.9
22	BA	2132	U	3.9
30	BI	49	ILE	3.9
53	B5	154	ILE	3.9
48	D0	34	SER	3.9
7	CG	30	LEU	3.9
27	DF	91	LEU	3.9
7	CG	148	ASN	3.9
29	DH	18	GLN	3.9
9	CI	48	VAL	3.9
19	CS	73	GLU	3.9
30	BI	109	ILE	3.9
33	DL	57	LEU	3.9
42	DU	49	VAL	3.9
21	AU	35	ARG	3.9
48	D0	37	LYS	3.9
53	B5	130	ARG	3.9
27	DF	153	ASP	3.9
13	AM	92	ARG	3.9
13	CM	94	GLY	3.9
25	DD	188	LEU	3.9
22	BA	2152	G	3.9
30	BI	91	GLY	3.9
38	DQ	23	GLY	3.9
9	AI	39	PHE	3.9
22	DA	2126	A	3.9
36	DO	88	LYS	3.9
44	DW	78	LYS	3.9
30	BI	16	GLY	3.9
36	DO	65	THR	3.9
29	BH	4	ILE	3.9
30	BI	25	GLY	3.9

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Mol	Chain	Res	Type	RSRZ
29	BH	61	VAL	3.9
28	DG	167	GLU	3.8
10	CJ	40	ILE	3.8
26	DE	148	ILE	3.8
27	DF	67	ILE	3.8
33	DL	126	ARG	3.8
1	CA	999	C	3.8
1	CA	1028	C	3.8
30	DI	16	GLY	3.8
51	D3	21	GLY	3.8
27	DF	85	ILE	3.8
42	DU	29	LEU	3.8
17	CQ	66	PRO	3.8
53	B5	28	ARG	3.8
29	BH	39	ALA	3.8
44	DW	50	ASN	3.8
13	CM	29	ARG	3.8
22	DA	1870	C	3.8
25	DD	60	VAL	3.8
14	CN	29	ALA	3.8
17	AQ	20	SER	3.8
1	CA	1021	A	3.8
1	CA	1302	C	3.8
27	DF	20	PHE	3.8
27	DF	175	PHE	3.8
30	DI	56	PRO	3.8
30	BI	30	GLN	3.8
12	CL	123	LYS	3.8
27	DF	40	VAL	3.8
32	DK	69	VAL	3.8
41	BT	2	ILE	3.8
42	DU	37	GLU	3.8
41	DT	12	ARG	3.8
29	DH	135	HIS	3.8
53	B5	22	THR	3.8
13	CM	60	VAL	3.8
14	CN	9	ARG	3.8
30	DI	131	GLY	3.8
40	DS	68	ASP	3.8
2	AB	135	LEU	3.8
28	DG	72	LEU	3.8
36	DO	25	ARG	3.8

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Mol	Chain	Res	Type	RSRZ
26	DE	129	PRO	3.8
39	DR	50	GLY	3.8
6	CF	79	ARG	3.8
27	DF	152	LEU	3.8
30	BI	112	THR	3.8
29	DH	82	SER	3.8
53	B5	40	GLU	3.7
16	CP	17	TYR	3.7
51	D3	64	TYR	3.7
27	DF	25	VAL	3.7
4	AD	36	GLN	3.7
35	DN	119	SER	3.7
30	BI	23	PRO	3.7
49	D1	34	LEU	3.7
53	B5	193	PHE	3.7
41	DT	3	ARG	3.7
27	DF	129	SER	3.7
30	BI	24	VAL	3.7
2	AB	131	LYS	3.7
26	DE	1	MET	3.7
33	DL	15	ALA	3.7
14	CN	54	ASP	3.7
47	DZ	48	ILE	3.7
4	CD	36	GLN	3.7
19	AS	56	GLN	3.7
29	DH	134	VAL	3.7
30	DI	49	ILE	3.7
7	CG	44	TYR	3.7
36	DO	64	TYR	3.7
22	BA	2181	U	3.7
22	BA	2154	A	3.7
24	DC	245	VAL	3.7
29	BH	76	GLU	3.7
44	DW	71	VAL	3.7
41	DT	88	LYS	3.7
30	DI	114	ALA	3.7
20	CT	3	ASN	3.7
17	AQ	5	ILE	3.7
24	DC	49	ILE	3.7
13	CM	76	SER	3.7
1	AA	1492	A	3.7
9	CI	68	LYS	3.7

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Mol	Chain	Res	Type	RSRZ
13	CM	65	VAL	3.7
5	CE	110	ALA	3.7
32	DK	110	GLU	3.6
14	AN	48	LEU	3.6
19	CS	5	LEU	3.6
48	D0	26	THR	3.6
22	BA	2106	U	3.6
9	AI	20	PHE	3.6
33	DL	82	LEU	3.6
13	CM	103	LYS	3.6
29	BH	63	ALA	3.6
29	BH	109	GLU	3.6
13	CM	83	LEU	3.6
29	BH	147	VAL	3.6
46	DY	45	GLN	3.6
19	AS	3	ARG	3.6
14	CN	26	GLU	3.6
22	BA	2122	U	3.6
40	DS	48	LYS	3.6
10	CJ	73	LEU	3.6
29	BH	90	LEU	3.6
13	CM	62	LYS	3.6
16	CP	57	ILE	3.6
42	DU	5	ILE	3.6
7	CG	26	PHE	3.6
1	CA	1314	C	3.6
11	AK	43	GLY	3.6
28	DG	103	ILE	3.6
13	CM	47	GLU	3.6
7	CG	133	THR	3.6
39	DR	66	HIS	3.6
19	CS	46	GLY	3.6
40	DS	20	VAL	3.6
46	DY	30	MET	3.6
53	B5	86	GLU	3.6
2	AB	18	HIS	3.6
27	DF	121	SER	3.6
7	CG	131	LYS	3.6
40	DS	37	THR	3.6
26	DE	138	LEU	3.6
30	DI	99	GLY	3.6
22	BA	1925	C	3.6

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Mol	Chain	Res	Type	RSRZ
34	DM	136	MET	3.6
24	DC	18	LYS	3.6
33	DL	71	ALA	3.6
9	CI	20	PHE	3.6
7	CG	50	LEU	3.6
29	BH	19	VAL	3.6
30	BI	122	ILE	3.6
53	B5	176	VAL	3.6
30	DI	20	PRO	3.6
14	CN	35	ASN	3.6
22	DA	546	U	3.6
27	DF	177	PHE	3.6
43	DV	42	LEU	3.5
27	DF	74	VAL	3.5
27	DF	150	ARG	3.5
40	DS	94	ASP	3.5
14	AN	52	PRO	3.5
7	AG	150	ALA	3.5
19	CS	10	PHE	3.5
26	DE	180	LEU	3.5
53	B5	197	LEU	3.5
48	D0	57	LYS	3.5
49	D1	23	THR	3.5
28	DG	151	TYR	3.5
27	DF	101	GLU	3.5
11	AK	82	LEU	3.5
16	CP	52	LEU	3.5
53	B5	19	LYS	3.5
27	DF	118	SER	3.5
10	CJ	8	ILE	3.5
22	BA	2166	U	3.5
29	BH	84	ALA	3.5
42	DU	38	GLY	3.5
46	DY	59	GLU	3.5
44	DW	60	PHE	3.5
22	DA	549	G	3.5
26	DE	55	SER	3.5
7	CG	69	VAL	3.5
30	BI	58	VAL	3.5
46	DY	16	THR	3.5
10	CJ	66	GLU	3.5
10	CJ	82	LYS	3.5

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Mol	Chain	Res	Type	RSRZ
27	DF	140	GLU	3.5
9	CI	39	PHE	3.5
30	BI	26	PRO	3.5
2	CB	210	VAL	3.5
7	CG	27	VAL	3.5
48	D0	30	VAL	3.5
7	CG	8	GLY	3.5
2	AB	90	PHE	3.5
9	CI	67	VAL	3.5
42	DU	44	LYS	3.5
43	DV	67	GLY	3.5
13	CM	75	MET	3.5
42	DU	75	ALA	3.5
10	CJ	17	LEU	3.5
30	DI	75	PRO	3.5
30	BI	6	GLN	3.5
30	DI	87	LYS	3.5
28	DG	11	VAL	3.5
10	CJ	101	SER	3.5
22	BA	2176	A	3.5
27	DF	136	ILE	3.5
41	DT	83	ALA	3.5
10	CJ	27	GLU	3.5
35	DN	29	VAL	3.5
53	B5	177	GLY	3.5
7	CG	61	ALA	3.5
22	BA	2111	U	3.5
45	DX	11	ARG	3.5
7	CG	70	ARG	3.4
9	CI	21	ILE	3.4
53	B5	224	ARG	3.4
22	BA	2170	A	3.4
16	CP	81	ALA	3.4
21	CU	44	GLU	3.4
27	DF	57	LEU	3.4
34	DM	129	THR	3.4
28	DG	10	VAL	3.4
29	DH	130	VAL	3.4
30	BI	59	ILE	3.4
14	AN	55	SER	3.4
27	DF	172	ALA	3.4
53	B5	196	ALA	3.4

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Mol	Chain	Res	Type	RSRZ
10	CJ	10	LEU	3.4
31	DJ	118	MET	3.4
41	DT	42	GLU	3.4
9	CI	38	TYR	3.4
30	DI	110	ALA	3.4
36	DO	9	ARG	3.4
22	BA	1175	A	3.4
22	BA	2130	U	3.4
29	DH	144	VAL	3.4
10	CJ	20	GLN	3.4
14	CN	27	LEU	3.4
26	DE	143	LEU	3.4
26	DE	103	GLY	3.4
7	CG	78	ARG	3.4
13	CM	97	VAL	3.4
30	BI	98	VAL	3.4
13	CM	39	ILE	3.4
29	BH	137	GLU	3.4
52	D4	15	LYS	3.4
10	CJ	15	HIS	3.4
10	AJ	90	LEU	3.4
40	DS	110	ARG	3.4
11	CK	126	LYS	3.4
19	CS	58	VAL	3.4
42	DU	47	LYS	3.4
9	AI	130	ARG	3.4
10	CJ	102	LEU	3.4
52	D4	12	ARG	3.4
20	CT	42	GLY	3.4
22	DA	345	A	3.4
16	CP	60	TRP	3.4
39	DR	92	TRP	3.4
13	CM	77	ILE	3.4
53	B5	23	ILE	3.4
8	CH	130	ALA	3.4
30	DI	41	ALA	3.4
2	AB	88	ASP	3.4
30	BI	138	LEU	3.4
44	DW	32	LEU	3.4
25	DD	74	GLU	3.3
3	CC	42	TYR	3.3
30	DI	129	ILE	3.3

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Mol	Chain	Res	Type	RSRZ
2	CB	225	ARG	3.3
6	CF	91	ARG	3.3
11	AK	52	PHE	3.3
13	CM	68	ASP	3.3
30	DI	82	LYS	3.3
1	AA	1030	U	3.3
30	DI	138	LEU	3.3
35	DN	26	GLY	3.3
46	DY	37	LEU	3.3
7	CG	74	GLU	3.3
30	DI	44	ALA	3.3
22	DA	2168	G	3.3
40	DS	3	THR	3.3
53	B5	102	GLN	3.3
36	DO	85	LYS	3.3
19	CS	65	GLU	3.3
29	BH	13	GLY	3.3
7	CG	111	ARG	3.3
27	DF	78	LYS	3.3
27	DF	31	VAL	3.3
24	DC	104	ILE	3.3
25	DD	139	SER	3.3
29	DH	136	SER	3.3
22	DA	2165	C	3.3
33	DL	124	GLY	3.3
17	CQ	23	VAL	3.3
27	DF	87	CYS	3.3
32	DK	104	THR	3.3
36	DO	90	VAL	3.3
13	CM	19	LEU	3.3
36	DO	26	LEU	3.3
7	CG	64	VAL	3.3
25	DD	25	THR	3.3
32	DK	111	LYS	3.3
1	AA	82	G	3.3
17	CQ	8	LEU	3.3
26	DE	153	LEU	3.3
36	DO	116	GLN	3.3
41	DT	62	VAL	3.3
17	CQ	20	SER	3.3
27	DF	51	ASP	3.3
30	BI	66	SER	3.3

