



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 09:22 PM GMT

PDB ID : 4U20  
Title : Crystal structure of the E. coli ribosome bound to flopristin.  
Authors : Noeske, J.; Huang, J.; Olivier, N.B.; Giacobbe, R.A.; Zambrowski, M.; Cate, J.H.D.  
Deposited on : 2014-06-06  
Resolution : 2.90 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

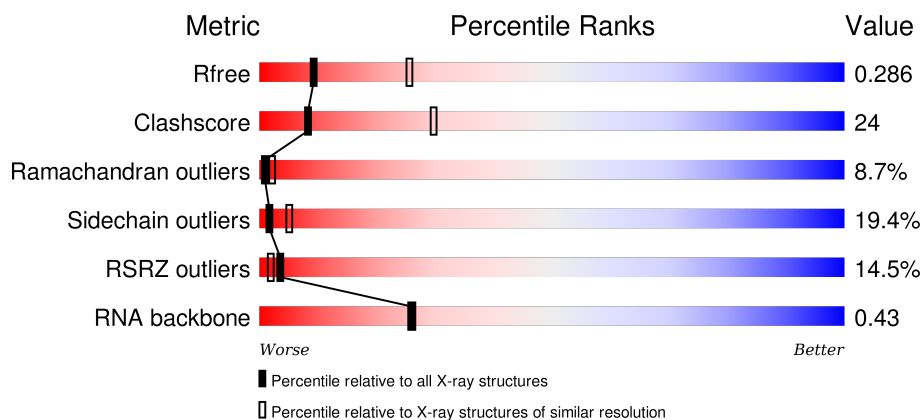
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

## *X-RAY DIFFRACTION*

The reported resolution of this entry is 2.90 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	1451 (2.90-2.90)
Clashscore	102246	1668 (2.90-2.90)
Ramachandran outliers	100387	1630 (2.90-2.90)
Sidechain outliers	100360	1632 (2.90-2.90)
RSRZ outliers	91569	1456 (2.90-2.90)
RNA backbone	2183	1093 (3.30-2.50)

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>2%</div> <div>30% 52% 17%</div> </div>
1	CA	1539	<div> <div>5%</div> <div>31% 53% 16%</div> </div>
2	AB	218	<div> <div>20%</div> <div>16% 46% 30% 7%</div> </div>
2	CB	218	<div> <div>30%</div> <div>24% 48% 25%</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	

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	MG	AA	1622	-	-	-	X
54	MG	AA	1644	-	-	-	X
54	MG	AA	1655	-	-	-	X
54	MG	BA	3029	-	-	-	X
54	MG	BA	3042	-	-	-	X
54	MG	BA	3051	-	-	-	X
54	MG	BA	3110	-	-	-	X
54	MG	BA	3133	-	-	-	X
54	MG	BA	3145	-	-	-	X
54	MG	BA	3162	-	-	-	X
54	MG	BA	3171	-	-	-	X
54	MG	BA	3176	-	-	-	X
54	MG	BA	3179	-	-	-	X
54	MG	BA	3187	-	-	-	X
54	MG	CA	1615	-	-	-	X
54	MG	DA	3003	-	-	-	X
54	MG	DA	3029	-	-	-	X
54	MG	DA	3042	-	-	-	X
54	MG	DA	3049	-	-	-	X
54	MG	DA	3059	-	-	-	X
54	MG	DA	3061	-	-	-	X
54	MG	DA	3065	-	-	-	X
54	MG	DA	3070	-	-	-	X
54	MG	DA	3073	-	-	-	X
54	MG	DA	3111	-	-	-	X
54	MG	DA	3125	-	-	-	X
54	MG	DA	3140	-	-	-	X
54	MG	DA	3154	-	-	-	X
55	VIF	BA	3001	-	-	-	X
56	ZN	B4	101	-	-	X	-

## 2 Entry composition

There are 57 unique types of molecules in this entry. The entry contains 288258 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			
			780	492	146	142	0	0	0

- 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		
			753	479	137	134	3	0	0
43	DV	94	Total	C	N	O	S		
			753	479	137	134	3	0	0

- 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		
			580	359	117	103	1	0	0
44	DW	75	Total	C	N	O	S		
			569	353	113	102	1	0	0

- 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		
			625	388	129	106	2	0	0
45	DX	77	Total	C	N	O	S		
			625	388	129	106	2	0	0

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

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

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

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

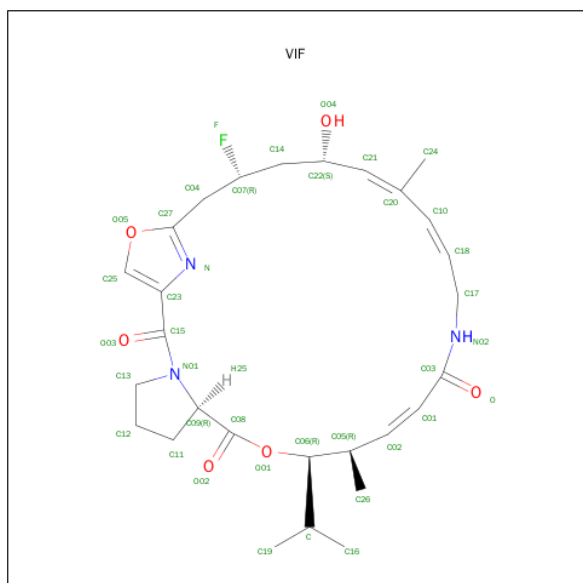
- Molecule 53 is a protein called 50S ribosomal protein L1.

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

- Molecule 54 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
54	BB	4	Total	Mg	0	0
			4	4		
54	BA	194	Total	Mg	0	0
			194	194		
54	BN	1	Total	Mg	0	0
			1	1		
54	DQ	1	Total	Mg	0	0
			1	1		
54	CM	1	Total	Mg	0	0
			1	1		
54	D2	1	Total	Mg	0	0
			1	1		
54	AA	72	Total	Mg	0	0
			72	72		
54	DA	166	Total	Mg	0	0
			166	166		
54	DB	3	Total	Mg	0	0
			3	3		
54	CA	55	Total	Mg	0	0
			55	55		

- Molecule 55 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
55	BA	1	Total	C	F	N	O	0	0
			38	28	1	3	6		
55	DA	1	Total	C	F	N	O	0	0
			38	28	1	3	6		

- Molecule 56 is ZINC ION (three-letter code: ZN) (formula: Zn).

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

- Molecule 57 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	AA	195	Total	O	0	0
			195	195		
57	AL	1	Total	O	0	0
			1	1		
57	AN	5	Total	O	0	0
			5	5		
57	AT	1	Total	O	0	0
			1	1		
57	AU	1	Total	O	0	0
			1	1		
57	BA	620	Total	O	0	0
			620	620		
57	BB	13	Total	O	0	0
			13	13		
57	BC	6	Total	O	0	0
			6	6		
57	BD	3	Total	O	0	0
			3	3		
57	BE	4	Total	O	0	0
			4	4		
57	BF	1	Total	O	0	0
			1	1		
57	BG	1	Total	O	0	0
			1	1		
57	BL	8	Total	O	0	0
			8	8		
57	BN	4	Total	O	0	0
			4	4		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	BS	1	Total 1	O 1	0	0
57	BV	1	Total 1	O 1	0	0
57	B2	1	Total 1	O 1	0	0
57	B3	2	Total 2	O 2	0	0
57	B4	1	Total 1	O 1	0	0
57	CA	189	Total 189	O 189	0	0
57	CL	1	Total 1	O 1	0	0
57	CN	3	Total 3	O 3	0	0
57	CT	4	Total 4	O 4	0	0
57	CU	1	Total 1	O 1	0	0
57	DA	613	Total 613	O 613	0	0
57	DB	13	Total 13	O 13	0	0
57	DC	9	Total 9	O 9	0	0
57	DD	4	Total 4	O 4	0	0
57	DE	2	Total 2	O 2	0	0
57	DJ	1	Total 1	O 1	0	0
57	DL	3	Total 3	O 3	0	0
57	DN	1	Total 1	O 1	0	0
57	DT	2	Total 2	O 2	0	0
57	DV	1	Total 1	O 1	0	0
57	D0	1	Total 1	O 1	0	0

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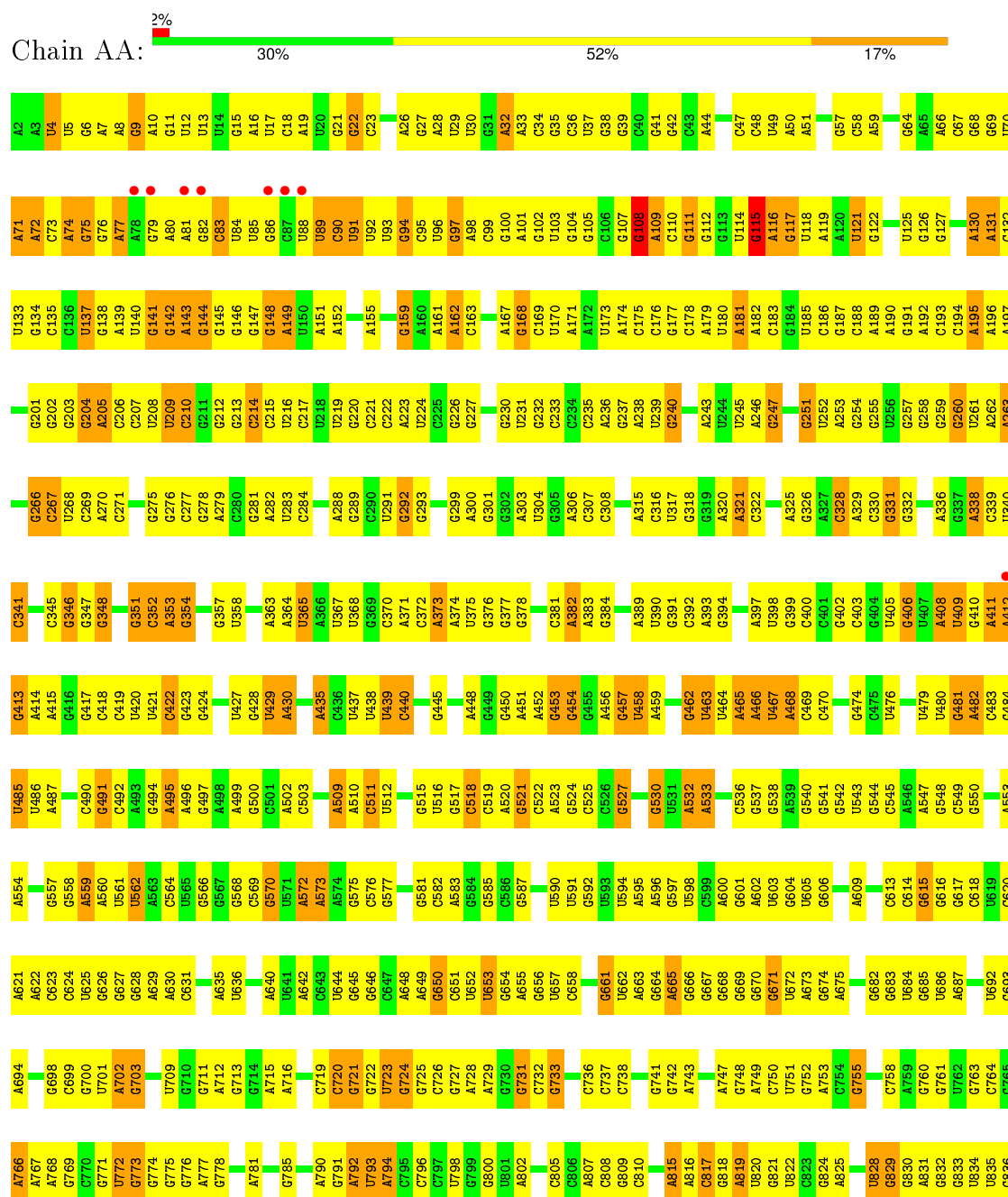
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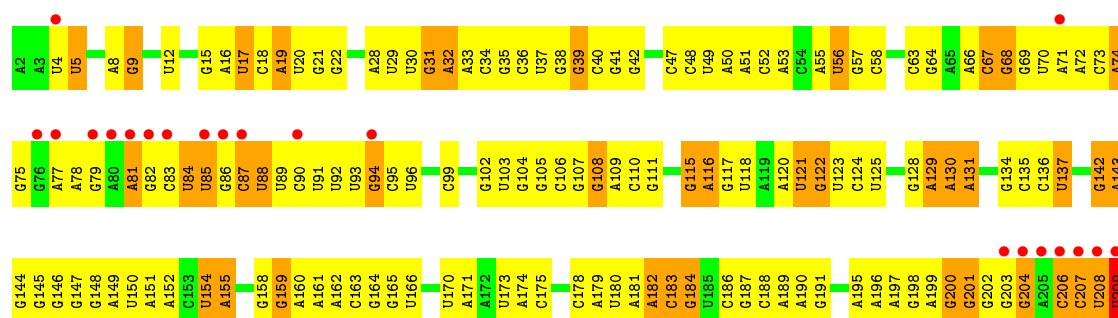
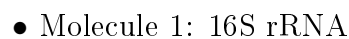
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	D2	3	Total 3	O 3	0	0
57	D3	2	Total 2	O 2	0	0
57	D4	1	Total 1	O 1	0	0

### 3 Residue-property plots

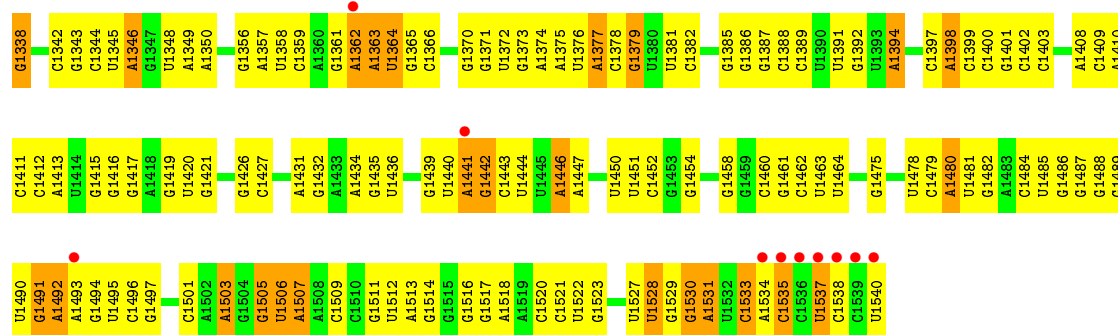
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according 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

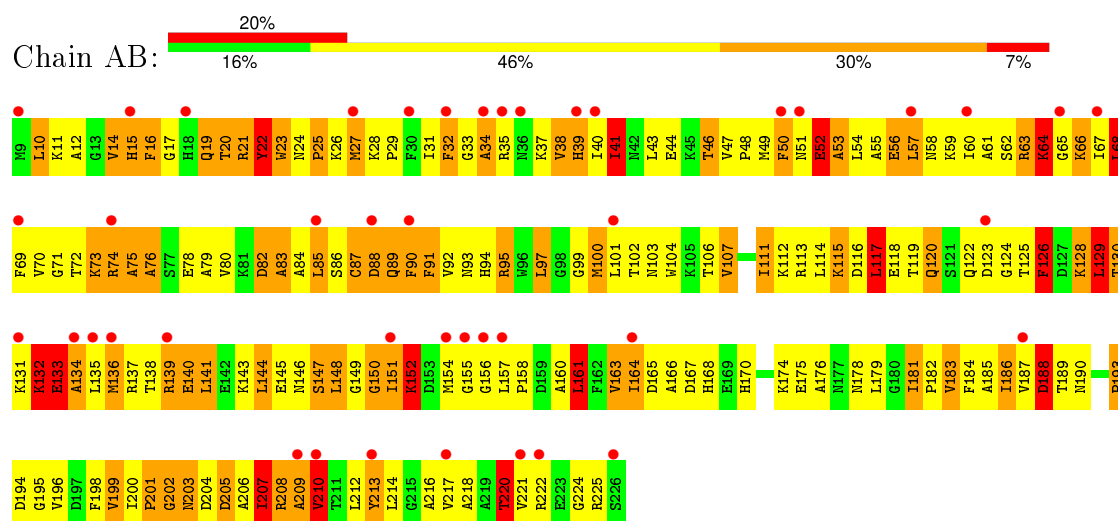




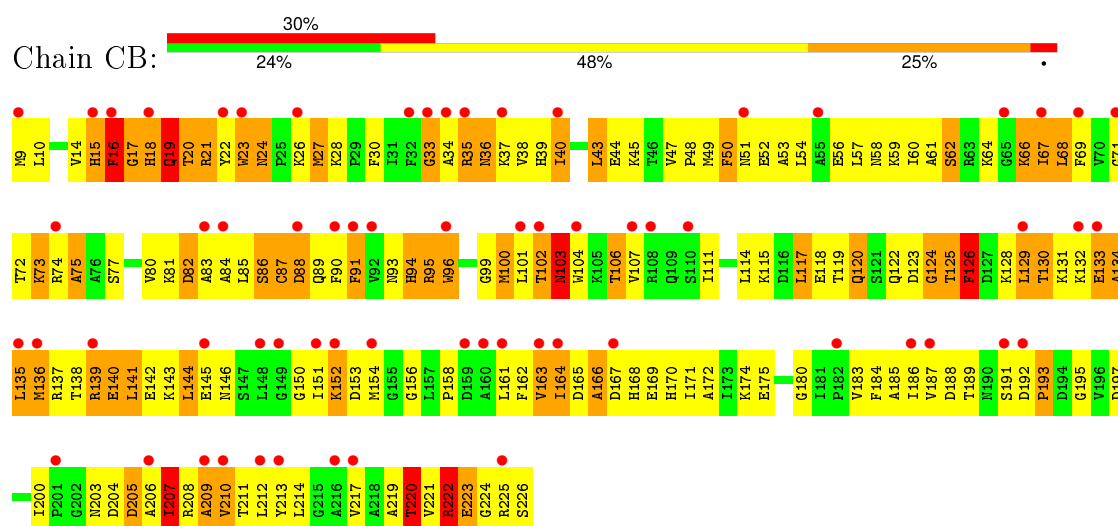
A1274	A1275	G1276	G1277	G1278	G1279	A1280	C1284	A1285	A1286	A1287	A1288	G1291	G1292	G1293	G1294	G1295	G1296	G1297	G1298	A1299	G1300	G1301	C1302	G1303	G1304	G1305	A1306	G1307	G1308	G1309	G1310	G1311	G1312	G1313	G1314	G1315	G1316	A1317	A1318	A1319	G1320	A1321	G1322	G1323	G1324	G1325	G1326	G1327	C1328	G1329	G1330	G1331	A1332	G1335	C1336	G1337					
U1205	G1206	U1211	U1212	A1213	G1214	G1215	G1216	G1217	G1218	A1219	G1220	G1221	G1222	G1223	A1224	A1225	A1226	A1227	G1231	G1232	A1233	G1234	U1235	G1236	A1237	A1238	G1239	A1240	G1241	G1242	G1243	G1244	G1245	G1246	A1247	A1248	A1249	A1250	A1251	G1252	G1253	A1254	G1255	A1256	A1257	G1260	A1261	G1262	G1263	U1264	C1265	G1266	A1267	G1268	A1269	G1270	A1271	G1272	C1273		
G1133	G1134	U1135	C1136	G1137	G1138	G1139	C1140	C1141	G1142	G1143	G1144	A1145	A1146	A1150	A1151	A1152	G1153	G1154	A1155	A1156	A1157	G1158	U1159	G1160	G1161	C1162	A1163	G1166	A1167	U1168	A1169	A1170	A1171	G1174	A1179	A1180	G1181	G1182	U1183	G1184	G1185	G1191	G1192	G1195	A1196	A1197	G1198	U1199	G1200	A1201	U1202	C1203	A1204								
U1061	U1062	U1065	U1066	A1067	G1068	G1069	U1070	C1071	G1072	U1073	G1074	U1075	U1076	G1077	U1078	G1079	A1080	A1081	A1082	U1083	G1084	U1085	U1086	G1087	G1088	G1089	U1090	G1094	U1095	C1096	C1097	C1098	G1099	C1100	A1101	A1102	C1103	G1104	A1105	G1106	C1107	G1108	G1112	U1118	G1124	U1125	U1126	U1127	G1128	C1129	A1130	G1131	C1132								
A994	C995	A996	U997	G998	G999	A1000	C1001	G1002	G1003	A1004	A1005	G1006	U1007	U1008	U1009	G1013	A1014	G1015	A1016	U1017	G1018	A1019	G1020	A1021	A1022	U1023	G1024	U1025	U1026	C1027	U1028	U1029	C1030	G1031	G1032	G1033	A1034	A1035	A1036	C1037	G1038	G1039	U1040	G1041	A1042	G1043	A1044	C1045	A1046	G1047	U1048	U1049	G1050	G1053	C1054	A1055	U1056				
U921	G922	A923	C924	G925	G926	G929	C930	C931	C932	G933	C934	A935	A938	G939	C940	G941	G942	A949	U950	G951	U952	U953	G954	G955	G956	G957	A958	A959	U960	U965	G966	C967	A968	A969	C970	G971	C972	G973	G974	A975	G976	A977	A978	C979	C980	A983	G987	G988	U989	C990	U991	U992	G993								
G846	G847	C848	G851	G852	C853	U854	U855	C856	C857	G858	G859	A860	G861	C862	U863	C866	G867	G868	G869	A872	G873	G874	C875	C876	G877	A878	C879	C880	G881	C882	C883	U884	G885	G888	A889	G890	U891	A892	G896	C899	A900	A901	U905	A906	A909	C910	A913	A914	A919	U920											
G776	A777	G778	A781	A782	G785	G790	G791	G792	G793	A794	U798	G799	G800	U801	A802	G803	U804	C805	C806	G807	C808	G809	C810	G811	G812	G813	G814	G815	G816	G817	G818	A819	U820	G821	U822	C823	G824	A825	C826	U827	U828	G829	G833	U834	U835	G836	A839	A841	U842	U843	G844	A845									
G713	G714	A715	A716	U717	A718	G719	G720	G721	G722	G723	G724	G725	A728	G730	G731	G732	G733	G734	C735	C736	C737	C738	C739	G670	G671	G672	U673	U674	G675	G676	G677	G678	G679	G682	G683	U684	A687	G688	G689	G690	G691	A695	U701	A702	G703	A704	G705	A706	U707	C708	U709	G710	G711	G712							
U636	C637	A642	A643	U644	G645	A649	G650	G651	G652	U653	G654	U657	G661	U662	G663	A665	G666	G667	G670	G671	G672	U673	U674	U675	U676	U677	U678	U679	U680	U681	U682	U683	U684	U685	U686	U687	U688	U689	U690	U691	U692	U693	U694	U695	U696	U697	U698	U699	U700	U701	U702	U703	U704	U705	U706	U707	U708	U709	U710	U711	U712
G558	A559	U562	A563	C564	G567	U568	G569	U571	A572	A573	U574	A575	C576	G577	C578	G581	C582	A583	G584	G585	C586	U590	U591	G597	U598	G604	U605	G606	A607	A608	A609	C613	G614	A621	A622	C623	C624	U625	U626	G627	U628	U629	U630	U631	U632	U633	U634	U635	U636	U637	U638	U639	U640	U641	U642	U643	U644	U645	U646		
U427	G428	U429	A431	A432	C433	U434	A435	C436	U437	U438	U439	C440	A441	G442	C443	G444	G445	G446	A451	G453	G454	G455	A456	A457	U458	U459	U463	U464	A465	A466	U467	U468	C469	G474	C475	U476	U477	A478	U479	U480	G481	A482	C483	G484	A485	U486	C489	C490	G491	C492	A495	A496									
G497	A498	A499	G500	C501	A502	C503	C504	G505	G506	A509	C511	U512	C513	C514	G515	U516	G517	C518	C519	A520	G521	C522	A523	C525	C526	G527	C528	G529	G530	A532	A533	U534	A535	C536	G537	G538	A539	G540	G541	U542	U543	C545	A546	A547	G548	G549	U551	U552	A553	A554	U555	C556	G557								
C210	G211	G212	G213	C214	G215	U216	C217	G222	C223	U224	G227	A228	U229	G230	C234	G237	A238	U239	G240	G241	G242	C243	U244	U245	A246	G247	C248	U249	A250	G251	U252	A253	G254	G255	G256	G257	A258	U259	A262	C263	G264	G265	G266	C267	U268	C269	A270	C271	C272	U273	G276	C277	G278								



• Molecule 2: 30S ribosomal protein S2

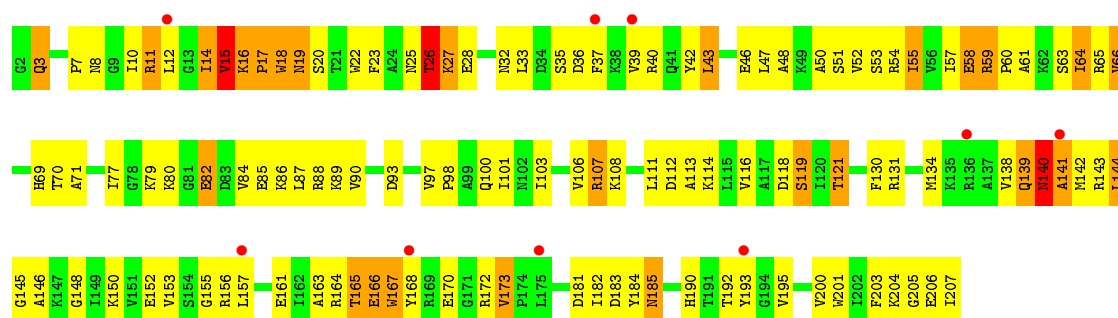


• Molecule 2: 30S ribosomal protein S2

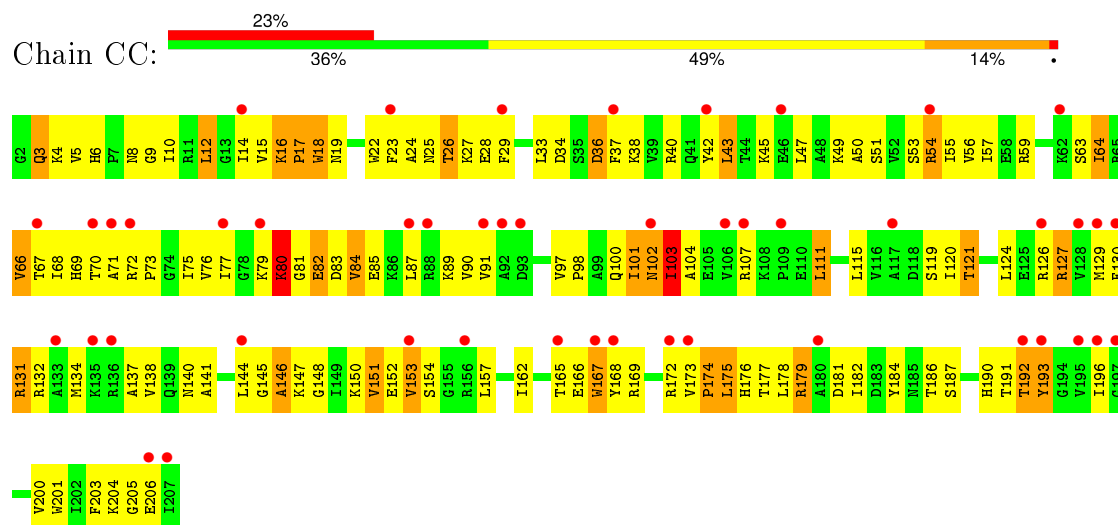


• Molecule 3: 30S ribosomal protein S3

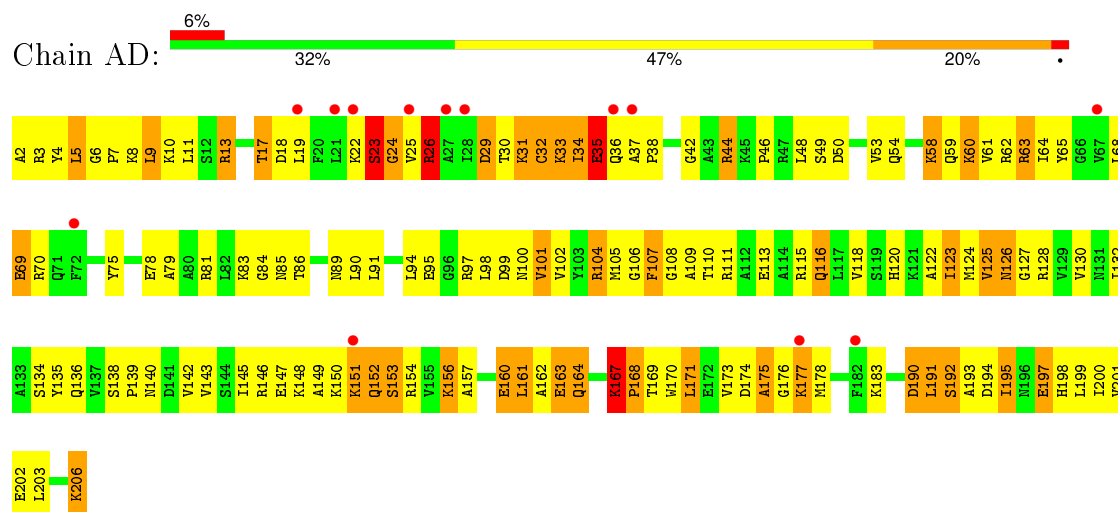




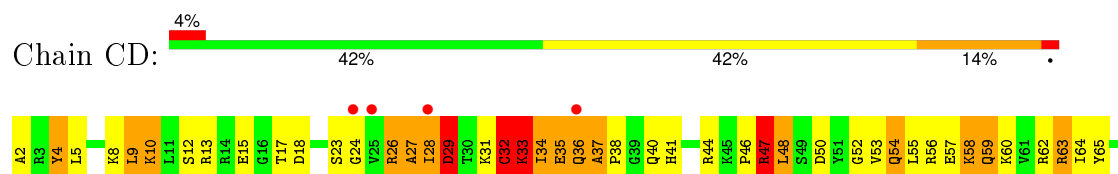
• Molecule 3: 30S ribosomal protein S3

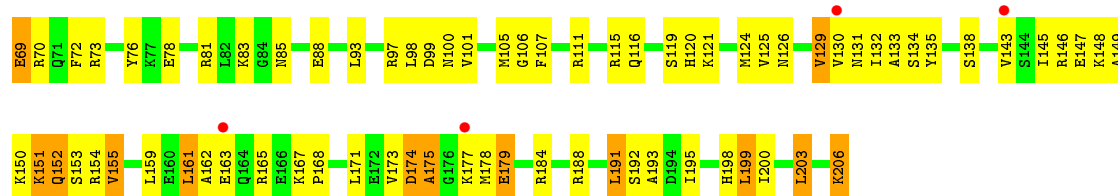


• Molecule 4: 30S ribosomal protein S4

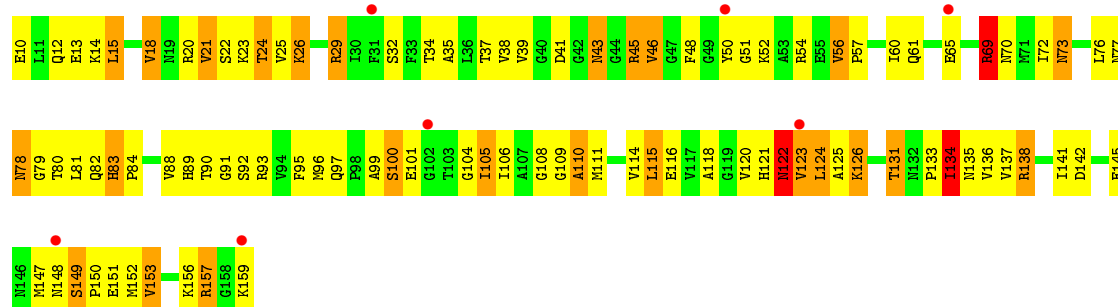


• Molecule 4: 30S ribosomal protein S4

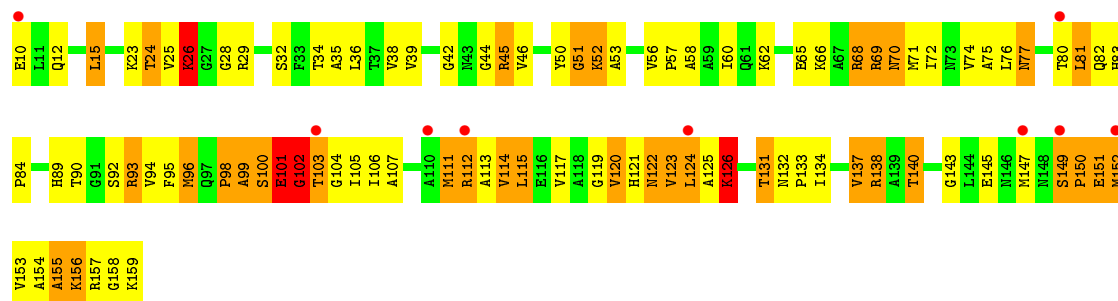




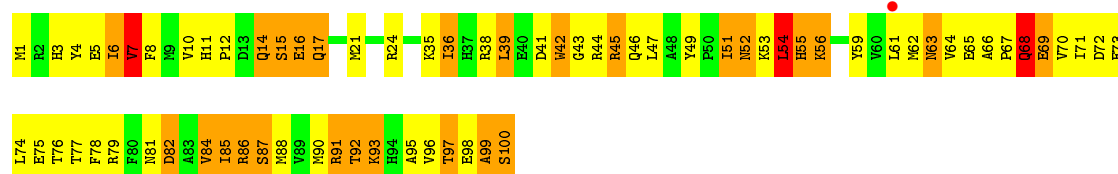
• Molecule 5: 30S ribosomal protein S5



• Molecule 5: 30S ribosomal protein S5

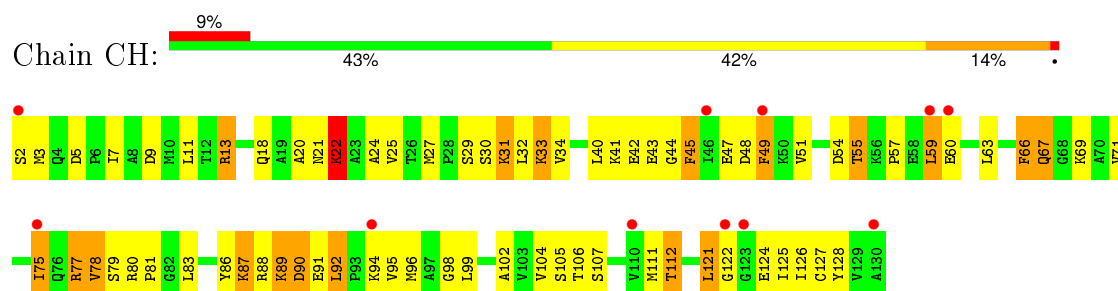
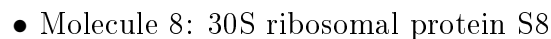
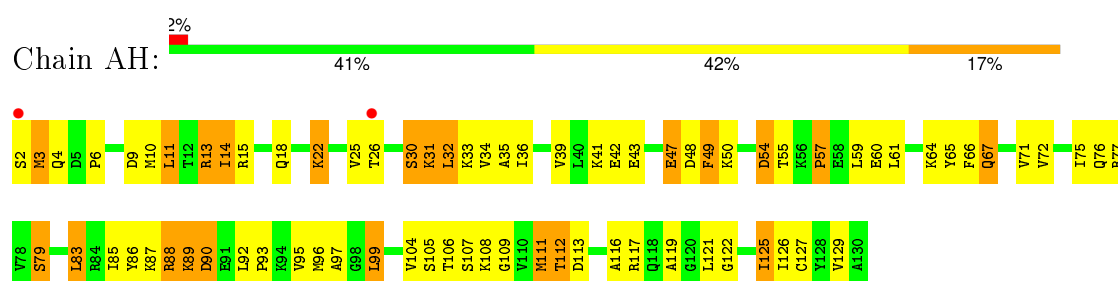
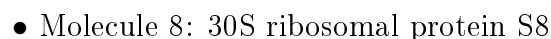
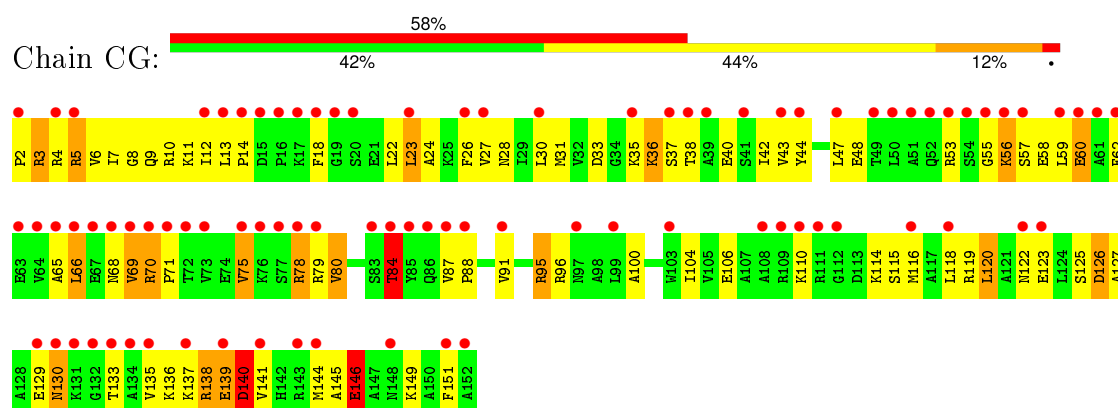
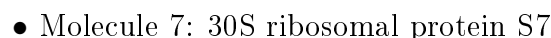
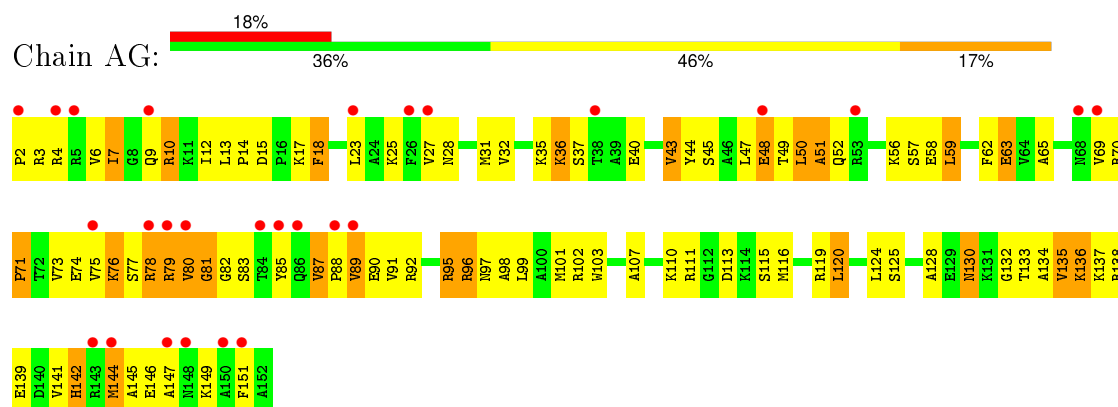
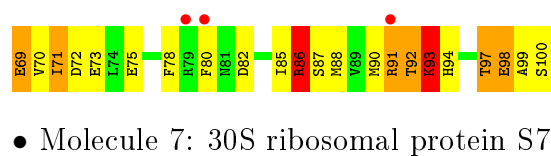


• Molecule 6: 30S ribosomal protein S6



• Molecule 6: 30S ribosomal protein S6








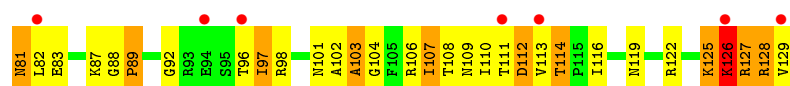
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- 
- | Category | Percentage | Items  |
|----------|------------|--|
| Red      | 17%        | R4, R33, R88, R99, R106, R107, R111, R124, R129, R130  |
| Green    | 26%        | G5, G6, G7, G8, G9, G10, G11, G12, G13, G14, G15, G16, G17, G18, G19, G20, G21, G22, G23, G24, G25, G26, G27, G28, G29, G30, G31, G32, G33, G34, G35, G36, G37, G38, G39, G40, G41, G42, G43, G44, G45, G46, G47, G48, G49, G50, G51, G52, G53, G54, G55, G56, G57, G58, G59, G60, G61, G62, G63, G64, G65                 |
| Yellow   | 50%        | Y1, Y2, Y3, Y4, Y5, Y6, Y7, Y8, Y9, Y10, Y11, Y12, Y13, Y14, Y15, Y16, Y17, Y18, Y19, Y20, Y21, Y22, Y23, Y24, Y25, Y26, Y27, Y28, Y29, Y30, Y31, Y32, Y33, Y34, Y35, Y36, Y37, Y38, Y39, Y40, Y41, Y42, Y43, Y44, Y45, Y46, Y47, Y48, Y49, Y50, Y51, Y52, Y53, Y54, Y55, Y56, Y57, Y58, Y59, Y60, Y61, Y62, Y63, Y64, Y65 |
| Orange   | 23%        | O1, O2, O3, O4, O5, O6, O7, O8, O9, O10, O11, O12, O13, O14, O15, O16, O17, O18, O19, O20, O21, O22, O23, O24, O25, O26, O27, O28, O29, O30, O31, O32, O33, O34, O35, O36, O37, O38, O39, O40, O41, O42, O43, O44, O45, O46, O47, O48, O49, O50, O51, O52, O53, O54, O55, O56, O57, O58, O59, O60, O61, O62, O63, O64, O65 |

- Chain CI:
- 

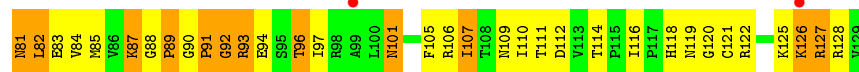
- Chain AJ:
- 
- | Category | Percentage |
|----------|------------|
| H5       | 16%        |
| L6       | 20%        |
| R7       | 47%        |
| L8       | 28%        |
| R9       | 5%         |
| L10      | 16%        |
| A11      | 20%        |
| F13      | 47%        |
| D14      | 28%        |
| H15      | 5%         |
| R16      | 16%        |
| L17      | 20%        |
| I18      | 47%        |
| D19      | 28%        |
| T22      | 5%         |
| T25      | 16%        |
| V26      | 20%        |
| E27      | 47%        |
| T28      | 28%        |
| A29      | 5%         |
| F30      | 16%        |
| R31      | 20%        |
| T32      | 47%        |
| G33      | 28%        |
| A34      | 5%         |
| G35      | 16%        |
| V36      | 20%        |
| R37      | 47%        |
| G38      | 28%        |
| P39      | 5%         |
| L40      | 16%        |
| P41      | 20%        |
| L42      | 47%        |
| P43      | 28%        |
| T44      | 5%         |
| F47      | 16%        |
| R48      | 20%        |
| F49      | 47%        |
| T50      | 28%        |
| V51      | 5%         |
| L52      | 16%        |
| L53      | 20%        |
| H56      | 47%        |
| V57      | 28%        |
| L58      | 5%         |
| K59      | 16%        |
| D60      | 20%        |
| A61      | 47%        |
| R62      | 28%        |
| D63      | 5%         |
| D64      | 16%        |
| V65      | 20%        |
| E66      | 47%        |
| L67      | 28%        |
| H70      | 5%         |
| L71      | 16%        |
| R72      | 20%        |
| L73      | 47%        |
| V74      | 28%        |
| D75      | 5%         |
| V77      | 16%        |
| E78      | 20%        |
| T80      | 47%        |
| E81      | 28%        |
| R82      | 5%         |
| T83      | 16%        |
| V84      | 20%        |
| D85      | 47%        |
| L86      | 28%        |
| L87      | 5%         |
| E88      | 16%        |
| R89      | 20%        |
| L90      | 47%        |
| D91      | 28%        |
| L92      | 5%         |
| A93      | 16%        |
| A94      | 20%        |
| G95      | 47%        |
| V96      | 28%        |
| D97      | 5%         |
| V98      | 16%        |
| Q99      | 20%        |
| L100     | 47%        |
| S101     | 28%        |
| L102     | 5%         |

- Chain CJ:
- 
- | Item | Segment |
|------|---------|
| T69  | Green   |
| H70  | Green   |
| L71  | Green   |
| R72  | Green   |
| L73  | Green   |
| V74  | Green   |
| D75  | Green   |
| L76  | Green   |
| V77  | Green   |
| E78  | Green   |
| V79  | Green   |
| T80  | Green   |
| E81  | Green   |
| K82  | Green   |
| T83  | Green   |
| V84  | Green   |
| D85  | Green   |
| A86  | Green   |
| L87  | Green   |
| M88  | Green   |
| R89  | Green   |
| L90  | Green   |
| D91  | Green   |
| L92  | Green   |
| A93  | Green   |
| A94  | Green   |
| G95  | Green   |
| V96  | Green   |
| D97  | Green   |
| V98  | Green   |
| Q99  | Green   |
| I100 | Green   |
| S101 | Green   |
| L102 | Green   |
| R5   | Yellow  |
| I6   | Yellow  |
| R7   | Yellow  |
| I8   | Yellow  |
| L10  | Yellow  |
| K11  | Yellow  |
| A12  | Yellow  |
| F13  | Yellow  |
| I14  | Yellow  |
| H15  | Yellow  |
| R16  | Yellow  |
| L17  | Yellow  |
| I18  | Yellow  |
| D19  | Yellow  |
| Q20  | Yellow  |
| I21  | Yellow  |
| T22  | Yellow  |
| A23  | Yellow  |
| E24  | Yellow  |
| I25  | Yellow  |
| V26  | Yellow  |
| E27  | Yellow  |
| T28  | Yellow  |
| A29  | Yellow  |
| R30  | Yellow  |
| R31  | Yellow  |
| T32  | Yellow  |
| G33  | Yellow  |
| A34  | Yellow  |
| Q35  | Yellow  |
| V36  | Yellow  |
| R37  | Yellow  |
| G38  | Yellow  |
| P39  | Yellow  |
| I40  | Yellow  |
| P41  | Yellow  |
| L42  | Yellow  |
| R45  | Yellow  |
| K46  | Yellow  |
| E47  | Yellow  |
| R48  | Yellow  |
| F49  | Yellow  |
| T50  | Yellow  |
| V51  | Yellow  |
| L52  | Yellow  |
| I53  | Yellow  |
| V57  | Yellow  |
| I58  | Yellow  |
| K59  | Yellow  |
| R62  | Yellow  |
| D63  | Yellow  |
| Q64  | Yellow  |
| V65  | Yellow  |
| E66  | Yellow  |
| L67  | Yellow  |
| R68  | Yellow  |

- Chain AK: 



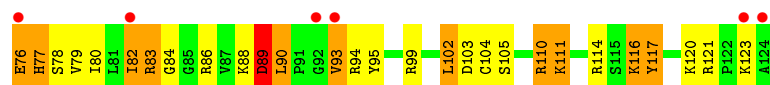
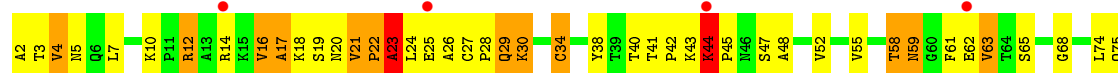
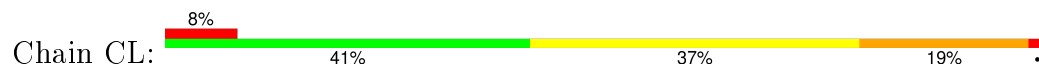
- Molecule 11: 30S ribosomal protein S11



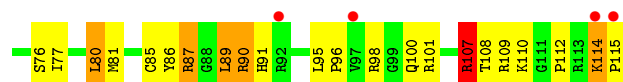
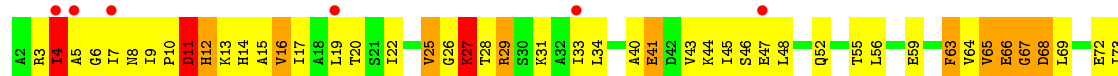
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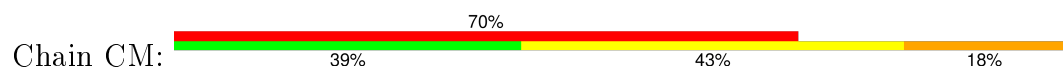
- Molecule 12: 30S ribosomal protein S12

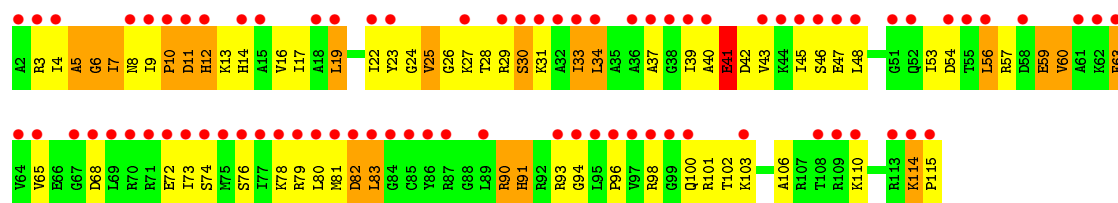


- Molecule 13: 30S ribosomal protein S13

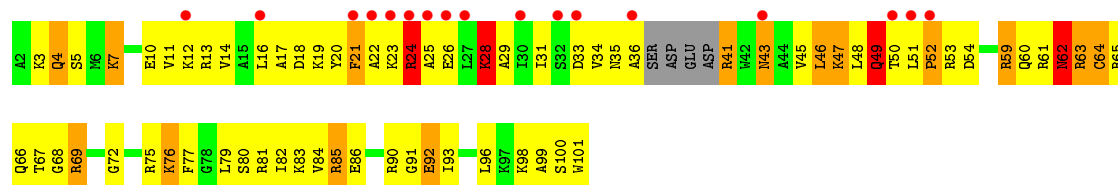


- Molecule 13: 30S ribosomal protein S13

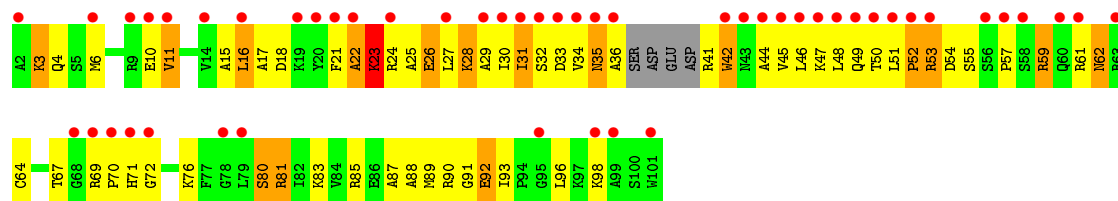




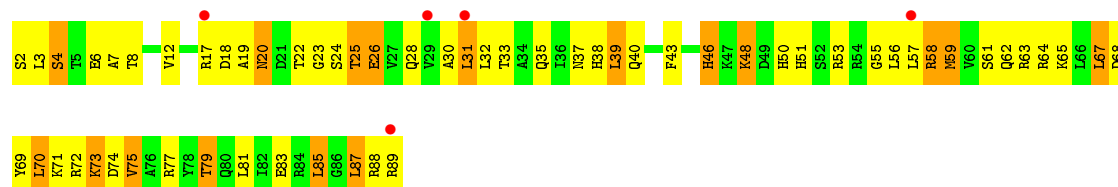
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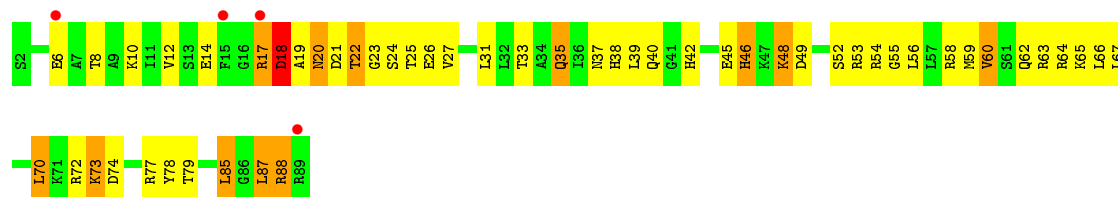
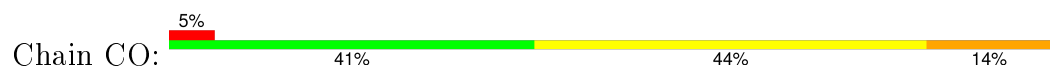
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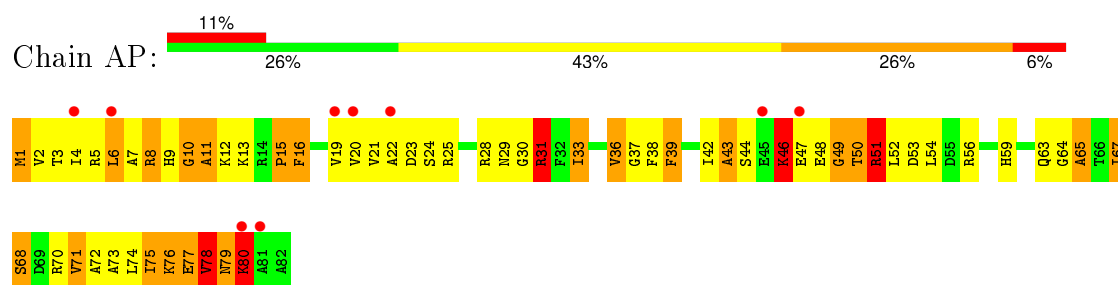
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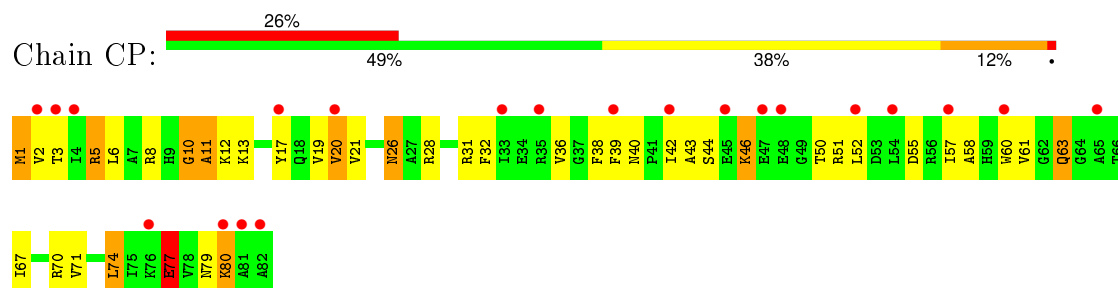
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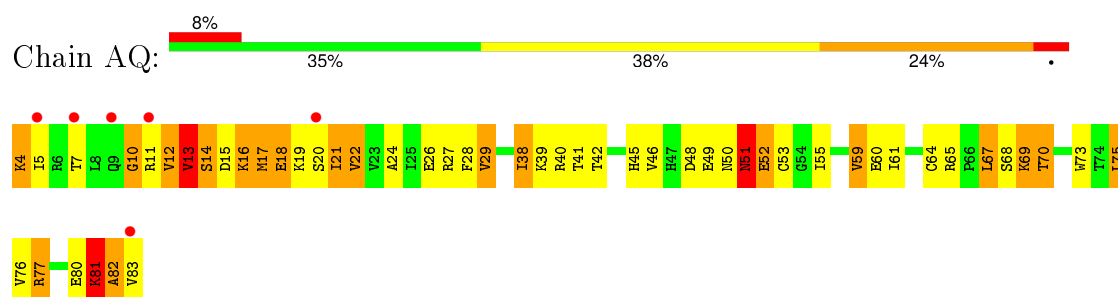
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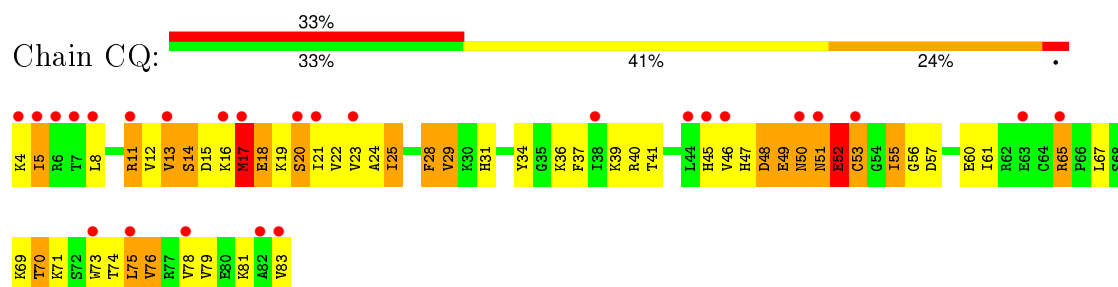
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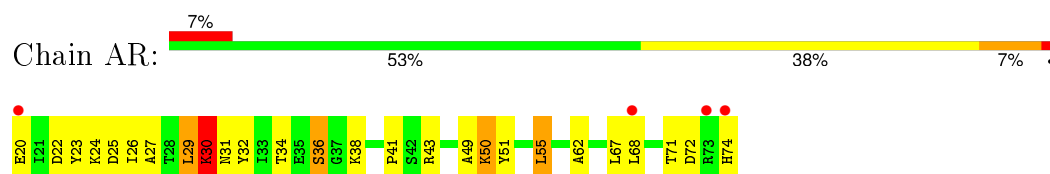
- Molecule 17: 30S ribosomal protein S17



- Molecule 17: 30S ribosomal protein S17

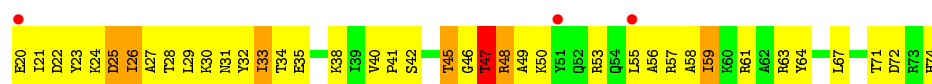


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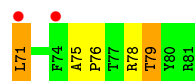
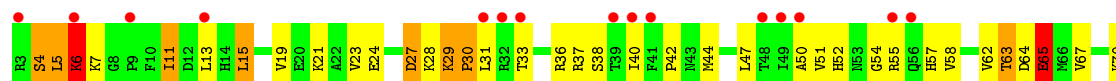


- Molecule 18: 30S ribosomal protein S18

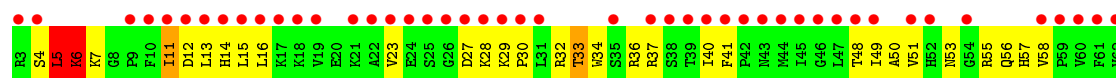
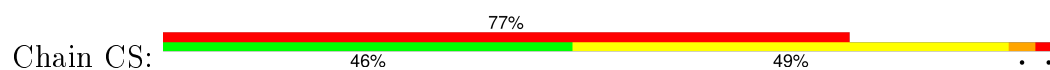




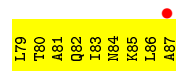
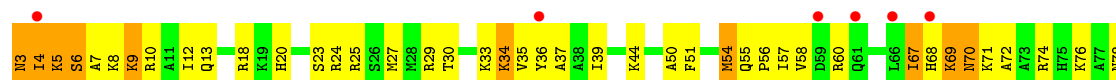
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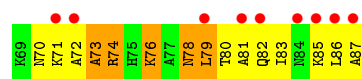
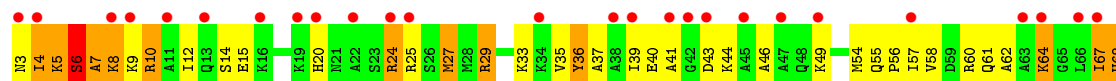
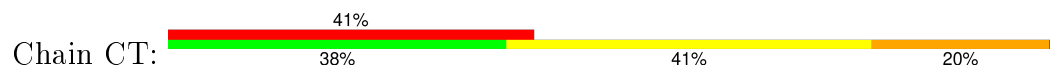
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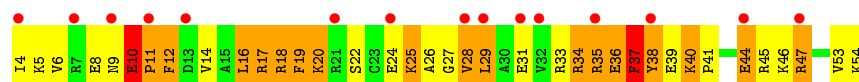
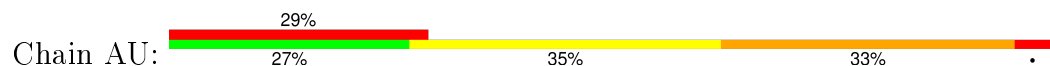
• Molecule 20: 30S ribosomal protein S20



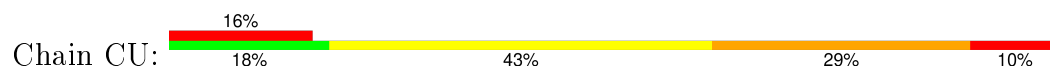
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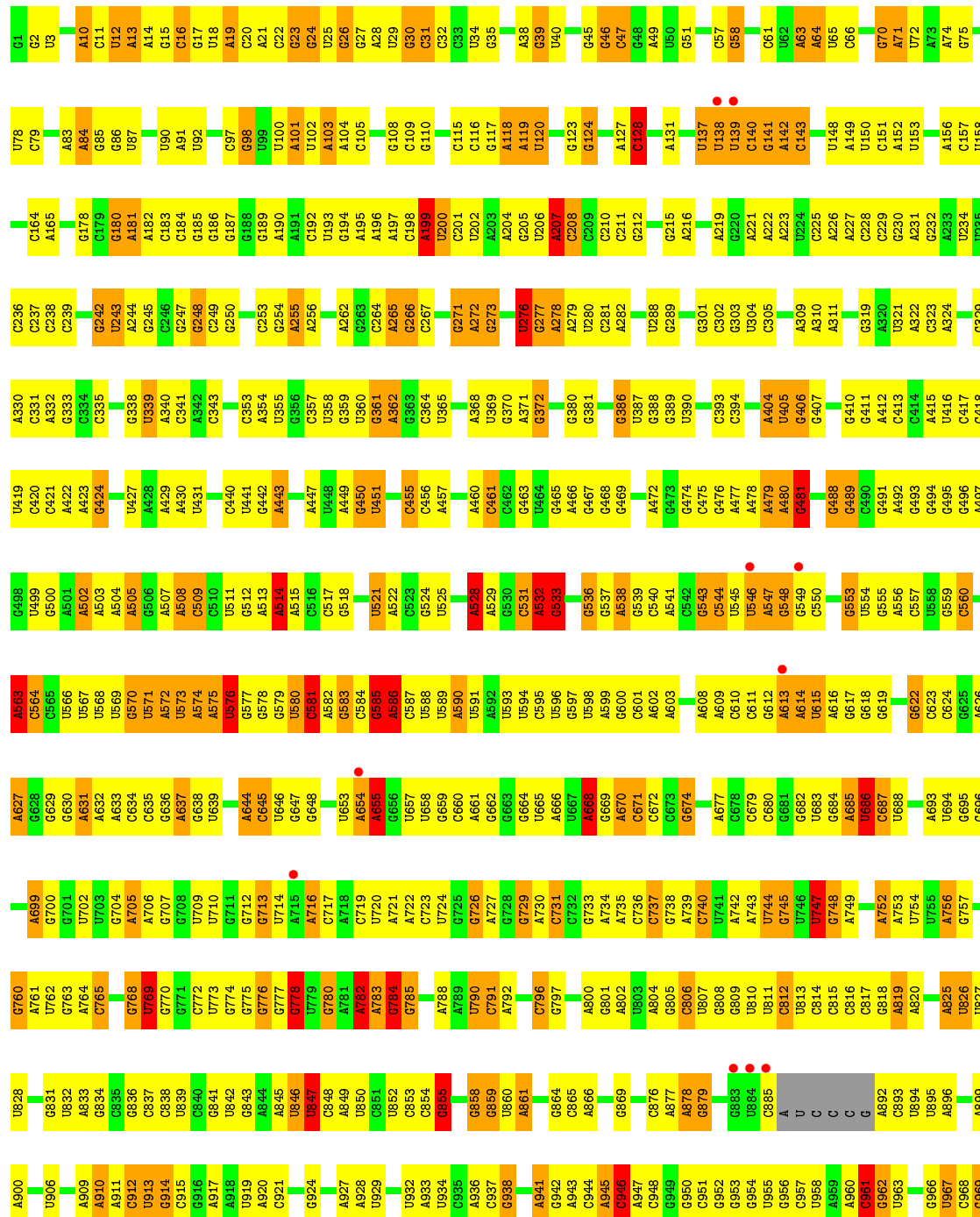
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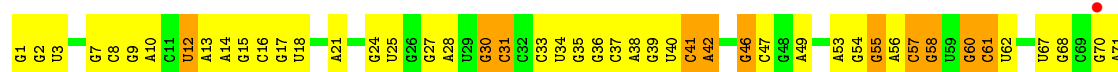
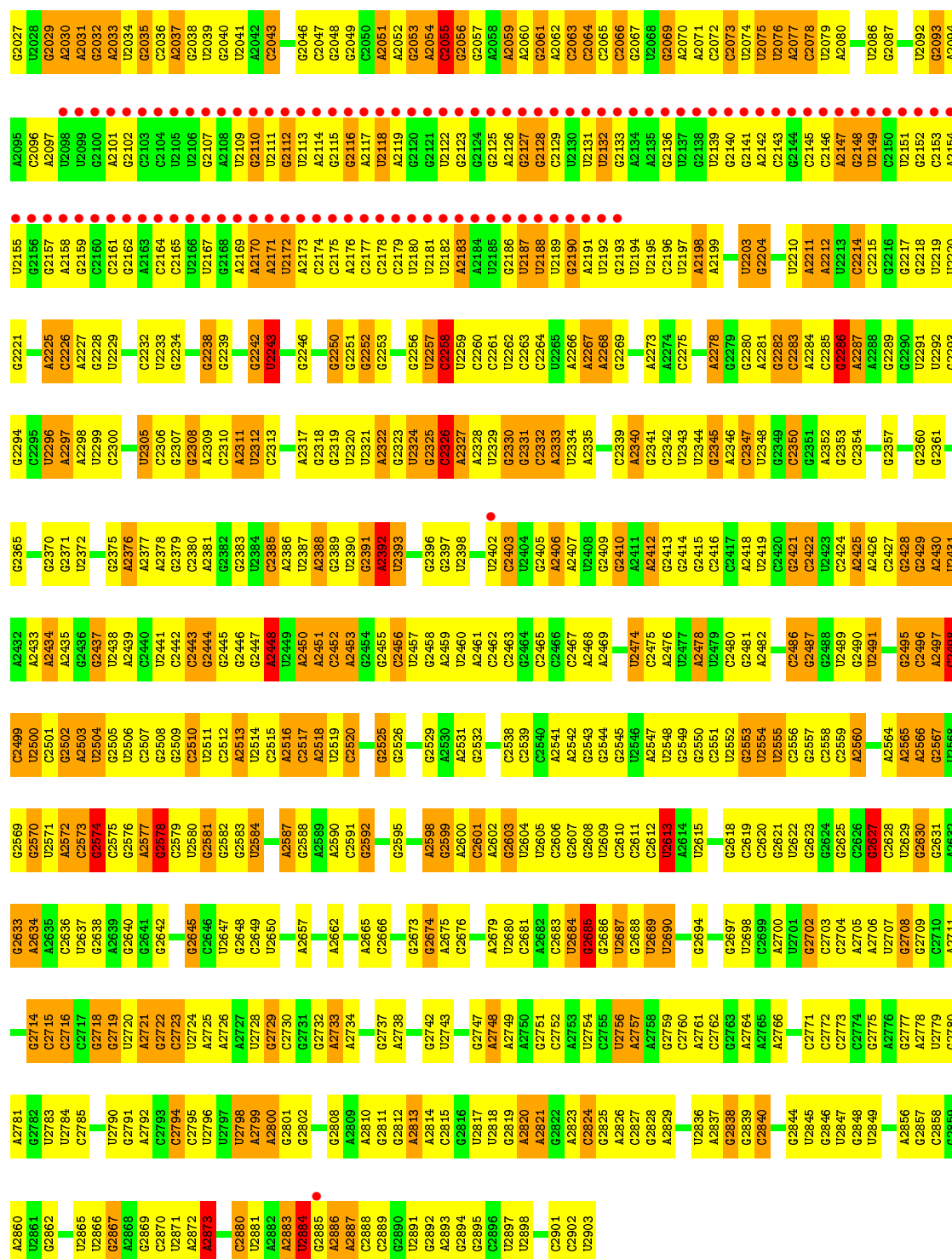
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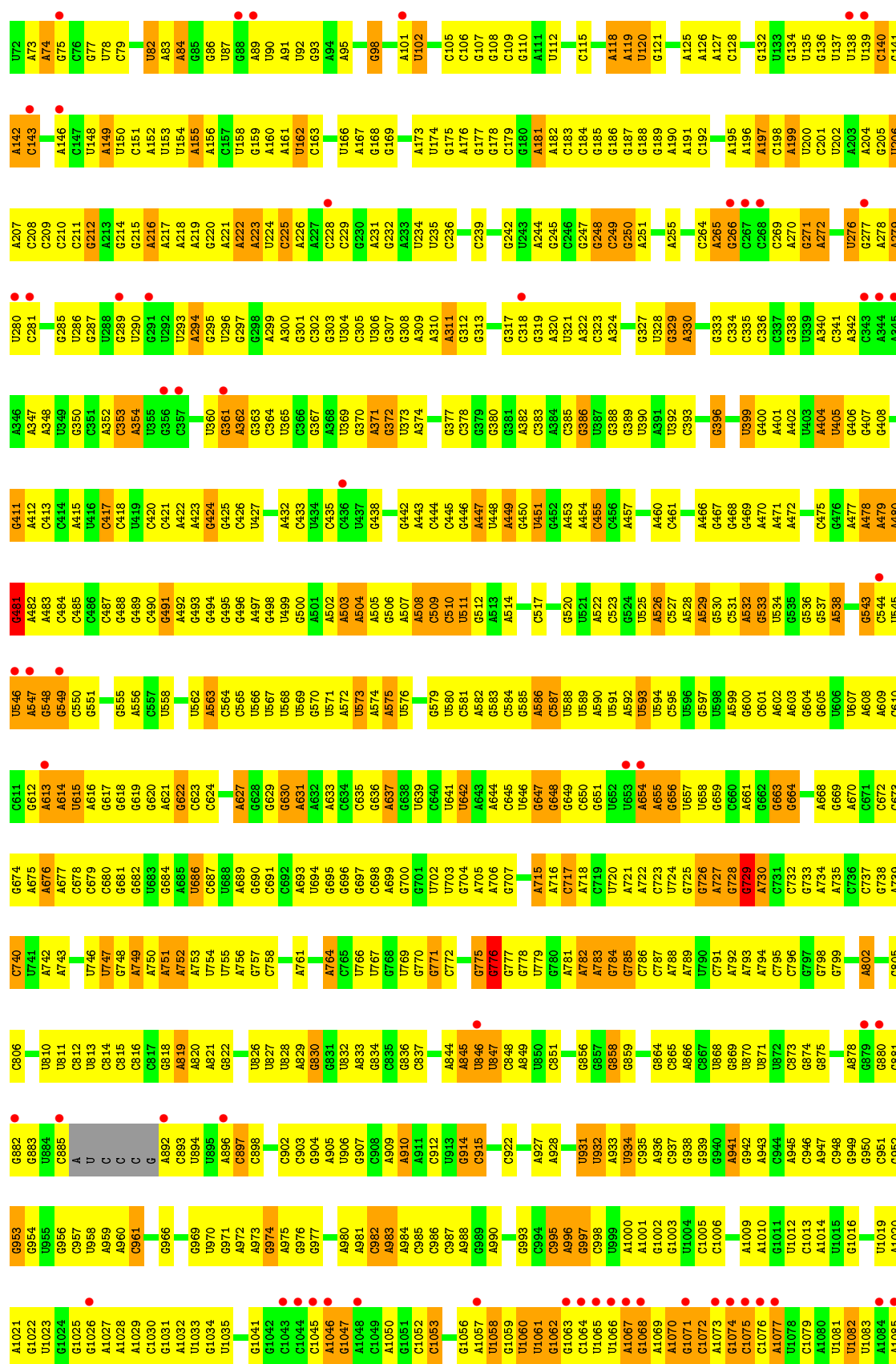
• Molecule 22: 23S rRNA



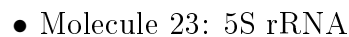
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U1963	A1901	C1832		U1682	A1535	C1461	A1385	C1319	A1238	G1168	C1102		A972
C1964	C1902	C1833	G1767	U1683	C1536		C1386	C1320	G1239	G1169	A1040	A1040	A973
C1965	G1903		U1768	G1686	G1537	G1464	A1387	A1321	U1240	G1170	C1104	G1041	G974
A1966	C1905	C1837	U1769	C1687	U1538	G1465	A1392	A1322	U1241	G1171	U1105	G1042	A975
C1967	C1906	C1838	G1770	U1687	C1546	U1466	A1393	G1323	A1241	C1172	C1106	C1043	G976
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A1969	C1908	G1840	A1772	U1689	C1547	U1468	U1395	U1325	C1243	U1174	U1108	C1045	G978
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	C1914	A1847	U1779	G1697		A1478	G1407	G1332	G1250	U1181	G1115	C985	C985
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A2015	C1947	U1882	U1817	U1747	G1667	G1514	U1442	G1369		U1219	A1151	A1088	A1020
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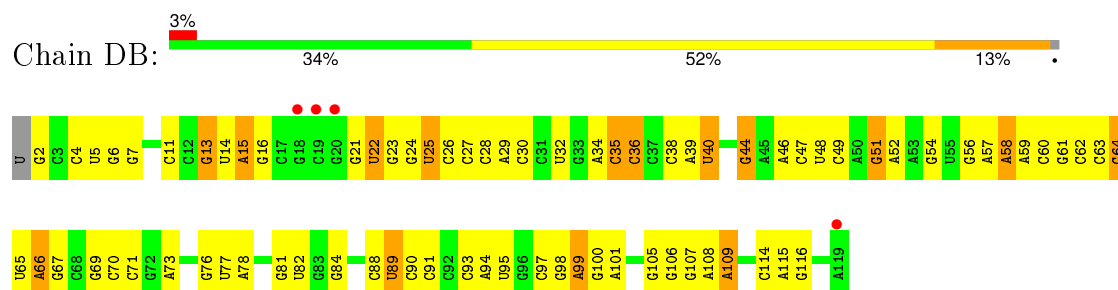
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A2019	U1946	U1796	C1729	A1655	U1584	A1516	A1434	A1367	G1303	G1236		G1093
C1947	G1866	C1797	C1730	C1656	C1585	G1516	G1435	G1368	A1304	A1237		U1094
A2020	C1868	G1798	G1731	C1657	A1586	G1519	G1436	G1369	C1305	G1238		A1095
C2021	G1869	C1799	C1732	G1659	G1587	G1520	C1437	C1370	C1306	G1239		A1096
U2022	C1870	G1800	G1733	G1660	G1588	G1521	U1438	G1371	G1307	U1240		U1097
C2023	A1871	A1801	G1734	G1661	U1589	A1522	A1439	U1372	A1308	A1241		A1098
G2024	A1872	A1802	G1735	U1662	C1592	U1523	G1445	G1374	G1310	G1099		G1099
C2025	G1873	A1803	G1736	G1663	G1593	G1524	G1446	G1375	G1311	A1247		C1100
C2026	C1874	C1804	G1737	A1664	A1594	G1525	G1447	U1376	U1312	G1248		U1101
G2027	G1875	A1805	G1738	A1665	U1595	C1526	G1448	C1377	U1313	U1249		C1102
U2028	A1876	C1806	A1739	G1666	A1596	G1527	G1449	A1378	C1314	G1250		A1103
G2029	U1880	G1807	G1740	G1667	A1597	A1528	A1453	U1379	C1315	G1252		C1104
A2030	C1881	A1808	C1741	A1668	A1598	G1529	C1454	G1380	C1316	A1253		U1105
A2031	U1882	A1809	U1742	A1669	C1599	G1530	G1455	G1381	G1317	A1254		G1106
G2032	U1883	A1810	G1743	C1670	C1600	A1531	G1456	G1382	U1318	U1255		U1107
A2033	G1884	U1811	A1744	A1671	G1601	A1532	U1457	A1383	C1319	G1256		U1108
U2034		U1812	A1745	A1672	A1602	C1533	U1458	A1384	C1320	C1257		G1109
G1971		G1813	A1746	G1673	U1603	U1534		A1385		U1258		G1110
G1972		G1814	U1747	G1674	C1604	A1535	C1462	C1386		G1259		A1111
G1973		A1815	C1675	C1675	C1604	A1535	C1463	A1387		G1259		G1112
G2030	C1893	C1816	A1676	A1677	C1605	C1536	G1464					U1113
G2040	C1894	G1817	A1677	G1678	C1606	G1537	G1465			A1262		G1114
A1899		A1818	A1678	A1679	C1607	G1538	G1466			U1263		G1115
G1977		U1819	G1752	A1679	U1608	U1539	U1468			A1264		G1116
A1978		A1820	G1753	A1680	A1609	G1540	A1469			U1265		C1117
U1979		U1821	A1755	G1681	A1610	C1541	U1470			G1266		G1118
G2046		C1822	G1756	G1682	U1681	U1542	U1471			U1267		U1119
C2047		G1823	U1757	U1683	A1614	A1544	G1471			A1268		G1120
G1907			U1758	U1683	C1615	A1545	U1472			G1270		C1121
U1911		G1826	A1759	U1688	C1616	G1546	U1473			C1271		G1122
G1984		U1827	A1689	A1689	A1616	C1547	U1474			G1272		
C1985		G1828	C1760	A1690	C1617	C1548	U1475			A1272		
C1986		A1829	C1761	C1691	A1618	A1549	U1476			U1198		G1125
A1987		C1830	C1764	U1692	C1619	C1550	G1477			U1199		A1126
C2055		G1831	U1765	U1693	C1620	A1551	U1480			C1200		A1127
G2056		C1832	G1766	C1694	U1621	A1552	U1481			A1275		G1128
U1917		U1833	G1767	G1695	G1622	A1553	G1482			G1276		
A1918		U1834	G1767	G1695	G1623	U1554	G1483			G1277		A1129
C1993		G1835		A1698	U1624	G1555	U1484			C1278		
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U1995		C1774	C1774	C1698	C1626	U1562	A1490			G1280		A1133
C1996		U1775	U1775	G1702	A1626	G1563	G1491			G1281		G1135
C1997		G1776	G1776	G1703	U1636	U1563	G1492			A1285		G1136
A1998		U1777	U1777	G1704	A1637	C1564	G1493			A1286		G1137
U1926		U1778	U1778	A1705	C1638	C1565	A1494			A1287		G1138
A1927		U1779	U1779	C1706	C1639	A1495	A1495			G1288		G1139
C2001		A1780	A1780	C1707	C1640	A1496	A1496			G1289		C1140
G2004		U1781	U1781	C1708	A1640	G1567	U1497			C1290		U1141
A2005		U1782	U1782	U1709	A1641	G1568	G1498			C1291		A1142
C2006		G1710	G1710	G1644	A1569	A1570	G1499			G1292		A1143
U2007		A1713	A1713	G1645	U1570	A1571	G1500			C1293		A1144
C2008		U1714	U1714	C1646	A1571	G1501	A1501			U1294		
C2009		U1715	U1715	U1647	U1571	A1502	A1502			G1227		A1147
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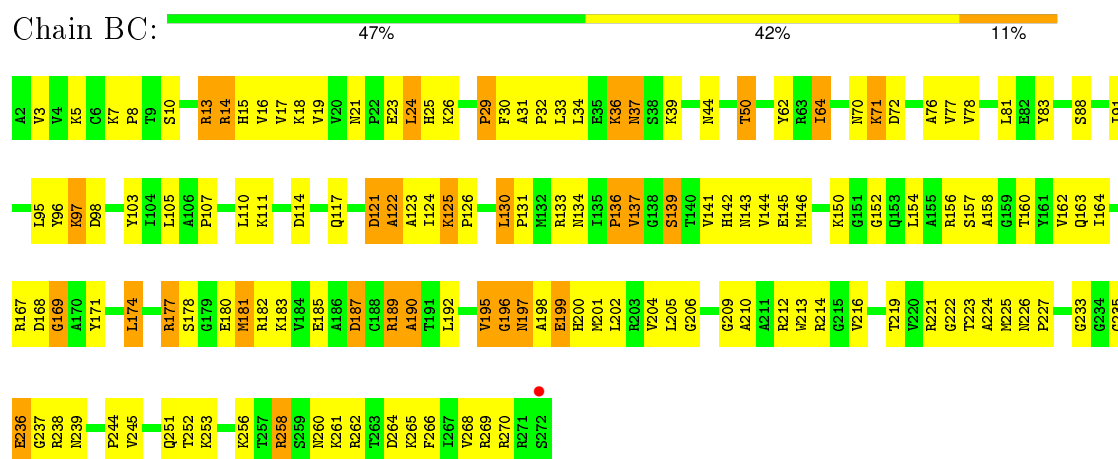
Response	Percentage
Used	50%
Not used	37%
Don't know	13%