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Mol	Chain	Res	Type	RSRZ
27	DF	80	ARG	3.3
31	DJ	95	ARG	3.3
36	DO	46	GLU	3.3
28	DG	48	ASN	3.3
36	DO	19	GLN	3.3
40	DS	31	GLN	3.3
11	AK	50	SER	3.3
28	DG	44	LYS	3.2
53	B5	178	LYS	3.2
22	DA	361	G	3.2
25	DD	140	HIS	3.2
29	BH	128	HIS	3.2
41	DT	47	VAL	3.2
25	DD	6	GLY	3.2
2	CB	152	LYS	3.2
22	BA	1847	A	3.2
30	BI	47	ASP	3.2
1	CA	1540	U	3.2
2	AB	65	GLY	3.2
4	CD	24	GLY	3.2
36	DO	82	ALA	3.2
26	DE	102	ARG	3.2
29	BH	11	ASN	3.2
26	DE	12	LEU	3.2
27	DF	29	PRO	3.2
36	DO	60	GLU	3.2
9	CI	19	VAL	3.2
22	DA	228	C	3.2
28	DG	40	ALA	3.2
30	BI	7	ALA	3.2
20	CT	85	LYS	3.2
46	DY	4	LYS	3.2
18	AR	20	GLU	3.2
7	AG	5	ARG	3.2
3	CC	77	ILE	3.2
26	DE	128	ALA	3.2
26	DE	158	PHE	3.2
27	DF	43	ALA	3.2
27	DF	138	PHE	3.2
40	DS	24	ILE	3.2
41	DT	70	HIS	3.2
46	BY	62	GLY	3.2

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Mol	Chain	Res	Type	RSRZ
53	B5	58	ASN	3.2
3	CC	127	ARG	3.2
17	CQ	53	CYS	3.2
22	BA	2108	A	3.2
30	DI	71	THR	3.2
31	DJ	97	PRO	3.2
7	CG	75	VAL	3.2
21	AU	50	ALA	3.2
1	CA	1132	C	3.2
11	CK	42	LEU	3.2
26	DE	200	LEU	3.2
22	BA	139	U	3.2
8	CH	2	SER	3.2
9	CI	5	GLN	3.2
27	DF	120	LYS	3.2
24	DC	239	ASN	3.2
26	DE	13	THR	3.2
4	AD	27	ALA	3.2
27	DF	100	PHE	3.2
28	DG	12	PRO	3.2
43	DV	70	ILE	3.2
40	DS	98	LYS	3.2
41	DT	33	LYS	3.2
51	D3	61	CYS	3.2
33	DL	3	LEU	3.2
1	CA	1022	A	3.2
22	DA	896	A	3.2
27	DF	102	ARG	3.2
37	DP	104	THR	3.2
41	DT	69	ARG	3.2
48	D0	54	VAL	3.2
12	CL	44	LYS	3.2
49	D1	48	ILE	3.2
27	DF	135	GLN	3.2
19	AS	13	LEU	3.2
2	CB	93	ASN	3.1
2	CB	133	GLU	3.1
14	CN	34	VAL	3.1
38	DQ	39	VAL	3.1
46	DY	24	GLU	3.1
1	CA	1534	A	3.1
35	DN	25	ALA	3.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
35	DN	111	ALA	3.1
13	CM	52	GLN	3.1
29	DH	58	LEU	3.1
7	AG	151	PHE	3.1
43	DV	56	PHE	3.1
1	AA	1537	U	3.1
16	CP	54	LEU	3.1
25	DD	84	LEU	3.1
28	DG	133	LEU	3.1
34	DM	41	LEU	3.1
33	DL	81	ASP	3.1
29	BH	66	ASN	3.1
53	B5	123	ALA	3.1
32	DK	108	ARG	3.1
46	DY	28	LEU	3.1
49	D1	21	TYR	3.1
44	DW	85	GLU	3.1
30	DI	91	GLY	3.1
44	DW	79	PHE	3.1
7	CG	130	ASN	3.1
13	CM	4	ILE	3.1
19	AS	49	ILE	3.1
1	AA	412	A	3.1
20	CT	66	LEU	3.1
26	DE	131	THR	3.1
49	D1	24	THR	3.1
13	CM	67	GLY	3.1
39	DR	102	SER	3.1
16	AP	22	ALA	3.1
32	DK	67	LYS	3.1
1	AA	79	G	3.1
22	DA	277	G	3.1
29	BH	143	ILE	3.1
37	DP	110	ILE	3.1
33	DL	62	PRO	3.1
11	AK	42	LEU	3.1
36	DO	62	LEU	3.1
16	CP	3	THR	3.1
22	DA	1170	C	3.1
6	CF	39	LEU	3.1
26	DE	118	LEU	3.1
29	BH	62	LEU	3.1

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Mol	Chain	Res	Type	RSRZ
33	DL	114	GLY	3.1
29	DH	137	GLU	3.1
46	DY	62	GLY	3.1
1	CA	1020	G	3.1
10	CJ	28	THR	3.1
42	DU	76	ALA	3.1
26	DE	134	LEU	3.1
29	BH	145	ASN	3.1
40	DS	46	LEU	3.1
49	D1	18	GLY	3.1
27	DF	26	MET	3.0
29	BH	94	ILE	3.0
51	D3	16	LYS	3.0
13	CM	99	GLY	3.0
28	DG	62	TRP	3.0
48	D0	28	LEU	3.0
28	DG	104	ASN	3.0
24	DC	26	LYS	3.0
9	AI	79	ILE	3.0
13	CM	56	LEU	3.0
7	CG	16	PRO	3.0
13	CM	113	ARG	3.0
36	DO	80	GLU	3.0
14	CN	33	ASP	3.0
51	D3	24	HIS	3.0
28	DG	22	GLN	3.0
40	DS	35	ILE	3.0
7	AG	143	ARG	3.0
36	DO	107	ALA	3.0
22	DA	2796	U	3.0
41	DT	73	ARG	3.0
7	CG	76	LYS	3.0
29	BH	71	LYS	3.0
46	DY	56	LEU	3.0
51	D3	22	PHE	3.0
7	CG	109	ARG	3.0
53	B5	168	LYS	3.0
9	CI	66	THR	3.0
25	DD	31	ALA	3.0
30	BI	63	ALA	3.0
30	BI	65	ARG	3.0
10	CJ	30	LYS	3.0

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Mol	Chain	Res	Type	RSRZ
26	DE	165	HIS	3.0
30	DI	118	THR	3.0
11	AK	14	LYS	3.0
27	DF	107	ALA	3.0
40	DS	71	VAL	3.0
41	DT	68	LYS	3.0
22	DA	2402	U	3.0
2	CB	164	ILE	3.0
23	DB	18	G	3.0
27	DF	83	TYR	3.0
7	CG	23	LEU	3.0
26	DE	15	SER	3.0
30	BI	18	ALA	3.0
40	DS	109	ASP	3.0
7	CG	129	GLU	3.0
26	DE	24	ASN	3.0
39	DR	101	ILE	3.0
52	D4	9	LYS	3.0
19	AS	74	PHE	3.0
24	DC	94	VAL	2.9
30	DI	105	GLN	2.9
46	DY	36	GLN	2.9
13	CM	12	HIS	2.9
27	DF	111	ILE	2.9
3	AC	193	TYR	2.9
22	DA	1100	C	2.9
25	DD	26	VAL	2.9
27	DF	95	ARG	2.9
17	CQ	50	ASN	2.9
41	DT	87	LEU	2.9
7	CG	57	SER	2.9
20	CT	87	ALA	2.9
33	DL	86	GLU	2.9
2	CB	138	THR	2.9
7	CG	15	ASP	2.9
19	CS	27	ASP	2.9
27	DF	90	THR	2.9
34	DM	132	THR	2.9
36	DO	53	THR	2.9
26	DE	147	LEU	2.9
27	DF	33	LYS	2.9
27	DF	93	GLY	2.9

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Mol	Chain	Res	Type	RSRZ
30	BI	61	VAL	2.9
9	CI	98	LEU	2.9
30	BI	125	MET	2.9
9	AI	27	LYS	2.9
22	BA	2126	A	2.9
10	CJ	94	ALA	2.9
26	DE	50	ALA	2.9
28	DG	150	ALA	2.9
30	DI	14	ALA	2.9
42	DU	90	GLY	2.9
43	DV	54	ALA	2.9
2	CB	108	ARG	2.9
7	CG	102	ARG	2.9
13	CM	3	ARG	2.9
16	AP	4	ILE	2.9
30	BI	95	LYS	2.9
22	BA	2180	U	2.9
33	DL	107	PHE	2.9
32	DK	35	VAL	2.9
14	CN	63	ARG	2.9
21	AU	7	ARG	2.9
45	DX	3	ARG	2.9
16	CP	45	GLU	2.9
26	DE	155	GLU	2.9
27	DF	4	LEU	2.9
1	AA	1032	G	2.9
30	DI	84	ALA	2.9
39	DR	6	GLN	2.9
19	CS	35	SER	2.9
21	AU	4	ILE	2.9
43	DV	58	SER	2.9
27	DF	50	LEU	2.9
14	CN	21	PHE	2.9
33	DL	78	ARG	2.9
35	DN	101	GLY	2.9
26	DE	11	ALA	2.9
42	DU	63	ALA	2.9
3	CC	80	LYS	2.9
27	DF	8	TYR	2.9
30	BI	96	ASP	2.9
37	DP	102	GLU	2.9
10	CJ	100	ILE	2.9

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Mol	Chain	Res	Type	RSRZ
7	CG	101	MET	2.9
22	DA	653	U	2.9
39	DR	40	MET	2.9
19	CS	21	LYS	2.9
14	CN	11	VAL	2.8
22	DA	2163	A	2.8
29	DH	19	VAL	2.8
12	AL	25	GLU	2.8
2	CB	191	SER	2.8
7	CG	10	ARG	2.8
28	DG	107	LEU	2.8
29	BH	75	LEU	2.8
26	DE	89	PRO	2.8
2	CB	130	THR	2.8
7	CG	134	ALA	2.8
14	CN	60	GLN	2.8
19	CS	36	ARG	2.8
41	BT	69	ARG	2.8
45	DX	50	ARG	2.8
7	CG	13	LEU	2.8
29	DH	122	LEU	2.8
53	B5	153	ILE	2.8
7	CG	37	SER	2.8
30	BI	42	PHE	2.8
43	DV	48	MET	2.8
2	CB	206	ALA	2.8
9	AI	19	VAL	2.8
41	DT	53	VAL	2.8
30	DI	81	LYS	2.8
1	CA	1537	U	2.8
13	CM	9	ILE	2.8
19	AS	71	LEU	2.8
7	CG	71	PRO	2.8
22	DA	2174	C	2.8
50	D2	18	PHE	2.8
7	CG	144	MET	2.8
2	AB	74	ARG	2.8
9	CI	41	ARG	2.8
10	CJ	45	ARG	2.8
42	DU	59	VAL	2.8
22	DA	846	U	2.8
22	BA	2119	A	2.8

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Mol	Chain	Res	Type	RSRZ
22	DA	2173	A	2.8
26	DE	191	ASP	2.8
43	DV	43	ASP	2.8
1	CA	209	U	2.8
25	DD	105	LYS	2.8
19	CS	34	TRP	2.8
33	DL	122	VAL	2.8
13	CM	55	THR	2.8
14	CN	50	THR	2.8
34	DM	99	GLY	2.8
12	CL	25	GLU	2.8
36	DO	112	GLU	2.8
41	DT	49	LYS	2.8
36	DO	79	ALA	2.8
53	B5	90	ALA	2.8
16	CP	20	VAL	2.8
45	DX	20	HIS	2.8
42	DU	40	ASN	2.8
19	CS	16	LEU	2.8
26	DE	173	THR	2.8
53	B5	25	GLU	2.8
7	CG	51	ALA	2.8
37	DP	95	ALA	2.8
53	B5	36	ALA	2.8
25	DD	73	VAL	2.8
30	BI	135	SER	2.8
37	DP	17	VAL	2.8
46	DY	40	SER	2.8
19	CS	14	HIS	2.8
19	CS	52	HIS	2.8
26	DE	92	HIS	2.8
2	CB	128	LYS	2.8
14	CN	7	LYS	2.8
22	DA	1068	G	2.8
30	BI	97	LYS	2.8
30	DI	92	LYS	2.8
36	DO	87	ILE	2.8
53	B5	206	LYS	2.8
14	CN	20	TYR	2.8
22	DA	613	A	2.8
22	DA	2602	A	2.8
28	DG	25	THR	2.8

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Mol	Chain	Res	Type	RSRZ
22	BA	2109	U	2.8
29	BH	18	GLN	2.8
3	CC	195	VAL	2.8
7	CG	141	VAL	2.8
20	CT	34	LYS	2.8
30	BI	113	LYS	2.8
10	CJ	19	ASP	2.8
28	DG	24	ILE	2.8
29	DH	11	ASN	2.8
27	DF	105	THR	2.8
7	CG	108	ALA	2.8
42	DU	54	GLN	2.8
7	AG	80	VAL	2.8
26	DE	122	GLU	2.7
33	DL	28	GLY	2.7
46	DY	13	GLU	2.7
27	DF	46	ASP	2.7
30	DI	101	ILE	2.7
36	DO	58	ILE	2.7
27	DF	52	ASN	2.7
10	CJ	80	THR	2.7
22	DA	101	A	2.7
40	DS	38	TYR	2.7
22	DA	2124	G	2.7
42	DU	55	PRO	2.7
37	DP	35	GLY	2.7
27	DF	10	ASP	2.7
14	CN	2	ALA	2.7
22	DA	1095	A	2.7
7	CG	43	VAL	2.7
29	DH	147	VAL	2.7
1	CA	1043	G	2.7
7	CG	53	ARG	2.7
7	CG	124	LEU	2.7
22	DA	2903	U	2.7
28	DG	86	LYS	2.7
42	DU	14	LEU	2.7
53	B5	186	LEU	2.7
13	CM	2	ALA	2.7
30	BI	76	ALA	2.7
28	DG	41	VAL	2.7
24	DC	47	GLY	2.7

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Mol	Chain	Res	Type	RSRZ
33	DL	132	ARG	2.7
42	DU	21	LYS	2.7
44	DW	68	LYS	2.7
24	DC	154	LEU	2.7
46	BY	6	LEU	2.7
28	BG	166	ASP	2.7
20	CT	25	ARG	2.7
22	BA	2098	U	2.7
28	DG	101	ASN	2.7
32	DK	90	ASN	2.7
36	DO	57	ALA	2.7
53	B5	171	ALA	2.7
28	DG	95	ARG	2.7
27	DF	149	VAL	2.7
11	AK	111	THR	2.7
38	DQ	22	LYS	2.7
2	CB	226	SER	2.7
30	BI	64	ASP	2.7
3	CC	92	ALA	2.7
22	DA	267	C	2.7
22	DA	291	G	2.7
26	DE	9	GLN	2.7
5	AE	159	LYS	2.7
36	DO	63	LYS	2.7
26	DE	28	VAL	2.7
26	DE	193	VAL	2.7
47	DZ	8	THR	2.7
2	AB	69	PHE	2.7
41	DT	74	ILE	2.7
46	DY	41	HIS	2.7
48	D0	42	HIS	2.7
1	CA	83	C	2.7
1	CA	207	C	2.7
33	DL	108	ALA	2.7
34	DM	8	LYS	2.7
44	DW	62	LYS	2.7
46	DY	54	LYS	2.7
1	CA	1030	U	2.7
33	DL	26	GLY	2.7
42	BU	53	ASN	2.7
22	DA	2169	A	2.7
27	BF	83	TYR	2.7

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Mol	Chain	Res	Type	RSRZ
7	CG	47	LEU	2.7
7	CG	90	GLU	2.7
27	DF	161	LYS	2.7
19	CS	25	SER	2.7
21	AU	51	SER	2.7
51	D3	65	ALA	2.7
13	CM	70	ARG	2.7
22	DA	289	G	2.7
22	DA	1099	G	2.7
26	DE	121	VAL	2.7
34	DM	26	VAL	2.7
26	DE	88	ARG	2.7
50	D2	34	ARG	2.7
26	DE	188	MET	2.7
27	DF	96	MET	2.7
22	DA	138	U	2.7
26	DE	127	GLU	2.7
27	DF	104	ILE	2.7
33	DL	121	THR	2.7
2	CB	96	TRP	2.7
13	CM	61	ALA	2.7
30	BI	89	GLY	2.7
13	CM	105	ASN	2.6
42	DU	53	ASN	2.6
1	CA	1033	G	2.6
42	DU	95	PHE	2.6
9	AI	63	LEU	2.6
41	DT	13	ALA	2.6
41	DT	41	ALA	2.6
27	DF	97	TRP	2.6
30	DI	119	GLY	2.6
42	DU	30	SER	2.6
7	CG	137	LYS	2.6
39	DR	96	VAL	2.6
9	AI	89	GLU	2.6
27	DF	127	ASN	2.6
25	DD	201	LEU	2.6
27	DF	17	MET	2.6
33	DL	79	LEU	2.6
33	DL	73	ILE	2.6
37	DP	84	ILE	2.6
13	CM	31	LYS	2.6

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Mol	Chain	Res	Type	RSRZ
31	DJ	76	HIS	2.6
33	DL	102	GLY	2.6
2	CB	107	VAL	2.6
39	DR	47	VAL	2.6
40	DS	106	VAL	2.6
51	D3	57	LEU	2.6
32	DK	98	ARG	2.6
33	DL	75	ALA	2.6
7	CG	63	GLU	2.6
7	CG	139	GLU	2.6
29	BH	82	SER	2.6
27	BF	80	ARG	2.6
35	DN	63	ARG	2.6
1	AA	1001	C	2.6
22	DA	2300	C	2.6
35	DN	83	LEU	2.6
53	B5	137	LEU	2.6
44	DW	75	LYS	2.6
50	D2	2	LYS	2.6
27	DF	63	GLN	2.6
30	DI	26	PRO	2.6
31	DJ	13	ARG	2.6
36	DO	74	VAL	2.6
2	CB	212	LEU	2.6
9	CI	87	LEU	2.6
10	CJ	59	LYS	2.6
12	AL	18	LYS	2.6
14	AN	16	LEU	2.6
14	CN	42	TRP	2.6
25	DD	154	LYS	2.6
2	CB	88	ASP	2.6
22	DA	1084	A	2.6
53	B5	88	GLU	2.6
27	DF	60	ILE	2.6
22	DA	2164	C	2.6
22	DA	1077	A	2.6
22	DA	1103	A	2.6
40	BS	110	ARG	2.6
2	CB	126	PHE	2.6
35	DN	102	PHE	2.6
19	AS	5	LEU	2.6
29	BH	12	LEU	2.6

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Mol	Chain	Res	Type	RSRZ
42	DU	98	SER	2.6
1	CA	1026	G	2.6
3	CC	196	ILE	2.6
21	AU	27	GLY	2.6
22	BA	2186	G	2.6
26	DE	141	MET	2.6
27	DF	11	GLU	2.6
27	DF	41	GLY	2.6
46	DY	7	ARG	2.6
48	D0	35	GLY	2.6
27	DF	27	GLN	2.6
20	CT	36	TYR	2.6
22	DA	1057	A	2.6
27	DF	28	VAL	2.6
38	DQ	31	VAL	2.6
37	DP	74	PHE	2.6
30	BI	118	THR	2.6
40	DS	100	THR	2.6
9	AI	129	LYS	2.6
30	BI	72	LYS	2.6
40	DS	93	ALA	2.6
2	AB	32	PHE	2.5
13	CM	43	VAL	2.6
25	DD	180	VAL	2.6
26	DE	14	VAL	2.6
30	BI	140	VAL	2.6
12	CL	14	ARG	2.5
27	DF	110	ARG	2.5
3	CC	33	LEU	2.5
39	DR	25	LEU	2.5
3	CC	155	GLY	2.5
16	CP	76	LYS	2.5
33	DL	117	THR	2.5
27	DF	45	ALA	2.5
9	CI	90	TYR	2.5
1	AA	844	G	2.5
1	CA	79	G	2.5
1	CA	1024	G	2.5
22	BA	277	G	2.5
46	BY	23	ARG	2.5
13	AM	95	LEU	2.5
13	CM	78	LYS	2.5

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Mol	Chain	Res	Type	RSRZ
38	DQ	84	LYS	2.5
51	D3	44	LEU	2.5
2	CB	110	SER	2.5
35	DN	73	ASN	2.5
39	DR	26	ASP	2.5
3	AC	168	TYR	2.5
27	BF	72	LYS	2.5
7	CG	120	LEU	2.5
24	DC	74	ILE	2.5
19	CS	3	ARG	2.5
31	DJ	117	ALA	2.5
36	DO	113	ALA	2.5
37	DP	19	SER	2.5
7	CG	123	GLU	2.5
21	AU	24	GLU	2.5
9	CI	63	LEU	2.5
22	DA	544	C	2.5
26	DE	157	LEU	2.5
53	B5	128	LEU	2.5
19	CS	69	HIS	2.5
22	DA	2125	G	2.5
29	DH	140	ALA	2.5
30	DI	76	ALA	2.5
36	DO	61	GLN	2.5
22	DA	1094	U	2.5
3	CC	192	THR	2.5
26	DE	23	PHE	2.5
26	DE	126	VAL	2.5
28	DG	164	TYR	2.5
22	DA	2175	C	2.5
20	CT	68	HIS	2.5
24	DC	28	LYS	2.5
29	DH	81	ALA	2.5
40	DS	4	ILE	2.5
53	B5	26	ALA	2.5
33	DL	91	ASP	2.5
30	DI	128	SER	2.5
14	AN	57	PRO	2.5
19	AS	32	ARG	2.5
27	DF	16	LEU	2.5
32	DK	87	LEU	2.5
22	DA	654	A	2.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
43	DV	74	ALA	2.5
2	AB	139	ARG	2.5
19	CS	12	ASP	2.5
20	CT	43	ASP	2.5
7	AG	18	PHE	2.5
22	DA	2110	G	2.5
49	D1	39	PHE	2.5
2	CB	114	LEU	2.5
27	DF	84	PRO	2.5
28	DG	8	PRO	2.5
1	CA	210	C	2.5
13	CM	22	ILE	2.5
33	DL	83	ALA	2.5
7	CG	48	GLU	2.5
28	DG	124	GLU	2.5
48	D0	38	HIS	2.5
10	CJ	97	ASP	2.5
14	AN	12	LYS	2.5
2	CB	62	SER	2.5
13	CM	30	SER	2.5
32	DK	65	THR	2.5
49	B1	4	GLY	2.5
1	AA	88	U	2.5
1	CA	1305	G	2.5
21	AU	11	PRO	2.5
22	BA	846	U	2.5
42	BU	52	LEU	2.5
7	CG	12	ILE	2.5
9	CI	30	ILE	2.5
37	DP	112	GLU	2.5
42	DU	33	LYS	2.5
10	CJ	98	VAL	2.5
21	AU	23	CYS	2.5
22	BA	2167	U	2.5
29	DH	21	VAL	2.5
33	DL	120	VAL	2.5
53	B5	129	GLY	2.5
1	CA	844	G	2.4
30	DI	104	ALA	2.4
33	DL	14	LYS	2.4
44	DW	72	LYS	2.4
1	AA	1031	C	2.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
22	BA	885	C	2.4
2	CB	224	GLY	2.4
10	AJ	74	VAL	2.4
30	BI	29	GLY	2.4
21	AU	42	THR	2.4
30	DI	88	SER	2.4
26	DE	30	GLN	2.4
29	DH	119	ASN	2.4
16	CP	4	ILE	2.4
36	DO	105	ALA	2.4
48	D0	43	ILE	2.4
53	B5	205	ALA	2.4
3	AC	37	PHE	2.4
13	CM	42	ASP	2.4
22	DA	1045	C	2.4
22	DA	1064	C	2.4
36	DO	108	ASP	2.4
28	DG	169	VAL	2.4
29	DH	78	VAL	2.4
45	DX	7	VAL	2.4
53	B5	124	VAL	2.4
3	CC	124	LEU	2.4
46	DY	31	GLN	2.4
19	CS	22	ALA	2.4
29	BH	111	ALA	2.4
40	DS	39	THR	2.4
33	DL	58	TYR	2.4
10	CJ	38	GLY	2.4
34	DM	29	GLY	2.4
12	AL	15	LYS	2.4
21	AU	32	VAL	2.4
41	DT	91	GLN	2.4
16	CP	33	ILE	2.4
26	DE	21	ARG	2.4
29	DH	20	ASN	2.4
30	DI	73	THR	2.4
11	AK	19	GLY	2.4
30	DI	89	GLY	2.4
34	DM	133	LYS	2.4
38	DQ	101	PHE	2.4
39	DR	75	VAL	2.4
2	CB	84	ALA	2.4