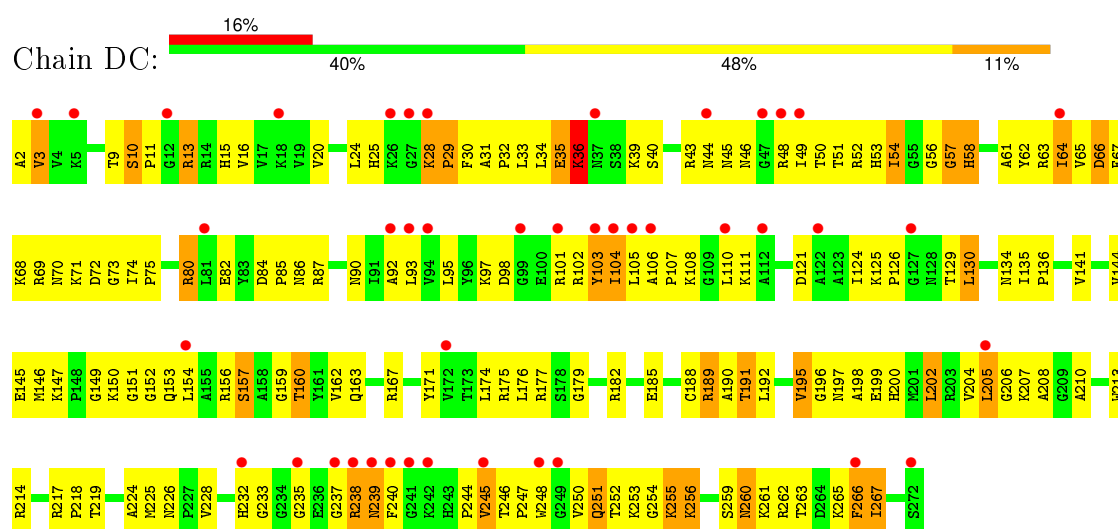
- Molecule 23: 5S rRNA



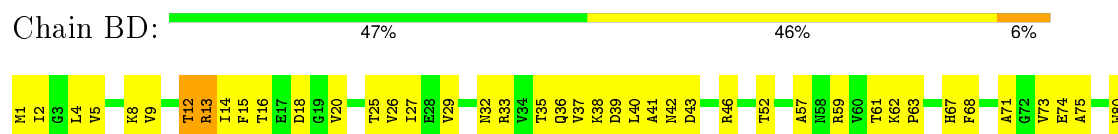
- Molecule 24: 50S ribosomal protein L2

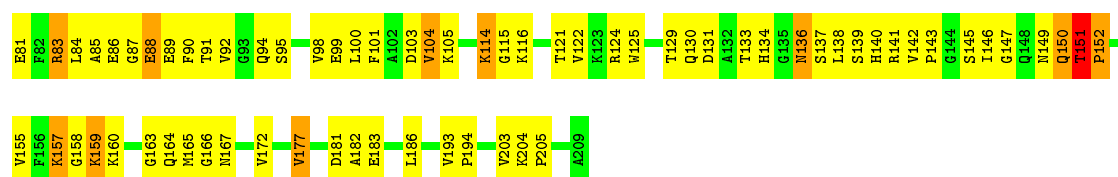


- Molecule 24: 50S ribosomal protein L2

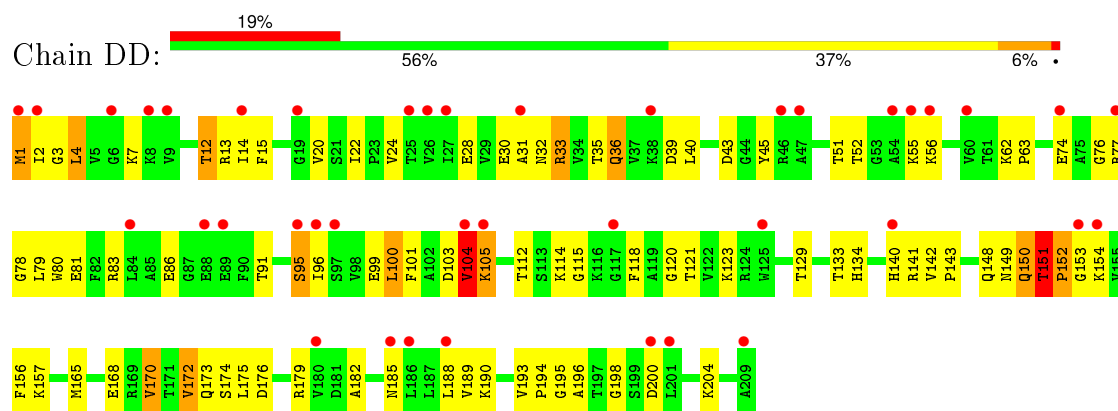


- Molecule 25: 50S ribosomal protein L3

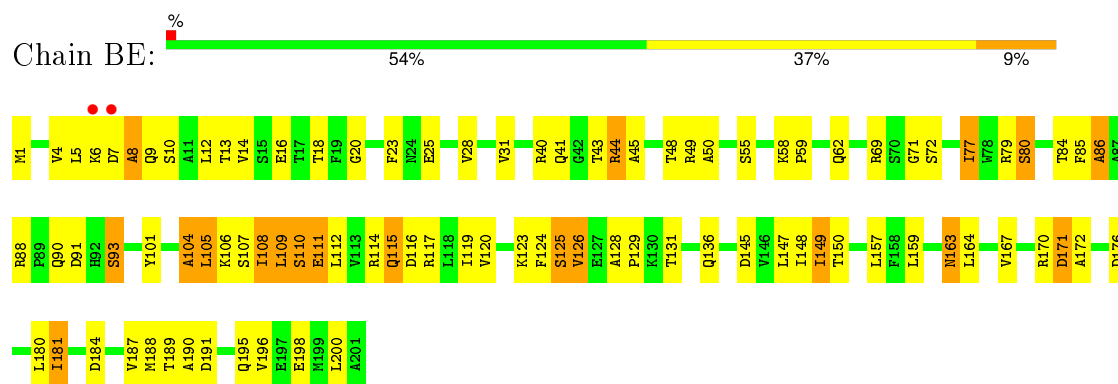




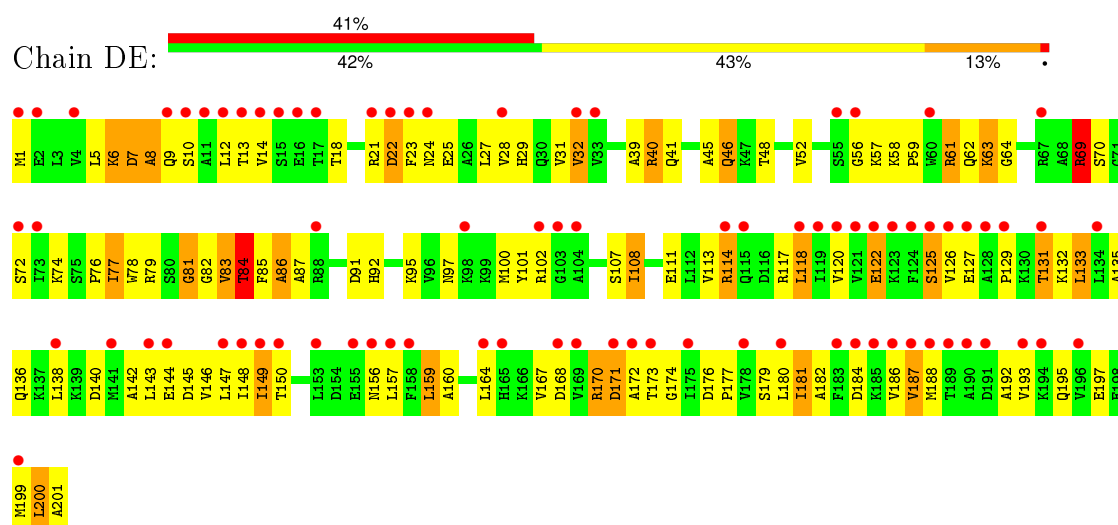
• Molecule 25: 50S ribosomal protein L3



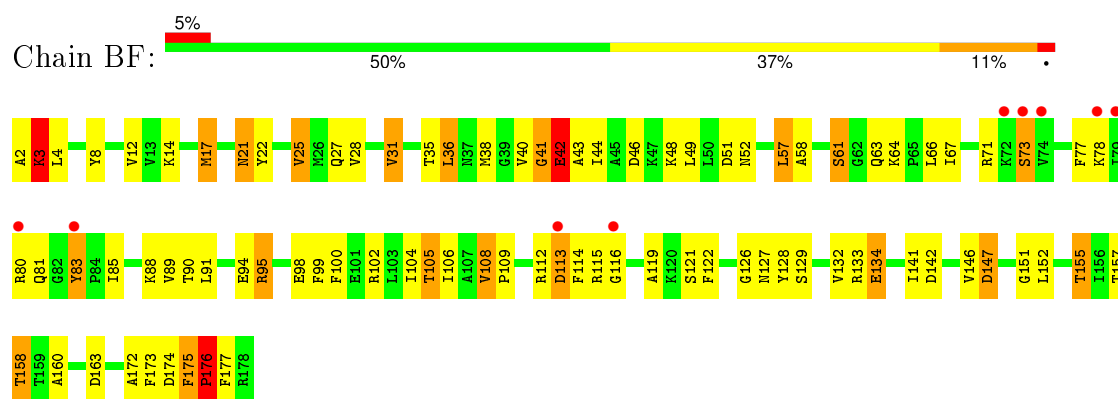
• Molecule 26: 50S ribosomal protein L4



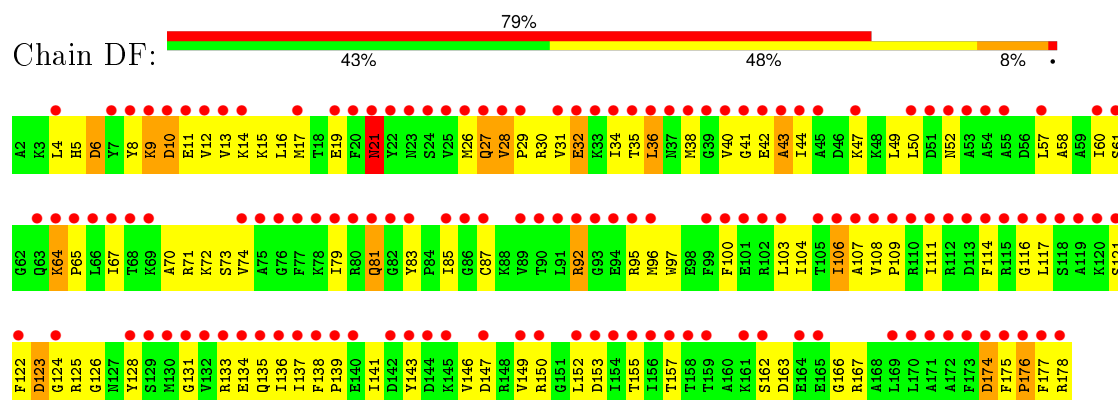
• Molecule 26: 50S ribosomal protein L4



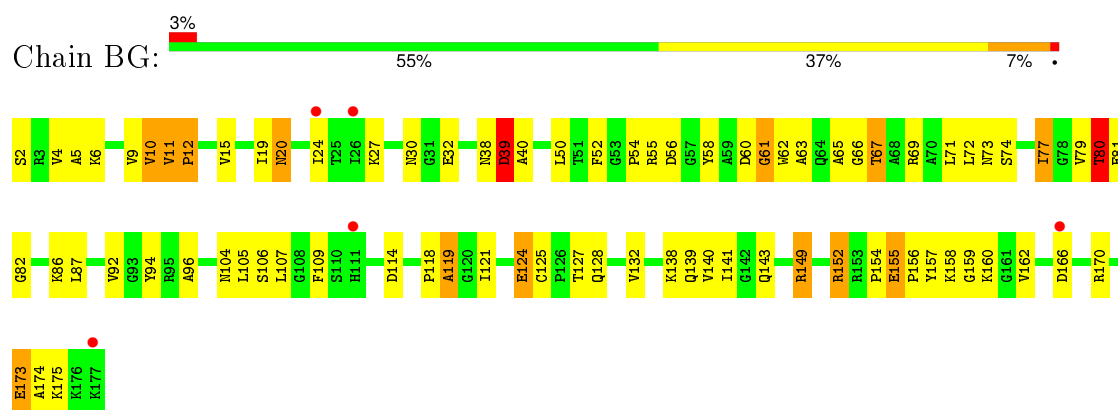
• Molecule 27: 50S ribosomal protein L5



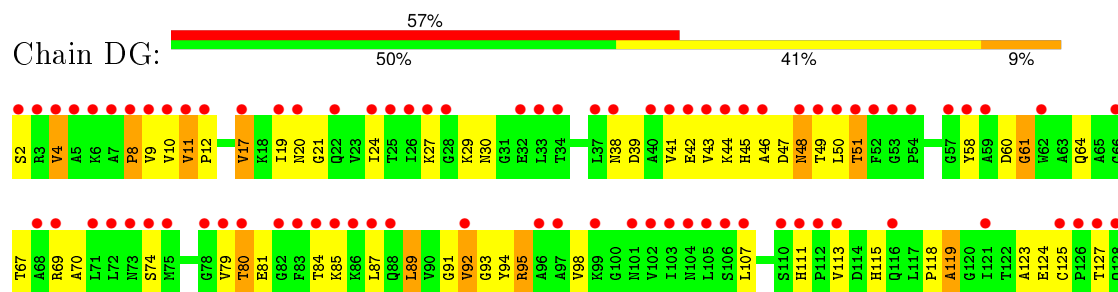
• Molecule 27: 50S ribosomal protein L5

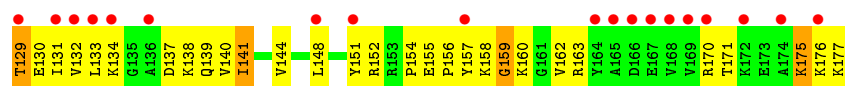


• Molecule 28: 50S ribosomal protein L6

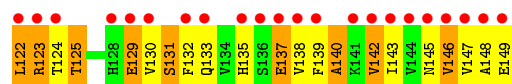
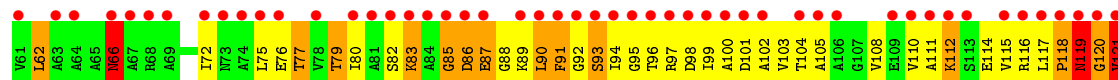
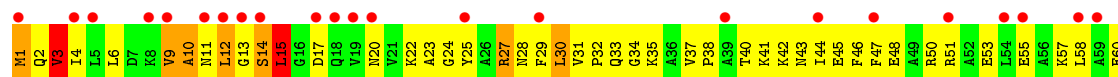


• Molecule 28: 50S ribosomal protein L6

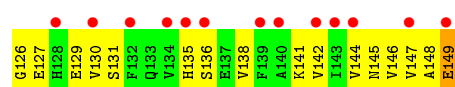
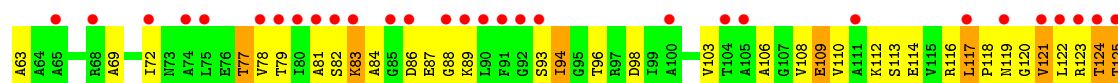




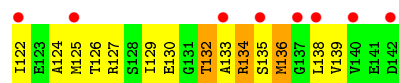
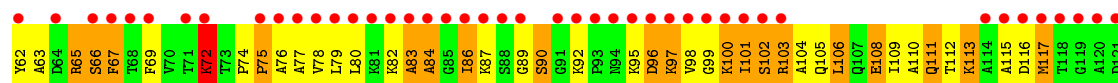
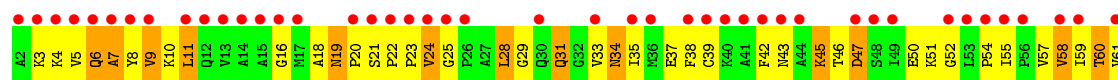
• Molecule 29: 50S ribosomal protein L9



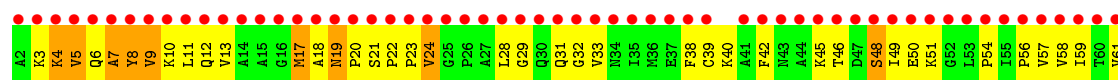
• Molecule 29: 50S ribosomal protein L9

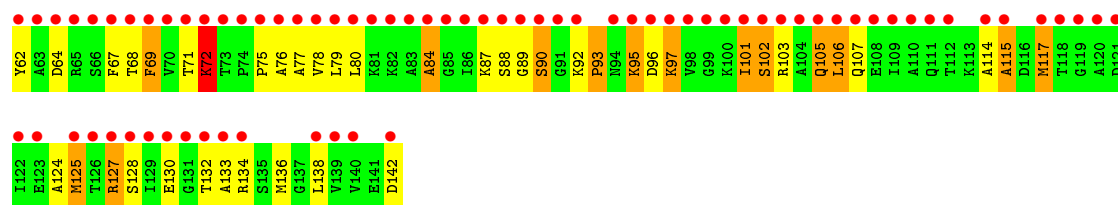


• Molecule 30: 50S ribosomal protein L11



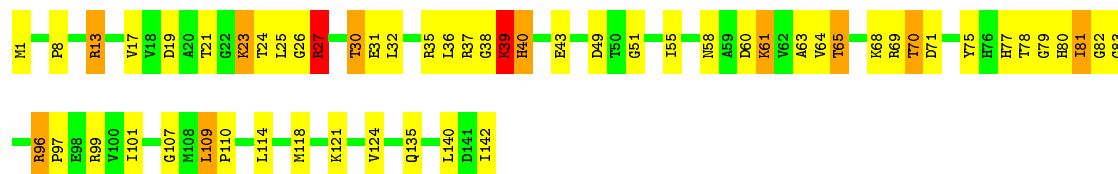
• Molecule 30: 50S ribosomal protein L11





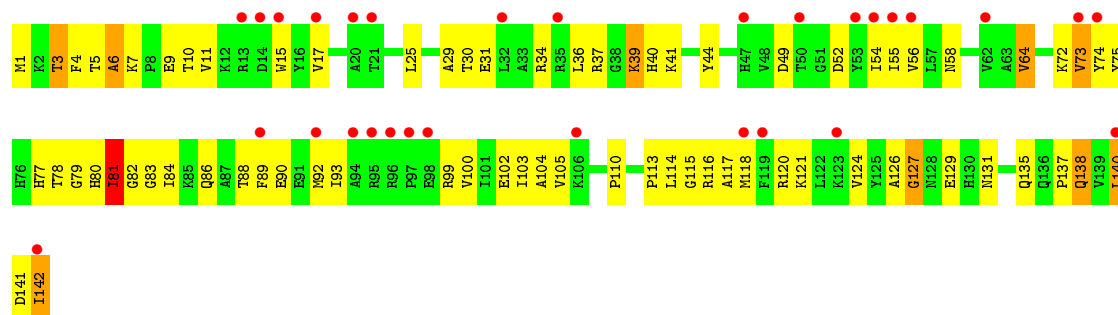
• Molecule 31: 50S ribosomal protein L13

Chain BJ: 61% 31% 7%



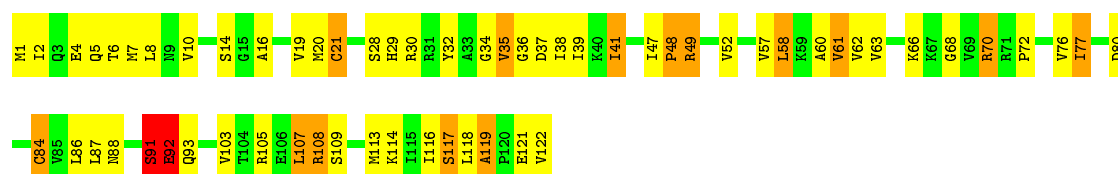
• Molecule 31: 50S ribosomal protein L13

Chain DJ: 21% 49% 44% 6%



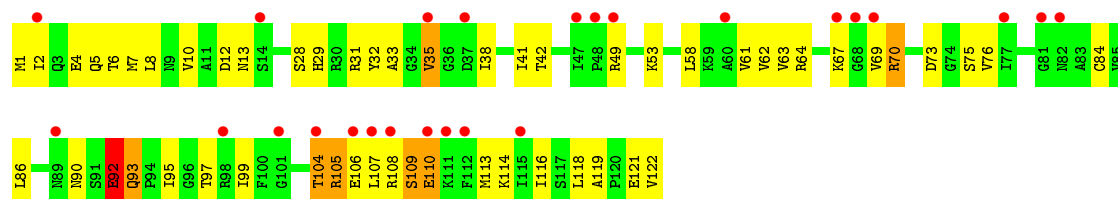
• Molecule 32: 50S ribosomal protein L14

Chain BK: 50% 37% 11%



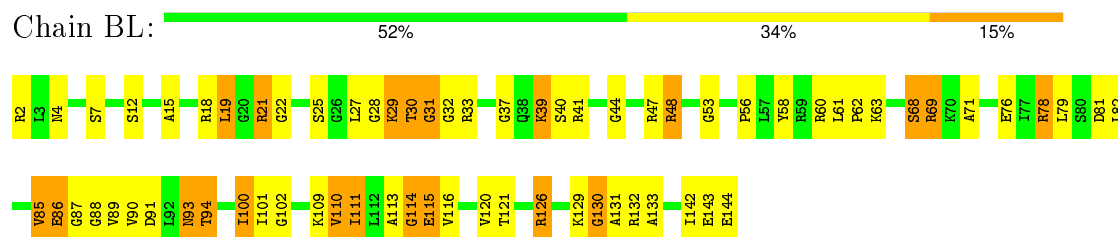
• Molecule 32: 50S ribosomal protein L14

Chain DK: 20% 56% 38% 6%

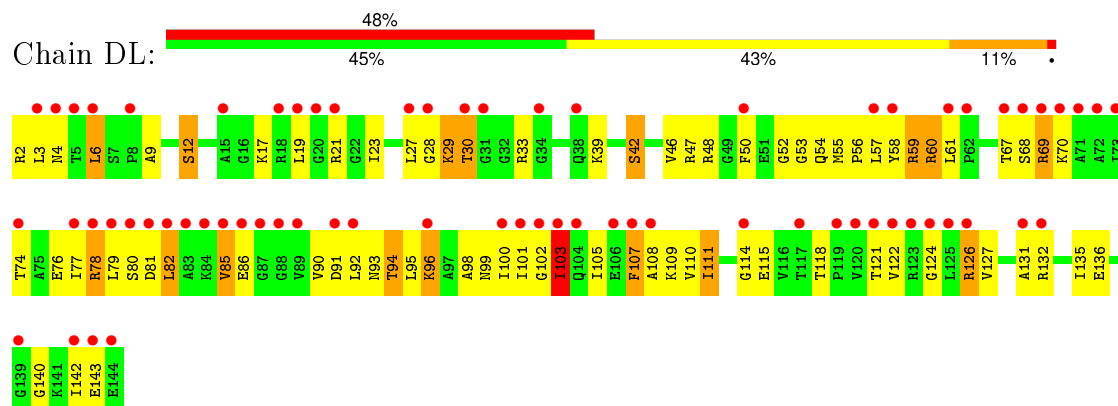




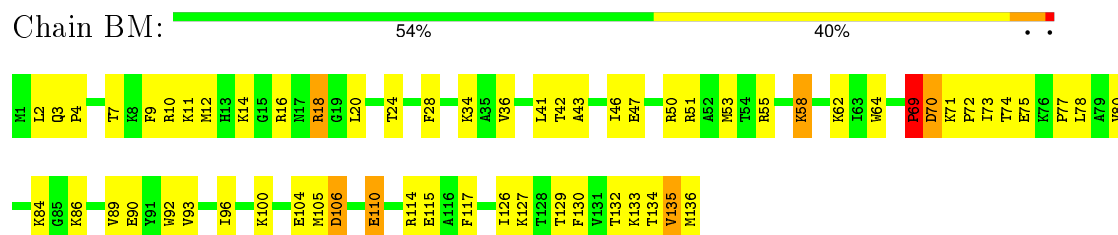
- Molecule 33: 50S ribosomal protein L15



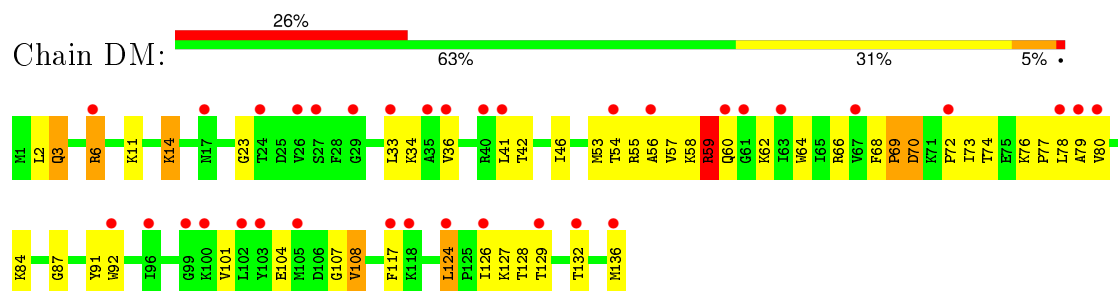
- Molecule 33: 50S ribosomal protein L15



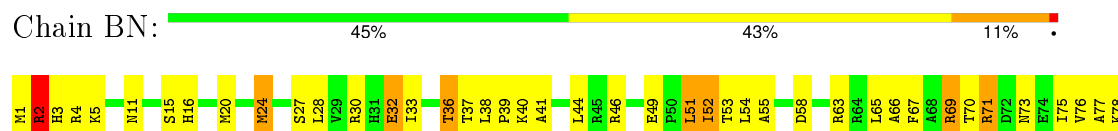
- Molecule 34: 50S ribosomal protein L16



- Molecule 34: 50S ribosomal protein L16

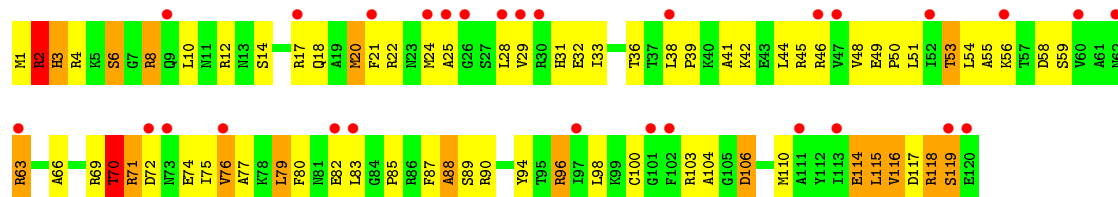


- Molecule 35: 50S ribosomal protein L17

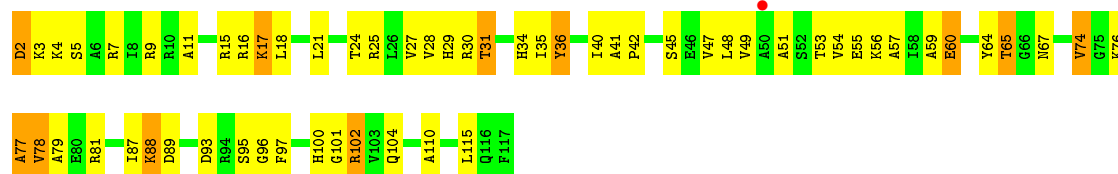




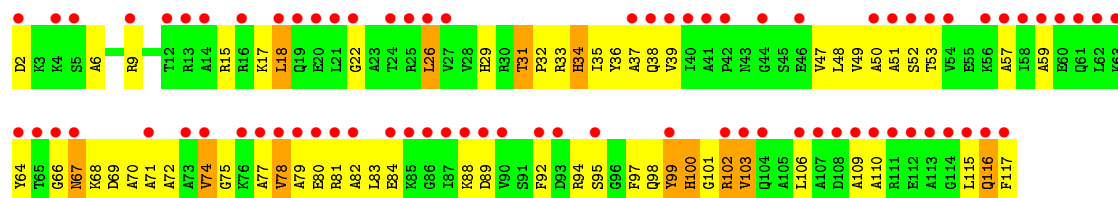
• Molecule 35: 50S ribosomal protein L17



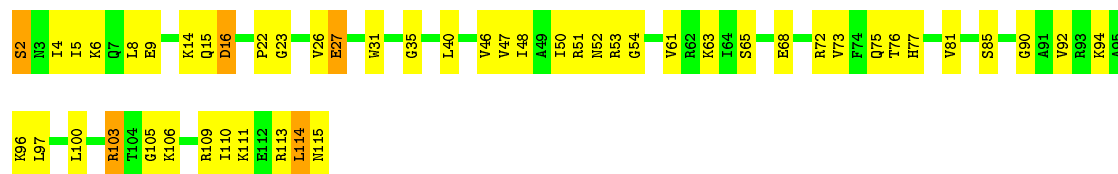
• Molecule 36: 50S ribosomal protein L18



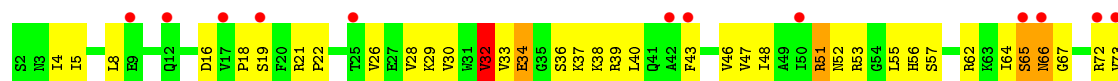
• Molecule 36: 50S ribosomal protein L18

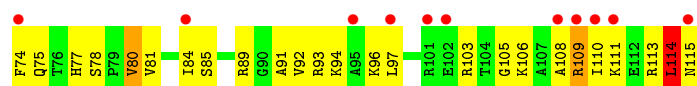


• Molecule 37: 50S ribosomal protein L19

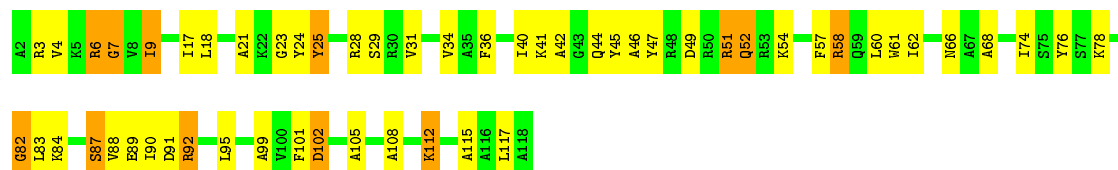


• Molecule 37: 50S ribosomal protein L19

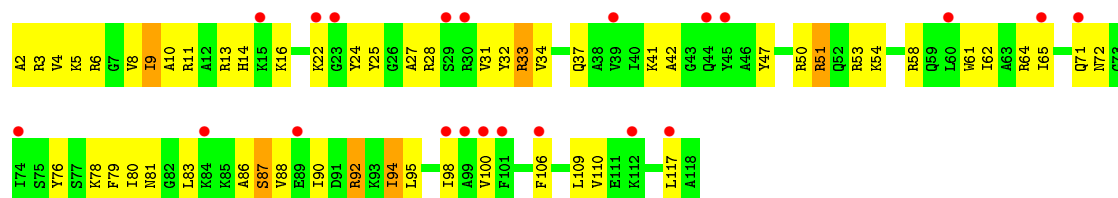




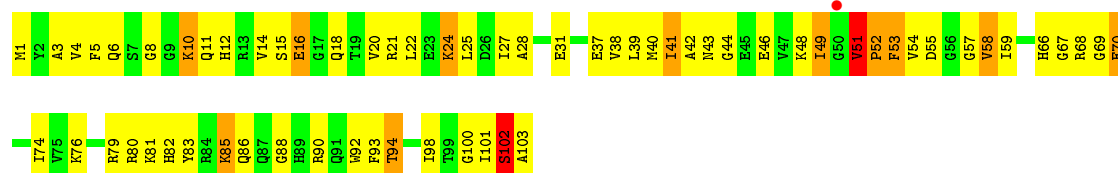
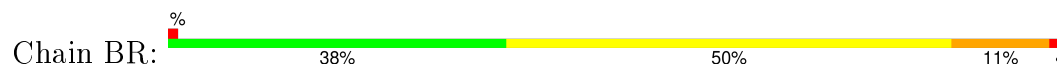
- Molecule 38: 50S ribosomal protein L20



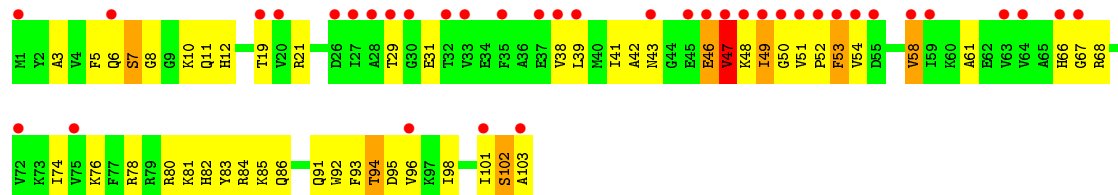
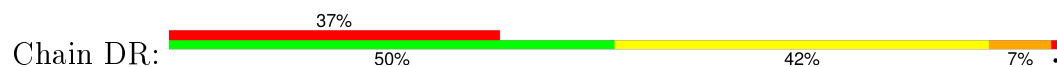
- Molecule 38: 50S ribosomal protein L20



- Molecule 39: 50S ribosomal protein L21

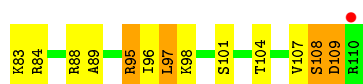


- Molecule 39: 50S ribosomal protein L21

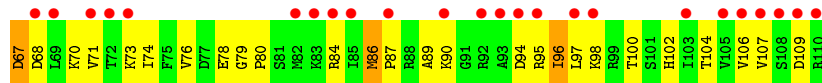
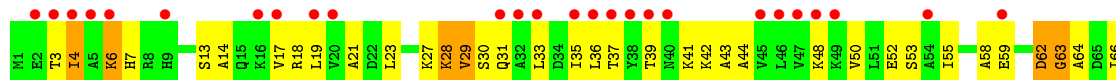


- Molecule 40: 50S ribosomal protein L22





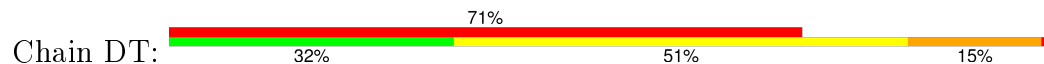
- Molecule 40: 50S ribosomal protein L22



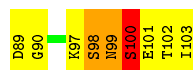
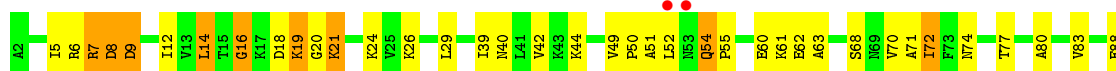
- Molecule 41: 50S ribosomal protein L23



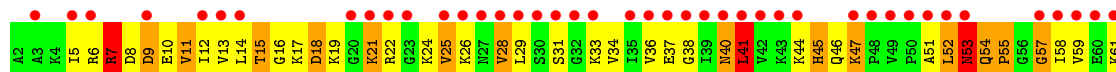
- Molecule 41: 50S ribosomal protein L23

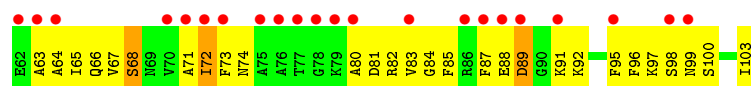


- Molecule 42: 50S ribosomal protein L24

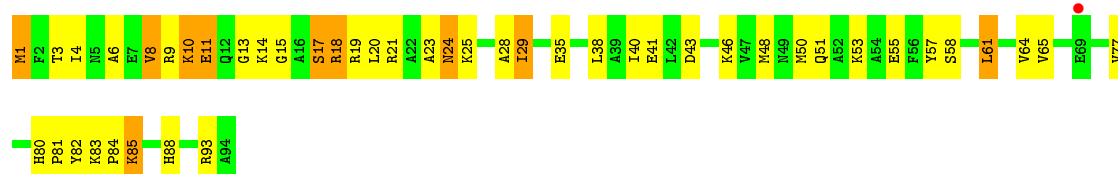


- Molecule 42: 50S ribosomal protein L24

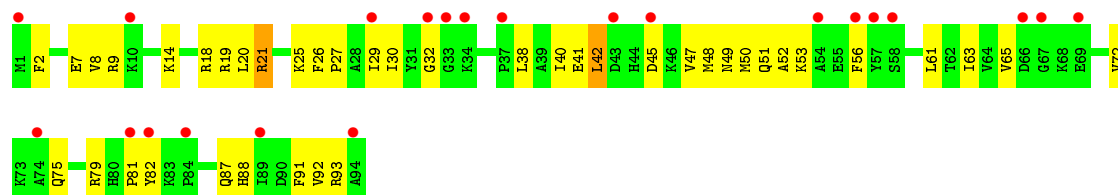




- Molecule 43: 50S ribosomal protein L25



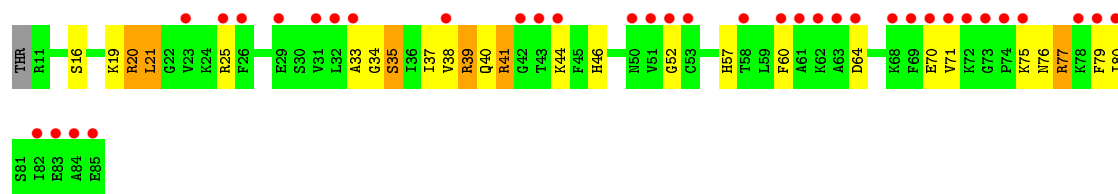
- Molecule 43: 50S ribosomal protein L25



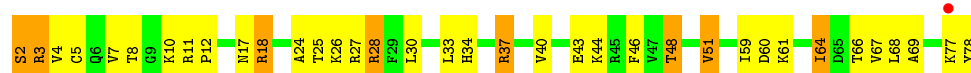
- Molecule 44: 50S ribosomal protein L27



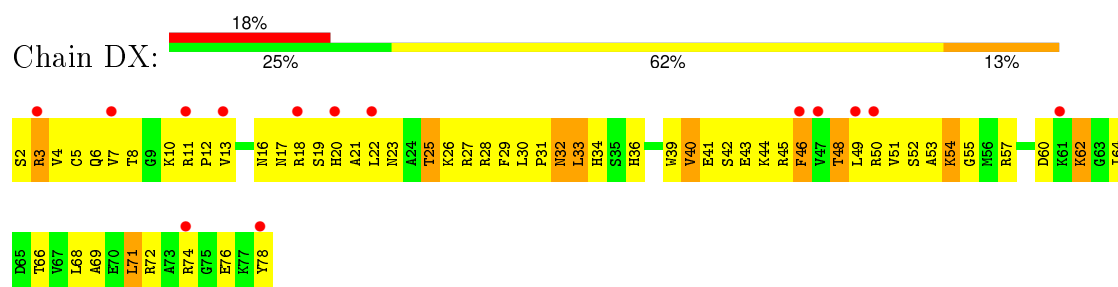
- Molecule 44: 50S ribosomal protein L27



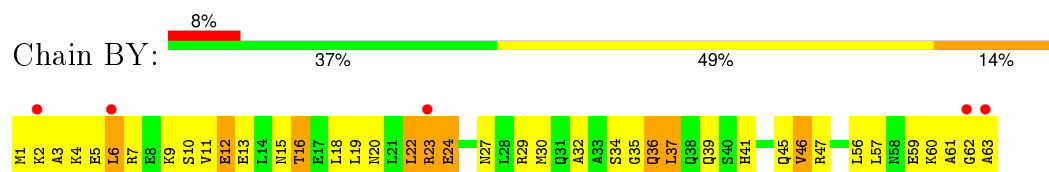
- Molecule 45: 50S ribosomal protein L28



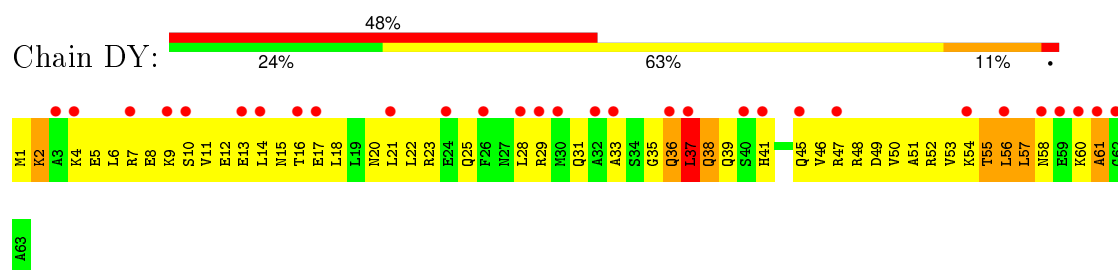
- Molecule 45: 50S ribosomal protein L28



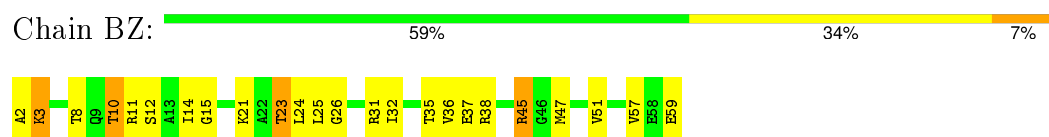
- Molecule 46: 50S ribosomal protein L29



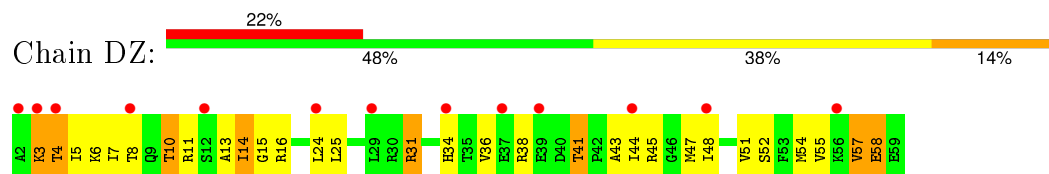
- Molecule 46: 50S ribosomal protein L29



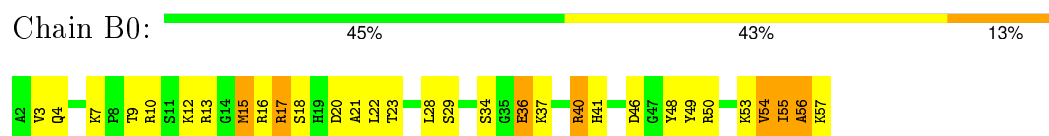
- Molecule 47: 50S ribosomal protein L30



- Molecule 47: 50S ribosomal protein L30

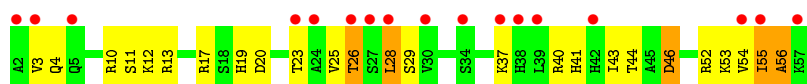


- Molecule 48: 50S ribosomal protein L32



- Molecule 48: 50S ribosomal protein L32

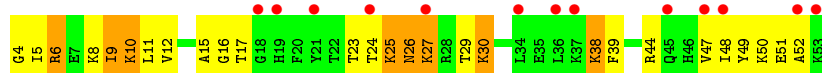




- Molecule 49: 50S ribosomal protein L33



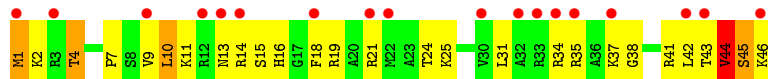
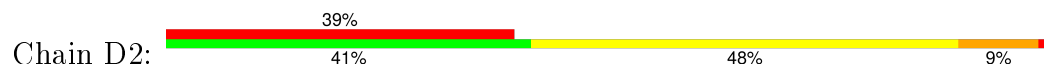
- Molecule 49: 50S ribosomal protein L33



- Molecule 50: 50S ribosomal protein L34



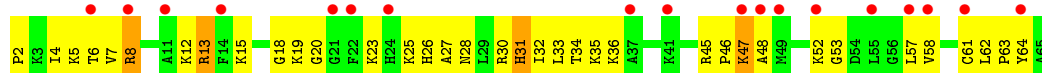
- Molecule 50: 50S ribosomal protein L34



- Molecule 51: 50S ribosomal protein L35



- Molecule 51: 50S ribosomal protein L35



- Molecule 52: 50S ribosomal protein L36







## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	211.79Å 433.06Å 623.86Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	69.33 – 2.90 69.33 – 2.90	Depositor EDS
% Data completeness (in resolution range)	87.4 (69.33-2.90) 87.4 (69.33-2.90)	Depositor EDS
$R_{merge}$	0.12	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.50 (at 2.91Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.8.1_1168)	Depositor
R, $R_{free}$	0.235 , 0.279 0.245 , 0.286	Depositor DCC
$R_{free}$ test set	4412 reflections (0.41%)	DCC
Wilson B-factor (Å <sup>2</sup> )	48.9	Xtriage
Anisotropy	0.742	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.27 , 57.0	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.45$ , $\langle L^2 \rangle = 0.27$	Xtriage
Outliers	1 of 1093642 reflections (0.000%)	Xtriage
$F_o, F_c$ correlation	0.90	EDS
Total number of atoms	288258	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	61.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.85% 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, MG

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	0.47	0/36944	0.95	29/57632 (0.1%)
1	CA	0.40	0/36966	0.90	9/57666 (0.0%)
2	AB	0.36	0/1736	0.64	0/2338
2	CB	0.33	0/1736	0.60	0/2338
3	AC	0.35	0/1652	0.61	0/2225
3	CC	0.31	0/1652	0.57	0/2225
4	AD	0.35	0/1665	0.63	0/2227
4	CD	0.40	0/1665	0.66	0/2227
5	AE	0.39	0/1119	0.70	0/1504
5	CE	0.36	0/1119	0.70	0/1504
6	AF	0.39	0/836	0.65	0/1128
6	CF	0.33	0/836	0.63	1/1128 (0.1%)
7	AG	0.34	0/1196	0.59	0/1602
7	CG	0.32	0/1196	0.55	0/1602
8	AH	0.34	0/989	0.58	0/1326
8	CH	0.32	0/989	0.59	0/1326
9	AI	0.33	0/1034	0.62	0/1375
9	CI	0.32	0/1034	0.62	0/1375
10	AJ	0.34	0/797	0.61	0/1077
10	CJ	0.31	0/797	0.62	1/1077 (0.1%)
11	AK	0.35	0/893	0.60	0/1205
11	CK	0.34	0/893	0.60	0/1205
12	AL	0.39	0/969	0.65	0/1300
12	CL	0.36	0/969	0.70	0/1300
13	AM	0.33	0/893	0.71	1/1193 (0.1%)
13	CM	0.34	0/893	0.59	0/1193
14	AN	0.34	0/785	0.63	0/1043
14	CN	0.30	0/785	0.54	0/1043
15	AO	0.33	0/718	0.60	0/959
15	CO	0.32	0/718	0.56	0/959
16	AP	0.36	0/659	0.70	1/884 (0.1%)
16	CP	0.35	0/659	0.58	0/884

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
17	AQ	0.37	0/658	0.66	1/881 (0.1%)
17	CQ	0.36	0/658	0.61	0/881
18	AR	0.33	0/463	0.57	0/621
18	CR	0.32	0/463	0.58	0/621
19	AS	0.34	0/653	0.63	0/877
19	CS	0.33	0/653	0.54	0/877
20	AT	0.34	0/671	0.60	0/888
20	CT	0.32	0/671	0.57	0/888
21	AU	0.45	0/431	0.72	0/570
21	CU	0.45	0/431	0.73	0/570
22	BA	0.80	22/69659 (0.0%)	1.31	570/108672 (0.5%)
22	DA	0.40	0/69659	0.90	13/108672 (0.0%)
23	BB	0.68	0/2850	1.17	9/4444 (0.2%)
23	DB	0.35	0/2828	0.85	0/4410
24	BC	0.48	0/2122	0.72	0/2852
24	DC	0.34	0/2122	0.60	0/2852
25	BD	0.54	0/1586	0.78	1/2134 (0.0%)
25	DD	0.33	0/1586	0.57	0/2134
26	BE	0.46	0/1571	0.66	0/2113
26	DE	0.35	0/1571	0.59	0/2113
27	BF	0.37	0/1435	0.59	0/1926
27	DF	0.32	0/1435	0.52	0/1926
28	BG	0.37	0/1343	0.65	0/1816
28	DG	0.32	0/1343	0.53	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	0.37	0/1046	0.59	0/1410
30	DI	0.37	0/1046	0.61	0/1410
31	BJ	0.53	0/1152	0.74	1/1551 (0.1%)
31	DJ	0.32	0/1152	0.59	0/1551
32	BK	0.52	0/948	0.77	0/1268
32	DK	0.34	0/948	0.56	0/1268
33	BL	0.50	0/1054	0.81	1/1403 (0.1%)
33	DL	0.34	0/1054	0.61	0/1403
34	BM	0.53	0/1093	0.72	0/1460
34	DM	0.31	0/1093	0.54	0/1460
35	BN	0.54	0/974	0.75	0/1301
35	DN	0.35	0/974	0.58	0/1301
36	BO	0.40	0/902	0.64	0/1209
36	DO	0.30	0/902	0.51	0/1209
37	BP	0.49	0/929	0.72	1/1242 (0.1%)
37	DP	0.35	0/929	0.58	0/1242
38	BQ	0.65	0/960	0.83	0/1278

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
38	DQ	0.33	0/960	0.53	0/1278
39	BR	0.60	0/829	0.79	1/1107 (0.1%)
39	DR	0.34	0/829	0.58	0/1107
40	BS	0.63	0/864	0.82	0/1156
40	DS	0.34	0/864	0.59	0/1156
41	BT	0.43	0/745	0.62	0/994
41	DT	0.35	0/745	0.60	0/994
42	BU	0.43	0/788	0.66	0/1051
42	DU	0.37	0/788	0.59	0/1051
43	BV	0.44	0/766	0.65	0/1025
43	DV	0.30	0/766	0.50	0/1025
44	BW	0.55	0/587	0.73	0/776
44	DW	0.31	0/576	0.49	0/762
45	BX	0.43	0/635	0.72	0/848
45	DX	0.34	0/635	0.60	0/848
46	BY	0.40	0/510	0.69	0/677
46	DY	0.34	0/510	0.58	0/677
47	BZ	0.55	0/453	0.82	0/605
47	DZ	0.31	0/453	0.55	0/605
48	B0	0.55	0/450	0.76	0/599
48	D0	0.35	0/450	0.61	0/599
49	B1	0.40	0/417	0.62	0/554
49	D1	0.34	0/417	0.56	0/554
50	B2	0.50	0/380	0.77	0/498
50	D2	0.36	0/380	0.59	0/498
51	B3	0.48	0/513	0.67	0/676
51	D3	0.31	0/513	0.54	0/676
52	B4	0.56	0/303	0.68	0/397
52	D4	0.46	0/303	0.64	0/397
53	B5	0.33	0/1145	0.55	0/1556
All	All	0.52	22/310626 (0.0%)	0.97	641/464366 (0.1%)

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
2	CB	0	1
5	CE	0	1
6	CF	0	1
11	AK	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
11	CK	0	1
12	CL	0	1
21	AU	0	2
21	CU	0	1
25	BD	0	1
25	DD	0	1
33	BL	0	1
47	BZ	0	1
All	All	0	13

All (22) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	BA	984	A	N9-C4	-9.47	1.32	1.37
22	BA	1977	A	N9-C4	-7.26	1.33	1.37
22	BA	1142	A	N9-C4	-7.11	1.33	1.37
22	BA	528	A	N7-C5	-7.06	1.35	1.39
22	BA	2071	A	N9-C4	-6.99	1.33	1.37
22	BA	783	A	N9-C4	-6.85	1.33	1.37
22	BA	528	A	N9-C4	-6.62	1.33	1.37
22	BA	1679	A	N7-C5	-6.49	1.35	1.39
22	BA	2266	A	N9-C4	-6.16	1.34	1.37
22	BA	1032	A	N3-C4	-5.74	1.31	1.34
22	BA	997	G	C2-N3	-5.68	1.28	1.32
22	BA	2273	A	N7-C5	-5.61	1.35	1.39
22	BA	1020	A	N9-C4	-5.57	1.34	1.37
22	BA	571	U	C2-N3	-5.43	1.33	1.37
22	BA	1253	A	N9-C4	-5.42	1.34	1.37
22	BA	529	A	N9-C4	-5.38	1.34	1.37
22	BA	941	A	N3-C4	-5.34	1.31	1.34
22	BA	2278	A	N9-C4	-5.34	1.34	1.37
22	BA	1677	A	C5-C6	-5.29	1.36	1.41
22	BA	685	A	N9-C4	-5.17	1.34	1.37
22	BA	984	A	N3-C4	-5.14	1.31	1.34
22	BA	2452	C	N1-C6	-5.06	1.34	1.37

All (641) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	528	A	N1-C6-N6	13.66	126.80	118.60
25	BD	151	THR	C-N-CD	-12.30	93.53	120.60
22	BA	984	A	C2-N3-C4	-11.24	104.98	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	532	A	O5'-P-OP1	-10.12	96.59	105.70
22	BA	528	A	C6-C5-N7	-9.92	125.36	132.30
22	BA	2017	U	O5'-P-OP1	-9.80	96.88	105.70
22	BA	752	A	N1-C6-N6	9.65	124.39	118.60
31	BJ	27	ARG	NE-CZ-NH1	9.57	125.09	120.30
22	BA	1677	A	N1-C6-N6	9.52	124.31	118.60
22	BA	1255	U	O5'-P-OP2	-9.50	97.15	105.70
22	BA	1977	A	C2-N3-C4	-9.45	105.87	110.60
22	BA	979	A	O5'-P-OP2	-9.29	97.34	105.70
23	BB	75	G	C5-C6-O6	-9.28	123.03	128.60
22	BA	752	A	C4-C5-N7	9.25	115.33	110.70
22	BA	2605	U	O5'-P-OP2	-9.07	97.53	105.70
22	BA	528	A	C5-N7-C8	-9.01	99.39	103.90
22	BA	946	C	O5'-P-OP2	-9.01	97.59	105.70
22	BA	974	G	C4-C5-N7	9.00	114.40	110.80
22	BA	752	A	C5-N7-C8	-8.79	99.50	103.90
22	BA	704	G	O4'-C1'-N9	8.75	115.20	108.20
22	BA	1153	C	O5'-P-OP1	-8.73	97.84	105.70
22	BA	984	A	N3-C4-C5	8.65	132.85	126.80
22	BA	564	C	O5'-P-OP1	-8.62	97.94	105.70
22	BA	1761	C	N1-C2-O2	8.62	124.07	118.90
23	BB	75	G	N1-C6-O6	8.59	125.05	119.90
22	BA	1779	U	O5'-P-OP1	-8.45	98.09	105.70
22	BA	2872	A	C8-N9-C4	-8.39	102.44	105.80
22	BA	572	A	O5'-P-OP1	-8.27	98.26	105.70
22	BA	783	A	C5-N7-C8	-8.10	99.85	103.90
22	BA	1676	A	O5'-P-OP2	-8.06	98.45	105.70
22	BA	1762	A	N1-C6-N6	8.00	123.40	118.60
22	BA	2450	A	O5'-P-OP2	-7.99	98.51	105.70
22	BA	2498	C	C6-N1-C2	7.93	123.47	120.30
22	BA	984	A	N3-C4-N9	-7.92	121.07	127.40
22	BA	1760	C	N3-C2-O2	7.91	127.43	121.90
16	AP	51	ARG	NE-CZ-NH1	7.88	124.24	120.30
22	BA	2022	U	N3-C2-O2	-7.87	116.69	122.20
22	BA	784	G	N1-C6-O6	-7.79	115.23	119.90
22	BA	1007	C	O5'-P-OP1	-7.76	98.71	105.70
22	BA	974	G	C5-N7-C8	-7.76	100.42	104.30
22	BA	528	A	C4-C5-N7	7.76	114.58	110.70
22	BA	2005	A	N1-C6-N6	7.75	123.25	118.60
22	BA	2286	G	N3-C4-C5	7.75	132.47	128.60
22	BA	1779	U	C5-C4-O4	7.73	130.54	125.90
22	BA	752	A	C6-C5-N7	-7.73	126.89	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2030	A	C5-C6-N6	7.66	129.83	123.70
22	BA	2021	C	O5'-P-OP2	-7.63	98.84	105.70
22	BA	1260	A	O5'-P-OP2	-7.58	98.87	105.70
22	BA	528	A	N7-C8-N9	7.56	117.58	113.80
22	BA	784	G	O4'-C1'-N9	-7.54	102.17	108.20
22	BA	531	C	N3-C2-O2	-7.51	116.64	121.90
1	AA	279	A	N1-C6-N6	7.51	123.11	118.60
22	BA	1760	C	N1-C2-O2	-7.48	114.41	118.90
22	BA	780	G	N1-C2-N2	-7.47	109.48	116.20
22	BA	729	G	O4'-C1'-N9	7.46	114.17	108.20
22	BA	1157	G	O5'-P-OP2	-7.45	98.99	105.70
22	BA	942	G	C5-C6-O6	-7.42	124.15	128.60
22	BA	705	A	N1-C6-N6	7.40	123.04	118.60
22	BA	1677	A	C5-C6-N6	-7.36	117.82	123.70
22	BA	2871	U	N1-C2-O2	7.35	127.94	122.80
22	BA	1768	C	C6-N1-C2	-7.32	117.37	120.30
22	BA	2705	A	N1-C6-N6	7.31	122.98	118.60
22	BA	2024	G	N1-C6-O6	-7.30	115.52	119.90
22	BA	2574	G	O5'-P-OP2	-7.26	99.17	105.70
22	BA	984	A	C5-C6-N1	-7.21	114.09	117.70
22	BA	2689	U	N3-C4-O4	-7.20	114.36	119.40
22	BA	806	C	N3-C4-C5	7.19	124.78	121.90
22	BA	1774	C	N1-C2-O2	-7.19	114.58	118.90
22	BA	2002	G	N1-C6-O6	7.19	124.22	119.90
1	CA	575	G	N3-C4-C5	7.17	132.19	128.60
22	BA	967	U	C5-C4-O4	7.13	130.18	125.90
22	BA	2633	G	N3-C4-C5	7.12	132.16	128.60
22	BA	2884	U	C5-C4-O4	7.12	130.17	125.90
22	BA	780	G	N3-C2-N2	7.10	124.87	119.90
1	AA	1286	U	C2-N1-C1'	7.08	126.19	117.70
22	BA	180	G	N3-C4-C5	7.07	132.14	128.60
22	BA	1784	A	C2-N3-C4	-7.06	107.07	110.60
22	BA	2495	G	C5-C6-O6	-7.05	124.37	128.60
22	BA	456	C	O5'-P-OP2	-7.04	99.36	105.70
22	BA	1286	A	N1-C6-N6	7.04	122.82	118.60
22	BA	980	A	C5-C6-N6	-7.03	118.08	123.70
22	BA	2871	U	N3-C2-O2	-7.02	117.29	122.20
22	BA	248	G	N1-C6-O6	6.99	124.09	119.90
22	BA	2447	G	N1-C6-O6	-6.99	115.71	119.90
22	BA	2055	C	O5'-P-OP2	-6.97	99.43	105.70
22	BA	760	G	N1-C6-O6	6.96	124.08	119.90
22	BA	2716	C	N3-C4-C5	6.94	124.68	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	769	U	N3-C2-O2	-6.94	117.34	122.20
22	BA	1658	C	C6-N1-C2	6.94	123.07	120.30
22	BA	2510	C	N1-C2-O2	-6.92	114.75	118.90
22	BA	450	G	N1-C6-O6	-6.91	115.75	119.90
22	BA	1274	A	N1-C6-N6	6.91	122.75	118.60
22	BA	1677	A	N9-C4-C5	-6.88	103.05	105.80
22	BA	672	C	N3-C4-C5	6.87	124.65	121.90
22	BA	980	A	N1-C6-N6	6.85	122.71	118.60
22	BA	1269	A	C4-C5-C6	6.85	120.42	117.00
1	AA	819	A	O5'-P-OP1	-6.84	99.55	105.70
22	BA	1780	A	O5'-P-OP2	-6.83	99.55	105.70
22	BA	1678	A	O5'-P-OP2	6.83	118.90	110.70
22	BA	2450	A	N1-C6-N6	6.82	122.69	118.60
22	BA	2824	C	OP2-P-O3'	6.82	120.19	105.20
22	BA	1189	A	O5'-P-OP2	-6.79	99.58	105.70
22	BA	2873	A	C8-N9-C4	-6.79	103.08	105.80
22	BA	780	G	N3-C4-N9	6.79	130.07	126.00
22	BA	2813	A	N1-C6-N6	6.79	122.67	118.60
22	BA	581	C	O5'-P-OP2	-6.78	99.60	105.70
22	BA	528	A	C2-N3-C4	-6.77	107.22	110.60
22	BA	2814	A	N1-C6-N6	6.76	122.66	118.60
22	BA	528	A	C5-C6-N1	-6.75	114.33	117.70
22	BA	1679	A	C4-C5-C6	6.75	120.37	117.00
22	BA	450	G	N3-C4-C5	-6.71	125.25	128.60
22	BA	980	A	C6-C5-N7	-6.70	127.61	132.30
22	BA	836	G	C4-C5-N7	6.70	113.48	110.80
1	CA	575	G	C4-N9-C1'	-6.69	117.81	126.50
1	CA	412	A	O4'-C1'-N9	6.63	113.51	108.20
22	DA	783	A	N1-C6-N6	6.63	122.58	118.60
22	BA	745	G	N3-C4-C5	-6.61	125.29	128.60
22	BA	2257	U	C5-C4-O4	6.61	129.86	125.90
22	BA	2002	G	C5-C6-O6	-6.60	124.64	128.60
22	BA	1654	A	N1-C6-N6	6.60	122.56	118.60
22	BA	1675	C	N1-C2-O2	-6.58	114.95	118.90
22	BA	461	C	N1-C2-O2	-6.54	114.97	118.90
22	BA	2565	A	N1-C6-N6	6.53	122.52	118.60
22	BA	1197	G	C4-N9-C1'	-6.53	118.02	126.50
22	BA	1019	U	O5'-P-OP1	-6.51	99.84	105.70
22	BA	783	A	N7-C8-N9	6.51	117.05	113.80
22	BA	2610	C	N3-C4-N4	-6.50	113.45	118.00
22	BA	1681	G	C5-C6-O6	-6.49	124.70	128.60
22	BA	1926	U	N1-C2-O2	6.48	127.33	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	533	G	C2-N3-C4	-6.47	108.66	111.90
22	BA	2037	A	N1-C6-N6	-6.47	114.72	118.60
22	BA	1321	A	C8-N9-C4	-6.47	103.21	105.80
22	BA	2592	G	O5'-P-OP1	-6.46	99.88	105.70
22	BA	1299	G	C6-C5-N7	-6.46	126.52	130.40
22	BA	1681	G	N1-C6-O6	6.44	123.77	119.90
22	BA	570	G	C5-C6-O6	-6.44	124.73	128.60
22	BA	2686	G	N1-C6-O6	6.43	123.76	119.90
13	AM	107	ARG	NE-CZ-NH1	6.42	123.51	120.30
22	BA	1677	A	C4-C5-N7	6.42	113.91	110.70
22	BA	2286	G	N3-C4-N9	-6.42	122.15	126.00
22	BA	977	G	O5'-P-OP2	-6.41	99.93	105.70
22	BA	2576	G	O5'-P-OP1	-6.40	99.94	105.70
22	BA	533	G	O5'-P-OP1	-6.40	99.94	105.70
22	BA	531	C	N1-C2-O2	6.38	122.73	118.90
22	BA	1779	U	N3-C4-O4	-6.38	114.94	119.40
1	AA	857	C	O5'-P-OP2	-6.37	99.97	105.70
22	BA	1677	A	C6-C5-N7	-6.37	127.84	132.30
22	BA	2498	C	C2-N1-C1'	-6.37	111.79	118.80
22	BA	32	C	N3-C2-O2	6.36	126.35	121.90
1	CA	575	G	N3-C4-N9	-6.35	122.19	126.00
22	BA	2439	A	N1-C6-N6	6.35	122.41	118.60
22	BA	2438	U	C5-C6-N1	-6.34	119.53	122.70
1	AA	1514	G	C5-C6-O6	-6.33	124.80	128.60
22	BA	2794	C	N1-C2-O2	-6.33	115.10	118.90
22	BA	942	G	N3-C2-N2	-6.33	115.47	119.90
22	BA	1032	A	N9-C4-C5	6.32	108.33	105.80
22	BA	2257	U	N3-C4-O4	-6.32	114.98	119.40
22	BA	1615	C	C6-N1-C2	-6.31	117.78	120.30
22	BA	1790	C	N1-C2-O2	-6.31	115.11	118.90
22	BA	488	G	N1-C6-O6	-6.31	116.11	119.90
1	AA	378	G	O5'-P-OP2	-6.30	100.03	105.70
22	BA	2674	G	N1-C6-O6	6.29	123.67	119.90
22	BA	802	A	O5'-P-OP1	-6.29	100.04	105.70
22	BA	737	C	OP1-P-OP2	6.28	129.02	119.60
22	BA	836	G	C5-C6-O6	-6.28	124.83	128.60
22	BA	2243	U	N1-C2-O2	-6.26	118.42	122.80
22	BA	2025	C	N3-C4-N4	-6.25	113.62	118.00
22	BA	2071	A	N3-C4-C5	6.25	131.18	126.80
22	BA	1260	A	O5'-P-OP1	6.25	118.20	110.70
22	BA	977	G	N1-C6-O6	6.25	123.65	119.90
22	BA	521	U	N3-C2-O2	-6.25	117.83	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	997	G	OP1-P-O3'	6.24	118.92	105.20
22	BA	2005	A	C5-C6-N6	-6.23	118.72	123.70
22	BA	961	C	O5'-P-OP2	-6.22	100.10	105.70
22	BA	1229	C	O5'-P-OP2	-6.21	100.11	105.70
22	BA	768	G	O5'-P-OP2	-6.20	100.12	105.70
22	BA	686	U	N1-C2-O2	-6.20	118.46	122.80
22	BA	2453	A	C4-C5-C6	6.18	120.09	117.00
22	BA	581	C	N3-C2-O2	-6.18	117.58	121.90
22	BA	2030	A	C5-C6-N1	-6.17	114.61	117.70
22	BA	2461	A	N1-C6-N6	6.17	122.30	118.60
22	BA	994	C	OP1-P-O3'	6.17	118.77	105.20
22	BA	2425	A	P-O3'-C3'	6.16	127.10	119.70
22	BA	2633	G	N3-C4-N9	-6.16	122.30	126.00
22	BA	2840	C	O5'-P-OP2	-6.16	100.16	105.70
22	BA	2263	C	C6-N1-C2	6.16	122.76	120.30
22	BA	1989	G	C6-C5-N7	-6.16	126.71	130.40
22	BA	1153	C	O5'-P-OP2	6.15	118.08	110.70
22	BA	1254	A	C6-N1-C2	-6.14	114.91	118.60
22	BA	2332	C	N1-C2-O2	-6.14	115.21	118.90
22	BA	752	A	N9-C4-C5	-6.14	103.34	105.80
22	BA	1909	C	C2-N1-C1'	6.14	125.55	118.80
22	BA	943	A	N1-C6-N6	6.13	122.28	118.60
22	BA	528	A	C4-C5-C6	6.13	120.06	117.00
22	BA	945	A	O5'-P-OP2	-6.12	100.19	105.70
22	BA	810	U	C5-C4-O4	-6.12	122.23	125.90
22	BA	1654	A	C4-C5-N7	6.11	113.76	110.70
22	BA	1761	C	C2-N1-C1'	6.10	125.51	118.80
22	BA	1277	G	N1-C6-O6	6.10	123.56	119.90
22	BA	1989	G	N1-C6-O6	6.10	123.56	119.90
22	BA	2388	A	N1-C6-N6	-6.09	114.95	118.60
22	BA	489	G	N9-C4-C5	6.08	107.83	105.40
22	BA	502	A	O5'-P-OP2	6.08	118.00	110.70
22	BA	973	A	OP2-P-O3'	6.08	118.58	105.20
22	BA	984	A	O4'-C1'-N9	6.08	113.06	108.20
22	BA	1754	A	OP1-P-OP2	-6.07	110.49	119.60
22	BA	2438	U	C2-N1-C1'	-6.07	110.42	117.70
22	BA	2689	U	C5-C4-O4	6.06	129.54	125.90
22	BA	2444	G	OP2-P-O3'	6.06	118.53	105.20
22	BA	1027	A	N1-C6-N6	6.05	122.23	118.60
22	BA	2250	G	N3-C4-C5	6.04	131.62	128.60
22	BA	528	A	C5-C6-N6	-6.04	118.87	123.70
22	BA	2448	A	N1-C6-N6	6.04	122.22	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2679	A	N1-C6-N6	6.04	122.22	118.60
22	BA	2588	G	O5'-P-OP2	-6.03	100.27	105.70
22	BA	2633	G	C2-N3-C4	-6.03	108.89	111.90
22	BA	528	A	C8-N9-C4	-6.01	103.39	105.80
22	BA	1265	A	OP1-P-O3'	6.01	118.42	105.20
22	BA	2452	C	C6-N1-C2	6.01	122.70	120.30
22	BA	2560	A	C8-N9-C4	-6.01	103.40	105.80
22	BA	2598	A	O5'-P-OP1	-6.01	100.29	105.70
22	BA	579	G	O5'-P-OP1	-6.00	100.30	105.70
22	BA	1132	U	N1-C2-N3	6.00	118.50	114.90
22	BA	1936	A	C2-N3-C4	-6.00	107.60	110.60
22	BA	1991	U	N3-C2-O2	-5.98	118.01	122.20
22	BA	778	G	N3-C4-N9	5.98	129.59	126.00
22	BA	970	U	OP2-P-O3'	5.98	118.35	105.20
22	BA	2238	G	N3-C2-N2	5.98	124.08	119.90
22	BA	590	A	N1-C6-N6	5.97	122.19	118.60
22	BA	686	U	N3-C2-O2	5.97	126.38	122.20
22	BA	2487	G	OP2-P-O3'	5.97	118.34	105.20
22	BA	752	A	N7-C8-N9	5.97	116.78	113.80
22	BA	855	G	N1-C6-O6	-5.95	116.33	119.90
22	BA	2250	G	O5'-P-OP1	-5.95	100.34	105.70
22	BA	727	A	N1-C6-N6	5.95	122.17	118.60
22	BA	664	G	O5'-P-OP2	-5.95	100.35	105.70
22	BA	2078	C	N3-C2-O2	-5.95	117.74	121.90
1	AA	503	C	C6-N1-C2	-5.95	117.92	120.30
22	BA	1644	C	C6-N1-C2	5.95	122.68	120.30
22	BA	1776	G	N1-C6-O6	5.93	123.46	119.90
22	BA	2037	A	N9-C4-C5	5.93	108.17	105.80
1	AA	971	G	O4'-C1'-N9	5.92	112.94	108.20
22	BA	912	C	OP1-P-O3'	5.92	118.22	105.20
22	BA	782	A	O5'-P-OP1	-5.91	100.38	105.70
22	BA	2054	A	OP2-P-O3'	5.91	118.21	105.20
22	BA	998	C	C6-N1-C2	-5.91	117.94	120.30
22	BA	1982	U	N3-C2-O2	-5.90	118.07	122.20
22	BA	942	G	N1-C6-O6	5.90	123.44	119.90
22	BA	672	C	C6-N1-C2	5.89	122.66	120.30
22	BA	740	C	C2-N3-C4	-5.89	116.95	119.90
22	BA	977	G	C5-C6-O6	-5.89	125.06	128.60
22	BA	1672	A	OP2-P-O3'	5.89	118.16	105.20
22	BA	583	G	N3-C4-N9	-5.89	122.47	126.00
22	BA	752	A	C5-C6-N6	-5.88	118.99	123.70
22	BA	481	G	C5-C6-O6	-5.88	125.07	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	790	U	O5'-P-OP2	-5.88	100.41	105.70
22	BA	1977	A	C5-C6-N1	-5.88	114.76	117.70
1	AA	1514	G	N1-C6-O6	5.88	123.43	119.90
22	BA	1977	A	C8-N9-C4	5.87	108.15	105.80
22	BA	571	U	O4'-C1'-N1	5.87	112.89	108.20
22	BA	1197	G	C8-N9-C1'	5.87	134.63	127.00
22	DA	729	G	O4'-C1'-N9	5.87	112.89	108.20
22	BA	2076	U	C5-C4-O4	5.86	129.42	125.90
22	BA	2059	A	OP1-P-OP2	5.86	128.39	119.60
22	BA	836	G	N1-C6-O6	5.85	123.41	119.90
22	BA	2578	G	C4-N9-C1'	-5.85	118.89	126.50
22	BA	2046	G	N1-C6-O6	5.84	123.41	119.90
22	BA	1250	G	OP1-P-OP2	5.83	128.35	119.60
22	DA	2447	G	C4-N9-C1'	-5.83	118.92	126.50
22	BA	536	G	C8-N9-C4	5.83	108.73	106.40
22	BA	1681	G	C4-C5-N7	5.83	113.13	110.80
22	BA	580	U	OP2-P-O3'	5.81	117.99	105.20
22	BA	2452	C	C2-N3-C4	-5.81	117.00	119.90
22	BA	783	A	C2-N3-C4	-5.81	107.70	110.60
1	AA	279	A	C5-C6-N6	-5.80	119.06	123.70
22	BA	461	C	N3-C2-O2	5.79	125.96	121.90
22	BA	16	C	O5'-P-OP2	-5.79	100.49	105.70
22	BA	2022	U	N1-C2-O2	5.79	126.85	122.80
22	BA	982	C	N1-C2-O2	5.79	122.37	118.90
22	BA	1311	G	C4-C5-N7	5.79	113.11	110.80
1	CA	209	U	C2-N1-C1'	5.78	124.64	117.70
22	BA	128	C	N1-C2-O2	-5.78	115.43	118.90
22	BA	1333	G	C5-C6-O6	5.78	132.06	128.60
22	BA	1779	U	O4'-C1'-N1	5.78	112.82	108.20
22	BA	1762	A	C5-C6-N6	-5.77	119.08	123.70
23	BB	107	G	C6-C5-N7	-5.77	126.94	130.40
22	BA	837	C	N1-C2-O2	-5.76	115.44	118.90
22	BA	752	A	C2-N3-C4	-5.76	107.72	110.60
22	BA	586	A	C8-N9-C4	-5.75	103.50	105.80
22	BA	2257	U	N3-C2-O2	-5.75	118.17	122.20
22	BA	1671	U	O5'-P-OP2	5.75	117.59	110.70
22	BA	952	G	C4-C5-N7	5.74	113.10	110.80
22	DA	481	G	O4'-C1'-N9	5.74	112.79	108.20
22	BA	2392	A	N1-C6-N6	5.73	122.04	118.60
22	BA	2718	G	O5'-P-OP1	-5.73	100.55	105.70
22	BA	514	A	OP1-P-O3'	5.72	117.79	105.20
22	BA	2029	G	C5-C6-N1	-5.72	108.64	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2799	A	N1-C6-N6	5.72	122.03	118.60
22	BA	2456	C	OP1-P-OP2	-5.72	111.02	119.60
23	BB	75	G	C6-C5-N7	-5.72	126.97	130.40
22	BA	2606	C	N1-C2-O2	-5.71	115.47	118.90
22	BA	1651	G	C4-N9-C1'	5.71	133.92	126.50
1	AA	664	G	N3-C4-N9	-5.71	122.58	126.00
22	BA	124	G	N3-C4-N9	-5.71	122.58	126.00
22	BA	1763	G	O5'-P-OP2	-5.68	100.58	105.70
22	BA	2004	G	OP1-P-OP2	5.68	128.12	119.60
22	BA	2350	C	OP2-P-O3'	5.68	117.69	105.20
22	BA	24	G	OP2-P-O3'	5.68	117.69	105.20
22	BA	532	A	N1-C6-N6	5.67	122.00	118.60
22	BA	32	C	N1-C2-O2	-5.67	115.50	118.90
22	BA	1299	G	N1-C6-O6	5.67	123.30	119.90
22	BA	1443	U	OP1-P-OP2	5.67	128.10	119.60
22	BA	2722	G	C6-C5-N7	-5.67	127.00	130.40
22	BA	1675	C	N1-C2-N3	5.66	123.16	119.20
22	BA	1131	G	OP1-P-O3'	5.65	117.64	105.20
22	BA	2606	C	C2-N3-C4	-5.65	117.07	119.90
22	BA	1784	A	C8-N9-C4	5.65	108.06	105.80
22	BA	200	U	N3-C2-O2	5.64	126.15	122.20
22	BA	47	C	N1-C2-O2	-5.63	115.52	118.90
22	BA	2592	G	C8-N9-C4	-5.63	104.15	106.40
22	BA	2581	G	C4-C5-N7	5.63	113.05	110.80
22	BA	563	A	N9-C4-C5	5.63	108.05	105.80
22	BA	962	G	C4-C5-N7	-5.63	108.55	110.80
22	BA	1550	C	N1-C2-O2	-5.63	115.52	118.90
22	BA	739	A	N1-C6-N6	5.62	121.97	118.60
22	BA	2815	C	C2-N3-C4	-5.62	117.09	119.90
1	AA	1504	G	O4'-C1'-N9	5.62	112.69	108.20
22	BA	655	A	N1-C6-N6	-5.61	115.23	118.60
22	BA	1266	G	C4-N9-C1'	-5.61	119.20	126.50
22	BA	748	G	O4'-C1'-N9	5.61	112.69	108.20
22	BA	855	G	C5-C6-O6	5.60	131.96	128.60
22	BA	1164	C	N1-C2-O2	-5.60	115.54	118.90
22	BA	2047	C	C6-N1-C2	5.60	122.54	120.30
22	BA	1022	G	N1-C6-O6	-5.60	116.54	119.90
22	BA	2076	U	N3-C4-O4	-5.60	115.48	119.40
1	AA	1279	G	N7-C8-N9	5.59	115.90	113.10
22	BA	1645	G	N3-C4-N9	5.59	129.35	126.00
22	BA	1125	G	C5-C6-O6	-5.59	125.25	128.60
22	BA	1142	A	C2-N3-C4	-5.59	107.81	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1926	U	N3-C2-O2	-5.58	118.29	122.20
22	BA	2076	U	N1-C2-N3	5.58	118.25	114.90
1	CA	1286	U	C2-N1-C1'	5.58	124.39	117.70
22	DA	2425	A	P-O3'-C3'	5.58	126.39	119.70
22	BA	207	A	C8-N9-C4	-5.58	103.57	105.80
22	BA	2640	G	N1-C6-O6	5.58	123.25	119.90
22	BA	2577	A	O5'-P-OP2	-5.57	100.69	105.70
23	BB	98	G	C5-C6-O6	-5.57	125.26	128.60
22	BA	962	G	N9-C4-C5	5.57	107.63	105.40
22	BA	1651	G	N3-C4-C5	-5.57	125.81	128.60
22	BA	1771	C	N1-C2-N3	5.57	123.09	119.20
22	BA	2073	C	N1-C2-O2	-5.57	115.56	118.90
22	BA	1250	G	O5'-P-OP1	-5.56	100.70	105.70
22	BA	1430	G	OP1-P-OP2	-5.55	111.27	119.60
22	DA	2447	G	C8-N9-C1'	5.55	134.21	127.00
22	BA	1248	G	C5-C6-O6	-5.55	125.27	128.60
22	BA	979	A	OP1-P-OP2	5.54	127.92	119.60
22	BA	973	A	N1-C6-N6	-5.54	115.28	118.60
22	BA	1673	G	O4'-C1'-N9	5.54	112.63	108.20
22	BA	2813	A	C8-N9-C4	5.54	108.01	105.80
22	BA	2250	G	C2-N3-C4	-5.53	109.13	111.90
22	BA	2375	G	N3-C4-N9	-5.53	122.68	126.00
22	BA	1760	C	C6-N1-C2	5.53	122.51	120.30
22	BA	2447	G	C4-C5-N7	-5.53	108.59	110.80
22	BA	531	C	C6-N1-C2	-5.53	118.09	120.30
1	AA	1279	G	C8-N9-C4	-5.52	104.19	106.40
22	BA	1761	C	C6-N1-C1'	-5.52	114.17	120.80
22	BA	2450	A	C5-C6-N6	-5.52	119.28	123.70
22	BA	1475	G	O4'-C1'-N9	5.52	112.61	108.20
22	BA	1277	G	C5-C6-O6	-5.51	125.30	128.60
22	BA	2260	C	C6-N1-C2	5.51	122.50	120.30
22	BA	967	U	N3-C4-O4	-5.50	115.55	119.40
22	BA	1671	U	C5-C6-N1	5.50	125.45	122.70
22	BA	962	G	C8-N9-C1'	5.50	134.15	127.00
22	BA	2630	G	N1-C6-O6	5.50	123.20	119.90
1	CA	575	G	C8-N9-C1'	5.50	134.15	127.00
22	BA	2715	C	O5'-P-OP2	-5.50	100.75	105.70
22	BA	1993	U	N3-C4-O4	-5.50	115.55	119.40
22	BA	585	G	O5'-P-OP2	-5.49	100.76	105.70
22	BA	2708	G	N1-C6-O6	-5.49	116.61	119.90
22	BA	1197	G	N3-C2-N2	-5.49	116.06	119.90
22	BA	1771	C	C2-N3-C4	-5.49	117.16	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BB	104	A	N1-C6-N6	5.48	121.89	118.60
22	BA	820	A	OP2-P-O3'	5.47	117.24	105.20
22	BA	2011	U	N1-C2-O2	-5.47	118.97	122.80
22	BA	2018	G	N1-C6-O6	-5.47	116.62	119.90
22	BA	2705	A	N9-C4-C5	-5.47	103.61	105.80
22	BA	84	A	N1-C6-N6	-5.46	115.33	118.60
37	BP	103	ARG	NE-CZ-NH1	5.46	123.03	120.30
22	BA	1784	A	N1-C6-N6	5.45	121.87	118.60
22	BA	1784	A	N9-C4-C5	-5.45	103.62	105.80
22	BA	2452	C	C5-C6-N1	-5.45	118.28	121.00
22	BA	2037	A	C8-N9-C4	-5.45	103.62	105.80
22	BA	2872	A	N9-C4-C5	5.45	107.98	105.80
22	BA	572	A	OP2-P-O3'	5.44	117.18	105.20
22	BA	200	U	N1-C2-O2	-5.44	118.99	122.80
22	BA	1248	G	N1-C6-O6	5.44	123.17	119.90
22	BA	2046	G	C5-C6-O6	-5.44	125.33	128.60
22	BA	1286	A	O5'-P-OP2	-5.44	100.81	105.70
22	BA	1147	A	O5'-P-OP2	-5.43	100.81	105.70
22	BA	1645	G	C6-C5-N7	-5.43	127.14	130.40
22	BA	2002	G	C6-C5-N7	-5.43	127.14	130.40
22	BA	2071	A	C2-N3-C4	-5.43	107.89	110.60
22	BA	1638	C	C5-C4-N4	-5.42	116.40	120.20
22	BA	2610	C	C5-C4-N4	5.42	124.00	120.20
22	BA	2685	G	N3-C2-N2	-5.42	116.11	119.90
22	BA	2437	G	C2-N3-C4	-5.42	109.19	111.90
22	BA	571	U	C2-N1-C1'	-5.41	111.20	117.70
22	BA	1452	G	C8-N9-C4	-5.41	104.24	106.40
22	DA	143	C	N3-C4-C5	5.41	124.06	121.90
22	BA	1197	G	C6-C5-N7	5.40	133.64	130.40
1	AA	115	G	P-O3'-C3'	5.40	126.18	119.70
22	BA	254	G	N1-C6-O6	5.40	123.14	119.90
22	BA	974	G	N3-C4-C5	5.40	131.30	128.60
22	BA	1789	A	N1-C6-N6	5.40	121.84	118.60
22	BA	1955	U	N3-C2-O2	5.40	125.98	122.20
22	BA	1651	G	C8-N9-C4	-5.39	104.24	106.40
22	BA	25	U	N1-C2-O2	-5.39	119.03	122.80
23	BB	107	G	N3-C4-N9	5.38	129.23	126.00
22	BA	913	U	OP1-P-OP2	-5.38	111.53	119.60
22	BA	834	G	N1-C2-N3	5.38	127.12	123.90
1	AA	1286	U	C6-N1-C1'	-5.37	113.68	121.20
22	BA	783	A	OP1-P-O3'	5.37	117.02	105.20
22	DA	1314	C	C2-N1-C1'	5.37	124.71	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2686	G	C8-N9-C4	-5.37	104.25	106.40
22	DA	2591	C	C6-N1-C2	-5.37	118.15	120.30
22	DA	776	G	C4-N9-C1'	5.36	133.47	126.50
22	BA	2498	C	N3-C2-O2	5.36	125.65	121.90
22	BA	804	A	N1-C6-N6	5.36	121.82	118.60
22	BA	2634	A	N1-C6-N6	5.36	121.82	118.60
22	BA	760	G	C5-C6-O6	-5.36	125.39	128.60
22	BA	1994	C	N1-C2-O2	5.36	122.11	118.90
22	BA	668	A	C4-C5-N7	5.35	113.38	110.70
22	BA	975	A	C8-N9-C4	-5.35	103.66	105.80
22	BA	1779	U	N3-C2-O2	-5.34	118.47	122.20
22	BA	2461	A	N9-C4-C5	-5.34	103.67	105.80
22	BA	1230	A	O5'-P-OP2	-5.33	100.90	105.70
22	BA	443	A	C8-N9-C4	-5.33	103.67	105.80
22	BA	1248	G	C6-C5-N7	-5.33	127.20	130.40
22	BA	1645	G	N9-C4-C5	-5.33	103.27	105.40
22	BA	2570	G	N1-C6-O6	-5.33	116.70	119.90
22	BA	837	C	N3-C4-C5	5.33	124.03	121.90
22	BA	979	A	N1-C6-N6	-5.33	115.40	118.60
22	BA	826	U	OP2-P-O3'	5.32	116.91	105.20
22	BA	2258	C	C6-N1-C2	5.32	122.43	120.30
22	BA	2687	U	N1-C2-O2	-5.31	119.08	122.80
22	BA	2286	G	C4-N9-C1'	-5.31	119.59	126.50
1	AA	108	G	C8-N9-C4	-5.31	104.28	106.40
22	BA	450	G	C5-C6-O6	5.31	131.78	128.60
22	DA	776	G	C8-N9-C1'	-5.31	120.10	127.00
22	BA	2630	G	C5-C6-O6	-5.30	125.42	128.60
22	BA	1269	A	C6-C5-N7	-5.30	128.59	132.30
22	BA	2592	G	N3-C2-N2	-5.30	116.19	119.90
22	BA	574	A	O5'-P-OP2	5.30	117.06	110.70
22	BA	2075	U	N3-C2-O2	-5.30	118.49	122.20
22	BA	200	U	N3-C4-O4	5.30	123.11	119.40
22	BA	533	G	N3-C4-C5	5.29	131.25	128.60
22	BA	2817	U	N3-C2-O2	5.29	125.91	122.20
22	BA	1229	C	N1-C2-O2	-5.29	115.73	118.90
22	BA	2004	G	C8-N9-C4	5.29	108.52	106.40
22	BA	938	G	C8-N9-C1'	5.29	133.87	127.00
22	BA	2633	G	N3-C2-N2	-5.29	116.20	119.90
22	BA	1326	U	N3-C2-O2	5.28	125.90	122.20
22	BA	953	G	C8-N9-C4	5.28	108.51	106.40
22	BA	957	C	C6-N1-C2	5.28	122.41	120.30
22	BA	2323	G	C6-C5-N7	-5.28	127.23	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	276	U	N1-C2-O2	5.28	126.49	122.80
22	BA	1614	A	O5'-P-OP1	-5.28	100.95	105.70
22	BA	2080	A	N1-C6-N6	5.27	121.76	118.60
22	BA	529	A	C8-N9-C4	5.27	107.91	105.80
22	BA	2252	G	C6-C5-N7	-5.27	127.24	130.40
22	BA	2627	G	C5-C6-O6	-5.27	125.44	128.60
22	BA	1464	G	N3-C4-N9	-5.26	122.84	126.00
22	BA	765	C	O5'-P-OP2	-5.26	100.96	105.70
1	CA	1151	A	O4'-C1'-N9	5.26	112.41	108.20
22	BA	747	U	C5-C4-O4	5.26	129.06	125.90
1	AA	279	A	C4-C5-N7	5.25	113.33	110.70
22	BA	2451	A	OP1-P-OP2	-5.25	111.72	119.60
22	BA	1651	G	OP1-P-O3'	5.25	116.75	105.20
22	BA	1989	G	N9-C4-C5	-5.25	103.30	105.40
22	BA	1649	G	OP1-P-OP2	5.25	127.47	119.60
22	BA	1128	G	C5-C6-O6	-5.24	125.45	128.60
22	BA	1756	G	O4'-C1'-N9	-5.24	104.01	108.20
22	BA	30	G	O5'-P-OP1	-5.24	100.98	105.70
22	BA	2456	C	OP1-P-O3'	5.24	116.73	105.20
22	BA	1255	U	OP1-P-OP2	5.24	127.46	119.60
22	BA	243	U	C5-C4-O4	-5.24	122.76	125.90
22	BA	1193	G	OP1-P-OP2	-5.23	111.75	119.60
22	BA	1977	A	N3-C4-C5	5.23	130.46	126.80
22	BA	2036	C	C6-N1-C2	-5.23	118.21	120.30
22	BA	1827	U	OP1-P-OP2	5.23	127.44	119.60
22	BA	2581	G	N9-C4-C5	-5.23	103.31	105.40
22	BA	2587	A	OP2-P-O3'	5.23	116.70	105.20
22	BA	578	G	C6-C5-N7	-5.22	127.27	130.40
22	BA	674	G	C8-N9-C4	-5.22	104.31	106.40
22	BA	2055	C	C5-C6-N1	-5.22	118.39	121.00
6	CF	86	ARG	NE-CZ-NH1	5.22	122.91	120.30
22	BA	1185	G	N1-C6-O6	-5.22	116.77	119.90
22	BA	2391	G	O4'-C1'-N9	5.21	112.37	108.20
22	BA	2434	A	C8-N9-C4	-5.21	103.72	105.80
33	BL	44	GLY	N-CA-C	-5.21	100.07	113.10
22	BA	276	U	C2-N1-C1'	5.21	123.95	117.70
22	BA	2694	G	C5-C6-O6	-5.21	125.47	128.60
22	BA	553	G	OP2-P-O3'	5.21	116.65	105.20
22	BA	2513	A	OP2-P-O3'	5.21	116.65	105.20
1	CA	733	G	P-O3'-C3'	5.21	125.95	119.70
22	BA	1286	A	C5-C6-N6	-5.20	119.54	123.70
22	BA	456	C	OP1-P-OP2	5.20	127.40	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	686	U	C2-N1-C1'	-5.20	111.46	117.70
22	BA	745	G	C6-N1-C2	-5.20	121.98	125.10
39	BR	51	VAL	C-N-CD	5.20	139.32	128.40
22	BA	772	C	C5-C4-N4	-5.20	116.56	120.20
22	BA	1153	C	OP2-P-O3'	5.20	116.63	105.20
22	BA	2612	C	C2-N1-C1'	-5.20	113.09	118.80
23	BB	5	U	N1-C2-O2	-5.20	119.16	122.80
22	BA	1123	C	C2-N3-C4	-5.19	117.30	119.90
22	BA	1790	C	C2-N3-C4	-5.19	117.30	119.90
22	BA	825	A	OP2-P-O3'	5.19	116.62	105.20
22	BA	2630	G	C6-C5-N7	-5.19	127.28	130.40
22	BA	2684	U	OP2-P-O3'	5.19	116.62	105.20
1	AA	365	U	C2-N1-C1'	-5.19	111.47	117.70
22	BA	249	C	N1-C2-O2	-5.19	115.79	118.90
22	BA	1762	A	C6-C5-N7	-5.18	128.67	132.30
22	BA	2553	G	N3-C4-C5	-5.18	126.01	128.60
22	BA	783	A	P-O3'-C3'	-5.18	113.48	119.70
22	BA	1216	G	C8-N9-C4	5.18	108.47	106.40
22	BA	488	G	C5-C6-O6	5.18	131.71	128.60
22	BA	1151	A	OP1-P-O3'	5.18	116.59	105.20
23	BB	5	U	N3-C2-O2	5.18	125.82	122.20
22	DA	1666	G	C4-N9-C1'	-5.18	119.77	126.50
22	BA	2330	G	N1-C6-O6	5.17	123.00	119.90
22	BA	576	U	N1-C2-O2	-5.17	119.18	122.80
22	BA	726	G	C2-N3-C4	-5.17	109.31	111.90
22	BA	2071	A	O5'-P-OP2	-5.17	101.05	105.70
22	BA	2428	G	C5-C6-N1	5.16	114.08	111.50
1	AA	348	G	C5-C6-O6	-5.16	125.50	128.60
22	BA	1127	A	C8-N9-C4	5.16	107.86	105.80
22	BA	2251	G	OP1-P-O3'	5.16	116.55	105.20
22	BA	962	G	C4-N9-C1'	-5.15	119.80	126.50
22	BA	1645	G	N3-C2-N2	5.15	123.51	119.90
22	BA	1426	G	C6-C5-N7	-5.15	127.31	130.40
22	BA	2645	G	C8-N9-C1'	-5.15	120.31	127.00
22	BA	1509	A	N1-C6-N6	5.14	121.69	118.60
22	BA	2024	G	C5-C6-O6	5.14	131.69	128.60
22	BA	2510	C	N3-C4-N4	5.14	121.60	118.00
22	BA	2719	G	N1-C6-O6	5.14	122.98	119.90
22	BA	1126	A	C4-C5-C6	5.14	119.57	117.00
22	BA	532	A	C4-C5-N7	5.14	113.27	110.70
22	BA	938	G	C4-N9-C1'	-5.14	119.82	126.50
22	BA	2030	A	C4-C5-N7	-5.14	108.13	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2838	G	N1-C6-O6	5.14	122.98	119.90
22	BA	2036	C	C2-N1-C1'	5.13	124.45	118.80
22	BA	2510	C	N3-C2-O2	5.13	125.49	121.90
22	BA	64	A	C8-N9-C4	-5.13	103.75	105.80
1	AA	348	G	N1-C6-O6	5.13	122.98	119.90
22	BA	1164	C	O5'-P-OP2	-5.13	101.08	105.70
1	AA	365	U	C6-N1-C1'	5.13	128.38	121.20
1	AA	742	G	C4-N9-C1'	-5.12	119.84	126.50
22	BA	583	G	N3-C4-C5	5.12	131.16	128.60
29	BH	121	VAL	C-N-CA	5.12	134.50	121.70
1	AA	1513	A	C8-N9-C4	5.12	107.85	105.80
22	BA	1326	U	N1-C2-O2	-5.12	119.22	122.80
22	BA	1658	C	C5-C6-N1	-5.11	118.44	121.00
22	BA	2625	G	C8-N9-C4	5.11	108.44	106.40
22	BA	2326	C	C3'-C2'-C1'	5.11	105.59	101.50
22	BA	1909	C	C5-C6-N1	5.11	123.56	121.00
22	BA	806	C	C5-C4-N4	-5.11	116.62	120.20
22	BA	1654	A	N9-C4-C5	-5.11	103.76	105.80
22	BA	677	A	O5'-P-OP1	5.10	116.82	110.70
22	BA	971	G	N3-C4-C5	-5.10	126.05	128.60
22	BA	946	C	C5-C4-N4	-5.10	116.63	120.20
22	BA	1346	G	C8-N9-C1'	5.09	133.62	127.00
22	BA	1768	C	N3-C2-O2	-5.09	118.33	121.90
1	AA	1524	C	N1-C2-O2	-5.09	115.85	118.90
22	BA	1270	C	OP1-P-OP2	-5.09	111.97	119.60
22	BA	586	A	N9-C4-C5	5.09	107.83	105.80
22	BA	2645	G	N3-C4-N9	5.09	129.05	126.00
22	BA	461	C	C6-N1-C2	5.09	122.33	120.30
22	BA	1394	U	O4'-C1'-N1	-5.09	104.13	108.20
22	BA	1637	A	N1-C6-N6	5.08	121.65	118.60
22	BA	2257	U	N1-C2-O2	5.08	126.36	122.80
22	BA	2685	G	N3-C4-N9	-5.08	122.95	126.00
22	BA	2705	A	C5-C6-N6	-5.08	119.63	123.70
22	DA	2326	C	C6-N1-C2	-5.08	118.27	120.30
22	BA	2715	C	N1-C2-O2	5.08	121.95	118.90
22	BA	705	A	C6-C5-N7	-5.08	128.75	132.30
22	BA	2030	A	N1-C6-N6	-5.08	115.56	118.60
22	BA	727	A	C6-C5-N7	-5.07	128.75	132.30
22	BA	1966	A	O4'-C1'-N9	-5.07	104.14	108.20
22	BA	975	A	N7-C8-N9	5.07	116.33	113.80
1	AA	279	A	N9-C4-C5	-5.07	103.77	105.80
22	BA	2246	G	C8-N9-C4	5.07	108.43	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1989	G	C4-C5-N7	5.06	112.83	110.80
22	BA	2076	U	C5-C6-N1	-5.06	120.17	122.70
22	BA	1926	U	P-O3'-C3'	-5.06	113.63	119.70
22	BA	969	G	N1-C6-O6	5.06	122.93	119.90
22	BA	809	G	O5'-P-OP1	5.05	116.76	110.70
22	BA	2645	G	C4-N9-C1'	5.05	133.07	126.50
1	AA	664	G	C8-N9-C1'	5.05	133.57	127.00
22	BA	796	C	N1-C2-O2	5.05	121.93	118.90
22	BA	1269	A	N1-C6-N6	5.05	121.63	118.60
22	BA	914	G	N3-C4-C5	5.04	131.12	128.60
22	BA	2517	C	N3-C4-C5	5.04	123.92	121.90
22	BA	199	A	N1-C6-N6	-5.04	115.58	118.60
22	BA	2722	G	C4-C5-N7	5.04	112.82	110.80
22	BA	784	G	C5-C6-O6	5.04	131.62	128.60
22	BA	670	A	O5'-P-OP1	-5.04	101.17	105.70
22	BA	1618	A	N1-C6-N6	-5.03	115.58	118.60
22	BA	770	G	C6-C5-N7	-5.03	127.38	130.40
22	BA	1244	A	N1-C6-N6	5.03	121.62	118.60
22	BA	2486	C	N1-C2-O2	-5.03	115.88	118.90
22	BA	699	A	N1-C6-N6	-5.03	115.58	118.60
22	BA	1253	A	C8-N9-C4	5.03	107.81	105.80
22	BA	2069	G	C4-C5-N7	5.03	112.81	110.80
22	BA	2613	U	O5'-P-OP2	-5.03	101.17	105.70
22	BA	906	U	O4'-C1'-N1	5.03	112.22	108.20
22	BA	980	A	C4-C5-N7	5.03	113.21	110.70
22	BA	39	G	N1-C6-O6	-5.02	116.89	119.90
22	BA	737	C	C2-N3-C4	-5.02	117.39	119.90
10	CJ	48	ARG	NE-CZ-NH1	5.02	122.81	120.30
22	BA	687	C	C5-C6-N1	-5.02	118.49	121.00
22	BA	1191	G	N1-C6-O6	-5.02	116.89	119.90
22	BA	2076	U	N3-C2-O2	-5.02	118.69	122.20
22	BA	2623	G	N3-C4-N9	5.02	129.01	126.00
22	BA	2723	C	OP2-P-O3'	5.02	116.24	105.20
1	AA	890	G	O4'-C1'-N9	5.01	112.21	108.20
22	BA	242	G	C8-N9-C1'	5.01	133.52	127.00
22	BA	1340	U	O4'-C1'-N1	5.01	112.21	108.20
22	BA	2375	G	C8-N9-C1'	5.01	133.52	127.00
22	BA	1212	G	O4'-C1'-N9	5.01	112.21	108.20
22	BA	2243	U	O5'-P-OP1	-5.01	101.19	105.70
22	BA	747	U	N3-C4-O4	-5.01	115.89	119.40
22	BA	783	A	C4-C5-N7	5.01	113.20	110.70
1	AA	742	G	N3-C4-C5	5.01	131.10	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
17	AQ	75	LEU	CA-CB-CG	5.01	126.82	115.30
22	BA	2719	G	C5-C6-O6	-5.01	125.60	128.60
22	BA	847	U	N3-C2-O2	-5.00	118.70	122.20
22	BA	977	G	OP1-P-O3'	5.00	116.21	105.20
22	BA	2724	U	OP2-P-O3'	5.00	116.21	105.20
22	BA	2889	C	C2-N3-C4	-5.00	117.40	119.90
22	BA	1945	G	C4-N9-C1'	5.00	133.00	126.50
22	BA	2581	G	N1-C6-O6	5.00	122.90	119.90