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Mol	Chain	Res	Type	RSRZ
7	AG	88	PRO	2.4
24	DC	92	ALA	2.4
26	DE	114	ARG	2.4
38	DQ	71	GLN	2.4
33	DL	119	PRO	2.4
40	DS	44	ALA	2.4
28	DG	80	THR	2.4
30	BI	62	TYR	2.4
38	DQ	19	LYS	2.4
2	CB	90	PHE	2.4
15	CO	15	PHE	2.4
21	AU	31	GLU	2.4
2	AB	221	VAL	2.4
10	CJ	91	ASP	2.4
22	DA	1065	U	2.4
1	CA	1325	C	2.4
22	DA	268	C	2.4
31	DJ	96	ARG	2.4
9	AI	17	ALA	2.4
19	AS	9	PRO	2.4
25	DD	14	ILE	2.4
26	DE	149	ILE	2.4
49	B1	53	LYS	2.4
10	CJ	81	GLU	2.4
30	BI	119	GLY	2.4
21	CU	37	PHE	2.4
37	DP	66	ASN	2.4
46	DY	26	PHE	2.4
2	AB	35	ARG	2.4
26	DE	178	VAL	2.4
2	CB	154	MET	2.4
29	DH	83	LYS	2.4
44	DW	44	LYS	2.4
2	CB	34	ALA	2.4
22	BA	2129	C	2.4
7	CG	81	GLY	2.4
22	BA	2128	G	2.4
22	DA	1530	G	2.4
41	DT	75	GLY	2.4
45	DX	46	PHE	2.4
2	CB	167	ASP	2.4
4	AD	25	VAL	2.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
7	CG	80	VAL	2.4
40	DS	7	HIS	2.4
22	BA	1926	U	2.4
29	DH	54	LEU	2.4
37	DP	42	ALA	2.4
51	D3	48	ALA	2.4
14	AN	24	ARG	2.4
39	DR	67	GLY	2.4
26	DE	124	PHE	2.4
4	AD	151	LYS	2.4
18	CR	51	TYR	2.4
53	B5	47	LYS	2.4
27	DF	158	THR	2.4
18	AR	68	LEU	2.3
33	DL	19	LEU	2.3
34	DM	105	MET	2.3
11	CK	13	ARG	2.3
26	DE	161	ALA	2.3
43	DV	23	ALA	2.3
22	DA	1278	C	2.3
40	DS	103	ILE	2.3
50	D2	5	PHE	2.3
16	CP	29	ASN	2.3
24	DC	103	TYR	2.3
29	BH	17	ASP	2.3
41	DT	58	VAL	2.3
22	DA	1087	G	2.3
44	DW	58	THR	2.3
1	AA	1019	A	2.3
1	CA	81	A	2.3
36	DO	16	ARG	2.3
29	BH	74	ALA	2.3
29	DH	16	GLY	2.3
29	DH	80	ILE	2.3
33	DL	87	GLY	2.3
19	AS	6	LYS	2.3
1	CA	206	C	2.3
37	DP	18	PRO	2.3
22	DA	2109	U	2.3
28	DG	87	LEU	2.3
29	DH	117	LEU	2.3
32	DK	107	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
12	AL	123	LYS	2.3
24	DC	36	LYS	2.3
9	CI	83	ILE	2.3
9	AI	33	ARG	2.3
22	DA	1092	C	2.3
22	DA	1211	C	2.3
29	BH	131	SER	2.3
30	BI	34	ASN	2.3
30	BI	108	GLU	2.3
9	CI	32	GLN	2.3
33	DL	61	LEU	2.3
50	D2	13	ASN	2.3
24	DC	112	ALA	2.3
1	CA	988	G	2.3
9	CI	65	ILE	2.3
5	CE	10	GLU	2.3
9	CI	53	GLU	2.3
35	DN	82	GLU	2.3
21	AU	29	LEU	2.3
22	DA	2172	U	2.3
30	BI	28	LEU	2.3
32	DK	82	ASN	2.3
49	D1	45	GLN	2.3
7	CG	128	ALA	2.3
25	DD	115	GLY	2.3
35	DN	68	ALA	2.3
50	D2	22	MET	2.3
33	DL	84	LYS	2.3
9	CI	126	GLN	2.3
10	CJ	23	ALA	2.3
17	CQ	11	ARG	2.3
44	DW	81	SER	2.3
52	D4	24	ARG	2.3
9	CI	84	THR	2.3
16	CP	48	GLU	2.3
26	DE	186	VAL	2.3
27	DF	146	VAL	2.3
39	DR	33	VAL	2.3
25	DD	200	ASP	2.3
22	DA	1606	C	2.3
24	DC	99	GLY	2.3
15	AO	2	SER	2.3

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Mol	Chain	Res	Type	RSRZ
27	DF	61	SER	2.3
29	DH	10	ALA	2.3
38	DQ	35	ALA	2.3
41	DT	9	LYS	2.3
7	AG	144	MET	2.3
28	DG	19	ILE	2.3
1	CA	1441	A	2.3
26	DE	189	THR	2.3
29	BH	149	GLU	2.3
10	AJ	87	LEU	2.3
28	DG	112	PRO	2.3
28	DG	6	LYS	2.3
29	DH	112	LYS	2.3
2	CB	36	ASN	2.3
7	CG	77	SER	2.3
26	DE	2	GLU	2.3
22	DA	1532	A	2.3
30	BI	103	ARG	2.3
28	DG	168	VAL	2.3
34	DM	80	VAL	2.3
13	CM	51	GLY	2.3
14	CN	23	LYS	2.3
26	DE	98	LYS	2.3
28	DG	53	GLY	2.3
17	CQ	82	ALA	2.2
22	BA	1065	U	2.2
22	DA	143	C	2.2
22	DA	275	C	2.2
22	DA	880	G	2.2
22	DA	2797	U	2.2
27	DF	7	TYR	2.2
11	AK	13	ARG	2.2
26	DE	40	ARG	2.2
34	DM	73	ILE	2.2
46	DY	47	ARG	2.2
53	B5	135	ARG	2.2
11	AK	126	LYS	2.2
36	DO	76	LYS	2.2
43	DV	34	LYS	2.2
28	DG	49	THR	2.2
34	DM	24	THR	2.2
44	DW	59	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
28	DG	136	ALA	2.2
27	DF	178	ARG	2.2
30	DI	127	ARG	2.2
34	DM	40	ARG	2.2
24	DC	37	ASN	2.2
2	CB	37	LYS	2.2
26	DE	199	MET	2.2
36	DO	99	TYR	2.2
1	CA	1025	U	2.2
3	CC	144	LEU	2.2
4	AD	24	GLY	2.2
7	CG	99	LEU	2.2
8	CH	123	GLY	2.2
13	AM	48	LEU	2.2
24	DC	235	GLY	2.2
33	DL	27	LEU	2.2
39	DR	88	GLY	2.2
40	DS	26	GLY	2.2
33	DL	118	THR	2.2
3	CC	131	ARG	2.2
13	CM	72	GLU	2.2
21	AU	21	ARG	2.2
27	DF	139	PRO	2.2
27	DF	144	ASP	2.2
29	DH	141	LYS	2.2
40	DS	96	ILE	2.2
50	D2	25	LYS	2.2
1	CA	1209	C	2.2
19	CS	4	SER	2.2
52	D4	6	SER	2.2
19	CS	19	VAL	2.2
36	DO	47	VAL	2.2
9	CI	92	GLU	2.2
19	AS	24	GLU	2.2
44	DW	25	ARG	2.2
28	DG	65	ALA	2.2
36	DO	56	LYS	2.2
40	DS	73	LYS	2.2
47	DZ	56	LYS	2.2
5	AE	31	PHE	2.2
29	BH	80	ILE	2.2
46	DY	27	ASN	2.2

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Mol	Chain	Res	Type	RSRZ
13	CM	38	GLY	2.2
26	DE	54	GLY	2.2
36	DO	111	ARG	2.2
36	DO	114	GLY	2.2
37	DP	65	SER	2.2
1	CA	208	U	2.2
51	D3	55	LEU	2.2
2	CB	160	ALA	2.2
19	CS	50	ALA	2.2
22	DA	882	G	2.2
22	DA	1112	G	2.2
22	DA	2157	G	2.2
29	BH	8	LYS	2.2
41	DT	46	ALA	2.2
46	BY	2	LYS	2.2
11	AK	96	THR	2.2
30	BI	35	ILE	2.2
34	DM	92	TRP	2.2
36	DO	92	PHE	2.2
28	DG	55	ARG	2.2
7	CG	19	GLY	2.2
47	DZ	24	LEU	2.2
1	CA	1044	A	2.2
13	CM	35	ALA	2.2
14	AN	22	ALA	2.2
30	DI	115	ALA	2.2
22	BA	2885	G	2.2
22	DA	1538	G	2.2
29	DH	132	PHE	2.2
7	AG	12	ILE	2.2
2	CB	115	LYS	2.2
2	CB	215	GLY	2.2
19	CS	70	LYS	2.2
16	AP	20	VAL	2.2
16	CP	2	VAL	2.2
2	CB	117	LEU	2.2
22	DA	2150	C	2.2
30	BI	128	SER	2.2
35	DN	115	LEU	2.2
1	CA	1016	A	2.2
2	CB	159	ASP	2.2
10	CJ	75	ASP	2.2

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Mol	Chain	Res	Type	RSRZ
13	CM	106	ALA	2.2
22	DA	1090	A	2.2
29	BH	100	ALA	2.2
41	DT	37	ASP	2.2
46	DY	3	ALA	2.2
15	AO	89	ARG	2.2
16	CP	56	ARG	2.2
3	CC	14	ILE	2.2
5	CE	72	ILE	2.2
1	CA	86	G	2.2
12	CL	76	GLU	2.2
22	DA	2116	G	2.2
27	DF	42	GLU	2.2
41	DT	56	GLU	2.2
3	CC	173	VAL	2.2
41	DT	72	GLN	2.2
47	DZ	29	LEU	2.2
3	CC	126	ARG	2.2
25	DD	97	SER	2.2
28	DG	46	ALA	2.2
29	DH	67	ALA	2.2
22	DA	213	A	2.2
32	DK	37	ASP	2.2
4	AD	22	LYS	2.2
31	DJ	111	LYS	2.2
7	CG	82	GLY	2.2
9	CI	89	GLU	2.2
52	D4	16	ILE	2.2
1	AA	1020	G	2.2
2	AB	63	ARG	2.2
4	AD	117	LEU	2.2
7	CG	118	LEU	2.2
10	CJ	37	ARG	2.2
20	CT	24	ARG	2.2
22	DA	1228	G	2.2
40	DS	33	LEU	2.2
7	CG	122	ASN	2.2
29	DH	14	SER	2.1
30	BI	44	ALA	2.2
48	D0	6	ASN	2.2
1	CA	87	C	2.1
14	CN	80	SER	2.1

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Mol	Chain	Res	Type	RSRZ
39	DR	46	GLU	2.1
27	DF	68	THR	2.1
2	CB	163	VAL	2.1
26	DE	32	VAL	2.1
26	DE	33	VAL	2.1
35	DN	9	GLN	2.1
38	DQ	44	GLN	2.1
39	DR	22	LEU	2.1
41	DT	67	VAL	2.1
52	D4	35	GLN	2.1
2	CB	23	TRP	2.1
30	BI	92	LYS	2.1
45	DX	17	ASN	2.1
33	DL	10	GLU	2.1
7	AG	7	ILE	2.1
9	CI	124	ARG	2.1
20	CT	64	LYS	2.1
2	CB	144	LEU	2.1
27	DF	108	VAL	2.1
28	DG	177	LYS	2.1
35	DN	36	THR	2.1
41	DT	11	LEU	2.1
44	DW	43	THR	2.1
51	D3	52	LYS	2.1
51	D3	49	MET	2.1
36	DO	14	ALA	2.1
26	DE	116	ASP	2.1
27	DF	56	ASP	2.1
34	DM	106	ASP	2.1
22	DA	343	C	2.1
42	DU	82	ARG	2.1
29	BH	44	ILE	2.1
42	DU	56	GLY	2.1
7	CG	11	LYS	2.1
40	DS	49	LYS	2.1
25	DD	186	LEU	2.1
28	DG	162	VAL	2.1
29	DH	104	THR	2.1
10	CJ	31	ARG	2.1
17	CQ	39	LYS	2.1
28	DG	78	GLY	2.1
1	CA	1018	G	2.1