There are no chirality outliers.

All (13) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
11	AK	126	LYS	Peptide
21	AU	39	GLU	Peptide
21	AU	8	GLU	Peptide
25	BD	151	THR	Peptide
33	BL	110	VAL	Peptide
47	BZ	15	GLY	Peptide
2	CB	84	ALA	Peptide
5	CE	102	GLY	Peptide
6	CF	54	LEU	Peptide
11	CK	126	LYS	Peptide
12	CL	23	ALA	Peptide
21	CU	35	ARG	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	1173	4
1	CA	33015	0	16617	1168	1
2	AB	1705	0	1732	198	0
2	CB	1705	0	1732	149	0
3	AC	1625	0	1696	88	0
3	CC	1625	0	1696	94	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	AD	1643	0	1707	143	0
4	CD	1643	0	1707	130	0
5	AE	1106	0	1148	82	0
5	CE	1106	0	1148	115	0
6	AF	818	0	808	60	0
6	CF	818	0	808	65	0
7	AG	1182	0	1238	78	0
7	CG	1182	0	1238	57	0
8	AH	979	0	1031	64	0
8	CH	979	0	1031	54	0
9	AI	1022	0	1070	91	0
9	CI	1022	0	1070	67	0
10	AJ	787	0	828	97	0
10	CJ	787	0	828	48	0
11	AK	877	0	887	87	0
11	CK	877	0	887	74	0
12	AL	955	0	1016	54	0
12	CL	955	0	1016	61	0
13	AM	884	0	941	70	0
13	CM	884	0	941	56	0
14	AN	774	0	824	74	0
14	CN	774	0	824	55	0
15	AO	710	0	728	45	0
15	CO	710	0	728	46	0
16	AP	649	0	666	64	0
16	CP	649	0	666	30	0
17	AQ	649	0	691	59	0
17	CQ	649	0	691	55	0
18	AR	456	0	478	22	0
18	CR	456	0	478	39	0
19	AS	638	0	665	40	0
19	CS	638	0	665	30	0
20	AT	665	0	714	53	0
20	CT	665	0	714	48	0
21	AU	426	0	449	57	0
21	CU	426	0	449	54	0
22	BA	62195	0	31280	1960	0
22	DA	62195	0	31280	2094	1
23	BB	2549	0	1291	47	0
23	DB	2529	0	1281	64	0
24	BC	2083	0	2154	131	0
24	DC	2083	0	2154	140	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
25	BD	1565	0	1616	108	0
25	DD	1565	0	1616	85	0
26	BE	1552	0	1619	71	0
26	DE	1552	0	1619	108	0
27	BF	1411	0	1444	84	0
27	DF	1411	0	1444	53	0
28	BG	1323	0	1371	62	0
28	DG	1323	0	1371	62	0
29	BH	1110	0	1147	167	0
29	DH	1110	0	1148	93	4
30	BI	1032	0	1085	89	0
30	DI	1032	0	1085	76	0
31	BJ	1129	0	1162	45	0
31	DJ	1129	0	1162	55	0
32	BK	939	0	1012	48	0
32	DK	939	0	1012	35	0
33	BL	1045	0	1117	54	0
33	DL	1045	0	1117	71	0
34	BM	1074	0	1157	49	0
34	DM	1074	0	1157	31	0
35	BN	961	0	1000	68	0
35	DN	961	0	1000	69	0
36	BO	892	0	923	41	0
36	DO	892	0	923	48	0
37	BP	917	0	962	43	0
37	DP	917	0	962	49	0
38	BQ	947	0	1019	62	0
38	DQ	947	0	1019	56	0
39	BR	816	0	839	84	0
39	DR	816	0	839	52	0
40	BS	857	0	922	58	0
40	DS	857	0	922	43	0
41	BT	739	0	807	34	0
41	DT	739	0	807	54	0
42	BU	780	0	831	35	0
42	DU	780	0	831	71	0
43	BV	753	0	780	35	0
43	DV	753	0	780	24	0
44	BW	580	0	594	21	0
44	DW	569	0	581	20	0
45	BX	625	0	652	26	0
45	DX	625	0	652	67	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
46	BY	509	0	543	36	0
46	DY	509	0	543	45	0
47	BZ	449	0	488	20	0
47	DZ	449	0	488	16	0
48	B0	444	0	458	35	0
48	D0	444	0	458	26	0
49	B1	410	0	440	17	0
49	D1	410	0	440	19	0
50	B2	377	0	418	14	0
50	D2	377	0	418	28	0
51	B3	504	0	572	25	0
51	D3	504	0	572	31	0
52	B4	302	0	340	18	0
52	D4	302	0	342	21	0
53	B5	1142	0	865	58	0
54	AA	72	0	0	0	0
54	BA	194	0	0	0	0
54	BB	4	0	0	0	0
54	BN	1	0	0	0	0
54	CA	55	0	0	0	0
54	CM	1	0	0	0	0
54	D2	1	0	0	0	0
54	DA	166	0	0	0	0
54	DB	3	0	0	0	0
54	DQ	1	0	0	0	0
55	BA	38	0	38	5	0
55	DA	38	0	37	11	0
56	B4	1	0	0	2	0
56	D4	1	0	0	0	0
57	AA	195	0	0	29	0
57	AL	1	0	0	0	0
57	AN	5	0	0	0	0
57	AT	1	0	0	0	0
57	AU	1	0	0	1	0
57	B2	1	0	0	1	0
57	B3	2	0	0	0	0
57	B4	1	0	0	0	0
57	BA	620	0	0	101	0
57	BB	13	0	0	0	0
57	BC	6	0	0	4	0
57	BD	3	0	0	3	0
57	BE	4	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	BF	1	0	0	1	0
57	BG	1	0	0	0	0
57	BL	8	0	0	0	0
57	BN	4	0	0	0	0
57	BS	1	0	0	0	0
57	BV	1	0	0	0	0
57	CA	189	0	0	19	0
57	CL	1	0	0	0	0
57	CN	3	0	0	0	0
57	CT	4	0	0	0	0
57	CU	1	0	0	0	0
57	D0	1	0	0	0	0
57	D2	3	0	0	0	0
57	D3	2	0	0	0	0
57	D4	1	0	0	0	0
57	DA	613	0	0	87	0
57	DB	13	0	0	1	0
57	DC	9	0	0	1	0
57	DD	4	0	0	2	0
57	DE	2	0	0	0	0
57	DJ	1	0	0	0	0
57	DL	3	0	0	1	0
57	DN	1	0	0	0	0
57	DT	2	0	0	0	0
57	DV	1	0	0	0	0
All	All	288258	0	192864	11506	5

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 24.

All (11506) 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:NH2	1:CA:367:U:OP2	1.64	1.27
29:BH:117:LEU:O	29:BH:121:VAL:HG23	1.34	1.22
22:BA:1153:C:OP2	57:BA:3357:HOH:O	1.59	1.19
15:AO:89:ARG:NH1	22:BA:716:A:OP2	1.75	1.19
22:BA:2574:G:OP1	57:BA:3713:HOH:O	1.61	1.18
22:BA:1342:A:OP2	57:BA:3717:HOH:O	1.63	1.16
22:BA:2005:A:OP1	57:BA:3383:HOH:O	1.63	1.15
1:AA:684:U:O2'	11:AK:40:ASN:O	1.63	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:117:LEU:O	29:BH:121:VAL:CG2	1.95	1.14
25:BD:140:HIS:NE2	57:BD:302:HOH:O	1.81	1.13
1:CA:1385:G:N7	57:CA:1870:HOH:O	1.81	1.12
1:AA:516:U:O4	57:AA:1849:HOH:O	1.68	1.11
22:DA:2711:A:OP2	57:DA:3548:HOH:O	1.68	1.11
29:BH:123:ARG:O	29:BH:124:THR:CG2	2.01	1.09
22:DA:192:C:OP1	57:DA:3738:HOH:O	1.69	1.08
22:BA:2579:C:OP1	57:BA:3541:HOH:O	1.71	1.08
1:AA:702:A:N6	22:BA:1846:G:O2'	1.87	1.08
22:DA:1395:A:OP2	57:DA:3403:HOH:O	1.72	1.07
22:BA:731:C:OP2	57:BA:3695:HOH:O	1.72	1.07
25:DD:151:THR:O	25:DD:153:GLY:N	1.88	1.06
22:BA:2498:C:OP2	57:BA:3687:HOH:O	1.72	1.04
22:BA:2453:A:N7	57:BA:3524:HOH:O	1.91	1.04
22:BA:842:U:O4	57:BA:3588:HOH:O	1.74	1.04
22:DA:756:A:N7	57:DA:3301:HOH:O	1.90	1.04
22:BA:2499:C:OP2	57:BA:3687:HOH:O	1.77	1.03
22:DA:2588:G:OP1	57:DA:3314:HOH:O	1.77	1.03
22:BA:978:G:N7	57:BA:3590:HOH:O	1.89	1.03
22:BA:2575:C:OP2	57:BA:3713:HOH:O	1.76	1.02
29:BH:97:ARG:HD2	1:CA:369:G:O2'	1.57	1.01
29:BH:117:LEU:HD21	29:BH:121:VAL:H	1.23	1.00
22:DA:2262:U:OP1	44:DW:41:ARG:NH2	1.95	1.00
1:AA:965:U:OP2	57:AA:1832:HOH:O	1.79	1.00
22:DA:370:G:N7	57:DA:3560:HOH:O	1.92	0.99
29:BH:123:ARG:O	29:BH:124:THR:HG23	1.61	0.99
22:DA:1371:G:N7	57:DA:3399:HOH:O	1.95	0.99
5:CE:157:ARG:O	5:CE:159:LYS:N	1.95	0.99
22:BA:2757:A:N1	28:BG:67:THR:HG21	1.78	0.99
22:BA:1179:G:C5	22:BA:1180:U:H1'	1.96	0.99
22:BA:2728:U:O2'	22:BA:2729:G:OP2	1.79	0.99
22:DA:973:A:OP2	39:DR:81:LYS:NZ	1.95	0.98
4:AD:125:VAL:O	4:AD:127:GLY:N	1.97	0.98
14:CN:41:ARG:NH1	14:CN:42:TRP:O	1.97	0.97
22:DA:1010:A:OP2	57:DA:3780:HOH:O	1.81	0.97
22:DA:1823:G:N7	57:DA:3654:HOH:O	1.96	0.97
22:DA:1006:C:OP2	57:DA:3781:HOH:O	1.83	0.97
2:AB:82:ASP:O	2:AB:85:LEU:N	1.97	0.96
29:DH:40:THR:O	29:DH:42:LYS:N	1.98	0.96
1:AA:1077:G:N7	57:AA:1789:HOH:O	1.98	0.96
22:DA:58:G:OP1	41:DT:78:SER:OG	1.82	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:123:ARG:HH22	1:CA:367:U:P	1.88	0.96
2:CB:206:ALA:O	2:CB:208:ARG:N	1.98	0.96
39:BR:24:LYS:HA	39:BR:94:THR:HG23	1.47	0.96
22:BA:2291:U:H2'	22:BA:2292:U:C6	2.01	0.95
22:BA:747:U:C5	22:BA:2613:U:C5	2.54	0.95
5:AE:14:LYS:NZ	5:AE:116:GLU:OE1	1.99	0.95
2:AB:21:ARG:O	2:AB:23:TRP:N	2.00	0.95
29:BH:120:GLY:C	29:BH:122:LEU:HA	1.85	0.95
22:BA:1602:U:O4	57:BA:3717:HOH:O	1.83	0.94
29:BH:83:LYS:HD2	1:CA:55:A:O2'	1.67	0.94
27:DF:122:PHE:O	27:DF:124:GLY:N	2.01	0.94
22:DA:2004:G:OP2	57:DA:3803:HOH:O	1.85	0.94
22:BA:14:A:OP2	57:BA:3553:HOH:O	1.84	0.94
22:DA:602:A:O2'	22:DA:604:G:O2'	1.83	0.94
22:BA:2025:C:OP2	57:BA:3473:HOH:O	1.84	0.94
22:BA:2057:G:OP2	57:BA:3488:HOH:O	1.85	0.93
1:AA:533:A:OP1	57:AA:1849:HOH:O	1.86	0.93
22:BA:944:C:O3'	57:BA:3345:HOH:O	1.86	0.93
22:BA:1669:A:OP2	57:BA:3726:HOH:O	1.86	0.92
4:AD:22:LYS:O	4:AD:24:GLY:N	2.03	0.92
1:CA:1198:G:N7	57:CA:1849:HOH:O	2.01	0.92
22:DA:450:G:O6	57:DA:3240:HOH:O	1.86	0.92
22:DA:528:A:OP1	57:DA:3244:HOH:O	1.87	0.91
22:BA:58:G:OP1	41:BT:78:SER:HB2	1.70	0.91
1:CA:257:G:N7	57:CA:1718:HOH:O	2.03	0.90
29:DH:83:LYS:HG3	29:DH:149:GLU:CG	2.02	0.90
5:CE:101:GLU:O	5:CE:103:THR:N	2.04	0.90
22:DA:527:C:OP1	57:DA:3245:HOH:O	1.90	0.89
22:BA:2478:A:H5'	52:B4:32:LYS:HD3	1.52	0.89
22:BA:1965:C:OP1	22:BA:1966:A:O2'	1.90	0.89
22:DA:2134:A:N6	22:DA:2157:G:O2'	2.04	0.89
1:AA:405:U:O4	4:AD:2:ALA:N	2.05	0.89
22:DA:1602:U:O4	57:DA:3713:HOH:O	1.88	0.89
1:AA:1407:C:O2'	22:BA:1912:A:N6	2.05	0.89
6:CF:12:PRO:O	6:CF:15:SER:OG	1.91	0.89
21:AU:35:ARG:O	21:AU:37:PHE:N	2.06	0.89
5:AE:159:LYS:O	8:AH:64:LYS:NZ	2.05	0.89
1:CA:858:G:N7	57:CA:1817:HOH:O	2.05	0.89
22:BA:826:U:O2'	33:BL:53:GLY:HA3	1.73	0.89
22:BA:1780:A:OP1	57:BA:3694:HOH:O	1.91	0.89
6:CF:91:ARG:O	6:CF:92:THR:OG1	1.89	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:116:LYS:O	12:CL:117:TYR:CG	2.26	0.88
22:BA:2615:U:OP2	57:BA:3753:HOH:O	1.89	0.88
22:BA:2573:C:OP1	57:BA:3713:HOH:O	1.89	0.88
22:BA:2497:A:O3'	57:BA:3688:HOH:O	1.91	0.88
1:CA:1097:C:OP1	2:CB:139:ARG:NH2	2.07	0.88
29:BH:123:ARG:O	29:BH:124:THR:HG22	1.74	0.88
22:DA:2627:G:O2'	22:DA:2781:A:N1	2.07	0.88
1:AA:1500:A:OP2	57:AA:1872:HOH:O	1.91	0.88
1:CA:484:G:H4'	1:CA:485:U:O5'	1.74	0.88
2:CB:103:ASN:ND2	2:CB:106:THR:OG1	2.07	0.87
29:BH:117:LEU:C	29:BH:121:VAL:HG23	1.93	0.87
22:DA:761:A:OP2	57:DA:3295:HOH:O	1.92	0.87
1:CA:687:A:O2'	1:CA:701:U:O4	1.92	0.87
22:BA:1070:A:O2'	22:BA:1097:U:OP1	1.91	0.87
1:AA:1166:G:N1	1:AA:1169:A:OP2	2.08	0.87
29:DH:83:LYS:HG3	29:DH:149:GLU:HG2	1.56	0.86
22:BA:273:G:N2	22:BA:365:U:O2	2.08	0.86
17:CQ:19:LYS:O	17:CQ:71:LYS:NZ	2.08	0.86
22:DA:161:A:H3'	22:DA:162:U:H5''	1.57	0.86
1:CA:412:A:O2'	1:CA:413:G:H4'	1.75	0.86
14:AN:46:LEU:O	14:AN:48:LEU:N	2.08	0.86
22:DA:1378:A:O2'	22:DA:1380:G:N7	2.07	0.86
22:DA:2006:C:OP1	57:DA:3379:HOH:O	1.92	0.86
35:DN:90:ARG:CZ	35:DN:116:VAL:HG11	2.06	0.86
29:BH:147:VAL:HG12	29:BH:149:GLU:HG3	1.57	0.85
22:BA:2458:G:N3	22:BA:2490:G:N2	2.24	0.85
22:DA:249:C:O5'	22:DA:2394:C:O2'	1.94	0.85
22:BA:1073:A:H3'	22:BA:1074:G:C5'	2.05	0.85
23:DB:28:C:OP1	36:DO:36:TYR:OH	1.94	0.85
21:CU:10:GLU:HG3	21:CU:11:PRO:HD3	1.56	0.85
22:BA:997:G:OP1	38:BQ:92:ARG:HG2	1.77	0.85
22:DA:2271:G:O6	57:DA:3509:HOH:O	1.94	0.85
22:DA:310:A:O2'	22:DA:311:A:OP2	1.94	0.85
14:AN:64:CYS:SG	14:AN:67:THR:OG1	2.30	0.85
25:BD:125:TRP:CE3	25:BD:160:LYS:HD3	2.11	0.85
22:DA:2164:C:H2'	22:DA:2165:C:C6	2.12	0.85
22:DA:1817:G:OP1	24:DC:62:TYR:OH	1.92	0.85
22:DA:1266:G:O2'	22:DA:2012:G:O6	1.95	0.85
4:AD:37:ALA:HA	4:AD:42:GLY:HA3	1.58	0.84
22:BA:2258:C:O2'	22:BA:2427:C:OP2	1.95	0.84
2:CB:221:VAL:O	2:CB:223:GLU:N	2.10	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:91:ARG:O	6:AF:92:THR:OG1	1.96	0.84
50:D2:43:THR:O	50:D2:44:VAL:HB	1.77	0.84
29:BH:117:LEU:HD21	29:BH:121:VAL:N	1.93	0.84
31:BJ:49:ASP:OD1	31:BJ:121:LYS:HE3	1.77	0.84
39:BR:49:ILE:HG22	39:BR:53:PHE:N	1.92	0.84
22:BA:819:A:C4	22:BA:1189:A:C2	2.66	0.84
35:DN:87:PHE:O	35:DN:89:SER:N	2.11	0.84
29:BH:117:LEU:O	29:BH:119:ASN:N	2.07	0.84
5:CE:102:GLY:O	5:CE:104:GLY:N	2.11	0.84
29:DH:82:SER:O	29:DH:84:ALA:N	2.10	0.83
17:AQ:68:SER:O	17:AQ:70:THR:N	2.11	0.83
22:BA:2305:U:C2	27:BF:151:GLY:HA3	2.12	0.83
22:DA:618:G:O6	57:DA:3291:HOH:O	1.96	0.83
22:BA:1141:U:H4'	22:BA:1142:A:O4'	1.79	0.83
5:CE:99:ALA:O	5:CE:122:ASN:ND2	2.12	0.83
22:DA:2010:G:N7	57:DA:3371:HOH:O	2.10	0.83
2:AB:136:MET:N	2:AB:136:MET:SD	2.52	0.83
22:BA:756:A:N7	57:BA:3300:HOH:O	2.12	0.83
22:DA:1827:U:O2'	22:DA:1970:A:N3	2.11	0.83
1:AA:536:C:OP1	57:AA:1885:HOH:O	1.97	0.83
22:BA:1179:G:H3'	22:BA:1180:U:H4'	1.61	0.82
29:BH:83:LYS:CD	1:CA:55:A:O2'	2.26	0.82
22:DA:732:C:OP2	57:DA:3298:HOH:O	1.95	0.82
22:BA:1823:G:N7	57:BA:3658:HOH:O	2.11	0.82
29:BH:120:GLY:C	29:BH:122:LEU:CA	2.47	0.82
2:AB:23:TRP:CH2	2:AB:25:PRO:HA	2.14	0.82
22:BA:2448:A:OP2	57:BA:3686:HOH:O	1.95	0.82
33:BL:87:GLY:O	33:BL:89:VAL:N	2.12	0.82
29:DH:94:ILE:HB	29:DH:122:LEU:HD12	1.60	0.82
22:BA:2211:A:O2'	22:BA:2212:A:OP1	1.98	0.82
22:BA:2243:U:OP1	57:BA:3743:HOH:O	1.98	0.82
1:AA:976:G:OP2	1:AA:1358:U:O2'	1.98	0.82
22:BA:826:U:OP2	57:BA:3702:HOH:O	1.97	0.82
34:DM:66:ARG:NH1	34:DM:104:GLU:OE1	2.11	0.82
22:DA:866:A:O4'	22:DA:914:G:N2	2.13	0.82
22:DA:250:G:OP2	51:D3:13:ARG:NH1	2.13	0.81
22:BA:1509:A:O2'	22:BA:1510:G:OP2	1.96	0.81
22:BA:1693:U:O2'	24:BC:14:ARG:NH2	2.13	0.81
22:BA:2800:A:H3'	22:BA:2801:G:H5'	1.62	0.81
22:BA:250:G:OP2	51:B3:13:ARG:NH1	2.13	0.81
22:BA:2825:G:H2'	22:BA:2826:A:H5'	1.63	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:614:A:O2'	22:BA:615:U:OP2	1.97	0.81
7:CG:145:ALA:O	7:CG:146:GLU:HB2	1.78	0.81
22:BA:2321:U:H5'	22:BA:2322:A:OP2	1.80	0.81
22:DA:1325:U:OP1	22:DA:1647:U:O2'	1.99	0.81
18:CR:25:ASP:O	18:CR:27:ALA:N	2.13	0.81
22:DA:587:C:N3	33:DL:33:ARG:NH2	2.28	0.81
22:DA:1847:A:HO2'	22:DA:1848:A:H8	1.29	0.81
28:DG:170:ARG:NH1	52:D4:29:ALA:O	2.14	0.81
22:BA:1494:A:O2'	22:BA:1495:A:O5'	1.98	0.81
22:DA:822:G:OP2	57:DA:3347:HOH:O	1.98	0.81
26:DE:58:LYS:NZ	26:DE:70:SER:O	2.12	0.81
1:CA:527:G:C2	1:CA:528:C:C6	2.68	0.80
22:BA:572:A:OP2	39:BR:80:ARG:NH2	2.13	0.80
13:AM:11:ASP:OD1	13:AM:12:HIS:N	2.14	0.80
22:BA:481:G:C4	22:BA:507:A:C2	2.70	0.80
1:AA:1232:U:OP1	9:AI:126:GLN:NE2	2.13	0.80
26:BE:1:MET:N	26:BE:14:VAL:O	2.14	0.80
1:CA:798:U:O4	57:CA:1805:HOH:O	1.99	0.80
1:AA:254:G:OP1	17:AQ:70:THR:HB	1.82	0.80
22:DA:1340:U:C5	22:DA:1603:A:C8	2.69	0.80
39:DR:8:GLY:O	39:DR:10:LYS:NZ	2.15	0.80
24:BC:71:LYS:NZ	24:BC:98:ASP:OD2	2.15	0.80
28:DG:158:LYS:O	28:DG:160:LYS:N	2.15	0.80
22:BA:2445:G:OP1	26:BE:69:ARG:NH2	2.14	0.80
22:BA:195:A:C6	22:BA:198:C:C5	2.70	0.80
19:AS:29:LYS:HB3	19:AS:30:PRO:HD2	1.64	0.80
31:BJ:80:HIS:HB3	31:BJ:81:ILE:HG22	1.62	0.80
1:CA:581:G:OP1	15:CO:65:LYS:NZ	2.14	0.80
14:AN:91:GLY:O	14:AN:93:ILE:N	2.15	0.80
22:BA:2324:U:H3'	22:BA:2325:G:C5'	2.11	0.80
26:DE:76:PRO:HA	26:DE:82:GLY:HA2	1.63	0.80
22:BA:2550:G:OP2	57:BA:3725:HOH:O	1.99	0.79
22:BA:1917:U:C4	22:BA:1918:A:C5	2.70	0.79
22:DA:422:A:OP2	57:DA:3561:HOH:O	1.98	0.79
1:CA:1001:C:H2'	1:CA:1002:G:C8	2.17	0.79
29:BH:123:ARG:NH2	1:CA:367:U:P	2.49	0.79
22:BA:819:A:OP2	22:BA:1187:G:N2	2.15	0.79
1:CA:582:C:N3	1:CA:760:G:C6	2.50	0.79
22:DA:2243:U:OP1	57:DA:3738:HOH:O	1.99	0.79
1:CA:840:C:N3	1:CA:842:U:H4'	1.97	0.79
22:BA:2748:A:N1	57:BA:3815:HOH:O	2.15	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1738:G:O2'	22:BA:1739:A:O5'	2.00	0.79
22:DA:1001:A:OP2	57:DA:3732:HOH:O	2.01	0.79
22:BA:2579:C:OP1	57:BA:3543:HOH:O	2.01	0.79
24:DC:157:SER:O	24:DC:160:THR:OG1	1.99	0.79
6:AF:7:VAL:O	6:AF:7:VAL:HG22	1.81	0.79
22:DA:2162:G:H4'	22:DA:2163:A:OP1	1.83	0.79
1:CA:32:A:C2	1:CA:33:A:C5	2.71	0.79
22:DA:668:A:N6	22:DA:670:A:O2'	2.16	0.79
1:AA:792:A:H4'	1:AA:793:U:O5'	1.82	0.78
22:BA:1083:U:O2	22:BA:1086:A:N1	2.16	0.78
22:BA:2269:G:OP1	57:BA:3512:HOH:O	2.01	0.78
22:DA:1619:G:N7	57:DA:3644:HOH:O	2.17	0.78
22:DA:1315:C:O2'	22:DA:1392:A:N3	2.16	0.78
22:BA:2820:A:OP2	35:BN:2:ARG:NH1	2.16	0.78
24:BC:133:ARG:NH2	4:CD:174:ASP:OD2	2.17	0.78
35:BN:103:ARG:HD3	35:BN:110:MET:CE	2.13	0.78
52:B4:11:CYS:SG	56:B4:101:ZN:ZN	1.70	0.78
22:DA:1823:G:C8	57:DA:3654:HOH:O	2.34	0.78
22:DA:1342:A:OP2	57:DA:3713:HOH:O	1.99	0.78
22:BA:2495:G:C2'	22:BA:2496:C:H5'	2.13	0.78
22:DA:1009:A:N3	22:DA:1153:C:O2'	2.15	0.78
1:AA:1504:G:O3'	57:AA:1870:HOH:O	2.02	0.78
22:DA:613:A:OP2	22:DA:614:A:N7	2.17	0.78
2:AB:115:LYS:O	2:AB:117:LEU:N	2.16	0.78
22:DA:444:C:OP1	26:DE:40:ARG:NH1	2.17	0.78
22:DA:53:A:C8	22:DA:54:G:C8	2.71	0.78
26:BE:149:ILE:HD11	26:BE:172:ALA:HA	1.66	0.78
22:BA:2550:G:P	57:BA:3725:HOH:O	2.42	0.77
22:DA:1607:C:N4	22:DA:1622:G:N7	2.32	0.77
22:BA:731:C:P	57:BA:3695:HOH:O	2.39	0.77
9:AI:40:GLY:O	9:AI:41:ARG:HB2	1.82	0.77
22:DA:2504:U:C5	55:DA:3001:VIF:H30	2.19	0.77
22:DA:1019:U:O2	22:DA:1142:A:N6	2.17	0.77
22:DA:1265:A:OP1	57:DA:3747:HOH:O	2.00	0.77
11:AK:76:GLU:C	22:BA:2141:G:OP1	2.22	0.77
1:AA:1074:G:C4	1:AA:1102:A:C2	2.73	0.77
22:BA:733:G:OP2	57:BA:3295:HOH:O	2.01	0.77
35:BN:2:ARG:HA	35:BN:5:LYS:HD2	1.64	0.77
29:DH:124:THR:OG1	29:DH:125:THR:N	2.17	0.77
15:CO:19:ALA:O	15:CO:20:ASN:HB2	1.85	0.77
22:BA:2714:G:OP2	57:BA:3549:HOH:O	2.01	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1061:U:O2'	22:BA:1062:G:O5'	2.01	0.77
14:AN:61:ARG:O	14:AN:62:ASN:HB2	1.83	0.77
22:BA:555:G:O2'	22:BA:556:A:OP2	2.02	0.77
22:DA:582:A:OP2	57:DA:3283:HOH:O	2.02	0.77
22:DA:27:G:O2'	22:DA:28:A:OP2	2.03	0.77
22:DA:2551:C:OP2	57:DA:3720:HOH:O	2.02	0.77
1:AA:1299:A:H2'	1:AA:1299:A:N3	2.00	0.77
22:BA:2720:U:OP1	37:BP:53:ARG:NH2	2.17	0.77
22:BA:747:U:C4	22:BA:2613:U:C5	2.73	0.77
24:BC:236:GLU:OE2	57:BC:303:HOH:O	2.02	0.77
1:CA:1095:U:OP2	57:CA:1852:HOH:O	2.03	0.77
22:BA:245:G:O6	51:B3:8:ARG:HD3	1.85	0.77
22:DA:1359:A:C8	22:DA:1373:A:C2	2.73	0.77
32:BK:121:GLU:OE2	37:BP:65:SER:OG	2.00	0.77
22:DA:1335:C:N4	57:DA:3392:HOH:O	2.17	0.77
28:DG:11:VAL:O	28:DG:48:ASN:ND2	2.18	0.77
51:B3:27:ALA:O	51:B3:28:ASN:HB2	1.83	0.77
1:AA:995:C:N3	1:AA:1046:A:O2'	2.17	0.77
2:AB:167:ASP:OD1	2:AB:168:HIS:N	2.18	0.77
22:DA:2575:C:OP2	57:DA:3709:HOH:O	2.03	0.76
22:DA:46:G:C2	22:DA:47:C:C5	2.73	0.76
29:DH:1:MET:SD	29:DH:27:ARG:NH1	2.58	0.76
22:DA:1258:U:H2'	22:DA:1259:G:C8	2.20	0.76
22:BA:850:U:HO2'	47:BZ:23:THR:HG1	1.25	0.76
22:BA:1494:A:C2'	22:BA:1495:A:O5'	2.33	0.76
22:BA:475:C:C4	22:BA:481:G:O6	2.38	0.76
22:BA:500:G:N2	22:BA:502:A:H3'	2.01	0.76
22:BA:2847:U:OP1	37:BP:96:LYS:NZ	2.17	0.76
22:DA:1344:U:O2'	22:DA:1345:C:OP2	2.03	0.76
29:BH:90:LEU:O	1:CA:358:U:H4'	1.86	0.76
22:DA:2171:A:O2'	22:DA:2173:A:OP1	2.02	0.76
1:AA:1406:U:C5	1:AA:1407:C:C5	2.74	0.76
22:DA:618:G:N7	57:DA:3289:HOH:O	2.18	0.76
29:DH:53:GLU:O	29:DH:55:GLU:N	2.19	0.76
22:BA:1668:A:O2'	22:BA:1674:G:N7	2.18	0.76
2:AB:73:LYS:O	2:AB:75:ALA:N	2.19	0.76
22:DA:2057:G:OP2	57:DA:3486:HOH:O	2.03	0.76
24:BC:204:VAL:O	24:BC:205:LEU:HB2	1.86	0.76
1:AA:1129:C:O2	1:AA:1130:A:N6	2.18	0.76
22:DA:1377:G:OP2	57:DA:3394:HOH:O	2.04	0.76
17:CQ:21:ILE:N	17:CQ:48:ASP:OD1	2.17	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:24:LEU:O	12:AL:26:ALA:N	2.19	0.76
5:CE:137:VAL:O	5:CE:138:ARG:CB	2.33	0.76
29:DH:45:GLU:O	29:DH:49:ALA:N	2.19	0.76
1:CA:1124:G:O2'	1:CA:1145:A:N6	2.19	0.76
22:BA:495:G:O4'	40:BS:57:ASN:ND2	2.18	0.76
22:BA:686:U:H2'	22:BA:788:A:C2	2.21	0.76
22:BA:2199:A:C1'	29:BH:28:ASN:ND2	2.48	0.76
35:BN:65:LEU:HD11	35:BN:69:ARG:NH2	2.01	0.76
1:CA:55:A:N7	1:CA:56:U:C4	2.54	0.75
22:BA:627:A:C6	22:BA:637:A:C8	2.75	0.75
22:DA:1248:G:C4	38:DQ:3:ARG:HG3	2.20	0.75
1:CA:209:U:H4'	1:CA:210:C:OP2	1.85	0.75
22:BA:64:A:H2'	22:BA:65:U:C6	2.20	0.75
4:CD:26:ARG:HG3	4:CD:27:ALA:N	2.00	0.75
22:BA:1869:G:H3'	22:BA:1870:C:H5'	1.67	0.75
22:DA:1154:G:OP2	38:DQ:58:ARG:NH1	2.19	0.75
30:BI:122:ILE:O	30:BI:126:THR:OG1	2.05	0.75
41:BT:1:MET:HB2	41:BT:2:ILE:HD12	1.65	0.75
1:CA:378:G:C2	1:CA:386:C:O2	2.39	0.75
39:BR:24:LYS:HA	39:BR:94:THR:CG2	2.16	0.75
22:BA:2291:U:H2'	22:BA:2292:U:H6	1.48	0.75
22:BA:927:A:H2'	22:BA:928:A:C8	2.21	0.75
22:BA:1474:U:O4	22:BA:1475:G:N2	2.20	0.75
22:DA:2209:G:C2	22:DA:2216:G:C2	2.73	0.75
22:DA:118:A:C8	22:DA:119:A:C8	2.73	0.75
35:DN:20:MET:HG3	35:DN:21:PHE:N	2.02	0.75
2:AB:160:ALA:O	2:AB:161:LEU:HB2	1.86	0.75
1:CA:537:G:OP1	12:CL:110:ARG:NH2	2.19	0.75
38:BQ:41:LYS:HD3	38:BQ:45:TYR:CZ	2.21	0.75
43:BV:6:ALA:HB1	43:BV:40:ILE:CG2	2.17	0.75
2:AB:26:LYS:NZ	2:AB:194:ASP:OD2	2.13	0.75
22:BA:1779:U:H5	22:BA:1784:A:N7	1.84	0.75
9:AI:45:ARG:HG2	9:AI:46:MET:SD	2.27	0.75
30:BI:16:GLY:HA2	30:BI:51:LYS:HB3	1.68	0.75
13:CM:6:GLY:O	13:CM:8:ASN:N	2.20	0.75
22:DA:447:A:H5'	22:DA:449:A:C5	2.21	0.75
22:BA:2097:A:C2	22:BA:2193:G:C6	2.74	0.75
28:BG:104:ASN:ND2	28:BG:114:ASP:OD1	2.18	0.75
17:CQ:48:ASP:N	17:CQ:48:ASP:OD2	2.17	0.75
4:AD:151:LYS:HA	4:AD:178:MET:HE1	1.69	0.75
22:DA:1289:C:O2'	22:DA:1330:C:H4'	1.87	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1073:A:H3'	22:BA:1074:G:H5''	1.67	0.75
22:BA:1779:U:C5	22:BA:1784:A:N7	2.55	0.74
38:BQ:87:SER:HB3	39:BR:51:VAL:HA	1.69	0.74
22:DA:1091:G:O2'	22:DA:1092:C:OP2	2.04	0.74
1:AA:533:A:OP1	57:AA:1848:HOH:O	2.05	0.74
1:CA:1101:A:H61	2:CB:102:THR:HG21	1.51	0.74
1:CA:1266:G:N2	1:CA:1269:A:OP2	2.20	0.74
1:CA:978:A:OP2	1:CA:1362:A:N6	2.20	0.74
22:DA:1476:U:H1'	22:DA:1732:C:C2	2.20	0.74
29:BH:117:LEU:HD11	29:BH:122:LEU:HD12	1.69	0.74
4:AD:26:ARG:HD2	4:AD:31:LYS:HE3	1.70	0.74
22:BA:1203:U:O4	22:BA:1204:A:C6	2.40	0.74
23:DB:29:A:O2'	23:DB:58:A:N1	2.19	0.74
3:AC:205:GLY:O	3:AC:206:GLU:HG2	1.87	0.74
29:BH:88:GLY:O	29:BH:125:THR:OG1	2.04	0.74
25:BD:125:TRP:CD2	25:BD:160:LYS:HD3	2.22	0.74
22:BA:278:A:C2	22:BA:362:A:C8	2.75	0.74
22:DA:2286:G:H4'	22:DA:2287:A:O5'	1.87	0.74
22:BA:2516:A:C2	22:BA:2569:G:C2	2.75	0.74
29:BH:123:ARG:C	29:BH:124:THR:HG23	2.06	0.74
2:CB:210:VAL:O	2:CB:214:LEU:HB2	1.88	0.74
1:CA:1362:A:H4'	1:CA:1362:A:OP1	1.86	0.74
22:BA:2516:A:C2	22:BA:2569:G:N3	2.55	0.74
23:DB:48:U:H4'	36:DO:100:HIS:CD2	2.22	0.74
25:DD:33:ARG:NH2	25:DD:74:GLU:O	2.21	0.74
3:CC:175:LEU:O	3:CC:175:LEU:HD12	1.88	0.74
1:CA:919:A:C2	1:CA:920:U:C5	2.76	0.74
1:AA:1151:A:O2'	1:AA:1152:A:O5'	2.05	0.74
22:DA:1315:C:OP2	57:DA:3762:HOH:O	2.06	0.74
38:BQ:36:PHE:CE1	38:BQ:40:ILE:HD11	2.23	0.74
5:CE:69:ARG:O	5:CE:70:ASN:HB2	1.87	0.74
2:CB:169:GLU:O	2:CB:171:ILE:N	2.21	0.74
27:BF:41:GLY:O	27:BF:43:ALA:N	2.20	0.74
22:BA:1171:G:N2	22:BA:1178:C:O2	2.20	0.74
1:AA:108:G:N3	1:AA:108:G:H5'	2.03	0.74
4:AD:95:GLU:OE2	4:AD:104:ARG:NH1	2.21	0.73
22:BA:1910:G:H2'	22:BA:1911:U:O4'	1.88	0.73
22:BA:1253:A:N7	57:BA:3336:HOH:O	2.20	0.73
22:DA:2125:G:N1	22:DA:2171:A:OP1	2.20	0.73
46:BY:56:LEU:O	46:BY:57:LEU:CB	2.37	0.73
1:CA:66:A:C6	1:CA:67:C:C5	2.76	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1838:C:C5	22:BA:1899:A:C6	2.77	0.73
29:BH:86:ASP:HB2	1:CA:359:G:O2'	1.88	0.73
22:DA:1378:A:O2'	57:DA:3753:HOH:O	2.06	0.73
13:AM:10:PRO:O	13:AM:11:ASP:HB3	1.87	0.73
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.24	0.73
34:BM:110:GLU:OE2	34:BM:114:ARG:NH2	2.21	0.73
22:DA:1060:U:H4'	22:DA:1061:U:H5'	1.70	0.73
22:BA:2127:G:H4'	22:BA:2128:G:OP1	1.87	0.73
25:BD:13:ARG:HD2	25:BD:15:PHE:CZ	2.23	0.73
22:DA:1428:C:O2'	22:DA:1569:A:OP2	2.02	0.73
10:CJ:63:ASP:OD1	14:CN:85:ARG:NH1	2.22	0.73
42:BU:14:LEU:HD11	42:BU:71:ALA:HB2	1.70	0.73
1:CA:552:U:O2'	12:CL:83:ARG:O	2.05	0.73
4:CD:145:ILE:HG21	4:CD:150:LYS:HA	1.70	0.73
1:AA:131:A:H2'	1:AA:132:C:C6	2.23	0.73
5:AE:41:ASP:OD1	5:AE:43:ASN:N	2.22	0.73
1:CA:1225:A:H2'	1:CA:1226:C:C5	2.22	0.73
22:BA:1838:C:C5	22:BA:1899:A:C5	2.77	0.73
32:DK:70:ARG:HD3	32:DK:76:VAL:HB	1.69	0.73
22:DA:2284:A:O2'	22:DA:2288:A:N1	2.19	0.73
22:DA:2269:G:OP1	57:DA:3508:HOH:O	2.06	0.73
22:BA:563:A:C2	22:BA:564:C:C2	2.77	0.73
2:CB:54:LEU:HA	2:CB:57:LEU:HB3	1.69	0.73
22:BA:30:G:O3'	57:BA:3705:HOH:O	2.05	0.73
29:DH:32:PRO:HB3	45:DX:39:TRP:HB3	1.71	0.73
1:CA:495:A:C2	1:CA:496:A:C6	2.77	0.73
22:BA:1916:A:H2'	22:BA:1917:U:O4'	1.88	0.73
1:CA:542:G:C2	1:CA:543:U:C5	2.76	0.73
12:CL:38:TYR:HB2	12:CL:52:VAL:HG13	1.70	0.73
22:BA:626:A:H2'	33:BL:78:ARG:NH1	2.04	0.73
22:BA:1789:A:OP2	24:BC:221:ARG:NH1	2.22	0.73
45:BX:2:SER:O	45:BX:4:VAL:N	2.22	0.73
2:AB:82:ASP:O	2:AB:84:ALA:N	2.22	0.73
1:AA:1505:G:P	57:AA:1870:HOH:O	2.46	0.73
41:DT:17:SER:O	41:DT:19:LYS:N	2.22	0.73
22:BA:1993:U:H4'	25:BD:133:THR:HG21	1.69	0.73
19:AS:51:VAL:HG22	19:AS:71:LEU:HD13	1.71	0.73
22:BA:1746:A:H2'	22:BA:1747:U:C6	2.24	0.73
22:BA:2311:A:N3	27:BF:85:ILE:HD11	2.04	0.73
16:AP:4:ILE:HG12	16:AP:21:VAL:HG22	1.71	0.73
22:DA:2720:U:OP1	37:DP:53:ARG:NH2	2.22	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1450:G:C6	22:DA:1451:C:N4	2.57	0.72
22:BA:587:C:N3	33:BL:33:ARG:NH2	2.37	0.72
22:DA:488:G:N2	22:DA:493:G:O6	2.22	0.72
1:CA:268:U:H2'	1:CA:269:C:C6	2.24	0.72
1:AA:515:G:N7	57:AA:1847:HOH:O	2.22	0.72
2:CB:86:SER:O	2:CB:87:CYS:O	2.07	0.72
22:BA:2199:A:H1'	29:BH:28:ASN:ND2	2.04	0.72
7:AG:146:GLU:HA	7:AG:149:LYS:HB2	1.70	0.72
1:AA:1014:A:N7	1:AA:1015:G:C5	2.57	0.72
28:BG:80:THR:HG22	28:BG:81:GLU:N	2.05	0.72
23:BB:8:C:O3'	36:BO:25:ARG:NH1	2.22	0.72
22:BA:1061:U:HO2'	22:BA:1062:G:P	2.13	0.72
22:DA:1435:G:C2'	22:DA:1436:G:H5'	2.19	0.72
42:BU:72:ILE:HD13	42:BU:83:VAL:HG23	1.70	0.72
22:BA:2839:G:O2'	35:BN:49:GLU:OE1	2.08	0.72
1:AA:144:G:C4	1:AA:179:A:C2	2.78	0.72
22:BA:587:C:OP2	33:BL:21:ARG:NH1	2.23	0.72
35:BN:32:GLU:OE1	35:BN:86:ARG:NH2	2.23	0.72
5:AE:149:SER:O	5:AE:153:VAL:HG12	1.89	0.72
22:DA:826:U:O2'	33:DL:53:GLY:HA3	1.89	0.72
25:DD:148:GLN:N	25:DD:148:GLN:OE1	2.23	0.72
22:DA:2268:A:OP1	57:DA:3508:HOH:O	2.07	0.72
22:BA:1274:A:N1	22:BA:1644:C:O2'	2.19	0.72
4:CD:100:ASN:OD1	4:CD:111:ARG:NH1	2.23	0.72
1:AA:64:G:C8	1:AA:99:C:N4	2.58	0.72
22:DA:1167:C:H2'	22:DA:1168:G:H5'	1.70	0.72
1:CA:55:A:C6	1:CA:56:U:C2	2.77	0.72
22:BA:572:A:H5''	22:BA:573:U:OP2	1.90	0.72
1:AA:1197:A:OP2	57:AA:1784:HOH:O	2.07	0.72
29:DH:31:VAL:HB	29:DH:32:PRO:CD	2.20	0.72
22:BA:1182:G:H2'	22:BA:1183:U:O4'	1.90	0.72
40:BS:37:THR:HG22	40:BS:38:TYR:CD1	2.25	0.72
22:BA:1925:C:H5''	22:BA:1926:U:O4	1.89	0.72
1:AA:951:G:OP2	13:AM:101:ARG:NH2	2.23	0.72
41:DT:54:GLU:HB3	41:DT:88:LYS:HG3	1.72	0.72
4:AD:163:GLU:OE2	4:AD:164:GLN:N	2.23	0.71
22:DA:1097:U:C5	22:DA:1098:A:H1'	2.25	0.71
22:BA:508:A:H4'	22:BA:509:C:OP2	1.89	0.71
35:BN:103:ARG:HD3	35:BN:110:MET:HE3	1.71	0.71
4:AD:32:CYS:O	4:AD:33:LYS:HB2	1.90	0.71
28:BG:109:PHE:HE2	28:BG:152:ARG:CZ	2.03	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2897:U:H2'	22:BA:2898:U:C6	2.26	0.71
39:DR:58:VAL:HG13	39:DR:102:SER:HB2	1.72	0.71
22:BA:253:C:OP2	51:B3:5:LYS:HE3	1.89	0.71
6:AF:92:THR:HG22	6:AF:93:LYS:N	2.05	0.71
16:CP:43:ALA:O	16:CP:44:SER:OG	2.04	0.71
12:CL:34:CYS:HA	12:CL:55:VAL:HA	1.71	0.71
42:DU:38:GLY:HA2	42:DU:41:LEU:HD21	1.71	0.71
26:BE:108:ILE:HD11	26:BE:180:LEU:HB3	1.72	0.71
1:AA:1074:G:C2	1:AA:1075:U:C2	2.79	0.71
22:BA:1838:C:C2	22:BA:1898:U:C5	2.79	0.71
24:DC:70:ASN:O	24:DC:72:ASP:N	2.23	0.71
1:AA:1048:G:N3	1:AA:1050:G:C8	2.59	0.71
1:AA:1377:A:N3	7:AG:2:PRO:HG3	2.06	0.71
9:AI:30:ILE:HD11	9:AI:38:TYR:CD2	2.24	0.71
22:DA:2843:G:N2	22:DA:2875:C:C2	2.58	0.71
1:AA:145:G:N2	1:AA:178:C:C2	2.59	0.71
14:CN:91:GLY:O	14:CN:93:ILE:N	2.24	0.71
23:DB:7:G:H5'	36:DO:29:HIS:CE1	2.25	0.71
29:BH:89:LYS:HB3	1:CA:359:G:H5''	1.72	0.71
23:BB:78:A:N6	23:BB:98:G:O2'	2.23	0.71
1:CA:978:A:HO2'	1:CA:1322:C:H5	1.38	0.71
22:DA:846:U:O2'	22:DA:847:U:O5'	2.08	0.71
1:CA:499:A:C6	1:CA:547:A:C8	2.78	0.71
4:CD:168:PRO:HB2	4:CD:171:LEU:CD1	2.21	0.71
22:DA:564:C:O4'	38:DQ:37:GLN:NE2	2.23	0.71
1:CA:689:C:OP2	11:CK:53:ARG:NH2	2.24	0.71
29:BH:123:ARG:CZ	1:CA:367:U:OP2	2.39	0.71
4:CD:173:VAL:O	4:CD:179:GLU:O	2.07	0.71
1:CA:679:C:O2	1:CA:712:A:C2	2.43	0.71
13:AM:29:ARG:CZ	13:AM:63:PHE:HB2	2.21	0.71
22:DA:2750:A:O2'	22:DA:2752:C:N4	2.24	0.71
1:CA:405:U:O4	4:CD:2:ALA:N	2.23	0.71
22:DA:1153:C:P	57:DA:3360:HOH:O	2.48	0.70
22:BA:70:G:H4'	22:BA:71:A:OP1	1.90	0.70
19:AS:29:LYS:HB3	19:AS:30:PRO:CD	2.21	0.70
1:CA:1040:U:H2'	1:CA:1041:G:C8	2.25	0.70
22:BA:2856:A:N6	22:BA:2857:G:C6	2.59	0.70
1:CA:374:A:H5''	1:CA:452:A:N1	2.06	0.70
50:B2:43:THR:O	50:B2:44:VAL:HG12	1.90	0.70
1:AA:1461:G:C5	1:AA:1462:C:C5	2.78	0.70
22:BA:455:C:N3	22:BA:472:A:H2'	2.06	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1006:G:H2'	1:CA:1007:U:C6	2.26	0.70
22:BA:1417:C:H2'	22:BA:1418:G:O4'	1.90	0.70
22:BA:1085:A:C6	22:BA:1086:A:N6	2.59	0.70
22:DA:488:G:C2	22:DA:493:G:O6	2.45	0.70
22:DA:1935:G:H1'	22:DA:1964:G:N2	2.06	0.70
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.25	0.70
1:AA:1145:A:O2'	1:AA:1146:A:O5'	2.08	0.70
48:D0:55:ILE:HG22	48:D0:56:ALA:N	2.06	0.70
1:AA:322:C:O2'	20:AT:18:ARG:HG3	1.90	0.70
38:BQ:41:LYS:HA	38:BQ:44:GLN:HG3	1.71	0.70
42:DU:7:ARG:O	42:DU:25:VAL:HB	1.92	0.70
1:CA:86:G:H1'	1:CA:87:C:O4'	1.90	0.70
22:BA:1435:G:O2'	22:BA:1436:G:H5'	1.91	0.70
13:AM:11:ASP:CG	13:AM:12:HIS:N	2.44	0.70
2:CB:54:LEU:HD12	2:CB:220:THR:HG21	1.74	0.70
1:AA:537:G:OP1	12:AL:110:ARG:NH2	2.23	0.70
22:DA:2143:C:H2'	22:DA:2144:G:O4'	1.92	0.70
1:CA:933:G:N7	7:CG:3:ARG:NH2	2.39	0.70
1:CA:319:G:O6	57:CA:1734:HOH:O	2.06	0.70
21:AU:36:GLU:O	21:AU:37:PHE:HB2	1.90	0.70
1:AA:1313:U:OP2	19:AS:6:LYS:HB3	1.91	0.70
24:BC:78:VAL:HG21	24:BC:110:LEU:HD21	1.74	0.70
8:CH:96:MET:HB2	8:CH:99:LEU:O	1.92	0.70
1:AA:1161:C:H2'	1:AA:1162:C:C6	2.27	0.70
22:BA:195:A:N7	57:BA:3763:HOH:O	2.23	0.70
11:AK:76:GLU:O	22:BA:2141:G:H5''	1.92	0.70
31:DJ:80:HIS:O	31:DJ:82:GLY:N	2.25	0.70
48:B0:55:ILE:HG22	48:B0:56:ALA:N	2.07	0.70
24:DC:45:ASN:OD1	24:DC:46:ASN:N	2.25	0.70
2:AB:104:TRP:CZ2	2:AB:154:MET:HG2	2.26	0.70
22:BA:1073:A:OP1	22:BA:1073:A:C8	2.45	0.70
22:BA:1925:C:H4'	22:BA:1926:U:C5	2.26	0.70
22:DA:1187:G:N7	57:DA:3578:HOH:O	2.24	0.70
22:DA:1738:G:O2'	22:DA:1739:A:O5'	2.09	0.70
4:CD:44:ARG:NE	4:CD:44:ARG:HA	2.06	0.70
5:AE:104:GLY:O	5:AE:105:ILE:HG22	1.92	0.70
29:BH:94:ILE:HG22	29:BH:99:ILE:HG13	1.72	0.70
22:BA:1086:A:O2'	22:BA:1087:G:N7	2.24	0.70
22:DA:2226:C:H2'	22:DA:2227:A:O4'	1.90	0.70
4:CD:151:LYS:O	4:CD:152:GLN:NE2	2.24	0.70
10:CJ:65:TYR:HB3	14:CN:96:LEU:HD11	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:84:THR:HG21	9:CI:103:PHE:HB3	1.74	0.70
1:AA:657:U:O2	15:AO:22:THR:HG23	1.92	0.70
1:CA:728:A:C8	15:CO:54:ARG:CZ	2.75	0.70
22:BA:1002:G:N7	57:BA:3742:HOH:O	2.23	0.70
22:BA:1379:U:C6	22:BA:1379:U:OP1	2.44	0.70
13:AM:114:LYS:CB	13:AM:115:PRO:HD3	2.21	0.70
22:BA:1344:U:H4'	22:BA:1345:C:OP2	1.90	0.70
22:BA:1179:G:N7	22:BA:1180:U:H1'	2.07	0.70
24:BC:222:GLY:HA2	24:BC:225:MET:HE3	1.71	0.70
22:DA:1317:G:H2'	22:DA:1318:U:O4'	1.91	0.70
1:CA:728:A:H2'	1:CA:729:A:C8	2.27	0.70
22:BA:2502:G:C5'	22:BA:2503:A:H5''	2.22	0.70
22:BA:2066:C:OP1	57:BA:3509:HOH:O	2.10	0.70
14:AN:54:ASP:OD1	14:AN:59:ARG:NH1	2.25	0.70
22:BA:1794:A:H2'	22:BA:1795:C:H6	1.56	0.70
35:BN:65:LEU:HD11	35:BN:69:ARG:HH21	1.56	0.69
22:BA:2516:A:N6	22:BA:2517:C:N4	2.39	0.69
22:DA:197:A:H62	22:DA:2430:A:H2'	1.56	0.69
14:CN:54:ASP:OD1	14:CN:59:ARG:NH1	2.25	0.69
1:AA:1125:U:C5	1:AA:1127:G:C6	2.80	0.69
1:CA:568:G:O6	12:CL:2:ALA:HB2	1.92	0.69
22:DA:469:G:O6	50:D2:37:LYS:HE2	1.92	0.69
30:DI:69:PHE:N	30:DI:69:PHE:CD1	2.60	0.69
22:DA:2507:C:OP1	57:DA:3710:HOH:O	2.08	0.69
2:AB:85:LEU:HG	2:AB:86:SER:N	2.05	0.69
22:DA:2575:C:OP1	57:DA:3711:HOH:O	2.10	0.69
5:CE:24:THR:HA	5:CE:29:ARG:HA	1.72	0.69
26:DE:21:ARG:O	26:DE:114:ARG:NH2	2.24	0.69
40:BS:66:ILE:HA	40:BS:69:LEU:CD2	2.23	0.69
22:BA:2151:U:H2'	22:BA:2152:G:C8	2.26	0.69
22:BA:2825:G:C2'	22:BA:2826:A:H5'	2.23	0.69
22:BA:686:U:OP2	57:BA:3723:HOH:O	2.10	0.69
53:B5:59:VAL:HG21	53:B5:167:ASP:C	2.12	0.69
1:AA:1368:A:OP1	10:AJ:64:GLN:NE2	2.26	0.69
22:BA:1115:G:N3	22:BA:1116:G:C8	2.61	0.69
45:DX:27:ARG:NE	45:DX:28:ARG:O	2.25	0.69
1:AA:1014:A:N7	1:AA:1015:G:C6	2.61	0.69
10:CJ:5:ARG:HG3	10:CJ:6:ILE:HG13	1.74	0.69
1:AA:562:U:OP2	12:AL:14:ARG:NH1	2.25	0.69
1:CA:1408:A:C2	1:CA:1494:G:C4	2.81	0.69
22:BA:1154:G:OP2	38:BQ:58:ARG:NH1	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:151:THR:HG22	25:DD:152:PRO:CD	2.22	0.69
22:BA:1936:A:C8	22:BA:1945:G:O6	2.46	0.69
13:AM:3:ARG:CG	13:AM:4:ILE:N	2.56	0.69
1:CA:154:U:O4	1:CA:155:A:N6	2.26	0.69
1:AA:568:G:C2	1:AA:569:C:C5	2.81	0.69
4:AD:3:ARG:CZ	4:AD:115:ARG:HD3	2.22	0.69
22:BA:1186:G:OP2	57:BA:3601:HOH:O	2.10	0.69
22:BA:1073:A:C3'	22:BA:1074:G:H5''	2.23	0.69
17:AQ:69:LYS:O	17:AQ:70:THR:CB	2.40	0.69
22:BA:2305:U:O2'	27:BF:133:ARG:NE	2.25	0.69
24:BC:13:ARG:HA	24:BC:16:VAL:HG23	1.75	0.69
22:BA:2564:A:C6	22:BA:2565:A:N1	2.60	0.69
1:AA:96:U:O2'	1:AA:97:G:P	2.50	0.69
1:CA:1513:A:H2'	1:CA:1514:G:H8	1.58	0.69
22:DA:1682:G:H2'	22:DA:1683:U:C6	2.28	0.69
1:AA:452:A:N6	1:AA:480:U:O2	2.26	0.69
22:DA:733:G:OP2	57:DA:3296:HOH:O	2.10	0.69
22:DA:1638:C:H4'	22:DA:2710:C:O2	1.93	0.69
22:DA:777:G:C2	22:DA:778:G:C8	2.81	0.69
4:AD:168:PRO:HG2	4:AD:171:LEU:HD11	1.75	0.69
22:BA:465:G:H2'	22:BA:466:A:C8	2.28	0.69
11:CK:17:SER:O	11:CK:80:LYS:N	2.26	0.69
29:DH:27:ARG:HE	45:DX:60:ASP:CG	1.96	0.69
1:AA:1062:U:H2'	1:AA:1063:C:C5	2.28	0.69
1:AA:1322:C:OP1	19:AS:78:ARG:NH2	2.25	0.69
4:CD:198:HIS:CE1	4:CD:199:LEU:HD23	2.28	0.69
1:CA:429:U:H3'	4:CD:9:LEU:HD23	1.74	0.69
22:BA:2595:G:N2	22:BA:2598:A:OP2	2.25	0.69
10:AJ:52:LEU:HB3	14:AN:81:ARG:NE	2.08	0.69
1:AA:68:G:C5	1:AA:69:G:H1'	2.28	0.69
34:BM:136:MET:HE2	43:BV:57:TYR:CD2	2.28	0.69
17:CQ:46:VAL:HG21	17:CQ:61:ILE:HD11	1.75	0.69
22:BA:370:G:N7	57:BA:3562:HOH:O	2.26	0.69
18:CR:22:ASP:OD1	18:CR:23:TYR:N	2.26	0.69
22:DA:1010:A:N7	57:DA:3778:HOH:O	2.26	0.68
39:BR:49:ILE:HB	39:BR:52:PRO:HA	1.74	0.68
52:B4:11:CYS:SG	52:B4:33:HIS:ND1	2.66	0.68
22:BA:2061:G:O5'	57:BA:3491:HOH:O	2.10	0.68
3:AC:77:ILE:HA	3:AC:84:VAL:HG23	1.75	0.68
2:AB:63:ARG:O	2:AB:64:LYS:HB2	1.93	0.68
36:BO:24:THR:HG22	36:BO:42:PRO:HD3	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:527:G:N1	1:CA:528:C:C5	2.61	0.68
48:B0:55:ILE:O	48:B0:56:ALA:CB	2.40	0.68
22:BA:2502:G:H5''	22:BA:2503:A:H5''	1.75	0.68
4:AD:123:ILE:HD13	4:AD:123:ILE:N	2.08	0.68
22:BA:18:U:O3'	38:BQ:23:GLY:HA2	1.93	0.68
33:DL:77:ILE:HG23	33:DL:81:ASP:OD2	1.93	0.68
22:DA:21:A:C2	22:DA:520:G:C2	2.80	0.68
22:DA:479:A:H4'	22:DA:480:A:OP1	1.93	0.68
9:AI:99:ARG:O	9:AI:102:GLY:N	2.25	0.68
22:DA:2261:C:C2	22:DA:2280:G:N2	2.62	0.68
22:BA:818:G:N7	57:BA:3580:HOH:O	2.25	0.68
22:BA:1738:G:HO2'	22:BA:1739:A:P	2.15	0.68
38:BQ:36:PHE:CZ	38:BQ:40:ILE:HD11	2.28	0.68
5:AE:82:GLN:NE2	5:AE:150:PRO:HD3	2.08	0.68
22:BA:2140:G:N3	22:BA:2140:G:H2'	2.08	0.68
22:BA:137:U:H2'	22:BA:140:C:C2	2.28	0.68
22:BA:2086:U:H2'	22:BA:2087:G:C8	2.28	0.68
2:AB:83:ALA:HA	2:AB:86:SER:OG	1.94	0.68
22:BA:819:A:N3	22:BA:1189:A:C2	2.61	0.68
23:DB:57:A:H1'	27:DF:27:GLN:HA	1.75	0.68
22:BA:2515:C:O2	22:BA:2570:G:C2	2.47	0.68
25:DD:12:THR:OG1	25:DD:13:ARG:N	2.23	0.68
4:AD:78:GLU:OE2	4:AD:81:ARG:NH1	2.26	0.68
1:AA:328:C:O2	1:AA:328:C:H2'	1.92	0.68
46:BY:9:LYS:HB3	46:BY:12:GLU:HG3	1.75	0.68
22:DA:834:G:H1'	22:DA:2358:A:N3	2.08	0.68
35:DN:76:VAL:HA	35:DN:79:LEU:HD12	1.76	0.68
28:BG:155:GLU:OE2	28:BG:158:LYS:N	2.27	0.68
1:AA:11:G:C5	1:AA:12:U:C5	2.81	0.68
52:B4:27:CYS:SG	56:B4:101:ZN:ZN	1.81	0.68
16:AP:39:PHE:CD2	16:AP:74:LEU:HD11	2.28	0.68
1:CA:1244:G:C6	1:CA:1245:C:N4	2.62	0.68
22:BA:1265:A:OP1	57:BA:3752:HOH:O	2.11	0.68
40:BS:83:LYS:O	40:BS:84:ARG:HD3	1.94	0.68
10:AJ:28:THR:HG22	10:AJ:86:ALA:HB1	1.75	0.68
53:B5:42:VAL:O	53:B5:179:ALA:N	2.26	0.68
22:BA:619:G:O6	57:BA:3291:HOH:O	2.10	0.68
22:BA:2578:G:N7	25:BD:145:SER:HB2	2.09	0.68
36:BO:100:HIS:O	36:BO:104:GLN:HB3	1.94	0.68
1:CA:31:G:N7	1:CA:306:A:H1'	2.09	0.68
22:BA:1414:C:C4	22:BA:1415:U:C5	2.81	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:107:LEU:O	32:BK:109:SER:N	2.27	0.68
38:DQ:79:PHE:CZ	38:DQ:83:LEU:HD11	2.28	0.68
1:CA:718:A:H5'	11:CK:119:ASN:ND2	2.08	0.68
10:AJ:48:ARG:NH1	14:AN:101:TRP:CE3	2.62	0.68
1:CA:505:G:C6	1:CA:535:A:C2	2.82	0.68
21:AU:37:PHE:HA	21:AU:40:LYS:HE3	1.75	0.68
22:BA:2078:C:O2'	22:BA:2079:U:H5'	1.94	0.68
22:BA:2385:C:O2'	22:BA:2386:A:H5'	1.93	0.68
14:CN:61:ARG:O	14:CN:62:ASN:HB2	1.94	0.68
22:DA:764:A:N1	22:DA:1789:A:O2'	2.27	0.68
23:BB:30:C:H2'	23:BB:31:C:H5'	1.75	0.68
22:BA:588:U:H2'	22:BA:589:U:C6	2.29	0.68
25:DD:140:HIS:NE2	57:DD:302:HOH:O	2.13	0.68
22:DA:485:C:C2	22:DA:496:G:N2	2.62	0.68
2:AB:41:ILE:HG21	2:AB:202:GLY:HA2	1.76	0.68
22:DA:1411:U:H2'	22:DA:1412:U:O4'	1.93	0.68
37:BP:15:GLN:O	37:BP:16:ASP:HB3	1.94	0.68
22:DA:1060:U:O4'	22:DA:1062:G:H5'	1.94	0.67
22:BA:973:A:C8	22:BA:1188:U:N3	2.62	0.67
22:BA:2683:C:OP1	37:BP:51:ARG:NH2	2.27	0.67
12:CL:21:VAL:O	12:CL:23:ALA:N	2.27	0.67
11:CK:101:ASN:C	11:CK:101:ASN:OD1	2.32	0.67
22:BA:2636:C:H2'	22:BA:2637:U:H6	1.58	0.67
22:BA:2310:C:C4	27:BF:77:PHE:CZ	2.81	0.67
7:AG:146:GLU:HA	7:AG:149:LYS:CB	2.24	0.67
1:AA:71:A:H3'	1:AA:71:A:OP2	1.93	0.67
24:BC:107:PRO:HB3	24:BC:142:HIS:CE1	2.29	0.67
5:AE:90:THR:HG22	5:AE:91:GLY:N	2.09	0.67
1:AA:983:A:H2'	1:AA:983:A:N3	2.08	0.67
21:AU:4:ILE:HA	21:AU:20:LYS:HE3	1.75	0.67
1:CA:683:G:N2	11:CK:39:GLY:O	2.27	0.67
22:DA:948:C:O2	22:DA:984:A:O2'	2.11	0.67
1:CA:976:G:OP2	1:CA:1358:U:O2'	2.12	0.67
22:DA:724:U:H2'	22:DA:725:G:O4'	1.94	0.67
22:DA:686:U:OP2	57:DA:3718:HOH:O	2.11	0.67
33:BL:109:LYS:HG2	33:BL:126:ARG:HB2	1.75	0.67
16:AP:46:LYS:HD3	16:AP:47:GLU:N	2.10	0.67
14:CN:21:PHE:O	14:CN:23:LYS:N	2.27	0.67
22:BA:1178:C:H2'	22:BA:1179:G:N7	2.08	0.67
22:BA:2728:U:O2'	22:BA:2729:G:P	2.53	0.67
4:CD:174:ASP:O	4:CD:175:ALA:CB	2.43	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B4:33:HIS:O	52:B4:35:GLN:HG3	1.94	0.67
1:AA:1225:A:H2'	1:AA:1226:C:C5	2.29	0.67
1:CA:518:C:H2'	1:CA:530:G:C8	2.29	0.67
22:BA:622:G:P	57:BA:3293:HOH:O	2.51	0.67
1:CA:72:A:C6	1:CA:73:C:N4	2.62	0.67
1:AA:91:U:H2'	1:AA:92:U:O4'	1.95	0.67
20:CT:6:SER:OG	20:CT:7:ALA:N	2.23	0.67
24:BC:70:ASN:O	24:BC:72:ASP:N	2.27	0.67
12:AL:85:GLY:O	12:AL:96:HIS:ND1	2.28	0.67
29:BH:122:LEU:HD23	29:BH:123:ARG:N	2.10	0.67
39:DR:81:LYS:N	39:DR:81:LYS:HD3	2.10	0.67
22:BA:2128:G:H2'	22:BA:2129:C:O4'	1.92	0.67
24:DC:16:VAL:HG22	24:DC:206:GLY:HA3	1.76	0.67
22:BA:1582:C:O2'	22:BA:1585:C:N3	2.26	0.67
26:BE:7:ASP:O	26:BE:9:GLN:N	2.27	0.67
25:BD:133:THR:O	25:BD:134:HIS:HB2	1.94	0.67
22:BA:2061:G:O6	55:BA:3001:VIF:H29	1.94	0.67
21:AU:4:ILE:N	21:AU:20:LYS:HE3	2.09	0.67
5:AE:95:PHE:CZ	5:AE:97:GLN:HG3	2.29	0.67
22:BA:2392:A:O2'	33:BL:60:ARG:O	2.12	0.67
1:AA:1079:G:OP1	57:AA:1791:HOH:O	2.12	0.67
35:DN:117:ASP:O	35:DN:118:ARG:HB2	1.94	0.67
34:BM:28:PHE:HB2	34:BM:104:GLU:OE2	1.94	0.67
22:BA:747:U:C4	22:BA:2613:U:C4	2.82	0.67
5:CE:101:GLU:CD	5:CE:101:GLU:O	2.32	0.67
1:AA:1504:G:H3'	57:AA:1803:HOH:O	1.93	0.67
22:BA:197:A:N6	22:BA:2430:A:H2'	2.09	0.67
1:CA:404:G:O6	4:CD:2:ALA:N	2.28	0.67
22:BA:18:U:O4	57:BA:3205:HOH:O	2.10	0.67
1:AA:1525:G:O6	57:AA:1869:HOH:O	2.08	0.67
2:AB:103:ASN:O	2:AB:106:THR:N	2.27	0.67
37:BP:90:GLY:O	37:BP:113:ARG:NH1	2.28	0.67
30:BI:97:LYS:HG3	30:BI:139:VAL:HG22	1.77	0.67
22:DA:1469:A:H2'	22:DA:1470:A:C8	2.30	0.67
1:CA:111:G:O6	1:CA:330:C:N4	2.27	0.67
22:BA:276:U:O2	22:BA:276:U:H2'	1.95	0.67
22:BA:2554:U:C4	22:BA:2555:U:O4	2.47	0.67
22:DA:1380:G:OP2	57:DA:3753:HOH:O	2.12	0.67
39:BR:46:GLU:N	39:BR:46:GLU:OE1	2.26	0.67
22:BA:1142:A:N3	22:BA:1144:A:C8	2.63	0.67
16:CP:42:ILE:O	16:CP:44:SER:N	2.23	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:2:SER:C	8:AH:4:GLN:H	1.98	0.67
13:CM:13:LYS:O	13:CM:14:HIS:ND1	2.28	0.67
13:CM:40:ALA:O	13:CM:42:ASP:N	2.28	0.67
1:AA:992:U:C2	1:AA:1043:G:N7	2.63	0.67
1:CA:1298:U:O2	1:CA:1298:U:H2'	1.94	0.67
1:CA:1055:A:C6	1:CA:1206:G:C5	2.83	0.67
22:DA:1809:A:C6	22:DA:1810:A:C6	2.83	0.67
24:DC:30:PHE:CE2	24:DC:32:PRO:HG2	2.29	0.67
22:DA:1826:G:C5	22:DA:1827:U:C5	2.82	0.67
5:AE:99:ALA:O	5:AE:101:GLU:N	2.28	0.67
24:DC:69:ARG:HD3	24:DC:104:ILE:HG21	1.74	0.67
28:BG:174:ALA:O	28:BG:175:LYS:HB3	1.95	0.67
22:BA:1422:G:C4	22:BA:1423:G:C8	2.83	0.67
1:CA:1388:C:C2	1:CA:1389:C:C5	2.83	0.67
31:BJ:81:ILE:HG12	31:BJ:82:GLY:N	2.09	0.67
21:AU:10:GLU:CG	21:AU:11:PRO:HD3	2.25	0.67
27:DF:32:GLU:OE1	27:DF:92:ARG:NH1	2.28	0.67
10:AJ:47:GLU:OE2	14:AN:76:LYS:NZ	2.21	0.67
40:BS:1:MET:N	40:BS:109:ASP:OD1	2.28	0.67
22:DA:1645:G:OP1	22:DA:1646:C:H5'	1.95	0.67
27:BF:67:ILE:HD12	27:BF:67:ILE:O	1.94	0.67
22:BA:714:U:O2'	22:BA:716:A:N7	2.28	0.66
21:AU:35:ARG:NH2	57:AU:101:HOH:O	2.22	0.66
39:BR:49:ILE:HG22	39:BR:52:PRO:C	2.15	0.66
29:BH:27:ARG:O	29:BH:28:ASN:HB2	1.95	0.66
1:AA:173:U:C2	1:AA:197:A:N1	2.63	0.66
22:DA:1096:A:H2'	22:DA:1097:U:O4'	1.95	0.66
36:BO:55:GLU:OE1	36:BO:81:ARG:NH1	2.27	0.66
22:DA:2838:G:OP1	57:DA:3806:HOH:O	2.13	0.66
41:DT:14:PRO:HD2	46:DY:33:ALA:HB1	1.76	0.66
21:CU:51:SER:O	21:CU:53:VAL:N	2.28	0.66
22:DA:1395:A:O2'	22:DA:1397:U:C6	2.48	0.66
44:DW:21:LEU:HA	44:DW:39:ARG:HB2	1.77	0.66
39:BR:49:ILE:HB	39:BR:51:VAL:O	1.95	0.66
3:CC:77:ILE:HA	3:CC:84:VAL:HG23	1.76	0.66
3:AC:36:ASP:OD1	3:AC:59:ARG:NH1	2.28	0.66
1:AA:598:U:H4'	8:AH:86:TYR:CD1	2.30	0.66
22:DA:2757:A:N1	28:DG:67:THR:HG21	2.10	0.66
13:AM:46:SER:O	13:AM:47:GLU:HB3	1.96	0.66
2:CB:73:LYS:O	2:CB:75:ALA:N	2.28	0.66
22:BA:945:A:C8	57:BA:3263:HOH:O	2.48	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:826:U:P	57:BA:3702:HOH:O	2.53	0.66
39:DR:49:ILE:HG22	39:DR:54:VAL:N	2.10	0.66
22:BA:357:C:H2'	22:BA:358:U:C6	2.30	0.66
21:AU:14:VAL:HG13	21:AU:16:LEU:CD2	2.25	0.66
22:DA:1139:G:N2	22:DA:1140:C:C2	2.63	0.66
11:AK:29:ASN:OD1	11:AK:47:ALA:HB3	1.93	0.66
1:CA:532:A:N6	3:CC:192:THR:OG1	2.27	0.66
7:CG:12:ILE:HD12	7:CG:24:ALA:HB1	1.75	0.66
29:BH:94:ILE:CG2	29:BH:99:ILE:HG13	2.26	0.66
22:BA:974:G:C8	22:BA:989:G:C2	2.84	0.66
22:BA:1180:U:H2'	22:BA:1181:U:H5'	1.77	0.66
22:BA:1936:A:C8	22:BA:1945:G:C6	2.83	0.66
2:CB:99:GLY:O	2:CB:101:LEU:N	2.28	0.66
22:DA:46:G:C2	22:DA:47:C:C6	2.84	0.66
22:BA:2516:A:N6	22:BA:2517:C:H42	1.93	0.66
1:AA:144:G:C5	1:AA:179:A:C2	2.82	0.66
34:BM:136:MET:CE	43:BV:57:TYR:CD2	2.78	0.66
1:AA:663:A:N1	1:AA:743:A:C2	2.63	0.66
22:BA:1385:A:H1'	22:BA:1386:C:C6	2.31	0.66
5:CE:149:SER:HB2	5:CE:152:MET:CG	2.26	0.66
22:BA:2291:U:H2'	22:BA:2292:U:C5	2.31	0.66
22:DA:2163:A:OP1	22:DA:2171:A:C8	2.49	0.66
24:BC:71:LYS:HE3	24:BC:96:TYR:CD2	2.30	0.66
22:BA:1794:A:H2'	22:BA:1795:C:C6	2.31	0.66
22:BA:2674:G:H4'	32:BK:30:ARG:HD2	1.77	0.66
43:BV:80:HIS:CE1	43:BV:83:LYS:HG3	2.30	0.66
41:BT:19:LYS:O	41:BT:21:SER:N	2.29	0.66
22:DA:187:G:C2	22:DA:210:C:C2	2.83	0.66
1:AA:1228:C:OP2	13:AM:107:ARG:NH2	2.29	0.66
22:BA:933:A:H5'	22:BA:934:U:OP2	1.95	0.66
10:AJ:6:ILE:CD1	10:AJ:76:ILE:HB	2.26	0.66
1:AA:1033:G:H2'	1:AA:1034:G:H5'	1.77	0.66
13:CM:11:ASP:OD1	13:CM:12:HIS:N	2.27	0.66
39:BR:76:LYS:HD2	39:BR:85:LYS:HD2	1.76	0.66
10:AJ:12:ALA:HB2	10:AJ:96:VAL:HA	1.78	0.66
3:AC:139:GLN:O	3:AC:141:ALA:N	2.29	0.66
29:BH:93:SER:OG	1:CA:357:G:H4'	1.96	0.66
22:BA:1917:U:H2'	22:BA:1918:A:H5'	1.78	0.66
1:CA:1296:C:H4'	1:CA:1302:C:N4	2.10	0.66
22:DA:2690:U:C4	22:DA:2873:A:N1	2.63	0.66
22:DA:617:G:O6	57:DA:3286:HOH:O	2.09	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BY:56:LEU:O	46:BY:57:LEU:HB3	1.95	0.66
22:BA:1439:A:OP2	57:BA:3634:HOH:O	2.14	0.66
35:BN:73:ASN:HA	35:BN:76:VAL:HG12	1.77	0.66
1:AA:1149:C:OP2	9:AI:11:ARG:NH2	2.29	0.66
22:BA:2012:G:OP1	40:BS:98:LYS:HG2	1.95	0.66
4:CD:50:ASP:O	4:CD:53:VAL:HG22	1.95	0.66
22:BA:2819:G:OP1	57:BA:3807:HOH:O	2.13	0.66
2:AB:186:ILE:HA	2:AB:200:ILE:HB	1.78	0.66
22:BA:608:A:C6	22:BA:609:A:C6	2.84	0.66
12:AL:24:LEU:HG	12:AL:25:GLU:H	1.61	0.66
40:BS:63:GLY:O	40:BS:64:ALA:HB3	1.96	0.66
1:CA:72:A:N6	1:CA:73:C:N4	2.43	0.66
12:AL:44:LYS:HB2	12:AL:45:PRO:CD	2.25	0.66
9:CI:54:LEU:O	9:CI:55:VAL:HG22	1.95	0.66
28:BG:10:VAL:CG1	28:BG:10:VAL:O	2.44	0.66
1:AA:702:A:H3'	1:AA:703:G:C5'	2.26	0.66
5:AE:137:VAL:O	5:AE:138:ARG:CB	2.44	0.66
22:DA:1973:G:C6	22:DA:1974:C:C4	2.84	0.66
2:AB:49:MET:O	2:AB:53:ALA:HB2	1.94	0.66
27:DF:111:ILE:HB	27:DF:114:PHE:HB2	1.78	0.66
22:BA:206:U:C2'	22:BA:207:A:H5'	2.26	0.66
29:BH:14:SER:O	29:BH:15:LEU:HB2	1.95	0.66
22:DA:2125:G:H5'	22:DA:2126:A:OP2	1.96	0.66
22:DA:1871:A:O2'	22:DA:1872:A:N7	2.29	0.66
23:DB:84:G:N2	23:DB:93:C:C2	2.64	0.66
22:BA:1730:C:H4'	22:BA:1730:C:OP1	1.96	0.66
22:BA:1143:A:N7	31:BJ:27:ARG:NH1	2.44	0.66
1:AA:872:A:C4	1:AA:874:G:N7	2.64	0.66
7:CG:75:VAL:HG21	7:CG:144:MET:HG2	1.77	0.66
22:BA:2346:A:H4'	22:BA:2347:C:OP2	1.94	0.65
22:BA:1745:A:C2	22:BA:1746:A:C8	2.84	0.65
14:CN:51:LEU:O	14:CN:53:ARG:N	2.29	0.65
25:BD:84:LEU:HD22	25:BD:88:GLU:HB3	1.79	0.65
22:DA:748:G:C8	40:DS:89:ALA:HB1	2.31	0.65
37:DP:29:LYS:HB3	37:DP:40:LEU:HD21	1.78	0.65
25:BD:12:THR:CG2	37:BP:9:GLU:OE2	2.44	0.65
22:DA:269:C:N3	22:DA:270:A:C8	2.63	0.65
38:DQ:47:TYR:CZ	38:DQ:51:ARG:CZ	2.79	0.65
4:AD:59:GLN:O	4:AD:63:ARG:HG2	1.95	0.65
22:DA:1429:G:N7	24:DC:28:LYS:NZ	2.44	0.65
22:DA:247:G:H4'	22:DA:386:G:C5	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:16:LYS:N	17:AQ:17:MET:SD	2.68	0.65
22:BA:575:A:H2'	22:BA:576:U:H5'	1.78	0.65
22:DA:2504:U:C4	55:DA:3001:VIF:H30	2.31	0.65
1:CA:495:A:C2	1:CA:496:A:N6	2.64	0.65
2:CB:83:ALA:O	2:CB:86:SER:OG	2.15	0.65
18:CR:20:GLU:O	18:CR:22:ASP:N	2.29	0.65
24:DC:210:ALA:HA	24:DC:213:TRP:CE2	2.30	0.65
22:DA:2346:A:H3'	22:DA:2347:C:C5'	2.26	0.65
22:BA:265:A:H4'	22:BA:266:G:OP1	1.96	0.65
16:AP:78:VAL:HG13	16:AP:78:VAL:O	1.96	0.65
22:DA:24:G:C5	22:DA:25:U:C5	2.85	0.65
1:AA:483:C:O2	16:AP:13:LYS:NZ	2.29	0.65
22:DA:996:A:C2	22:DA:997:G:C8	2.83	0.65
36:DO:92:PHE:HB2	36:DO:117:PHE:CD1	2.31	0.65
22:DA:1274:A:N3	22:DA:1297:C:H1'	2.11	0.65
24:DC:62:TYR:CE1	24:DC:63:ARG:O	2.49	0.65
24:BC:226:ASN:ND2	57:BC:302:HOH:O	2.28	0.65
2:AB:168:HIS:ND1	2:AB:168:HIS:O	2.28	0.65
38:BQ:36:PHE:CE1	38:BQ:40:ILE:CD1	2.78	0.65
1:AA:1289:A:O3'	7:AG:35:LYS:NZ	2.29	0.65
22:DA:2344:U:H4'	22:DA:2345:G:OP1	1.96	0.65
53:B5:50:ILE:CG2	53:B5:51:ASP:N	2.59	0.65
52:D4:30:GLU:HB3	52:D4:33:HIS:CD2	2.31	0.65
22:DA:990:A:N1	39:DR:78:ARG:NH1	2.44	0.65
9:AI:81:HIS:NE2	9:AI:104:VAL:O	2.29	0.65
22:BA:1027:A:C6	22:BA:1126:A:N3	2.64	0.65
17:AQ:12:VAL:HG12	17:AQ:13:VAL:N	2.11	0.65
13:AM:26:GLY:O	13:AM:28:THR:N	2.29	0.65
12:CL:74:LEU:HD11	12:CL:80:ILE:HG21	1.78	0.65
22:BA:996:A:C2	22:BA:997:G:C8	2.85	0.65
22:DA:2225:A:H4'	22:DA:2226:C:O5'	1.96	0.65
22:DA:514:A:N3	22:DA:581:C:O2'	2.23	0.65
26:BE:171:ASP:OD1	26:BE:171:ASP:C	2.34	0.65
2:AB:15:HIS:CD2	2:AB:15:HIS:C	2.69	0.65
4:AD:191:LEU:HD12	4:AD:192:SER:HB2	1.78	0.65
22:BA:1258:U:C4	22:BA:1259:G:N7	2.65	0.65
23:DB:34:A:N6	23:DB:44:G:O2'	2.30	0.65
9:AI:56:ASP:O	9:AI:60:LYS:NZ	2.18	0.65
24:BC:8:PRO:HB3	24:BC:14:ARG:HB2	1.79	0.65
22:BA:576:U:H2'	22:BA:577:G:C8	2.31	0.65
4:AD:151:LYS:HB2	4:AD:156:LYS:HE3	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:25:ASN:O	3:AC:27:LYS:N	2.29	0.65
1:AA:872:A:C5	1:AA:874:G:C8	2.85	0.65
22:DA:1693:U:O4	22:DA:1976:U:O2'	2.12	0.65
3:AC:11:ARG:O	3:AC:14:ILE:O	2.15	0.65
24:BC:244:PRO:O	24:BC:251:GLN:NE2	2.29	0.65
2:AB:51:ASN:O	2:AB:52:GLU:HB2	1.96	0.65
22:DA:352:A:H2'	22:DA:353:C:O4'	1.96	0.65
29:BH:114:GLU:HB3	29:BH:133:GLN:O	1.97	0.65
4:AD:106:GLY:O	4:AD:108:GLY:N	2.29	0.65
24:DC:61:ALA:O	24:DC:63:ARG:NH2	2.30	0.65
44:BW:52:GLY:HA3	44:BW:60:PHE:CE2	2.31	0.65
22:BA:1925:C:H4'	22:BA:1926:U:C4	2.31	0.65
26:BE:31:VAL:HG21	26:BE:104:ALA:HB2	1.78	0.65
30:DI:69:PHE:HD1	30:DI:69:PHE:N	1.94	0.65
16:AP:42:ILE:O	16:AP:44:SER:N	2.30	0.65
22:BA:2555:U:C5	22:BA:2556:C:C2	2.84	0.65
31:BJ:13:ARG:HB3	31:BJ:51:GLY:O	1.97	0.65
35:BN:77:ALA:O	35:BN:81:ASN:HB2	1.97	0.65
22:BA:1816:C:C5	24:BC:62:TYR:CE1	2.85	0.65
20:AT:6:SER:OG	20:AT:7:ALA:N	2.30	0.65
33:DL:29:LYS:O	33:DL:30:THR:OG1	2.12	0.65
37:BP:103:ARG:HG3	37:BP:103:ARG:HH11	1.61	0.65
1:AA:800:G:O6	57:AA:1813:HOH:O	2.11	0.65
29:BH:139:PHE:O	29:BH:140:ALA:CB	2.44	0.65
22:DA:2136:G:N1	22:DA:2156:G:H1'	2.12	0.65
12:CL:116:LYS:O	12:CL:117:TYR:CD2	2.49	0.65
22:BA:1509:A:O2'	22:BA:1510:G:P	2.54	0.65
12:AL:21:VAL:HG23	12:AL:95:TYR:CE1	2.30	0.65
5:CE:56:VAL:N	5:CE:57:PRO:HD2	2.12	0.65
1:CA:152:A:N6	1:CA:170:U:C2	2.65	0.65
20:AT:29:ARG:O	20:AT:33:LYS:HG2	1.97	0.65
22:BA:2264:C:N4	44:BW:15:ASP:OD1	2.29	0.65
45:BX:12:PRO:HB3	45:BX:30:LEU:HD23	1.79	0.65
13:CM:33:ILE:HD13	13:CM:59:GLU:HB3	1.79	0.65
2:AB:23:TRP:CZ3	2:AB:25:PRO:HA	2.31	0.65
22:BA:1508:A:O2'	22:BA:1509:A:O4'	2.13	0.65
1:AA:1054:C:OP2	57:AA:1784:HOH:O	2.14	0.65
22:DA:1427:A:N6	22:DA:1571:A:OP2	2.29	0.65
32:DK:76:VAL:HG12	37:DP:73:VAL:CG2	2.26	0.65
1:CA:736:C:OP1	18:CR:61:ARG:NH1	2.30	0.65
1:AA:721:G:H4'	1:AA:722:G:O4'	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:108:VAL:HG13	27:BF:114:PHE:CZ	2.32	0.65
22:DA:1477:A:N6	22:DA:1514:G:O2'	2.30	0.65
22:BA:2034:U:O4	57:BA:3579:HOH:O	2.12	0.65
22:DA:2291:U:H2'	22:DA:2292:U:C6	2.32	0.65
12:CL:68:GLY:O	12:CL:99:ARG:NH1	2.30	0.65
1:CA:790:A:C6	1:CA:791:G:C6	2.85	0.65
22:BA:528:A:C8	22:BA:528:A:H3'	2.32	0.65
29:BH:122:LEU:C	29:BH:123:ARG:HG2	2.17	0.65
2:AB:33:GLY:O	2:AB:34:ALA:HB2	1.97	0.65
30:BI:47:ASP:HA	30:BI:51:LYS:CD	2.26	0.65
1:CA:718:A:C8	1:CA:719:C:C5	2.84	0.65
21:AU:20:LYS:CE	21:AU:20:LYS:HA	2.27	0.65
1:AA:652:U:O2'	1:AA:653:U:OP2	2.13	0.65
22:DA:1809:A:H2'	22:DA:1810:A:C8	2.32	0.64
2:CB:141:LEU:O	2:CB:145:GLU:N	2.30	0.64
38:BQ:40:ILE:O	38:BQ:44:GLN:HG3	1.97	0.64
3:AC:206:GLU:O	3:AC:207:ILE:O	2.15	0.64
1:AA:920:U:O4'	1:AA:1080:A:C2	2.49	0.64
10:AJ:33:GLY:O	10:AJ:34:ALA:HB2	1.97	0.64
22:BA:517:C:OP2	48:B0:10:ARG:NH2	2.30	0.64
27:BF:36:LEU:HD22	27:BF:91:LEU:HD11	1.78	0.64
22:DA:2681:C:C2	22:DA:2724:U:O4	2.50	0.64
40:DS:73:LYS:HB2	40:DS:106:VAL:HB	1.80	0.64
22:BA:2020:A:C2	22:BA:2035:G:N1	2.65	0.64
22:DA:204:A:H5'	22:DA:206:U:O4'	1.96	0.64
40:DS:41:LYS:O	40:DS:44:ALA:N	2.30	0.64
22:DA:247:G:H4'	22:DA:386:G:C4	2.33	0.64
22:BA:1926:U:O2	22:BA:1926:U:H2'	1.96	0.64
26:BE:108:ILE:HD13	26:BE:181:ILE:HG12	1.78	0.64
22:DA:2346:A:H3'	22:DA:2347:C:H5'	1.77	0.64
22:BA:118:A:C8	22:BA:119:A:C8	2.84	0.64
22:DA:1992:G:N2	22:DA:1996:C:O2'	2.30	0.64
1:CA:1181:G:O2'	1:CA:1182:G:C8	2.50	0.64
1:AA:174:A:C5	1:AA:175:C:C5	2.85	0.64
22:DA:2127:G:H4'	22:DA:2128:G:OP1	1.96	0.64
6:CF:9:MET:HG3	6:CF:86:ARG:HB2	1.78	0.64
22:DA:2063:C:H2'	22:DA:2063:C:O2	1.97	0.64
4:AD:150:LYS:O	4:AD:152:GLN:NE2	2.30	0.64
53:B5:50:ILE:C	53:B5:52:PRO:HD3	2.17	0.64
1:AA:731:G:OP1	1:AA:766:A:H1'	1.97	0.64
44:DW:52:GLY:HA3	44:DW:60:PHE:CZ	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:17:THR:HG23	4:AD:18:ASP:N	2.12	0.64
22:DA:1251:C:OP2	38:DQ:6:ARG:NH2	2.30	0.64
1:AA:624:C:H4'	16:AP:11:ALA:HB2	1.79	0.64
1:CA:4:U:H5''	1:CA:5:U:OP1	1.97	0.64
1:AA:232:G:H2'	1:AA:233:C:O4'	1.97	0.64
22:BA:2176:A:C6	22:BA:2177:C:N4	2.65	0.64
28:DG:159:GLY:O	28:DG:163:ARG:NH1	2.30	0.64
1:AA:663:A:C2	1:AA:743:A:C2	2.86	0.64
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.79	0.64
22:DA:2436:G:C2	22:DA:2437:G:C8	2.85	0.64
1:CA:866:C:C5	1:CA:867:G:H1'	2.32	0.64
9:CI:90:TYR:O	9:CI:91:ASP:CG	2.36	0.64
33:BL:68:SER:O	33:BL:69:ARG:HB2	1.97	0.64
22:DA:1127:A:C2'	22:DA:1128:G:H5''	2.27	0.64
22:BA:991:C:C4	22:BA:1185:G:C6	2.86	0.64
22:DA:370:G:C6	22:DA:424:G:N7	2.66	0.64
22:BA:2458:G:C2	22:BA:2490:G:N2	2.66	0.64
22:DA:118:A:N3	22:DA:178:G:H1'	2.13	0.64
1:AA:1374:A:C2	1:AA:1375:A:C8	2.85	0.64
1:CA:1211:U:C2'	1:CA:1212:U:OP2	2.46	0.64
22:DA:1530:G:N2	22:DA:1542:U:O2	2.31	0.64
22:DA:192:C:O2'	22:DA:802:A:N3	2.29	0.64
22:DA:1359:A:C8	22:DA:1373:A:N1	2.66	0.64
22:BA:983:A:C6	22:BA:984:A:C2	2.86	0.64
22:BA:572:A:C2	22:BA:2033:A:C2	2.86	0.64
22:DA:1570:A:H2'	22:DA:1571:A:C8	2.32	0.64
4:AD:75:TYR:OH	4:AD:97:ARG:NH1	2.30	0.64
1:AA:544:G:C5	1:AA:545:C:C5	2.86	0.64
22:BA:447:A:OP2	57:BA:3210:HOH:O	2.14	0.64
30:BI:58:VAL:HG12	30:BI:59:ILE:N	2.12	0.64
15:CO:62:GLN:O	15:CO:66:LEU:HD23	1.97	0.64
22:DA:151:C:H2'	22:DA:152:A:C8	2.32	0.64
8:CH:77:ARG:NE	8:CH:79:SER:O	2.30	0.64
42:DU:9:ASP:OD2	42:DU:10:GLU:N	2.31	0.64
15:AO:8:THR:O	15:AO:12:VAL:HG23	1.97	0.64
8:CH:94:LYS:HD3	8:CH:98:GLY:HA2	1.79	0.64
22:DA:2282:G:N3	22:DA:2425:A:N6	2.46	0.64
20:CT:78:ASN:O	20:CT:82:GLN:HG2	1.98	0.64
22:DA:1339:G:O4'	22:DA:1393:A:C2	2.51	0.64
35:BN:2:ARG:HA	35:BN:5:LYS:CD	2.26	0.64
22:BA:2839:G:C5	22:BA:2840:C:C5	2.85	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:91:U:C2	1:AA:92:U:H1'	2.33	0.64
22:DA:1774:C:O2	24:DC:11:PRO:HB2	1.97	0.64
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.32	0.64
22:BA:2520:C:C6	22:BA:2567:G:H1'	2.32	0.64
46:DY:56:LEU:O	46:DY:57:LEU:CB	2.46	0.64
22:BA:211:C:OP1	50:B2:25:LYS:NZ	2.30	0.64
31:DJ:142:ILE:OXT	31:DJ:142:ILE:HG23	1.96	0.64
22:BA:2282:G:H5''	22:BA:2283:C:O4'	1.98	0.64
22:BA:1176:U:H2'	22:BA:1177:G:C8	2.32	0.64
22:DA:1141:U:H4'	22:DA:1142:A:O4'	1.97	0.64
17:CQ:8:LEU:HD22	17:CQ:73:TRP:CH2	2.32	0.64
1:AA:1304:G:N1	1:AA:1305:G:N2	2.45	0.64
2:AB:95:ARG:HH12	2:AB:97:LEU:HA	1.63	0.64
22:BA:206:U:H2'	22:BA:207:A:H5'	1.79	0.64
22:BA:2474:U:H5''	22:BA:2475:C:OP2	1.98	0.64
22:DA:1181:U:H2'	22:DA:1182:G:C8	2.33	0.64
1:AA:468:A:C2	1:AA:469:C:C4	2.85	0.64
2:CB:35:ARG:O	2:CB:37:LYS:N	2.31	0.64
1:AA:673:A:H2'	1:AA:674:G:C8	2.32	0.64
9:CI:120:LYS:HG2	9:CI:123:ARG:HB3	1.79	0.64
2:CB:23:TRP:O	2:CB:23:TRP:CG	2.51	0.64
22:BA:2828:G:C2	22:BA:2829:A:C8	2.85	0.64
22:BA:947:A:O2'	22:BA:984:A:H2	1.79	0.64
1:AA:566:G:O6	57:AA:1840:HOH:O	2.10	0.64
5:AE:115:LEU:HG	5:AE:120:VAL:HG21	1.80	0.64
45:DX:33:LEU:O	45:DX:34:HIS:CG	2.51	0.64
2:AB:213:TYR:O	2:AB:217:VAL:HG23	1.97	0.64
3:AC:7:PRO:HG2	3:AC:184:TYR:CG	2.33	0.64
24:DC:147:LYS:HB2	24:DC:150:LYS:HB2	1.80	0.64
22:BA:1100:C:H2'	22:BA:1101:U:C6	2.32	0.64
22:BA:1140:C:OP2	31:BJ:68:LYS:NZ	2.31	0.64
1:CA:1029:U:O2	1:CA:1029:U:H2'	1.96	0.64
29:DH:117:LEU:CD1	29:DH:130:VAL:HG22	2.28	0.64
38:BQ:21:ALA:HA	38:BQ:24:TYR:CE1	2.33	0.64
1:AA:532:A:N6	3:AC:192:THR:OG1	2.31	0.64
29:BH:89:LYS:HB3	1:CA:359:G:C5'	2.28	0.64
15:AO:89:ARG:NH1	22:BA:714:U:C5	2.66	0.64
22:BA:2516:A:C6	22:BA:2517:C:N4	2.65	0.64
1:AA:657:U:O2	15:AO:22:THR:CG2	2.46	0.64
1:AA:1031:C:O2'	1:AA:1032:G:OP2	2.16	0.64
2:CB:135:LEU:O	2:CB:137:ARG:N	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:980:C:OP2	57:CA:1861:HOH:O	2.15	0.64
22:DA:526:A:N6	22:DA:2626:C:H4'	2.13	0.64
1:AA:208:U:C5	1:AA:210:C:C4	2.86	0.64
43:BV:13:GLY:O	43:BV:17:SER:OG	2.15	0.64
39:BR:16:GLU:OE1	39:BR:100:GLY:HA2	1.98	0.64
22:DA:1651:G:C6	22:DA:1652:A:C5	2.87	0.63
1:AA:262:A:C6	1:AA:263:A:C6	2.85	0.63
7:AG:27:VAL:HG12	7:AG:43:VAL:HG21	1.79	0.63
24:BC:143:ASN:OD1	24:BC:152:GLY:HA3	1.99	0.63
22:DA:2788:C:H2'	22:DA:2789:C:C6	2.33	0.63
1:CA:463:U:H5'	1:CA:464:U:OP2	1.98	0.63
1:CA:289:G:C2	1:CA:290:C:C5	2.85	0.63
22:DA:1300:G:O6	22:DA:1626:A:O2'	2.11	0.63
24:BC:136:PRO:O	24:BC:139:SER:OG	2.16	0.63
22:BA:2325:G:C6	22:BA:2326:C:N4	2.66	0.63
41:BT:2:ILE:HA	41:BT:3:ARG:C	2.18	0.63
22:DA:563:A:C4	22:DA:2018:G:C2	2.86	0.63
22:DA:1187:G:H5''	39:DR:83:TYR:CE2	2.33	0.63
53:B5:50:ILE:O	53:B5:52:PRO:HD3	1.98	0.63
20:CT:80:THR:O	20:CT:83:ILE:HG13	1.99	0.63
22:DA:1178:C:H2'	22:DA:1179:G:C8	2.33	0.63
3:AC:130:PHE:CZ	3:AC:131:ARG:HD2	2.33	0.63
22:DA:717:C:N4	22:DA:718:A:C2	2.67	0.63
1:CA:949:A:O2'	1:CA:971:G:O6	2.08	0.63
22:BA:2571:U:H2'	22:BA:2572:A:OP1	1.99	0.63
21:AU:44:GLU:OE2	21:AU:45:ARG:NH1	2.31	0.63
22:BA:250:G:OP1	57:BA:3818:HOH:O	2.15	0.63
1:CA:64:G:C8	1:CA:99:C:N4	2.65	0.63
22:DA:197:A:N6	22:DA:2430:A:H2'	2.12	0.63
40:BS:59:GLU:HA	40:BS:64:ALA:HB2	1.80	0.63
37:DP:39:ARG:HG3	37:DP:40:LEU:H	1.64	0.63
1:CA:1181:G:O2'	1:CA:1182:G:N7	2.32	0.63
20:CT:81:ALA:O	20:CT:85:LYS:HG2	1.98	0.63
22:DA:616:A:H4'	26:DE:101:TYR:CZ	2.34	0.63
22:BA:321:U:H5''	26:BE:131:THR:HG23	1.80	0.63
19:CS:40:ILE:HB	19:CS:66:MET:O	1.98	0.63
22:DA:2328:A:H2'	22:DA:2329:U:C6	2.33	0.63
22:DA:310:A:H5''	42:DU:15:THR:HG22	1.80	0.63
22:DA:2211:A:H1'	22:DA:2212:A:OP1	1.99	0.63
22:BA:1838:C:C4	22:BA:1899:A:C4	2.86	0.63
40:BS:63:GLY:O	40:BS:64:ALA:CB	2.46	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:373:A:C2	1:AA:374:A:C8	2.85	0.63
16:CP:20:VAL:CG2	16:CP:32:PHE:HB2	2.29	0.63
5:CE:38:VAL:HG12	5:CE:117:VAL:HG21	1.79	0.63
1:CA:624:C:H2'	1:CA:625:U:O4'	1.99	0.63
39:BR:102:SER:O	39:BR:103:ALA:O	2.16	0.63
1:CA:909:A:H2'	1:CA:910:C:O4'	1.98	0.63
22:BA:2015:A:C6	48:B0:3:VAL:HG23	2.33	0.63
22:DA:12:U:O2	22:DA:12:U:H2'	1.98	0.63
22:BA:790:U:O2'	22:BA:791:C:P	2.57	0.63
32:BK:91:SER:O	32:BK:92:GLU:C	2.36	0.63
22:DA:2311:A:O2'	22:DA:2312:U:P	2.56	0.63
22:BA:2495:G:H2'	22:BA:2496:C:H5'	1.80	0.63
5:CE:155:ALA:HB1	8:CH:66:PHE:CD2	2.34	0.63
22:BA:58:G:OP1	41:BT:78:SER:CB	2.45	0.63
1:CA:858:G:O6	1:CA:869:G:H3'	1.98	0.63
22:BA:1020:A:C2	22:BA:1141:U:C2	2.86	0.63
1:AA:1182:G:H4'	1:AA:1183:U:H5'	1.79	0.63
1:AA:206:C:H2'	1:AA:207:C:O4'	1.98	0.63
1:CA:216:U:H4'	1:CA:464:U:H4'	1.80	0.63
46:DY:9:LYS:HB3	46:DY:12:GLU:HG2	1.80	0.63
22:DA:420:C:H2'	22:DA:421:C:H6	1.64	0.63
1:AA:1064:G:O2'	1:AA:1190:G:N2	2.32	0.63
24:DC:93:LEU:HD13	24:DC:103:TYR:CE1	2.34	0.63