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Mol	Chain	Res	Type	RSRZ
22	DA	2112	G	2.1
7	AG	27	VAL	2.1
7	AG	73	VAL	2.1
17	CQ	44	LEU	2.1
22	BA	546	U	2.1
38	DQ	2	ALA	2.1
28	DG	16	ASP	2.1
28	DG	18	LYS	2.1
3	CC	120	ILE	2.1
27	DF	24	SER	2.1
32	DK	99	ILE	2.1
22	DA	1076	C	2.1
22	BA	1179	G	2.1
27	DF	164	GLU	2.1
28	DG	17	VAL	2.1
46	DY	22	LEU	2.1
2	AB	154	MET	2.1
8	CH	3	MET	2.1
27	DF	69	LYS	2.1
29	DH	74	ALA	2.1
36	DO	50	ALA	2.1
27	DF	77	PHE	2.1
30	BI	19	ASN	2.1
30	DI	94	ASN	2.1
2	CB	40	ILE	2.1
2	CB	104	TRP	2.1
52	D4	19	ARG	2.1
21	AU	44	GLU	2.1
33	DL	8	PRO	2.1
27	DF	88	LYS	2.1
31	DJ	106	LYS	2.1
9	CI	16	ALA	2.1
10	CJ	49	PHE	2.1
51	D3	26	HIS	2.1
26	DE	171	ASP	2.1
33	DL	30	THR	2.1
10	CJ	65	TYR	2.1
13	CM	73	ILE	2.1
17	CQ	5	ILE	2.1
25	DD	185	ASN	2.1
32	DK	2	ILE	2.1
42	DU	72	ILE	2.1

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Mol	Chain	Res	Type	RSRZ
50	D2	26	ASN	2.1
11	CK	55	SER	2.1
22	DA	1174	U	2.1
48	D0	53	LYS	2.1
22	DA	279	A	2.1
43	DV	72	VAL	2.1
45	DX	22	LEU	2.1
13	CM	5	ALA	2.1
36	DO	66	GLY	2.1
1	CA	1013	G	2.1
10	CJ	63	ASP	2.1
2	CB	125	THR	2.1
3	CC	206	GLU	2.1
12	AL	73	ASN	2.1
25	DD	8	LYS	2.1
34	DM	63	ILE	2.1
41	DT	30	ILE	2.1
1	AA	81	A	2.1
26	DE	196	VAL	2.1
13	CM	71	ARG	2.1
20	CT	72	ALA	2.1
22	DA	892	A	2.1
29	DH	61	VAL	2.1
36	DO	39	VAL	2.1
43	DV	92	VAL	2.1
28	DG	96	ALA	2.1
41	DT	24	MET	2.0
14	AN	19	LYS	2.0
27	DF	47	LYS	2.0
9	CI	112	GLU	2.0
10	CJ	67	ILE	2.0
22	BA	2193	G	2.0
30	DI	141	GLU	2.0
39	DR	19	THR	2.0
39	DR	99	THR	2.0
1	CA	4	U	2.0
7	CG	4	ARG	2.0
22	BA	2137	U	2.0
33	DL	6	LEU	2.0
45	DX	4	VAL	2.0
26	DE	201	ALA	2.0
22	BA	1172	C	2.0

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Mol	Chain	Res	Type	RSRZ
26	DE	25	GLU	2.0
40	DS	34	ASP	2.0
13	AM	4	ILE	2.0
31	DJ	142	ILE	2.0
52	D4	26	ILE	2.0
6	AF	91	ARG	2.0
7	CG	49	THR	2.0
22	DA	2148	G	2.0
39	DR	43	ASN	2.0
24	DC	24	LEU	2.0
36	DO	49	VAL	2.0
45	DX	47	VAL	2.0
5	CE	109	GLY	2.0
22	BA	2191	A	2.0
1	CA	1317	C	2.0
41	DT	25	GLU	2.0
13	CM	58	ASP	2.0
2	CB	74	ARG	2.0
4	CD	28	ILE	2.0
21	AU	47	ARG	2.0
10	CJ	36	VAL	2.0
24	DC	205	LEU	2.0
30	DI	97	LYS	2.0
36	DO	78	VAL	2.0
13	CM	37	ALA	2.0
14	CN	17	ALA	2.0
2	CB	182	PRO	2.0
6	CF	80	PHE	2.0
22	BA	549	G	2.0
28	DG	28	GLY	2.0
38	DQ	21	ALA	2.0
32	DK	14	SER	2.0
42	DU	88	GLU	2.0
2	CB	35	ARG	2.0
17	CQ	17	MET	2.0
22	DA	885	C	2.0
37	DP	13	MET	2.0
50	D2	3	ARG	2.0
28	DG	39	ASP	2.0
2	AB	60	ILE	2.0
8	CH	75	ILE	2.0
37	DP	111	LYS	2.0

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Mol	Chain	Res	Type	RSRZ
25	DD	4	LEU	2.0
10	AJ	34	ALA	2.0
34	DM	56	ALA	2.0
38	DQ	73	GLY	2.0
39	DR	28	ALA	2.0
14	AN	26	GLU	2.0
29	BH	47	PHE	2.0
41	DT	51	PHE	2.0
14	CN	57	PRO	2.0

## 6.2 Non-standard residues in protein, DNA, RNA chains [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
54	04X	B6	6	15/16	0.97	0.14	-	1,3,15,15	0
54	04X	D6	6	15/16	0.94	0.15	-	46,56,70,73	0
54	004	B6	7	10/11	0.97	0.21	-	0,0,1,2	0
54	MHW	D6	1	9/10	0.92	0.19	-	36,47,54,54	0
54	DBB	D6	3	6/7	0.94	0.28	-	45,52,56,63	0
54	MHW	B6	1	9/10	0.97	0.16	-	0,1,2,9	0
54	MHU	B6	5	15/16	0.97	0.21	-	0,1,3,6	0
54	MHU	D6	5	15/16	0.87	0.27	-	45,56,65,65	0
54	004	D6	7	10/11	0.95	0.18	-	40,51,56,56	0
54	DBB	B6	3	6/7	0.97	0.19	-	0,1,1,4	0