1:CA:811:C:O2'	1:CA:901:A:N1	2.30	0.63
22:DA:753:A:C2	22:DA:754:U:C2	2.86	0.63
49:D1:10:LYS:O	49:D1:51:GLU:HG2	1.98	0.63
19:CS:4:SER:O	19:CS:5:LEU:HB2	1.97	0.63
32:BK:113:MET:SD	32:BK:116:ILE:HD11	2.39	0.63
1:CA:66:A:H4'	1:CA:173:U:C5	2.34	0.63
22:BA:1838:C:N4	22:BA:1899:A:C4	2.67	0.63
30:BI:28:LEU:HD12	30:BI:28:LEU:O	1.96	0.63
13:CM:114:LYS:HB2	13:CM:115:PRO:HD3	1.80	0.63
22:BA:2808:G:N2	22:BA:2891:U:C6	2.67	0.63
22:BA:936:A:H2'	22:BA:937:C:C6	2.34	0.63
10:AJ:10:LEU:HB2	10:AJ:72:ARG:HB2	1.79	0.63
22:DA:528:A:C2	22:DA:2043:C:H4'	2.33	0.63
22:DA:2135:A:C2	22:DA:2136:G:H1'	2.34	0.63
22:BA:742:A:H2'	22:BA:743:A:C8	2.34	0.63
1:CA:373:A:C2	1:CA:374:A:C8	2.87	0.63
22:DA:1789:A:H5''	24:DC:219:THR:O	1.99	0.63
22:BA:1266:G:OP1	48:B0:16:ARG:NE	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:107:PHE:CG	4:AD:145:ILE:HD11	2.33	0.63
22:BA:12:U:O2	22:BA:12:U:H2'	1.99	0.63
36:BO:31:THR:O	36:BO:102:ARG:NH1	2.31	0.63
11:AK:102:ALA:O	11:AK:104:GLY:N	2.31	0.63
22:DA:2428:G:H5''	22:DA:2429:G:OP1	1.99	0.63
22:DA:2308:G:H5''	22:DA:2309:A:OP2	1.98	0.63
37:BP:31:TRP:CE2	37:BP:40:LEU:HD11	2.34	0.63
22:BA:674:G:H1'	26:BE:69:ARG:HD3	1.79	0.63
36:DO:100:HIS:CD2	36:DO:101:GLY:N	2.66	0.63
1:AA:983:A:C2'	1:AA:983:A:N3	2.61	0.63
29:DH:117:LEU:HG	29:DH:120:GLY:O	1.98	0.63
1:CA:1048:G:OP1	57:CA:1846:HOH:O	2.16	0.63
11:CK:15:GLN:HA	11:CK:77:TYR:HA	1.81	0.63
22:BA:474:G:O6	57:BA:3208:HOH:O	2.14	0.63
25:BD:39:ASP:OD2	25:BD:40:LEU:N	2.31	0.63
22:DA:306:U:O2	22:DA:312:G:N2	2.31	0.63
12:AL:24:LEU:HG	12:AL:25:GLU:N	2.14	0.63
22:DA:152:A:C2	22:DA:175:G:C2	2.87	0.63
1:AA:466:A:H5'	1:AA:467:U:OP2	1.98	0.63
52:B4:3:VAL:HG13	52:B4:36:ARG:HB3	1.79	0.63
37:DP:22:PRO:HA	37:DP:47:VAL:HG12	1.79	0.63
22:DA:945:A:C8	22:DA:2448:A:C2	2.86	0.63
22:BA:1922:G:C2	22:BA:1923:U:C6	2.86	0.63
2:AB:187:VAL:HG23	2:AB:187:VAL:O	1.99	0.63
26:BE:91:ASP:OD1	26:BE:93:SER:OG	2.15	0.63
22:BA:1179:G:N7	22:BA:1180:U:C1'	2.62	0.62
22:BA:947:A:H2'	22:BA:948:C:C6	2.33	0.62
1:AA:1198:G:N7	57:AA:1786:HOH:O	2.31	0.62
1:CA:374:A:H5''	1:CA:452:A:C2	2.34	0.62
1:CA:1182:G:H4'	1:CA:1183:U:H5''	1.79	0.62
1:CA:1215:G:C5	1:CA:1216:A:N7	2.67	0.62
1:AA:205:A:OP1	1:AA:205:A:H4'	1.99	0.62
22:BA:1907:G:C5	22:BA:1908:C:C4	2.87	0.62
22:DA:305:C:H1'	22:DA:313:G:N2	2.14	0.62
22:DA:1320:C:N4	22:DA:1333:G:C6	2.67	0.62
1:AA:484:G:H4'	1:AA:485:U:OP1	1.99	0.62
1:CA:1273:C:H2'	1:CA:1274:A:O4'	1.99	0.62
22:BA:1216:G:C5	22:BA:1217:U:C5	2.87	0.62
51:B3:31:HIS:CD2	51:B3:32:ILE:HG13	2.34	0.62
22:DA:2499:C:N4	22:DA:2500:U:O4	2.32	0.62
22:DA:594:U:H2'	22:DA:595:C:C6	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1153:C:OP1	38:BQ:92:ARG:NH1	2.32	0.62
25:BD:140:HIS:CD2	57:BD:302:HOH:O	2.37	0.62
1:CA:257:G:C5	57:CA:1718:HOH:O	2.49	0.62
17:AQ:16:LYS:C	17:AQ:17:MET:SD	2.78	0.62
22:BA:1794:A:O4'	22:BA:1900:A:C2	2.52	0.62
1:AA:375:U:C4	1:AA:376:G:N7	2.67	0.62
1:AA:213:G:C8	1:AA:214:C:C5	2.87	0.62
12:CL:90:LEU:HB2	12:CL:93:VAL:HG21	1.80	0.62
22:DA:1805:A:N3	22:DA:1813:G:C2	2.67	0.62
22:DA:1805:A:C2	22:DA:1813:G:C2	2.87	0.62
20:CT:29:ARG:O	20:CT:33:LYS:HG2	1.98	0.62
51:B3:17:THR:OG1	51:B3:18:GLY:N	2.31	0.62
3:CC:6:HIS:CD2	14:CN:89:MET:HB3	2.34	0.62
22:DA:2349:G:OP1	51:D3:45:ARG:NH2	2.32	0.62
22:DA:1649:G:C6	22:DA:2009:A:C6	2.86	0.62
22:DA:1153:C:H5'	38:DQ:62:ILE:HD13	1.80	0.62
1:CA:32:A:OP1	1:CA:398:U:H1'	1.99	0.62
22:BA:1087:G:N2	22:BA:1090:A:C8	2.67	0.62
1:CA:16:A:C2'	1:CA:17:U:H5'	2.29	0.62
33:DL:81:ASP:O	33:DL:82:LEU:HB3	1.98	0.62
2:CB:23:TRP:O	2:CB:23:TRP:CD1	2.51	0.62
16:CP:20:VAL:HG21	16:CP:32:PHE:HB2	1.81	0.62
23:DB:81:G:C5	23:DB:82:U:C5	2.88	0.62
1:CA:1263:C:H2'	1:CA:1264:U:C6	2.34	0.62
2:CB:186:ILE:HA	2:CB:200:ILE:HB	1.79	0.62
1:CA:562:U:H4'	1:CA:563:A:O5'	2.00	0.62
1:CA:55:A:C8	1:CA:56:U:C5	2.88	0.62
22:BA:1915:U:C2'	22:BA:1916:A:H5'	2.30	0.62
1:CA:1041:G:H2'	1:CA:1042:A:C8	2.35	0.62
22:DA:2061:G:O6	55:DA:3001:VIF:H29	1.98	0.62
1:AA:451:A:H5''	16:AP:70:ARG:NH2	2.14	0.62
22:BA:1421:G:C2	22:BA:1422:G:C8	2.87	0.62
22:DA:2689:U:H4'	22:DA:2690:U:OP2	1.99	0.62
2:AB:50:PHE:HA	2:AB:213:TYR:OH	2.00	0.62
9:AI:57:MET:SD	9:AI:58:VAL:N	2.69	0.62
1:AA:727:G:N2	1:AA:731:G:C4	2.67	0.62
22:DA:811:U:O2	22:DA:1251:C:C5	2.52	0.62
1:CA:866:C:C4	1:CA:867:G:H1'	2.35	0.62
38:BQ:24:TYR:O	38:BQ:25:TYR:HB2	1.99	0.62
22:BA:1998:A:OP2	25:BD:141:ARG:NH2	2.32	0.62
24:DC:24:LEU:HD21	24:DC:90:ASN:ND2	2.13	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:6:LYS:HB3	40:BS:104:THR:HA	1.80	0.62
28:DG:70:ALA:O	28:DG:74:SER:OG	2.10	0.62
22:BA:1686:C:H2'	22:BA:1687:G:O4'	1.99	0.62
4:CD:35:GLU:O	4:CD:37:ALA:N	2.31	0.62
38:DQ:58:ARG:NH2	38:DQ:92:ARG:CZ	2.62	0.62
11:AK:76:GLU:HA	22:BA:2141:G:P	2.40	0.62
22:BA:2199:A:O4'	29:BH:28:ASN:ND2	2.33	0.62
20:AT:67:ILE:HG13	20:AT:71:LYS:HG2	1.80	0.62
22:DA:228:C:H4'	22:DA:229:C:H5''	1.82	0.62
22:BA:1450:G:C6	22:BA:1451:C:N4	2.68	0.62
1:CA:435:A:H2'	1:CA:436:C:O5'	1.99	0.62
1:CA:555:U:H2'	1:CA:556:C:C6	2.34	0.62
40:DS:28:LYS:O	40:DS:30:SER:N	2.33	0.62
1:AA:259:G:C2	1:AA:260:G:H1'	2.34	0.62
22:DA:2899:A:H2'	22:DA:2900:A:C8	2.34	0.62
2:AB:163:VAL:HG13	2:AB:185:ALA:HB2	1.81	0.62
27:BF:4:LEU:HD11	27:BF:104:ILE:HD11	1.81	0.62
11:CK:27:PHE:CZ	11:CK:89:PRO:HG2	2.33	0.62
22:BA:2478:A:C5'	52:B4:32:LYS:HD3	2.28	0.62
21:AU:37:PHE:HB3	21:AU:41:PRO:HG3	1.80	0.62
4:AD:122:ALA:O	4:AD:123:ILE:HG23	2.00	0.62
2:AB:15:HIS:CD2	2:AB:16:PHE:O	2.53	0.62
22:DA:1182:G:H2'	22:DA:1183:U:O4'	1.99	0.62
22:DA:642:U:O2'	22:DA:644:A:N7	2.25	0.62
1:AA:914:A:C4	1:AA:915:A:C8	2.88	0.62
22:DA:503:A:C4	22:DA:506:G:N7	2.68	0.62
1:AA:998:C:H2'	1:AA:999:C:C6	2.34	0.62
1:AA:1477:U:H2'	1:AA:1478:U:C6	2.35	0.62
33:DL:85:VAL:O	33:DL:86:GLU:HB3	1.98	0.62
30:BI:127:ARG:HA	30:BI:130:GLU:HG3	1.81	0.62
22:DA:674:G:H1'	26:DE:69:ARG:HD3	1.82	0.62
4:CD:59:GLN:O	4:CD:63:ARG:HG3	1.99	0.62
1:AA:1004:A:H2'	1:AA:1005:A:O4'	1.99	0.62
22:BA:1474:U:H2'	22:BA:1475:G:H5'	1.82	0.62
22:DA:1064:C:N3	22:DA:1074:G:N2	2.48	0.62
1:CA:552:U:C4	1:CA:553:A:N7	2.68	0.62
1:AA:373:A:N3	1:AA:374:A:C8	2.67	0.62
1:CA:407:U:C2	1:CA:408:A:C8	2.87	0.62
22:BA:1425:G:O2'	22:BA:1426:G:H5'	2.00	0.62
22:BA:2630:G:H2'	22:BA:2631:G:O4'	1.99	0.62
22:DA:301:G:H1'	22:DA:302:C:C6	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1027:A:C6	22:DA:1126:A:N3	2.67	0.62
22:DA:983:A:N6	22:DA:984:A:C2	2.68	0.62
1:AA:212:G:N2	1:AA:213:G:C4	2.68	0.62
41:DT:64:LYS:HD2	41:DT:79:ASP:OD1	2.00	0.62
22:BA:1018:U:O3'	22:BA:1120:G:N2	2.32	0.62
4:CD:188:ARG:NH1	4:CD:191:LEU:CD1	2.63	0.62
22:BA:682:G:H5'	50:B2:26:ASN:OD1	1.99	0.62
1:CA:55:A:N7	1:CA:56:U:C5	2.68	0.62
22:BA:1936:A:N7	22:BA:1945:G:C6	2.68	0.62
22:DA:2164:C:H2'	22:DA:2165:C:H6	1.59	0.62
22:BA:1142:A:C2	22:BA:1144:A:N9	2.67	0.62
22:BA:2820:A:C2'	22:BA:2821:A:OP1	2.48	0.62
4:CD:32:CYS:SG	4:CD:33:LYS:N	2.73	0.62
6:CF:41:ASP:OD2	6:CF:43:GLY:N	2.33	0.62
8:AH:125:ILE:O	8:AH:125:ILE:HG13	1.99	0.62
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.33	0.62
11:CK:125:LYS:O	21:CU:34:ARG:NE	2.30	0.62
22:DA:1197:G:H2'	22:DA:1198:U:C6	2.35	0.62
22:BA:988:A:P	47:BZ:12:SER:HB2	2.40	0.62
22:BA:1911:U:H2'	22:BA:1918:A:N1	2.15	0.62
22:DA:2093:G:O2'	22:DA:2094:A:H5'	2.00	0.62
22:DA:1045:C:H1'	22:DA:1047:G:C6	2.35	0.62
22:DA:1187:G:OP1	39:DR:85:LYS:HE3	2.00	0.62
3:AC:7:PRO:HD2	3:AC:184:TYR:CD2	2.35	0.62
25:DD:104:VAL:O	25:DD:105:LYS:CB	2.47	0.62
6:CF:45:ARG:O	6:CF:56:LYS:HA	2.00	0.62
22:DA:1515:A:O2'	22:DA:1556:C:O2'	2.09	0.62
22:DA:910:A:N3	22:DA:2264:C:O2'	2.32	0.62
38:DQ:27:ALA:HB1	38:DQ:31:VAL:HB	1.82	0.62
22:BA:2591:C:H2'	22:BA:2592:G:C8	2.35	0.62
22:DA:185:G:C6	22:DA:212:G:C2	2.88	0.62
22:BA:1808:A:O2'	45:BX:3:ARG:NH1	2.32	0.62
22:BA:1061:U:O4	30:BI:11:LEU:HA	2.00	0.61
4:CD:26:ARG:O	4:CD:27:ALA:HB2	2.00	0.61
22:DA:377:G:C6	22:DA:378:C:C4	2.88	0.61
22:DA:2091:C:H3'	22:DA:2092:U:H5''	1.82	0.61
4:AD:11:LEU:HD22	4:AD:63:ARG:HD3	1.82	0.61
22:BA:1100:C:H2'	22:BA:1101:U:C5	2.35	0.61
1:AA:19:A:N3	1:AA:917:G:C2	2.68	0.61
24:BC:25:HIS:CE1	24:BC:26:LYS:O	2.53	0.61
31:BJ:17:VAL:HG22	31:BJ:55:ILE:HB	1.80	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:22:U:O4	57:DB:302:HOH:O	2.12	0.61
22:DA:67:U:C2	22:DA:68:G:C8	2.88	0.61
22:BA:1322:A:O3'	40:BS:84:ARG:NH1	2.32	0.61
31:BJ:27:ARG:CG	31:BJ:27:ARG:HH11	2.13	0.61
39:BR:21:ARG:NE	39:BR:93:PHE:CD1	2.67	0.61
12:CL:86:ARG:CZ	12:CL:88:LYS:HB3	2.30	0.61
22:DA:2636:C:H2'	22:DA:2637:U:C6	2.36	0.61
22:BA:1939:U:OP1	22:BA:2604:U:O2'	2.16	0.61
13:AM:66:GLU:O	13:AM:69:LEU:N	2.33	0.61
35:BN:38:LEU:HB3	35:BN:39:PRO:HD3	1.80	0.61
22:BA:714:U:C2'	22:BA:716:A:N7	2.62	0.61
22:DA:2005:A:OP1	57:DA:3383:HOH:O	2.16	0.61
22:BA:1098:A:C5	22:BA:1099:G:C6	2.88	0.61
22:DA:1607:C:O2	22:DA:1621:U:C5	2.52	0.61
22:BA:495:G:C1'	40:BS:57:ASN:ND2	2.63	0.61
22:BA:2516:A:C4	22:BA:2569:G:N2	2.68	0.61
29:DH:32:PRO:O	29:DH:33:GLN:CB	2.48	0.61
22:DA:1094:U:H2'	22:DA:1096:A:OP2	1.99	0.61
50:D2:15:SER:OG	50:D2:16:HIS:CE1	2.53	0.61
30:BI:6:GLN:O	30:BI:7:ALA:HB3	2.00	0.61
1:CA:1080:A:OP1	5:CE:52:LYS:CE	2.48	0.61
22:DA:2250:G:OP1	34:DM:84:LYS:NZ	2.33	0.61
6:CF:64:VAL:HG12	6:CF:65:GLU:N	2.15	0.61
47:DZ:14:ILE:HG22	47:DZ:15:GLY:N	2.16	0.61
6:AF:98:GLU:HG3	6:AF:99:ALA:H	1.65	0.61
1:CA:632:U:O2	1:CA:632:U:H2'	1.99	0.61
22:DA:297:G:H5''	42:DU:85:PHE:HB2	1.82	0.61
1:AA:771:G:C2'	1:AA:772:U:H5'	2.30	0.61
1:CA:955:U:H2'	1:CA:956:U:O4'	2.01	0.61
23:DB:25:U:C4	23:DB:26:C:C4	2.88	0.61
22:BA:2262:U:OP1	44:BW:41:ARG:NH2	2.33	0.61
22:DA:2812:G:N2	22:DA:2889:C:C2	2.69	0.61
22:DA:2889:C:H2'	22:DA:2890:G:C8	2.35	0.61
22:DA:400:G:N7	45:DX:57:ARG:NH1	2.47	0.61
36:BO:2:ASP:OD1	36:BO:3:LYS:N	2.33	0.61
25:BD:129:THR:HG22	25:BD:130:GLN:O	2.00	0.61
29:BH:86:ASP:CB	1:CA:359:G:O2'	2.47	0.61
11:AK:127:ARG:N	21:AU:34:ARG:CZ	2.63	0.61
22:BA:1496:A:N3	22:BA:1577:C:O2'	2.28	0.61
22:DA:1394:U:H4'	22:DA:1603:A:H4'	1.82	0.61
22:BA:555:G:HO2'	22:BA:556:A:P	2.23	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:978:A:P	1:CA:1362:A:N6	2.73	0.61
22:DA:2283:C:C2	22:DA:2389:G:C2	2.88	0.61
22:DA:2874:C:H2'	22:DA:2875:C:C6	2.36	0.61
53:B5:43:GLU:HA	53:B5:178:LYS:HA	1.83	0.61
2:AB:93:ASN:OD1	2:AB:94:HIS:ND1	2.34	0.61
1:CA:990:C:C4	1:CA:991:U:O4	2.54	0.61
53:B5:64:SER:O	53:B5:65:LEU:HB2	2.00	0.61
1:AA:393:A:C2	1:AA:394:G:C8	2.89	0.61
35:DN:98:LEU:HD13	48:D0:54:VAL:HG21	1.82	0.61
22:DA:2112:G:H2'	22:DA:2112:G:N3	2.16	0.61
1:AA:701:U:H4'	1:AA:702:A:H5''	1.82	0.61
1:AA:428:G:O4'	1:AA:430:A:C8	2.54	0.61
22:BA:1142:A:C2	22:BA:1144:A:C1'	2.83	0.61
36:DO:33:ARG:O	36:DO:34:HIS:HB2	2.01	0.61
27:BF:40:VAL:O	27:BF:42:GLU:N	2.33	0.61
22:DA:1435:G:H2'	22:DA:1436:G:H5'	1.82	0.61
1:CA:18:C:C2	1:CA:19:A:C8	2.88	0.61
1:CA:115:G:H4'	1:CA:116:A:O5'	2.01	0.61
22:DA:593:U:H2'	22:DA:594:U:C6	2.36	0.61
22:DA:2343:U:O2'	22:DA:2373:G:O2'	2.11	0.61
46:DY:28:LEU:CD1	46:DY:46:VAL:HG21	2.31	0.61
22:DA:1355:G:C2	22:DA:1356:G:C8	2.88	0.61
22:BA:1672:A:C2	22:BA:2582:G:H5'	2.35	0.61
39:DR:42:ALA:HA	39:DR:46:GLU:HA	1.83	0.61
22:BA:228:C:H4'	22:BA:229:C:H5''	1.81	0.61
16:AP:52:LEU:O	16:AP:54:LEU:N	2.34	0.61
1:CA:328:C:H4'	1:CA:329:A:H5''	1.83	0.61
20:AT:67:ILE:CG1	20:AT:71:LYS:HG2	2.30	0.61
49:D1:4:GLY:O	49:D1:6:ARG:N	2.25	0.61
22:BA:2636:C:H2'	22:BA:2637:U:C6	2.35	0.61
4:CD:48:LEU:HD23	4:CD:53:VAL:N	2.16	0.61
1:CA:435:A:C2'	1:CA:436:C:O5'	2.48	0.61
22:DA:2537:U:H2'	22:DA:2538:C:C6	2.36	0.61
4:AD:174:ASP:O	4:AD:175:ALA:HB2	1.99	0.61
22:DA:30:G:C6	22:DA:31:C:N3	2.69	0.61
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.35	0.61
20:AT:81:ALA:O	20:AT:85:LYS:HG2	2.00	0.61
22:BA:2076:U:O4'	22:BA:2076:U:O2	2.18	0.61
22:BA:2114:A:N3	22:BA:2114:A:H2'	2.14	0.61
22:BA:998:C:H2'	22:BA:999:U:O5'	2.00	0.61
13:AM:4:ILE:O	13:AM:6:GLY:N	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:378:G:N2	1:CA:386:C:O2	2.34	0.61
22:DA:783:A:O2'	22:DA:1779:U:O2	2.16	0.61
5:AE:109:GLY:O	5:AE:110:ALA:CB	2.49	0.61
22:DA:485:C:N3	22:DA:496:G:C2	2.68	0.61
9:AI:84:THR:HG21	9:AI:103:PHE:CB	2.31	0.61
1:CA:790:A:N6	1:CA:791:G:C6	2.69	0.61
22:BA:11:C:H2'	22:BA:12:U:H5'	1.81	0.61
20:CT:25:ARG:O	20:CT:29:ARG:HG2	2.01	0.61
42:BU:99:ASN:O	42:BU:101:GLU:N	2.33	0.61
1:CA:1125:U:H4'	10:CJ:7:ARG:NH1	2.16	0.61
22:DA:536:G:N2	22:DA:558:U:C2	2.68	0.61
4:CD:4:TYR:O	4:CD:5:LEU:HB2	2.00	0.61
24:DC:2:ALA:HA	24:DC:199:GLU:OE2	2.00	0.61
2:AB:132:LYS:O	2:AB:134:ALA:N	2.33	0.61
13:AM:114:LYS:HB2	13:AM:115:PRO:HD3	1.80	0.61
4:AD:3:ARG:NH2	4:AD:115:ARG:HD3	2.16	0.61
22:BA:2673:G:C2	22:BA:2674:G:C8	2.89	0.61
5:AE:137:VAL:O	5:AE:138:ARG:HB2	2.00	0.61
22:DA:1027:A:N7	22:DA:1126:A:C2	2.67	0.61
22:DA:373:U:C2	22:DA:374:A:C8	2.88	0.61
1:AA:315:A:O2'	1:AA:330:C:H4'	2.00	0.61
22:DA:1801:A:C5	24:DC:262:ARG:NH2	2.68	0.61
6:AF:53:LYS:O	6:AF:54:LEU:HB3	1.99	0.61
1:AA:667:G:H4'	15:AO:51:HIS:ND1	2.16	0.61
1:AA:1089:G:H2'	1:AA:1090:U:O4'	2.01	0.61
22:DA:1599:U:C4	22:DA:1600:C:N4	2.68	0.61
29:DH:83:LYS:H	29:DH:149:GLU:HG2	1.64	0.61
22:BA:195:A:C5	22:BA:198:C:C5	2.89	0.61
10:AJ:90:LEU:N	10:AJ:91:ASP:OD1	2.34	0.61
1:CA:706:A:C5	1:CA:707:U:C5	2.89	0.61
22:DA:482:A:N6	22:DA:506:G:O2'	2.33	0.61
22:DA:1599:U:O4	22:DA:1600:C:N4	2.34	0.61
1:AA:277:C:H2'	1:AA:278:G:H5'	1.82	0.61
8:AH:113:ASP:OD2	8:AH:117:ARG:NH2	2.34	0.61
1:CA:1169:A:C6	1:CA:1170:A:C6	2.89	0.61
1:AA:1008:U:H2'	1:AA:1009:U:C6	2.36	0.61
27:BF:158:THR:O	57:BF:201:HOH:O	2.16	0.61
22:BA:1278:C:OP1	35:BN:36:THR:OG1	2.18	0.61
22:DA:565:C:H4'	22:DA:1253:A:N6	2.16	0.61
43:BV:64:VAL:O	43:BV:64:VAL:HG12	2.01	0.61
4:AD:84:GLY:O	4:AD:89:ASN:ND2	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:369:G:OP2	1:CA:388:G:N1	2.33	0.61
1:CA:388:G:O2'	1:CA:389:A:OP1	2.14	0.61
1:AA:620:C:H2'	1:AA:621:A:O4'	2.01	0.61
2:AB:21:ARG:C	2:AB:23:TRP:H	2.01	0.61
22:DA:2209:G:N2	22:DA:2216:G:N3	2.48	0.61
22:BA:1897:G:C2	22:BA:1898:U:O2	2.54	0.61
12:CL:58:THR:HG22	12:CL:59:ASN:N	2.15	0.61
20:AT:5:LYS:O	20:AT:7:ALA:N	2.34	0.61
26:DE:131:THR:HA	26:DE:160:ALA:HB1	1.83	0.61
6:CF:18:VAL:HG12	6:CF:19:PRO:N	2.16	0.61
26:DE:52:VAL:HG21	26:DE:81:GLY:HA2	1.83	0.61
1:AA:1348:U:H4'	9:AI:122:ARG:HG3	1.82	0.61
3:CC:59:ARG:HB2	3:CC:63:SER:O	2.00	0.61
2:CB:16:PHE:CE1	2:CB:18:HIS:CE1	2.89	0.61
29:BH:117:LEU:O	29:BH:121:VAL:HG22	1.93	0.60
22:BA:2559:C:O2'	22:BA:2560:A:H5'	2.00	0.60
30:BI:47:ASP:HA	30:BI:51:LYS:HD2	1.83	0.60
13:CM:4:ILE:HA	13:CM:57:ARG:CZ	2.31	0.60
22:BA:1924:C:O2	22:BA:1926:U:O4	2.19	0.60
1:CA:409:U:OP1	4:CD:24:GLY:HA3	2.01	0.60
21:AU:4:ILE:CA	21:AU:20:LYS:HE3	2.31	0.60
1:CA:1211:U:O2'	1:CA:1212:U:OP2	2.19	0.60
1:AA:1040:U:H2'	1:AA:1041:G:C8	2.36	0.60
22:DA:235:U:C4	22:DA:236:C:C5	2.89	0.60
1:CA:995:C:N3	1:CA:1046:A:O2'	2.31	0.60
9:CI:52:LEU:HD13	9:CI:57:MET:HG2	1.82	0.60
1:CA:805:C:C2	1:CA:806:C:C5	2.89	0.60
25:DD:78:GLY:HA3	25:DD:80:TRP:CH2	2.35	0.60
22:DA:1806:C:C5	22:DA:1807:G:C8	2.89	0.60
13:AM:15:ALA:CB	13:AM:34:LEU:HD21	2.31	0.60
22:DA:2038:G:H2'	22:DA:2039:U:O4'	1.99	0.60
25:BD:4:LEU:CD2	25:BD:100:LEU:HD23	2.31	0.60
1:AA:71:A:O2'	1:AA:72:A:P	2.60	0.60
1:AA:927:G:C2	1:AA:1391:U:O2	2.54	0.60
22:DA:2817:U:O2	22:DA:2836:U:H1'	2.00	0.60
22:BA:1378:A:O2'	22:BA:1380:G:OP2	2.19	0.60
1:CA:577:G:C8	1:CA:816:A:C6	2.89	0.60
29:BH:100:ALA:HB1	29:BH:112:LYS:HA	1.83	0.60
19:AS:29:LYS:CB	19:AS:30:PRO:HD2	2.31	0.60
22:DA:1317:G:C2	22:DA:1336:A:C2	2.88	0.60
5:CE:137:VAL:O	5:CE:138:ARG:HB2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1867:G:O2'	22:BA:1868:C:H5'	2.01	0.60
4:AD:29:ASP:O	4:AD:31:LYS:HD3	2.01	0.60
22:DA:1779:U:H5	22:DA:1784:A:N7	1.99	0.60
17:CQ:8:LEU:HB2	17:CQ:61:ILE:CG2	2.30	0.60
22:DA:1663:G:C6	22:DA:1992:G:N7	2.68	0.60
40:DS:7:HIS:HB2	40:DS:50:VAL:HG21	1.81	0.60
26:BE:125:SER:OG	26:BE:126:VAL:N	2.31	0.60
35:DN:1:MET:O	35:DN:3:HIS:N	2.34	0.60
12:AL:50:ARG:HG3	12:AL:90:LEU:HD11	1.83	0.60
13:CM:26:GLY:O	13:CM:30:SER:HB2	2.00	0.60
22:DA:195:A:C6	22:DA:198:C:C5	2.89	0.60
1:AA:604:G:C2	1:AA:635:A:C2	2.89	0.60
24:DC:237:GLY:O	24:DC:239:ASN:N	2.34	0.60
38:BQ:47:TYR:C	38:BQ:47:TYR:CD2	2.74	0.60
32:BK:8:LEU:N	32:BK:8:LEU:HD12	2.17	0.60
49:D1:38:LYS:HB2	49:D1:49:TYR:CD2	2.36	0.60
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.37	0.60
29:BH:121:VAL:N	29:BH:122:LEU:HB2	2.16	0.60
22:DA:2212:A:C2	22:DA:2214:C:C4	2.89	0.60
43:BV:8:VAL:HG23	43:BV:9:ARG:N	2.16	0.60
22:DA:749:A:C5	22:DA:750:A:N7	2.70	0.60
4:AD:191:LEU:O	4:AD:192:SER:CB	2.49	0.60
22:DA:2138:G:N2	22:DA:2154:A:H1'	2.16	0.60
1:CA:525:C:N4	1:CA:526:C:N4	2.49	0.60
1:CA:1534:A:H5''	1:CA:1535:C:OP1	2.01	0.60
22:DA:938:G:C2	22:DA:939:G:N7	2.69	0.60
33:BL:48:ARG:HG2	51:B3:60:ALA:HB1	1.83	0.60
2:CB:166:ALA:HB2	2:CB:187:VAL:HG12	1.82	0.60
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.37	0.60
30:BI:18:ALA:O	30:BI:19:ASN:CB	2.49	0.60
22:BA:1073:A:N7	22:BA:1074:G:H8	1.99	0.60
22:BA:1494:A:HO2'	22:BA:1495:A:P	2.24	0.60
4:CD:173:VAL:HG13	4:CD:174:ASP:N	2.17	0.60
15:CO:17:ARG:O	15:CO:18:ASP:HB3	2.02	0.60
22:BA:245:G:N7	51:B3:8:ARG:NH1	2.48	0.60
22:BA:244:A:C2	22:BA:255:A:C4	2.89	0.60
22:DA:2199:A:C6	22:DA:2200:C:C2	2.89	0.60
1:AA:1145:A:HO2'	1:AA:1146:A:P	2.23	0.60
1:CA:568:G:N2	1:CA:883:C:C2	2.70	0.60
8:AH:2:SER:O	8:AH:4:GLN:N	2.34	0.60
9:AI:43:THR:O	9:AI:44:ALA:CB	2.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1714:U:H5''	22:BA:1715:G:H5'	1.82	0.60
22:DA:2815:C:HO2'	48:D0:41:HIS:HD1	1.47	0.60
22:DA:2819:G:OP1	57:DA:3808:HOH:O	2.16	0.60
2:CB:66:LYS:NZ	2:CB:154:MET:O	2.33	0.60
22:DA:2019:A:H4'	38:DQ:34:VAL:HG21	1.83	0.60
22:DA:1199:U:H2'	22:DA:1200:C:C6	2.37	0.60
22:DA:856:G:N2	22:DA:922:C:C2	2.70	0.60
22:DA:247:G:N7	22:DA:249:C:C2	2.69	0.60
22:DA:2474:U:H5''	22:DA:2475:C:OP2	2.02	0.60
1:CA:411:A:C6	1:CA:429:U:C5	2.89	0.60
1:CA:1239:A:H2'	1:CA:1298:U:O4	2.01	0.60
30:BI:34:ASN:OD1	30:BI:65:ARG:NH2	2.34	0.60
22:DA:2033:A:OP2	57:DA:3476:HOH:O	2.16	0.60
24:BC:160:THR:O	24:BC:195:VAL:HG12	2.02	0.60
32:BK:34:GLY:O	32:BK:36:GLY:N	2.34	0.60
22:DA:1993:U:H4'	25:DD:133:THR:CG2	2.32	0.60
15:AO:19:ALA:O	15:AO:20:ASN:HB2	2.01	0.60
22:BA:877:A:N6	22:BA:899:A:N6	2.49	0.60
1:AA:1359:C:O3'	57:AA:1777:HOH:O	2.16	0.60
22:DA:2420:C:OP1	51:D3:34:THR:HB	2.01	0.60
29:BH:117:LEU:CD2	29:BH:121:VAL:HA	2.31	0.60
6:AF:7:VAL:CG2	6:AF:7:VAL:O	2.50	0.60
1:AA:1048:G:N3	1:AA:1050:G:N7	2.50	0.60
40:BS:30:SER:OG	40:BS:31:GLN:N	2.34	0.60
22:BA:1348:C:C5	22:BA:1349:C:C5	2.90	0.60
1:CA:515:G:H2'	1:CA:516:U:O4'	2.02	0.60
41:DT:34:VAL:HG21	41:DT:43:ILE:HD11	1.84	0.60
5:CE:106:ILE:HD11	5:CE:124:LEU:HD23	1.83	0.60
22:DA:1995:U:OP1	57:DA:3810:HOH:O	2.17	0.60
22:BA:1009:A:OP2	31:BJ:39:LYS:NZ	2.29	0.60
1:CA:642:A:C5	8:CH:107:SER:HA	2.37	0.60
1:CA:778:G:O2'	11:CK:121:CYS:HB3	2.01	0.60
22:BA:2339:C:H2'	22:BA:2340:A:C8	2.36	0.60
22:DA:60:G:O2'	22:DA:62:U:OP2	2.14	0.60
22:BA:983:A:N6	22:BA:984:A:N1	2.50	0.60
22:DA:1847:A:O2'	22:DA:1848:A:H8	1.84	0.60
1:CA:495:A:N1	1:CA:496:A:N6	2.49	0.60
22:BA:2309:A:C6	22:BA:2310:C:N4	2.69	0.60
1:AA:1014:A:H2'	1:AA:1015:G:O4'	2.02	0.60
39:DR:39:LEU:HA	39:DR:49:ILE:HG21	1.83	0.60
13:AM:29:ARG:O	13:AM:33:ILE:HG12	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:17:G:C4	22:BA:524:G:N2	2.69	0.60
46:DY:11:VAL:O	46:DY:15:ASN:ND2	2.34	0.60
42:DU:11:VAL:HG12	42:DU:72:ILE:HA	1.82	0.60
51:B3:15:LYS:HD2	51:B3:23:LYS:HE2	1.84	0.60
12:CL:28:PRO:HB2	12:CL:29:GLN:OE1	2.02	0.60
22:BA:2142:A:H2'	22:BA:2143:C:C6	2.36	0.60
22:BA:2345:G:N3	22:BA:2381:A:H2'	2.17	0.60
22:DA:2004:G:P	57:DA:3803:HOH:O	2.55	0.60
5:CE:98:PRO:O	5:CE:99:ALA:HB3	2.01	0.60
22:DA:2502:G:H5'	22:DA:2503:A:H5''	1.83	0.60
22:DA:2552:U:C2	22:DA:2554:U:H5'	2.37	0.60
2:AB:75:ALA:O	2:AB:76:ALA:HB2	2.02	0.60
48:D0:55:ILE:O	48:D0:56:ALA:HB3	2.01	0.60
10:CJ:6:ILE:HD12	10:CJ:76:ILE:HB	1.84	0.60
1:CA:736:C:H2'	1:CA:737:C:C6	2.37	0.60
24:DC:247:PRO:HG2	24:DC:248:TRP:CZ3	2.36	0.60
25:BD:172:VAL:HG21	25:BD:194:PRO:HD3	1.84	0.60
43:BV:21:ARG:HA	43:BV:25:LYS:O	2.02	0.60
42:DU:44:LYS:O	42:DU:58:ILE:HA	2.01	0.60
22:BA:2334:U:C4	36:BO:16:ARG:HD3	2.37	0.60
12:CL:30:LYS:HA	12:CL:30:LYS:HE3	1.83	0.60
1:AA:251:G:C6	1:AA:266:G:C6	2.89	0.60
10:AJ:44:THR:HG22	10:AJ:70:HIS:HA	1.83	0.60
2:CB:206:ALA:C	2:CB:208:ARG:N	2.55	0.60
22:BA:2458:G:C4	22:BA:2490:G:C2	2.90	0.60
1:CA:502:A:H2'	1:CA:503:C:O4'	2.00	0.60
48:D0:55:ILE:O	48:D0:56:ALA:CB	2.50	0.60
22:DA:13:A:N1	22:DA:525:U:H2'	2.17	0.60
6:CF:64:VAL:HG12	6:CF:65:GLU:H	1.67	0.60
6:CF:19:PRO:HA	6:CF:22:ILE:HB	1.84	0.60
3:CC:42:TYR:CE1	3:CC:90:VAL:HG21	2.37	0.60
4:AD:160:GLU:O	4:AD:162:ALA:N	2.35	0.60
22:BA:1736:U:H2'	22:BA:1737:G:O4'	2.02	0.60
11:AK:52:PHE:CB	11:AK:56:ARG:HB3	2.32	0.60
14:AN:33:ASP:O	14:AN:35:ASN:N	2.34	0.60
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.83	0.60
22:BA:1680:U:H2'	22:BA:1681:G:O4'	2.02	0.60
53:B5:35:THR:O	53:B5:35:THR:OG1	2.17	0.60
22:DA:2262:U:N3	22:DA:2279:G:C2	2.70	0.59
22:DA:1373:A:H2'	22:DA:1374:G:O4'	2.01	0.59
22:BA:780:G:H2'	22:BA:782:A:N7	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:3:ARG:HG3	13:AM:4:ILE:N	2.16	0.59
1:CA:583:A:C2	1:CA:759:A:C5	2.90	0.59
1:CA:1124:G:C2	1:CA:1127:G:N2	2.70	0.59
10:AJ:51:VAL:HB	14:AN:81:ARG:HB2	1.83	0.59
22:DA:2845:U:H5''	37:DP:52:ASN:O	2.02	0.59
1:CA:406:G:C2	1:CA:407:U:C6	2.90	0.59
16:AP:42:ILE:HG22	16:AP:42:ILE:O	2.02	0.59
1:AA:7:A:N6	5:AE:97:GLN:OE1	2.35	0.59
8:AH:2:SER:C	8:AH:4:GLN:N	2.55	0.59
27:BF:108:VAL:HG11	27:BF:176:PRO:HG2	1.84	0.59
1:AA:9:G:OP2	5:AE:126:LYS:NZ	2.28	0.59
16:CP:8:ARG:HB3	16:CP:28:ARG:NH1	2.17	0.59
1:CA:38:G:N2	1:CA:397:A:C4	2.70	0.59
1:CA:203:G:N2	1:CA:215:C:C2	2.70	0.59
22:BA:1250:G:C5'	38:BQ:6:ARG:HD3	2.32	0.59
3:CC:36:ASP:O	3:CC:40:ARG:HG3	2.02	0.59
27:BF:25:VAL:O	27:BF:28:VAL:HG12	2.02	0.59
1:AA:1216:A:OP1	14:AN:3:LYS:HE2	2.01	0.59
22:DA:1856:U:O4	22:DA:1857:G:C6	2.55	0.59
41:BT:73:ARG:NH2	41:BT:73:ARG:HB3	2.17	0.59
29:DH:126:GLY:O	29:DH:146:VAL:HG23	2.00	0.59
29:DH:126:GLY:O	29:DH:146:VAL:N	2.35	0.59
29:BH:99:ILE:HB	29:BH:115:VAL:HG11	1.84	0.59
29:BH:83:LYS:CE	1:CA:55:A:O2'	2.49	0.59
21:CU:12:PHE:O	21:CU:13:ASP:HB2	2.02	0.59
22:BA:1142:A:C2	22:BA:1144:A:C8	2.91	0.59
22:BA:576:U:OP1	57:BA:3672:HOH:O	2.17	0.59
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.02	0.59
1:AA:64:G:C2	1:AA:67:C:N4	2.71	0.59
4:CD:168:PRO:HB2	4:CD:171:LEU:HD12	1.84	0.59
22:BA:190:A:C4	22:BA:207:A:C2	2.90	0.59
9:AI:84:THR:HG21	9:AI:103:PHE:HB2	1.84	0.59
19:CS:66:MET:SD	19:CS:74:PHE:CZ	2.95	0.59
22:DA:2311:A:C2	27:DF:79:ILE:HG21	2.37	0.59
22:DA:1805:A:N3	22:DA:1813:G:N2	2.50	0.59
44:BW:68:LYS:HE2	44:BW:83:GLU:OE2	2.01	0.59
22:BA:813:U:H2'	22:BA:814:C:C6	2.37	0.59
41:DT:44:LYS:HE3	41:DT:55:VAL:HB	1.84	0.59
2:CB:123:ASP:O	2:CB:124:GLY:C	2.40	0.59
22:BA:1045:C:C3'	22:BA:1046:A:H5'	2.32	0.59
22:BA:1168:G:H2'	22:BA:1169:A:O4'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:527:G:C2	1:CA:528:C:C5	2.90	0.59
22:DA:1019:U:OP1	22:DA:1035:U:O2'	2.10	0.59
22:BA:1791:A:O2'	24:BC:206:GLY:HA2	2.02	0.59
12:AL:22:PRO:C	12:AL:24:LEU:N	2.56	0.59
2:AB:151:ILE:O	2:AB:152:LYS:C	2.40	0.59
22:BA:1731:G:C6	22:BA:1733:G:C5	2.90	0.59
38:DQ:47:TYR:OH	38:DQ:51:ARG:NH1	2.34	0.59
22:BA:265:A:N1	22:BA:427:U:O2'	2.31	0.59
22:BA:528:A:C2	22:BA:2043:C:H5'	2.37	0.59
22:DA:753:A:H2'	22:DA:754:U:C6	2.37	0.59
14:CN:64:CYS:SG	14:CN:83:LYS:HG3	2.42	0.59
3:CC:130:PHE:CE2	3:CC:131:ARG:HD3	2.37	0.59
1:CA:906:A:N6	57:CA:1823:HOH:O	2.35	0.59
22:BA:2032:G:N7	57:BA:3534:HOH:O	2.31	0.59
22:BA:2390:U:OP2	51:B3:35:LYS:NZ	2.35	0.59
5:AE:56:VAL:N	5:AE:57:PRO:HD2	2.18	0.59
22:DA:1584:U:O2	22:DA:1584:U:H3'	2.03	0.59
1:CA:1286:U:H2'	1:CA:1286:U:O2	2.01	0.59
22:DA:2415:G:C6	22:DA:2416:C:C4	2.90	0.59
31:DJ:110:PRO:O	31:DJ:115:GLY:HA3	2.02	0.59
40:DS:33:LEU:HD21	40:DS:52:GLU:CG	2.32	0.59
22:BA:2517:C:C5	22:BA:2542:A:C5	2.91	0.59
22:BA:1838:C:C6	22:BA:1899:A:C6	2.90	0.59
39:DR:47:VAL:CG1	39:DR:47:VAL:O	2.49	0.59
30:BI:97:LYS:HB3	30:BI:139:VAL:CG2	2.32	0.59
2:CB:94:HIS:CD2	2:CB:146:ASN:HB2	2.38	0.59
22:BA:1027:A:C6	22:BA:1126:A:C4	2.90	0.59
35:BN:36:THR:HG23	35:BN:37:THR:N	2.17	0.59
22:DA:186:G:C2	22:DA:211:C:C2	2.90	0.59
2:AB:184:PHE:CE2	2:AB:198:PHE:CD2	2.90	0.59
22:BA:543:G:C2	22:BA:544:C:H1'	2.38	0.59
1:AA:1346:A:C8	7:AG:10:ARG:NH2	2.70	0.59
22:BA:761:A:N7	57:BA:3294:HOH:O	2.35	0.59
1:CA:295:C:C4	1:CA:296:U:C4	2.91	0.59
2:AB:218:ALA:O	2:AB:222:ARG:HB2	2.02	0.59
22:BA:2256:G:O2'	22:BA:2257:U:H5'	2.02	0.59
1:CA:1028:C:H2'	1:CA:1028:C:O2	2.01	0.59
22:DA:219:A:N6	22:DA:220:G:C6	2.70	0.59
29:BH:94:ILE:HG22	29:BH:99:ILE:CG1	2.32	0.59
11:AK:43:GLY:HA3	11:AK:74:VAL:HG13	1.85	0.59
1:CA:542:G:C2	1:CA:543:U:C6	2.91	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:269:C:H2'	1:CA:270:A:C8	2.38	0.59
1:AA:1048:G:C2	1:AA:1050:G:C5	2.91	0.59
22:BA:2502:G:H5''	22:BA:2503:A:C5'	2.33	0.59
22:DA:2873:A:H4'	57:DA:3807:HOH:O	2.03	0.59
1:AA:148:G:H2'	1:AA:149:A:O5'	2.03	0.59
22:DA:132:G:N2	22:DA:148:U:C2	2.70	0.59
22:BA:2001:C:C2	22:BA:2002:G:C8	2.90	0.59
22:DA:2272:U:H5''	22:DA:2273:A:OP1	2.03	0.59
13:AM:73:ILE:O	13:AM:76:SER:OG	2.17	0.59
1:AA:1417:G:C6	1:AA:1482:G:C6	2.90	0.59
22:DA:1529:G:C6	22:DA:1543:G:N2	2.70	0.59
17:CQ:52:GLU:HG2	17:CQ:53:CYS:SG	2.42	0.59
31:BJ:19:ASP:OD2	31:BJ:58:ASN:ND2	2.35	0.59
22:BA:78:U:H2'	22:BA:79:C:C6	2.38	0.59
1:CA:570:G:C4	1:CA:571:U:C5	2.91	0.59
46:BY:37:LEU:HD11	46:BY:39:GLN:O	2.02	0.59
27:DF:10:ASP:OD2	27:DF:11:GLU:HG3	2.02	0.59
13:AM:95:LEU:HB3	13:AM:96:PRO:CD	2.32	0.59
22:DA:1109:C:C4	22:DA:1110:G:C6	2.90	0.59
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.38	0.59
1:AA:1316:G:N1	1:AA:1319:A:OP2	2.35	0.59
24:DC:67:PHE:HB3	24:DC:151:GLY:O	2.02	0.59
22:DA:142:A:H2'	22:DA:143:C:C6	2.37	0.59
46:BY:61:ALA:O	46:BY:63:ALA:N	2.36	0.59
29:BH:1:MET:O	29:BH:20:ASN:ND2	2.34	0.59
22:DA:1173:U:O2'	22:DA:1176:U:O2	2.12	0.59
27:DF:131:GLY:HA2	27:DF:153:ASP:HA	1.84	0.59
4:CD:31:LYS:HD3	4:CD:31:LYS:N	2.17	0.59
22:BA:319:G:C4	22:BA:333:G:N2	2.70	0.59
39:BR:42:ALA:HA	39:BR:46:GLU:CB	2.33	0.59
25:BD:133:THR:HG23	25:BD:134:HIS:CD2	2.38	0.59
22:DA:2146:C:H5''	22:DA:2147:A:OP1	2.02	0.59
48:B0:54:VAL:O	48:B0:55:ILE:C	2.41	0.59
30:DI:6:GLN:O	30:DI:7:ALA:CB	2.51	0.59
33:DL:77:ILE:O	33:DL:110:VAL:O	2.20	0.59
10:AJ:9:ARG:HB2	10:AJ:99:GLN:HB2	1.83	0.59
1:CA:791:G:C6	1:CA:792:A:N7	2.71	0.59
20:AT:83:ILE:O	20:AT:87:ALA:HB3	2.03	0.59
22:BA:585:G:H5''	22:BA:586:A:P	2.42	0.59
22:DA:2079:U:H2'	22:DA:2080:A:O4'	2.03	0.59
22:DA:2464:G:H2'	22:DA:2465:C:O4'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:415:A:N1	22:BA:2409:G:C6	2.71	0.59
6:CF:97:THR:O	6:CF:98:GLU:HB3	2.02	0.59
30:DI:39:CYS:HA	30:DI:42:PHE:HB3	1.83	0.59
1:CA:1219:A:N6	1:CA:1220:G:O6	2.36	0.59
25:DD:151:THR:O	25:DD:152:PRO:C	2.39	0.59
2:CB:99:GLY:O	2:CB:103:ASN:N	2.35	0.59
22:BA:2029:G:N1	22:BA:2033:A:OP2	2.32	0.59
22:BA:2721:A:C2	22:BA:2873:A:C5	2.91	0.59
22:DA:2199:A:C4	22:DA:2225:A:C2	2.90	0.59
1:AA:92:U:H2'	1:AA:93:U:C6	2.37	0.59
2:AB:164:ILE:O	2:AB:186:ILE:HG12	2.03	0.59
53:B5:52:PRO:O	53:B5:53:ARG:HB2	2.03	0.59
12:CL:74:LEU:HD21	12:CL:104:CYS:SG	2.43	0.59
1:AA:673:A:H5''	6:AF:86:ARG:NH1	2.17	0.59
16:CP:20:VAL:HG21	16:CP:32:PHE:CB	2.32	0.59
1:CA:202:G:O2'	1:CA:468:A:C8	2.56	0.59
22:DA:2415:G:C2	22:DA:2416:C:C2	2.91	0.59
11:AK:23:ILE:O	11:AK:23:ILE:HG13	2.02	0.59
1:CA:160:A:H2'	1:CA:161:A:O4'	2.02	0.59
22:DA:1432:G:H2'	22:DA:1433:A:C8	2.38	0.59
22:BA:1563:U:H2'	22:BA:1564:C:C6	2.38	0.59
37:DP:65:SER:O	37:DP:67:GLY:N	2.36	0.59
22:DA:279:A:C2	22:DA:362:A:H4'	2.38	0.59
14:CN:30:ILE:HG22	14:CN:35:ASN:OD1	2.03	0.59
22:BA:2714:G:P	57:BA:3549:HOH:O	2.60	0.59
23:DB:58:A:H2'	23:DB:59:A:O4'	2.03	0.59
3:CC:173:VAL:O	3:CC:175:LEU:N	2.36	0.59
1:CA:441:A:C2	1:CA:497:G:C6	2.91	0.59
1:CA:1511:G:C5	1:CA:1512:U:C5	2.91	0.59
22:DA:1638:C:O2	22:DA:2698:U:O2'	2.08	0.59
2:AB:106:THR:O	2:AB:107:VAL:CB	2.51	0.59
2:AB:111:ILE:CG1	2:AB:151:ILE:HG12	2.32	0.59
22:DA:2345:G:C6	22:DA:2347:C:N4	2.71	0.59
24:BC:237:GLY:O	57:BC:305:HOH:O	2.17	0.59
22:DA:2585:U:HO2'	22:DA:2586:U:P	2.26	0.59
22:BA:1219:U:H2'	22:BA:1220:G:H8	1.68	0.59
41:BT:56:GLU:HB2	41:BT:88:LYS:HA	1.85	0.59
16:AP:38:PHE:CZ	16:AP:51:ARG:HB2	2.38	0.59
22:BA:1180:U:C2'	22:BA:1181:U:H5'	2.32	0.59
22:DA:1823:G:O6	57:DA:3658:HOH:O	2.16	0.59
5:CE:115:LEU:O	5:CE:120:VAL:HG23	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:74:VAL:HB	5:CE:76:LEU:HD11	1.85	0.59
11:AK:126:LYS:C	21:AU:34:ARG:CZ	2.71	0.59
1:AA:554:A:H5'	12:AL:26:ALA:HB1	1.84	0.59
22:DA:590:A:C6	22:DA:591:U:C4	2.90	0.59
12:CL:90:LEU:CB	12:CL:93:VAL:HG21	2.33	0.59
22:DA:2819:G:H2'	22:DA:2821:A:N7	2.18	0.59
11:AK:23:ILE:HG22	11:AK:32:VAL:HG22	1.84	0.59
17:CQ:12:VAL:HG23	17:CQ:57:ASP:O	2.03	0.59
24:DC:226:ASN:ND2	57:DC:304:HOH:O	2.24	0.59
22:DA:608:A:H2'	22:DA:609:A:C8	2.37	0.59
1:CA:1458:G:H5'	20:CT:27:MET:HB3	1.85	0.59
4:CD:46:PRO:O	4:CD:47:ARG:C	2.41	0.59
24:DC:43:ARG:NH2	24:DC:49:ILE:HD11	2.18	0.59
22:DA:2032:G:H1'	25:DD:150:GLN:NE2	2.18	0.58
22:DA:248:G:H5'	22:DA:250:G:N7	2.18	0.58
22:BA:2430:A:H5'	22:BA:2431:U:OP2	2.02	0.58
1:CA:32:A:N3	1:CA:32:A:H2'	2.18	0.58
22:BA:1057:A:C2	22:BA:1086:A:C2	2.91	0.58
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.33	0.58
22:BA:2309:A:N6	22:BA:2310:C:N4	2.51	0.58
1:AA:152:A:N6	1:AA:170:U:C2	2.71	0.58
1:AA:451:A:OP2	16:AP:70:ARG:NH2	2.36	0.58
1:AA:8:A:C6	4:AD:206:LYS:HB3	2.38	0.58
2:AB:47:VAL:HB	2:AB:48:PRO:HD3	1.85	0.58
1:CA:216:U:H2'	1:CA:217:C:C6	2.38	0.58
33:DL:59:ARG:CZ	33:DL:59:ARG:HB3	2.33	0.58
35:BN:117:ASP:O	35:BN:119:SER:N	2.36	0.58
7:CG:115:SER:HB3	7:CG:118:LEU:HG	1.85	0.58
22:DA:720:U:H2'	22:DA:721:A:C8	2.38	0.58
3:AC:150:LYS:HG3	3:AC:201:TRP:CE3	2.38	0.58
1:CA:657:U:O2	15:CO:22:THR:CG2	2.51	0.58
22:DA:2531:A:H5'	28:DG:157:TYR:CZ	2.38	0.58
22:BA:608:A:N1	22:BA:609:A:C2	2.71	0.58
52:B4:10:LEU:HB2	52:B4:33:HIS:CE1	2.38	0.58
4:AD:147:GLU:OE1	4:AD:148:LYS:NZ	2.35	0.58
4:CD:124:MET:HG3	4:CD:146:ARG:HG2	1.84	0.58
48:B0:55:ILE:O	48:B0:56:ALA:HB3	2.03	0.58
20:CT:3:ASN:O	20:CT:5:LYS:N	2.35	0.58
2:AB:188:ASP:HB2	2:AB:204:ASP:OD1	2.03	0.58
4:AD:17:THR:CG2	4:AD:18:ASP:N	2.65	0.58
31:DJ:31:GLU:HG3	31:DJ:142:ILE:HD11	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:259:G:H2'	1:AA:260:G:O4'	2.03	0.58
22:DA:297:G:H5''	42:DU:85:PHE:CB	2.34	0.58
42:BU:18:ASP:O	42:BU:20:GLY:N	2.36	0.58
29:DH:34:GLY:O	29:DH:35:LYS:CB	2.51	0.58
5:AE:25:VAL:O	5:AE:26:LYS:C	2.41	0.58
15:CO:87:LEU:O	15:CO:88:ARG:HB3	2.04	0.58
37:BP:26:VAL:HG23	37:BP:85:SER:O	2.03	0.58
22:DA:1911:U:H2'	22:DA:1918:A:C2	2.39	0.58
1:CA:228:A:H4'	16:CP:63:GLN:HG2	1.85	0.58
22:DA:771:G:C2	22:DA:772:C:C6	2.91	0.58
2:CB:208:ARG:O	2:CB:212:LEU:N	2.35	0.58
31:BJ:49:ASP:OD1	31:BJ:121:LYS:CE	2.49	0.58
39:BR:42:ALA:HA	39:BR:46:GLU:HB2	1.85	0.58
1:AA:1181:G:C2	1:AA:1182:G:N2	2.70	0.58
4:AD:152:GLN:O	4:AD:153:SER:C	2.41	0.58
1:AA:96:U:O2'	1:AA:97:G:OP2	2.20	0.58
22:DA:792:A:H1'	22:DA:2072:C:O2'	2.03	0.58
24:DC:15:HIS:O	24:DC:204:VAL:HG21	2.03	0.58
22:BA:1259:G:O2'	22:BA:1260:A:H5'	2.03	0.58
22:BA:2021:C:OP1	48:B0:9:THR:HG21	2.03	0.58
8:AH:55:THR:C	8:AH:57:PRO:HD3	2.23	0.58
17:AQ:4:LYS:HG3	17:AQ:7:THR:CG2	2.33	0.58
1:AA:1095:U:H2'	1:AA:1096:C:O4'	2.03	0.58
39:DR:61:ALA:HB2	39:DR:98:ILE:HD13	1.85	0.58
22:BA:181:A:C2	22:BA:182:A:C4	2.92	0.58
38:BQ:101:PHE:O	38:BQ:102:ASP:HB2	2.03	0.58
27:BF:73:SER:OG	27:BF:80:ARG:HA	2.03	0.58
40:BS:43:ALA:O	40:BS:47:VAL:HG12	2.04	0.58
22:BA:1000:A:C6	22:BA:1001:A:C6	2.91	0.58
22:BA:1006:C:C2	22:BA:1138:G:N2	2.70	0.58
22:DA:2031:A:C6	22:DA:2498:C:H1'	2.38	0.58
22:DA:388:G:N7	22:DA:390:U:H2'	2.18	0.58
22:BA:1153:C:N4	22:BA:1154:G:N1	2.51	0.58
22:BA:998:C:C2'	22:BA:999:U:O5'	2.52	0.58
22:BA:2571:U:C2'	22:BA:2572:A:OP1	2.50	0.58
22:BA:991:C:C2'	22:BA:992:C:O5'	2.50	0.58
17:AQ:15:ASP:C	17:AQ:17:MET:SD	2.82	0.58
18:CR:25:ASP:O	18:CR:28:THR:N	2.36	0.58
1:AA:1125:U:C5	1:AA:1127:G:C5	2.92	0.58
2:AB:15:HIS:O	2:AB:16:PHE:C	2.41	0.58
22:BA:2360:G:H1'	33:BL:60:ARG:HD3	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1366:A:C4	22:DA:1367:A:C8	2.91	0.58
27:BF:175:PHE:HD1	27:BF:177:PHE:CE1	2.21	0.58
1:AA:913:A:H4'	1:AA:914:A:OP1	2.04	0.58
1:AA:188:C:O2	1:AA:188:C:C2'	2.52	0.58
1:AA:338:A:N1	1:AA:351:G:O6	2.36	0.58
40:DS:84:ARG:HB2	40:DS:96:ILE:HG12	1.85	0.58
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.85	0.58
1:AA:572:A:H5'	1:AA:573:A:OP2	2.02	0.58
1:AA:32:A:OP1	1:AA:398:U:H1'	2.04	0.58
24:BC:258:ARG:NH1	24:BC:264:ASP:OD2	2.36	0.58
22:DA:533:G:H5'	38:DQ:24:TYR:CE2	2.39	0.58
6:AF:17:GLN:O	6:AF:17:GLN:NE2	2.37	0.58
22:DA:655:A:H4'	22:DA:656:G:OP1	2.03	0.58
22:DA:2234:G:C6	22:DA:2235:G:N7	2.72	0.58
9:CI:95:ARG:O	9:CI:99:ARG:N	2.32	0.58
2:AB:10:LEU:HG	2:AB:11:LYS:N	2.19	0.58
22:BA:1324:G:C2	22:BA:1328:A:N1	2.70	0.58
22:DA:35:G:H1'	22:DA:454:A:C4	2.39	0.58
22:DA:607:U:O4	22:DA:619:G:H2'	2.03	0.58
22:BA:2298:A:C4	22:BA:2321:U:C5	2.90	0.58
22:BA:2192:U:C2	22:BA:2193:G:C8	2.91	0.58
16:AP:71:VAL:O	16:AP:75:ILE:HG13	2.03	0.58
22:BA:2327:A:H2'	22:BA:2328:A:C8	2.38	0.58
6:CF:39:LEU:HD12	6:CF:40:GLU:N	2.18	0.58
22:BA:1356:G:N2	22:BA:1357:C:H1'	2.19	0.58
24:DC:34:LEU:O	24:DC:35:GLU:HB3	2.04	0.58
22:DA:1439:A:N7	22:DA:1552:A:H2	2.01	0.58
8:CH:59:LEU:HD12	8:CH:60:GLU:N	2.18	0.58
37:DP:92:VAL:HG21	37:DP:97:LEU:HD11	1.84	0.58
25:DD:14:ILE:HG12	25:DD:24:VAL:HG21	1.86	0.58
26:DE:108:ILE:HD13	26:DE:181:ILE:HG12	1.86	0.58
25:DD:151:THR:HG22	25:DD:152:PRO:N	2.18	0.58
1:CA:8:A:C6	4:CD:206:LYS:HB3	2.39	0.58
22:DA:2683:C:OP1	37:DP:56:HIS:HB3	2.03	0.58
1:AA:1349:A:C2	1:AA:1374:A:C5	2.91	0.58
22:BA:528:A:C8	22:BA:528:A:C3'	2.86	0.58
46:DY:9:LYS:N	46:DY:12:GLU:HG3	2.19	0.58
15:CO:46:HIS:O	15:CO:48:LYS:N	2.36	0.58
3:CC:145:GLY:O	3:CC:146:ALA:O	2.20	0.58
29:BH:31:VAL:N	29:BH:32:PRO:HD2	2.19	0.58
29:BH:93:SER:HG	1:CA:357:G:H4'	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1809:A:N6	22:DA:1810:A:C6	2.72	0.58
22:BA:2517:C:C6	22:BA:2542:A:C5	2.92	0.58
19:AS:40:ILE:HG12	19:AS:71:LEU:HD23	1.84	0.58
22:DA:776:G:C8	22:DA:793:A:C4	2.91	0.58
22:DA:21:A:C2	22:DA:520:G:N3	2.71	0.58
20:CT:7:ALA:HB1	20:CT:10:ARG:HB2	1.86	0.58
22:DA:301:G:C2	22:DA:302:C:C2	2.91	0.58
22:DA:186:G:N2	22:DA:211:C:C2	2.71	0.58
24:BC:189:ARG:O	24:BC:190:ALA:HB2	2.03	0.58
22:DA:1056:G:N1	22:DA:1102:C:OP2	2.36	0.58
27:BF:52:ASN:HB3	27:BF:147:ASP:OD1	2.04	0.58
22:BA:2052:A:O4'	25:BD:147:GLY:HA3	2.03	0.58
29:BH:97:ARG:CD	1:CA:369:G:O2'	2.44	0.58
22:BA:1180:U:H2'	22:BA:1181:U:C5'	2.33	0.58
1:CA:829:G:C6	1:CA:858:G:N2	2.72	0.58
17:AQ:68:SER:O	17:AQ:69:LYS:C	2.42	0.58
22:BA:575:A:C2'	22:BA:576:U:H5'	2.34	0.58
40:BS:84:ARG:HB2	40:BS:96:ILE:CG1	2.33	0.58
35:DN:118:ARG:O	35:DN:119:SER:CB	2.52	0.58
1:CA:227:G:H2'	1:CA:228:A:O4'	2.03	0.58
1:AA:188:C:H2'	1:AA:188:C:O2	2.04	0.58
1:AA:1371:G:C6	1:AA:1372:U:C4	2.91	0.58
22:BA:2038:G:H2'	22:BA:2039:U:O4'	2.04	0.58
22:DA:575:A:C2	22:DA:576:U:C6	2.92	0.58
1:AA:1210:C:O4'	1:AA:1214:C:C5	2.57	0.58
31:DJ:34:ARG:O	31:DJ:39:LYS:HB2	2.02	0.58
1:AA:223:A:H2'	1:AA:224:U:C6	2.39	0.58
22:BA:2462:C:H2'	22:BA:2463:C:C6	2.38	0.58
22:BA:997:G:OP1	38:BQ:92:ARG:CG	2.51	0.58
25:BD:149:ASN:OD1	25:BD:150:GLN:N	2.36	0.58
2:CB:96:TRP:CE2	2:CB:172:ALA:HB2	2.39	0.58
1:CA:511:C:C2	1:CA:512:U:C6	2.92	0.58
22:DA:1682:G:C2	22:DA:1757:A:O4'	2.57	0.58
22:BA:1499:C:C4	22:BA:1500:G:N7	2.71	0.58
22:DA:24:G:C6	22:DA:25:U:C4	2.92	0.58
22:BA:1260:A:N6	57:BA:3276:HOH:O	2.36	0.58
1:CA:841:C:H3'	1:CA:843:U:H5''	1.84	0.58
25:DD:30:GLU:HG2	25:DD:185:ASN:ND2	2.19	0.58
23:BB:94:A:O2'	23:BB:95:U:H5'	2.03	0.58
22:DA:1809:A:C5	22:DA:1810:A:C5	2.92	0.58
22:DA:1606:C:C2'	22:DA:1607:C:OP2	2.51	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:149:ILE:HG23	26:BE:188:MET:HG2	1.86	0.58
22:DA:328:U:O3'	42:DU:66:GLN:HG3	2.04	0.58
22:BA:1433:A:O2'	22:BA:1434:A:H5'	2.04	0.58
2:AB:99:GLY:O	2:AB:103:ASN:N	2.36	0.58
38:DQ:47:TYR:CZ	38:DQ:51:ARG:NH1	2.72	0.58
16:AP:51:ARG:HH11	16:AP:51:ARG:HG2	1.69	0.58
8:AH:59:LEU:HD13	8:AH:60:GLU:N	2.18	0.58
53:B5:48:LEU:HA	53:B5:208:THR:CB	2.34	0.58
45:DX:41:GLU:O	45:DX:44:LYS:HD2	2.04	0.58
2:CB:163:VAL:HG23	2:CB:185:ALA:HB2	1.85	0.58
28:DG:24:ILE:HD11	28:DG:43:VAL:HG11	1.85	0.58
22:DA:2468:A:C2	22:DA:2481:G:C2	2.92	0.58
22:BA:2780:G:H4'	22:BA:2781:A:OP2	2.03	0.58
6:AF:10:VAL:CG1	6:AF:11:HIS:N	2.67	0.58
9:CI:25:ASN:O	9:CI:62:ASP:HA	2.03	0.58
1:CA:1036:A:H3'	1:CA:1037:C:C6	2.39	0.58
30:BI:92:LYS:HB3	30:BI:95:LYS:HG2	1.84	0.58
1:CA:1201:A:H4'	1:CA:1202:U:O5'	2.04	0.58
31:DJ:84:ILE:O	31:DJ:84:ILE:HG13	2.04	0.58
5:CE:149:SER:O	5:CE:153:VAL:HG13	2.03	0.57
22:BA:1070:A:C2	22:BA:1097:U:H4'	2.39	0.57
7:AG:149:LYS:O	7:AG:151:PHE:O	2.21	0.57
1:AA:1375:A:C6	1:AA:1376:U:C4	2.92	0.57
7:AG:43:VAL:O	7:AG:47:LEU:HB2	2.04	0.57
22:DA:1808:A:N1	45:DX:28:ARG:HD2	2.19	0.57
22:DA:1776:G:N2	22:DA:1789:A:H1'	2.19	0.57
1:AA:80:A:C2	1:AA:90:C:N3	2.72	0.57
2:AB:106:THR:O	2:AB:107:VAL:HB	2.03	0.57
22:BA:264:C:O2'	22:BA:265:A:H2'	2.03	0.57
2:CB:35:ARG:O	2:CB:38:VAL:N	2.35	0.57
22:DA:503:A:N3	22:DA:506:G:C8	2.72	0.57
22:BA:1355:G:O2'	22:BA:1356:G:H5'	2.03	0.57
22:DA:574:A:P	57:DA:3263:HOH:O	2.62	0.57
34:BM:2:LEU:O	34:BM:3:GLN:HB3	2.03	0.57
1:AA:186:C:H2'	1:AA:187:G:O4'	2.04	0.57
22:DA:2297:A:N1	22:DA:2321:U:C5	2.71	0.57
38:DQ:76:TYR:CZ	38:DQ:80:ILE:HG13	2.39	0.57
1:CA:206:C:H2'	1:CA:207:C:C4'	2.34	0.57
22:BA:404:A:H1'	22:BA:405:U:OP2	2.04	0.57
22:BA:2180:U:H5''	22:BA:2181:U:OP2	2.03	0.57
2:AB:20:THR:OG1	2:AB:21:ARG:N	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1917:U:C2'	22:BA:1918:A:H5'	2.34	0.57
22:DA:563:A:C6	22:DA:2018:G:C4	2.92	0.57
24:BC:13:ARG:HA	24:BC:16:VAL:CG2	2.34	0.57
2:AB:148:LEU:HA	2:AB:151:ILE:HG22	1.86	0.57
22:DA:1692:U:O2'	22:DA:1693:U:H2'	2.03	0.57
11:CK:89:PRO:HD3	21:CU:29:LEU:HD11	1.84	0.57
53:B5:191:ARG:O	53:B5:195:ARG:CB	2.52	0.57
22:BA:761:A:C8	57:BA:3294:HOH:O	2.52	0.57
1:CA:1133:G:C2	1:CA:1142:G:C2	2.92	0.57
41:DT:73:ARG:NH1	41:DT:74:ILE:O	2.36	0.57
22:DA:813:U:H1'	22:DA:1226:A:N3	2.18	0.57
34:BM:132:THR:CG2	34:BM:133:LYS:N	2.68	0.57
22:DA:649:G:H2'	22:DA:650:C:C6	2.39	0.57
10:CJ:77:VAL:O	10:CJ:79:PRO:HD3	2.04	0.57
1:AA:763:G:C2	1:AA:764:C:C2	2.92	0.57
22:DA:78:U:OP2	46:DY:2:LYS:CD	2.52	0.57
22:BA:2507:C:P	57:BA:3714:HOH:O	2.61	0.57
1:CA:475:C:H2'	1:CA:476:U:C6	2.39	0.57
11:AK:71:ALA:O	11:AK:73:ALA:N	2.37	0.57
38:DQ:86:ALA:O	38:DQ:87:SER:CB	2.52	0.57
22:DA:2594:C:N4	22:DA:2595:G:O6	2.37	0.57
35:BN:58:ASP:OD1	35:BN:63:ARG:NH2	2.37	0.57
22:BA:1249:U:C2	33:BL:18:ARG:NH1	2.72	0.57
22:BA:2292:U:H2'	22:BA:2293:G:C8	2.40	0.57
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.86	0.57
42:DU:34:VAL:HG22	42:DU:65:ILE:O	2.04	0.57
3:CC:63:SER:OG	3:CC:64:ILE:N	2.36	0.57
22:DA:1654:A:P	35:DN:1:MET:HA	2.43	0.57
32:BK:34:GLY:O	32:BK:35:VAL:C	2.42	0.57
22:BA:2779:U:C5	22:BA:2781:A:C2	2.92	0.57
22:DA:102:U:C2	46:DY:2:LYS:HE2	2.39	0.57
23:BB:41:G:H5''	27:BF:66:LEU:HD13	1.86	0.57
1:CA:1330:U:H4'	13:CM:23:TYR:CE1	2.39	0.57
11:CK:91:PRO:O	11:CK:92:GLY:C	2.43	0.57
22:DA:1445:G:N2	22:DA:1547:C:C2	2.73	0.57
1:AA:990:C:N3	1:AA:991:U:C4	2.72	0.57
29:DH:108:VAL:O	29:DH:110:VAL:N	2.36	0.57
1:CA:147:G:H2'	1:CA:148:G:C8	2.40	0.57
14:AN:48:LEU:O	14:AN:50:THR:N	2.37	0.57
52:B4:11:CYS:SG	52:B4:33:HIS:CE1	2.97	0.57
4:AD:109:ALA:N	4:AD:113:GLU:OE2	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1167:C:C2'	22:DA:1168:G:H5'	2.34	0.57
22:BA:1385:A:C4	22:BA:1386:C:C5	2.91	0.57
45:DX:2:SER:O	45:DX:4:VAL:N	2.37	0.57
53:B5:204:GLY:O	53:B5:205:ALA:CB	2.52	0.57
22:DA:1177:G:H2'	22:DA:1178:C:O4'	2.03	0.57
1:AA:202:G:N2	1:AA:216:U:O2	2.37	0.57
4:CD:32:CYS:O	4:CD:33:LYS:CB	2.52	0.57
23:BB:47:C:OP2	36:BO:3:LYS:HE3	2.04	0.57
22:DA:537:G:N1	22:DA:555:G:C2	2.72	0.57
1:CA:1411:C:H2'	1:CA:1412:C:H6	1.69	0.57
2:CB:67:ILE:HG22	2:CB:68:LEU:N	2.19	0.57
8:AH:22:LYS:N	8:AH:65:TYR:OH	2.37	0.57
19:CS:11:ILE:HG13	19:CS:12:ASP:N	2.19	0.57
32:DK:105:ARG:NH1	37:DP:34:GLU:HG3	2.19	0.57
31:BJ:30:THR:HG22	31:BJ:31:GLU:N	2.20	0.57
35:DN:103:ARG:HB2	35:DN:110:MET:HE3	1.85	0.57
8:AH:88:ARG:O	8:AH:122:GLY:HA3	2.04	0.57
1:CA:366:A:O2'	1:CA:394:G:N2	2.38	0.57
9:AI:90:TYR:O	9:AI:91:ASP:CG	2.43	0.57
1:CA:1291:U:OP1	7:CG:37:SER:HB3	2.04	0.57
19:CS:58:VAL:HG11	19:CS:75:ALA:HA	1.86	0.57
1:CA:667:G:C2	1:CA:740:U:O2	2.57	0.57
1:AA:1168:U:C2'	1:AA:1168:U:O2	2.52	0.57
22:DA:1854:A:O4'	22:DA:2233:U:H4'	2.05	0.57
6:AF:3:HIS:H	6:AF:92:THR:HG23	1.69	0.57
22:BA:1721:G:O2'	22:BA:1739:A:N6	2.37	0.57
22:BA:1091:G:O2'	22:BA:1092:C:OP2	2.22	0.57
22:BA:277:G:O2'	22:BA:361:G:N1	2.37	0.57
22:BA:2683:C:O2	32:BK:70:ARG:NH2	2.38	0.57
22:DA:1773:A:N3	22:DA:1978:A:C2	2.73	0.57
3:CC:83:ASP:O	3:CC:85:GLU:N	2.38	0.57
1:AA:1031:C:C2'	1:AA:1032:G:OP2	2.51	0.57
2:AB:200:ILE:O	2:AB:201:PRO:O	2.23	0.57
1:CA:1072:G:C5	1:CA:1073:U:C4	2.93	0.57
46:DY:11:VAL:HA	46:DY:14:LEU:HB2	1.87	0.57
22:DA:2296:U:H4'	22:DA:2297:A:OP1	2.02	0.57
12:CL:65:SER:HB2	12:CL:82:ILE:HD11	1.85	0.57
12:AL:86:ARG:CZ	12:AL:88:LYS:HB3	2.34	0.57
22:BA:1845:G:OP1	24:BC:256:LYS:NZ	2.37	0.57
7:CG:136:LYS:O	7:CG:140:ASP:HB2	2.04	0.57
29:DH:62:LEU:HD13	29:DH:62:LEU:C	2.25	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2611:C:OP2	57:BA:3540:HOH:O	2.17	0.57
22:BA:1971:U:OP2	22:BA:1971:U:H4'	2.04	0.57
1:AA:438:U:C2	1:AA:494:G:C6	2.92	0.57
23:DB:106:G:H2'	23:DB:107:G:O4'	2.04	0.57
29:BH:117:LEU:CD2	29:BH:121:VAL:H	2.08	0.57
22:DA:2056:G:C2	22:DA:2057:G:C8	2.92	0.57
22:BA:2495:G:O2'	22:BA:2496:C:H5'	2.05	0.57
22:DA:2004:G:C5	22:DA:2005:A:C8	2.92	0.57
22:BA:1917:U:O2	22:BA:1918:A:O4'	2.22	0.57
1:CA:412:A:HO2'	1:CA:413:G:H4'	1.68	0.57
22:BA:2324:U:H3'	22:BA:2325:G:H5'	1.84	0.57
22:DA:118:A:H1'	22:DA:178:G:O4'	2.05	0.57
22:BA:2191:A:C6	22:BA:2192:U:C4	2.92	0.57
1:AA:108:G:O6	20:AT:10:ARG:HG2	2.04	0.57
25:DD:12:THR:HG21	37:DP:5:ILE:HG23	1.86	0.57
22:BA:2564:A:C6	22:BA:2565:A:C6	2.92	0.57
1:CA:406:G:C2	1:CA:407:U:C5	2.92	0.57
1:AA:11:G:C6	1:AA:12:U:C4	2.92	0.57
22:DA:301:G:C6	22:DA:317:G:C6	2.93	0.57
22:DA:2836:U:H2'	22:DA:2837:A:C8	2.39	0.57
1:AA:496:A:C2	1:AA:497:G:C5	2.92	0.57
18:CR:35:GLU:HB2	21:CU:19:PHE:CZ	2.40	0.57
1:AA:596:A:C6	1:AA:645:G:C2	2.92	0.57
22:DA:1676:A:H2'	22:DA:1677:A:O4'	2.04	0.57
22:DA:2790:U:H5'	22:DA:2893:A:N7	2.20	0.57
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.39	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
22:DA:224:U:C4	22:DA:225:C:C5	2.93	0.57
1:AA:1313:U:O4	19:AS:4:SER:HA	2.05	0.57
22:BA:1853:A:N1	22:BA:2087:G:H1'	2.20	0.57
1:CA:518:C:H4'	1:CA:519:C:O5'	2.03	0.57
1:AA:79:G:N2	1:AA:91:U:O4	2.36	0.57
1:AA:872:A:C8	1:AA:874:G:C8	2.93	0.57
1:CA:890:G:O2'	1:CA:891:U:OP2	2.21	0.57
22:DA:2585:U:O2'	22:DA:2586:U:O5'	2.21	0.57
17:CQ:12:VAL:HG12	17:CQ:13:VAL:H	1.67	0.57
22:BA:539:G:C5	22:BA:540:C:C5	2.93	0.57
1:CA:822:U:C2	1:CA:823:C:C5	2.93	0.57
22:BA:116:C:N4	22:BA:117:G:C6	2.72	0.57
1:CA:957:U:O2	1:CA:959:A:C8	2.58	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:64:LYS:HA	41:BT:79:ASP:OD1	2.04	0.57
21:CU:37:PHE:HA	21:CU:40:LYS:HE3	1.85	0.57
19:CS:80:TYR:O	19:CS:81:ARG:CB	2.52	0.57
25:DD:35:THR:O	25:DD:36:GLN:HB2	2.05	0.57
42:BU:12:ILE:HG21	42:BU:80:ALA:HB2	1.87	0.57
28:DG:89:LEU:HB2	28:DG:129:THR:HG22	1.85	0.57
29:BH:117:LEU:HD21	29:BH:121:VAL:CA	2.35	0.57
11:AK:126:LYS:C	21:AU:34:ARG:NH2	2.58	0.57
22:BA:1190:G:OP1	33:BL:32:GLY:HA2	2.04	0.57
17:AQ:14:SER:HB3	17:AQ:22:VAL:CG1	2.35	0.57
22:DA:1308:A:N6	22:DA:1309:G:C2	2.73	0.57
22:BA:2189:U:H2'	22:BA:2190:G:O4'	2.04	0.57
30:DI:5:VAL:HA	30:DI:8:TYR:CE1	2.40	0.57
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.40	0.57
12:AL:44:LYS:HB2	12:AL:45:PRO:HD3	1.86	0.57
5:CE:57:PRO:O	5:CE:60:ILE:HG13	2.04	0.57
1:CA:1343:G:O2'	9:CI:123:ARG:HD2	2.04	0.57
29:DH:117:LEU:HB3	29:DH:120:GLY:O	2.05	0.57
22:DA:320:A:H2'	26:DE:131:THR:HG21	1.87	0.57
1:CA:577:G:C8	1:CA:816:A:N1	2.73	0.57
22:DA:1231:U:H2'	22:DA:1232:G:C8	2.40	0.57
28:BG:74:SER:HA	28:BG:77:ILE:HG13	1.85	0.57
18:CR:33:ILE:HA	18:CR:40:VAL:HG23	1.86	0.57
36:DO:79:ALA:HA	36:DO:115:LEU:HD22	1.86	0.57
22:BA:2794:C:H2'	22:BA:2795:C:H6	1.70	0.57
12:CL:44:LYS:HB2	12:CL:45:PRO:HD3	1.87	0.57
2:AB:32:PHE:CG	2:AB:32:PHE:O	2.57	0.57
15:AO:64:ARG:NH2	15:AO:68:ASP:OD2	2.38	0.57
1:CA:484:G:C5	1:CA:486:U:H1'	2.39	0.57
22:DA:161:A:C3'	22:DA:162:U:H5''	2.34	0.57
24:BC:15:HIS:O	24:BC:204:VAL:HG21	2.04	0.57
22:DA:1428:C:C4	22:DA:1569:A:H5''	2.40	0.57
1:AA:921:U:H2'	1:AA:922:G:O4'	2.04	0.57
53:B5:50:ILE:HG22	53:B5:51:ASP:N	2.19	0.57
33:BL:68:SER:O	33:BL:69:ARG:CB	2.52	0.57
22:DA:2308:G:C5'	22:DA:2309:A:OP2	2.53	0.57
23:DB:81:G:C6	23:DB:82:U:C4	2.93	0.57
46:DY:41:HIS:O	46:DY:45:GLN:HG2	2.04	0.57
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.20	0.57
22:BA:1467:U:C4	22:BA:1546:G:C2	2.93	0.57
26:BE:12:LEU:HD23	26:BE:13:THR:N	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:24:GLU:HA	21:CU:28:VAL:HG22	1.87	0.57
37:DP:91:ALA:HB2	37:DP:113:ARG:HA	1.87	0.57
20:CT:43:ASP:HB3	20:CT:46:ALA:HB3	1.86	0.57
22:DA:697:G:C2	22:DA:766:U:O2	2.58	0.57
15:AO:61:SER:O	15:AO:65:LYS:HG3	2.05	0.57
22:BA:892:A:N3	22:BA:892:A:H2'	2.20	0.57
22:BA:1429:G:O2'	22:BA:1430:G:H5'	2.05	0.57
22:DA:2115:G:O2'	22:DA:2117:A:N6	2.38	0.57
17:AQ:17:MET:N	17:AQ:17:MET:SD	2.77	0.57
22:DA:1606:C:O2'	22:DA:1607:C:OP2	2.23	0.57
15:CO:19:ALA:O	15:CO:20:ASN:CB	2.52	0.57
22:DA:2093:G:C6	22:DA:2225:A:C8	2.93	0.57
1:AA:568:G:N3	1:AA:569:C:C5	2.73	0.57
1:AA:8:A:N6	4:AD:202:GLU:O	2.38	0.57
1:CA:562:U:OP2	12:CL:14:ARG:NH2	2.38	0.57
27:BF:2:ALA:O	27:BF:3:LYS:C	2.43	0.57
1:CA:1072:G:C6	1:CA:1073:U:C4	2.93	0.57
30:BI:18:ALA:O	30:BI:19:ASN:HB3	2.05	0.57
22:DA:2615:U:C2	48:D0:4:GLN:HA	2.40	0.57
22:DA:981:A:N1	22:DA:2027:G:O2'	2.32	0.57
22:DA:897:C:H2'	22:DA:898:C:C6	2.40	0.57
1:AA:820:U:H4'	1:AA:821:G:OP2	2.05	0.57
22:BA:2771:C:H2'	22:BA:2772:C:H6	1.69	0.57
7:CG:88:PRO:HD2	7:CG:151:PHE:O	2.05	0.57
22:BA:1405:U:H2'	22:BA:1406:U:C6	2.40	0.57
28:BG:11:VAL:CG2	28:BG:11:VAL:O	2.53	0.57
31:DJ:64:VAL:HG11	31:DJ:89:PHE:CZ	2.40	0.57
1:AA:1425:U:O2'	1:AA:1426:G:H5'	2.04	0.57
1:CA:1198:G:OP1	57:CA:1835:HOH:O	2.17	0.56
5:CE:81:LEU:CD1	5:CE:120:VAL:HG11	2.35	0.56
11:AK:126:LYS:O	21:AU:34:ARG:NE	2.38	0.56
17:CQ:19:LYS:HD3	17:CQ:49:GLU:HA	1.86	0.56
24:BC:7:LYS:HB3	24:BC:8:PRO:CD	2.35	0.56
22:BA:197:A:C6	22:BA:198:C:C2	2.93	0.56
22:DA:55:G:C2	22:DA:56:A:C8	2.93	0.56
46:BY:6:LEU:HD13	46:BY:56:LEU:HD22	1.86	0.56
35:BN:49:GLU:OE2	35:BN:95:THR:HG22	2.05	0.56
22:BA:2564:A:C5	22:BA:2565:A:C6	2.93	0.56
22:DA:674:G:H1'	26:DE:69:ARG:CD	2.35	0.56
24:DC:68:LYS:HG2	24:DC:151:GLY:HA2	1.86	0.56
22:BA:2051:A:H4'	22:BA:2052:A:OP1	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2704:C:H2'	22:DA:2705:A:O4'	2.04	0.56
22:DA:2469:A:O2'	34:DM:55:ARG:NH2	2.38	0.56
22:DA:341:C:H2'	22:DA:342:A:C8	2.40	0.56
30:DI:20:PRO:HB2	30:DI:23:PRO:HD2	1.86	0.56
23:BB:91:C:OP2	34:BM:18:ARG:HG2	2.04	0.56
22:BA:2318:G:C6	22:BA:2319:G:N1	2.72	0.56
22:BA:1840:G:C2	22:BA:1841:U:C2	2.92	0.56
19:AS:36:ARG:NH2	19:AS:75:ALA:O	2.38	0.56
1:AA:1418:A:N1	22:BA:1948:G:O2'	2.38	0.56
7:CG:5:ARG:NE	7:CG:5:ARG:HA	2.20	0.56
1:AA:1520:C:C2	1:AA:1521:C:C5	2.93	0.56
22:BA:2638:G:O2'	22:BA:2775:G:N2	2.36	0.56
15:AO:89:ARG:NH1	22:BA:714:U:C6	2.73	0.56
22:BA:1142:A:C4	22:BA:1144:A:C8	2.93	0.56
22:BA:1510:G:H2'	22:BA:1511:G:O4'	2.05	0.56
22:BA:2800:A:H3'	22:BA:2801:G:C5'	2.33	0.56
4:AD:150:LYS:O	4:AD:151:LYS:C	2.43	0.56
22:DA:1428:C:C5	22:DA:1569:A:H5''	2.40	0.56
1:CA:552:U:C2	1:CA:553:A:C8	2.92	0.56
13:AM:25:VAL:HG12	13:AM:29:ARG:HB3	1.87	0.56
1:AA:1319:A:C8	1:AA:1323:G:C5	2.92	0.56
1:AA:960:U:O2'	1:AA:1223:C:C5'	2.52	0.56
22:DA:729:G:OP2	24:DC:207:LYS:NZ	2.36	0.56
22:DA:2345:G:H5'	22:DA:2347:C:O4'	2.05	0.56
1:AA:600:A:H2'	1:AA:601:G:C8	2.39	0.56
1:AA:1277:C:HO2'	1:AA:1279:G:H8	1.52	0.56
1:AA:665:A:H2'	1:AA:732:C:O2	2.05	0.56
22:BA:1078:U:H1'	22:BA:1088:A:C2	2.40	0.56
1:AA:194:C:OP1	57:AA:1880:HOH:O	2.18	0.56
1:CA:1431:A:C6	1:CA:1432:G:C6	2.92	0.56
30:BI:116:ASP:O	30:BI:117:MET:HB2	2.05	0.56
20:CT:67:ILE:HD11	20:CT:71:LYS:HD3	1.87	0.56
1:AA:109:A:C6	1:AA:326:G:C6	2.93	0.56
22:DA:956:G:O6	34:DM:14:LYS:NZ	2.38	0.56
22:DA:1581:G:C5	22:DA:1582:C:C4	2.93	0.56
22:DA:584:C:N4	57:DA:3282:HOH:O	2.38	0.56
22:BA:1334:G:C6	22:BA:1335:C:C4	2.93	0.56
22:BA:1176:U:H2'	22:BA:1177:G:N9	2.20	0.56
1:AA:430:A:OP1	4:AD:9:LEU:HB2	2.05	0.56
22:DA:2131:U:H5'	22:DA:2132:U:H5''	1.88	0.56
1:AA:1517:G:H1'	22:BA:1919:A:O3'	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1073:A:H3'	22:BA:1074:G:H5'	1.85	0.56
24:DC:31:ALA:HB3	24:DC:32:PRO:HD3	1.87	0.56
39:BR:49:ILE:CG2	39:BR:53:PHE:N	2.65	0.56
22:DA:1826:G:C6	22:DA:1827:U:C4	2.94	0.56
22:BA:195:A:C5	22:BA:198:C:H5	2.23	0.56
7:AG:47:LEU:O	7:AG:51:ALA:HB2	2.05	0.56
9:AI:19:VAL:HA	9:AI:65:ILE:HG22	1.88	0.56
22:BA:2502:G:C5'	22:BA:2503:A:C5'	2.84	0.56
22:DA:377:G:C5	22:DA:378:C:C5	2.94	0.56
22:DA:1682:G:N3	22:DA:1757:A:H1'	2.20	0.56
1:AA:1226:C:O2'	13:AM:110:LYS:NZ	2.38	0.56
18:CR:58:ALA:O	18:CR:61:ARG:N	2.38	0.56
33:DL:77:ILE:HD11	33:DL:101:ILE:HG21	1.86	0.56
4:AD:197:GLU:OE2	4:AD:197:GLU:N	2.38	0.56
2:AB:15:HIS:HB2	2:AB:209:ALA:HB2	1.87	0.56
5:AE:83:HIS:HB2	5:AE:84:PRO:HD2	1.87	0.56
22:BA:1426:G:H1'	22:BA:1572:A:N6	2.19	0.56
10:AJ:36:VAL:HG23	10:AJ:76:ILE:HG23	1.86	0.56
1:AA:946:A:C2	1:AA:1236:A:C2	2.93	0.56
22:BA:1266:G:O2'	22:BA:2012:G:O6	2.15	0.56
22:DA:1973:G:C5	22:DA:1974:C:C4	2.94	0.56
22:BA:205:G:O2'	22:BA:206:U:P	2.63	0.56
15:CO:25:THR:HG23	15:CO:66:LEU:HD12	1.86	0.56
22:DA:420:C:H2'	22:DA:421:C:C6	2.40	0.56
32:BK:116:ILE:HD12	32:BK:117:SER:N	2.19	0.56
26:DE:48:THR:O	26:DE:52:VAL:HG23	2.05	0.56
22:DA:483:A:H1'	42:DU:45:HIS:HB2	1.87	0.56
22:BA:585:G:C5'	22:BA:586:A:OP1	2.53	0.56
1:CA:1202:U:H2'	1:CA:1203:C:O4'	2.04	0.56
1:AA:196:A:N3	1:AA:222:C:H1'	2.20	0.56
22:BA:1156:A:C8	38:BQ:51:ARG:HG2	2.40	0.56
36:DO:53:THR:O	36:DO:59:ALA:HB2	2.05	0.56
22:DA:1666:G:O3'	32:DK:6:THR:HG23	2.04	0.56
27:DF:126:GLY:HA2	27:DF:163:ASP:HA	1.87	0.56
22:BA:2888:C:O2	22:BA:2888:C:H2'	2.05	0.56
22:BA:2267:A:H5''	22:BA:2268:A:H5'	1.87	0.56
43:DV:14:LYS:HD3	43:DV:18:ARG:NH2	2.20	0.56
24:DC:87:ARG:HB3	24:DC:87:ARG:NH1	2.20	0.56
22:BA:1014:A:C4	22:BA:1149:G:N2	2.73	0.56
24:BC:121:ASP:O	24:BC:122:ALA:O	2.23	0.56
1:CA:1337:G:H5''	1:CA:1338:G:OP1	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:91:PHE:O	2:CB:150:GLY:HA3	2.05	0.56
22:DA:987:C:H2'	22:DA:988:A:O4'	2.05	0.56
2:CB:15:HIS:C	2:CB:15:HIS:ND1	2.57	0.56
22:DA:1831:G:N2	22:DA:1975:G:C4	2.74	0.56
22:DA:2514:U:H2'	22:DA:2515:C:C6	2.40	0.56
34:BM:4:PRO:HG3	34:BM:70:ASP:HA	1.87	0.56
1:AA:1182:G:C4'	1:AA:1183:U:H5'	2.34	0.56
22:DA:2503:A:H8	55:DA:3001:VIF:C10	2.18	0.56
29:DH:21:VAL:HG22	29:DH:22:LYS:N	2.19	0.56
1:AA:107:G:H2'	1:AA:108:G:H5''	1.87	0.56
4:AD:198:HIS:CE1	4:AD:199:LEU:HD23	2.41	0.56
13:CM:10:PRO:O	13:CM:11:ASP:CB	2.53	0.56
15:AO:4:SER:O	15:AO:8:THR:HG23	2.05	0.56
9:CI:120:LYS:CG	9:CI:123:ARG:HB3	2.35	0.56
22:DA:2898:U:H2'	22:DA:2899:A:C8	2.41	0.56
22:DA:1654:A:O2'	25:DD:118:PHE:O	2.20	0.56
10:AJ:11:LYS:HG3	10:AJ:97:ASP:HB3	1.85	0.56
35:BN:78:LYS:C	35:BN:79:LEU:O	2.41	0.56
6:AF:81:ASN:O	6:AF:84:VAL:HG12	2.05	0.56
19:AS:44:MET:HA	19:AS:47:LEU:HD12	1.88	0.56
22:DA:893:C:H2'	22:DA:894:U:O4'	2.04	0.56
1:AA:100:G:N7	1:AA:101:A:N7	2.53	0.56
38:BQ:57:PHE:O	38:BQ:60:LEU:N	2.38	0.56
22:DA:2571:U:C4	22:DA:2574:G:C8	2.93	0.56
1:CA:1309:G:C6	1:CA:1329:A:C2	2.94	0.56
43:BV:1:MET:SD	43:BV:1:MET:C	2.83	0.56
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.41	0.56
22:DA:1206:G:C6	22:DA:1207:C:C4	2.93	0.56
8:CH:9:ASP:OD2	8:CH:13:ARG:NH1	2.38	0.56
22:DA:781:A:H2'	22:DA:1777:U:O2'	2.06	0.56
39:DR:81:LYS:CD	39:DR:81:LYS:N	2.69	0.56
2:CB:210:VAL:CG2	2:CB:211:THR:N	2.68	0.56
29:DH:83:LYS:N	29:DH:149:GLU:HG2	2.20	0.56
17:AQ:69:LYS:O	17:AQ:70:THR:HB	2.05	0.56
1:CA:1361:G:C2	1:CA:1362:A:N7	2.73	0.56
30:DI:6:GLN:O	30:DI:7:ALA:HB2	2.06	0.56
1:CA:716:A:N3	11:CK:119:ASN:O	2.39	0.56
1:AA:982:U:H4'	1:AA:983:A:H5'	1.88	0.56
13:AM:66:GLU:O	13:AM:68:ASP:N	2.39	0.56
3:CC:40:ARG:HG2	3:CC:55:ILE:HD11	1.88	0.56
22:DA:1855:U:C5	22:DA:1856:U:C5	2.93	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:159:G:N2	1:CA:162:A:OP2	2.39	0.56
22:BA:322:A:C5	22:BA:340:A:C2	2.94	0.56
28:DG:19:ILE:O	28:DG:21:GLY:N	2.39	0.56
24:BC:3:VAL:HG12	24:BC:19:VAL:HG22	1.88	0.56
51:D3:4:ILE:HG21	51:D3:63:PRO:HG3	1.88	0.56
1:CA:1118:U:OP1	9:CI:11:ARG:NH1	2.39	0.56
1:AA:935:A:C2	1:AA:936:C:C2	2.92	0.56
14:AN:68:GLY:O	14:AN:69:ARG:C	2.43	0.56
47:DZ:3:LYS:O	47:DZ:4:THR:O	2.23	0.56
19:CS:63:THR:HG22	19:CS:64:ASP:N	2.20	0.56
21:AU:12:PHE:CD2	21:AU:12:PHE:N	2.74	0.56
45:BX:7:VAL:HG23	45:BX:51:VAL:HG12	1.87	0.56
5:CE:82:GLN:OE1	5:CE:150:PRO:HD3	2.05	0.56
22:BA:2800:A:C2	22:BA:2895:G:H1'	2.41	0.56
22:BA:1720:U:H2'	22:BA:1721:G:O4'	2.05	0.56
1:AA:1374:A:N3	1:AA:1375:A:C8	2.74	0.56
37:BP:113:ARG:O	37:BP:114:LEU:HG	2.05	0.56
1:CA:1302:C:C5	13:CM:17:ILE:HD13	2.41	0.56
22:DA:2311:A:O2'	22:DA:2312:U:OP1	2.21	0.56
17:CQ:14:SER:C	17:CQ:17:MET:HE1	2.26	0.56
22:BA:404:A:C8	22:BA:406:G:C6	2.93	0.56
12:AL:86:ARG:NE	12:AL:88:LYS:HB3	2.20	0.56
22:BA:1536:C:H4'	22:BA:1537:G:H5''	1.87	0.56
25:BD:38:LYS:O	25:BD:46:ARG:HA	2.05	0.56
24:DC:10:SER:O	24:DC:13:ARG:HB3	2.05	0.56
24:DC:121:ASP:N	24:DC:121:ASP:OD1	2.35	0.56
51:B3:45:ARG:N	51:B3:46:PRO:HD2	2.20	0.56
2:CB:206:ALA:O	2:CB:207:ILE:C	2.42	0.56
22:BA:1056:G:H4'	22:BA:1086:A:C8	2.41	0.56
15:CO:18:ASP:OD1	15:CO:18:ASP:C	2.44	0.56
22:DA:2550:G:O6	22:DA:2551:C:N4	2.38	0.56
22:BA:2311:A:C2	27:BF:85:ILE:HD11	2.41	0.56
1:AA:1375:A:C5	1:AA:1376:U:C5	2.93	0.56
1:AA:1377:A:O2'	7:AG:2:PRO:HB3	2.04	0.56
1:AA:1141:C:O2'	1:AA:1142:G:P	2.63	0.56
22:DA:777:G:N7	22:DA:793:A:H2	2.02	0.56
1:AA:923:A:O4'	1:AA:1398:A:C2	2.58	0.56
4:AD:58:LYS:HG2	4:AD:203:LEU:HD22	1.86	0.56
20:CT:74:ARG:O	20:CT:78:ASN:OD1	2.24	0.56
1:CA:1077:G:N2	1:CA:1080:A:OP2	2.37	0.56
44:BW:41:ARG:HG3	44:BW:41:ARG:HH11	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:804:U:H5''	1:CA:805:C:OP2	2.05	0.56
22:BA:1219:U:H2'	22:BA:1220:G:C8	2.41	0.56
23:BB:42:C:C5	27:BF:66:LEU:HD22	2.40	0.56
31:DJ:64:VAL:CG1	31:DJ:89:PHE:CZ	2.89	0.56
27:DF:5:HIS:HB2	27:DF:97:TRP:CG	2.41	0.56
22:DA:1965:C:OP1	22:DA:1966:A:C2'	2.54	0.56
22:DA:1820:U:OP1	24:DC:177:ARG:HG2	2.06	0.56
22:BA:1301:A:C4	22:BA:1303:G:C8	2.94	0.56
39:BR:68:ARG:NH1	39:BR:90:ARG:HD3	2.20	0.56
30:BI:67:PHE:N	30:BI:67:PHE:CD2	2.74	0.56
2:CB:119:THR:O	2:CB:120:GLN:CB	2.54	0.56
2:AB:126:PHE:N	2:AB:126:PHE:CD2	2.73	0.56
12:AL:51:LYS:HD3	12:AL:51:LYS:N	2.21	0.56
3:CC:72:ARG:HB3	3:CC:75:ILE:HG22	1.88	0.56
43:DV:41:GLU:C	43:DV:42:LEU:HD23	2.26	0.56
22:BA:2452:C:C4	22:BA:2453:A:C6	2.94	0.56
22:BA:1171:G:C5	22:BA:1172:C:C4	2.94	0.56
22:DA:1009:A:O2'	22:DA:1153:C:H4'	2.06	0.56
22:BA:1916:A:N3	22:BA:1917:U:H1'	2.21	0.56
22:BA:2296:U:H4'	22:BA:2297:A:OP1	2.06	0.56
22:DA:2552:U:C2	22:DA:2554:U:C5'	2.89	0.56
1:CA:211:G:O2'	1:CA:212:G:C4'	2.53	0.56
41:BT:2:ILE:HG12	41:BT:7:LEU:HD11	1.88	0.56
1:CA:511:C:C2	1:CA:512:U:C5	2.94	0.56
22:BA:587:C:C6	22:BA:671:C:H1'	2.41	0.56
22:DA:197:A:N3	22:DA:197:A:H2'	2.21	0.56
30:DI:57:VAL:HG22	30:DI:58:VAL:N	2.21	0.56
53:B5:213:VAL:O	53:B5:214:TYR:CB	2.53	0.56
22:DA:1773:A:N7	22:DA:1829:A:H1'	2.21	0.56
22:BA:1139:G:O2'	22:BA:1140:C:H5'	2.06	0.56
37:BP:31:TRP:CD2	37:BP:40:LEU:CD1	2.89	0.56
22:BA:1356:G:C2	22:BA:1357:C:C2	2.94	0.56
30:BI:22:PRO:HB2	30:BI:23:PRO:HD3	1.87	0.56
22:DA:411:G:OP2	22:DA:2406:A:O2'	2.19	0.56
26:DE:5:LEU:O	26:DE:7:ASP:N	2.38	0.56
21:AU:25:LYS:HD2	21:AU:26:ALA:N	2.21	0.56
22:DA:2521:C:C2	22:DA:2545:G:N2	2.74	0.56
22:BA:2204:G:O5'	24:BC:150:LYS:HE3	2.05	0.56
28:BG:96:ALA:HB2	28:BG:105:LEU:HD23	1.88	0.56
22:DA:747:U:C5	22:DA:2613:U:C5	2.93	0.56
8:CH:78:VAL:N	8:CH:126:ILE:O	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:371:A:H1'	1:CA:482:A:H1'	1.86	0.56
30:BI:72:LYS:CD	30:BI:72:LYS:N	2.69	0.56
3:AC:97:VAL:HB	3:AC:98:PRO:CD	2.36	0.56
22:DA:1359:A:C2	22:DA:1360:G:H1'	2.41	0.56
22:DA:569:U:H5''	22:DA:821:A:C2	2.41	0.56
22:DA:1152:C:H3'	57:DA:3360:HOH:O	2.05	0.56
22:BA:1073:A:C3'	22:BA:1074:G:C5'	2.79	0.56
1:AA:276:G:OP1	17:AQ:17:MET:HE2	2.06	0.56
22:DA:607:U:H5	22:DA:619:G:C4	2.24	0.56
22:BA:1494:A:C2	22:BA:1495:A:C4	2.94	0.56
10:AJ:65:TYR:CB	14:AN:96:LEU:HD11	2.36	0.56
5:CE:36:LEU:HD21	5:CE:137:VAL:HG11	1.87	0.56
1:AA:108:G:C6	20:AT:10:ARG:HG2	2.41	0.56
10:AJ:51:VAL:O	10:AJ:62:ARG:HA	2.06	0.56
12:CL:21:VAL:N	12:CL:22:PRO:HD3	2.21	0.56
30:BI:100:LYS:HB3	30:BI:139:VAL:HB	1.88	0.56
1:AA:1032:G:H3'	1:AA:1033:G:O4'	2.06	0.56
22:DA:1297:C:O2'	22:DA:1302:A:N1	2.36	0.56
22:BA:528:A:H2	22:BA:2043:C:H5'	1.69	0.56
1:CA:302:G:O2'	1:CA:556:C:H5''	2.05	0.56
25:BD:4:LEU:HD23	25:BD:101:PHE:CE1	2.41	0.56
22:BA:2032:G:C8	57:BA:3534:HOH:O	2.58	0.56
22:DA:1206:G:C5	22:DA:1207:C:C5	2.94	0.56
2:AB:126:PHE:N	2:AB:126:PHE:HD2	2.04	0.56
17:AQ:10:GLY:HA3	17:AQ:24:ALA:O	2.06	0.56
1:CA:242:G:N2	1:CA:285:C:C2	2.74	0.56
1:CA:337:G:H2'	1:CA:338:A:C8	2.41	0.56
29:BH:40:THR:OG1	29:BH:43:ASN:OD1	2.24	0.56
22:BA:1651:G:OP1	35:BN:40:LYS:HE3	2.06	0.56
38:DQ:94:ILE:HD13	39:DR:11:GLN:HB2	1.87	0.56
1:AA:775:G:O2'	1:AA:776:G:H5'	2.06	0.56
22:BA:1941:C:C4	22:BA:1942:C:C4	2.94	0.56
1:AA:1311:A:C2	1:AA:1327:C:N3	2.74	0.56
6:AF:38:ARG:HB3	6:AF:63:ASN:HB2	1.88	0.56
28:BG:69:ARG:C	28:BG:69:ARG:HD3	2.27	0.56
52:D4:16:ILE:HD13	52:D4:25:VAL:HG22	1.86	0.56
6:CF:86:ARG:HH11	6:CF:86:ARG:CG	2.19	0.56
1:CA:1074:G:H4'	2:CB:103:ASN:CB	2.35	0.56
22:DA:1312:U:C2	22:DA:1603:A:C2	2.94	0.56
30:BI:122:ILE:HG22	30:BI:122:ILE:O	2.06	0.56
7:AG:146:GLU:O	7:AG:149:LYS:HB3	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:123:ILE:CD1	4:AD:123:ILE:N	2.68	0.56
50:D2:16:HIS:HB3	50:D2:21:ARG:NH1	2.21	0.56
1:CA:1295:U:H2'	1:CA:1296:C:C6	2.41	0.56
13:AM:107:ARG:HG2	13:AM:107:ARG:HH11	1.70	0.56
28:BG:10:VAL:HG13	28:BG:10:VAL:O	2.06	0.56
53:B5:204:GLY:O	53:B5:205:ALA:HB3	2.04	0.56
2:CB:134:ALA:O	2:CB:138:THR:N	2.38	0.56
22:BA:1452:G:C4	22:BA:2702:G:C6	2.94	0.56
6:CF:97:THR:O	6:CF:98:GLU:CB	2.54	0.56
16:AP:51:ARG:HH11	16:AP:51:ARG:CG	2.19	0.56
1:AA:1168:U:H2'	1:AA:1168:U:O2	2.06	0.56
21:AU:25:LYS:HD2	21:AU:26:ALA:H	1.70	0.56
7:AG:73:VAL:HG12	7:AG:90:GLU:HG3	1.87	0.56
22:DA:242:G:H5''	51:D3:64:TYR:CZ	2.40	0.56
5:AE:50:TYR:CE2	5:AE:134:ILE:HD11	2.40	0.56
22:DA:2831:G:OP1	25:DD:56:LYS:NZ	2.35	0.56
22:DA:635:C:O2'	22:DA:639:U:H5''	2.05	0.56
22:DA:547:A:H3'	22:DA:548:G:H5'	1.88	0.56
12:CL:25:GLU:O	12:CL:26:ALA:C	2.41	0.56
1:AA:137:U:H1'	1:AA:227:G:N2	2.21	0.56
28:DG:133:LEU:HD12	28:DG:133:LEU:O	2.05	0.56
37:BP:14:LYS:HE3	37:BP:77:HIS:HA	1.88	0.56
22:DA:491:G:C6	22:DA:492:A:C6	2.93	0.56
32:DK:118:LEU:O	32:DK:119:ALA:HB3	2.05	0.56
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.05	0.55
22:DA:511:U:O4	22:DA:512:G:N1	2.38	0.55
12:AL:59:ASN:OD1	12:AL:59:ASN:C	2.44	0.55
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.41	0.55
10:AJ:53:ILE:HD11	14:AN:85:ARG:NH1	2.21	0.55
22:BA:2673:G:N3	22:BA:2674:G:C8	2.74	0.55
1:CA:411:A:C5	1:CA:429:U:C5	2.94	0.55
50:D2:18:PHE:O	50:D2:19:ARG:C	2.44	0.55
2:AB:50:PHE:HA	2:AB:53:ALA:HB3	1.87	0.55
22:DA:1179:G:C5	22:DA:1180:U:H1'	2.40	0.55
22:BA:1808:A:N1	45:BX:28:ARG:HD2	2.22	0.55
22:BA:545:U:H2'	22:BA:546:U:O3'	2.06	0.55
1:AA:381:C:H2'	1:AA:382:A:O4'	2.06	0.55
25:BD:151:THR:HG22	25:BD:152:PRO:CD	2.36	0.55
7:AG:147:ALA:O	11:AK:61:PHE:CD1	2.59	0.55
1:CA:1377:A:C5	7:CG:7:ILE:HD12	2.41	0.55
22:DA:1272:A:C5	22:DA:1618:A:H1'	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:10:MET:HE1	8:AH:33:LYS:HA	1.88	0.55
28:DG:27:LYS:O	28:DG:27:LYS:HG3	2.06	0.55
23:DB:14:U:C2'	23:DB:14:U:O2	2.54	0.55
10:CJ:80:THR:O	10:CJ:84:VAL:HB	2.06	0.55
3:AC:140:ASN:HA	3:AC:143:ARG:CB	2.35	0.55
22:BA:894:U:H2'	22:BA:895:U:C6	2.41	0.55
1:CA:1481:U:H2'	1:CA:1482:G:C8	2.40	0.55
28:BG:40:ALA:HB2	28:BG:58:TYR:CG	2.41	0.55
22:BA:1131:G:C8	31:BJ:77:HIS:CE1	2.94	0.55
2:CB:102:THR:O	2:CB:103:ASN:HB3	2.06	0.55
22:DA:1651:G:N2	22:DA:2007:U:O2	2.39	0.55
22:DA:1826:G:O2'	22:DA:1971:U:OP2	2.24	0.55
22:BA:614:A:HO2'	22:BA:615:U:P	2.25	0.55
5:CE:25:VAL:O	5:CE:28:GLY:N	2.39	0.55
4:AD:32:CYS:SG	4:AD:33:LYS:N	2.79	0.55
1:AA:1145:A:O2'	1:AA:1146:A:P	2.65	0.55
2:AB:61:ALA:HA	2:AB:65:GLY:CA	2.37	0.55
33:BL:109:LYS:HG2	33:BL:126:ARG:CB	2.35	0.55
22:BA:1467:U:C4	22:BA:1546:G:N2	2.74	0.55
39:BR:68:ARG:CZ	39:BR:90:ARG:HD3	2.37	0.55
22:BA:2566:A:N1	32:BK:28:SER:OG	2.36	0.55
1:CA:987:G:C6	1:CA:988:G:C5	2.94	0.55
26:BE:44:ARG:HG2	26:BE:45:ALA:N	2.21	0.55
22:BA:26:G:C6	22:BA:27:G:N1	2.75	0.55
32:DK:92:GLU:O	32:DK:93:GLN:HB2	2.05	0.55
2:AB:67:ILE:O	2:AB:68:LEU:HB2	2.07	0.55
1:CA:833:G:C5	1:CA:834:U:C5	2.94	0.55
22:BA:1587:G:C4	22:BA:1588:G:C8	2.95	0.55
22:BA:593:U:H2'	22:BA:594:U:C6	2.40	0.55
1:CA:68:G:C6	1:CA:69:G:HI'	2.41	0.55
22:BA:1008:A:N6	22:BA:1136:G:C6	2.74	0.55
6:AF:68:GLN:HA	6:AF:71:ILE:CG2	2.36	0.55
22:BA:1528:A:H2'	22:BA:1529:G:O4'	2.06	0.55
29:BH:91:PHE:HB3	1:CA:55:A:N3	2.21	0.55
22:BA:2478:A:H5'	52:B4:32:LYS:CD	2.32	0.55
22:BA:1911:U:H2'	22:BA:1918:A:C2	2.42	0.55
22:DA:2164:C:H2'	22:DA:2165:C:C5	2.42	0.55
22:BA:1141:U:OP2	31:BJ:65:THR:HG21	2.06	0.55
22:BA:1508:A:OP1	22:BA:1508:A:H4'	2.06	0.55
20:CT:5:LYS:O	20:CT:7:ALA:N	2.39	0.55
1:AA:15:G:H4'	5:AE:29:ARG:NH1	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:14:VAL:HG13	21:AU:16:LEU:HD21	1.88	0.55
10:AJ:73:LEU:O	10:AJ:74:VAL:HB	2.06	0.55
22:DA:188:G:C6	22:DA:189:G:C4	2.95	0.55
36:BO:30:ARG:HG2	36:BO:31:THR:N	2.21	0.55
22:DA:674:G:C1'	26:DE:69:ARG:HD3	2.37	0.55
1:CA:200:G:C3'	1:CA:201:G:H5''	2.36	0.55
40:DS:33:LEU:HD21	40:DS:52:GLU:HG3	1.88	0.55
1:CA:158:G:H2'	1:CA:159:G:H5''	1.87	0.55
22:DA:279:A:N6	22:DA:361:G:O2'	2.38	0.55
1:AA:1201:A:H1'	1:AA:1202:U:OP2	2.06	0.55
22:DA:547:A:H3'	22:DA:548:G:C5'	2.34	0.55
22:DA:2611:C:OP2	57:DA:3538:HOH:O	2.17	0.55
47:BZ:35:THR:HG22	47:BZ:36:VAL:N	2.21	0.55
22:DA:1415:U:H2'	22:DA:1416:G:H4'	1.89	0.55
35:BN:24:MET:SD	35:BN:44:LEU:HD22	2.46	0.55
22:DA:153:U:H2'	22:DA:154:U:C6	2.42	0.55
22:BA:1905:C:H2'	22:BA:1930:G:C8	2.42	0.55
5:CE:75:ALA:O	5:CE:147:MET:HE2	2.06	0.55
22:BA:2688:G:C8	22:BA:2719:G:C6	2.94	0.55
2:CB:27:MET:SD	2:CB:193:PRO:HD3	2.47	0.55
22:DA:42:A:C2	22:DA:438:G:C2	2.94	0.55
1:AA:1286:U:H2'	1:AA:1286:U:O2	2.05	0.55
29:BH:86:ASP:O	29:BH:87:GLU:CB	2.53	0.55
22:BA:1169:A:H2'	22:BA:1170:C:O4'	2.07	0.55
14:CN:41:ARG:HG2	14:CN:42:TRP:N	2.20	0.55
11:AK:76:GLU:N	11:AK:76:GLU:CD	2.59	0.55
11:AK:76:GLU:CA	22:BA:2141:G:OP1	2.54	0.55
1:AA:1072:G:C5	1:AA:1073:U:C4	2.94	0.55
22:BA:2193:G:O2'	22:BA:2194:U:H5'	2.06	0.55
22:BA:1607:C:N4	22:BA:1622:G:C8	2.74	0.55
42:BU:72:ILE:HD13	42:BU:83:VAL:CG2	2.36	0.55
2:AB:147:SER:O	2:AB:148:LEU:HB2	2.06	0.55
2:AB:71:GLY:HA2	2:AB:164:ILE:HG22	1.88	0.55
1:AA:1491:G:H5''	12:AL:43:LYS:HG3	1.88	0.55
11:AK:102:ALA:O	11:AK:103:ALA:C	2.44	0.55
51:D3:31:HIS:ND1	51:D3:32:ILE:HG13	2.20	0.55
25:BD:101:PHE:HE2	25:BD:203:VAL:CG1	2.20	0.55
13:AM:90:ARG:NH1	13:AM:95:LEU:HB2	2.21	0.55
1:AA:316:C:C2	1:AA:317:U:C5	2.94	0.55
2:AB:140:GLU:O	2:AB:144:LEU:HG	2.07	0.55
26:DE:149:ILE:HG23	26:DE:188:MET:HG2	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:145:GLU:HG2	24:DC:152:GLY:N	2.22	0.55
3:CC:179:ARG:O	3:CC:206:GLU:O	2.24	0.55
22:BA:2412:A:H5''	22:BA:2413:G:OP2	2.07	0.55
12:AL:74:LEU:HD21	12:AL:104:CYS:HA	1.87	0.55
1:AA:609:A:N7	57:AA:1852:HOH:O	2.33	0.55
29:BH:121:VAL:N	29:BH:122:LEU:CA	2.69	0.55
21:AU:34:ARG:CZ	21:AU:35:ARG:HB2	2.36	0.55
6:CF:88:MET:HE1	18:CR:64:TYR:CD2	2.42	0.55
22:BA:608:A:C2	22:BA:609:A:C4	2.95	0.55
22:BA:1056:G:HO2'	22:BA:1086:A:H8	1.52	0.55
22:DA:1087:G:N1	22:DA:1089:A:C2	2.75	0.55
22:BA:29:U:H2'	22:BA:30:G:C8	2.41	0.55
1:CA:542:G:N3	1:CA:543:U:C6	2.75	0.55
22:BA:591:U:HO2'	51:B3:2:PRO:N	2.05	0.55
22:DA:847:U:O2	22:DA:934:U:H1'	2.06	0.55
22:BA:2648:G:N2	22:BA:2673:G:H1'	2.22	0.55
9:AI:22:LYS:NZ	9:AI:62:ASP:OD2	2.39	0.55
3:AC:7:PRO:HG2	3:AC:184:TYR:CD1	2.42	0.55
2:CB:134:ALA:O	2:CB:138:THR:HG23	2.07	0.55
2:CB:135:LEU:O	2:CB:138:THR:N	2.40	0.55
22:BA:2582:G:OP2	22:BA:2583:G:OP2	2.24	0.55
9:AI:90:TYR:O	9:AI:91:ASP:CB	2.55	0.55
1:CA:585:G:C6	1:CA:586:C:C4	2.95	0.55
42:DU:14:LEU:HD11	42:DU:71:ALA:HB2	1.89	0.55
24:BC:260:ASN:O	24:BC:262:ARG:N	2.38	0.55
22:DA:1670:C:C5	22:DA:1671:U:C4	2.94	0.55
47:DZ:52:SER:HA	47:DZ:55:VAL:HG22	1.89	0.55
22:BA:1277:G:H5'	35:BN:20:MET:CE	2.37	0.55
1:AA:1508:A:H2'	1:AA:1509:C:O4'	2.06	0.55
34:DM:70:ASP:OD1	34:DM:70:ASP:C	2.44	0.55
22:DA:1644:C:O2	22:DA:1644:C:H2'	2.06	0.55
18:AR:22:ASP:OD2	18:AR:24:LYS:N	2.38	0.55
5:AE:72:ILE:HD13	5:AE:145:GLU:CD	2.27	0.55
22:BA:1317:G:C2	22:BA:1336:A:C2	2.95	0.55
29:BH:98:ASP:O	29:BH:102:ALA:HB3	2.07	0.55
1:CA:1387:G:H2'	1:CA:1388:C:H6	1.72	0.55
5:CE:101:GLU:HA	5:CE:122:ASN:HB2	1.88	0.55
1:CA:1097:C:H2'	1:CA:1098:C:C6	2.41	0.55
22:BA:1070:A:C2	30:BI:10:LYS:HG3	2.42	0.55
14:AN:10:GLU:OE2	14:AN:61:ARG:HB3	2.07	0.55
35:BN:32:GLU:HG3	35:BN:120:GLU:HG2	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:B0:55:ILE:HG22	48:B0:56:ALA:H	1.72	0.55
55:BA:3001:VIF:N	55:BA:3001:VIF:C13	2.70	0.55
5:AE:131:THR:OG1	5:AE:131:THR:O	2.25	0.55
1:CA:519:C:OP2	12:CL:47:SER:OG	2.24	0.55
1:AA:17:U:H2'	1:AA:18:C:C6	2.42	0.55
22:DA:1469:A:C2	22:DA:1470:A:C5	2.94	0.55
1:CA:991:U:C4	1:CA:1212:U:H1'	2.40	0.55
22:DA:1649:G:N1	22:DA:2009:A:C6	2.75	0.55
2:CB:203:ASN:OD1	2:CB:204:ASP:N	2.39	0.55
41:DT:44:LYS:O	41:DT:48:GLN:HG2	2.07	0.55
22:BA:1384:A:H1'	22:BA:1405:U:H1'	1.87	0.55
1:CA:243:A:H4'	1:CA:244:U:H5''	1.89	0.55
14:AN:83:LYS:NZ	14:AN:86:GLU:OE1	2.35	0.55
1:CA:1068:G:C2'	1:CA:1069:C:H5'	2.36	0.55
1:AA:736:C:H2'	1:AA:737:C:C6	2.42	0.55
4:AD:34:ILE:O	4:AD:35:GLU:CB	2.55	0.55
22:BA:2131:U:H5'	22:BA:2132:U:H5''	1.89	0.55
22:DA:2184:A:H2'	22:DA:2185:U:C6	2.42	0.55
1:CA:661:G:C2	1:CA:662:U:C6	2.95	0.55
1:CA:572:A:H5'	1:CA:573:A:OP2	2.07	0.55
22:BA:219:A:N3	22:BA:234:U:O2'	2.32	0.55
2:CB:52:GLU:HG3	2:CB:56:GLU:HG2	1.89	0.55
28:BG:19:ILE:HG12	28:BG:24:ILE:HD13	1.88	0.55
10:CJ:48:ARG:CG	10:CJ:48:ARG:HH11	2.20	0.55
22:BA:1866:A:N1	22:BA:1876:A:C8	2.74	0.55
29:BH:121:VAL:N	29:BH:122:LEU:CB	2.70	0.55
29:BH:120:GLY:CA	29:BH:122:LEU:HA	2.37	0.55
2:AB:20:THR:O	2:AB:21:ARG:NH1	2.39	0.55
22:DA:450:G:N1	22:DA:454:A:OP2	2.31	0.55
22:DA:2043:C:OP1	22:DA:2777:G:O2'	2.21	0.55
22:BA:1061:U:O2'	22:BA:1062:G:C5'	2.54	0.55
24:DC:33:LEU:HA	24:DC:64:ILE:HD12	1.89	0.55
22:BA:477:A:H2'	22:BA:478:A:C8	2.41	0.55
1:CA:1003:G:C2	1:CA:1038:C:C2	2.95	0.55
22:BA:1086:A:H5''	22:BA:1087:G:OP1	2.07	0.55
5:CE:137:VAL:O	5:CE:138:ARG:HB3	2.06	0.55
1:AA:1367:C:H5'	10:AJ:62:ARG:NH1	2.22	0.55
5:AE:109:GLY:O	5:AE:110:ALA:HB3	2.07	0.55
1:AA:992:U:H4'	1:AA:993:G:O5'	2.06	0.55
31:BJ:27:ARG:HH11	31:BJ:27:ARG:HG2	1.71	0.55
4:AD:190:ASP:OD2	4:AD:190:ASP:N	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:204:G:H2'	1:AA:205:A:O4'	2.06	0.55
1:AA:209:U:H4'	1:AA:210:C:OP2	2.06	0.55
39:BR:21:ARG:CZ	39:BR:93:PHE:CE1	2.90	0.55
22:DA:2571:U:N3	22:DA:2574:G:C8	2.74	0.55
22:DA:1943:U:H4'	22:DA:1944:U:OP1	2.07	0.55
22:DA:2195:U:C2	22:DA:2196:C:C6	2.95	0.55
36:BO:15:ARG:HG2	36:BO:93:ASP:OD1	2.07	0.55
46:DY:1:MET:O	46:DY:5:GLU:HG3	2.07	0.55
22:DA:1083:U:O2	22:DA:1086:A:N1	2.40	0.55
22:DA:728:G:C2	22:DA:730:A:C4	2.95	0.55
1:AA:408:A:C2	1:AA:435:A:C2	2.95	0.55
34:BM:36:VAL:HG12	34:BM:36:VAL:O	2.07	0.55
22:BA:969:G:C6	22:BA:970:U:C4	2.95	0.55
22:DA:2249:U:N3	22:DA:2253:G:OP2	2.39	0.55
1:AA:810:C:H2'	1:AA:810:C:O2	2.06	0.55
22:DA:1607:C:H4'	22:DA:1608:A:O5'	2.06	0.55
22:DA:1344:U:O2'	22:DA:1345:C:P	2.65	0.55
40:BS:38:TYR:CE1	48:B0:28:LEU:HD21	2.42	0.55
1:AA:145:G:N2	1:AA:178:C:N3	2.54	0.55
1:AA:956:U:C4	1:AA:957:U:C5	2.95	0.55
40:BS:84:ARG:HB2	40:BS:96:ILE:HG13	1.88	0.55
22:DA:2346:A:H4'	22:DA:2347:C:OP2	2.07	0.55
1:AA:203:G:N2	1:AA:215:C:C2	2.75	0.55
1:AA:772:U:H2'	1:AA:773:G:O5'	2.07	0.55
9:CI:57:MET:SD	9:CI:58:VAL:N	2.78	0.55
51:D3:34:THR:HG23	51:D3:35:LYS:N	2.22	0.55
1:CA:295:C:C4	1:CA:296:U:C5	2.95	0.55
1:CA:261:U:OP2	20:CT:71:LYS:HD2	2.07	0.55
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.41	0.55
53:B5:99:GLU:O	53:B5:103:LYS:CB	2.55	0.55
1:CA:77:A:H2'	1:CA:78:A:O4'	2.05	0.55
1:AA:929:G:C6	1:AA:930:C:C4	2.95	0.55
22:BA:381:G:OP1	45:BX:18:ARG:NH2	2.40	0.55
22:BA:388:G:C8	22:BA:390:U:C6	2.95	0.55
29:BH:10:ALA:O	29:BH:12:LEU:N	2.40	0.55
22:DA:689:A:H2'	22:DA:690:G:C8	2.42	0.55
22:BA:714:U:H2'	22:BA:716:A:N7	2.22	0.55
22:BA:1918:A:H1'	22:BA:1919:A:N7	2.22	0.55
22:BA:1919:A:H2'	22:BA:1919:A:N3	2.22	0.55
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.42	0.55
33:DL:61:LEU:O	51:D3:13:ARG:HD3	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:702:A:N6	22:DA:1848:A:C6	2.75	0.55
43:BV:40:ILE:HG22	43:BV:41:GLU:N	2.21	0.55
1:CA:545:C:H5'	4:CD:69:GLU:HG2	1.88	0.55
23:BB:77:U:C2'	23:BB:78:A:H5'	2.36	0.55
1:CA:16:A:H2'	1:CA:17:U:H5'	1.88	0.55
1:AA:74:A:C2	1:AA:97:G:C4	2.94	0.55
22:BA:2139:U:C2	22:BA:2140:G:C8	2.95	0.55
35:DN:75:ILE:O	35:DN:79:LEU:HD12	2.06	0.55
12:CL:22:PRO:O	12:CL:24:LEU:N	2.39	0.55
1:AA:992:U:O2	1:AA:1043:G:N7	2.39	0.55
24:DC:92:ALA:HB3	24:DC:104:ILE:HD12	1.88	0.55
20:AT:83:ILE:O	20:AT:87:ALA:CB	2.55	0.55
22:BA:1820:U:O4	24:BC:198:ALA:HB1	2.06	0.55
22:BA:1246:A:H2'	22:BA:1247:A:O5'	2.07	0.55
22:DA:636:G:N1	33:DL:76:GLU:OE2	2.38	0.55
23:BB:29:A:C2	23:BB:56:G:C2	2.95	0.55
38:DQ:98:ILE:HG22	38:DQ:106:PHE:HB2	1.89	0.55
1:AA:825:A:O2'	8:AH:13:ARG:NH1	2.40	0.55
22:BA:1403:A:H2'	22:BA:1404:C:C6	2.42	0.55
22:DA:2796:U:C4	22:DA:2798:U:C4	2.95	0.55
31:DJ:41:LYS:NZ	31:DJ:52:ASP:OD2	2.39	0.55
35:DN:83:LEU:CD2	35:DN:115:LEU:HD13	2.37	0.55
11:AK:63:ALA:CB	11:AK:92:GLY:HA3	2.37	0.55
22:BA:991:C:H2'	22:BA:992:C:O5'	2.07	0.55
22:BA:1482:G:C2	22:BA:1483:G:C8	2.95	0.55
22:DA:53:A:C2	22:DA:179:C:H4'	2.42	0.55
11:AK:34:ILE:HG13	11:AK:74:VAL:HG21	1.89	0.55
22:DA:1343:G:H1'	22:DA:1597:A:C4	2.42	0.55
4:AD:30:THR:O	4:AD:31:LYS:C	2.46	0.55
23:DB:48:U:H4'	36:DO:100:HIS:NE2	2.21	0.55
22:BA:590:A:H2'	22:BA:591:U:C6	2.42	0.55
22:BA:2857:G:N2	22:BA:2860:A:OP2	2.40	0.55
40:BS:59:GLU:HA	40:BS:64:ALA:CB	2.37	0.55
3:AC:26:THR:HG23	14:AN:76:LYS:HZ2	1.71	0.55
22:BA:204:A:O4'	22:BA:206:U:C6	2.60	0.55
25:BD:12:THR:HG21	37:BP:9:GLU:CG	2.37	0.55
9:AI:22:LYS:HZ2	9:AI:24:GLY:HA3	1.71	0.55
4:CD:32:CYS:O	4:CD:33:LYS:HB2	2.07	0.55
1:CA:1170:A:H2'	1:CA:1171:A:O4'	2.07	0.55
27:BF:28:VAL:O	27:BF:28:VAL:HG13	2.07	0.55
1:CA:891:U:C5	1:CA:906:A:C2	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:219:A:C6	22:DA:220:G:C6	2.95	0.55
1:CA:477:C:H2'	1:CA:478:A:C8	2.41	0.55
1:CA:666:G:C6	1:CA:741:G:C6	2.95	0.55
22:BA:1081:U:O2	22:BA:1081:U:H2'	2.07	0.55
30:BI:117:MET:SD	30:BI:129:ILE:HD11	2.47	0.55
22:DA:1409:U:C5	57:DA:3622:HOH:O	2.54	0.55
22:DA:92:U:H2'	22:DA:93:G:O4'	2.06	0.55
1:CA:1522:U:H2'	1:CA:1523:G:H8	1.72	0.55
31:DJ:140:LEU:HD12	31:DJ:141:ASP:N	2.22	0.55
25:BD:142:VAL:HB	25:BD:143:PRO:CD	2.37	0.55
26:DE:143:LEU:HB3	26:DE:146:VAL:HG11	1.90	0.55
14:AN:31:ILE:HG23	14:AN:45:VAL:HB	1.87	0.55
41:DT:21:SER:O	41:DT:24:MET:N	2.40	0.55
22:DA:1783:A:C6	22:DA:2587:A:C2	2.95	0.55
22:BA:84:A:N1	22:BA:98:G:O2'	2.26	0.55
40:DS:95:ARG:O	40:DS:95:ARG:CG	2.54	0.55
23:DB:62:C:H2'	23:DB:63:C:C6	2.41	0.55
38:BQ:62:ILE:HG23	38:BQ:76:TYR:CE1	2.42	0.54
22:BA:990:A:H5''	22:BA:991:C:OP1	2.07	0.54
29:BH:83:LYS:HD2	1:CA:55:A:HO2'	1.67	0.54
22:DA:2133:G:C2	22:DA:2158:A:N6	2.75	0.54
1:AA:1161:C:H2'	1:AA:1162:C:H6	1.71	0.54
22:BA:2297:A:N1	22:BA:2321:U:C5	2.75	0.54
23:DB:29:A:OP2	36:DO:32:PRO:HD2	2.07	0.54
1:CA:18:C:N3	1:CA:19:A:C8	2.75	0.54
22:DA:537:G:OP1	22:DA:995:C:N4	2.41	0.54
1:CA:756:C:O2'	1:CA:757:U:H5'	2.06	0.54
3:AC:97:VAL:HB	3:AC:98:PRO:HD2	1.89	0.54
22:BA:15:G:C6	22:BA:16:C:C4	2.95	0.54
48:B0:15:MET:O	48:B0:18:SER:HB3	2.07	0.54
1:CA:1166:G:C6	1:CA:1168:U:H5''	2.43	0.54
22:BA:636:G:O2'	22:BA:638:G:O2'	2.20	0.54
22:DA:183:C:H1'	22:DA:433:C:H1'	1.89	0.54
11:CK:40:ASN:O	11:CK:41:ALA:HB3	2.07	0.54
41:DT:47:VAL:HG12	41:DT:47:VAL:O	2.07	0.54
22:BA:236:C:O2'	22:BA:237:C:H5'	2.07	0.54
1:AA:168:G:C6	1:AA:169:C:N3	2.75	0.54
39:DR:68:ARG:HD3	39:DR:92:TRP:CE2	2.43	0.54
4:AD:91:LEU:HD11	4:AD:195:ILE:HD11	1.88	0.54
4:AD:130:VAL:HG11	4:AD:135:TYR:CD1	2.42	0.54
22:BA:2344:U:H4'	22:BA:2345:G:OP1	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1917:U:O4	22:BA:1918:A:C6	2.60	0.54
22:BA:2297:A:C2	22:BA:2298:A:C8	2.95	0.54
22:BA:1754:A:C6	22:BA:1755:A:C6	2.96	0.54
22:BA:1869:G:C2	22:BA:1873:G:C6	2.95	0.54
43:BV:38:LEU:HD23	43:BV:40:ILE:HD11	1.88	0.54
1:AA:1288:A:N3	1:AA:1352:C:O2'	2.35	0.54
22:BA:1746:A:H2'	22:BA:1747:U:H6	1.72	0.54
1:CA:403:C:OP1	4:CD:134:SER:HB3	2.06	0.54
9:CI:54:LEU:O	9:CI:55:VAL:HG13	2.06	0.54
16:AP:77:GLU:C	16:AP:79:ASN:N	2.60	0.54
22:DA:1319:C:O2'	22:DA:1320:C:H5'	2.07	0.54
42:DU:96:PHE:CZ	42:DU:103:ILE:HG12	2.43	0.54
1:CA:824:G:H1'	8:CH:2:SER:N	2.21	0.54
14:AN:63:ARG:HG2	14:AN:68:GLY:O	2.07	0.54
22:DA:1965:C:OP1	22:DA:1966:A:H2'	2.06	0.54
5:AE:18:VAL:HA	5:AE:34:THR:O	2.07	0.54
3:AC:140:ASN:HA	3:AC:143:ARG:HB3	1.88	0.54
2:AB:67:ILE:O	2:AB:68:LEU:CB	2.55	0.54
46:BY:1:MET:HA	46:BY:4:LYS:HB2	1.88	0.54
22:DA:2810:A:C8	22:DA:2811:G:C8	2.95	0.54
6:CF:6:ILE:HD12	6:CF:6:ILE:N	2.22	0.54
24:BC:252:THR:O	24:BC:253:LYS:C	2.45	0.54
24:BC:162:VAL:HG12	24:BC:163:GLN:N	2.21	0.54
8:CH:18:GLN:HG2	8:CH:63:LEU:HD13	1.88	0.54
3:AC:53:SER:HB2	3:AC:112:ASP:OD2	2.08	0.54
22:BA:2187:U:C4	22:BA:2188:U:C4	2.96	0.54
40:DS:107:VAL:O	40:DS:107:VAL:HG13	2.06	0.54
29:BH:90:LEU:HA	29:BH:125:THR:HG23	1.90	0.54
22:BA:712:G:C2'	22:BA:713:G:H5'	2.38	0.54
22:BA:2496:C:C2'	22:BA:2497:A:O5'	2.55	0.54
22:DA:2133:G:N2	22:DA:2158:A:C6	2.75	0.54
22:BA:2838:G:H2'	22:BA:2839:G:O4'	2.08	0.54
1:CA:374:A:C5	1:CA:375:U:C5	2.95	0.54
22:DA:699:A:H2'	22:DA:700:G:H5'	1.89	0.54
2:AB:71:GLY:O	2:AB:93:ASN:HA	2.07	0.54
2:AB:94:HIS:CE1	2:AB:146:ASN:HB2	2.42	0.54
22:BA:1730:C:O2'	22:BA:1731:G:C4	2.59	0.54
1:CA:109:A:C6	1:CA:327:A:C6	2.95	0.54
31:DJ:7:LYS:O	31:DJ:11:VAL:CG2	2.55	0.54
22:BA:586:A:C2	22:BA:1254:A:C2	2.96	0.54
22:BA:2687:U:O4	22:BA:2688:G:N1	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1877:A:N6	22:BA:1878:G:C6	2.75	0.54
40:BS:18:ARG:HG2	40:BS:76:VAL:HG23	1.88	0.54
15:CO:49:ASP:OD1	15:CO:52:SER:OG	2.25	0.54
15:CO:53:ARG:O	15:CO:56:LEU:HB3	2.07	0.54
15:CO:70:LEU:HD22	15:CO:78:TYR:HB2	1.89	0.54
22:DA:1838:C:H4'	22:DA:1839:G:C8	2.42	0.54
22:BA:192:C:H2'	22:BA:193:U:H5'	1.89	0.54
1:AA:448:A:C4	1:AA:487:A:C2	2.95	0.54
22:BA:744:U:H2'	22:BA:745:G:O4'	2.07	0.54
1:CA:186:C:O4'	20:CT:76:LYS:HD2	2.08	0.54
1:CA:1439:G:C2	1:CA:1463:U:O2	2.60	0.54
16:AP:23:ASP:O	16:AP:25:ARG:N	2.40	0.54
22:BA:776:G:H4'	22:BA:777:G:O5'	2.07	0.54
22:DA:1716:U:C5	22:DA:1743:G:C2	2.95	0.54
29:BH:90:LEU:CD2	29:BH:93:SER:HA	2.37	0.54
1:AA:429:U:H4'	1:AA:430:A:OP1	2.04	0.54
22:BA:1912:A:C2	22:BA:1919:A:C4	2.95	0.54
22:BA:2458:G:C4	22:BA:2490:G:N2	2.76	0.54
1:CA:209:U:O2	1:CA:209:U:H2'	2.06	0.54
5:AE:149:SER:HB2	5:AE:152:MET:HB2	1.88	0.54
40:BS:37:THR:CG2	40:BS:38:TYR:CE1	2.89	0.54
39:DR:39:LEU:O	39:DR:49:ILE:HG23	2.07	0.54
1:CA:451:A:H61	1:CA:481:G:H5'	1.73	0.54
1:AA:1461:G:C6	1:AA:1462:C:C4	2.95	0.54
1:CA:1022:A:C6	1:CA:1023:U:C4	2.96	0.54
22:DA:740:C:H5'	22:DA:1784:A:H3'	1.88	0.54
38:DQ:72:ASN:HB3	38:DQ:110:VAL:HG11	1.89	0.54
22:DA:983:A:C6	22:DA:984:A:C2	2.95	0.54
1:AA:1539:C:H5'	21:AU:18:ARG:CB	2.37	0.54
25:BD:1:MET:HG3	25:BD:205:PRO:HG2	1.89	0.54
9:AI:57:MET:HA	9:AI:60:LYS:HB2	1.89	0.54
2:CB:131:LYS:O	2:CB:135:LEU:N	2.40	0.54
26:DE:179:SER:HA	26:DE:182:ALA:HB3	1.88	0.54
22:DA:491:G:C6	22:DA:492:A:C5	2.96	0.54
5:AE:133:PRO:O	5:AE:135:ASN:N	2.40	0.54
22:DA:2359:C:N4	22:DA:2360:G:C6	2.75	0.54
22:DA:1240:U:O2'	22:DA:1241:A:O5'	2.26	0.54
22:DA:324:A:N6	22:DA:338:G:O2'	2.40	0.54
22:BA:1197:G:H5'	22:BA:1227:G:O2'	2.08	0.54
22:BA:1372:U:O2'	22:BA:1373:A:H5'	2.07	0.54
22:BA:570:G:H2'	22:BA:2030:A:C8	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:12:ILE:HG13	42:DU:21:LYS:O	2.08	0.54
29:BH:77:THR:CG2	29:BH:77:THR:O	2.56	0.54
1:AA:1503:A:C8	1:AA:1531:A:O2'	2.60	0.54
30:DI:101:ILE:O	30:DI:102:SER:HB3	2.08	0.54
22:BA:1230:A:H2'	22:BA:1231:U:O4'	2.07	0.54
13:CM:27:LYS:O	13:CM:27:LYS:HD3	2.06	0.54
23:DB:64:G:H2'	23:DB:65:U:C6	2.42	0.54
11:CK:25:ALA:N	11:CK:87:LYS:O	2.40	0.54
21:AU:35:ARG:O	21:AU:36:GLU:C	2.45	0.54
39:BR:51:VAL:HG23	39:BR:52:PRO:HD2	1.88	0.54
27:BF:133:ARG:O	27:BF:134:GLU:HB2	2.07	0.54
12:AL:25:GLU:O	12:AL:26:ALA:C	2.46	0.54
36:DO:33:ARG:O	36:DO:34:HIS:CB	2.55	0.54
4:CD:146:ARG:O	4:CD:150:LYS:HB2	2.08	0.54
1:CA:620:C:H2'	1:CA:621:A:O4'	2.07	0.54
1:AA:96:U:O2'	1:AA:97:G:O5'	2.26	0.54
22:DA:126:A:N7	22:DA:127:A:N1	2.55	0.54
22:DA:187:G:C2	22:DA:210:C:O2	2.61	0.54
29:BH:14:SER:OG	29:BH:17:ASP:CG	2.46	0.54
1:AA:209:U:C5'	1:AA:210:C:OP2	2.55	0.54
1:CA:115:G:C2	1:CA:289:G:N7	2.75	0.54
1:CA:577:G:C2	1:CA:578:C:C6	2.95	0.54
25:DD:133:THR:HG23	25:DD:134:HIS:N	2.23	0.54
11:AK:53:ARG:O	11:AK:56:ARG:HG3	2.07	0.54
22:BA:1355:G:C4	22:BA:1356:G:C8	2.95	0.54
22:DA:1581:G:C6	22:DA:1582:C:C4	2.95	0.54
27:DF:34:ILE:HA	27:DF:155:THR:O	2.07	0.54
39:DR:21:ARG:CZ	39:DR:93:PHE:CE1	2.90	0.54
2:AB:206:ALA:O	2:AB:208:ARG:N	2.40	0.54
3:AC:70:THR:O	3:AC:106:VAL:N	2.40	0.54
22:DA:2676:C:OP1	32:DK:31:ARG:NH2	2.41	0.54
3:CC:121:THR:HB	3:CC:187:SER:OG	2.07	0.54
1:AA:687:A:C2	1:AA:700:G:N3	2.76	0.54
1:AA:963:G:H2'	1:AA:963:G:N3	2.22	0.54
29:BH:103:VAL:HG21	29:BH:132:PHE:CE1	2.42	0.54
1:AA:686:U:O4	1:AA:703:G:O2'	2.15	0.54
50:D2:44:VAL:O	50:D2:45:SER:OG	2.20	0.54
1:AA:1181:G:O2'	1:AA:1182:G:C5	2.61	0.54
22:DA:1827:U:O4'	22:DA:1970:A:O2'	2.25	0.54
22:BA:2820:A:OP1	57:BA:3811:HOH:O	2.19	0.54
2:AB:119:THR:O	2:AB:120:GLN:HB2	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:120:GLN:O	2:AB:120:GLN:HG2	2.07	0.54
1:AA:981:U:O2'	14:AN:61:ARG:NE	2.41	0.54
22:DA:1248:G:N7	26:DE:46:GLN:NE2	2.55	0.54
30:DI:90:SER:HB3	30:DI:93:PRO:HG3	1.90	0.54
4:CD:105:MET:SD	4:CD:143:VAL:CG1	2.95	0.54
5:AE:153:VAL:HG11	8:AH:99:LEU:HD13	1.88	0.54
22:DA:327:G:H2'	22:DA:328:U:O4'	2.08	0.54
22:BA:1438:U:H3'	57:BA:3634:HOH:O	2.07	0.54
22:BA:1731:G:N1	22:BA:1733:G:C4	2.75	0.54
8:CH:7:ILE:HB	8:CH:77:ARG:NH1	2.22	0.54
24:DC:82:GLU:OE1	24:DC:103:TYR:OH	2.24	0.54
22:DA:2449:U:H4'	22:DA:2450:A:OP1	2.08	0.54
22:DA:297:G:OP1	42:DU:92:LYS:HD3	2.07	0.54
1:AA:1481:U:O2'	1:AA:1482:G:H5'	2.08	0.54
22:BA:1355:G:C6	22:BA:1356:G:N7	2.75	0.54
22:BA:2052:A:C2	22:BA:2053:G:C8	2.95	0.54
22:DA:108:G:O2'	22:DA:347:A:N3	2.37	0.54
22:BA:2887:A:H5'	22:BA:2888:C:OP2	2.08	0.54
15:CO:10:LYS:O	15:CO:14:GLU:HG3	2.08	0.54
26:BE:84:THR:HG22	26:BE:85:PHE:CD2	2.43	0.54
27:DF:43:ALA:O	27:DF:47:LYS:HD2	2.08	0.54
22:DA:1544:A:N6	22:DA:1545:A:C6	2.75	0.54
43:DV:21:ARG:HA	43:DV:25:LYS:O	2.06	0.54
22:DA:2293:G:H2'	22:DA:2294:G:O4'	2.07	0.54
24:BC:31:ALA:HB3	24:BC:32:PRO:HD3	1.90	0.54
53:B5:122:GLY:HA3	53:B5:146:VAL:CB	2.38	0.54
2:AB:88:ASP:HB2	2:AB:221:VAL:HG12	1.88	0.54
22:DA:1833:C:C4	22:DA:1834:U:C4	2.96	0.54
22:BA:842:U:C2	22:BA:843:G:C8	2.96	0.54
22:BA:1061:U:H3'	22:BA:1062:G:H5'	1.90	0.54
22:BA:2305:U:N3	27:BF:151:GLY:HA3	2.22	0.54
22:DA:224:U:OP2	22:DA:408:G:N2	2.40	0.54
22:BA:1829:A:C8	22:BA:1830:C:C6	2.95	0.54
39:DR:101:ILE:O	39:DR:103:ALA:N	2.41	0.54
22:BA:2675:A:C2'	22:BA:2676:C:H5'	2.38	0.54
53:B5:43:GLU:O	53:B5:213:VAL:HA	2.08	0.54
22:BA:2392:A:C2	22:BA:2393:U:C2	2.96	0.54
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.43	0.54
10:AJ:32:THR:O	10:AJ:33:GLY:O	2.25	0.54
1:AA:622:A:C8	1:AA:623:C:C6	2.96	0.54
22:DA:14:A:C6	22:DA:526:A:C2	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:38:VAL:HG11	5:CE:114:VAL:HA	1.88	0.54
2:AB:187:VAL:O	2:AB:187:VAL:CG2	2.56	0.54
21:CU:34:ARG:NE	21:CU:35:ARG:HB2	2.23	0.54
22:BA:2076:U:O5'	22:BA:2076:U:O2	2.26	0.54
17:CQ:16:LYS:C	17:CQ:17:MET:SD	2.86	0.54
5:AE:50:TYR:CZ	5:AE:134:ILE:HD11	2.42	0.54
36:BO:51:ALA:HB3	36:BO:78:VAL:HG13	1.90	0.54
36:DO:97:PHE:CB	36:DO:103:VAL:HG11	2.37	0.54
1:AA:1204:A:OP1	57:AA:1780:HOH:O	2.18	0.54
22:DA:572:A:H5''	22:DA:573:U:OP2	2.07	0.54
22:BA:492:A:H2'	22:BA:493:G:O4'	2.08	0.54
4:AD:50:ASP:O	4:AD:54:GLN:HB2	2.07	0.54
33:BL:81:ASP:CG	33:BL:100:ILE:HD13	2.28	0.54
28:DG:140:VAL:O	28:DG:144:VAL:HG23	2.06	0.54
3:CC:181:ASP:O	3:CC:203:PHE:HA	2.08	0.54
22:BA:990:A:H5''	22:BA:991:C:P	2.48	0.54
28:BG:63:ALA:O	28:BG:67:THR:HG22	2.08	0.54
2:CB:102:THR:HG22	2:CB:175:GLU:OE1	2.06	0.54
13:AM:11:ASP:O	13:AM:12:HIS:HB2	2.08	0.54
22:DA:2200:C:O2	22:DA:2226:C:N4	2.41	0.54
22:BA:1606:C:HO2'	22:BA:1607:C:P	2.30	0.54
1:AA:1367:C:C4	1:AA:1368:A:N7	2.76	0.54
22:DA:846:U:HO2'	22:DA:847:U:P	2.31	0.54
22:DA:847:U:O2	22:DA:847:U:H2'	2.06	0.54
19:AS:5:LEU:C	19:AS:6:LYS:HG3	2.28	0.54
1:AA:453:G:H2'	1:AA:454:G:C8	2.43	0.54
53:B5:42:VAL:HG12	53:B5:214:TYR:HA	1.90	0.54
22:BA:1413:A:C6	22:BA:1414:C:N3	2.75	0.54
12:CL:19:SER:OG	12:CL:21:VAL:HG23	2.07	0.54
1:AA:1032:G:H5'	1:AA:1033:G:OP2	2.07	0.54
1:AA:147:G:N2	1:AA:176:C:C2	2.76	0.54
22:DA:1027:A:C6	22:DA:1126:A:C4	2.96	0.54
44:BW:41:ARG:NH1	44:BW:41:ARG:HG3	2.22	0.54
1:AA:277:C:C2'	1:AA:278:G:H5'	2.38	0.54
22:DA:936:A:C2	22:DA:937:C:C2	2.96	0.54
16:AP:51:ARG:NH1	16:AP:51:ARG:HB3	2.23	0.54
22:BA:1355:G:C2	22:BA:1356:G:C8	2.96	0.54
22:BA:2771:C:H2'	22:BA:2772:C:C6	2.43	0.54
22:DA:1032:A:H4'	52:D4:16:ILE:HD12	1.89	0.54
1:CA:517:G:O6	57:CA:1761:HOH:O	2.18	0.54
22:BA:1224:U:H4'	39:BR:88:GLY:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:105:C:H2'	22:DA:106:C:C6	2.43	0.54
36:DO:50:ALA:O	36:DO:81:ARG:NH2	2.41	0.54
1:AA:760:G:C5	1:AA:761:G:C8	2.96	0.54
24:BC:36:LYS:O	24:BC:37:ASN:CB	2.54	0.54
22:BA:752:A:C2	22:BA:1781:U:C2	2.96	0.54
43:BV:35:GLU:HB2	43:BV:93:ARG:CZ	2.37	0.54
21:CU:39:GLU:HA	21:CU:42:THR:OG1	2.08	0.54
11:AK:25:ALA:HA	11:AK:30:THR:HG22	1.90	0.54
8:CH:32:LEU:HD12	8:CH:32:LEU:O	2.08	0.54
22:BA:2112:G:H2'	22:BA:2112:G:N3	2.23	0.54
11:CK:14:LYS:HD2	11:CK:14:LYS:C	2.29	0.54
29:BH:95:GLY:CA	1:CA:368:U:OP1	2.56	0.54
22:BA:1179:G:C6	22:BA:1180:U:H1'	2.42	0.54
1:CA:254:G:OP1	17:CQ:69:LYS:O	2.26	0.54
22:DA:247:G:C8	22:DA:249:C:C6	2.96	0.54
22:BA:1074:G:C2'	22:BA:1075:C:H5'	2.38	0.54
21:CU:10:GLU:CG	21:CU:11:PRO:HD3	2.33	0.54
1:CA:1150:A:N6	1:CA:1151:A:H62	2.06	0.54
1:CA:1361:G:H2'	1:CA:1362:A:H5''	1.90	0.54
1:CA:920:U:H2'	1:CA:921:U:C6	2.43	0.54
7:AG:146:GLU:HG3	7:AG:149:LYS:HE2	1.90	0.54
22:BA:2502:G:H5'	22:BA:2503:A:H5''	1.89	0.54
22:DA:776:G:N7	22:DA:793:A:C4	2.76	0.54
11:CK:16:VAL:O	11:CK:17:SER:OG	2.16	0.54
1:CA:518:C:H2'	1:CA:530:G:H8	1.72	0.54
22:DA:218:A:N7	57:DA:3223:HOH:O	2.33	0.54
30:DI:22:PRO:HB2	30:DI:23:PRO:HD3	1.89	0.54
1:AA:521:G:OP2	12:AL:51:LYS:NZ	2.20	0.54
3:CC:177:THR:HG22	3:CC:179:ARG:HG3	1.90	0.54
1:CA:1317:C:OP1	14:CN:57:PRO:HD2	2.07	0.54
1:CA:1227:A:OP2	13:CM:110:LYS:HE3	2.08	0.54
19:AS:64:ASP:HB3	27:BF:115:ARG:NH2	2.23	0.54
1:AA:842:U:H3'	1:AA:843:U:C5'	2.38	0.54
28:DG:98:VAL:CG2	28:DG:125:CYS:SG	2.96	0.54
1:CA:773:G:C2	1:CA:807:A:C2	2.96	0.54
17:AQ:52:GLU:N	17:AQ:52:GLU:OE1	2.38	0.54
34:DM:42:THR:O	34:DM:46:ILE:HG13	2.08	0.54
3:AC:153:VAL:HG23	3:AC:157:LEU:HD22	1.90	0.54
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.42	0.54
22:BA:2757:A:N1	28:BG:67:THR:CG2	2.62	0.54
22:BA:1916:A:C2	22:BA:1917:U:H1'	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:607:U:O4	22:DA:620:G:H5'	2.08	0.54
22:BA:743:A:O3'	57:BA:3656:HOH:O	2.19	0.54
22:BA:674:G:H5''	26:BE:71:GLY:N	2.23	0.54
1:AA:792:A:H1'	1:AA:794:A:N7	2.23	0.54
22:BA:1084:A:H2'	22:BA:1085:A:C8	2.43	0.54
9:AI:36:GLU:HA	9:AI:40:GLY:HA3	1.90	0.54
22:DA:1069:A:N1	22:DA:1073:A:N7	2.56	0.54
22:DA:1087:G:C4	22:DA:1089:A:H1'	2.43	0.54
23:BB:78:A:C2	23:BB:99:A:C4	2.95	0.54
22:BA:1115:G:C4	22:BA:1116:G:C8	2.96	0.54
4:AD:99:ASP:N	4:AD:99:ASP:OD1	2.41	0.54
1:AA:73:C:O2'	1:AA:74:A:H5''	2.08	0.54
22:BA:370:G:C8	57:BA:3562:HOH:O	2.60	0.54
9:AI:26:GLY:N	9:AI:59:GLU:HA	2.23	0.54
37:DP:22:PRO:HA	37:DP:47:VAL:CG1	2.37	0.54
4:AD:174:ASP:O	4:AD:175:ALA:CB	2.56	0.54
26:DE:52:VAL:HG11	26:DE:81:GLY:HA3	1.88	0.54
22:BA:585:G:H4'	22:BA:586:A:OP1	2.07	0.54
22:BA:415:A:C2	22:BA:2409:G:C2	2.96	0.54
41:BT:54:GLU:HB3	41:BT:88:LYS:HG3	1.89	0.54
27:BF:80:ARG:HG2	27:BF:81:GLN:N	2.23	0.54
22:BA:22:C:H2'	22:BA:23:G:O5'	2.08	0.54
22:BA:721:A:H2'	22:BA:722:A:C8	2.42	0.54
9:CI:31:ASN:ND2	9:CI:38:TYR:OH	2.41	0.54
28:BG:124:GLU:CD	28:BG:125:CYS:H	2.10	0.54
1:AA:1395:C:O2'	1:AA:1401:G:O2'	2.25	0.54
57:BA:3805:HOH:O	35:BN:11:ASN:ND2	2.41	0.54
22:DA:276:U:O2'	22:DA:278:A:N7	2.41	0.54
1:CA:1034:G:H2'	1:CA:1035:A:C8	2.43	0.54
31:BJ:114:LEU:HG	31:BJ:118:MET:CE	2.38	0.54
20:AT:58:VAL:HG12	20:AT:72:ALA:CB	2.38	0.54
22:BA:2286:G:OP2	49:B1:6:ARG:NH2	2.41	0.54
1:AA:415:A:OP2	57:AA:1720:HOH:O	2.19	0.54
1:AA:880:C:C2'	1:AA:881:G:H5'	2.37	0.54
29:DH:79:THR:HA	29:DH:145:ASN:HB2	1.89	0.54
22:BA:2469:A:C6	22:BA:2482:A:C8	2.96	0.54
5:CE:104:GLY:HA3	5:CE:122:ASN:HA	1.90	0.53
5:CE:122:ASN:O	5:CE:123:VAL:O	2.26	0.53
6:CF:9:MET:HB2	6:CF:85:ILE:HG13	1.89	0.53
39:BR:49:ILE:C	39:BR:51:VAL:O	2.46	0.53
13:AM:10:PRO:O	13:AM:11:ASP:CB	2.54	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1056:G:H5''	22:BA:1057:A:H5'	1.90	0.53
29:DH:32:PRO:O	29:DH:33:GLN:HB2	2.08	0.53
7:AG:146:GLU:CG	7:AG:149:LYS:HE2	2.38	0.53
16:CP:44:SER:O	16:CP:46:LYS:HG3	2.07	0.53
2:AB:62:SER:C	2:AB:64:LYS:N	2.59	0.53
5:AE:80:THR:OG1	5:AE:81:LEU:N	2.41	0.53
22:DA:187:G:O2'	22:DA:1365:A:N3	2.34	0.53
6:AF:47:LEU:HD13	6:AF:51:ILE:HG23	1.90	0.53
22:DA:228:C:C5'	22:DA:229:C:C6	2.91	0.53
22:DA:1356:G:N2	22:DA:1357:C:H1'	2.23	0.53
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.72	0.53
42:BU:99:ASN:OD1	42:BU:99:ASN:C	2.47	0.53
1:AA:338:A:C5	1:AA:339:C:C5	2.96	0.53
22:BA:1357:C:H2'	22:BA:1358:G:O4'	2.08	0.53
1:CA:1309:G:C6	1:CA:1329:A:N1	2.77	0.53
28:BG:40:ALA:HA	28:BG:58:TYR:CD1	2.43	0.53
17:AQ:50:ASN:O	17:AQ:51:ASN:C	2.46	0.53
34:BM:20:LEU:HD12	43:BV:81:PRO:HG2	1.88	0.53
9:CI:13:LYS:O	9:CI:14:SER:HB3	2.07	0.53
46:DY:21:LEU:HA	46:DY:25:GLN:HB3	1.90	0.53
1:CA:104:G:C2	1:CA:105:G:C8	2.96	0.53
7:AG:70:ARG:HG3	7:AG:96:ARG:HG2	1.90	0.53
40:BS:34:ASP:OD2	48:B0:37:LYS:NZ	2.41	0.53
1:CA:1279:G:OP2	10:CJ:11:LYS:NZ	2.41	0.53
10:CJ:26:VAL:HG22	10:CJ:36:VAL:HG11	1.89	0.53
33:BL:61:LEU:HB3	33:BL:62:PRO:HD2	1.90	0.53
22:BA:332:A:C2	22:BA:335:C:C5	2.96	0.53
22:BA:2094:A:OP1	29:BH:22:LYS:HE3	2.08	0.53
22:DA:2259:U:H1'	22:DA:2427:C:C2	2.43	0.53
22:BA:1167:C:H2'	22:BA:1168:G:H5''	1.89	0.53
5:CE:81:LEU:N	5:CE:81:LEU:CD1	2.70	0.53
1:CA:1074:G:H4'	2:CB:103:ASN:HB3	1.90	0.53
22:DA:1075:C:H2'	22:DA:1076:C:C6	2.43	0.53
22:BA:1789:A:H5''	24:BC:219:THR:O	2.08	0.53
13:AM:29:ARG:NH2	13:AM:63:PHE:HB2	2.23	0.53
19:AS:5:LEU:O	19:AS:6:LYS:HD2	2.07	0.53
22:DA:396:G:H1'	45:DX:29:PHE:HB3	1.89	0.53
1:AA:872:A:C4	1:AA:874:G:C8	2.97	0.53
30:BI:57:VAL:HG22	30:BI:58:VAL:N	2.23	0.53
9:CI:120:LYS:O	9:CI:121:ALA:HB3	2.09	0.53
42:BU:97:LYS:O	42:BU:98:SER:OG	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:15:ALA:HB3	13:AM:34:LEU:HD21	1.90	0.53
22:BA:1046:A:H3'	22:BA:1047:G:H5'	1.90	0.53
1:AA:1346:A:N7	7:AG:10:ARG:NH2	2.57	0.53
17:AQ:4:LYS:O	17:AQ:4:LYS:HD2	2.08	0.53
22:DA:2467:C:N4	22:DA:2468:A:C6	2.76	0.53
22:DA:78:U:OP2	46:DY:2:LYS:HD2	2.09	0.53
1:AA:1211:U:O2'	1:AA:1212:U:P	2.66	0.53
1:AA:989:U:H2'	1:AA:990:C:H6	1.72	0.53
1:CA:1416:G:N2	1:CA:1485:U:H1'	2.22	0.53
22:BA:1225:G:C2	22:BA:1226:A:C2	2.96	0.53
28:BG:124:GLU:CD	28:BG:125:CYS:N	2.61	0.53
22:BA:1712:U:OP2	22:BA:1713:A:O2'	2.17	0.53
38:BQ:49:ASP:HA	38:BQ:52:GLN:HB2	1.89	0.53
22:DA:2189:U:H2'	22:DA:2190:G:H5''	1.90	0.53
20:AT:70:ASN:N	20:AT:70:ASN:OD1	2.40	0.53
22:DA:2491:U:H5''	22:DA:2570:G:H5''	1.89	0.53
22:BA:1122:G:N3	22:BA:1122:G:H2'	2.22	0.53
34:BM:78:LEU:O	34:BM:80:VAL:HG23	2.08	0.53
23:BB:116:G:H4'	36:BO:54:VAL:O	2.08	0.53
1:AA:1407:C:O2'	22:BA:1912:A:C6	2.51	0.53
22:BA:1917:U:H2'	22:BA:1917:U:O2	2.09	0.53
1:CA:485:U:O2'	1:CA:486:U:OP1	2.22	0.53
30:BI:106:LEU:HA	30:BI:109:ILE:HB	1.91	0.53
38:BQ:105:ALA:O	38:BQ:108:ALA:HB3	2.07	0.53
22:DA:2550:G:C6	22:DA:2551:C:C4	2.97	0.53
2:CB:53:ALA:C	2:CB:54:LEU:HD22	2.29	0.53
1:AA:151:A:H2'	1:AA:152:A:O4'	2.08	0.53
22:DA:1045:C:O2	22:DA:1047:G:N1	2.41	0.53
1:CA:1007:U:H2'	1:CA:1008:U:H5''	1.89	0.53
10:AJ:91:ASP:C	10:AJ:92:LEU:HG	2.29	0.53
2:AB:106:THR:O	2:AB:107:VAL:HG23	2.08	0.53
1:CA:1055:A:N6	1:CA:1206:G:C5	2.76	0.53
46:DY:45:GLN:O	46:DY:47:ARG:N	2.41	0.53
26:DE:52:VAL:HG21	26:DE:81:GLY:CA	2.37	0.53
22:DA:2019:A:H4'	38:DQ:34:VAL:CG2	2.37	0.53
22:DA:1993:U:H4'	25:DD:133:THR:HG21	1.91	0.53
30:DI:21:SER:HB3	30:DI:22:PRO:HD3	1.89	0.53
22:BA:2317:A:H2'	22:BA:2318:G:H5'	1.90	0.53
34:BM:69:PRO:O	34:BM:70:ASP:CG	2.47	0.53
22:DA:1525:A:C6	22:DA:1526:C:C4	2.97	0.53
28:DG:176:LYS:O	28:DG:177:LYS:HB2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1796:U:H2'	22:DA:1797:G:C8	2.43	0.53
16:CP:6:LEU:HD23	16:CP:17:TYR:CG	2.43	0.53
1:AA:102:G:N2	1:AA:103:U:C2	2.77	0.53
35:DN:54:LEU:HD23	35:DN:66:ALA:HB2	1.90	0.53
5:AE:13:GLU:HB3	5:AE:39:VAL:HG12	1.91	0.53
27:BF:63:GLN:NE2	27:BF:90:THR:O	2.41	0.53
11:CK:21:ALA:HB3	11:CK:84:VAL:HG13	1.90	0.53
7:CG:125:SER:C	7:CG:127:ALA:H	2.11	0.53
49:B1:47:VAL:HG13	49:B1:48:ILE:N	2.22	0.53
42:BU:49:VAL:O	42:BU:51:ALA:N	2.41	0.53
1:CA:399:G:C6	1:CA:400:C:C4	2.97	0.53
1:AA:237:G:H2'	1:AA:238:A:O4'	2.09	0.53
27:DF:135:GLN:OE1	27:DF:135:GLN:N	2.41	0.53
24:DC:51:THR:CG2	24:DC:54:ILE:HD11	2.38	0.53
42:DU:16:GLY:O	42:DU:17:LYS:HB2	2.07	0.53
22:BA:996:A:C2	22:BA:997:G:N9	2.77	0.53
1:AA:533:A:P	57:AA:1848:HOH:O	2.66	0.53
1:CA:57:G:C6	1:CA:58:C:C4	2.96	0.53
22:DA:2043:C:H1'	22:DA:2779:U:O4	2.08	0.53
30:BI:105:GLN:O	30:BI:106:LEU:HB2	2.08	0.53
39:BR:39:LEU:O	39:BR:40:MET:HB2	2.09	0.53
39:BR:49:ILE:CG2	39:BR:52:PRO:C	2.77	0.53
22:BA:2211:A:O2'	22:BA:2212:A:P	2.67	0.53
10:AJ:65:TYR:HB3	14:AN:96:LEU:HD11	1.90	0.53
29:DH:27:ARG:HE	45:DX:60:ASP:CB	2.20	0.53
1:AA:1374:A:C2	1:AA:1375:A:C4	2.96	0.53
50:B2:43:THR:O	50:B2:44:VAL:CG1	2.56	0.53
31:DJ:78:THR:OG1	31:DJ:80:HIS:HB2	2.08	0.53
3:AC:25:ASN:O	3:AC:26:THR:C	2.46	0.53
1:AA:205:A:H2'	1:AA:205:A:N3	2.22	0.53
22:DA:995:C:N3	31:DJ:3:THR:N	2.55	0.53
31:DJ:5:THR:HG22	31:DJ:6:ALA:O	2.09	0.53
21:CU:28:VAL:O	21:CU:32:VAL:HG23	2.09	0.53
1:CA:78:A:N6	1:CA:79:G:C6	2.76	0.53
22:DA:1783:A:H5'	22:DA:2608:G:H4'	1.90	0.53
1:CA:1277:C:O2'	1:CA:1279:G:H1'	2.07	0.53
1:AA:728:A:C6	1:AA:729:A:C6	2.96	0.53
1:AA:1378:C:H2'	1:AA:1379:G:O5'	2.08	0.53
22:BA:1268:A:C2	22:BA:2013:A:C4	2.96	0.53
39:DR:19:THR:CG2	39:DR:95:ASP:HB3	2.39	0.53
23:BB:34:A:O2'	23:BB:35:C:H5"	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2652:C:C4	22:DA:2653:U:C4	2.97	0.53
22:DA:1422:G:C6	22:DA:1423:G:C5	2.96	0.53
1:CA:123:U:OP1	1:CA:311:C:O2'	2.22	0.53
22:DA:2581:G:H1'	22:DA:2582:G:N7	2.23	0.53
22:DA:329:G:O4'	22:DA:477:A:H1'	2.08	0.53
2:AB:35:ARG:HE	2:AB:35:ARG:HA	1.74	0.53
22:BA:2884:U:O4'	22:BA:2884:U:O2	2.22	0.53
25:BD:61:THR:OG1	25:BD:63:PRO:HD2	2.08	0.53
13:AM:80:LEU:HD21	13:AM:87:ARG:HE	1.74	0.53
36:DO:15:ARG:O	36:DO:18:LEU:HB2	2.09	0.53
34:BM:72:PRO:O	34:BM:73:ILE:HD13	2.07	0.53
41:DT:62:VAL:HG12	41:DT:63:VAL:N	2.24	0.53
22:DA:451:U:H2'	22:DA:453:A:N7	2.24	0.53
17:AQ:15:ASP:HA	17:AQ:21:ILE:CD1	2.37	0.53
22:BA:700:G:O2'	22:BA:1632:A:N3	2.29	0.53
4:CD:145:ILE:N	4:CD:145:ILE:HD12	2.23	0.53
39:DR:47:VAL:HG12	39:DR:47:VAL:O	2.09	0.53
23:BB:78:A:H2'	23:BB:79:G:O4'	2.08	0.53
5:AE:96:MET:HB3	5:AE:125:ALA:HB2	1.89	0.53
22:BA:2020:A:C2	22:BA:2035:G:C6	2.97	0.53
49:D1:50:LYS:O	49:D1:51:GLU:HB3	2.07	0.53
22:DA:1028:A:N6	22:DA:1125:G:H2'	2.24	0.53
4:CD:29:ASP:C	4:CD:31:LYS:H	2.12	0.53
1:CA:1201:A:H1'	1:CA:1202:U:OP2	2.09	0.53
22:DA:2321:U:H5'	22:DA:2322:A:OP2	2.07	0.53
15:CO:70:LEU:HD13	15:CO:78:TYR:HA	1.89	0.53
11:CK:25:ALA:HA	11:CK:30:THR:HG22	1.88	0.53
25:DD:7:LYS:HD3	25:DD:198:GLY:HA2	1.91	0.53
28:BG:60:ASP:O	28:BG:61:GLY:C	2.47	0.53
1:CA:818:G:O2'	1:CA:819:A:H5'	2.09	0.53
29:DH:103:VAL:HA	29:DH:106:ALA:HB3	1.89	0.53
22:BA:1584:U:H2'	22:BA:1584:U:O2	2.07	0.53
22:DA:1866:A:N7	22:DA:1867:G:C8	2.76	0.53
1:CA:354:G:C2	1:CA:355:C:C5	2.96	0.53
38:BQ:76:TYR:CD2	38:BQ:76:TYR:C	2.81	0.53
22:BA:1131:G:OP1	31:BJ:82:GLY:HA2	2.08	0.53
22:DA:35:G:N2	22:DA:450:G:H1'	2.23	0.53
22:DA:2133:G:N3	22:DA:2158:A:N1	2.57	0.53
22:DA:160:A:C6	22:DA:161:A:C6	2.96	0.53
21:CU:11:PRO:C	21:CU:12:PHE:CG	2.80	0.53
1:AA:275:G:C2	1:AA:276:G:C8	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1124:G:N2	1:CA:1127:G:C2	2.76	0.53
46:BY:5:GLU:C	46:BY:7:ARG:N	2.61	0.53
7:AG:27:VAL:HG23	7:AG:28:ASN:N	2.24	0.53
22:BA:1435:G:HO2'	22:BA:1436:G:H5'	1.74	0.53
22:BA:137:U:H2'	22:BA:140:C:N1	2.23	0.53
32:BK:70:ARG:HD3	32:BK:76:VAL:HG22	1.91	0.53
2:AB:147:SER:O	2:AB:148:LEU:CB	2.56	0.53
1:CA:1125:U:C6	10:CJ:40:ILE:HD13	2.44	0.53
24:DC:262:ARG:HG2	24:DC:263:THR:HG23	1.90	0.53
26:DE:181:ILE:HD13	33:DL:2:ARG:NH2	2.24	0.53
1:AA:190:A:C8	1:AA:191:G:C8	2.97	0.53
7:AG:120:LEU:HD22	7:AG:124:LEU:HD23	1.90	0.53
1:CA:1250:A:C6	1:CA:1251:A:C6	2.96	0.53
22:BA:2665:A:C2	22:BA:2666:C:C6	2.96	0.53
1:CA:1373:G:H5''	7:CG:36:LYS:HB2	1.90	0.53
22:DA:18:U:O4	57:DA:3205:HOH:O	2.14	0.53
2:CB:20:THR:OG1	2:CB:21:ARG:N	2.41	0.53
14:AN:25:ALA:O	14:AN:28:LYS:HG2	2.08	0.53
11:AK:110:ILE:HB	21:AU:6:VAL:HG22	1.91	0.53
1:AA:1066:C:H2'	1:AA:1066:C:O2	2.08	0.53
22:DA:770:G:H1'	22:DA:1379:U:C4	2.44	0.53
2:CB:128:LYS:O	2:CB:129:LEU:HB2	2.09	0.53
22:DA:2244:U:C5	22:DA:2245:U:C4	2.97	0.53
22:BA:749:A:C6	22:BA:1618:A:C2	2.97	0.53
22:BA:2347:C:H2'	22:BA:2348:U:C6	2.44	0.53
5:CE:126:LYS:HE2	5:CE:126:LYS:HA	1.91	0.53
22:BA:1779:U:H2'	57:BA:3694:HOH:O	2.07	0.53
6:CF:88:MET:SD	6:CF:90:MET:SD	3.07	0.53
1:CA:1101:A:H61	2:CB:102:THR:CG2	2.20	0.53
2:CB:103:ASN:O	2:CB:103:ASN:OD1	2.27	0.53
22:BA:782:A:C2	24:BC:225:MET:SD	3.02	0.53
22:DA:56:A:C2	22:DA:57:C:C2	2.96	0.53
22:DA:1258:U:H2'	22:DA:1259:G:H8	1.68	0.53
22:DA:1073:A:O2'	22:DA:2474:U:H5'	2.08	0.53
26:BE:23:PHE:CD1	26:BE:111:GLU:HG3	2.44	0.53
50:B2:43:THR:O	50:B2:44:VAL:CB	2.57	0.53
22:BA:2153:C:H2'	22:BA:2154:A:O4'	2.07	0.53
1:AA:561:U:O2'	1:AA:562:U:P	2.66	0.53
4:AD:97:ARG:HB3	4:AD:99:ASP:OD1	2.09	0.53
1:AA:74:A:N3	1:AA:97:G:C2	2.77	0.53
33:DL:77:ILE:CD1	33:DL:108:ALA:HB1	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:7:ASP:OD2	26:BE:8:ALA:N	2.39	0.53
22:DA:1364:G:H5''	45:DX:3:ARG:NH1	2.23	0.53
1:AA:946:A:H2'	1:AA:947:G:C8	2.44	0.53
4:CD:48:LEU:HD21	4:CD:52:GLY:C	2.29	0.53
16:AP:78:VAL:O	16:AP:80:LYS:N	2.41	0.53
16:AP:77:GLU:C	16:AP:79:ASN:H	2.11	0.53
1:CA:435:A:C2	1:CA:436:C:H1'	2.44	0.53
22:BA:2591:C:H2'	22:BA:2592:G:H8	1.72	0.53
3:CC:64:ILE:HG12	3:CC:66:VAL:HG23	1.90	0.53
41:BT:71:GLY:O	41:BT:73:ARG:N	2.42	0.53
1:CA:657:U:O2	15:CO:22:THR:HG23	2.09	0.53
12:AL:88:LYS:HG3	12:AL:88:LYS:O	2.08	0.53
1:CA:1417:G:C6	1:CA:1482:G:C6	2.97	0.53
10:CJ:26:VAL:HG12	10:CJ:27:GLU:N	2.23	0.53
33:BL:85:VAL:HG11	33:BL:94:THR:HG22	1.91	0.53
22:DA:2070:A:C2	22:DA:2442:C:C2	2.97	0.53
1:CA:1441:A:C8	1:CA:1442:G:C8	2.97	0.53
29:DH:37:VAL:CG2	29:DH:38:PRO:HD2	2.39	0.53
30:DI:29:GLY:HA2	30:DI:33:VAL:HB	1.91	0.53
3:AC:55:ILE:HG13	3:AC:55:ILE:O	2.08	0.53
1:CA:247:G:C6	1:CA:278:G:C2	2.97	0.53
12:CL:16:VAL:O	12:CL:17:ALA:O	2.27	0.53
22:BA:102:U:H4'	22:BA:103:A:OP1	2.08	0.53
1:CA:743:A:C6	1:CA:744:C:C4	2.97	0.53
1:AA:1511:G:H2'	1:AA:1512:U:O4'	2.09	0.53
22:DA:2648:G:C4	22:DA:2673:G:C2	2.97	0.53
15:AO:55:GLY:O	15:AO:58:ARG:HB3	2.09	0.53
1:AA:1533:C:H5'	1:AA:1534:A:OP1	2.09	0.53
22:DA:1031:G:H5''	52:D4:8:LYS:HE3	1.89	0.53
29:BH:147:VAL:CG1	29:BH:149:GLU:HG3	2.36	0.53
5:CE:122:ASN:CG	5:CE:123:VAL:N	2.62	0.53
33:DL:58:TYR:O	51:D3:13:ARG:HD3	2.08	0.53
22:BA:1066:U:O2	22:BA:1069:A:N7	2.42	0.53
35:DN:87:PHE:CZ	35:DN:94:TYR:HB3	2.44	0.53
1:CA:527:G:C6	1:CA:528:C:C5	2.97	0.53
35:BN:103:ARG:NE	35:BN:110:MET:HE2	2.24	0.53
9:AI:36:GLU:N	9:AI:36:GLU:OE2	2.42	0.53
22:DA:2503:A:C8	55:DA:3001:VIF:H1	2.44	0.53
10:AJ:15:HIS:CG	10:AJ:16:ARG:N	2.76	0.53
4:CD:145:ILE:HG22	4:CD:146:ARG:O	2.08	0.53
1:AA:261:U:C5	20:AT:74:ARG:NH1	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:31:VAL:HB	29:DH:32:PRO:HD3	1.89	0.53
2:AB:154:MET:CE	2:AB:158:PRO:HG3	2.39	0.53
34:BM:135:VAL:O	34:BM:136:MET:O	2.27	0.53
13:CM:14:HIS:HB2	13:CM:17:ILE:HD12	1.91	0.53
22:DA:2001:C:H4'	22:DA:2689:U:H2'	1.91	0.53
37:DP:39:ARG:CG	37:DP:40:LEU:H	2.21	0.53
22:DA:811:U:C2	22:DA:1251:C:C5	2.96	0.53
1:AA:485:U:O4'	1:AA:485:U:O2	2.26	0.53
30:BI:130:GLU:HB3	30:BI:134:ARG:NH2	2.24	0.53
22:BA:1714:U:H5''	22:BA:1715:G:C5'	2.38	0.53
2:AB:222:ARG:HB3	2:AB:222:ARG:CZ	2.38	0.53
22:DA:1831:G:C5	22:DA:1832:C:C4	2.97	0.53
22:DA:242:G:H5''	51:D3:64:TYR:CE2	2.44	0.53
22:DA:2196:C:O2'	22:DA:2197:U:H5'	2.09	0.53
22:DA:1544:A:C6	22:DA:1545:A:C6	2.97	0.53
7:AG:71:PRO:O	7:AG:96:ARG:HG3	2.08	0.53
1:CA:247:G:C6	1:CA:278:G:N1	2.76	0.53
1:AA:581:G:C5	1:AA:758:C:C5	2.97	0.53
2:AB:56:GLU:HA	2:AB:59:LYS:HB3	1.90	0.53
25:BD:16:THR:HG23	25:BD:20:VAL:O	2.09	0.53
11:AK:81:ASN:HB3	11:AK:106:ARG:HB3	1.90	0.53
22:BA:2783:U:H2'	22:BA:2784:U:C6	2.44	0.53
22:BA:1106:G:N2	22:BA:1107:G:H1'	2.22	0.53
29:DH:2:GLN:O	29:DH:3:VAL:HG22	2.09	0.53
41:BT:33:LYS:HG3	41:BT:80:TRP:CE3	2.44	0.53
11:CK:51:GLY:O	11:CK:52:PHE:O	2.26	0.53
42:BU:89:ASP:OD1	42:BU:90:GLY:N	2.42	0.53
34:BM:74:THR:O	34:BM:75:GLU:HG2	2.09	0.53
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.09	0.53
1:CA:1388:C:H2'	1:CA:1389:C:H6	1.74	0.53
22:BA:991:C:C4	22:BA:1185:G:O6	2.62	0.53
44:DW:21:LEU:HD22	44:DW:39:ARG:HB3	1.90	0.53
22:DA:2127:G:C2	22:DA:2162:G:C8	2.97	0.53
19:AS:29:LYS:CB	19:AS:30:PRO:CD	2.87	0.53
22:BA:1090:A:H2'	22:BA:1091:G:H5'	1.90	0.53
2:AB:181:ILE:O	2:AB:183:VAL:HG23	2.09	0.53
22:BA:2191:A:C2	22:BA:2192:U:C2	2.96	0.53
2:CB:53:ALA:O	2:CB:57:LEU:HB2	2.09	0.53
16:AP:4:ILE:HD12	16:AP:67:ILE:HD11	1.91	0.53
1:CA:976:G:P	1:CA:1358:U:O2'	2.67	0.53
3:AC:7:PRO:O	3:AC:11:ARG:HG3	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:7:LEU:HD22	12:CL:12:ARG:CD	2.38	0.53
1:CA:1080:A:OP1	5:CE:52:LYS:HE3	2.09	0.53
6:CF:18:VAL:HA	6:CF:21:MET:HE2	1.90	0.53
22:BA:1358:G:H1'	22:BA:1374:G:N2	2.23	0.53
25:BD:99:GLU:HG2	25:BD:182:ALA:HB2	1.91	0.53
22:DA:1068:G:N3	22:DA:1068:G:H2'	2.24	0.53
10:AJ:57:VAL:O	10:AJ:58:ASN:HB2	2.09	0.53
49:B1:11:LEU:N	49:B1:11:LEU:HD23	2.23	0.53
9:CI:49:ARG:NH2	9:CI:53:GLU:HA	2.24	0.53
22:DA:532:A:N3	22:DA:532:A:H2'	2.24	0.53
22:BA:2073:C:O2	22:BA:2437:G:C2	2.62	0.53
1:CA:1364:U:H2'	1:CA:1364:U:O2	2.08	0.53
24:DC:57:GLY:O	24:DC:58:HIS:O	2.26	0.53
22:BA:841:G:H2'	22:BA:842:U:H6	1.73	0.53
14:CN:36:ALA:HB2	14:CN:42:TRP:CH2	2.44	0.53
29:DH:40:THR:O	29:DH:41:LYS:C	2.48	0.53
1:CA:485:U:OP2	1:CA:485:U:H4'	2.09	0.53
22:BA:499:U:C4	22:BA:500:G:C6	2.97	0.53
22:BA:1084:A:C5	22:BA:1085:A:C6	2.97	0.53
10:AJ:59:LYS:HD2	10:AJ:59:LYS:C	2.29	0.53
22:BA:2127:G:H2'	22:BA:2128:G:C8	2.44	0.53
29:DH:31:VAL:CB	29:DH:32:PRO:CD	2.86	0.53
41:DT:54:GLU:CB	41:DT:88:LYS:HG3	2.39	0.53
1:AA:1374:A:C2	1:AA:1375:A:N9	2.77	0.53
1:AA:321:A:N7	1:AA:328:C:O2'	2.34	0.53
22:BA:580:U:O3'	38:BQ:31:VAL:HG13	2.08	0.53
27:BF:38:MET:HE3	27:BF:152:LEU:HD13	1.90	0.53
1:AA:464:U:C2	1:AA:466:A:H5''	2.45	0.53
4:CD:35:GLU:O	4:CD:38:PRO:HD3	2.09	0.53
22:DA:1125:G:C6	22:DA:1126:A:N6	2.76	0.53
10:AJ:11:LYS:HA	10:AJ:70:HIS:O	2.09	0.53
22:DA:1855:U:C5	22:DA:1856:U:C4	2.97	0.53
41:BT:48:GLN:OE1	41:BT:54:GLU:HA	2.09	0.53
24:DC:145:GLU:HA	24:DC:152:GLY:HA2	1.90	0.53
3:AC:40:ARG:NH1	3:AC:55:ILE:O	2.41	0.53
22:BA:695:G:C2	22:BA:696:G:C8	2.97	0.53
1:CA:608:A:H2'	1:CA:609:A:O4'	2.09	0.53
1:AA:890:G:O2'	1:AA:906:A:N6	2.42	0.53
37:BP:2:SER:O	37:BP:6:LYS:HG2	2.09	0.53
42:DU:88:GLU:O	42:DU:89:ASP:CB	2.56	0.53
3:AC:114:LYS:HD3	3:AC:185:ASN:OD1	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:468:G:N7	50:B2:39:ARG:NH2	2.55	0.53
26:DE:193:VAL:O	26:DE:197:GLU:HB2	2.09	0.53
22:BA:45:G:C5'	22:BA:46:G:OP1	2.57	0.53
1:AA:142:G:H3'	1:AA:143:A:H8	1.74	0.53
43:BV:61:LEU:HD13	43:BV:61:LEU:N	2.24	0.53
22:BA:1984:G:O2'	22:BA:1985:C:H5'	2.09	0.53
1:AA:268:U:H2'	1:AA:269:C:C6	2.44	0.53
18:AR:29:LEU:O	18:AR:31:ASN:N	2.42	0.53
11:AK:17:SER:HA	11:AK:79:ILE:HA	1.90	0.53
22:BA:1073:A:C2'	22:BA:1074:G:H5''	2.39	0.52
1:AA:1160:G:O2'	1:AA:1161:C:P	2.67	0.52
25:DD:13:ARG:HD2	25:DD:15:PHE:CE1	2.44	0.52
39:DR:49:ILE:HD12	39:DR:52:PRO:HA	1.91	0.52
20:CT:6:SER:O	20:CT:8:LYS:N	2.42	0.52
41:DT:13:ALA:O	41:DT:32:LEU:HB2	2.08	0.52
22:DA:811:U:O2	22:DA:1251:C:C6	2.61	0.52
1:AA:345:C:N3	32:BK:117:SER:OG	2.42	0.52
52:B4:36:ARG:HG2	52:B4:37:GLN:N	2.24	0.52
1:AA:257:G:C2	1:AA:258:G:C5	2.96	0.52
25:DD:78:GLY:C	25:DD:80:TRP:CZ3	2.82	0.52
22:BA:2339:C:H2'	22:BA:2340:A:H8	1.72	0.52
24:DC:68:LYS:HD3	24:DC:149:GLY:O	2.09	0.52
30:DI:42:PHE:O	30:DI:46:THR:OG1	2.27	0.52
29:DH:34:GLY:O	29:DH:35:LYS:HB2	2.09	0.52
1:AA:495:A:C2	1:AA:496:A:N6	2.76	0.52
22:DA:2013:A:N1	22:DA:2014:A:C2	2.78	0.52
12:CL:25:GLU:CB	12:CL:27:CYS:SG	2.97	0.52
26:DE:143:LEU:HB3	26:DE:146:VAL:CG1	2.39	0.52
22:DA:1782:U:O4'	22:DA:2609:U:C2	2.62	0.52
22:BA:1717:A:C5	22:BA:1718:G:C8	2.97	0.52
22:DA:500:G:N2	22:DA:502:A:C8	2.77	0.52
22:BA:1842:G:N3	22:BA:1901:A:C2	2.77	0.52
36:DO:39:VAL:N	36:DO:49:VAL:O	2.41	0.52
31:DJ:17:VAL:HG22	31:DJ:55:ILE:HB	1.91	0.52
22:BA:1848:A:H2'	22:BA:1849:G:O4'	2.09	0.52
28:BG:121:ILE:HD12	28:BG:141:ILE:HG22	1.91	0.52
9:CI:30:ILE:HA	9:CI:65:ILE:O	2.08	0.52
22:DA:734:A:C8	22:DA:735:A:C8	2.98	0.52
22:DA:40:U:H2'	22:DA:41:C:C6	2.45	0.52
30:DI:97:LYS:HD2	30:DI:97:LYS:N	2.24	0.52
1:CA:134:G:H2'	1:CA:135:C:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:156:A:H2'	22:BA:157:C:O4'	2.09	0.52
1:AA:702:A:H3'	1:AA:703:G:H5'	1.90	0.52
22:DA:370:G:O2'	22:DA:423:A:H3'	2.10	0.52
22:BA:1912:A:N1	22:BA:1919:A:C4	2.76	0.52
22:BA:1064:C:H2'	22:BA:1064:C:O2	2.08	0.52
21:CU:12:PHE:O	21:CU:13:ASP:CB	2.56	0.52
7:CG:146:GLU:HA	7:CG:149:LYS:HB2	1.91	0.52
22:BA:1494:A:H2'	22:BA:1495:A:O5'	2.09	0.52
22:DA:1605:C:O2	22:DA:1610:A:O2'	2.25	0.52
22:BA:1083:U:O2	22:BA:1086:A:C2	2.61	0.52
22:DA:119:A:H4'	22:DA:120:U:O5'	2.09	0.52
7:AG:40:GLU:HB2	7:AG:44:TYR:CE2	2.44	0.52
40:BS:29:VAL:HG13	40:BS:55:ILE:HD11	1.90	0.52
40:BS:59:GLU:HG3	40:BS:66:ILE:CD1	2.39	0.52
1:AA:568:G:C4	1:AA:569:C:H5	2.28	0.52