## 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( $\text{\AA}^2$ )	Q<0.9
55	MG	DA	3117	1/1	0.92	0.57	40.28	73,73,73,73	0
55	MG	AA	1671	1/1	0.91	0.47	30.80	47,47,47,47	0
55	MG	BA	3137	1/1	0.87	0.69	26.12	66,66,66,66	0
55	MG	BA	3016	1/1	0.77	0.36	17.25	59,59,59,59	0
55	MG	DA	3121	1/1	0.87	0.27	11.18	78,78,78,78	0
55	MG	BA	3041	1/1	0.94	0.38	10.35	2,2,2,2	0
55	MG	BA	3132	1/1	0.96	0.28	9.61	50,50,50,50	0
55	MG	AA	1644	1/1	0.83	0.52	9.31	58,58,58,58	0
55	MG	DA	3025	1/1	0.84	0.39	8.60	56,56,56,56	0
55	MG	BA	3151	1/1	0.83	0.24	8.60	49,49,49,49	0
55	MG	AA	1670	1/1	0.83	0.34	8.00	56,56,56,56	0
55	MG	BA	3084	1/1	0.80	0.24	7.35	49,49,49,49	0
55	MG	BA	3106	1/1	0.97	0.26	7.22	0,0,0,0	0
55	MG	BA	3058	1/1	0.83	0.25	7.15	45,45,45,45	0
55	MG	DA	3003	1/1	0.73	0.29	6.74	92,92,92,92	0
55	MG	AA	1647	1/1	0.82	0.25	6.41	58,58,58,58	0
55	MG	DA	3159	1/1	0.91	0.38	6.32	61,61,61,61	0
55	MG	BA	3153	1/1	0.96	0.28	6.21	11,11,11,11	0
55	MG	DA	3103	1/1	0.95	0.31	5.66	83,83,83,83	0
55	MG	BA	3110	1/1	0.97	0.22	5.48	0,0,0,0	0
55	MG	BA	3109	1/1	0.98	0.20	5.44	1,1,1,1	0
55	MG	AA	1635	1/1	0.94	0.19	5.40	65,65,65,65	0
55	MG	AA	1656	1/1	0.93	0.23	5.29	36,36,36,36	0
55	MG	DA	3125	1/1	0.82	0.45	5.26	92,92,92,92	0
55	MG	DA	3042	1/1	0.47	0.33	5.09	68,68,68,68	0
55	MG	DA	3114	1/1	0.55	0.29	4.74	80,80,80,80	0
55	MG	BA	3174	1/1	0.81	0.22	4.46	27,27,27,27	0
55	MG	BA	3147	1/1	0.93	0.19	4.18	39,39,39,39	0
55	MG	DA	3140	1/1	0.97	0.29	4.03	28,28,28,28	0
55	MG	AA	1622	1/1	0.98	0.20	3.75	17,17,17,17	0
55	MG	DA	3065	1/1	0.94	0.21	3.58	43,43,43,43	0
55	MG	DA	3110	1/1	0.80	0.23	3.08	48,48,48,48	0
55	MG	BA	3105	1/1	0.96	0.19	2.89	0,0,0,0	0
55	MG	DA	3026	1/1	0.88	0.24	2.73	67,67,67,67	0
56	VIF	BA	3001	38/38	0.97	0.20	2.51	0,2,7,10	0
55	MG	BA	3177	1/1	0.90	0.19	2.50	29,29,29,29	0
55	MG	DA	3153	1/1	0.78	0.34	2.21	62,62,62,62	0
55	MG	BA	3035	1/1	0.97	0.19	1.35	47,47,47,47	0
56	VIF	DA	3001	38/38	0.94	0.23	1.33	34,47,57,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	BA	3170	1/1	0.90	0.15	1.31	33,33,33,33	0
55	MG	BA	3050	1/1	0.92	0.19	1.06	6,6,6,6	0
55	MG	DA	3096	1/1	0.84	0.18	1.04	75,75,75,75	0
55	MG	DA	3064	1/1	0.87	0.19	0.97	48,48,48,48	0
55	MG	DA	3009	1/1	0.93	0.20	0.87	81,81,81,81	0
55	MG	CA	1635	1/1	0.79	0.25	0.84	120,120,120,120	0
55	MG	DA	3070	1/1	0.86	0.19	0.69	86,86,86,86	0
55	MG	DA	3106	1/1	0.94	0.20	0.67	72,72,72,72	0
55	MG	BA	3165	1/1	0.96	0.17	0.64	5,5,5,5	0
55	MG	DA	3116	1/1	0.85	0.34	0.60	96,96,96,96	0
55	MG	BA	3069	1/1	0.97	0.18	0.52	0,0,0,0	0
55	MG	DA	3109	1/1	0.89	0.17	0.50	50,50,50,50	0
55	MG	BA	3131	1/1	0.96	0.19	0.45	0,0,0,0	0
55	MG	BA	3014	1/1	0.95	0.19	0.43	0,0,0,0	0
55	MG	BA	3019	1/1	0.97	0.15	0.39	12,12,12,12	0
55	MG	BA	3097	1/1	0.95	0.16	0.10	5,5,5,5	0
55	MG	DA	3130	1/1	0.94	0.18	-0.12	39,39,39,39	0
55	MG	BA	3018	1/1	0.94	0.17	-0.26	0,0,0,0	0
55	MG	CA	1630	1/1	0.47	0.21	-0.41	105,105,105,105	0
55	MG	BA	3023	1/1	0.98	0.17	-0.52	0,0,0,0	0
55	MG	BA	3080	1/1	0.92	0.14	-0.52	17,17,17,17	0
55	MG	AA	1632	1/1	0.90	0.11	-0.64	54,54,54,54	0
55	MG	DA	3020	1/1	0.71	0.19	-0.64	83,83,83,83	0
55	MG	DA	3099	1/1	0.95	0.16	-0.65	50,50,50,50	0
57	ZN	B4	101	1/1	1.00	0.14	-0.77	24,24,24,24	0
55	MG	BA	3037	1/1	0.78	0.15	-0.77	35,35,35,35	0
55	MG	CA	1614	1/1	0.89	0.09	-0.78	49,49,49,49	0
57	ZN	D4	101	1/1	0.99	0.10	-0.85	86,86,86,86	0
55	MG	DA	3079	1/1	0.86	0.12	-0.88	92,92,92,92	0
55	MG	BA	3187	1/1	0.94	0.13	-0.89	25,25,25,25	0
55	MG	DA	3044	1/1	0.96	0.13	-0.99	47,47,47,47	0
55	MG	AA	1663	1/1	0.92	0.13	-1.03	41,41,41,41	0
55	MG	DA	3133	1/1	0.85	0.11	-1.12	53,53,53,53	0
55	MG	DA	3050	1/1	0.88	0.15	-1.16	83,83,83,83	0
55	MG	AA	1607	1/1	0.90	0.14	-1.17	41,41,41,41	0
55	MG	BA	3013	1/1	0.97	0.17	-1.20	0,0,0,0	0
55	MG	DB	202	1/1	0.85	0.08	-1.21	65,65,65,65	0
55	MG	DA	3029	1/1	0.89	0.12	-1.24	65,65,65,65	0
55	MG	BA	3159	1/1	0.89	0.14	-1.28	21,21,21,21	0
55	MG	AA	1641	1/1	0.97	0.14	-1.35	15,15,15,15	0
55	MG	DA	3111	1/1	0.92	0.15	-1.36	43,43,43,43	0
55	MG	DA	3051	1/1	0.95	0.13	-1.52	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	BA	3063	1/1	0.93	0.17	-1.59	6,6,6,6	0
55	MG	BA	3025	1/1	0.99	0.15	-1.60	0,0,0,0	0
55	MG	CA	1632	1/1	0.72	0.12	-1.63	74,74,74,74	0
55	MG	CA	1603	1/1	0.98	0.12	-1.63	36,36,36,36	0
55	MG	BA	3066	1/1	0.95	0.14	-1.66	1,1,1,1	0
55	MG	AA	1630	1/1	0.84	0.13	-1.68	63,63,63,63	0
55	MG	DA	3095	1/1	0.88	0.12	-1.75	80,80,80,80	0
55	MG	DA	3013	1/1	0.96	0.16	-1.76	34,34,34,34	0
55	MG	BA	3056	1/1	0.97	0.14	-1.77	29,29,29,29	0
55	MG	AA	1642	1/1	0.98	0.15	-1.79	15,15,15,15	0
55	MG	BA	3163	1/1	0.96	0.12	-1.80	31,31,31,31	0
55	MG	DA	3137	1/1	0.38	0.11	-1.83	88,88,88,88	0
55	MG	BB	201	1/1	0.98	0.08	-1.85	29,29,29,29	0
55	MG	BA	3024	1/1	0.95	0.14	-1.88	4,4,4,4	0
55	MG	CA	1610	1/1	0.93	0.10	-1.90	64,64,64,64	0
55	MG	BA	3135	1/1	0.95	0.15	-1.91	2,2,2,2	0
55	MG	DA	3135	1/1	0.85	0.11	-1.94	53,53,53,53	0
55	MG	DA	3080	1/1	0.70	0.10	-2.01	101,101,101,101	0
55	MG	DA	3023	1/1	0.96	0.13	-2.04	42,42,42,42	0
55	MG	BA	3152	1/1	0.94	0.15	-2.11	18,18,18,18	0
55	MG	DA	3024	1/1	0.92	0.07	-2.17	61,61,61,61	0
55	MG	AA	1617	1/1	0.97	0.04	-2.18	51,51,51,51	0
55	MG	BA	3133	1/1	0.82	0.07	-2.23	37,37,37,37	0
55	MG	AA	1616	1/1	0.78	0.12	-2.34	50,50,50,50	0
55	MG	DA	3083	1/1	0.94	0.12	-2.37	49,49,49,49	0
55	MG	BA	3036	1/1	0.97	0.14	-2.47	0,0,0,0	0
55	MG	BA	3029	1/1	0.97	0.15	-2.47	2,2,2,2	0
55	MG	BA	3108	1/1	0.98	0.14	-2.59	9,9,9,9	0
55	MG	DA	3048	1/1	0.91	0.09	-2.63	53,53,53,53	0
55	MG	DA	3081	1/1	0.93	0.12	-2.76	84,84,84,84	0
55	MG	DA	3131	1/1	0.94	0.07	-2.79	67,67,67,67	0
55	MG	DA	3107	1/1	0.77	0.14	-3.18	48,48,48,48	0
55	MG	BA	3033	1/1	0.96	0.15	-3.30	4,4,4,4	0
55	MG	AA	1612	1/1	0.89	0.14	-3.41	37,37,37,37	0
55	MG	CA	1621	1/1	0.56	0.07	-3.44	71,71,71,71	0
55	MG	BA	3054	1/1	0.91	0.15	-3.60	2,2,2,2	0
55	MG	DA	3018	1/1	0.90	0.15	-3.68	51,51,51,51	0
55	MG	DA	3040	1/1	0.89	0.14	-3.77	60,60,60,60	0
55	MG	DA	3052	1/1	0.93	0.09	-3.77	49,49,49,49	0
55	MG	DA	3060	1/1	0.97	0.10	-3.79	43,43,43,43	0
55	MG	DA	3006	1/1	0.72	0.11	-3.82	98,98,98,98	0
55	MG	BA	3098	1/1	0.98	0.14	-3.83	2,2,2,2	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	BA	3155	1/1	0.96	0.16	-3.89	26,26,26,26	0
55	MG	AA	1604	1/1	0.93	0.05	-3.96	58,58,58,58	0
55	MG	CA	1612	1/1	0.96	0.07	-4.13	44,44,44,44	0
55	MG	DA	3055	1/1	0.80	0.10	-4.41	41,41,41,41	0
55	MG	DB	201	1/1	0.86	0.06	-4.44	97,97,97,97	0
55	MG	DA	3067	1/1	0.93	0.08	-4.45	42,42,42,42	0
55	MG	AA	1606	1/1	0.95	0.10	-4.48	41,41,41,41	0
55	MG	CA	1617	1/1	0.77	0.09	-4.52	40,40,40,40	0
55	MG	AA	1613	1/1	0.88	0.11	-4.66	30,30,30,30	0
55	MG	AA	1629	1/1	0.99	0.05	-4.89	54,54,54,54	0
55	MG	DA	3075	1/1	0.90	0.09	-5.01	63,63,63,63	0
55	MG	CA	1601	1/1	0.90	0.10	-5.27	45,45,45,45	0
55	MG	BA	3003	1/1	0.68	0.11	-5.34	23,23,23,23	0
55	MG	BA	3161	1/1	0.98	0.13	-5.44	13,13,13,13	0
55	MG	AA	1618	1/1	0.98	0.09	-5.77	41,41,41,41	0
55	MG	CA	1640	1/1	0.96	0.08	-5.81	31,31,31,31	0
55	MG	CA	1607	1/1	0.94	0.09	-6.03	47,47,47,47	0
55	MG	BA	3051	1/1	0.98	0.08	-6.03	5,5,5,5	0
55	MG	BA	3130	1/1	0.99	0.15	-6.44	0,0,0,0	0
55	MG	BA	3121	1/1	0.89	0.07	-6.47	7,7,7,7	0
55	MG	BA	3009	1/1	0.98	0.14	-7.34	5,5,5,5	0
55	MG	AA	1625	1/1	0.96	0.11	-7.69	33,33,33,33	0
55	MG	AA	1609	1/1	0.92	0.09	-7.77	35,35,35,35	0
55	MG	AA	1633	1/1	0.96	0.10	-7.78	41,41,41,41	0
55	MG	BA	3117	1/1	0.97	0.10	-7.80	3,3,3,3	0
55	MG	BA	3022	1/1	0.96	0.16	-7.98	0,0,0,0	0
55	MG	CA	1626	1/1	0.83	0.06	-7.98	43,43,43,43	0
55	MG	CA	1619	1/1	0.92	0.09	-8.47	40,40,40,40	0
55	MG	CA	1616	1/1	0.96	0.11	-8.50	33,33,33,33	0
55	MG	BA	3074	1/1	0.89	0.13	-8.82	14,14,14,14	0
55	MG	BA	3006	1/1	0.82	0.08	-8.98	51,51,51,51	0
55	MG	BA	3111	1/1	0.94	0.08	-9.07	24,24,24,24	0
55	MG	BA	3094	1/1	0.93	0.06	-10.05	30,30,30,30	0
55	MG	BA	3119	1/1	0.90	0.09	-10.15	14,14,14,14	0
55	MG	BA	3059	1/1	0.95	0.05	-10.65	13,13,13,13	0
55	MG	BA	3072	1/1	0.95	0.08	-11.55	23,23,23,23	0