24:BC:10:SER:O	24:BC:13:ARG:HB3	2.09	0.52
50:D2:11:LYS:O	50:D2:15:SER:N	2.42	0.52
22:BA:583:G:H2'	22:BA:584:C:O5'	2.10	0.52
22:DA:277:G:H1'	22:DA:361:G:O6	2.10	0.52
21:AU:25:LYS:O	21:AU:29:LEU:HB2	2.09	0.52
39:DR:68:ARG:HD3	39:DR:92:TRP:CZ2	2.44	0.52
26:BE:85:PHE:O	26:BE:86:ALA:O	2.27	0.52
36:BO:79:ALA:HB2	36:BO:110:ALA:HA	1.91	0.52
1:CA:1490:U:H2'	1:CA:1491:G:C8	2.44	0.52
34:DM:56:ALA:C	34:DM:58:LYS:H	2.11	0.52
16:CP:61:VAL:HG21	16:CP:67:ILE:HD11	1.89	0.52
18:CR:49:ALA:O	18:CR:50:LYS:C	2.48	0.52
1:AA:1135:U:C2	1:AA:1137:C:N3	2.77	0.52
1:CA:847:G:H2'	1:CA:848:C:O4'	2.08	0.52
24:DC:171:TYR:CD2	24:DC:185:GLU:HA	2.44	0.52
16:AP:50:THR:O	16:AP:50:THR:HG22	2.09	0.52
10:AJ:67:ILE:O	10:AJ:67:ILE:HG22	2.10	0.52
52:D4:19:ARG:O	52:D4:20:ASP:HB2	2.08	0.52
22:DA:2341:G:C5	22:DA:2342:C:C4	2.98	0.52
35:BN:67:PHE:CE2	35:BN:71:ARG:NH1	2.77	0.52
1:CA:238:A:C5	1:CA:239:U:C5	2.97	0.52
18:CR:24:LYS:O	18:CR:26:ILE:N	2.39	0.52
1:CA:1144:G:C2	1:CA:1145:A:C2	2.97	0.52
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.44	0.52
25:BD:131:ASP:HB3	25:BD:133:THR:O	2.09	0.52
4:AD:99:ASP:OD2	4:AD:115:ARG:NH2	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:55:ALA:HA	35:DN:80:PHE:CE1	2.44	0.52
22:BA:1414:C:C4	22:BA:1415:U:H5	2.26	0.52
1:CA:108:G:C6	20:CT:10:ARG:HG2	2.45	0.52
9:AI:50:GLN:C	9:AI:52:LEU:H	2.13	0.52
6:AF:51:ILE:HD12	6:AF:86:ARG:CZ	2.39	0.52
24:DC:80:ARG:NE	24:DC:82:GLU:OE2	2.41	0.52
1:AA:1000:A:C2	1:AA:1041:G:C2	2.97	0.52
22:DA:987:C:O2'	22:DA:1000:A:N3	2.41	0.52
1:AA:100:G:O6	1:AA:101:A:C6	2.62	0.52
12:CL:25:GLU:HB2	12:CL:27:CYS:SG	2.49	0.52
1:CA:1067:A:H4'	1:CA:1068:G:O5'	2.09	0.52
22:BA:744:U:O4	22:BA:745:G:C6	2.62	0.52
29:BH:77:THR:HA	29:BH:143:ILE:O	2.09	0.52
22:BA:2094:A:C2	22:BA:2196:C:C2	2.98	0.52
34:DM:54:THR:HA	34:DM:57:VAL:HG22	1.91	0.52
32:DK:58:LEU:HD11	32:DK:86:LEU:HB3	1.91	0.52
22:DA:1984:G:C6	22:DA:1985:C:C4	2.97	0.52
3:CC:50:ALA:HB1	3:CC:76:VAL:CG2	2.40	0.52
22:DA:873:C:N3	22:DA:905:A:C2	2.78	0.52
22:DA:2110:G:C6	22:DA:2120:G:C8	2.98	0.52
41:BT:69:ARG:HB2	41:BT:74:ILE:HG22	1.90	0.52
4:AD:62:ARG:NH1	4:AD:69:GLU:HG2	2.25	0.52
22:DA:651:G:P	51:D3:19:LYS:HG3	2.49	0.52
22:DA:624:C:O2'	22:DA:657:U:H5''	2.09	0.52
8:CH:51:VAL:O	8:CH:51:VAL:HG22	2.09	0.52
1:AA:518:C:H5	1:AA:530:G:OP2	1.91	0.52
22:DA:973:A:O4'	22:DA:1188:U:C6	2.62	0.52
1:CA:8:A:C2	5:CE:112:ARG:NH2	2.78	0.52
5:CE:98:PRO:O	5:CE:99:ALA:CB	2.58	0.52
39:BR:51:VAL:HB	39:BR:52:PRO:CD	2.40	0.52
1:AA:520:A:N1	1:AA:536:C:H1'	2.24	0.52
28:DG:91:GLY:O	28:DG:92:VAL:O	2.27	0.52
14:AN:7:LYS:O	14:AN:10:GLU:N	2.42	0.52
2:AB:72:THR:O	2:AB:73:LYS:HB3	2.08	0.52
1:CA:920:U:C2	1:CA:921:U:C5	2.97	0.52
1:CA:922:G:H4'	5:CE:25:VAL:HA	1.92	0.52
46:BY:7:ARG:HG3	46:BY:7:ARG:O	2.09	0.52
22:BA:811:U:C4	33:BL:21:ARG:NH2	2.77	0.52
1:AA:1014:A:C8	1:AA:1015:G:C5	2.97	0.52
1:AA:1144:G:H5''	1:AA:1145:A:OP2	2.09	0.52
1:AA:1313:U:P	19:AS:6:LYS:HB3	2.50	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:51:LEU:O	40:BS:54:ALA:HB3	2.09	0.52
24:BC:13:ARG:CA	24:BC:16:VAL:HG23	2.38	0.52
2:AB:65:GLY:C	2:AB:66:LYS:HD3	2.29	0.52
38:DQ:72:ASN:CB	38:DQ:110:VAL:HG11	2.40	0.52
16:AP:72:ALA:HA	16:AP:75:ILE:HD11	1.92	0.52
48:B0:17:ARG:HB3	48:B0:20:ASP:OD1	2.08	0.52
1:AA:502:A:OP1	12:AL:115:SER:HB3	2.10	0.52
1:CA:972:C:H4'	10:CJ:59:LYS:CG	2.39	0.52
10:CJ:52:LEU:HD22	10:CJ:59:LYS:HA	1.91	0.52
25:DD:78:GLY:CA	25:DD:80:TRP:CH2	2.92	0.52
1:AA:602:A:C2	1:AA:603:U:C2	2.97	0.52
32:BK:36:GLY:HA2	32:BK:62:VAL:O	2.09	0.52
22:DA:1917:U:H2'	22:DA:1918:A:H5'	1.92	0.52
22:BA:2462:C:N4	22:BA:2463:C:N4	2.57	0.52
45:DX:40:VAL:CG2	45:DX:43:GLU:HB2	2.39	0.52
1:CA:206:C:H2'	1:CA:207:C:H4'	1.90	0.52
23:DB:71:C:C2	23:DB:106:G:C2	2.97	0.52
22:DA:489:G:C2	22:DA:491:G:H1'	2.45	0.52
22:BA:2783:U:H2'	22:BA:2784:U:H6	1.74	0.52
15:AO:74:ASP:OD1	15:AO:77:ARG:HD3	2.09	0.52
53:B5:102:GLN:HA	53:B5:105:LEU:CB	2.40	0.52
6:CF:99:ALA:O	6:CF:100:SER:HB3	2.10	0.52
1:CA:1379:G:N2	1:CA:1381:U:O4	2.38	0.52
25:DD:157:LYS:HD2	31:DJ:79:GLY:O	2.10	0.52
6:AF:70:VAL:HA	6:AF:73:GLU:HG2	1.90	0.52
22:BA:2572:A:N7	25:BD:150:GLN:HB2	2.24	0.52
1:AA:1053:G:O5'	1:AA:1054:C:H5'	2.09	0.52
4:CD:168:PRO:HB2	4:CD:171:LEU:HD13	1.91	0.52
48:B0:46:ASP:O	48:B0:53:LYS:HE3	2.10	0.52
37:BP:114:LEU:O	37:BP:115:ASN:HB3	2.09	0.52
21:AU:16:LEU:C	21:AU:18:ARG:HD2	2.30	0.52
1:CA:909:A:C8	1:CA:910:C:C5	2.97	0.52
39:BR:21:ARG:NH1	39:BR:93:PHE:CE1	2.78	0.52
1:CA:1410:A:H2'	1:CA:1411:C:C6	2.45	0.52
41:DT:51:PHE:O	41:DT:53:VAL:N	2.43	0.52
1:AA:841:C:O2	1:AA:843:U:N3	2.43	0.52
35:BN:67:PHE:HE2	35:BN:71:ARG:NH1	2.08	0.52
1:CA:401:C:OP2	4:CD:70:ARG:HD3	2.09	0.52
29:BH:51:ARG:NH1	29:BH:55:GLU:OE1	2.43	0.52
1:CA:131:A:O2'	1:CA:262:A:N3	2.37	0.52
22:BA:816:C:C2	22:BA:1192:G:N2	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:9:LYS:O	20:CT:12:ILE:HG12	2.10	0.52
32:BK:47:ILE:HB	32:BK:48:PRO:HD3	1.92	0.52
22:BA:1392:A:C6	22:BA:1393:A:N1	2.78	0.52
23:BB:75:G:H1'	43:BV:29:ILE:HG13	1.91	0.52
7:CG:71:PRO:HD2	7:CG:96:ARG:O	2.09	0.52
28:DG:80:THR:HG22	28:DG:81:GLU:N	2.24	0.52
3:CC:43:LEU:HD21	3:CC:68:ILE:HD11	1.92	0.52
24:DC:141:VAL:HG11	24:DC:190:ALA:HB1	1.91	0.52
1:AA:1422:G:O3'	32:BK:49:ARG:NH2	2.42	0.52
44:BW:47:ALA:HB2	44:BW:59:LEU:HD22	1.91	0.52
29:DH:72:ILE:O	29:DH:72:ILE:HG22	2.09	0.52
22:DA:957:C:C4	22:DA:2459:A:H1'	2.45	0.52
22:BA:975:A:C2	22:BA:990:A:C8	2.97	0.52
28:BG:67:THR:O	28:BG:71:LEU:HG	2.10	0.52
2:CB:80:VAL:HG13	2:CB:214:LEU:HD11	1.91	0.52
5:CE:76:LEU:HD23	5:CE:120:VAL:HG13	1.91	0.52
1:AA:1074:G:N1	1:AA:1075:U:C2	2.78	0.52
29:DH:23:ALA:O	29:DH:27:ARG:N	2.38	0.52
1:AA:1140:C:O2'	1:AA:1141:C:P	2.67	0.52
1:CA:18:C:C4	1:CA:19:A:N7	2.77	0.52
22:DA:1638:C:H5''	22:DA:2710:C:O2'	2.10	0.52
5:AE:122:ASN:N	5:AE:122:ASN:ND2	2.57	0.52
21:CU:53:VAL:HG13	21:CU:54:LYS:N	2.25	0.52
2:AB:94:HIS:ND1	2:AB:146:ASN:HB2	2.23	0.52
33:DL:29:LYS:HG3	33:DL:30:THR:HG23	1.92	0.52
23:BB:24:G:N2	23:BB:28:C:C2	2.77	0.52
22:BA:1734:G:H2'	22:BA:1735:A:H8	1.74	0.52
22:DA:1856:U:C4	22:DA:1857:G:C6	2.98	0.52
29:DH:34:GLY:O	29:DH:35:LYS:HD2	2.10	0.52
1:AA:338:A:N6	1:AA:339:C:C4	2.77	0.52
22:BA:2462:C:C4	22:BA:2463:C:N4	2.77	0.52
31:BJ:30:THR:CG2	31:BJ:31:GLU:N	2.72	0.52
34:BM:70:ASP:OD2	34:BM:70:ASP:C	2.48	0.52
22:BA:1588:G:C2	22:BA:1589:U:C6	2.98	0.52
1:AA:1286:U:OP1	1:AA:1286:U:C6	2.63	0.52
28:BG:24:ILE:HD12	28:BG:72:LEU:HD21	1.91	0.52
1:CA:1521:C:C2	1:CA:1522:U:C6	2.98	0.52
20:AT:58:VAL:CG1	20:AT:72:ALA:HA	2.40	0.52
1:CA:123:U:H2'	1:CA:124:C:H6	1.74	0.52
46:DY:18:LEU:O	46:DY:22:LEU:CB	2.56	0.52
16:CP:38:PHE:CZ	16:CP:51:ARG:HB3	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:801:U:H2'	1:CA:802:A:H8	1.73	0.52
25:BD:104:VAL:O	25:BD:105:LYS:HB2	2.10	0.52
47:DZ:41:THR:HG23	47:DZ:44:ILE:HG12	1.92	0.52
22:DA:2852:G:H2'	22:DA:2853:C:O4'	2.10	0.52
28:DG:84:THR:OG1	28:DG:134:LYS:HG2	2.08	0.52
38:BQ:74:ILE:HG23	38:BQ:74:ILE:O	2.10	0.52
1:AA:121:U:H4'	1:AA:121:U:OP2	2.09	0.52
22:DA:2326:C:H1'	22:DA:2327:A:OP1	2.09	0.52
33:DL:50:PHE:CZ	33:DL:52:GLY:O	2.63	0.52
17:CQ:47:HIS:HB2	17:CQ:67:LEU:CD1	2.40	0.52
35:BN:1:MET:O	35:BN:2:ARG:CB	2.57	0.52
4:AD:150:LYS:O	4:AD:152:GLN:N	2.43	0.52
1:CA:545:C:H5'	4:CD:69:GLU:CG	2.39	0.52
19:AS:51:VAL:HG22	19:AS:71:LEU:CD1	2.39	0.52
1:CA:1022:A:C5	1:CA:1023:U:C4	2.98	0.52
24:BC:107:PRO:HB3	24:BC:142:HIS:HE1	1.73	0.52
1:AA:1224:U:O2'	1:AA:1322:C:OP1	2.27	0.52
9:AI:99:ARG:O	9:AI:101:ALA:N	2.42	0.52
22:DA:686:U:H2'	22:DA:788:A:C2	2.43	0.52
1:AA:924:C:O2'	1:AA:925:G:H5'	2.08	0.52
22:BA:515:A:H1'	22:BA:581:C:H1'	1.90	0.52
1:CA:1215:G:C6	1:CA:1216:A:C5	2.98	0.52
30:BI:57:VAL:CG2	30:BI:58:VAL:N	2.71	0.52
1:AA:207:C:O2	1:AA:213:G:N2	2.43	0.52
51:D3:32:ILE:HG22	51:D3:32:ILE:O	2.10	0.52
22:DA:830:G:C2	22:DA:2448:A:N7	2.78	0.52
5:CE:52:LYS:O	5:CE:53:ALA:HB2	2.09	0.52
22:BA:812:C:C5	22:BA:1250:G:C6	2.97	0.52
1:CA:295:C:N4	1:CA:296:U:O4	2.43	0.52
22:BA:1269:A:H2'	22:BA:1270:C:C6	2.44	0.52
25:BD:103:ASP:O	25:BD:105:LYS:N	2.39	0.52
3:AC:165:THR:O	3:AC:166:GLU:HB2	2.09	0.52
22:BA:1095:A:H2'	22:BA:1096:A:C8	2.45	0.52
1:CA:1300:G:C6	1:CA:1335:U:C6	2.97	0.52
1:AA:1107:C:C4	1:AA:1108:G:N7	2.78	0.52
22:DA:704:G:H1'	22:DA:726:G:H22	1.75	0.52
49:D1:15:ALA:O	49:D1:17:THR:N	2.43	0.52
22:BA:1316:U:C2	22:BA:1337:G:N2	2.78	0.52
24:BC:130:LEU:N	24:BC:130:LEU:HD23	2.25	0.52
7:AG:63:GLU:O	7:AG:63:GLU:OE1	2.27	0.52
22:DA:2473:U:O2	22:DA:2473:U:H2'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2226:C:H2'	22:BA:2226:C:O2	2.09	0.52
1:AA:1253:G:H2'	1:AA:1254:A:H8	1.75	0.52
1:AA:994:A:N1	1:AA:1047:G:H4'	2.25	0.52
1:CA:1311:A:C2	1:CA:1327:C:N3	2.78	0.52
1:CA:1326:U:H2'	1:CA:1327:C:C6	2.45	0.52
24:DC:101:ARG:O	24:DC:102:ARG:HG3	2.10	0.52
22:BA:2513:A:N3	22:BA:2513:A:H2'	2.25	0.52
2:AB:82:ASP:C	2:AB:84:ALA:N	2.63	0.52
1:AA:796:C:OP1	11:AK:126:LYS:HB2	2.10	0.52
1:CA:273:U:H1'	17:CQ:18:GLU:OE2	2.10	0.52
39:BR:41:ILE:O	39:BR:46:GLU:HB2	2.09	0.52
22:BA:1187:G:H5'	39:BR:83:TYR:CZ	2.44	0.52
22:BA:2075:U:H2'	22:BA:2077:A:OP2	2.09	0.52
22:BA:616:A:OP2	57:BA:3290:HOH:O	2.19	0.52
2:AB:117:LEU:HB3	2:AB:141:LEU:HD11	1.92	0.52
1:AA:1060:U:O2	1:AA:1061:G:C8	2.63	0.52
35:BN:49:GLU:OE2	35:BN:95:THR:CG2	2.58	0.52
22:DA:1738:G:HO2'	22:DA:1739:A:P	2.32	0.52
1:CA:407:U:H2'	1:CA:408:A:C8	2.45	0.52
22:DA:833:A:H2'	22:DA:834:G:C8	2.44	0.52
1:CA:73:C:HO2'	1:CA:74:A:C5'	2.23	0.52
22:DA:2747:G:O6	22:DA:2755:C:H5''	2.10	0.52
21:AU:16:LEU:O	21:AU:18:ARG:HD2	2.10	0.52
25:BD:1:MET:HA	25:BD:88:GLU:OE2	2.10	0.52
22:DA:748:G:O6	22:DA:751:A:H5'	2.09	0.52
20:AT:25:ARG:O	20:AT:29:ARG:HG3	2.10	0.52
13:CM:33:ILE:HG23	13:CM:59:GLU:HB3	1.91	0.52
22:DA:2499:C:C4	22:DA:2500:U:O4	2.63	0.52
22:DA:1355:G:C6	22:DA:1356:G:N7	2.78	0.52
42:DU:74:ASN:HA	42:DU:96:PHE:CZ	2.45	0.52
22:BA:585:G:C4'	22:BA:586:A:OP1	2.57	0.52
22:DA:1231:U:H2'	22:DA:1232:G:H8	1.75	0.52
21:AU:12:PHE:HD2	21:AU:12:PHE:N	2.07	0.52
27:DF:5:HIS:O	27:DF:9:LYS:HG3	2.10	0.52
22:BA:84:A:H4'	22:BA:85:G:O5'	2.10	0.52
1:AA:973:G:H1'	10:AJ:56:HIS:HD2	1.74	0.52
22:DA:39:G:C6	22:DA:40:U:C4	2.98	0.52
24:DC:107:PRO:HD2	24:DC:110:LEU:HD22	1.92	0.52
1:AA:815:A:H4'	1:AA:817:C:C4	2.45	0.52
7:CG:42:ILE:HD13	7:CG:116:MET:HB3	1.91	0.52
22:DA:2549:G:C2	22:DA:2560:A:C2	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:669:G:H2'	1:AA:670:G:H8	1.74	0.52
22:DA:2557:G:H2'	22:DA:2558:C:C6	2.45	0.52
22:DA:993:G:H1'	39:DR:91:GLN:OE1	2.10	0.52
22:DA:661:A:H1'	33:DL:12:SER:O	2.09	0.52
22:BA:110:G:N3	22:BA:110:G:H2'	2.25	0.52
34:BM:34:LYS:O	34:BM:129:THR:N	2.43	0.52
22:BA:503:A:C2	22:BA:505:A:C4	2.98	0.52
1:CA:855:U:H2'	1:CA:856:C:C6	2.44	0.52
22:DA:107:G:O3'	22:DA:293:U:O2'	2.12	0.52
10:AJ:18:ILE:CG2	10:AJ:19:ASP:N	2.73	0.52
22:DA:696:G:C2	22:DA:767:U:O2	2.63	0.52
18:AR:25:ASP:O	18:AR:27:ALA:N	2.42	0.52
29:BH:94:ILE:HD12	29:BH:98:ASP:HB3	1.92	0.52
29:BH:123:ARG:NH2	1:CA:367:U:O5'	2.43	0.52
1:CA:369:G:OP2	1:CA:388:G:N2	2.39	0.52
5:CE:101:GLU:HA	5:CE:122:ASN:CB	2.40	0.52
22:BA:613:A:H2'	22:BA:614:A:H5''	1.91	0.52
22:BA:674:G:O2'	26:BE:69:ARG:HD3	2.10	0.52
22:DA:1020:A:C2	22:DA:1141:U:C2	2.98	0.52
22:BA:1829:A:O2'	24:BC:15:HIS:CD2	2.63	0.52
9:AI:46:MET:N	9:AI:46:MET:SD	2.83	0.52
5:CE:25:VAL:N	5:CE:28:GLY:O	2.37	0.52
26:BE:196:VAL:HG13	26:BE:200:LEU:CD2	2.40	0.52
22:BA:1002:G:C2	22:BA:1003:G:H1'	2.44	0.52
17:CQ:61:ILE:HA	17:CQ:75:LEU:HA	1.92	0.52
1:CA:976:G:N2	1:CA:1363:A:C4	2.78	0.52
1:AA:1306:A:C5	1:AA:1307:U:C5	2.97	0.52
22:DA:289:G:C2	22:DA:352:A:C2	2.98	0.52
20:CT:39:ILE:HD11	20:CT:83:ILE:HG22	1.90	0.52
32:BK:116:ILE:O	32:BK:118:LEU:O	2.27	0.52
11:CK:27:PHE:CE1	11:CK:89:PRO:HG2	2.45	0.52
1:CA:632:U:O2	1:CA:632:U:C2'	2.58	0.52
22:BA:1045:C:H3'	22:BA:1046:A:H5'	1.91	0.52
22:BA:1374:G:C2'	22:BA:1375:U:H5'	2.40	0.52
41:DT:72:GLN:O	41:DT:73:ARG:O	2.28	0.52
30:BI:116:ASP:O	30:BI:117:MET:CB	2.57	0.52
22:BA:893:C:H2'	22:BA:894:U:O4'	2.10	0.52
22:BA:1121:C:H2'	22:BA:1122:G:O4'	2.10	0.52
22:BA:1584:U:C2'	22:BA:1584:U:O2	2.57	0.52
22:BA:1271:G:O2'	22:BA:1618:A:OP1	2.20	0.52
1:CA:604:G:H2'	1:CA:605:U:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1001:C:H2'	1:AA:1002:G:C8	2.45	0.52
7:AG:130:ASN:HA	7:AG:135:VAL:HG11	1.92	0.52
29:DH:25:TYR:CZ	29:DH:30:LEU:HD21	2.45	0.52
37:DP:48:ILE:HD13	37:DP:62:ARG:HB2	1.92	0.52
27:DF:106:ILE:HG12	27:DF:107:ALA:N	2.25	0.52
22:BA:2331:G:C6	22:BA:2332:C:C4	2.97	0.52
22:BA:2116:G:C6	22:BA:2171:A:N6	2.77	0.52
8:CH:89:LYS:HA	8:CH:92:LEU:HD12	1.92	0.52
25:DD:123:LYS:HD3	25:DD:165:MET:SD	2.49	0.52
22:BA:238:C:H2'	22:BA:239:C:O5'	2.09	0.52
1:CA:926:G:C6	1:CA:1505:G:C5	2.98	0.52
38:BQ:76:TYR:OH	38:BQ:92:ARG:NH1	2.43	0.52
15:AO:88:ARG:O	15:AO:89:ARG:OXT	2.28	0.52
5:CE:155:ALA:HB1	8:CH:66:PHE:CE2	2.44	0.52
39:BR:25:LEU:N	39:BR:94:THR:HG21	2.25	0.52
22:DA:36:G:C2'	22:DA:450:G:HO2'	2.23	0.52
5:CE:105:ILE:N	5:CE:122:ASN:O	2.44	0.52
22:DA:2133:G:C2	22:DA:2158:A:C6	2.98	0.52
22:BA:1073:A:N7	22:BA:1074:G:C8	2.78	0.52
14:AN:64:CYS:O	14:AN:66:GLN:N	2.43	0.52
14:AN:64:CYS:HB2	14:AN:80:SER:HB2	1.91	0.52
22:BA:574:A:H4'	22:BA:575:A:O5'	2.10	0.52
39:BR:79:ARG:O	39:BR:80:ARG:CB	2.58	0.52
22:DA:1340:U:H4'	22:DA:1341:G:OP2	2.09	0.52
22:DA:2554:U:H2'	22:DA:2555:U:C6	2.45	0.52
4:AD:151:LYS:CA	4:AD:178:MET:HE1	2.38	0.52
22:DA:2111:U:C5	22:DA:2145:C:H2'	2.45	0.52
22:DA:1566:A:N1	24:DC:213:TRP:CE3	2.78	0.52
22:DA:729:G:H2'	22:DA:1775:U:H1'	1.92	0.52
50:D2:18:PHE:O	50:D2:21:ARG:N	2.43	0.52
14:CN:23:LYS:HG3	14:CN:24:ARG:N	2.24	0.52
1:CA:72:A:C5	1:CA:73:C:C5	2.98	0.52
16:AP:12:LYS:O	16:AP:13:LYS:HB2	2.10	0.52
40:DS:41:LYS:O	40:DS:42:LYS:C	2.48	0.52
20:CT:80:THR:O	20:CT:83:ILE:N	2.42	0.52
22:DA:2311:A:HO2'	22:DA:2312:U:P	2.30	0.52
26:DE:83:VAL:CG1	26:DE:86:ALA:HA	2.40	0.52
13:CM:19:LEU:CB	13:CM:30:SER:OG	2.58	0.52
22:BA:877:A:C6	22:BA:899:A:C6	2.98	0.52
5:AE:60:ILE:HG13	5:AE:61:GLN:N	2.24	0.52
22:DA:2297:A:C8	22:DA:2320:U:C4	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:84:VAL:HG22	6:AF:84:VAL:O	2.10	0.52
46:DY:1:MET:HA	46:DY:4:LYS:HD3	1.92	0.52
25:BD:139:SER:HA	25:BD:142:VAL:HG13	1.91	0.52
15:CO:56:LEU:O	15:CO:59:MET:N	2.43	0.52
36:DO:97:PHE:HB2	36:DO:103:VAL:HG11	1.92	0.52
35:DN:46:ARG:O	35:DN:50:PRO:HG2	2.10	0.52
22:DA:1881:C:H2'	22:DA:1882:U:O4'	2.10	0.52
29:BH:2:GLN:O	29:BH:3:VAL:HG22	2.10	0.52
2:CB:59:LYS:HA	2:CB:62:SER:HB2	1.92	0.52
22:BA:2619:C:H5'	25:BD:155:VAL:O	2.10	0.52
22:BA:699:A:N7	22:BA:734:A:C5	2.78	0.52
1:CA:1082:A:C6	1:CA:1083:U:N3	2.78	0.52
5:CE:131:THR:O	5:CE:132:ASN:C	2.48	0.52
19:CS:29:LYS:CB	19:CS:30:PRO:HD2	2.40	0.52
22:DA:271:G:H4'	22:DA:272:A:OP1	2.09	0.52
45:BX:17:ASN:OD1	45:BX:27:ARG:HD2	2.10	0.52
11:CK:116:ILE:O	11:CK:116:ILE:HG22	2.08	0.52
2:CB:82:ASP:N	2:CB:82:ASP:OD1	2.43	0.52
15:CO:73:LYS:HA	15:CO:73:LYS:HE2	1.91	0.52
39:DR:29:THR:HG22	39:DR:29:THR:O	2.09	0.52
1:AA:347:G:H2'	1:AA:348:G:O5'	2.10	0.52
51:D3:27:ALA:O	51:D3:28:ASN:HB2	2.10	0.52
22:BA:2547:A:H2'	22:BA:2548:U:C6	2.44	0.52
1:AA:715:A:OP1	1:AA:805:C:H1'	2.10	0.52
1:CA:142:G:C2	1:CA:143:A:H1'	2.44	0.52
29:BH:117:LEU:CD2	29:BH:121:VAL:N	2.70	0.51
1:AA:701:U:H4'	1:AA:702:A:C5'	2.40	0.51
22:BA:2498:C:P	57:BA:3688:HOH:O	2.64	0.51
5:CE:149:SER:HB2	5:CE:152:MET:HG3	1.92	0.51
1:AA:620:C:H1'	4:AD:132:ILE:HD11	1.91	0.51
2:CB:206:ALA:O	2:CB:209:ALA:N	2.43	0.51
1:CA:1087:G:N2	1:CA:1099:G:H1'	2.25	0.51
22:DA:1647:U:H3'	22:DA:1647:U:OP2	2.10	0.51
22:BA:784:G:H5''	24:BC:226:ASN:OD1	2.10	0.51
22:BA:2821:A:OP2	25:BD:115:GLY:HA3	2.10	0.51
11:AK:74:VAL:C	11:AK:76:GLU:H	2.11	0.51
1:AA:1353:G:C2	1:AA:1354:U:C6	2.99	0.51
1:AA:1349:A:C6	1:AA:1374:A:C8	2.98	0.51
30:DI:8:TYR:CD1	30:DI:8:TYR:O	2.63	0.51
1:CA:19:A:C2	1:CA:20:U:C2	2.98	0.51
45:DX:28:ARG:NH1	45:DX:30:LEU:HD21	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:27:G:C5	1:AA:557:G:C2	2.97	0.51
1:AA:568:G:C4	1:AA:569:C:C5	2.97	0.51
1:CA:505:G:H2'	1:CA:506:G:C8	2.45	0.51
22:DA:270:A:C2	22:DA:369:U:H4'	2.45	0.51
1:CA:102:G:O2'	1:CA:151:A:N3	2.34	0.51
1:AA:209:U:C4'	1:AA:210:C:OP2	2.58	0.51
4:CD:36:GLN:O	4:CD:37:ALA:HB2	2.10	0.51
45:DX:54:LYS:O	45:DX:57:ARG:N	2.43	0.51
31:DJ:5:THR:C	31:DJ:6:ALA:O	2.48	0.51
40:DS:7:HIS:HB2	40:DS:50:VAL:CG2	2.39	0.51
22:BA:584:C:OP2	38:BQ:6:ARG:HG3	2.10	0.51
1:CA:1202:U:C2'	1:CA:1203:C:H5'	2.40	0.51
22:BA:1080:A:H2'	22:BA:1080:A:N3	2.25	0.51
36:BO:53:THR:HB	36:BO:65:THR:HG22	1.91	0.51
22:DA:2712:C:OP1	22:DA:2714:G:H4'	2.10	0.51
22:DA:158:U:H2'	22:DA:159:G:H5'	1.92	0.51
1:CA:1084:G:C5	1:CA:1085:U:C4	2.98	0.51
40:BS:41:LYS:HE3	48:B0:22:LEU:HD21	1.92	0.51
22:DA:621:A:OP2	33:DL:99:ASN:ND2	2.41	0.51
27:DF:73:SER:HB2	27:DF:81:GLN:HB3	1.92	0.51
22:DA:1551:A:N6	57:DA:3632:HOH:O	2.42	0.51
22:BA:418:C:H2'	22:BA:419:U:O4'	2.10	0.51
28:BG:149:ARG:HH11	28:BG:149:ARG:CG	2.22	0.51
1:CA:844:G:N3	1:CA:844:G:H2'	2.25	0.51
22:DA:2:G:C6	22:DA:3:U:C4	2.97	0.51
22:BA:2056:G:N2	22:BA:2057:G:C4	2.79	0.51
22:DA:200:U:C4	22:DA:248:G:C2	2.98	0.51
50:D2:44:VAL:O	50:D2:45:SER:CB	2.58	0.51
17:AQ:16:LYS:HE3	17:AQ:16:LYS:O	2.10	0.51
22:DA:2199:A:C5	22:DA:2225:A:C6	2.98	0.51
22:BA:361:G:HO2'	22:BA:362:A:P	2.32	0.51
22:DA:1351:C:H2'	22:DA:1352:U:C1'	2.41	0.51
1:AA:131:A:H2'	1:AA:132:C:H6	1.75	0.51
22:BA:1644:C:O2	22:BA:1644:C:H2'	2.10	0.51
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.09	0.51
13:AM:114:LYS:CB	13:AM:115:PRO:CD	2.89	0.51
22:DA:792:A:N3	22:DA:2072:C:O2'	2.32	0.51
33:DL:90:VAL:HB	33:DL:122:VAL:HA	1.92	0.51
5:AE:82:GLN:H	5:AE:147:MET:CE	2.23	0.51
22:BA:623:C:H2'	22:BA:624:C:C6	2.45	0.51
22:DA:228:C:H5''	22:DA:229:C:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:64:LYS:HA	41:DT:79:ASP:OD1	2.11	0.51
22:DA:30:G:C5	22:DA:31:C:C4	2.99	0.51
14:CN:64:CYS:SG	14:CN:80:SER:HB2	2.51	0.51
1:CA:1028:C:OP2	1:CA:1028:C:C6	2.63	0.51
22:BA:2180:U:C5'	22:BA:2181:U:OP2	2.58	0.51
1:AA:100:G:C5	1:AA:101:A:C5	2.99	0.51
22:BA:1301:A:C4	22:BA:1303:G:N7	2.79	0.51
11:CK:52:PHE:CZ	11:CK:62:ALA:HA	2.45	0.51
22:BA:1392:A:C6	22:BA:1393:A:C6	2.97	0.51
1:CA:844:G:C8	1:CA:844:G:OP2	2.64	0.51
41:DT:38:ALA:O	41:DT:39:THR:HB	2.11	0.51
32:BK:10:VAL:HG21	32:BK:16:ALA:HB3	1.92	0.51
25:BD:146:ILE:HG22	25:BD:159:LYS:HE3	1.91	0.51
11:AK:31:ILE:HB	11:AK:46:THR:HG22	1.93	0.51
17:AQ:81:LYS:N	17:AQ:81:LYS:CD	2.73	0.51
2:CB:183:VAL:N	2:CB:197:ASP:OD1	2.43	0.51
34:DM:59:ARG:HD3	34:DM:59:ARG:O	2.10	0.51
28:DG:113:VAL:HG11	28:DG:151:TYR:CE2	2.46	0.51
22:BA:2681:C:OP2	25:BD:114:LYS:HE2	2.09	0.51
1:AA:1442:G:H2'	1:AA:1443:C:H6	1.75	0.51
22:DA:2518:A:P	57:DA:3533:HOH:O	2.67	0.51
22:DA:214:G:H1'	22:DA:217:A:H5'	1.92	0.51
45:BX:8:THR:OG1	45:BX:10:LYS:HG3	2.10	0.51
29:BH:99:ILE:O	29:BH:103:VAL:CG2	2.58	0.51
22:DA:2134:A:OP2	22:DA:2157:G:N2	2.41	0.51
1:CA:528:C:O2	1:CA:528:C:H2'	2.11	0.51
22:DA:2061:G:H5''	22:DA:2503:A:C2	2.46	0.51
22:DA:1335:C:H2'	22:DA:1336:A:C8	2.45	0.51
22:BA:1791:A:OP2	57:BA:3787:HOH:O	2.19	0.51
1:AA:972:C:H4'	10:AJ:59:LYS:HE3	1.92	0.51
2:CB:47:VAL:HB	2:CB:48:PRO:HD3	1.91	0.51
22:DA:2148:G:C2	22:DA:2149:U:C4	2.99	0.51
4:CD:161:LEU:HD23	4:CD:162:ALA:N	2.24	0.51
1:CA:73:C:C2	1:CA:74:A:C8	2.98	0.51
22:BA:1423:G:C2	22:BA:1424:G:C4	2.98	0.51
1:AA:1538:C:C2'	1:AA:1539:C:H5'	2.41	0.51
21:AU:14:VAL:HG13	21:AU:16:LEU:HG	1.92	0.51
22:DA:1998:A:OP2	25:DD:141:ARG:NH2	2.43	0.51
1:AA:502:A:C2	1:AA:544:G:C2	2.98	0.51
16:CP:10:GLY:O	16:CP:11:ALA:HB2	2.11	0.51
33:DL:55:MET:SD	33:DL:59:ARG:NH2	2.84	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:999:C:H2'	1:AA:1000:A:C8	2.45	0.51
4:AD:174:ASP:OD2	4:AD:176:GLY:N	2.42	0.51
22:BA:585:G:N7	38:BQ:6:ARG:NH1	2.58	0.51
1:CA:476:U:O2'	1:CA:477:C:H5'	2.10	0.51
2:CB:81:LYS:HG2	2:CB:85:LEU:HD23	1.93	0.51
22:BA:340:A:H2'	22:BA:341:C:H5'	1.92	0.51
22:DA:2013:A:N6	22:DA:2014:A:N1	2.58	0.51
1:AA:111:G:H5''	1:AA:112:G:OP2	2.10	0.51
1:AA:102:G:C2	1:AA:103:U:C5	2.99	0.51
22:DA:2074:U:H2'	22:DA:2075:U:C6	2.46	0.51
22:BA:2480:C:C2'	22:BA:2481:G:H5'	2.40	0.51
22:DA:2622:U:O2'	22:DA:2825:G:N7	2.43	0.51
22:DA:1709:U:H2'	22:DA:1710:G:C8	2.45	0.51
22:DA:570:G:C4	22:DA:2030:A:N7	2.79	0.51
22:BA:1504:A:C2	22:BA:1505:A:C4	2.98	0.51
15:AO:32:LEU:O	15:AO:33:THR:C	2.49	0.51
36:DO:35:ILE:HG23	36:DO:35:ILE:O	2.11	0.51
1:CA:878:A:C6	1:CA:879:C:C4	2.99	0.51
22:BA:841:G:H2'	22:BA:842:U:C6	2.45	0.51
22:DA:756:A:H2'	22:DA:757:G:O4'	2.10	0.51
22:BA:2747:G:O2'	28:BG:67:THR:HB	2.09	0.51
1:AA:1081:A:H5'	5:AE:23:LYS:HG3	1.92	0.51
31:BJ:81:ILE:HG23	31:BJ:82:GLY:H	1.75	0.51
1:AA:429:U:H1'	1:AA:430:A:H5''	1.91	0.51
22:BA:1936:A:N3	22:BA:1940:U:O2	2.43	0.51
1:CA:673:A:H2'	1:CA:674:G:C8	2.45	0.51
2:CB:102:THR:CG2	2:CB:175:GLU:HG2	2.40	0.51
39:BR:5:PHE:HA	39:BR:39:LEU:HD12	1.92	0.51
29:DH:121:VAL:O	29:DH:122:LEU:HB2	2.11	0.51
22:BA:2298:A:C4	22:BA:2321:U:H5	2.29	0.51
22:DA:1316:U:C2	22:DA:1337:G:N2	2.78	0.51
12:AL:22:PRO:O	12:AL:24:LEU:N	2.41	0.51
30:BI:43:ASN:OD1	30:BI:46:THR:HB	2.10	0.51
1:AA:1197:A:OP1	1:AA:1198:G:OP2	2.28	0.51
2:CB:50:PHE:HB2	2:CB:213:TYR:OH	2.10	0.51
26:BE:147:LEU:CD2	26:BE:180:LEU:HD23	2.39	0.51
22:BA:2451:A:C2	55:BA:3001:VIF:C23	2.94	0.51
1:AA:375:U:OP1	16:AP:70:ARG:NH1	2.44	0.51
3:CC:77:ILE:HA	3:CC:84:VAL:CG2	2.39	0.51
29:BH:110:VAL:HG22	29:BH:114:GLU:HB2	1.90	0.51
38:BQ:24:TYR:O	38:BQ:25:TYR:CB	2.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:52:VAL:HB	26:DE:74:LYS:HD3	1.92	0.51
22:BA:2341:G:H2'	22:BA:2342:C:C6	2.45	0.51
22:BA:1358:G:C8	22:BA:1371:G:O6	2.63	0.51
24:DC:35:GLU:O	24:DC:36:LYS:O	2.29	0.51
6:AF:10:VAL:HG12	6:AF:11:HIS:N	2.25	0.51
1:CA:987:G:N2	1:CA:1218:C:O2	2.44	0.51
3:AC:70:THR:OG1	3:AC:71:ALA:N	2.43	0.51
1:CA:1434:A:N6	1:CA:1435:G:C6	2.79	0.51
1:CA:1450:U:O2'	1:CA:1451:U:H2'	2.11	0.51
1:AA:859:G:H2'	1:AA:860:A:C8	2.45	0.51
50:B2:1:MET:O	50:B2:2:LYS:C	2.48	0.51
22:DA:579:G:N2	22:DA:1262:A:C4	2.78	0.51
1:AA:1219:A:H2'	1:AA:1220:G:C8	2.45	0.51
22:DA:2882:A:H5'	35:DN:96:ARG:HB2	1.92	0.51
22:BA:2064:C:H2'	22:BA:2065:C:C6	2.46	0.51
1:AA:616:G:N2	1:AA:617:G:C4	2.79	0.51
22:DA:77:G:OP1	46:DY:52:ARG:HD3	2.11	0.51
23:DB:115:A:H2'	23:DB:116:G:C8	2.45	0.51
22:DA:2058:A:N6	22:DA:2059:A:N6	2.58	0.51
1:AA:1157:A:H1'	1:AA:1181:G:N2	2.25	0.51
22:BA:2077:A:O2'	22:BA:2078:C:H5'	2.10	0.51
30:DI:76:ALA:HB3	30:DI:132:THR:HG21	1.91	0.51
30:DI:58:VAL:HG12	30:DI:59:ILE:N	2.26	0.51
5:AE:77:ASN:O	5:AE:78:ASN:CB	2.59	0.51
1:CA:31:G:O4'	1:CA:306:A:C2	2.63	0.51
1:AA:1150:A:O2'	10:AJ:43:PRO:HD3	2.10	0.51
22:DA:1869:G:N2	22:DA:1871:A:O2'	2.43	0.51
25:BD:40:LEU:O	25:BD:41:ALA:C	2.49	0.51
12:CL:90:LEU:CB	12:CL:93:VAL:CG2	2.89	0.51
22:BA:229:C:H2'	22:BA:230:G:O5'	2.11	0.51
26:DE:181:ILE:HG23	33:DL:2:ARG:CZ	2.41	0.51
1:AA:596:A:N6	1:AA:645:G:C6	2.79	0.51
1:CA:756:C:C2'	1:CA:757:U:H5'	2.41	0.51
37:DP:113:ARG:O	37:DP:114:LEU:HD23	2.11	0.51
22:DA:1965:C:OP1	22:DA:1966:A:O2'	2.28	0.51
2:CB:119:THR:O	2:CB:120:GLN:HB3	2.10	0.51
22:DA:1668:A:O4'	22:DA:1669:A:C2	2.64	0.51
22:DA:1082:U:OP1	30:DI:124:ALA:HB2	2.10	0.51
22:BA:1107:G:C6	22:BA:1108:U:C4	2.98	0.51
22:BA:45:G:H5'	22:BA:46:G:OP1	2.10	0.51
22:DA:571:U:C4	22:DA:2030:A:C6	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BY:45:GLN:O	46:BY:46:VAL:HG23	2.10	0.51
2:CB:225:ARG:O	2:CB:226:SER:HB2	2.11	0.51
22:BA:2486:C:C2'	22:BA:2487:G:O5'	2.58	0.51
22:DA:931:U:H4'	22:DA:932:U:OP2	2.10	0.51
22:BA:1275:A:C8	35:BN:16:HIS:ND1	2.79	0.51
22:DA:706:A:C2	22:DA:707:G:H1'	2.45	0.51
31:DJ:15:TRP:O	31:DJ:137:PRO:HA	2.10	0.51
22:DA:1376:C:H3'	57:DA:3398:HOH:O	2.10	0.51
27:DF:134:GLU:HG3	27:DF:136:ILE:HD12	1.91	0.51
2:AB:91:PHE:O	2:AB:150:GLY:HA3	2.10	0.51
22:DA:675:A:C6	22:DA:676:A:C6	2.99	0.51
2:CB:126:PHE:CD2	2:CB:126:PHE:N	2.78	0.51
7:AG:137:LYS:O	7:AG:141:VAL:HG23	2.11	0.51
22:DA:1680:U:H2'	22:DA:1681:G:O4'	2.11	0.51
1:CA:1130:A:N9	1:CA:1146:A:C2	2.78	0.51
29:BH:100:ALA:CB	29:BH:112:LYS:HA	2.41	0.51
29:BH:132:PHE:O	29:BH:139:PHE:HB3	2.11	0.51
22:BA:2056:G:H2'	22:BA:2056:G:N3	2.25	0.51
22:BA:2371:G:C2	22:BA:2372:U:C6	2.99	0.51
2:AB:23:TRP:HB3	2:AB:39:HIS:CE1	2.45	0.51
29:BH:85:GLY:HA2	29:BH:91:PHE:CE2	2.46	0.51
17:CQ:69:LYS:O	17:CQ:70:THR:CB	2.58	0.51
41:DT:17:SER:O	41:DT:18:GLU:C	2.49	0.51
2:AB:72:THR:O	2:AB:73:LYS:CB	2.58	0.51
2:CB:57:LEU:HD13	2:CB:58:ASN:N	2.26	0.51
1:CA:17:U:C2	1:CA:18:C:C6	2.99	0.51
40:BS:28:LYS:O	40:BS:29:VAL:C	2.49	0.51
35:DN:72:ASP:HB3	35:DN:75:ILE:HB	1.92	0.51
36:BO:100:HIS:CG	36:BO:101:GLY:N	2.77	0.51
41:DT:14:PRO:HA	41:DT:32:LEU:HB3	1.93	0.51
22:BA:2742:G:O2'	22:BA:2743:U:H5'	2.10	0.51
4:AD:174:ASP:OD2	4:AD:177:LYS:N	2.37	0.51
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.73	0.51
1:AA:339:C:H2'	1:AA:340:U:H6	1.75	0.51
41:DT:72:GLN:O	41:DT:73:ARG:C	2.48	0.51
22:DA:1677:A:H5''	57:DA:3436:HOH:O	2.11	0.51
12:CL:43:LYS:O	12:CL:44:LYS:C	2.49	0.51
20:CT:67:ILE:O	20:CT:68:HIS:O	2.29	0.51
22:DA:1936:A:H2	22:DA:1943:U:H3	1.56	0.51
10:CJ:27:GLU:HG2	10:CJ:27:GLU:O	2.09	0.51
1:CA:1491:G:H2'	1:CA:1492:A:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:164:C:C2'	22:BA:165:A:H5'	2.41	0.51
22:DA:2354:C:O2'	44:DW:35:SER:HA	2.10	0.51
1:AA:832:G:C4	1:AA:833:G:C8	2.98	0.51
22:DA:155:A:H2'	22:DA:156:A:C8	2.45	0.51
1:AA:1489:G:C6	1:AA:1490:U:C4	2.98	0.51
1:CA:304:U:H2'	1:CA:305:G:C8	2.46	0.51
11:CK:26:SER:OG	11:CK:29:ASN:O	2.17	0.51
22:DA:1914:C:C5	22:DA:1915:U:C2	2.99	0.51
15:AO:43:PHE:CE1	15:AO:56:LEU:HD22	2.46	0.51
1:AA:682:G:N2	1:AA:709:U:C2	2.78	0.51
11:AK:36:ASP:OD1	11:AK:40:ASN:HB2	2.10	0.51
22:BA:1846:G:C2	22:BA:1895:C:C2	2.98	0.51
22:BA:2380:C:C2	22:BA:2381:A:C8	2.98	0.51
2:AB:21:ARG:NH1	2:AB:21:ARG:HA	2.25	0.51
11:AK:125:LYS:HG2	11:AK:126:LYS:N	2.26	0.51
4:AD:36:GLN:O	4:AD:37:ALA:HB2	2.11	0.51
22:BA:2211:A:HO2'	22:BA:2212:A:P	2.29	0.51
10:AJ:63:ASP:HB3	10:AJ:65:TYR:CE2	2.45	0.51
26:BE:171:ASP:OD1	26:BE:172:ALA:N	2.43	0.51
36:DO:33:ARG:HG2	36:DO:34:HIS:CD2	2.45	0.51
40:BS:37:THR:HG22	40:BS:38:TYR:CE1	2.45	0.51
22:DA:1097:U:O2	30:DI:9:VAL:HG11	2.11	0.51
22:DA:2142:A:C6	22:DA:2143:C:C4	2.98	0.51
1:CA:769:G:O2'	1:CA:770:C:H5'	2.11	0.51
22:DA:478:A:C6	22:DA:480:A:C6	2.99	0.51
1:AA:1539:C:H5''	21:AU:18:ARG:HG3	1.93	0.51
53:B5:64:SER:O	53:B5:65:LEU:CB	2.58	0.51
22:DA:1917:U:C2'	22:DA:1918:A:H5'	2.40	0.51
6:AF:14:GLN:OE1	6:AF:17:GLN:HB2	2.10	0.51
1:AA:220:G:C5	1:AA:221:C:C5	2.99	0.51
22:BA:1277:G:H5'	35:BN:20:MET:HE1	1.93	0.51
36:BO:78:VAL:O	36:BO:79:ALA:C	2.49	0.51
22:BA:2708:G:H1'	35:BN:71:ARG:CZ	2.41	0.51
22:BA:2547:A:H5''	32:BK:29:HIS:NE2	2.25	0.51
22:DA:2478:A:C8	22:DA:2529:G:C5	2.99	0.51
33:BL:142:ILE:CG2	33:BL:143:GLU:N	2.73	0.51
31:DJ:9:GLU:O	31:DJ:10:THR:CG2	2.59	0.51
8:CH:5:ASP:OD1	8:CH:81:PRO:HD3	2.11	0.51
22:DA:2794:C:H2'	22:DA:2795:C:O4'	2.11	0.51
52:D4:11:CYS:SG	52:D4:12:ARG:N	2.83	0.51
22:BA:2737:G:C6	22:BA:2738:A:C6	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:868:U:C4	22:DA:869:G:N7	2.79	0.51
1:CA:1053:G:H4'	1:CA:1054:C:H5'	1.93	0.51
29:BH:117:LEU:CD2	29:BH:121:VAL:CA	2.89	0.51
29:BH:94:ILE:CG2	29:BH:99:ILE:CG1	2.88	0.51
22:BA:998:C:OP2	38:BQ:58:ARG:NH2	2.41	0.51
22:BA:2510:C:C2'	22:BA:2511:U:H5'	2.41	0.51
22:BA:841:G:C2	22:BA:938:G:C2	2.99	0.51
39:BR:25:LEU:N	39:BR:94:THR:CG2	2.74	0.51
39:BR:66:HIS:CE1	39:BR:94:THR:HB	2.46	0.51
1:CA:56:U:H2'	1:CA:57:G:C8	2.46	0.51
4:AD:23:SER:O	4:AD:24:GLY:C	2.49	0.51
22:DA:1567:G:H2'	24:DC:85:PRO:HG3	1.93	0.51
22:DA:587:C:OP2	33:DL:21:ARG:NH1	2.44	0.51
22:BA:479:A:N3	22:BA:481:G:H5''	2.26	0.51
11:AK:21:ALA:HA	11:AK:34:ILE:HD13	1.93	0.51
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.11	0.51
29:DH:53:GLU:O	29:DH:54:LEU:C	2.49	0.51
1:CA:258:G:C2	1:CA:269:C:O2	2.64	0.51
9:AI:103:PHE:CD1	9:AI:103:PHE:N	2.77	0.51
22:DA:2282:G:C2	22:DA:2425:A:C6	2.98	0.51
20:CT:73:ALA:O	20:CT:74:ARG:C	2.49	0.51
32:BK:91:SER:O	32:BK:91:SER:OG	2.28	0.51
36:BO:31:THR:HG22	36:BO:34:HIS:H	1.74	0.51
22:DA:674:G:H1'	26:DE:69:ARG:NE	2.25	0.51
30:BI:19:ASN:N	30:BI:20:PRO:CD	2.74	0.51
6:AF:67:PRO:O	6:AF:69:GLU:N	2.44	0.51
22:DA:769:U:N3	22:DA:770:G:N7	2.59	0.51
25:BD:103:ASP:O	25:BD:104:VAL:HG22	2.11	0.51
22:DA:404:A:C1'	22:DA:405:U:OP2	2.59	0.51
22:BA:1801:A:C8	22:BA:2203:U:H2'	2.46	0.51
1:CA:439:U:H5''	4:CD:121:LYS:HD2	1.93	0.51
34:DM:11:LYS:HE3	34:DM:87:GLY:O	2.11	0.51
37:DP:51:ARG:O	37:DP:57:SER:HA	2.11	0.51
22:DA:1483:G:C6	22:DA:1484:U:C4	2.98	0.51
1:CA:1540:U:O3'	21:CU:18:ARG:NE	2.43	0.51
22:BA:1759:A:C2	22:BA:1760:C:C2	2.99	0.51
3:AC:118:ASP:HA	3:AC:121:THR:HB	1.93	0.51
20:CT:57:ILE:O	20:CT:61:GLN:HG2	2.11	0.51
7:AG:144:MET:CE	7:AG:144:MET:HA	2.41	0.51
22:BA:2275:C:O2	34:BM:84:LYS:HD2	2.10	0.51
17:AQ:42:THR:O	17:AQ:42:THR:HG22	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1503:A:C8	1:CA:1531:A:H1'	2.46	0.51
29:BH:83:LYS:HA	29:BH:148:ALA:HA	1.93	0.51
22:DA:1651:G:C2	22:DA:2007:U:O2	2.63	0.51
13:CM:54:ASP:HA	13:CM:57:ARG:HB3	1.93	0.51
4:CD:150:LYS:O	4:CD:151:LYS:HG2	2.11	0.51
14:CN:16:LEU:HB3	14:CN:55:SER:HA	1.93	0.51
40:BS:66:ILE:HA	40:BS:69:LEU:HD23	1.93	0.51
46:BY:9:LYS:O	46:BY:11:VAL:N	2.43	0.51
1:AA:79:G:N2	1:AA:91:U:C4	2.78	0.51
1:AA:1306:A:C4	1:AA:1307:U:C6	2.99	0.51
22:BA:582:A:N1	22:BA:1259:G:C6	2.79	0.51
20:AT:3:ASN:O	20:AT:5:LYS:N	2.43	0.51
40:DS:37:THR:OG1	40:DS:48:LYS:NZ	2.32	0.51
6:AF:16:GLU:OE2	4:CD:188:ARG:NH1	2.44	0.51
21:CU:34:ARG:HE	21:CU:35:ARG:HB2	1.75	0.51
1:CA:1104:G:H2'	1:CA:1105:A:O4'	2.10	0.51
22:DA:1439:A:N7	22:DA:1552:A:C2	2.79	0.51
22:BA:1333:G:C2	22:BA:1334:G:C8	2.98	0.51
22:BA:545:U:H3'	22:BA:546:U:H4'	1.93	0.51
4:CD:64:ILE:HG22	4:CD:65:TYR:CD1	2.46	0.51
37:BP:22:PRO:HD3	37:BP:50:ILE:HD12	1.93	0.51
25:BD:2:ILE:HD13	25:BD:90:PHE:CZ	2.46	0.51
21:AU:19:PHE:O	21:AU:22:SER:HB3	2.11	0.51
37:DP:32:VAL:O	37:DP:38:LYS:HA	2.11	0.51
22:BA:2697:G:C5	22:BA:2698:U:C5	2.99	0.51
18:CR:34:THR:CG2	18:CR:38:LYS:HB2	2.41	0.51
22:DA:1997:C:P	25:DD:129:THR:HG1	2.34	0.51
16:AP:48:GLU:HG3	16:AP:49:GLY:N	2.26	0.51
1:AA:901:A:N7	1:AA:902:G:H1'	2.26	0.51
22:DA:2056:G:OP1	57:DA:3667:HOH:O	2.19	0.51
22:BA:1185:G:H5''	22:BA:1186:G:P	2.50	0.51
5:CE:150:PRO:O	5:CE:153:VAL:HG22	2.11	0.51
22:DA:818:G:O2'	22:DA:819:A:O4'	2.28	0.51
22:DA:582:A:OP1	38:DQ:14:HIS:ND1	2.43	0.51
22:BA:686:U:H2'	22:BA:788:A:N1	2.26	0.51
22:DA:1073:A:H2'	22:DA:1074:G:H5'	1.93	0.51
1:AA:71:A:O2'	1:AA:72:A:OP2	2.24	0.51
39:DR:3:ALA:HB2	39:DR:101:ILE:HG23	1.93	0.51
22:DA:1737:G:C6	22:DA:1738:G:N1	2.79	0.51
5:CE:23:LYS:O	5:CE:24:THR:CB	2.59	0.51
1:AA:451:A:C8	1:AA:452:A:C2	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:960:U:H2'	1:AA:1225:A:H62	1.76	0.51
4:AD:90:LEU:O	4:AD:90:LEU:HD12	2.10	0.51
22:DA:686:U:H6	22:DA:788:A:N1	2.09	0.51
45:BX:11:ARG:HB2	45:BX:12:PRO:CD	2.41	0.51
27:BF:108:VAL:HG13	27:BF:114:PHE:CE2	2.46	0.51
20:CT:70:ASN:O	20:CT:74:ARG:N	2.43	0.51
10:CJ:59:LYS:O	10:CJ:62:ARG:HD2	2.11	0.51
1:AA:258:G:C6	1:AA:259:G:C5	2.99	0.51
1:AA:914:A:C5	1:AA:915:A:N7	2.79	0.51
22:DA:1027:A:C5	22:DA:1126:A:C2	2.99	0.51
42:BU:97:LYS:O	42:BU:98:SER:CB	2.59	0.51
24:DC:260:ASN:OD1	24:DC:263:THR:N	2.42	0.51
22:BA:1384:A:H1'	22:BA:1405:U:C1'	2.41	0.51
22:BA:1079:C:C5	22:BA:1088:A:C2	2.99	0.51
22:BA:388:G:N7	22:BA:390:U:H2'	2.26	0.51
1:CA:1520:C:H2'	1:CA:1521:C:C6	2.46	0.51
2:AB:87:CYS:HB2	2:AB:89:GLN:NE2	2.25	0.51
22:BA:2708:G:O2'	35:BN:71:ARG:HD3	2.11	0.51
29:DH:26:ALA:HA	29:DH:30:LEU:HB2	1.92	0.51
1:CA:1084:G:OP1	1:CA:1086:U:C6	2.64	0.51
15:AO:39:LEU:HD23	15:AO:56:LEU:HD13	1.92	0.51
27:DF:117:LEU:O	27:DF:177:PHE:HA	2.11	0.51
1:AA:577:G:C1'	1:AA:816:A:H2'	2.41	0.51
22:BA:2198:A:C4	29:BH:29:PHE:HB2	2.46	0.51
1:AA:34:C:O2'	1:AA:35:G:H5'	2.11	0.51
34:BM:41:LEU:O	34:BM:93:VAL:HA	2.11	0.51
22:BA:817:C:P	57:BA:3583:HOH:O	2.68	0.51
30:DI:18:ALA:O	30:DI:19:ASN:CB	2.59	0.51
24:DC:129:THR:C	24:DC:130:LEU:HD23	2.32	0.51
22:DA:1323:C:N4	22:DA:1324:G:O6	2.44	0.51
22:DA:752:A:N1	22:DA:1781:U:H1'	2.26	0.51
6:CF:70:VAL:HG23	6:CF:71:ILE:N	2.26	0.51
1:CA:724:G:C2	1:CA:725:G:C8	2.98	0.51
4:AD:170:TRP:O	4:AD:183:LYS:HB3	2.11	0.51
24:DC:266:PHE:N	24:DC:266:PHE:CD1	2.78	0.51
32:DK:2:ILE:HB	32:DK:33:ALA:O	2.11	0.51
22:BA:223:A:C6	22:BA:422:A:C5	2.99	0.51
22:BA:2574:G:O2'	22:BA:2575:C:H5'	2.11	0.50
22:BA:2748:A:C2	22:BA:2757:A:C4	2.99	0.50
38:DQ:65:ILE:HD11	38:DQ:95:LEU:HB2	1.93	0.50
22:BA:1668:A:H4'	22:BA:1669:A:O5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:49:ILE:HB	39:BR:52:PRO:CA	2.42	0.50
38:BQ:88:VAL:HG13	39:BR:49:ILE:HD11	1.92	0.50
22:BA:194:G:N7	57:BA:3763:HOH:O	2.35	0.50
22:DA:1951:U:H2'	22:DA:1953:A:OP2	2.11	0.50
4:CD:150:LYS:O	4:CD:151:LYS:C	2.47	0.50
12:AL:110:ARG:NH2	12:AL:117:TYR:CE2	2.79	0.50
39:DR:49:ILE:HG13	39:DR:49:ILE:O	2.11	0.50
22:DA:1739:A:H2'	22:DA:1740:G:O5'	2.11	0.50
22:DA:1682:G:N2	22:DA:1757:A:O4'	2.44	0.50
1:AA:1222:G:C6	1:AA:1223:C:C4	2.99	0.50
10:AJ:48:ARG:HD3	14:AN:101:TRP:CH2	2.46	0.50
11:CK:31:ILE:O	11:CK:31:ILE:HG12	2.11	0.50
2:AB:203:ASN:OD1	2:AB:204:ASP:N	2.44	0.50
29:BH:14:SER:OG	29:BH:17:ASP:OD1	2.29	0.50
22:BA:528:A:H3'	22:BA:528:A:H8	1.73	0.50
1:CA:1160:G:O2'	1:CA:1161:C:P	2.70	0.50
22:BA:211:C:O2'	22:BA:212:G:H5'	2.11	0.50
1:CA:898:G:O2'	1:CA:900:A:N7	2.37	0.50
12:CL:90:LEU:HB2	12:CL:93:VAL:CG2	2.41	0.50
22:BA:1687:G:C2	22:BA:1688:U:C4	2.98	0.50
53:B5:65:LEU:C	53:B5:67:HIS:H	2.14	0.50
3:CC:97:VAL:HB	3:CC:98:PRO:HD2	1.93	0.50
22:DA:2024:G:OP2	22:DA:2034:U:H4'	2.11	0.50
22:DA:483:A:C8	22:DA:484:C:C5	2.99	0.50
28:DG:89:LEU:HD12	28:DG:162:VAL:HG22	1.93	0.50
8:CH:11:LEU:HD22	8:CH:75:ILE:HD11	1.93	0.50
23:DB:14:U:O2'	23:DB:14:U:O2	2.27	0.50
1:CA:833:G:C4	1:CA:834:U:C6	3.00	0.50
1:AA:668:G:O2'	1:AA:669:G:H5'	2.11	0.50
22:DA:2223:G:H2'	22:DA:2224:G:H5'	1.93	0.50
9:AI:16:ALA:O	9:AI:67:VAL:HA	2.11	0.50
22:BA:2004:G:OP1	57:BA:3804:HOH:O	2.19	0.50
1:CA:425:G:H2'	1:CA:426:U:O4'	2.11	0.50
22:DA:1938:A:C6	22:DA:2590:A:H1'	2.45	0.50
29:BH:66:ASN:OD1	29:BH:138:VAL:HG21	2.11	0.50
7:AG:95:ARG:O	7:AG:98:ALA:N	2.44	0.50
22:BA:1832:C:N4	22:BA:1833:C:C4	2.79	0.50
22:BA:1394:U:P	57:BA:3407:HOH:O	2.69	0.50
22:DA:1636:U:H2'	22:DA:1637:A:C8	2.45	0.50
16:AP:22:ALA:HA	16:AP:33:ILE:HG13	1.91	0.50
38:DQ:32:TYR:CD2	38:DQ:32:TYR:C	2.84	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:170:ARG:HG3	26:DE:174:GLY:O	2.10	0.50
22:BA:2496:C:H2'	22:BA:2497:A:O5'	2.11	0.50
22:BA:989:G:C8	47:BZ:14:ILE:HD11	2.46	0.50
22:DA:1799:G:N2	22:DA:1818:U:O2'	2.42	0.50
17:AQ:69:LYS:O	17:AQ:70:THR:OG1	2.28	0.50
22:BA:611:C:C2'	22:BA:612:G:H5'	2.41	0.50
30:BI:43:ASN:HB3	30:BI:47:ASP:OD1	2.11	0.50
22:DA:1062:G:C2	22:DA:1063:G:N1	2.80	0.50
22:DA:1063:G:O2'	30:DI:89:GLY:HA3	2.12	0.50
30:DI:71:THR:C	30:DI:72:LYS:HD3	2.31	0.50
40:BS:59:GLU:HG3	40:BS:66:ILE:HG13	1.92	0.50
4:AD:98:LEU:HD23	4:AD:118:VAL:CG1	2.41	0.50
22:DA:699:A:C2'	22:DA:700:G:H5'	2.40	0.50
21:AU:4:ILE:N	21:AU:20:LYS:CE	2.75	0.50
1:AA:93:U:H2'	1:AA:94:G:H5''	1.93	0.50
1:AA:824:G:C2	1:AA:877:G:C2	3.00	0.50
22:BA:1421:G:C2	22:BA:1422:G:N7	2.79	0.50
1:AA:652:U:O2'	1:AA:653:U:P	2.68	0.50
4:AD:145:ILE:N	4:AD:145:ILE:HD12	2.25	0.50
43:DV:9:ARG:HG3	43:DV:41:GLU:HB3	1.93	0.50
1:CA:68:G:C5	1:CA:69:G:H1'	2.46	0.50
1:CA:1521:C:C4	1:CA:1522:U:C5	3.00	0.50
22:BA:2186:G:H2'	22:BA:2187:U:C6	2.46	0.50
1:CA:174:A:C4	1:CA:175:C:C6	2.99	0.50
22:DA:2341:G:C2	22:DA:2342:C:C2	2.99	0.50
1:CA:1505:G:H4'	1:CA:1506:U:H5''	1.93	0.50
22:DA:2822:G:H2'	22:DA:2823:A:H5''	1.93	0.50
1:AA:900:A:N1	1:AA:901:A:C2	2.78	0.50
47:BZ:37:GLU:O	47:BZ:38:ARG:HD3	2.12	0.50
33:DL:79:LEU:HB3	33:DL:114:GLY:O	2.11	0.50
22:DA:2351:G:H1'	22:DA:2367:G:N2	2.26	0.50
29:DH:5:LEU:HA	29:DH:36:ALA:HA	1.92	0.50
22:BA:2016:U:H2'	22:BA:2017:U:C6	2.46	0.50
1:CA:252:U:H5'	1:CA:253:A:OP2	2.10	0.50
13:CM:81:MET:O	13:CM:83:LEU:N	2.45	0.50
49:B1:26:ASN:OD1	49:B1:28:ARG:HB2	2.10	0.50
2:AB:216:ALA:O	2:AB:220:THR:HG22	2.12	0.50
19:CS:36:ARG:HB3	19:CS:72:GLY:CA	2.41	0.50
30:BI:78:VAL:HG23	30:BI:79:LEU:HG	1.92	0.50
9:CI:12:ARG:HD2	9:CI:107:ASP:HB3	1.92	0.50
32:BK:2:ILE:HG23	32:BK:6:THR:HG21	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:940:C:N4	1:CA:941:G:O6	2.45	0.50
22:DA:2857:G:N2	22:DA:2860:A:OP2	2.36	0.50
6:AF:8:PHE:HA	6:AF:87:SER:HA	1.93	0.50
49:D1:47:VAL:HG12	49:D1:48:ILE:N	2.26	0.50
22:BA:2025:C:H2'	22:BA:2026:U:C6	2.46	0.50
22:DA:447:A:H5'	22:DA:449:A:C4	2.46	0.50
22:DA:453:A:H4'	22:DA:472:A:N6	2.26	0.50
1:CA:701:U:H4'	1:CA:703:G:C8	2.46	0.50
22:BA:1098:A:H5'	22:BA:1099:G:OP2	2.11	0.50
22:BA:1061:U:C4	30:BI:10:LYS:O	2.64	0.50
33:BL:29:LYS:HG2	33:BL:30:THR:HG23	1.93	0.50
1:AA:1157:A:N7	1:AA:1180:A:N6	2.60	0.50
1:CA:211:G:O2'	1:CA:212:G:H4'	2.12	0.50
1:AA:1351:U:H2'	1:AA:1352:C:C6	2.47	0.50
9:AI:118:LEU:HA	9:AI:125:PRO:HD3	1.94	0.50
4:CD:145:ILE:CG2	4:CD:150:LYS:HA	2.41	0.50
1:CA:711:G:O2'	1:CA:712:A:H5'	2.11	0.50
1:AA:74:A:C2	1:AA:97:G:C2	2.99	0.50
1:AA:89:U:O2'	1:AA:90:C:C5'	2.59	0.50
2:AB:103:ASN:CG	2:AB:106:THR:HB	2.31	0.50
24:DC:147:LYS:HG3	24:DC:150:LYS:HD2	1.93	0.50
1:CA:972:C:H4'	10:CJ:59:LYS:HG2	1.93	0.50
1:AA:771:G:O2'	1:AA:772:U:H5'	2.10	0.50
1:CA:321:A:C8	1:CA:328:C:C2	2.99	0.50
22:DA:335:C:O5'	22:DA:335:C:H6	1.94	0.50
2:CB:18:HIS:CD2	2:CB:203:ASN:ND2	2.80	0.50
1:CA:577:G:N3	1:CA:578:C:C6	2.80	0.50
22:DA:2382:G:H3'	22:DA:2382:G:OP1	2.11	0.50
22:DA:2080:A:OP1	45:DX:20:HIS:HB2	2.11	0.50
22:BA:182:A:H2'	22:BA:183:C:C6	2.46	0.50
1:CA:957:U:O2	1:CA:959:A:H8	1.94	0.50
22:DA:1417:C:N4	22:DA:1418:G:C6	2.79	0.50
22:DA:690:G:H1'	22:DA:779:U:O3'	2.12	0.50
24:BC:162:VAL:CG1	24:BC:163:GLN:N	2.75	0.50
29:DH:127:GLU:HG3	29:DH:145:ASN:HA	1.93	0.50
22:DA:1866:A:C8	22:DA:1867:G:C8	2.99	0.50
22:DA:2244:U:C5	22:DA:2245:U:C5	2.98	0.50
3:CC:47:LEU:HB3	3:CC:50:ALA:HB3	1.93	0.50
22:DA:2823:A:C5	22:DA:2824:C:C5	3.00	0.50
6:AF:74:LEU:HD23	6:AF:78:PHE:CE1	2.46	0.50
4:CD:116:GLN:NE2	4:CD:120:HIS:CE1	2.80	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DV:63:ILE:HD12	43:DV:72:VAL:HG21	1.93	0.50
5:AE:15:LEU:HB3	5:AE:37:THR:HG22	1.93	0.50
11:CK:82:LEU:O	11:CK:82:LEU:HD23	2.11	0.50
22:BA:657:U:H2'	22:BA:658:U:C6	2.47	0.50
43:BV:15:GLY:O	43:BV:19:ARG:HG3	2.11	0.50
27:DF:58:ALA:HB2	27:DF:65:PRO:HD3	1.93	0.50
10:AJ:81:GLU:HA	10:AJ:84:VAL:HG12	1.93	0.50
7:AG:17:LYS:O	7:AG:18:PHE:CD1	2.64	0.50
22:DA:2767:C:C2'	22:DA:2768:U:H5'	2.41	0.50
22:BA:864:G:C6	22:BA:865:C:N4	2.79	0.50
12:AL:76:GLU:O	12:AL:77:HIS:HB2	2.11	0.50
22:DA:2886:A:C2	22:DA:2887:A:H1'	2.46	0.50
42:BU:42:VAL:O	42:BU:60:GLU:HA	2.11	0.50
19:AS:15:LEU:HD13	19:AS:33:THR:HG21	1.94	0.50
16:AP:56:ARG:O	16:AP:59:HIS:HB3	2.12	0.50
31:DJ:56:VAL:HB	31:DJ:124:VAL:HG12	1.94	0.50
25:BD:136:ASN:ND2	25:BD:140:HIS:CD2	2.80	0.50
1:AA:620:C:H1'	4:AD:132:ILE:CD1	2.41	0.50
22:DA:310:A:C5	22:DA:330:A:C6	2.99	0.50
24:DC:31:ALA:HB3	24:DC:32:PRO:CD	2.41	0.50
9:AI:36:GLU:HA	9:AI:40:GLY:CA	2.42	0.50
1:AA:1353:G:C2	1:AA:1354:U:C5	3.00	0.50
1:CA:18:C:N3	1:CA:19:A:N7	2.59	0.50
22:DA:396:G:C1'	45:DX:29:PHE:HB3	2.42	0.50
28:BG:12:PRO:HD2	28:BG:15:VAL:HG21	1.93	0.50
7:CG:75:VAL:HG11	7:CG:144:MET:HG3	1.94	0.50
1:AA:1329:A:C2'	1:AA:1330:U:H5'	2.40	0.50
22:BA:1258:U:N3	22:BA:1259:G:N7	2.59	0.50
22:DA:1127:A:H2'	22:DA:1128:G:H5''	1.94	0.50
22:DA:591:U:C2	22:DA:592:A:C8	2.99	0.50
4:CD:34:ILE:O	4:CD:35:GLU:CB	2.59	0.50
9:CI:57:MET:O	9:CI:59:GLU:N	2.45	0.50
43:BV:23:ALA:O	43:BV:25:LYS:N	2.44	0.50
15:CO:46:HIS:C	15:CO:48:LYS:H	2.14	0.50
2:CB:81:LYS:HG3	2:CB:91:PHE:CZ	2.46	0.50
22:DA:636:G:C6	33:DL:111:ILE:HD11	2.46	0.50
42:DU:13:VAL:HB	42:DU:18:ASP:O	2.11	0.50
11:CK:112:ASP:HB3	21:CU:20:LYS:HE3	1.93	0.50
28:DG:115:HIS:HE1	28:DG:144:VAL:HG13	1.77	0.50
1:AA:880:C:O2'	1:AA:881:G:H5'	2.11	0.50
33:BL:91:ASP:HB3	33:BL:94:THR:HB	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1107:G:C5	22:BA:1108:U:C5	2.99	0.50
42:BU:88:GLU:O	42:BU:89:ASP:HB3	2.12	0.50
18:CR:34:THR:HG22	18:CR:38:LYS:HB2	1.93	0.50
22:BA:2313:C:H5''	27:BF:88:LYS:HD3	1.94	0.50
22:DA:2466:C:OP1	52:D4:4:ARG:HB2	2.12	0.50
39:BR:59:ILE:HG23	39:BR:101:ILE:CD1	2.41	0.50
25:BD:166:GLY:O	25:BD:167:ASN:HB3	2.11	0.50
1:CA:1089:G:C4	1:CA:1090:U:C6	2.99	0.50
22:DA:851:C:O2'	47:DZ:43:ALA:O	2.28	0.50
26:DE:12:LEU:HD23	26:DE:13:THR:N	2.26	0.50
47:DZ:6:LYS:HB2	47:DZ:58:GLU:HG3	1.93	0.50
24:BC:91:ILE:HD12	24:BC:103:TYR:CD1	2.46	0.50
21:CU:4:ILE:O	21:CU:4:ILE:HG22	2.11	0.50
22:BA:430:A:H5''	22:BA:431:U:OP2	2.12	0.50
29:BH:80:ILE:O	29:BH:147:VAL:N	2.44	0.50
25:BD:136:ASN:HD21	25:BD:140:HIS:CD2	2.30	0.50
22:BA:1846:G:N2	22:BA:1895:C:C2	2.79	0.50
22:DA:310:A:HO2'	22:DA:311:A:P	2.28	0.50
22:BA:495:G:H1'	40:BS:57:ASN:ND2	2.26	0.50
22:DA:1248:G:N3	38:DQ:3:ARG:HG3	2.26	0.50
4:AD:30:THR:O	4:AD:31:LYS:HE2	2.11	0.50
22:DA:1073:A:H4'	22:DA:2474:U:H4'	1.94	0.50
25:DD:12:THR:CG2	37:DP:5:ILE:HG23	2.41	0.50
22:BA:2839:G:C4	22:BA:2840:C:C6	3.00	0.50
1:CA:679:C:C2	1:CA:712:A:C2	2.98	0.50
45:DX:12:PRO:HB3	45:DX:28:ARG:NH2	2.27	0.50
5:AE:81:LEU:HD12	5:AE:147:MET:SD	2.52	0.50
22:BA:1585:C:C2'	22:BA:1586:A:H5'	2.42	0.50
22:BA:1424:G:H2'	22:BA:1425:G:O4'	2.12	0.50
22:DA:1179:G:C6	22:DA:1180:U:H1'	2.47	0.50
22:DA:222:A:H3'	22:DA:421:C:H5'	1.93	0.50
4:CD:88:GLU:HG2	4:CD:188:ARG:HD3	1.93	0.50
6:AF:99:ALA:O	6:AF:100:SER:CB	2.59	0.50
24:DC:238:ARG:O	24:DC:239:ASN:O	2.30	0.50
22:DA:1856:U:O4	22:DA:1857:G:N1	2.44	0.50
1:CA:1203:C:H4'	14:CN:67:THR:HB	1.93	0.50
33:DL:111:ILE:HD12	33:DL:111:ILE:N	2.26	0.50
22:BA:468:G:O6	22:BA:469:G:C2	2.64	0.50
1:CA:237:G:C6	1:CA:238:A:C5	3.00	0.50
22:DA:2853:C:H2'	22:DA:2854:G:C8	2.46	0.50
23:DB:5:U:C2	23:DB:116:G:N2	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:102:GLY:N	57:DL:202:HOH:O	2.43	0.50
44:DW:38:VAL:HG21	44:DW:80:ILE:CD1	2.42	0.50
2:AB:176:ALA:O	2:AB:179:LEU:N	2.45	0.50
22:DA:786:C:H5''	22:DA:1780:A:N7	2.26	0.50
22:BA:368:A:N6	22:BA:369:U:O4	2.45	0.50
33:DL:93:ASN:OD1	33:DL:94:THR:N	2.44	0.50
1:AA:116:A:C4	1:AA:117:G:C8	3.00	0.50
48:B0:4:GLN:NE2	48:B0:7:LYS:HA	2.27	0.50
1:CA:649:A:H2'	1:CA:650:G:O4'	2.11	0.50
25:BD:186:LEU:HD21	37:BP:4:ILE:HG21	1.94	0.50
37:DP:18:PRO:HG3	37:DP:84:ILE:O	2.12	0.50
4:AD:101:VAL:HG12	4:AD:101:VAL:O	2.12	0.50
1:CA:84:U:O2'	1:CA:85:U:H5'	2.12	0.50
7:AG:56:LYS:O	7:AG:57:SER:HB3	2.11	0.50
1:AA:1446:A:N6	1:AA:1447:A:H62	2.09	0.50
42:DU:54:GLN:N	42:DU:55:PRO:HD3	2.27	0.50
39:BR:25:LEU:H	39:BR:94:THR:CG2	2.24	0.50
22:BA:983:A:C6	22:BA:984:A:N1	2.79	0.50
2:CB:142:GLU:HA	2:CB:145:GLU:HB2	1.94	0.50
22:BA:1189:A:C8	22:BA:1190:G:C8	2.99	0.50
11:AK:76:GLU:HA	22:BA:2141:G:OP1	2.12	0.50
1:AA:553:A:O2'	1:AA:554:A:H5'	2.11	0.50
22:DA:2209:G:N2	22:DA:2216:G:C4	2.79	0.50
22:DA:2216:G:H2'	22:DA:2217:G:C8	2.47	0.50
38:BQ:41:LYS:O	38:BQ:42:ALA:C	2.50	0.50
22:BA:362:A:C8	22:BA:362:A:OP2	2.64	0.50
10:AJ:52:LEU:HD21	10:AJ:59:LYS:HA	1.94	0.50
1:CA:1226:C:H2'	13:CM:102:THR:HB	1.94	0.50
1:AA:1374:A:O3'	7:AG:28:ASN:ND2	2.45	0.50
22:DA:2147:A:N7	22:DA:2148:G:C5	2.79	0.50
4:AD:118:VAL:HA	4:AD:123:ILE:CD1	2.41	0.50
1:CA:505:G:H2'	1:CA:506:G:H8	1.76	0.50
21:AU:10:GLU:HG3	21:AU:11:PRO:HD3	1.93	0.50
2:AB:47:VAL:C	2:AB:49:MET:H	2.15	0.50
27:BF:132:VAL:CG2	27:BF:152:LEU:HB3	2.42	0.50
40:DS:73:LYS:CB	40:DS:106:VAL:HB	2.41	0.50
30:BI:59:ILE:HG22	30:BI:61:VAL:HG23	1.93	0.50
1:AA:203:G:O2'	1:AA:465:A:N1	2.42	0.50
4:CD:59:GLN:OE1	4:CD:59:GLN:HA	2.11	0.50
8:AH:89:LYS:HA	8:AH:92:LEU:HG	1.92	0.50
34:BM:132:THR:HG22	34:BM:133:LYS:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:511:U:C5	22:BA:512:G:C5	3.00	0.50
1:AA:737:C:C2	1:AA:738:C:C5	2.99	0.50
22:DA:2103:C:H2'	22:DA:2104:C:C6	2.46	0.50
35:DN:29:VAL:HG13	35:DN:83:LEU:HD11	1.94	0.50
22:DA:1525:A:H2'	22:DA:1526:C:O4'	2.12	0.50
43:DV:20:LEU:HD22	43:DV:27:PRO:HD3	1.93	0.50
35:DN:66:ALA:O	35:DN:70:THR:HG23	2.12	0.50
1:CA:123:U:H2'	1:CA:124:C:C6	2.47	0.50
1:CA:124:C:N3	1:CA:125:U:C4	2.80	0.50
1:AA:973:G:H1'	10:AJ:56:HIS:CD2	2.45	0.50
22:DA:2326:C:C1'	22:DA:2327:A:OP1	2.59	0.50
1:CA:1267:C:N3	1:CA:1327:C:H4'	2.27	0.50
44:DW:34:GLY:O	44:DW:35:SER:C	2.50	0.50
30:BI:75:PRO:HB2	30:BI:78:VAL:HG13	1.94	0.50
1:AA:642:A:C4	8:AH:106:THR:O	2.64	0.50
6:CF:67:PRO:O	6:CF:69:GLU:N	2.45	0.50
1:AA:582:C:C2	1:AA:583:A:C8	3.00	0.50
1:AA:490:C:C2	1:AA:491:G:C8	2.99	0.50
21:CU:14:VAL:O	21:CU:16:LEU:HG	2.12	0.50
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.27	0.50
22:BA:665:U:O2'	22:BA:666:A:H5'	2.12	0.50
22:DA:1906:G:OP1	22:DA:1930:G:C8	2.65	0.50
22:BA:684:G:OP1	50:B2:21:ARG:NH1	2.45	0.50
1:AA:618:C:H2'	1:AA:618:C:O2	2.10	0.50
22:DA:2506:U:H2'	22:DA:2506:U:O2	2.10	0.50
28:DG:138:LYS:O	28:DG:141:ILE:HG13	2.12	0.50
22:BA:1783:A:N1	22:BA:2587:A:H2'	2.27	0.50
31:DJ:77:HIS:HA	31:DJ:83:GLY:O	2.12	0.50
25:DD:176:ASP:HB2	25:DD:190:LYS:HB3	1.92	0.50
29:BH:93:SER:O	1:CA:368:U:C6	2.64	0.50
22:DA:2053:G:H2'	22:DA:2054:A:O4'	2.11	0.50
22:BA:1179:G:C3'	22:BA:1180:U:H4'	2.37	0.50
4:AD:130:VAL:HG11	4:AD:135:TYR:CG	2.47	0.50
8:AH:64:LYS:HB2	8:AH:71:VAL:HG21	1.92	0.50
1:CA:687:A:N3	1:CA:688:G:H1'	2.26	0.50
14:AN:46:LEU:HG	14:AN:47:LYS:N	2.27	0.50
6:AF:3:HIS:HB2	6:AF:92:THR:HG23	1.93	0.50
22:BA:819:A:N3	22:BA:1189:A:H2	2.10	0.50
1:CA:33:A:H2'	1:CA:34:C:C6	2.47	0.50
24:BC:210:ALA:O	24:BC:214:ARG:HG3	2.11	0.50
22:DA:844:A:C2	22:DA:845:A:N7	2.80	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:41:ILE:C	2:AB:41:ILE:HD13	2.32	0.50
1:AA:920:U:C1'	1:AA:1080:A:C2	2.95	0.50
1:AA:946:A:O2'	1:AA:1333:A:N3	2.34	0.50
1:AA:468:A:H5'	1:AA:469:C:OP2	2.12	0.50
20:AT:44:LYS:CD	20:AT:87:ALA:HA	2.41	0.50
42:DU:74:ASN:ND2	42:DU:96:PHE:CG	2.79	0.50
46:BY:32:ALA:HB2	46:BY:37:LEU:HD23	1.92	0.50
1:CA:756:C:H2'	1:CA:757:U:C5'	2.42	0.50
26:DE:5:LEU:O	26:DE:6:LYS:C	2.49	0.50
22:DA:1240:U:HO2'	22:DA:1241:A:P	2.34	0.50
25:BD:62:LYS:N	25:BD:63:PRO:CD	2.75	0.50
10:AJ:57:VAL:HG22	10:AJ:58:ASN:H	1.77	0.50
46:BY:45:GLN:O	46:BY:46:VAL:CB	2.59	0.50
1:CA:938:A:N6	1:CA:939:G:C6	2.80	0.50
1:CA:421:U:O5'	1:CA:422:C:C5	2.65	0.50
33:DL:92:LEU:CD2	33:DL:124:GLY:HA3	2.42	0.50
20:CT:64:LYS:HE3	20:CT:64:LYS:HA	1.94	0.50
1:CA:183:C:O2'	1:CA:184:G:O5'	2.30	0.50
22:BA:1428:C:C5	22:BA:1569:A:H5''	2.46	0.50
5:CE:72:ILE:HD13	5:CE:145:GLU:CD	2.32	0.50
27:BF:127:ASN:OD1	27:BF:157:THR:HA	2.12	0.50
22:BA:2883:A:OP2	48:B0:50:ARG:NH1	2.45	0.50
22:BA:2320:U:O2	22:BA:2333:A:N6	2.43	0.50
26:DE:1:MET:CG	26:DE:14:VAL:HG23	2.42	0.50
22:BA:2118:U:O4	22:BA:2148:G:O2'	2.29	0.50
22:BA:1947:C:C2	22:BA:1960:A:C2	2.99	0.50
22:BA:1411:U:H2'	22:BA:1412:U:O4'	2.12	0.50
11:CK:107:ILE:O	11:CK:107:ILE:HG23	2.11	0.50
6:AF:64:VAL:HG12	6:AF:65:GLU:N	2.27	0.50
1:AA:357:G:C2	1:AA:358:U:C6	3.00	0.50
26:DE:28:VAL:O	26:DE:32:VAL:HG23	2.12	0.50
22:BA:2467:C:N4	22:BA:2468:A:C6	2.80	0.50
22:DA:2261:C:H5''	44:DW:19:LYS:HZ3	1.76	0.50
22:BA:1176:U:C4	22:BA:1177:G:O6	2.65	0.50
29:DH:44:ILE:O	29:DH:48:GLU:HB2	2.12	0.50
1:CA:485:U:HO2'	1:CA:486:U:P	2.34	0.50
22:DA:307:G:N2	22:DA:310:A:C8	2.80	0.50
22:DA:2012:G:OP1	40:DS:98:LYS:HG2	2.11	0.50
1:AA:792:A:N3	1:AA:794:A:C5	2.80	0.50
1:AA:1023:U:H2'	1:AA:1024:G:O4'	2.12	0.50
22:BA:1792:G:OP1	24:BC:204:VAL:O	2.30	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:205:LEU:HG	24:BC:210:ALA:HB1	1.93	0.50
1:AA:131:A:O2'	1:AA:262:A:N3	2.37	0.50
22:BA:1364:G:OP2	45:BX:2:SER:N	2.45	0.50
22:BA:1924:C:C2'	22:BA:1924:C:O2	2.59	0.50
1:AA:951:G:C2	1:AA:952:U:C2	3.00	0.50
22:DA:1109:C:H5''	22:DA:1110:G:OP2	2.12	0.50
1:AA:1140:C:O2'	1:AA:1141:C:OP2	2.28	0.50
22:DA:396:G:OP1	45:DX:13:VAL:HG11	2.11	0.50
22:DA:699:A:N6	22:DA:733:G:O2'	2.44	0.50
1:AA:957:U:H1'	1:AA:960:U:N3	2.27	0.50
1:AA:15:G:C5	1:AA:1396:A:C2	2.99	0.50
22:BA:118:A:N3	22:BA:178:G:H1'	2.26	0.50
22:BA:790:U:O2'	22:BA:791:C:O5'	2.29	0.50
37:DP:46:VAL:HG12	37:DP:47:VAL:N	2.26	0.50
12:CL:7:LEU:HD22	12:CL:12:ARG:HD2	1.93	0.50
4:CD:192:SER:O	4:CD:193:ALA:HB3	2.11	0.50
22:DA:555:G:O2'	22:DA:556:A:OP2	2.29	0.50
24:DC:260:ASN:O	24:DC:261:LYS:HB2	2.12	0.50
22:DA:2391:G:OP2	51:D3:35:LYS:NZ	2.35	0.50
1:CA:213:G:C8	1:CA:214:C:C5	2.99	0.50
3:CC:153:VAL:O	3:CC:165:THR:O	2.30	0.50
1:AA:1346:A:C5	7:AG:10:ARG:CZ	2.95	0.50
22:BA:2001:C:N3	22:BA:2002:G:N7	2.60	0.50
22:DA:362:A:C4	22:DA:363:G:C8	3.00	0.50
22:DA:2323:G:C6	22:DA:2324:U:C4	3.00	0.50
22:BA:27:G:N2	22:BA:512:G:H1'	2.26	0.50
22:DA:2104:C:H2'	22:DA:2105:U:O4'	2.12	0.50
24:BC:252:THR:HG22	24:BC:253:LYS:H	1.76	0.50
28:DG:98:VAL:HG22	28:DG:125:CYS:SG	2.52	0.50
49:B1:11:LEU:O	49:B1:20:PHE:HB2	2.12	0.50
22:DA:457:A:N1	22:DA:470:A:H5''	2.26	0.50
16:AP:56:ARG:O	16:AP:59:HIS:N	2.45	0.50
18:AR:49:ALA:O	18:AR:51:TYR:N	2.45	0.50
1:AA:1123:U:O2'	10:AJ:39:PRO:O	2.26	0.50
28:BG:6:LYS:HG2	28:BG:62:TRP:CZ3	2.47	0.50
4:CD:78:GLU:OE2	4:CD:81:ARG:NH1	2.44	0.50
22:DA:1247:A:O3'	38:DQ:2:ALA:HB3	2.11	0.50
26:DE:148:ILE:HG12	26:DE:168:ASP:O	2.12	0.50
22:BA:2557:G:C6	22:BA:2558:C:N4	2.80	0.50
11:AK:37:ARG:C	11:AK:39:GLY:H	2.15	0.50
22:BA:1169:A:N1	22:BA:1180:U:O4	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:82:HIS:CG	39:DR:82:HIS:O	2.65	0.50
22:BA:1131:G:O2'	22:BA:2025:C:O2'	2.27	0.50
5:CE:105:ILE:H	5:CE:122:ASN:CA	2.25	0.50
22:DA:2165:C:O2	22:DA:2165:C:H2'	2.11	0.50
17:AQ:16:LYS:O	17:AQ:17:MET:HE3	2.11	0.50
18:CR:25:ASP:C	18:CR:27:ALA:N	2.63	0.50
22:BA:1495:A:O2'	22:BA:1496:A:H5'	2.12	0.50
22:DA:443:A:C8	26:DE:40:ARG:HD3	2.47	0.50
24:BC:17:VAL:H	24:BC:204:VAL:HG22	1.76	0.50
12:AL:24:LEU:HB2	12:AL:59:ASN:ND2	2.26	0.50
5:CE:89:HIS:CE1	5:CE:90:THR:OG1	2.65	0.50
22:BA:563:A:C2	22:BA:564:C:N1	2.80	0.50
10:AJ:7:ARG:HB2	10:AJ:75:ASP:OD1	2.12	0.50
53:B5:52:PRO:O	53:B5:53:ARG:CB	2.60	0.50
22:DA:810:U:C4	33:DL:30:THR:HA	2.46	0.50
2:CB:36:ASN:O	2:CB:37:LYS:HB2	2.12	0.50
22:DA:2637:U:H5''	25:DD:83:ARG:NH2	2.26	0.50
1:CA:1105:A:C2	1:CA:1106:G:C8	3.00	0.50
1:CA:214:C:H2'	1:CA:215:C:C6	2.47	0.50
22:BA:2409:G:H2'	22:BA:2410:G:O4'	2.11	0.50
9:AI:13:LYS:HG2	9:AI:13:LYS:O	2.12	0.50
53:B5:49:GLY:N	53:B5:208:THR:CB	2.75	0.50
1:AA:219:U:C2	1:AA:220:G:C8	2.99	0.50
18:CR:50:LYS:HA	18:CR:53:ARG:NH1	2.27	0.50
6:CF:99:ALA:O	6:CF:100:SER:CB	2.59	0.50
22:DA:1491:G:C6	22:DA:1500:G:C2	3.00	0.50
41:DT:82:LYS:HG2	41:DT:83:ALA:N	2.27	0.50
2:CB:100:MET:HA	2:CB:107:VAL:HG21	1.93	0.50
46:DY:35:GLY:C	46:DY:36:GLN:HG3	2.33	0.50
22:BA:861:A:C2	22:BA:917:A:C4	2.99	0.50
53:B5:24:ASP:CB	53:B5:185:LYS:O	2.60	0.50
22:DA:715:A:N6	22:DA:716:A:C6	2.79	0.50
22:BA:1487:U:O2	22:BA:1503:A:C2	2.64	0.50
1:AA:1405:G:H1'	1:AA:1519:A:O4'	2.11	0.50
1:CA:934:C:H5''	57:CA:1825:HOH:O	2.11	0.50
42:BU:6:ARG:O	42:BU:9:ASP:HB2	2.12	0.50
44:BW:38:VAL:HG12	44:BW:39:ARG:N	2.26	0.50
28:BG:20:ASN:ND2	28:BG:20:ASN:O	2.40	0.50
22:DA:654:A:N3	22:DA:654:A:H3'	2.27	0.50
8:AH:41:LYS:NZ	8:AH:48:ASP:OD2	2.43	0.50
10:AJ:26:VAL:HG12	10:AJ:30:LYS:HD3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1593:A:H2'	22:DA:1594:U:O4'	2.12	0.50
22:BA:2500:U:H5''	22:BA:2501:C:OP2	2.12	0.49
5:CE:156:LYS:HD2	8:CH:71:VAL:HG13	1.93	0.49
22:BA:2549:G:N2	22:BA:2560:A:C4	2.80	0.49
22:DA:1651:G:N2	22:DA:2007:U:C2	2.80	0.49
22:BA:2598:A:C8	22:BA:2599:G:H1'	2.47	0.49
22:DA:223:A:N1	22:DA:407:G:O2'	2.36	0.49
22:DA:406:G:H2'	22:DA:407:G:O4'	2.11	0.49
11:AK:21:ALA:CB	11:AK:34:ILE:HD13	2.42	0.49
38:BQ:41:LYS:HD3	38:BQ:45:TYR:CE1	2.47	0.49
4:CD:151:LYS:O	4:CD:151:LYS:HG3	2.12	0.49
22:BA:2309:A:C6	22:BA:2310:C:C4	2.99	0.49
22:DA:1045:C:C3'	22:DA:1046:A:H5'	2.41	0.49
1:AA:1461:G:C4	1:AA:1462:C:C6	3.00	0.49
22:DA:1738:G:O2'	22:DA:1739:A:P	2.69	0.49