55	MG	BA	3028	1/1	0.97	0.06	-12.19	15,15,15,15	0
55	MG	DA	3073	1/1	0.75	0.09	-12.21	72,72,72,72	0
55	MG	CA	1615	1/1	0.66	0.09	-12.44	55,55,55,55	0
55	MG	BA	3071	1/1	0.98	0.09	-12.83	5,5,5,5	0
55	MG	DA	3168	1/1	0.92	0.10	-	47,47,47,47	0
55	MG	DA	3068	1/1	0.87	0.10	-	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	DA	3054	1/1	0.92	0.12	-	41,41,41,41	0
55	MG	BA	3091	1/1	0.93	0.10	-	23,23,23,23	0
55	MG	AA	1652	1/1	0.84	0.36	-	56,56,56,56	0
55	MG	DA	3155	1/1	0.96	0.15	-	45,45,45,45	0
55	MG	DA	3037	1/1	0.93	0.09	-	54,54,54,54	0
55	MG	CA	1650	1/1	0.78	0.26	-	44,44,44,44	0
55	MG	BA	3169	1/1	0.95	0.09	-	34,34,34,34	0
55	MG	BA	3020	1/1	0.86	0.18	-	8,8,8,8	0
55	MG	BA	3150	1/1	0.91	0.14	-	45,45,45,45	0
55	MG	BA	3149	1/1	0.92	0.15	-	27,27,27,27	0
55	MG	AA	1666	1/1	0.89	0.57	-	41,41,41,41	0
55	MG	CA	1638	1/1	0.73	0.18	-	84,84,84,84	0
55	MG	DA	3144	1/1	0.97	0.21	-	30,30,30,30	0
55	MG	DA	3082	1/1	0.95	0.08	-	66,66,66,66	0
55	MG	BA	3095	1/1	0.94	0.06	-	20,20,20,20	0
55	MG	BA	3114	1/1	0.97	0.22	-	0,0,0,0	0
55	MG	CA	1622	1/1	0.85	0.10	-	51,51,51,51	0
55	MG	DA	3091	1/1	0.88	0.06	-	76,76,76,76	0
55	MG	DA	3146	1/1	0.78	0.08	-	84,84,84,84	0
55	MG	BA	3124	1/1	0.97	0.15	-	5,5,5,5	0
55	MG	DA	3129	1/1	0.98	0.14	-	75,75,75,75	0
55	MG	DA	3034	1/1	0.88	0.11	-	62,62,62,62	0
55	MG	BA	3082	1/1	0.98	0.17	-	0,0,0,0	0
55	MG	DA	3061	1/1	0.58	0.17	-	80,80,80,80	0
55	MG	CA	1641	1/1	0.91	0.44	-	67,67,67,67	0
55	MG	DA	3078	1/1	0.95	0.23	-	83,83,83,83	0
55	MG	BA	3103	1/1	0.89	0.11	-	13,13,13,13	0
55	MG	BA	3160	1/1	0.92	0.22	-	29,29,29,29	0
55	MG	BA	3175	1/1	0.97	0.13	-	33,33,33,33	0
55	MG	CA	1654	1/1	0.93	0.24	-	58,58,58,58	0
55	MG	DA	3138	1/1	0.78	0.44	-	52,52,52,52	0
55	MG	DA	3093	1/1	0.48	0.43	-	101,101,101,101	0
55	MG	BB	203	1/1	0.95	0.06	-	15,15,15,15	0
55	MG	BA	3062	1/1	0.88	0.83	-	57,57,57,57	0
55	MG	AA	1657	1/1	0.98	0.21	-	46,46,46,46	0
55	MG	CA	1623	1/1	0.97	0.10	-	35,35,35,35	0
55	MG	DA	3049	1/1	0.28	0.28	-	109,109,109,109	0
55	MG	BA	3073	1/1	0.92	0.18	-	2,2,2,2	0
55	MG	BA	3044	1/1	0.92	0.04	-	19,19,19,19	0
55	MG	AA	1636	1/1	0.89	0.09	-	42,42,42,42	0
55	MG	DA	3094	1/1	0.55	0.14	-	93,93,93,93	0
55	MG	DA	3127	1/1	0.90	0.15	-	86,86,86,86	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	DA	3143	1/1	0.93	0.20	-	39,39,39,39	0
55	MG	DA	3036	1/1	0.86	0.08	-	70,70,70,70	0
55	MG	BA	3168	1/1	0.86	0.23	-	35,35,35,35	0
55	MG	DA	3008	1/1	0.72	0.41	-	100,100,100,100	0
55	MG	CA	1644	1/1	0.95	0.48	-	55,55,55,55	0
55	MG	AA	1653	1/1	0.71	0.28	-	51,51,51,51	0
55	MG	AA	1624	1/1	0.88	0.09	-	35,35,35,35	0
55	MG	DA	3012	1/1	0.88	0.20	-	74,74,74,74	0
55	MG	BA	3179	1/1	0.94	0.20	-	34,34,34,34	0
55	MG	DA	3166	1/1	0.92	0.20	-	57,57,57,57	0
55	MG	CA	1628	1/1	0.72	0.24	-	98,98,98,98	0
55	MG	DA	3071	1/1	0.85	0.08	-	96,96,96,96	0
55	MG	BA	3191	1/1	0.93	0.16	-	20,20,20,20	0
55	MG	BA	3143	1/1	0.99	0.30	-	14,14,14,14	0
55	MG	BA	3052	1/1	0.96	0.15	-	3,3,3,3	0
55	MG	DA	3105	1/1	0.94	0.08	-	67,67,67,67	0
55	MG	AA	1640	1/1	0.94	0.05	-	45,45,45,45	0
55	MG	AA	1668	1/1	0.80	0.20	-	58,58,58,58	0
55	MG	AA	1626	1/1	0.93	0.15	-	19,19,19,19	0
55	MG	DA	3058	1/1	0.61	0.17	-	73,73,73,73	0
55	MG	DA	3021	1/1	0.85	0.08	-	64,64,64,64	0
55	MG	DA	3098	1/1	0.89	0.14	-	73,73,73,73	0
55	MG	AA	1638	1/1	0.81	0.06	-	77,77,77,77	0
55	MG	CA	1649	1/1	0.50	0.18	-	71,71,71,71	0
55	MG	DA	3139	1/1	0.91	0.43	-	49,49,49,49	0
55	MG	BA	3078	1/1	0.92	0.08	-	31,31,31,31	0
55	MG	CA	1625	1/1	0.82	0.13	-	43,43,43,43	0
55	MG	DA	3092	1/1	0.84	0.10	-	77,77,77,77	0
55	MG	AA	1660	1/1	0.70	1.01	-	70,70,70,70	0
55	MG	BA	3031	1/1	0.98	0.15	-	2,2,2,2	0
55	MG	DA	3142	1/1	0.93	0.27	-	40,40,40,40	0
55	MG	CA	1642	1/1	0.96	0.24	-	29,29,29,29	0
55	MG	CA	1637	1/1	0.90	0.11	-	64,64,64,64	0
55	MG	BA	3047	1/1	0.91	0.15	-	9,9,9,9	0
55	MG	DA	3005	1/1	0.39	0.28	-	94,94,94,94	0
55	MG	AA	1603	1/1	0.97	0.13	-	48,48,48,48	0
55	MG	BA	3034	1/1	0.96	0.21	-	0,0,0,0	0
55	MG	DA	3045	1/1	0.36	0.26	-	95,95,95,95	0
55	MG	BA	3088	1/1	0.91	0.15	-	37,37,37,37	0
55	MG	DA	3038	1/1	0.93	0.08	-	75,75,75,75	0
55	MG	AA	1658	1/1	0.72	0.44	-	72,72,72,72	0
55	MG	AA	1611	1/1	0.99	0.10	-	19,19,19,19	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	BA	3007	1/1	0.98	0.09	-	17,17,17,17	0
55	MG	BA	3085	1/1	0.95	0.08	-	16,16,16,16	0
55	MG	BA	3005	1/1	0.93	0.08	-	42,42,42,42	0
55	MG	AA	1605	1/1	0.86	0.15	-	33,33,33,33	0
55	MG	BA	3027	1/1	0.96	0.09	-	4,4,4,4	0
55	MG	DA	3041	1/1	0.84	0.11	-	92,92,92,92	0
55	MG	CA	1653	1/1	0.97	0.10	-	42,42,42,42	0
55	MG	AA	1623	1/1	0.92	0.07	-	46,46,46,46	0
55	MG	BA	3176	1/1	0.96	0.11	-	13,13,13,13	0
55	MG	DA	3164	1/1	0.93	0.21	-	57,57,57,57	0
55	MG	AA	1608	1/1	0.99	0.18	-	16,16,16,16	0
55	MG	DA	3090	1/1	0.89	0.18	-	80,80,80,80	0
55	MG	CA	1608	1/1	0.92	0.13	-	63,63,63,63	0
55	MG	DA	3057	1/1	0.75	0.27	-	88,88,88,88	0
55	MG	DA	3085	1/1	0.85	0.08	-	78,78,78,78	0
55	MG	AA	1621	1/1	0.95	0.06	-	35,35,35,35	0
55	MG	CA	1636	1/1	0.79	0.20	-	113,113,113,113	0
55	MG	BA	3089	1/1	0.79	0.09	-	22,22,22,22	0
55	MG	BA	3158	1/1	0.96	0.20	-	15,15,15,15	0
55	MG	DA	3163	1/1	0.93	0.42	-	71,71,71,71	0
55	MG	BA	3164	1/1	0.99	0.31	-	19,19,19,19	0
55	MG	BA	3060	1/1	0.92	0.12	-	9,9,9,9	0
55	MG	DA	3115	1/1	0.96	0.11	-	51,51,51,51	0
55	MG	DA	3112	1/1	0.75	0.08	-	70,70,70,70	0
55	MG	BA	3183	1/1	0.99	0.21	-	24,24,24,24	0
55	MG	BA	3076	1/1	0.94	0.17	-	4,4,4,4	0
55	MG	DA	3149	1/1	0.63	0.26	-	54,54,54,54	0
55	MG	DA	3124	1/1	0.91	0.16	-	51,51,51,51	0
55	MG	BA	3126	1/1	0.95	0.15	-	4,4,4,4	0
55	MG	DA	3043	1/1	0.72	0.10	-	82,82,82,82	0
55	MG	BA	3118	1/1	0.96	0.13	-	1,1,1,1	0
55	MG	CA	1624	1/1	0.86	0.11	-	47,47,47,47	0
55	MG	BA	3039	1/1	0.96	0.14	-	0,0,0,0	0
55	MG	CA	1648	1/1	0.98	0.21	-	30,30,30,30	0
55	MG	BA	3167	1/1	0.96	0.12	-	21,21,21,21	0
55	MG	DA	3101	1/1	0.45	0.27	-	78,78,78,78	0
55	MG	AA	1610	1/1	0.93	0.19	-	63,63,63,63	0
55	MG	DA	3123	1/1	0.97	0.17	-	37,37,37,37	0
55	MG	DA	3069	1/1	0.88	0.08	-	60,60,60,60	0
55	MG	BA	3099	1/1	0.55	0.37	-	64,64,64,64	0
55	MG	BA	3065	1/1	0.88	0.17	-	0,0,0,0	0
55	MG	DA	3014	1/1	0.68	0.16	-	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	CA	1652	1/1	0.93	0.07	-	62,62,62,62	0
55	MG	AA	1615	1/1	0.97	0.07	-	50,50,50,50	0
55	MG	BA	3180	1/1	0.92	0.23	-	40,40,40,40	0
55	MG	BA	3102	1/1	0.82	0.19	-	10,10,10,10	0
55	MG	AA	1662	1/1	0.79	0.55	-	47,47,47,47	0
55	MG	BA	3101	1/1	0.97	0.09	-	2,2,2,2	0
55	MG	AA	1654	1/1	0.96	0.23	-	30,30,30,30	0
55	MG	AA	1643	1/1	0.97	0.12	-	25,25,25,25	0
55	MG	BA	3120	1/1	0.94	0.18	-	32,32,32,32	0
55	MG	DA	3031	1/1	0.94	0.07	-	57,57,57,57	0
55	MG	BA	3070	1/1	0.88	0.07	-	50,50,50,50	0
55	MG	BA	3083	1/1	0.87	0.13	-	20,20,20,20	0
55	MG	DA	3089	1/1	0.89	0.07	-	78,78,78,78	0
55	MG	BA	3055	1/1	0.88	0.12	-	6,6,6,6	0
55	MG	DA	3154	1/1	0.75	0.34	-	70,70,70,70	0
55	MG	CA	1631	1/1	0.89	0.14	-	92,92,92,92	0
55	MG	AA	1665	1/1	0.91	0.07	-	48,48,48,48	0
55	MG	BA	3145	1/1	0.87	0.39	-	41,41,41,41	0
55	MG	BA	3081	1/1	0.81	0.12	-	16,16,16,16	0
55	MG	AA	1627	1/1	0.86	0.13	-	58,58,58,58	0
55	MG	DA	3019	1/1	0.75	0.17	-	85,85,85,85	0
55	MG	DA	3122	1/1	0.97	0.08	-	44,44,44,44	0
55	MG	BA	3049	1/1	0.82	0.07	-	13,13,13,13	0
55	MG	DA	3056	1/1	0.84	0.07	-	66,66,66,66	0
55	MG	BA	3182	1/1	0.91	0.21	-	20,20,20,20	0
55	MG	DA	3084	1/1	0.91	0.20	-	72,72,72,72	0
55	MG	DA	3161	1/1	0.88	0.19	-	49,49,49,49	0
55	MG	BA	3141	1/1	0.93	0.18	-	26,26,26,26	0
55	MG	AA	1672	1/1	0.75	0.47	-	49,49,49,49	0
55	MG	BA	3128	1/1	0.97	0.13	-	0,0,0,0	0
55	MG	DA	3004	1/1	0.86	0.10	-	65,65,65,65	0
55	MG	CA	1651	1/1	0.86	0.30	-	50,50,50,50	0
55	MG	BA	3043	1/1	0.94	0.14	-	11,11,11,11	0
55	MG	AA	1651	1/1	0.86	0.25	-	40,40,40,40	0
55	MG	BA	3021	1/1	0.97	0.07	-	2,2,2,2	0
55	MG	BA	3125	1/1	0.94	0.14	-	20,20,20,20	0
55	MG	BA	3123	1/1	0.97	0.20	-	0,0,0,0	0
55	MG	DA	3157	1/1	0.85	0.49	-	63,63,63,63	0
55	MG	BA	3173	1/1	0.85	0.20	-	32,32,32,32	0
55	MG	DA	3113	1/1	0.76	0.61	-	77,77,77,77	0
55	MG	DA	3087	1/1	0.91	0.10	-	69,69,69,69	0
55	MG	BA	3194	1/1	0.98	0.08	-	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	BA	3142	1/1	0.98	0.39	-	5,5,5,5	0
55	MG	BA	3100	1/1	0.81	0.09	-	14,14,14,14	0
55	MG	CA	1643	1/1	0.94	0.24	-	56,56,56,56	0
55	MG	BA	3154	1/1	0.85	0.17	-	34,34,34,34	0
55	MG	DA	3027	1/1	0.58	0.99	-	96,96,96,96	0
55	MG	BA	3140	1/1	0.97	0.36	-	3,3,3,3	0
55	MG	BA	3186	1/1	0.90	0.14	-	32,32,32,32	0
55	MG	DA	3010	1/1	0.91	0.09	-	68,68,68,68	0
55	MG	BA	3002	1/1	0.78	0.07	-	15,15,15,15	0
55	MG	DA	3158	1/1	0.90	0.19	-	49,49,49,49	0
55	MG	DA	3017	1/1	0.57	0.13	-	84,84,84,84	0
55	MG	BB	202	1/1	0.96	0.10	-	2,2,2,2	0
55	MG	BA	3122	1/1	0.94	0.08	-	39,39,39,39	0
55	MG	CA	1634	1/1	0.95	0.10	-	52,52,52,52	0
55	MG	AA	1631	1/1	0.92	0.10	-	48,48,48,48	0
55	MG	CA	1655	1/1	0.86	0.13	-	51,51,51,51	0
55	MG	AA	1669	1/1	0.91	0.32	-	51,51,51,51	0
55	MG	BA	3192	1/1	0.96	0.22	-	34,34,34,34	0
55	MG	DA	3039	1/1	0.95	0.13	-	63,63,63,63	0
55	MG	BA	3048	1/1	0.66	0.11	-	53,53,53,53	0
55	MG	DA	3151	1/1	0.88	0.27	-	49,49,49,49	0
55	MG	BA	3017	1/1	0.98	0.06	-	1,1,1,1	0
55	MG	DA	3100	1/1	0.76	0.32	-	81,81,81,81	0
55	MG	DA	3066	1/1	0.94	0.15	-	39,39,39,39	0
55	MG	AA	1620	1/1	0.95	0.07	-	59,59,59,59	0
55	MG	BA	3162	1/1	0.97	0.13	-	37,37,37,37	0
55	MG	BA	3087	1/1	0.97	0.20	-	1,1,1,1	0
55	MG	CA	1629	1/1	0.60	0.08	-	80,80,80,80	0
55	MG	BA	3090	1/1	0.95	0.14	-	1,1,1,1	0
55	MG	BA	3093	1/1	0.96	0.04	-	38,38,38,38	0
55	MG	BA	3115	1/1	0.91	0.14	-	17,17,17,17	0
55	MG	DA	3022	1/1	0.74	0.13	-	62,62,62,62	0
55	MG	CA	1606	1/1	0.94	0.15	-	70,70,70,70	0
55	MG	CA	1633	1/1	0.85	0.34	-	78,78,78,78	0
55	MG	BA	3190	1/1	0.87	0.21	-	39,39,39,39	0
55	MG	AA	1639	1/1	0.89	0.06	-	60,60,60,60	0
55	MG	BA	3092	1/1	0.92	0.04	-	55,55,55,55	0
55	MG	CA	1618	1/1	0.97	0.12	-	45,45,45,45	0
55	MG	CA	1639	1/1	0.94	0.09	-	49,49,49,49	0
55	MG	BA	3053	1/1	0.90	0.12	-	6,6,6,6	0
55	MG	BA	3038	1/1	0.93	0.25	-	0,0,0,0	0
55	MG	BD	301	1/1	0.96	0.17	-	27,27,27,27	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	CA	1611	1/1	0.96	0.21	-	82,82,82,82	0
55	MG	BA	3046	1/1	0.99	0.12	-	2,2,2,2	0
55	MG	BA	3079	1/1	0.89	0.08	-	37,37,37,37	0
55	MG	DA	3059	1/1	0.77	0.23	-	70,70,70,70	0
55	MG	DA	3011	1/1	0.86	0.08	-	60,60,60,60	0
55	MG	DA	3134	1/1	0.71	0.64	-	100,100,100,100	0
55	MG	AA	1637	1/1	0.96	0.11	-	16,16,16,16	0
55	MG	DA	3072	1/1	0.43	0.16	-	80,80,80,80	0
55	MG	BA	3193	1/1	0.93	0.15	-	42,42,42,42	0
55	MG	DA	3033	1/1	0.80	0.16	-	71,71,71,71	0
55	MG	BA	3136	1/1	0.85	0.11	-	34,34,34,34	0
55	MG	BA	3011	1/1	0.98	0.18	-	1,1,1,1	0
55	MG	AA	1648	1/1	0.97	0.11	-	57,57,57,57	0
55	MG	DA	3165	1/1	0.62	0.51	-	68,68,68,68	0
55	MG	DA	3086	1/1	0.85	0.08	-	72,72,72,72	0
55	MG	DB	203	1/1	0.78	0.07	-	83,83,83,83	0
55	MG	DA	3088	1/1	0.94	0.07	-	52,52,52,52	0
55	MG	BA	3077	1/1	0.81	0.25	-	61,61,61,61	0
55	MG	CA	1604	1/1	0.72	0.07	-	89,89,89,89	0
55	MG	BA	3138	1/1	0.94	0.38	-	4,4,4,4	0
55	MG	DA	3032	1/1	0.88	0.10	-	63,63,63,63	0
55	MG	BA	3156	1/1	0.92	0.23	-	23,23,23,23	0
55	MG	DA	3007	1/1	0.67	0.21	-	101,101,101,101	0
55	MG	DA	3102	1/1	0.94	0.08	-	58,58,58,58	0
55	MG	BA	3139	1/1	0.99	0.40	-	0,0,0,0	0
55	MG	AA	1614	1/1	0.81	0.12	-	55,55,55,55	0
55	MG	DA	3118	1/1	0.95	0.10	-	66,66,66,66	0
55	MG	BA	3026	1/1	0.86	0.13	-	36,36,36,36	0
55	MG	DA	3074	1/1	0.77	0.11	-	68,68,68,68	0
55	MG	BA	3185	1/1	0.94	0.25	-	25,25,25,25	0
55	MG	BA	3057	1/1	0.95	0.06	-	3,3,3,3	0
55	MG	BA	3189	1/1	0.81	0.27	-	44,44,44,44	0
55	MG	CA	1620	1/1	0.93	0.04	-	65,65,65,65	0
55	MG	DA	3097	1/1	0.84	0.15	-	51,51,51,51	0
55	MG	BA	3184	1/1	0.98	0.17	-	10,10,10,10	0
55	MG	DA	3152	1/1	0.94	0.16	-	47,47,47,47	0
55	MG	DA	3132	1/1	0.55	0.42	-	89,89,89,89	0
55	MG	AA	1664	1/1	0.88	0.33	-	42,42,42,42	0
55	MG	BA	3061	1/1	0.93	0.25	-	28,28,28,28	0
55	MG	BA	3107	1/1	0.99	0.24	-	0,0,0,0	0
55	MG	BA	3129	1/1	0.94	0.14	-	5,5,5,5	0
55	MG	BA	3067	1/1	0.98	0.17	-	1,1,1,1	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	DA	3015	1/1	0.95	0.05	-	44,44,44,44	0
55	MG	CA	1645	1/1	0.95	0.19	-	40,40,40,40	0
55	MG	AA	1661	1/1	0.91	0.11	-	53,53,53,53	0
55	MG	BA	3032	1/1	0.92	0.08	-	5,5,5,5	0
55	MG	DA	3053	1/1	0.98	0.07	-	45,45,45,45	0
55	MG	DA	3126	1/1	0.87	0.16	-	59,59,59,59	0
55	MG	AA	1634	1/1	0.89	0.12	-	42,42,42,42	0
55	MG	BA	3045	1/1	0.95	0.10	-	21,21,21,21	0
55	MG	BA	3010	1/1	0.97	0.13	-	0,0,0,0	0
55	MG	BA	3171	1/1	0.87	0.21	-	24,24,24,24	0
55	MG	AA	1645	1/1	0.83	0.37	-	53,53,53,53	0
55	MG	BA	3157	1/1	0.90	0.27	-	27,27,27,27	0
55	MG	BA	3030	1/1	0.95	0.05	-	12,12,12,12	0
55	MG	DA	3141	1/1	0.91	0.37	-	41,41,41,41	0
55	MG	BA	3064	1/1	0.98	0.20	-	0,0,0,0	0
55	MG	CA	1647	1/1	0.81	0.22	-	45,45,45,45	0
55	MG	BA	3075	1/1	0.87	0.07	-	29,29,29,29	0
55	MG	BA	3134	1/1	0.94	0.34	-	47,47,47,47	0
55	MG	BA	3127	1/1	0.98	0.20	-	6,6,6,6	0
55	MG	BA	3004	1/1	0.92	0.12	-	25,25,25,25	0
55	MG	BB	204	1/1	0.96	0.39	-	21,21,21,21	0
55	MG	BA	3172	1/1	0.93	0.17	-	32,32,32,32	0
55	MG	DA	3120	1/1	0.44	0.31	-	97,97,97,97	0
55	MG	CA	1656	1/1	0.78	0.75	-	53,53,53,53	0
55	MG	D2	101	1/1	0.70	0.12	-	77,77,77,77	0
55	MG	CA	1646	1/1	0.67	0.33	-	65,65,65,65	0
55	MG	DA	3046	1/1	0.90	0.10	-	77,77,77,77	0
55	MG	BA	3086	1/1	0.89	0.11	-	5,5,5,5	0
55	MG	AA	1646	1/1	0.99	0.16	-	55,55,55,55	0
55	MG	DA	3167	1/1	0.89	0.40	-	43,43,43,43	0
55	MG	AA	1655	1/1	0.92	0.25	-	45,45,45,45	0
55	MG	DA	3162	1/1	0.93	0.12	-	35,35,35,35	0
55	MG	DA	3076	1/1	0.82	0.16	-	70,70,70,70	0
55	MG	AA	1602	1/1	0.91	0.10	-	46,46,46,46	0
55	MG	BA	3096	1/1	0.99	0.05	-	10,10,10,10	0
55	MG	BA	3112	1/1	0.84	0.17	-	8,8,8,8	0
55	MG	AA	1659	1/1	0.95	0.31	-	61,61,61,61	0
55	MG	BA	3068	1/1	0.95	0.20	-	0,0,0,0	0
55	MG	AA	1649	1/1	0.81	0.18	-	46,46,46,46	0
55	MG	BA	3104	1/1	0.95	0.06	-	18,18,18,18	0
55	MG	BA	3008	1/1	0.94	0.04	-	22,22,22,22	0
55	MG	DA	3136	1/1	0.72	0.27	-	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	BA	3015	1/1	0.91	0.12	-	6,6,6,6	0
55	MG	BA	3116	1/1	0.96	0.22	-	50,50,50,50	0
55	MG	BA	3148	1/1	0.86	0.46	-	24,24,24,24	0
55	MG	DA	3028	1/1	0.74	0.23	-	83,83,83,83	0
55	MG	DA	3147	1/1	0.96	0.10	-	60,60,60,60	0
55	MG	DA	3047	1/1	0.78	0.10	-	80,80,80,80	0
55	MG	DA	3104	1/1	0.82	0.15	-	67,67,67,67	0
55	MG	BA	3040	1/1	0.97	0.17	-	3,3,3,3	0
55	MG	BQ	201	1/1	0.98	0.26	-	1,1,1,1	0
55	MG	DA	3145	1/1	0.90	0.38	-	67,67,67,67	0
55	MG	CA	1605	1/1	0.73	0.17	-	88,88,88,88	0
55	MG	BA	3144	1/1	0.99	0.28	-	8,8,8,8	0
55	MG	DA	3119	1/1	0.97	0.07	-	46,46,46,46	0
55	MG	CA	1613	1/1	0.96	0.11	-	24,24,24,24	0
55	MG	DA	3128	1/1	0.76	0.13	-	71,71,71,71	0
55	MG	DA	3077	1/1	0.98	0.13	-	65,65,65,65	0
55	MG	AA	1667	1/1	0.76	0.36	-	54,54,54,54	0
55	MG	DA	3016	1/1	0.69	0.42	-	78,78,78,78	0
55	MG	DA	3156	1/1	0.90	0.11	-	42,42,42,42	0
55	MG	BA	3188	1/1	0.97	0.17	-	16,16,16,16	0
55	MG	AA	1619	1/1	0.96	0.16	-	37,37,37,37	0
55	MG	AA	1628	1/1	0.98	0.05	-	35,35,35,35	0
55	MG	DA	3160	1/1	0.87	0.11	-	74,74,74,74	0
55	MG	AA	1601	1/1	0.88	0.07	-	41,41,41,41	0
55	MG	BA	3042	1/1	0.98	0.14	-	11,11,11,11	0
55	MG	BA	3113	1/1	0.97	0.08	-	13,13,13,13	0
55	MG	DA	3063	1/1	0.61	0.75	-	93,93,93,93	0
55	MG	CA	1609	1/1	0.78	0.11	-	77,77,77,77	0
55	MG	DA	3150	1/1	0.71	0.20	-	61,61,61,61	0
55	MG	DA	3148	1/1	0.71	0.14	-	58,58,58,58	0
55	MG	DA	3108	1/1	0.80	0.12	-	72,72,72,72	0
55	MG	CA	1602	1/1	0.82	0.15	-	69,69,69,69	0
55	MG	BA	3166	1/1	0.93	0.17	-	36,36,36,36	0
55	MG	DA	3035	1/1	0.98	0.09	-	41,41,41,41	0
55	MG	AA	1650	1/1	0.90	0.16	-	37,37,37,37	0
55	MG	DA	3062	1/1	0.92	1.19	-	104,104,104,104	0
55	MG	DA	3002	1/1	0.87	0.08	-	65,65,65,65	0
55	MG	BA	3146	1/1	0.96	0.26	-	15,15,15,15	0
55	MG	BA	3012	1/1	0.98	0.09	-	25,25,25,25	0
55	MG	CA	1627	1/1	0.90	0.11	-	76,76,76,76	0
55	MG	BA	3181	1/1	0.96	0.18	-	19,19,19,19	0
55	MG	BA	3178	1/1	0.94	0.14	-	13,13,13,13	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	DA	3030	1/1	0.78	0.18	-	72,72,72,72	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.