1:CA:728:A:H2'	1:CA:729:A:H8	1.75	0.49
1:AA:68:G:C6	1:AA:69:G:H1'	2.47	0.49
16:AP:79:ASN:O	16:AP:80:LYS:HB2	2.12	0.49
1:CA:1211:U:O2'	1:CA:1212:U:P	2.70	0.49
22:DA:222:A:H3'	22:DA:421:C:C5'	2.41	0.49
21:CU:29:LEU:O	21:CU:29:LEU:HD23	2.12	0.49
1:AA:277:C:H2'	1:AA:278:G:C5'	2.42	0.49
41:DT:51:PHE:O	41:DT:53:VAL:HG22	2.12	0.49
1:AA:316:C:C5	1:AA:351:G:C2	3.00	0.49
11:AK:72:ASP:O	11:AK:73:ALA:HB2	2.12	0.49
19:CS:80:TYR:O	19:CS:81:ARG:HB3	2.11	0.49
22:DA:1581:G:C5	22:DA:1582:C:C5	3.00	0.49
26:DE:113:VAL:HG23	26:DE:118:LEU:HD23	1.93	0.49
33:BL:111:ILE:H	33:BL:111:ILE:HD12	1.77	0.49
22:BA:1824:G:N3	24:BC:252:THR:HG21	2.26	0.49
1:CA:1372:U:OP2	9:CI:13:LYS:NZ	2.41	0.49
1:CA:1255:G:C6	1:CA:1279:G:C8	3.00	0.49
24:DC:51:THR:O	24:DC:54:ILE:HG13	2.12	0.49
9:CI:45:ARG:HG3	9:CI:46:MET:SD	2.51	0.49
22:DA:734:A:C5	22:DA:735:A:C8	3.00	0.49
22:DA:1323:C:C4	22:DA:1324:G:N7	2.80	0.49
3:AC:87:LEU:O	3:AC:88:ARG:C	2.50	0.49
22:BA:2214:C:C5	22:BA:2215:C:C5	3.00	0.49
35:DN:74:GLU:O	35:DN:77:ALA:HB3	2.12	0.49
32:DK:10:VAL:CG1	32:DK:12:ASP:OD1	2.59	0.49
1:CA:363:A:O2'	1:CA:364:A:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2847:U:H2'	22:DA:2848:G:H5'	1.94	0.49
1:AA:1136:C:O2	1:AA:1136:C:O4'	2.29	0.49
22:BA:1857:G:H1'	22:BA:1884:G:N2	2.27	0.49
39:BR:11:GLN:O	39:BR:12:HIS:CG	2.65	0.49
22:BA:1178:C:C2'	22:BA:1179:G:N7	2.75	0.49
1:AA:427:U:C4	1:AA:428:G:C6	2.99	0.49
29:DH:81:ALA:C	29:DH:149:GLU:HB3	2.33	0.49
22:DA:2128:G:N3	22:DA:2173:A:O2'	2.46	0.49
22:DA:2199:A:C4	22:DA:2225:A:N1	2.81	0.49
23:DB:48:U:H2'	23:DB:49:C:C6	2.47	0.49
22:BA:2127:G:C4'	22:BA:2128:G:OP1	2.59	0.49
42:DU:33:LYS:HE2	42:DU:66:GLN:CD	2.32	0.49
19:AS:5:LEU:O	19:AS:6:LYS:CD	2.60	0.49
1:CA:1408:A:C2	1:CA:1494:G:C5	3.00	0.49
22:DA:1566:A:C2	24:DC:213:TRP:CE3	3.00	0.49
24:DC:53:HIS:NE2	24:DC:219:THR:HG23	2.27	0.49
45:DX:3:ARG:HG2	45:DX:33:LEU:HD22	1.94	0.49
2:AB:95:ARG:HG2	2:AB:95:ARG:HH11	1.77	0.49
3:AC:16:LYS:HE3	3:AC:181:ASP:OD1	2.12	0.49
10:AJ:33:GLY:O	10:AJ:34:ALA:CB	2.60	0.49
2:CB:35:ARG:O	2:CB:38:VAL:HG12	2.12	0.49
22:BA:2808:G:C2	22:BA:2891:U:C6	3.00	0.49
22:BA:1908:C:H2'	22:BA:1909:C:C6	2.47	0.49
6:CF:14:GLN:C	6:CF:16:GLU:H	2.14	0.49
1:CA:577:G:C2	1:CA:578:C:C5	3.00	0.49
1:AA:126:G:C2'	1:AA:127:G:O5'	2.60	0.49
2:CB:167:ASP:OD2	2:CB:191:SER:HA	2.11	0.49
22:BA:1820:U:OP1	24:BC:177:ARG:NH2	2.44	0.49
22:BA:2001:C:C4	22:BA:2002:G:N7	2.80	0.49
11:CK:90:GLY:O	11:CK:91:PRO:O	2.29	0.49
23:DB:76:G:OP1	43:DV:9:ARG:NH2	2.45	0.49
29:BH:43:ASN:O	29:BH:46:PHE:HB3	2.12	0.49
10:CJ:48:ARG:HG3	10:CJ:48:ARG:HH11	1.76	0.49
14:AN:21:PHE:O	14:AN:22:ALA:HB3	2.12	0.49
22:DA:769:U:C4	22:DA:770:G:N7	2.81	0.49
1:AA:1001:C:H3'	1:AA:1001:C:H6	1.77	0.49
47:DZ:10:THR:HG22	47:DZ:54:MET:C	2.33	0.49
22:DA:1016:G:C2	22:DA:1147:A:C2	3.00	0.49
22:BA:2531:A:H4'	28:BG:157:TYR:CD1	2.47	0.49
43:BV:14:LYS:CD	43:BV:18:ARG:NH1	2.75	0.49
44:DW:71:VAL:HG13	44:DW:76:ASN:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:57:VAL:HG13	10:CJ:58:ASN:N	2.27	0.49
22:DA:1438:U:O2	22:DA:1555:G:N2	2.45	0.49
22:BA:187:G:C2	22:BA:210:C:C2	3.00	0.49
22:BA:859:G:O2'	22:BA:860:U:P	2.70	0.49
41:DT:2:ILE:HG23	41:DT:3:ARG:C	2.32	0.49
22:BA:981:A:OP1	57:BA:3596:HOH:O	2.19	0.49
1:CA:951:G:N3	1:CA:1231:G:C2	2.79	0.49
29:BH:99:ILE:O	29:BH:99:ILE:HG22	2.12	0.49
22:DA:1370:C:H2'	22:DA:1371:G:O4'	2.12	0.49
22:DA:445:C:O2'	22:DA:449:A:N3	2.45	0.49
5:CE:101:GLU:C	5:CE:103:THR:N	2.66	0.49
6:CF:85:ILE:O	6:CF:86:ARG:O	2.29	0.49
2:CB:103:ASN:O	2:CB:103:ASN:CG	2.50	0.49
50:D2:44:VAL:HG13	50:D2:45:SER:N	2.28	0.49
7:CG:145:ALA:O	7:CG:146:GLU:CB	2.56	0.49
1:CA:582:C:C4	1:CA:760:G:C6	3.00	0.49
24:DC:159:GLY:N	24:DC:195:VAL:HG22	2.28	0.49
22:BA:1056:G:C2	22:BA:1102:C:C5	3.01	0.49
22:BA:2190:G:C6	22:BA:2191:A:C5	3.00	0.49
4:CD:124:MET:HE2	4:CD:146:ARG:HD2	1.94	0.49
12:CL:38:TYR:N	12:CL:52:VAL:O	2.42	0.49
22:BA:2307:G:O4'	22:BA:2308:G:C2	2.66	0.49
1:CA:17:U:C2	1:CA:18:C:C5	3.00	0.49
1:CA:407:U:H2'	1:CA:408:A:H8	1.76	0.49
1:AA:10:A:O2'	1:AA:11:G:H5'	2.12	0.49
22:DA:982:C:H5''	22:DA:983:A:P	2.52	0.49
22:DA:2757:A:N1	28:DG:67:THR:CG2	2.74	0.49
22:DA:1140:C:O4'	22:DA:1143:A:C2	2.65	0.49
9:AI:52:LEU:HD13	9:AI:57:MET:HG2	1.95	0.49
22:DA:289:G:H2'	22:DA:290:U:O4'	2.12	0.49
22:DA:1998:A:H2'	22:DA:1999:C:O4'	2.11	0.49
22:BA:2262:U:OP2	44:BW:19:LYS:HE2	2.12	0.49
3:CC:19:ASN:HA	3:CC:56:VAL:HG13	1.94	0.49
3:CC:57:ILE:HG13	3:CC:66:VAL:HG22	1.94	0.49
14:CN:72:GLY:O	14:CN:80:SER:HA	2.12	0.49
22:DA:771:G:C6	22:DA:772:C:C5	3.01	0.49
3:CC:141:ALA:O	3:CC:146:ALA:HB3	2.11	0.49
8:AH:49:PHE:O	8:AH:50:LYS:HG3	2.12	0.49
22:DA:1196:C:H1'	22:DA:1226:A:C4	2.47	0.49
22:BA:2318:G:C6	22:BA:2319:G:C6	3.01	0.49
22:DA:549:G:O4'	22:DA:549:G:N3	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:75:GLN:O	37:BP:77:HIS:N	2.46	0.49
26:DE:149:ILE:CG2	26:DE:188:MET:HG2	2.42	0.49
10:CJ:35:GLN:O	10:CJ:36:VAL:HB	2.12	0.49
22:DA:308:G:C6	22:DA:309:A:C6	3.01	0.49
22:BA:749:A:C5	22:BA:1618:A:C2	3.00	0.49
22:BA:1392:A:C5	22:BA:1393:A:C6	2.99	0.49
41:DT:35:ALA:HB3	41:DT:38:ALA:HB2	1.94	0.49
29:DH:5:LEU:HD11	29:DH:13:GLY:HA2	1.93	0.49
47:BZ:2:ALA:HB1	47:BZ:3:LYS:HE3	1.95	0.49
1:AA:1430:A:C2	1:AA:1471:U:C2	3.00	0.49
26:DE:97:ASN:HB2	26:DE:100:MET:HB2	1.92	0.49
2:CB:19:GLN:HB3	2:CB:189:THR:OG1	2.12	0.49
44:BW:12:ASN:O	44:BW:14:ARG:NH1	2.45	0.49
22:DA:1456:G:C5	22:DA:1457:U:C5	3.00	0.49
1:CA:748:G:H2'	1:CA:749:A:C8	2.47	0.49
22:DA:1479:G:H2'	22:DA:1480:C:O4'	2.12	0.49
22:DA:82:U:H5'	22:DA:296:U:H5''	1.94	0.49
26:DE:22:ASP:OD2	26:DE:22:ASP:N	2.45	0.49
9:AI:28:ILE:HG12	9:AI:63:LEU:HD21	1.94	0.49
22:BA:967:U:H2'	22:BA:968:C:C6	2.47	0.49
5:AE:157:ARG:HD2	8:AH:43:GLU:O	2.12	0.49
32:DK:38:ILE:HD13	32:DK:61:VAL:HB	1.93	0.49
1:AA:21:G:N2	1:AA:22:G:C6	2.81	0.49
22:BA:2642:G:C2	22:BA:2773:C:C2	3.00	0.49
39:BR:66:HIS:CE1	39:BR:94:THR:CG2	2.95	0.49
22:DA:604:G:N1	22:DA:605:G:C5	2.80	0.49
5:CE:80:THR:HA	5:CE:120:VAL:HG12	1.94	0.49
22:DA:2131:U:H5'	22:DA:2132:U:C5'	2.42	0.49
17:AQ:14:SER:OG	17:AQ:17:MET:HE2	2.12	0.49
22:BA:2075:U:C2'	22:BA:2077:A:OP2	2.61	0.49
11:AK:70:CYS:O	11:AK:74:VAL:HG22	2.13	0.49
22:DA:2094:A:OP1	29:DH:22:LYS:HG3	2.12	0.49
22:BA:927:A:H2'	22:BA:928:A:H8	1.76	0.49
22:DA:1476:U:H1'	22:DA:1732:C:O2	2.12	0.49
1:CA:552:U:N3	1:CA:553:A:N7	2.60	0.49
1:CA:1005:A:N7	1:CA:1006:G:C4	2.80	0.49
11:CK:16:VAL:HG12	11:CK:79:ILE:HG12	1.94	0.49
17:CQ:46:VAL:CG2	17:CQ:61:ILE:HD11	2.42	0.49
1:AA:15:G:N7	1:AA:1396:A:C2	2.80	0.49
2:AB:186:ILE:HA	2:AB:200:ILE:O	2.12	0.49
16:AP:73:ALA:O	16:AP:77:GLU:HB2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:581:C:H2'	22:BA:582:A:C8	2.47	0.49
27:BF:173:PHE:O	27:BF:174:ASP:HB3	2.11	0.49
22:DA:1663:G:C6	22:DA:1992:G:C8	3.00	0.49
1:CA:263:A:OP1	20:CT:74:ARG:HD3	2.12	0.49
1:AA:208:U:C5	1:AA:210:C:N3	2.81	0.49
22:DA:2066:C:H5''	57:DA:3505:HOH:O	2.13	0.49
22:DA:2037:A:N6	22:DA:2038:G:O6	2.46	0.49
15:AO:19:ALA:O	15:AO:20:ASN:CB	2.60	0.49
22:DA:347:A:C2	22:DA:348:A:C4	3.01	0.49
1:AA:575:G:C6	1:AA:821:G:C8	3.00	0.49
11:AK:89:PRO:HD3	21:AU:29:LEU:HD11	1.94	0.49
22:DA:2612:C:H5''	22:DA:2613:U:OP1	2.13	0.49
8:CH:75:ILE:HA	8:CH:128:TYR:O	2.13	0.49
10:CJ:84:VAL:O	10:CJ:88:MET:HG2	2.11	0.49
47:BZ:35:THR:CG2	47:BZ:36:VAL:N	2.75	0.49
4:AD:91:LEU:HD21	4:AD:195:ILE:HD11	1.93	0.49
32:BK:47:ILE:HB	32:BK:48:PRO:CD	2.43	0.49
22:DA:404:A:C4'	22:DA:405:U:OP2	2.61	0.49
1:CA:951:G:C2	1:CA:1231:G:C2	3.01	0.49
1:AA:723:U:H5'	1:AA:724:G:OP1	2.12	0.49
22:DA:2376:A:H2'	22:DA:2377:A:O4'	2.12	0.49
22:BA:1932:A:H5''	22:BA:1933:G:OP2	2.13	0.49
1:AA:135:C:O2	16:AP:1:MET:N	2.41	0.49
1:CA:106:C:O2	1:CA:379:C:H4'	2.12	0.49
24:BC:44:ASN:HB3	24:BC:50:THR:HG21	1.94	0.49
22:BA:954:G:C5	22:BA:955:U:C5	3.00	0.49
21:CU:43:THR:O	21:CU:44:GLU:C	2.51	0.49
14:CN:31:ILE:HG22	14:CN:32:SER:N	2.27	0.49
15:CO:33:THR:HA	15:CO:63:ARG:NH1	2.26	0.49
15:CO:37:ASN:O	15:CO:40:GLN:HB2	2.13	0.49
12:CL:77:HIS:O	12:CL:78:SER:CB	2.60	0.49
1:AA:903:G:H2'	1:AA:904:U:H6	1.77	0.49
29:BH:86:ASP:O	29:BH:87:GLU:HB2	2.11	0.49
2:CB:210:VAL:HG22	2:CB:211:THR:N	2.28	0.49
22:DA:2627:G:N2	22:DA:2777:G:OP2	2.45	0.49
1:CA:583:A:C8	1:CA:584:G:C8	3.00	0.49
2:AB:119:THR:O	2:AB:120:GLN:CB	2.60	0.49
9:AI:40:GLY:O	9:AI:41:ARG:CB	2.54	0.49
2:AB:74:ARG:O	2:AB:75:ALA:HB2	2.12	0.49
41:BT:2:ILE:CG1	41:BT:7:LEU:HD11	2.42	0.49
22:BA:1203:U:C4	22:BA:1204:A:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2308:G:O6	22:BA:2311:A:C8	2.66	0.49
22:BA:1794:A:H1'	22:BA:1900:A:N3	2.27	0.49
22:BA:2648:G:H2'	22:BA:2649:C:C6	2.48	0.49
22:BA:1853:A:C2	22:BA:1854:A:C2	3.00	0.49
22:BA:1415:U:O2	22:BA:1415:U:H3'	2.12	0.49
1:AA:1080:A:OP1	5:AE:52:LYS:CE	2.60	0.49
22:BA:1386:C:H2'	22:BA:1387:A:C8	2.47	0.49
10:AJ:8:ILE:O	10:AJ:73:LEU:O	2.31	0.49
10:AJ:6:ILE:HD12	10:AJ:76:ILE:HB	1.94	0.49
2:AB:47:VAL:O	2:AB:49:MET:N	2.45	0.49
4:AD:11:LEU:CD2	4:AD:63:ARG:HD3	2.41	0.49
4:AD:58:LYS:HG3	4:AD:59:GLN:N	2.28	0.49
22:DA:1530:G:N2	22:DA:1542:U:C2	2.80	0.49
22:DA:945:A:C5	22:DA:2448:A:C2	3.00	0.49
25:DD:104:VAL:O	25:DD:105:LYS:HB3	2.12	0.49
22:DA:2372:U:H2'	22:DA:2373:G:C8	2.48	0.49
15:CO:45:GLU:O	15:CO:46:HIS:HB2	2.12	0.49
22:DA:813:U:H2'	22:DA:814:C:C6	2.46	0.49
8:CH:11:LEU:HD11	8:CH:127:CYS:HB3	1.94	0.49
23:BB:33:G:O2'	23:BB:34:A:H5'	2.13	0.49
10:AJ:17:LEU:HD23	10:AJ:18:ILE:N	2.26	0.49
22:BA:699:A:C8	22:BA:734:A:C2	3.00	0.49
15:AO:43:PHE:CD1	15:AO:56:LEU:HD22	2.48	0.49
25:DD:3:GLY:HA3	25:DD:204:LYS:HG2	1.93	0.49
6:AF:6:ILE:HA	6:AF:88:MET:O	2.12	0.49
1:AA:590:U:H2'	1:AA:591:U:C6	2.47	0.49
24:BC:212:ARG:HD2	24:BC:216:VAL:O	2.13	0.49
24:DC:146:MET:SD	24:DC:154:LEU:HD21	2.53	0.49
24:BC:171:TYR:CD2	24:BC:185:GLU:HA	2.47	0.49
1:CA:1460:C:N4	1:CA:1461:G:C6	2.80	0.49
45:BX:37:ARG:HG3	45:BX:48:THR:HB	1.94	0.49
23:DB:38:C:H2'	23:DB:39:A:O4'	2.12	0.49
1:CA:523:A:N1	12:CL:89:ASP:HB2	2.27	0.49
22:BA:2880:C:N3	22:BA:2881:U:C5	2.80	0.49
22:DA:585:G:H2'	22:DA:586:A:N7	2.27	0.49
10:CJ:92:LEU:O	10:CJ:93:ALA:HB2	2.12	0.49
22:DA:1688:U:C4	22:DA:1698:A:C2	3.00	0.49
1:AA:685:G:N1	1:AA:686:U:O4	2.46	0.49
6:CF:88:MET:CE	18:CR:64:TYR:CD2	2.95	0.49
22:BA:2489:U:O2	22:BA:2491:U:C4	2.66	0.49
2:AB:133:GLU:O	2:AB:137:ARG:N	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:120:LYS:O	9:AI:121:ALA:HB3	2.12	0.49
4:CD:98:LEU:O	4:CD:99:ASP:C	2.51	0.49
22:DA:2144:G:C2	22:DA:2146:C:O2	2.65	0.49
22:DA:1638:C:O2'	22:DA:2698:U:O2	2.30	0.49
22:BA:1419:A:C5	22:BA:1421:G:C5	3.00	0.49
22:DA:1645:G:H4'	22:DA:1646:C:C6	2.48	0.49
2:CB:72:THR:HG23	2:CB:94:HIS:O	2.11	0.49
22:DA:749:A:C4	22:DA:750:A:C8	3.01	0.49
38:DQ:47:TYR:CE1	38:DQ:51:ARG:NH2	2.80	0.49
1:CA:1342:C:H1'	9:CI:126:GLN:HG3	1.94	0.49
23:DB:25:U:H2'	23:DB:26:C:O4'	2.12	0.49
22:DA:2834:G:H2'	22:DA:2879:A:N6	2.27	0.49
1:AA:125:U:H2'	1:AA:126:G:O4'	2.12	0.49
14:CN:80:SER:O	14:CN:83:LYS:N	2.45	0.49
22:DA:2415:G:C5	22:DA:2416:C:C4	3.01	0.49
14:CN:33:ASP:O	14:CN:35:ASN:N	2.42	0.49
1:AA:316:C:N3	1:AA:317:U:C5	2.81	0.49
1:CA:793:U:HO2'	1:CA:1516:G:Cl'	2.26	0.49
1:AA:167:A:H2'	1:AA:168:G:O4'	2.11	0.49
22:DA:2314:A:O4'	27:DF:155:THR:HG21	2.13	0.49
22:DA:2511:U:C5	22:DA:2512:C:C5	3.01	0.49
22:BA:102:U:C2	46:BY:2:LYS:HE3	2.47	0.49
9:CI:30:ILE:HA	9:CI:65:ILE:HG13	1.95	0.49
22:BA:2618:G:C6	22:BA:2619:C:C4	3.01	0.49
1:CA:182:A:C5	1:CA:184:G:N7	2.80	0.49
22:DA:1408:G:N2	22:DA:1595:C:H1'	2.27	0.49
33:BL:90:VAL:HG23	33:BL:120:VAL:HG21	1.93	0.49
22:DA:798:G:H2'	22:DA:799:G:C8	2.47	0.49
10:CJ:18:ILE:HG23	10:CJ:19:ASP:N	2.28	0.49
27:BF:121:SER:HB2	27:BF:128:TYR:CE1	2.48	0.49
22:BA:645:C:O2'	22:BA:646:U:H5''	2.13	0.49
1:CA:635:A:C6	1:CA:636:U:C4	3.00	0.49
3:AC:39:VAL:O	3:AC:43:LEU:HB2	2.13	0.49
3:CC:16:LYS:HG3	3:CC:17:PRO:HD2	1.95	0.49
3:AC:54:ARG:HB3	3:AC:69:HIS:HB2	1.94	0.49
12:AL:3:THR:HB	12:AL:6:GLN:HG3	1.94	0.49
2:CB:43:LEU:HG	2:CB:44:GLU:CG	2.43	0.49
13:AM:56:LEU:O	13:AM:59:GLU:N	2.46	0.49
49:B1:34:LEU:H	49:B1:52:ALA:CB	2.25	0.49
22:BA:1860:G:C2	22:BA:1883:U:H1'	2.47	0.49
6:AF:46:GLN:HA	6:AF:56:LYS:HG2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1251:A:H2'	1:AA:1252:A:O4'	2.13	0.49
22:DA:121:G:O5'	22:DA:121:G:H8	1.95	0.49
36:BO:59:ALA:O	36:BO:60:GLU:C	2.50	0.49
22:BA:948:C:H1'	22:BA:984:A:O2'	2.12	0.49
22:DA:2134:A:H62	22:DA:2157:G:H1'	1.77	0.49
22:DA:200:U:C4	22:DA:248:G:N2	2.81	0.49
22:BA:1063:G:N2	30:BI:90:SER:HG	2.11	0.49
1:AA:1181:G:O2'	1:AA:1182:G:C8	2.66	0.49
1:CA:32:A:N1	1:CA:33:A:C6	2.80	0.49
28:DG:11:VAL:O	28:DG:48:ASN:CG	2.51	0.49
47:BZ:21:LYS:O	47:BZ:23:THR:N	2.46	0.49
1:CA:1144:G:H5''	1:CA:1145:A:OP2	2.12	0.49
4:CD:26:ARG:O	4:CD:27:ALA:CB	2.61	0.49
1:CA:978:A:O2'	1:CA:1322:C:H5	1.94	0.49
1:CA:509:A:N3	1:CA:543:U:O2'	2.41	0.49
1:AA:328:C:C2'	1:AA:328:C:O2	2.60	0.49
22:DA:833:A:P	33:DL:39:LYS:HE2	2.53	0.49
1:CA:706:A:C1'	11:CK:31:ILE:HD11	2.42	0.49
22:BA:2555:U:H5''	22:BA:2556:C:OP2	2.12	0.49
25:BD:12:THR:HG21	37:BP:9:GLU:HG3	1.95	0.49
4:CD:34:ILE:O	4:CD:35:GLU:HB3	2.12	0.49
1:AA:338:A:C6	1:AA:339:C:C4	3.01	0.49
22:BA:1355:G:N3	22:BA:1356:G:C8	2.81	0.49
1:CA:207:C:O2	1:CA:207:C:H2'	2.11	0.49
1:CA:757:U:OP1	1:CA:822:U:O2'	2.24	0.49
42:BU:12:ILE:HG13	42:BU:21:LYS:O	2.13	0.49
2:AB:68:LEU:HD21	2:AB:92:VAL:HG23	1.94	0.49
12:AL:72:HIS:ND1	12:AL:72:HIS:O	2.46	0.49
22:BA:2094:A:H5'	29:BH:25:TYR:CG	2.47	0.49
30:DI:33:VAL:HG22	30:DI:67:PHE:CE2	2.48	0.49
22:DA:2020:A:C2	22:DA:2022:U:O4'	2.65	0.49
7:AG:139:GLU:OE1	7:AG:139:GLU:HA	2.12	0.49
22:BA:2275:C:O2	34:BM:84:LYS:CD	2.60	0.49
22:DA:2351:G:O2'	22:DA:2366:A:N6	2.39	0.49
22:BA:449:A:C6	22:BA:450:G:C5	3.01	0.49
1:AA:1293:C:H5'	1:AA:1294:G:OP2	2.12	0.49
22:DA:1534:U:O2'	22:DA:1537:G:O6	2.29	0.49
22:BA:2415:G:C2	22:BA:2416:C:C2	3.00	0.49
5:AE:45:ARG:HG2	5:AE:73:ASN:HB3	1.93	0.49
46:BY:20:ASN:O	46:BY:24:GLU:HB2	2.12	0.49
29:DH:112:LYS:CG	29:DH:113:SER:N	2.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:100:U:H4'	22:BA:101:A:O5'	2.11	0.49
22:BA:2456:C:C2'	22:BA:2457:U:H5'	2.43	0.49
32:DK:63:VAL:O	32:DK:64:ARG:CG	2.61	0.49
32:DK:63:VAL:O	32:DK:64:ARG:HG2	2.12	0.49
22:DA:953:G:O2'	22:DA:954:G:H5'	2.13	0.49
4:AD:65:TYR:CG	4:AD:94:LEU:HD22	2.47	0.49
1:AA:683:G:N2	11:AK:39:GLY:O	2.46	0.49
22:BA:947:A:O2'	22:BA:984:A:C2	2.58	0.49
22:BA:1063:G:H4'	30:BI:77:ALA:HB1	1.93	0.49
39:BR:51:VAL:CG2	39:BR:52:PRO:HD2	2.43	0.49
22:DA:2211:A:C1'	22:DA:2212:A:OP1	2.61	0.49
22:DA:1060:U:H5	30:DI:132:THR:HG23	1.78	0.49
5:AE:153:VAL:O	5:AE:156:LYS:HB2	2.12	0.49
7:AG:50:LEU:O	7:AG:51:ALA:C	2.50	0.49
22:DA:469:G:O6	50:D2:37:LYS:CE	2.60	0.49
40:BS:55:ILE:O	40:BS:56:ALA:C	2.51	0.49
5:AE:90:THR:HG22	5:AE:91:GLY:H	1.74	0.49
10:AJ:36:VAL:HA	10:AJ:75:ASP:O	2.11	0.49
8:AH:125:ILE:O	8:AH:125:ILE:CG1	2.60	0.49
22:DA:319:G:OP2	26:DE:132:LYS:HE2	2.12	0.49
1:AA:126:G:H2'	1:AA:127:G:O5'	2.13	0.49
1:CA:890:G:HO2'	1:CA:891:U:P	2.36	0.49
6:AF:17:GLN:OE1	6:AF:21:MET:HG3	2.13	0.49
3:CC:49:LYS:O	3:CC:72:ARG:NH1	2.45	0.49
1:AA:382:A:H2'	1:AA:383:A:C8	2.48	0.49
1:CA:92:U:C4	1:CA:93:U:O4	2.66	0.49
22:DA:2811:G:OP1	25:DD:62:LYS:N	2.45	0.49
42:DU:18:ASP:HB3	42:DU:21:LYS:HG3	1.94	0.49
20:AT:58:VAL:HG12	20:AT:72:ALA:HB1	1.95	0.49
34:BM:51:ARG:O	34:BM:55:ARG:HG2	2.13	0.49
1:AA:102:G:C2	1:AA:103:U:C6	3.00	0.49
22:BA:2665:A:C2	22:BA:2666:C:C2	3.01	0.49
22:DA:2341:G:C6	22:DA:2342:C:C4	3.01	0.49
22:BA:2331:G:O4'	44:BW:42:GLY:HA3	2.13	0.49
46:BY:45:GLN:O	46:BY:46:VAL:HB	2.13	0.49
1:AA:1123:U:H4'	10:AJ:39:PRO:HD2	1.94	0.49
1:AA:1432:G:P	37:BP:106:LYS:HG2	2.52	0.49
41:BT:10:VAL:HG12	41:BT:11:LEU:HD23	1.95	0.49
1:AA:292:G:N7	1:AA:293:G:H1'	2.28	0.49
22:BA:1649:G:C6	22:BA:2009:A:C6	3.01	0.49
11:AK:112:ASP:OD2	11:AK:114:THR:HG23	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:862:C:H2'	1:CA:863:U:H6	1.78	0.49
49:B1:23:THR:OG1	49:B1:24:THR:N	2.44	0.49
3:AC:60:PRO:HB3	10:AJ:94:ALA:HB1	1.94	0.49
8:CH:87:LYS:HG3	8:CH:91:GLU:HB3	1.95	0.49
2:AB:207:ILE:HD13	2:AB:207:ILE:N	2.28	0.49
22:DA:70:G:H5''	22:DA:112:U:O2	2.13	0.49
14:CN:18:ASP:HA	14:CN:22:ALA:HB3	1.95	0.49
1:AA:1243:C:H2'	1:AA:1244:G:C8	2.47	0.49
26:BE:119:ILE:CG2	26:BE:187:VAL:HG22	2.42	0.49
22:BA:2572:A:OP1	22:BA:2574:G:H4'	2.13	0.49
22:BA:2580:U:C5	22:BA:2581:G:C6	3.00	0.49
22:BA:58:G:N2	22:BA:70:G:C4	2.81	0.49
35:DN:116:VAL:HG13	35:DN:116:VAL:O	2.12	0.49
35:BN:2:ARG:CA	35:BN:5:LYS:HD2	2.39	0.49
1:AA:1005:A:H2'	1:AA:1006:G:O4'	2.13	0.49
29:DH:21:VAL:CG2	29:DH:22:LYS:N	2.76	0.49
22:BA:627:A:C5	22:BA:637:A:N7	2.81	0.49
1:AA:1060:U:H2'	1:AA:1061:G:H8	1.77	0.49
4:CD:151:LYS:O	4:CD:151:LYS:CG	2.61	0.49
1:AA:452:A:C8	1:AA:452:A:H3'	2.47	0.49
30:BI:99:GLY:O	30:BI:139:VAL:HG23	2.13	0.49
1:AA:231:U:O2'	1:AA:232:G:H5'	2.12	0.49
1:AA:201:G:C2	1:AA:217:C:O2	2.66	0.49
22:BA:1922:G:C6	22:BA:1923:U:C5	3.00	0.49
25:DD:101:PHE:O	25:DD:104:VAL:HG22	2.12	0.49
46:BY:36:GLN:O	46:BY:37:LEU:HB3	2.13	0.49
30:DI:51:LYS:N	30:DI:51:LYS:HD3	2.28	0.49
22:DA:574:A:H4'	22:DA:575:A:C5'	2.43	0.49
8:AH:49:PHE:CB	8:AH:61:LEU:HD23	2.43	0.49
1:AA:1211:U:HO2'	1:AA:1212:U:P	2.36	0.49
22:BA:1088:A:N3	22:BA:1088:A:H3'	2.28	0.49
14:AN:63:ARG:CG	14:AN:68:GLY:O	2.61	0.49
22:DA:242:G:N7	51:D3:5:LYS:HG2	2.28	0.49
14:AN:43:ASN:HA	14:AN:45:VAL:HG22	1.95	0.49
1:AA:1503:A:C8	1:AA:1531:A:H1'	2.47	0.49
1:AA:843:U:H3	2:CB:115:LYS:HD3	1.78	0.49
14:AN:21:PHE:HA	14:AN:25:ALA:HB3	1.95	0.49
1:CA:247:G:C5	1:CA:278:G:N2	2.81	0.49
1:CA:743:A:C6	1:CA:744:C:C5	3.01	0.49
22:BA:2620:C:C2	22:BA:2621:G:C8	3.01	0.49
24:DC:130:LEU:HD12	24:DC:134:ASN:HB2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:106:C:C2'	1:CA:107:G:H5'	2.42	0.49
22:BA:2287:A:C8	22:BA:2289:G:C8	3.00	0.49
22:BA:1132:U:H3'	22:BA:1133:A:H5''	1.94	0.49
1:AA:1302:C:C4	13:AM:17:ILE:CD1	2.96	0.49
22:DA:2780:G:O6	31:DJ:102:GLU:OE2	2.31	0.49
25:BD:124:ARG:HA	25:BD:165:MET:SD	2.53	0.49
1:AA:1026:G:C6	1:AA:1027:C:N3	2.81	0.49
22:DA:2702:G:C6	22:DA:2703:C:C4	3.01	0.49
22:BA:2600:A:C6	22:BA:2601:C:N4	2.80	0.49
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.95	0.49
4:CD:203:LEU:HD12	4:CD:203:LEU:O	2.11	0.49
22:BA:714:U:O2	22:BA:717:C:H5	1.96	0.49
22:BA:1342:A:C2	22:BA:1345:C:C6	3.01	0.49
11:AK:22:HIS:CD2	11:AK:35:THR:HG22	2.48	0.49
22:DA:2054:A:C2	22:DA:2616:C:C2	3.01	0.49
22:BA:977:G:C5	57:BA:3590:HOH:O	2.64	0.49
4:AD:124:MET:SD	4:AD:127:GLY:O	2.71	0.49
4:AD:22:LYS:O	4:AD:23:SER:C	2.51	0.49
6:CF:86:ARG:HH11	6:CF:86:ARG:HG2	1.77	0.49
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.47	0.49
1:CA:254:G:C4	1:CA:255:G:C8	3.00	0.49
13:AM:6:GLY:C	13:AM:8:ASN:N	2.63	0.49
24:DC:160:THR:O	24:DC:195:VAL:HG13	2.12	0.49
22:DA:2060:A:O4'	22:DA:2502:G:H1'	2.13	0.49
1:AA:1072:G:C6	1:AA:1073:U:C4	3.01	0.49
22:BA:2190:G:C2	22:BA:2191:A:C4	3.01	0.49
35:BN:118:ARG:O	35:BN:120:GLU:N	2.42	0.49
22:DA:1095:A:H2'	22:DA:1096:A:N9	2.27	0.49
48:D0:53:LYS:HE3	48:D0:56:ALA:HA	1.95	0.49
22:DA:1739:A:C2'	22:DA:1740:G:O5'	2.61	0.49
1:CA:15:G:C4	1:CA:16:A:C8	3.01	0.49
22:BA:2154:A:H2'	22:BA:2155:U:C6	2.47	0.49
16:AP:39:PHE:CG	16:AP:74:LEU:HD11	2.48	0.49
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.48	0.49
22:BA:207:A:C2'	22:BA:208:C:O5'	2.61	0.49
37:DP:39:ARG:HG3	37:DP:40:LEU:N	2.27	0.49
22:DA:2282:G:C4	22:DA:2425:A:N6	2.81	0.49
51:D3:33:LEU:HA	51:D3:36:LYS:HD2	1.93	0.49
22:DA:1805:A:H5''	24:DC:248:TRP:CE2	2.48	0.49
1:CA:562:U:H1'	12:CL:12:ARG:HG3	1.95	0.49
1:AA:914:A:C6	1:AA:915:A:N7	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:157:SER:O	24:BC:158:ALA:C	2.50	0.49
42:DU:96:PHE:CE1	42:DU:103:ILE:CG1	2.96	0.49
46:BY:39:GLN:HB2	46:BY:41:HIS:CE1	2.48	0.49
22:DA:1677:A:N6	22:DA:1678:A:C6	2.81	0.49
2:CB:90:PHE:CD2	2:CB:150:GLY:O	2.66	0.49
1:CA:243:A:C2	1:CA:246:A:C8	3.01	0.49
21:AU:29:LEU:HD23	21:AU:29:LEU:O	2.13	0.49
1:CA:834:U:H2'	1:CA:835:U:C6	2.48	0.49
22:DA:1379:U:OP1	22:DA:1379:U:C6	2.65	0.49
30:DI:33:VAL:HG22	30:DI:67:PHE:CD2	2.47	0.49
1:CA:247:G:C5	1:CA:278:G:C2	3.00	0.49
9:CI:18:ARG:O	9:CI:65:ILE:HA	2.12	0.49
29:DH:72:ILE:O	29:DH:141:LYS:O	2.30	0.49
22:BA:108:G:C6	22:BA:109:C:C4	3.01	0.49
18:AR:27:ALA:O	18:AR:30:LYS:HE3	2.12	0.49
22:BA:2415:G:H2'	22:BA:2416:C:C6	2.48	0.49
49:B1:8:LYS:HA	49:B1:24:THR:HG22	1.95	0.49
28:BG:94:TYR:HA	28:BG:106:SER:O	2.13	0.49
20:AT:55:GLN:N	20:AT:56:PRO:HD2	2.28	0.49
1:CA:433:G:C5	1:CA:434:U:C5	3.01	0.49
33:BL:110:VAL:O	33:BL:131:ALA:CB	2.61	0.49
22:DA:2540:C:H2'	22:DA:2541:A:H8	1.77	0.49
22:DA:2784:U:O4	22:DA:2785:C:N4	2.46	0.49
22:DA:1053:C:C2	22:DA:1107:G:C2	3.01	0.49
22:BA:1283:G:N2	22:BA:1285:A:H3'	2.27	0.49
1:CA:41:G:H2'	1:CA:42:G:C8	2.48	0.49
1:AA:130:A:N7	17:AQ:65:ARG:HB2	2.28	0.49
18:CR:71:THR:OG1	18:CR:72:ASP:N	2.45	0.49
8:AH:30:SER:O	8:AH:31:LYS:C	2.51	0.49
1:AA:626:G:O2'	1:AA:627:G:H5'	2.13	0.49
25:BD:57:ALA:O	25:BD:59:ARG:N	2.46	0.49
29:BH:121:VAL:H	29:BH:122:LEU:HB2	1.77	0.48
29:BH:139:PHE:O	29:BH:140:ALA:HB2	2.13	0.48
22:DA:1601:G:C5	22:DA:1602:U:C4	3.00	0.48
6:CF:3:HIS:CD2	6:CF:94:HIS:HA	2.48	0.48
1:AA:1504:G:H4'	1:AA:1505:G:C4	2.48	0.48
21:CU:8:GLU:HB3	21:CU:12:PHE:CE2	2.47	0.48
1:AA:254:G:O2'	1:AA:255:G:H5'	2.13	0.48
22:BA:1695:G:C8	24:BC:8:PRO:HG2	2.47	0.48
22:DA:2061:G:C6	55:DA:3001:VIF:H29	2.48	0.48
22:DA:1265:A:C8	22:DA:1267:U:N3	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:121:GLU:O	32:BK:122:VAL:C	2.50	0.48
22:DA:1343:G:N2	22:DA:1405:U:C2	2.81	0.48
1:AA:559:A:C8	1:AA:561:U:C6	3.00	0.48
22:BA:2564:A:C2	22:BA:2647:U:H4'	2.47	0.48
22:BA:973:A:OP2	39:BR:81:LYS:NZ	2.39	0.48
1:AA:77:A:N1	1:AA:91:U:O4	2.46	0.48
22:BA:207:A:H2'	22:BA:208:C:O5'	2.13	0.48
36:DO:92:PHE:HB2	36:DO:117:PHE:CE1	2.47	0.48
53:B5:53:ARG:HD3	53:B5:204:GLY:HA3	1.94	0.48
22:BA:1026:G:O4'	22:BA:1026:G:P	2.71	0.48
33:DL:28:GLY:O	33:DL:29:LYS:HB3	2.12	0.48
22:DA:1180:U:H5'	22:DA:1181:U:OP2	2.14	0.48
1:AA:202:G:O2'	1:AA:468:A:C8	2.55	0.48
22:DA:2392:A:OP2	51:D3:31:HIS:CE1	2.66	0.48
1:CA:200:G:H2'	1:CA:201:G:H5''	1.94	0.48
11:CK:127:ARG:N	21:CU:34:ARG:NH2	2.60	0.48
42:BU:98:SER:O	42:BU:99:ASN:CB	2.61	0.48
22:BA:1562:U:H2'	22:BA:1563:U:O4'	2.13	0.48
22:DA:279:A:H61	22:DA:361:G:H1'	1.78	0.48
22:DA:362:A:H2'	22:DA:362:A:N3	2.28	0.48
1:CA:755:G:C2	1:CA:756:C:C5	3.01	0.48
22:DA:2469:A:H4'	34:DM:55:ARG:HD3	1.95	0.48
22:DA:2573:C:OP1	22:DA:2574:G:H5''	2.13	0.48
24:DC:9:THR:O	24:DC:10:SER:CB	2.60	0.48
7:AG:76:LYS:HB3	7:AG:89:VAL:HG11	1.94	0.48
22:BA:2405:G:O2'	22:BA:2406:A:OP1	2.29	0.48
1:CA:1068:G:H2'	1:CA:1069:C:H5'	1.94	0.48
53:B5:122:GLY:CA	53:B5:146:VAL:CB	2.90	0.48
22:DA:276:U:O2	22:DA:276:U:H2'	2.12	0.48
1:AA:1107:C:C4	1:AA:1108:G:C8	3.01	0.48
22:DA:704:G:H1'	22:DA:726:G:N2	2.28	0.48
7:CG:42:ILE:O	7:CG:42:ILE:HG22	2.13	0.48
17:AQ:41:THR:HG22	17:AQ:42:THR:N	2.28	0.48
1:CA:421:U:OP1	1:CA:421:U:C4'	2.61	0.48
39:BR:11:GLN:C	39:BR:12:HIS:CG	2.86	0.48
39:BR:4:VAL:HA	39:BR:12:HIS:O	2.12	0.48
1:AA:363:A:O2'	1:AA:364:A:H5'	2.12	0.48
22:DA:2693:G:N2	22:DA:2717:C:C2	2.81	0.48
22:DA:415:A:C2	22:DA:2409:G:C2	3.01	0.48
1:CA:165:G:C2	1:CA:166:U:C2	3.01	0.48
22:DA:1753:G:N1	22:DA:1756:G:C2	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:52:THR:O	25:DD:77:ARG:HG2	2.13	0.48
22:DA:782:A:O2'	24:DC:224:ALA:O	2.28	0.48
22:DA:2732:G:O2'	22:DA:2733:A:H5'	2.13	0.48
24:BC:180:GLU:HG3	24:BC:269:ARG:O	2.12	0.48
30:DI:28:LEU:HD13	30:DI:38:PHE:CD2	2.47	0.48
34:DM:76:LYS:HE3	34:DM:80:VAL:HG12	1.95	0.48
30:DI:10:LYS:HB2	30:DI:56:PRO:HB3	1.95	0.48
22:DA:599:A:N3	22:DA:659:G:C2	2.81	0.48
44:BW:82:ILE:O	44:BW:82:ILE:HG22	2.12	0.48
22:DA:1760:C:H3'	22:DA:1761:C:H6	1.77	0.48
1:AA:712:A:C2	1:AA:713:G:C4	3.01	0.48
22:DA:682:G:H2'	22:DA:682:G:N3	2.27	0.48
22:BA:1058:U:N3	22:BA:1059:G:N7	2.61	0.48
22:BA:1190:G:OP1	33:BL:32:GLY:CA	2.62	0.48
1:AA:1182:G:C3'	1:AA:1183:U:H5'	2.43	0.48
22:BA:2599:G:C8	24:BC:236:GLU:HB2	2.48	0.48
22:BA:783:A:C8	22:BA:784:G:H4'	2.48	0.48
11:AK:13:ARG:O	11:AK:14:LYS:O	2.31	0.48
22:BA:2721:A:H2'	22:BA:2722:G:O4'	2.13	0.48
37:BP:52:ASN:O	37:BP:53:ARG:HD3	2.13	0.48
2:AB:75:ALA:O	2:AB:76:ALA:CB	2.61	0.48
1:CA:1127:G:H5'	1:CA:1280:A:O2'	2.12	0.48
22:BA:1474:U:C2'	22:BA:1475:G:H5'	2.43	0.48
46:BY:3:ALA:HA	46:BY:6:LEU:HB2	1.95	0.48
22:DA:1060:U:C5	30:DI:132:THR:HG23	2.48	0.48
32:DK:76:VAL:CG1	37:DP:73:VAL:HG22	2.43	0.48
1:CA:620:C:C1'	4:CD:132:ILE:HD13	2.44	0.48
22:DA:479:A:N3	22:DA:481:G:H5''	2.27	0.48
22:BA:2428:G:H5''	22:BA:2429:G:OP1	2.12	0.48
21:AU:10:GLU:CB	21:AU:11:PRO:HD3	2.42	0.48
21:AU:18:ARG:HD2	21:AU:18:ARG:N	2.28	0.48
1:AA:661:G:N2	1:AA:662:U:C2	2.82	0.48
22:DA:382:A:N1	22:DA:383:C:C2	2.81	0.48
1:AA:623:C:C4	1:AA:624:C:C5	3.01	0.48
1:CA:263:A:P	20:CT:74:ARG:NH1	2.86	0.48
6:AF:47:LEU:HD12	6:AF:55:HIS:HA	1.95	0.48
22:DA:537:G:C6	22:DA:555:G:C2	3.00	0.48
22:BA:2462:C:H2'	22:BA:2463:C:H6	1.78	0.48
1:CA:1141:C:C2	1:CA:1142:G:C8	3.01	0.48
1:AA:406:G:C6	1:AA:495:A:C8	3.01	0.48
1:AA:596:A:N6	1:AA:645:G:N1	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:15:HIS:O	2:CB:17:GLY:N	2.46	0.48
26:DE:5:LEU:HD23	26:DE:122:GLU:HG2	1.94	0.48
32:DK:99:ILE:HD13	32:DK:118:LEU:HD12	1.94	0.48
7:AG:147:ALA:HA	11:AK:61:PHE:CE1	2.48	0.48
22:DA:2185:U:H2'	22:DA:2186:G:C8	2.48	0.48
2:AB:208:ARG:O	2:AB:210:VAL:N	2.46	0.48
13:CM:106:ALA:O	13:CM:110:LYS:HB3	2.13	0.48
12:CL:16:VAL:O	12:CL:17:ALA:C	2.51	0.48
38:BQ:74:ILE:CG2	38:BQ:74:ILE:O	2.60	0.48
22:DA:705:A:C2	22:DA:727:A:O4'	2.67	0.48
22:BA:699:A:N7	22:BA:734:A:C4	2.82	0.48
22:DA:158:U:C2'	22:DA:159:G:H5'	2.43	0.48
1:CA:939:G:C2	1:CA:940:C:C2	3.01	0.48
6:AF:75:GLU:HA	6:AF:78:PHE:HB2	1.95	0.48
1:CA:636:U:H2'	1:CA:637:C:C6	2.47	0.48
1:AA:1242:G:C6	1:AA:1243:C:N3	2.81	0.48
45:DX:17:ASN:HB2	45:DX:25:THR:HB	1.95	0.48
3:AC:155:GLY:HA2	3:AC:163:ALA:HB1	1.96	0.48
26:DE:45:ALA:HA	26:DE:87:ALA:O	2.12	0.48
22:BA:719:C:H2'	22:BA:720:U:O4'	2.13	0.48
22:BA:630:G:H5''	22:BA:631:A:OP2	2.13	0.48
22:BA:184:C:H2'	22:BA:185:G:H8	1.78	0.48
18:CR:46:GLY:O	18:CR:47:THR:O	2.32	0.48
1:CA:952:U:H2'	1:CA:953:G:C8	2.48	0.48
1:AA:958:A:C6	1:AA:959:A:N1	2.82	0.48
36:DO:72:ALA:HA	36:DO:109:ALA:CB	2.43	0.48
32:BK:41:ILE:HD11	32:BK:86:LEU:HD22	1.95	0.48
6:AF:45:ARG:HB3	6:AF:59:TYR:CD1	2.48	0.48
10:CJ:46:LYS:HB3	10:CJ:66:GLU:OE1	2.13	0.48
11:AK:128:ARG:HG2	11:AK:128:ARG:HH11	1.78	0.48
9:CI:127:PHE:C	9:CI:127:PHE:CD2	2.87	0.48
3:CC:102:ASN:N	3:CC:102:ASN:OD1	2.46	0.48
50:D2:35:ARG:O	50:D2:38:GLY:N	2.45	0.48
1:CA:1507:A:C5	1:CA:1530:G:C6	3.01	0.48
38:DQ:58:ARG:NH2	38:DQ:92:ARG:NH1	2.61	0.48
22:BA:2292:U:H2'	22:BA:2293:G:H8	1.77	0.48
27:DF:122:PHE:O	27:DF:123:ASP:C	2.50	0.48
22:BA:1085:A:C5	22:BA:1086:A:N6	2.82	0.48
22:BA:2820:A:P	35:BN:2:ARG:HH12	2.36	0.48
22:DA:582:A:N7	57:DA:3285:HOH:O	2.35	0.48
22:DA:1317:G:N2	22:DA:1336:A:N3	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:919:A:N1	1:CA:920:U:C5	2.82	0.48
2:CB:165:ASP:O	2:CB:169:GLU:HG2	2.13	0.48
1:CA:66:A:O4'	1:CA:173:U:C4	2.66	0.48
22:DA:2267:A:H5''	22:DA:2268:A:H5'	1.95	0.48
22:DA:2683:C:H4'	25:DD:13:ARG:NH1	2.28	0.48
40:BS:38:TYR:CD1	48:B0:28:LEU:HD21	2.48	0.48
42:DU:6:ARG:O	42:DU:7:ARG:O	2.30	0.48
1:CA:1512:U:O2	1:CA:1513:A:C8	2.67	0.48
16:AP:43:ALA:O	16:AP:46:LYS:HD2	2.13	0.48
22:BA:2429:G:OP2	57:BA:3343:HOH:O	2.20	0.48
35:DN:114:GLU:OE2	35:DN:118:ARG:CD	2.61	0.48
45:DX:31:PRO:HB2	45:DX:33:LEU:HD13	1.94	0.48
22:BA:1027:A:N1	22:BA:1126:A:C4	2.82	0.48
23:DB:35:C:C2'	23:DB:36:C:O5'	2.61	0.48
3:AC:11:ARG:O	3:AC:12:LEU:C	2.51	0.48
22:DA:1813:G:H2'	22:DA:1814:G:O4'	2.12	0.48
22:DA:319:G:OP2	26:DE:132:LYS:CE	2.61	0.48
3:CC:64:ILE:CG1	3:CC:66:VAL:HG23	2.43	0.48
1:AA:601:G:H2'	1:AA:602:A:C8	2.48	0.48
1:CA:890:G:O2'	1:CA:906:A:N6	2.47	0.48
22:BA:2779:U:C6	22:BA:2781:A:C2	3.01	0.48
1:AA:437:U:C2'	1:AA:438:U:H5'	2.43	0.48
22:BA:1383:A:N3	22:BA:1405:U:O2'	2.37	0.48
1:AA:1483:A:H2'	1:AA:1484:C:O4'	2.13	0.48
22:DA:583:G:C5	22:DA:584:C:C5	3.01	0.48
22:BA:1372:U:C2'	22:BA:1373:A:H5'	2.43	0.48
22:DA:1525:A:C5	22:DA:1526:C:C4	3.01	0.48
22:BA:1224:U:C4	22:BA:1225:G:C6	3.00	0.48
34:BM:43:ALA:O	34:BM:47:GLU:HB2	2.13	0.48
22:DA:7:G:H4'	31:DJ:15:TRP:CH2	2.48	0.48
1:AA:577:G:C8	1:AA:816:A:C6	3.01	0.48
1:CA:1089:G:N2	1:CA:1090:U:H1'	2.28	0.48
1:AA:116:A:H2'	1:AA:117:G:H8	1.78	0.48
21:CU:14:VAL:HG12	21:CU:16:LEU:CD2	2.44	0.48
1:AA:1270:G:C2	1:AA:1271:A:C8	3.00	0.48
2:AB:27:MET:HG2	2:AB:189:THR:HA	1.95	0.48
17:AQ:59:VAL:HG23	17:AQ:77:ARG:O	2.13	0.48
1:CA:445:G:C2	1:CA:490:C:C2	3.00	0.48
22:DA:1138:G:O2'	31:DJ:104:ALA:O	2.30	0.48
7:CG:57:SER:HB3	7:CG:60:GLU:HG3	1.94	0.48
42:BU:39:ILE:HG22	42:BU:40:ASN:N	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:28:SER:O	32:DK:29:HIS:HB2	2.13	0.48
42:DU:47:LYS:HB2	42:DU:47:LYS:HE2	1.52	0.48
6:AF:36:ILE:O	6:AF:36:ILE:HG23	2.13	0.48
40:DS:66:ILE:HD13	40:DS:66:ILE:N	2.28	0.48
22:BA:513:A:C2	22:BA:514:A:C4	3.00	0.48
11:CK:122:ARG:NH1	21:CU:36:GLU:HG2	2.27	0.48
22:BA:1940:U:C2	22:BA:1965:C:OP2	2.66	0.48
22:BA:2598:A:OP1	24:BC:235:GLY:HA2	2.13	0.48
22:DA:1846:G:H5''	22:DA:1847:A:OP2	2.12	0.48
22:BA:2847:U:C2'	22:BA:2848:G:H5'	2.43	0.48
40:BS:57:ASN:O	40:BS:61:ASN:HB2	2.12	0.48
22:DA:1277:G:H5'	35:DN:20:MET:CE	2.43	0.48
22:DA:1090:A:N6	22:DA:1091:G:O6	2.46	0.48
10:AJ:52:LEU:HB3	14:AN:81:ARG:HE	1.76	0.48
1:CA:510:A:H5''	1:CA:511:C:P	2.53	0.48
26:BE:109:LEU:O	26:BE:111:GLU:N	2.47	0.48
1:CA:375:U:N3	1:CA:376:G:N7	2.61	0.48
1:AA:558:G:C5	1:AA:559:A:C2	3.01	0.48
1:AA:376:G:H2'	1:AA:377:G:H8	1.78	0.48
22:DA:784:G:N1	24:DC:228:VAL:HG21	2.28	0.48
4:AD:197:GLU:O	4:AD:200:ILE:N	2.46	0.48
13:AM:107:ARG:HG2	13:AM:107:ARG:NH1	2.28	0.48
22:BA:847:U:O2	22:BA:934:U:H1'	2.13	0.48
22:DA:2873:A:O4'	35:DN:6:SER:HB2	2.13	0.48
27:BF:119:ALA:HB2	27:BF:177:PHE:CD2	2.48	0.48
22:DA:2037:A:C6	22:DA:2038:G:C6	3.01	0.48
15:CO:42:HIS:O	15:CO:45:GLU:O	2.31	0.48
1:CA:244:U:H4'	1:CA:245:U:C5'	2.44	0.48
1:CA:609:A:N7	57:CA:1795:HOH:O	2.35	0.48
24:DC:141:VAL:O	24:DC:162:VAL:N	2.43	0.48
7:AG:132:GLY:O	7:AG:135:VAL:HG22	2.14	0.48
22:BA:735:A:C8	22:BA:736:C:C5	3.01	0.48
1:CA:49:U:O4	1:CA:365:U:H5	1.96	0.48
1:CA:747:A:N6	1:CA:748:G:C6	2.81	0.48
1:AA:592:G:C6	1:AA:648:A:C6	3.01	0.48
32:BK:19:VAL:HG11	32:BK:41:ILE:HD13	1.95	0.48
1:AA:1068:G:O2'	1:AA:1191:A:N1	2.40	0.48
15:CO:8:THR:O	15:CO:12:VAL:HG23	2.13	0.48
22:DA:1058:U:H2'	22:DA:1059:G:C8	2.48	0.48
44:DW:33:ALA:N	44:DW:64:ASP:OD2	2.46	0.48
1:AA:44:A:C2	1:AA:399:G:C2	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DZ:7:ILE:HD11	47:DZ:48:ILE:HD11	1.96	0.48
8:CH:67:GLN:C	8:CH:69:LYS:N	2.65	0.48
35:DN:51:LEU:N	35:DN:51:LEU:HD23	2.27	0.48
22:BA:2543:G:H2'	22:BA:2544:G:C8	2.48	0.48
22:DA:1586:A:N6	22:DA:1587:G:C2	2.81	0.48
22:DA:2405:G:N2	22:DA:2411:A:C8	2.81	0.48
22:BA:842:U:N3	22:BA:843:G:N7	2.62	0.48
22:BA:1176:U:N3	22:BA:1177:G:C6	2.81	0.48
1:AA:402:G:C5	1:AA:403:C:C5	3.01	0.48
22:BA:2371:G:N2	22:BA:2372:U:C2	2.81	0.48
22:BA:1917:U:C2	22:BA:1918:A:C8	3.01	0.48
11:AK:125:LYS:CG	11:AK:126:LYS:N	2.76	0.48
6:CF:88:MET:HE1	18:CR:64:TYR:HD2	1.78	0.48
2:CB:139:ARG:C	2:CB:139:ARG:CD	2.82	0.48
17:CQ:45:HIS:ND1	17:CQ:70:THR:HG21	2.27	0.48
22:BA:1074:G:H2'	22:BA:1075:C:H5'	1.96	0.48
14:AN:66:GLN:HG3	14:AN:79:LEU:HD21	1.94	0.48
22:DA:1567:G:OP1	24:DC:85:PRO:HB3	2.13	0.48
33:BL:28:GLY:C	33:BL:29:LYS:O	2.52	0.48
22:DA:1647:U:H3'	22:DA:1647:U:P	2.54	0.48
13:AM:11:ASP:O	13:AM:12:HIS:CB	2.62	0.48
22:DA:1338:G:O2'	22:DA:1393:A:N1	2.37	0.48
22:DA:27:G:N2	22:DA:512:G:H1'	2.29	0.48
22:DA:1351:C:H2'	22:DA:1352:U:O4'	2.13	0.48
1:CA:501:C:H1'	1:CA:549:C:H1'	1.96	0.48
1:AA:1133:G:N1	1:AA:1142:G:C6	2.81	0.48
53:B5:59:VAL:HG12	53:B5:63:VAL:CG2	2.43	0.48
4:AD:3:ARG:NE	4:AD:115:ARG:HD3	2.29	0.48
23:BB:30:C:C2'	23:BB:31:C:H5'	2.40	0.48
1:AA:1042:A:H2'	1:AA:1043:G:C1'	2.43	0.48
22:BA:2020:A:H5'	48:B0:9:THR:HG22	1.95	0.48
30:BI:6:GLN:O	30:BI:7:ALA:CB	2.62	0.48
1:AA:772:U:C2'	1:AA:773:G:O5'	2.61	0.48
10:AJ:44:THR:CG2	10:AJ:70:HIS:HA	2.43	0.48
13:AM:95:LEU:HB3	13:AM:96:PRO:HD2	1.94	0.48
1:AA:495:A:O4'	1:AA:496:A:C8	2.67	0.48
1:AA:575:G:C6	1:AA:821:G:N7	2.81	0.48
22:BA:1876:A:C2	22:BA:1877:A:C4	3.02	0.48
1:AA:110:C:N4	1:AA:111:G:C6	2.81	0.48
11:CK:93:ARG:NH2	21:CU:20:LYS:HD2	2.29	0.48
3:CC:148:GLY:O	3:CC:203:PHE:N	2.38	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:22:C:C2'	22:BA:23:G:O5'	2.61	0.48
22:BA:2093:G:O5'	29:BH:24:GLY:HA3	2.14	0.48
22:DA:532:A:N7	22:DA:2021:C:H2'	2.28	0.48
46:DY:18:LEU:O	46:DY:22:LEU:HB2	2.13	0.48
41:DT:39:THR:HG23	41:DT:42:GLU:H	1.78	0.48
22:BA:164:C:H2'	22:BA:165:A:H5'	1.94	0.48
22:DA:2353:G:H2'	22:DA:2354:C:O4'	2.13	0.48
22:DA:471:A:OP1	26:DE:79:ARG:NH1	2.46	0.48
1:AA:34:C:H2'	1:AA:35:G:C8	2.48	0.48
10:AJ:81:GLU:O	10:AJ:84:VAL:HG12	2.14	0.48
8:CH:86:TYR:CE2	8:CH:124:GLU:HB2	2.48	0.48
1:AA:193:C:O4'	20:AT:55:GLN:OE1	2.31	0.48
20:AT:23:SER:OG	20:AT:24:ARG:N	2.46	0.48
22:DA:1983:G:O2'	22:DA:2606:C:H5'	2.13	0.48
22:BA:2027:G:N2	22:BA:2037:A:C4	2.81	0.48
36:DO:2:ASP:O	36:DO:6:ALA:HB2	2.14	0.48
3:CC:152:GLU:OE2	3:CC:154:SER:HB3	2.14	0.48
1:AA:499:A:H4'	1:AA:500:G:OP1	2.14	0.48
25:DD:179:ARG:NH1	37:DP:8:LEU:HD21	2.29	0.48
36:DO:80:GLU:HA	36:DO:83:LEU:HD12	1.96	0.48
1:AA:785:G:N2	1:AA:798:U:C2	2.81	0.48
22:BA:1319:C:O2'	22:BA:1320:C:H5'	2.14	0.48
22:DA:737:C:C2	22:DA:738:G:C8	3.02	0.48
3:AC:107:ARG:O	3:AC:108:LYS:C	2.52	0.48
26:DE:145:ASP:HB3	26:DE:184:ASP:HB2	1.96	0.48
22:DA:2305:U:C4	27:DF:152:LEU:HA	2.48	0.48
22:BA:1593:A:H2'	22:BA:1594:U:O4'	2.14	0.48
1:AA:1058:G:C6	1:AA:1059:C:C4	3.01	0.48
3:AC:19:ASN:OD1	3:AC:19:ASN:N	2.46	0.48
46:DY:23:ARG:NE	46:DY:23:ARG:HA	2.27	0.48
16:CP:50:THR:O	16:CP:50:THR:HG22	2.14	0.48
22:DA:546:U:O2	22:DA:546:U:H3'	2.13	0.48
22:DA:664:G:H4'	22:DA:941:A:OP1	2.13	0.48
1:AA:933:G:OP2	7:AG:3:ARG:HB3	2.12	0.48
22:BA:247:G:H4'	22:BA:386:G:C5	2.49	0.48
15:CO:35:GLN:NE2	15:CO:39:LEU:HD22	2.28	0.48
22:DA:1864:U:H2'	22:DA:1865:U:H5'	1.94	0.48
32:DK:113:MET:SD	32:DK:116:ILE:HD11	2.54	0.48
22:BA:1344:U:HO2'	22:BA:1345:C:P	2.37	0.48
25:DD:150:GLN:C	25:DD:151:THR:O	2.50	0.48
1:CA:55:A:N6	1:CA:56:U:N3	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2131:U:C4'	22:DA:2133:G:H1'	2.44	0.48
22:BA:1917:U:C4	22:BA:1918:A:C4	3.02	0.48
30:BI:102:SER:OG	30:BI:103:ARG:N	2.47	0.48
22:BA:612:G:H4'	22:BA:613:A:C2	2.48	0.48
22:BA:194:G:C8	57:BA:3763:HOH:O	2.65	0.48
1:CA:1000:A:H2'	1:CA:1001:C:O4'	2.13	0.48
37:BP:53:ARG:O	37:BP:54:GLY:C	2.51	0.48
27:BF:46:ASP:OD2	27:BF:49:LEU:HD13	2.13	0.48
1:AA:108:G:C5'	1:AA:108:G:N3	2.74	0.48
1:AA:1288:A:C6	1:AA:1289:A:C5	3.01	0.48
22:DA:1062:G:H2'	22:DA:1063:G:C4	2.49	0.48
22:DA:1076:C:H1'	30:DI:93:PRO:HG2	1.95	0.48
4:CD:147:GLU:O	4:CD:148:LYS:C	2.51	0.48
1:CA:960:U:C5	1:CA:1225:A:C8	3.01	0.48
22:BA:1789:A:OP1	24:BC:221:ARG:HG3	2.13	0.48
14:CN:93:ILE:HG21	14:CN:96:LEU:HD22	1.95	0.48
22:BA:1115:G:C4	22:BA:1116:G:N7	2.82	0.48
22:DA:783:A:H8	22:DA:784:G:H4'	1.78	0.48
33:DL:110:VAL:HG21	33:DL:127:VAL:HG22	1.95	0.48
5:AE:101:GLU:HB3	5:AE:122:ASN:CB	2.43	0.48
1:AA:1036:A:H3'	1:AA:1037:C:C5	2.49	0.48
4:AD:192:SER:O	4:AD:193:ALA:HB3	2.14	0.48
9:AI:25:ASN:HB2	9:AI:27:LYS:HG2	1.94	0.48
27:BF:36:LEU:HB3	27:BF:57:LEU:HD21	1.94	0.48
30:BI:5:VAL:O	30:BI:6:GLN:HB2	2.12	0.48
22:DA:1027:A:N6	22:DA:1126:A:N3	2.61	0.48
3:CC:22:TRP:CD1	3:CC:57:ILE:HG22	2.49	0.48
1:AA:602:A:C6	1:AA:603:U:N3	2.82	0.48
30:BI:92:LYS:HB3	30:BI:95:LYS:CG	2.43	0.48
1:CA:207:C:C2'	1:CA:207:C:O2	2.61	0.48
1:AA:1211:U:H1'	1:AA:1213:A:C2	2.48	0.48
22:BA:2317:A:C2'	22:BA:2318:G:H5'	2.44	0.48
22:DA:1820:U:OP1	24:DC:177:ARG:CG	2.60	0.48
26:DE:5:LEU:HD13	26:DE:10:SER:O	2.14	0.48
28:BG:96:ALA:CB	28:BG:105:LEU:HD23	2.44	0.48
22:BA:2687:U:H2'	22:BA:2688:G:O4'	2.13	0.48
29:DH:127:GLU:HG3	29:DH:144:VAL:O	2.13	0.48
22:BA:2665:A:C2	22:BA:2666:C:N1	2.82	0.48
21:AU:6:VAL:O	21:AU:6:VAL:HG23	2.12	0.48
22:DA:769:U:C2	22:DA:770:G:C8	3.01	0.48
22:DA:532:A:N1	22:DA:2020:A:H1'	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:703:U:C5	22:DA:704:G:C6	3.01	0.48
8:CH:88:ARG:O	8:CH:122:GLY:HA3	2.13	0.48
41:DT:39:THR:HA	41:DT:81:LYS:HZ3	1.79	0.48
7:AG:97:ASN:O	7:AG:101:MET:HG3	2.14	0.48
43:DV:30:ILE:HD11	43:DV:63:ILE:CD1	2.44	0.48
1:CA:1088:G:C4	1:CA:1089:G:C8	3.02	0.48
1:AA:1446:A:O2'	1:AA:1447:A:H5'	2.14	0.48
1:AA:654:G:H2'	1:AA:655:A:H5'	1.94	0.48
24:DC:84:ASP:OD1	24:DC:86:ASN:ND2	2.44	0.48
1:CA:1303:C:N4	1:CA:1304:G:C6	2.82	0.48
22:BA:602:A:N3	22:BA:655:A:C2	2.82	0.48
3:AC:46:GLU:C	3:AC:48:ALA:H	2.16	0.48
22:DA:2563:U:H1'	22:DA:2566:A:C6	2.49	0.48
28:DG:4:VAL:HG12	28:DG:69:ARG:HG2	1.94	0.48
12:AL:56:ARG:NH1	12:AL:62:GLU:HG3	2.29	0.48
47:DZ:47:MET:O	47:DZ:51:VAL:HG22	2.14	0.48
49:D1:26:ASN:HB3	49:D1:29:THR:OG1	2.13	0.48
11:CK:110:ILE:O	21:CU:6:VAL:HG22	2.12	0.48
22:BA:301:G:H4'	22:BA:301:G:OP1	2.14	0.48
29:BH:103:VAL:HG21	29:BH:132:PHE:CZ	2.49	0.48
5:CE:77:ASN:HB2	5:CE:82:GLN:HG2	1.95	0.48
1:AA:1077:G:N1	1:AA:1081:A:C6	2.82	0.48
39:BR:66:HIS:ND1	39:BR:94:THR:HG22	2.29	0.48
22:BA:2345:G:C5	22:BA:2381:A:C2	3.02	0.48
30:BI:77:ALA:HA	30:BI:80:LEU:HD12	1.95	0.48
39:BR:52:PRO:O	39:BR:53:PHE:O	2.31	0.48
1:AA:1160:G:O2'	1:AA:1161:C:O5'	2.26	0.48
22:BA:1695:G:H1'	24:BC:8:PRO:O	2.13	0.48
11:AK:76:GLU:O	22:BA:2141:G:OP1	2.30	0.48
22:DA:1087:G:H2'	22:DA:1088:A:H5'	1.96	0.48
1:AA:1048:G:N2	1:AA:1050:G:C4	2.81	0.48
22:DA:327:G:N2	42:DU:68:SER:HB2	2.29	0.48
22:BA:2675:A:H2'	22:BA:2676:C:H5'	1.93	0.48
4:AD:197:GLU:O	4:AD:199:LEU:N	2.46	0.48
18:AR:36:SER:HA	18:AR:72:ASP:HB3	1.94	0.48
21:AU:17:ARG:NH1	21:AU:20:LYS:HG2	2.29	0.48
1:AA:90:C:C2	1:AA:91:U:C5	3.02	0.48
5:AE:97:GLN:HB2	5:AE:124:LEU:HD12	1.95	0.48
35:DN:117:ASP:O	35:DN:118:ARG:CB	2.60	0.48
3:CC:83:ASP:O	3:CC:84:VAL:C	2.51	0.48
22:BA:848:C:H2'	22:BA:849:A:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:204:A:O4'	22:DA:206:U:C6	2.67	0.48
1:AA:469:C:C4	1:AA:470:C:C4	3.02	0.48
29:DH:117:LEU:HD11	29:DH:130:VAL:HG22	1.95	0.48
1:CA:463:U:H2'	1:CA:463:U:O2	2.12	0.48
22:DA:374:A:C2	22:DA:401:A:C4	3.01	0.48
13:AM:15:ALA:HB1	13:AM:34:LEU:HD21	1.94	0.48
1:CA:202:G:H2'	1:CA:203:G:O4'	2.13	0.48
1:AA:1216:A:H2'	1:AA:1217:C:H6	1.78	0.48
17:CQ:11:ARG:NH2	17:CQ:12:VAL:O	2.47	0.48
27:BF:80:ARG:O	27:BF:83:TYR:HB2	2.14	0.48
32:DK:121:GLU:O	32:DK:122:VAL:O	2.32	0.48
22:BA:380:G:H2'	22:BA:381:G:O4'	2.14	0.48
22:DA:1544:A:N6	22:DA:1545:A:N1	2.61	0.48
9:CI:41:ARG:O	9:CI:45:ARG:NH1	2.47	0.48
22:BA:238:C:C2'	22:BA:239:C:O5'	2.61	0.48
2:CB:62:SER:HA	2:CB:224:GLY:HA2	1.96	0.48
31:DJ:9:GLU:O	31:DJ:10:THR:HG22	2.13	0.48
52:D4:12:ARG:NH1	52:D4:12:ARG:HB2	2.28	0.48
22:BA:83:A:C2	22:BA:101:A:C2	3.01	0.48
22:DA:681:G:C4	22:DA:682:G:C8	3.02	0.48
25:BD:29:VAL:HG11	25:BD:98:VAL:HG23	1.96	0.48
51:D3:52:LYS:O	51:D3:53:GLY:C	2.51	0.48
22:BA:1799:G:O6	24:BC:178:SER:HB3	2.14	0.48
1:AA:852:G:C5	1:AA:853:C:C5	3.02	0.48
22:BA:1662:U:H2'	22:BA:1662:U:O2	2.12	0.48
22:BA:2146:C:H5''	22:BA:2147:A:OP1	2.13	0.48
22:DA:1821:A:H2'	22:DA:1822:C:O4'	2.14	0.48
22:BA:2063:C:O2	22:BA:2450:A:N1	2.46	0.48
38:BQ:9:ILE:O	38:BQ:9:ILE:HG13	2.12	0.48
22:DA:2766:A:N3	22:DA:2766:A:H2'	2.29	0.48
22:DA:300:A:O5'	42:DU:82:ARG:NH1	2.46	0.48
1:AA:702:A:H61	22:BA:1846:G:C2'	2.27	0.48
5:CE:153:VAL:O	5:CE:157:ARG:N	2.43	0.48
22:DA:448:U:H4'	22:DA:449:A:OP2	2.13	0.48
38:BQ:89:GLU:H	39:BR:49:ILE:HD12	1.79	0.48
22:BA:2210:U:C2	22:BA:2212:A:N7	2.82	0.48
22:DA:1313:U:H4'	22:DA:1332:G:H4'	1.96	0.48
22:BA:2714:G:C2'	22:BA:2715:C:H5'	2.43	0.48
22:BA:627:A:C5	22:BA:637:A:C8	3.01	0.48
22:BA:811:U:C2	22:BA:1251:C:C5	3.02	0.48
22:BA:2674:G:H2'	22:BA:2675:A:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:30:C:C5	23:BB:31:C:C6	3.02	0.48
22:DA:1470:A:H2'	22:DA:1471:G:O5'	2.13	0.48
2:AB:46:THR:HG23	2:AB:201:PRO:HB2	1.96	0.48
12:AL:44:LYS:CB	12:AL:45:PRO:CD	2.92	0.48
22:DA:24:G:N2	22:DA:517:C:C2	2.82	0.48
30:BI:7:ALA:HB2	30:BI:61:VAL:HB	1.96	0.48
22:DA:14:A:N1	22:DA:526:A:C2	2.81	0.48
9:CI:116:VAL:HG21	10:CJ:62:ARG:HB2	1.95	0.48
30:BI:25:GLY:O	30:BI:28:LEU:HD23	2.13	0.48
22:DA:830:G:C4	22:DA:2448:A:C5	3.02	0.48
36:BO:2:ASP:OD1	36:BO:2:ASP:C	2.52	0.48
42:DU:96:PHE:CE1	42:DU:103:ILE:HG13	2.48	0.48
22:BA:1564:C:H2'	22:BA:1565:C:C6	2.49	0.48
17:CQ:17:MET:HE2	17:CQ:20:SER:O	2.14	0.48
22:DA:629:G:O6	22:DA:630:G:C6	2.66	0.48
1:AA:989:U:H2'	1:AA:990:C:C6	2.49	0.48
1:CA:756:C:N3	1:CA:757:U:C6	2.81	0.48
28:DG:17:VAL:HG12	28:DG:19:ILE:HD11	1.95	0.48
27:DF:6:ASP:HA	27:DF:9:LYS:HD2	1.96	0.48
36:BO:93:ASP:OD2	36:BO:95:SER:N	2.40	0.48
7:AG:92:ARG:O	7:AG:96:ARG:HB2	2.14	0.48
35:DN:69:ARG:O	35:DN:71:ARG:N	2.38	0.48
1:AA:1379:G:C5	1:AA:1380:U:C5	3.02	0.48
2:AB:35:ARG:NE	2:AB:35:ARG:HA	2.28	0.48
24:DC:141:VAL:HG13	24:DC:191:THR:O	2.14	0.48
24:DC:162:VAL:HG12	24:DC:163:GLN:N	2.27	0.48
22:DA:1708:C:H2'	22:DA:1709:U:C6	2.49	0.48
2:CB:126:PHE:HD2	2:CB:126:PHE:N	2.11	0.48
40:DS:58:ALA:O	40:DS:62:ASP:O	2.31	0.48
1:AA:41:G:H2'	1:AA:42:G:C8	2.49	0.48
1:CA:799:G:C6	1:CA:800:G:C4	3.02	0.48
22:BA:1646:C:H5''	22:BA:1647:U:C5'	2.44	0.48
9:AI:115:LYS:O	9:AI:116:VAL:C	2.52	0.48
1:CA:644:U:C2	1:CA:645:G:C8	3.01	0.48
44:BW:10:THR:O	44:BW:11:ARG:CB	2.60	0.48
29:BH:135:HIS:CD2	29:BH:137:GLU:HG3	2.48	0.48
3:CC:184:TYR:CE1	3:CC:201:TRP:CE2	3.01	0.48
22:BA:748:G:OP2	40:BS:88:ARG:HB3	2.14	0.48
1:CA:767:A:H2'	1:CA:768:A:O4'	2.14	0.48
5:CE:93:ARG:NH1	5:CE:93:ARG:HB3	2.27	0.48
49:B1:32:GLU:HG2	49:B1:32:GLU:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:D0:44:THR:C	48:D0:46:ASP:H	2.17	0.48
25:DD:112:THR:O	25:DD:195:GLY:HA2	2.14	0.48
22:BA:1098:A:C6	22:BA:1099:G:C6	3.01	0.48
22:BA:1693:U:O4	22:BA:1977:A:C5	2.67	0.48
22:BA:784:G:O2'	22:BA:785:G:H5''	2.13	0.48
22:DA:1341:G:C2	41:DT:84:TYR:CD2	3.01	0.48
11:AK:13:ARG:N	22:BA:2141:G:H4'	2.29	0.48
1:AA:1074:G:O3'	2:AB:102:THR:CG2	2.62	0.48
1:CA:509:A:C2	1:CA:510:A:C2	3.02	0.48
22:DA:1070:A:H2'	22:DA:1097:U:OP1	2.14	0.48
26:BE:105:LEU:O	26:BE:106:LYS:C	2.51	0.48
30:DI:7:ALA:O	30:DI:59:ILE:HB	2.14	0.48
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.95	0.48
1:AA:1322:C:O4'	1:AA:1322:C:O2	2.27	0.48
18:CR:58:ALA:HA	18:CR:61:ARG:HD3	1.96	0.48
4:AD:78:GLU:OE1	4:AD:81:ARG:NH1	2.47	0.48
22:BA:1415:U:O2	22:BA:1415:U:C2'	2.62	0.48
12:CL:22:PRO:C	12:CL:24:LEU:H	2.16	0.48
22:DA:947:A:HO2'	22:DA:984:A:H2	1.59	0.48
28:DG:38:ASN:HB3	28:DG:41:VAL:HG23	1.96	0.48
10:AJ:8:ILE:HA	10:AJ:99:GLN:O	2.13	0.48
2:AB:149:GLY:O	2:AB:151:ILE:N	2.46	0.48
1:CA:562:U:OP2	12:CL:14:ARG:CZ	2.62	0.48
22:DA:1198:U:O2	38:DQ:4:VAL:HG11	2.13	0.48
22:BA:2329:U:H2'	22:BA:2330:G:C8	2.49	0.48
22:DA:536:G:H2'	22:DA:537:G:O4'	2.14	0.48
1:CA:1346:A:N6	1:CA:1374:A:C8	2.81	0.48
22:DA:2080:A:O5'	45:DX:19:SER:HB2	2.14	0.48
32:DK:105:ARG:HG2	32:DK:122:VAL:HG12	1.96	0.48
1:CA:666:G:O2'	1:CA:667:G:H5'	2.14	0.48
1:CA:740:U:O2'	1:CA:741:G:H5'	2.13	0.48
22:DA:627:A:O2'	33:DL:76:GLU:OE1	2.32	0.48
31:BJ:114:LEU:HG	31:BJ:118:MET:HE3	1.95	0.48
22:BA:2619:C:OP1	25:BD:157:LYS:HE2	2.14	0.48
21:CU:14:VAL:HG12	21:CU:16:LEU:HD23	1.94	0.48
26:DE:23:PHE:CD1	26:DE:111:GLU:HG3	2.49	0.48
24:DC:3:VAL:HG11	24:DC:202:LEU:HD23	1.95	0.48
35:BN:82:GLU:O	35:BN:85:PRO:HG2	2.14	0.48
23:BB:22:U:H2'	23:BB:23:G:C8	2.49	0.48
2:AB:196:VAL:HG11	2:AB:199:VAL:HA	1.96	0.48
11:CK:23:ILE:HG13	11:CK:23:ILE:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:39:ASP:HB3	28:DG:58:TYR:OH	2.14	0.48
7:CG:126:ASP:O	7:CG:130:ASN:HA	2.13	0.48
3:CC:5:VAL:HG21	3:CC:10:ILE:HD13	1.94	0.48
25:BD:181:ASP:OD1	25:BD:183:GLU:OE1	2.32	0.48
31:BJ:96:ARG:NH2	31:BJ:99:ARG:HD3	2.29	0.48
27:BF:122:PHE:HB3	27:BF:163:ASP:CG	2.34	0.48
22:BA:142:A:C5	22:BA:143:C:C4	3.02	0.48
7:CG:23:LEU:HD23	7:CG:26:PHE:HB3	1.96	0.48
22:BA:1894:C:O2'	22:BA:1895:C:H5'	2.14	0.48
22:DA:2387:U:H1'	44:DW:41:ARG:CD	2.44	0.48
22:DA:1361:G:C2	22:DA:1362:C:C6	3.02	0.48
22:BA:2747:G:C2	22:BA:2756:U:C5	3.02	0.48
22:BA:1170:C:H2'	22:BA:1171:G:C8	2.49	0.48
35:DN:38:LEU:HB3	35:DN:39:PRO:HD3	1.96	0.48
22:BA:2825:G:C3'	22:BA:2826:A:H5'	2.44	0.48
22:DA:1308:A:H2'	22:DA:1309:G:O4'	2.13	0.48
22:DA:225:C:H2'	22:DA:226:A:O4'	2.13	0.48
22:DA:1062:G:N1	22:DA:1077:A:C2	2.82	0.48
20:AT:67:ILE:HG23	20:AT:67:ILE:O	2.14	0.48
1:CA:17:U:N3	1:CA:18:C:C5	2.82	0.48
1:CA:1512:U:C2	1:CA:1513:A:C8	3.02	0.48
1:AA:374:A:C6	1:AA:375:U:C4	3.01	0.48
1:CA:505:G:H5'	1:CA:534:U:C2	2.48	0.48
22:DA:1775:U:H2'	22:DA:1776:G:O5'	2.13	0.48
1:AA:927:G:N1	1:AA:1391:U:C2	2.82	0.48
3:CC:87:LEU:O	3:CC:91:VAL:HG23	2.13	0.48
2:AB:47:VAL:C	2:AB:49:MET:N	2.68	0.48
23:DB:84:G:C2	23:DB:93:C:C2	3.02	0.48
9:AI:47:VAL:O	9:AI:50:GLN:HB2	2.14	0.48
9:AI:57:MET:N	9:AI:57:MET:SD	2.85	0.48
32:BK:114:LYS:O	32:BK:118:LEU:HG	2.14	0.48
22:BA:10:A:C5	22:BA:11:C:C5	3.02	0.48
13:AM:64:VAL:O	13:AM:69:LEU:HB2	2.13	0.48
22:DA:937:C:C4	22:DA:938:G:N7	2.82	0.48
3:CC:130:PHE:CE1	3:CC:157:LEU:HB3	2.48	0.48
17:CQ:52:GLU:HG2	17:CQ:53:CYS:H	1.79	0.48
1:AA:1091:U:O2	1:AA:1095:U:C2	2.66	0.48
22:DA:2615:U:H1'	48:D0:4:GLN:HB3	1.96	0.48
22:BA:340:A:C2'	22:BA:341:C:H5'	2.44	0.48
19:CS:63:THR:CG2	19:CS:64:ASP:N	2.77	0.48
22:BA:1877:A:H2'	22:BA:1878:G:O4'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:146:VAL:HG22	26:DE:167:VAL:HG22	1.94	0.48
17:AQ:52:GLU:N	17:AQ:52:GLU:CD	2.66	0.48
22:DA:2491:U:C5'	22:DA:2570:G:H5''	2.43	0.48
2:AB:56:GLU:HA	2:AB:59:LYS:CB	2.44	0.48
1:CA:238:A:O2'	1:CA:239:U:H5'	2.14	0.48
22:BA:2557:G:H2'	22:BA:2558:C:C6	2.48	0.48
24:BC:88:SER:HB2	24:BC:200:HIS:CD2	2.49	0.48
8:AH:66:PHE:CD2	8:AH:67:GLN:HG2	2.48	0.48
5:AE:20:ARG:O	5:AE:21:VAL:HG12	2.14	0.48
35:DN:85:PRO:HA	35:DN:88:ALA:HB2	1.95	0.48
25:DD:142:VAL:HB	25:DD:143:PRO:HD2	1.96	0.48
1:CA:652:U:C4	1:CA:752:G:N3	2.81	0.48
32:BK:57:VAL:C	32:BK:58:LEU:HD13	2.34	0.48
25:DD:39:ASP:OD1	25:DD:40:LEU:N	2.47	0.48
3:CC:79:LYS:O	3:CC:81:GLY:N	2.47	0.48
25:BD:149:ASN:CG	25:BD:150:GLN:H	2.16	0.47
1:AA:683:G:N2	11:AK:40:ASN:HA	2.29	0.47
1:CA:1388:C:N3	1:CA:1389:C:C5	2.82	0.47
22:BA:991:C:C5	22:BA:1185:G:C6	3.02	0.47
1:CA:829:G:C5	1:CA:858:G:N2	2.82	0.47
1:CA:1101:A:N6	2:CB:102:THR:HG21	2.23	0.47
17:AQ:14:SER:OG	17:AQ:17:MET:CE	2.62	0.47
22:DA:1826:G:C4	22:DA:1827:U:C6	3.02	0.47
2:AB:138:THR:HA	2:AB:141:LEU:HB2	1.96	0.47
4:AD:147:GLU:HA	4:AD:150:LYS:HD2	1.96	0.47
22:DA:2142:A:C2	22:DA:2150:C:N3	2.82	0.47
1:AA:960:U:O2'	1:AA:1223:C:H5''	2.14	0.47
22:DA:1870:C:C3'	22:DA:1871:A:H5'	2.44	0.47
22:BA:528:A:C2	22:BA:2043:C:H4'	2.49	0.47
30:BI:34:ASN:HB2	30:BI:37:GLU:HG3	1.96	0.47
1:AA:465:A:H2'	1:AA:466:A:C8	2.49	0.47
22:BA:11:C:C2'	22:BA:12:U:H5'	2.44	0.47
4:AD:177:LYS:HD3	4:AD:177:LYS:N	2.29	0.47
1:AA:188:C:N3	1:AA:189:A:C2	2.82	0.47
1:AA:1213:A:C5	1:AA:1215:G:C4	3.02	0.47
1:CA:664:G:N2	1:CA:666:G:C8	2.82	0.47
1:CA:881:G:C6	1:CA:882:C:C4	3.02	0.47
22:DA:1229:C:C2	22:DA:1230:A:C8	3.02	0.47
1:CA:1431:A:C6	1:CA:1432:G:O6	2.66	0.47
22:DA:883:G:N2	22:DA:894:U:O2	2.47	0.47
1:AA:737:C:N3	1:AA:738:C:C5	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:6:ILE:HG22	6:CF:7:VAL:N	2.28	0.47
1:CA:1255:G:N1	1:CA:1279:G:C8	2.82	0.47
10:CJ:35:GLN:O	10:CJ:36:VAL:CB	2.61	0.47
22:BA:2486:C:H2'	22:BA:2487:G:O5'	2.13	0.47
2:AB:54:LEU:HD12	2:AB:220:THR:HG21	1.95	0.47
41:DT:2:ILE:HG23	41:DT:4:GLU:N	2.29	0.47
22:DA:121:G:H4'	22:DA:149:A:H5'	1.95	0.47
3:CC:10:ILE:HD12	14:CN:98:LYS:HG3	1.96	0.47
33:DL:68:SER:O	33:DL:69:ARG:CB	2.61	0.47
8:AH:11:LEU:HD23	8:AH:11:LEU:N	2.28	0.47
34:DM:62:LYS:HD3	34:DM:64:TRP:CZ2	2.49	0.47
22:BA:705:A:N6	22:BA:726:G:H1'	2.29	0.47
32:BK:21:CYS:HB2	32:BK:39:ILE:HD12	1.95	0.47
22:DA:1893:C:C5	22:DA:1894:C:C5	3.02	0.47
22:BA:2:G:H2'	22:BA:3:U:C6	2.49	0.47
46:DY:60:LYS:O	46:DY:61:ALA:C	2.52	0.47
22:DA:1285:A:N6	22:DA:1329:U:C6	2.82	0.47
41:DT:20:ALA:HA	41:DT:31:VAL:HG21	1.96	0.47
1:AA:146:G:C2	1:AA:177:G:N7	2.82	0.47
50:D2:10:LEU:O	50:D2:14:ARG:HG3	2.14	0.47
24:BC:77:VAL:HA	24:BC:114:ASP:O	2.14	0.47
3:CC:69:HIS:HA	3:CC:104:ALA:HB3	1.95	0.47
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.49	0.47
1:CA:57:G:C6	1:CA:58:C:N4	2.82	0.47
29:DH:83:LYS:CG	29:DH:149:GLU:CG	2.86	0.47
1:CA:8:A:N6	4:CD:206:LYS:HB3	2.29	0.47
22:BA:1911:U:O2	22:BA:1920:C:O2	2.31	0.47
24:DC:29:PRO:HG3	24:DC:63:ARG:CZ	2.43	0.47
22:BA:478:A:C6	22:BA:480:A:C6	3.02	0.47
2:AB:120:GLN:N	2:AB:123:ASP:HB2	2.29	0.47
1:CA:211:G:N3	1:CA:211:G:H2'	2.29	0.47
4:AD:113:GLU:CD	4:AD:154:ARG:HD2	2.34	0.47
1:AA:1367:C:C5'	10:AJ:62:ARG:NH1	2.76	0.47
9:AI:114:LYS:HG2	9:AI:120:LYS:HA	1.95	0.47
25:BD:13:ARG:HD2	25:BD:15:PHE:CE2	2.49	0.47
42:BU:14:LEU:HD12	42:BU:70:VAL:C	2.34	0.47
4:CD:151:LYS:C	4:CD:152:GLN:HE21	2.17	0.47
37:DP:52:ASN:O	37:DP:53:ARG:HD3	2.14	0.47
39:DR:52:PRO:O	39:DR:53:PHE:CB	2.62	0.47
22:DA:2111:U:H5	22:DA:2145:C:H2'	1.78	0.47
24:BC:107:PRO:HD2	24:BC:110:LEU:HB2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:83:LYS:HD2	40:BS:97:LEU:CD1	2.44	0.47
35:BN:73:ASN:HA	35:BN:76:VAL:CG1	2.44	0.47
22:BA:581:C:H2'	22:BA:582:A:H8	1.79	0.47
29:BH:111:ALA:O	29:BH:114:GLU:HB2	2.13	0.47
22:DA:1662:U:O2	22:DA:2687:U:H4'	2.13	0.47
46:DY:56:LEU:O	46:DY:57:LEU:HB3	2.14	0.47
22:DA:1515:A:H5'	22:DA:1516:G:OP2	2.15	0.47
1:AA:19:A:C2	1:AA:917:G:C4	3.02	0.47
22:DA:67:U:H2'	22:DA:68:G:O4'	2.14	0.47
1:CA:1080:A:OP1	5:CE:52:LYS:HE2	2.13	0.47
31:BJ:35:ARG:HG2	31:BJ:40:HIS:CD2	2.49	0.47
2:CB:85:LEU:O	2:CB:85:LEU:HG	2.12	0.47
1:CA:661:G:N3	1:CA:662:U:C6	2.82	0.47
22:BA:1228:G:C6	22:BA:1229:C:C4	3.02	0.47
22:DA:2491:U:H5'	22:DA:2570:G:H5'	1.96	0.47
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.14	0.47
33:BL:132:ARG:NH1	33:BL:142:ILE:HG21	2.29	0.47
22:DA:2886:A:C2	48:D0:29:SER:HB3	2.49	0.47
4:CD:78:GLU:HG3	4:CD:93:LEU:HD11	1.96	0.47
14:CN:22:ALA:N	14:CN:25:ALA:HB2	2.29	0.47
3:CC:81:GLY:O	3:CC:82:GLU:C	2.52	0.47
22:DA:2114:A:H2'	22:DA:2114:A:N3	2.29	0.47
2:AB:28:LYS:N	2:AB:29:PRO:CD	2.77	0.47
9:CI:19:VAL:HG21	9:CI:82:GLY:C	2.34	0.47
5:AE:141:ILE:HG22	5:AE:142:ASP:N	2.29	0.47
34:DM:107:GLY:C	34:DM:108:VAL:HG22	2.35	0.47
22:DA:1014:A:C2	22:DA:1149:G:C2	3.02	0.47
51:D3:7:VAL:HB	51:D3:61:CYS:HB3	1.95	0.47
49:B1:17:THR:HG21	49:B1:42:VAL:HB	1.96	0.47
24:DC:39:LYS:HE3	24:DC:56:GLY:O	2.14	0.47
34:DM:78:LEU:O	34:DM:79:ALA:HB3	2.14	0.47
53:B5:41:THR:HG21	53:B5:216:THR:CB	2.45	0.47
22:DA:1754:A:C6	22:DA:1755:A:C6	3.02	0.47
19:CS:15:LEU:HD13	19:CS:33:THR:HG21	1.96	0.47
22:BA:2790:U:H5'	22:BA:2893:A:N7	2.29	0.47
23:BB:109:A:C5	23:BB:110:C:C4	3.02	0.47
22:BA:596:U:O2'	22:BA:597:G:H5'	2.14	0.47
22:DA:742:A:H2'	22:DA:743:A:C8	2.49	0.47
13:CM:43:VAL:O	13:CM:43:VAL:HG23	2.14	0.47
36:DO:99:TYR:O	36:DO:99:TYR:CD1	2.67	0.47
12:CL:111:LYS:O	12:CL:114:ARG:HG3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:172:VAL:CG2	25:DD:194:PRO:HD3	2.44	0.47
22:BA:1029:A:OP1	34:BM:127:LYS:NZ	2.47	0.47
29:BH:116:ARG:O	29:BH:118:PRO:HD3	2.14	0.47
28:BG:63:ALA:O	28:BG:67:THR:CG2	2.62	0.47
22:BA:1169:A:C6	22:BA:1180:U:O4	2.68	0.47
22:BA:2729:G:C5	22:BA:2730:C:C5	3.02	0.47
39:BR:24:LYS:CA	39:BR:94:THR:HG23	2.33	0.47
5:CE:104:GLY:O	5:CE:105:ILE:HG22	2.15	0.47
22:DA:2160:C:H2'	22:DA:2161:C:O4'	2.14	0.47
12:CL:110:ARG:NE	12:CL:117:TYR:CD2	2.82	0.47
30:BI:80:LEU:HA	30:BI:84:ALA:HB3	1.95	0.47
1:AA:254:G:O2'	17:AQ:18:GLU:O	2.32	0.47
22:DA:510:C:C4	22:DA:511:U:C4	3.02	0.47
22:DA:1475:G:HO2'	22:DA:1476:U:P	2.38	0.47
22:BA:1924:C:O2	22:BA:1924:C:H2'	2.13	0.47
22:BA:242:G:C8	51:B3:5:LYS:HG2	2.49	0.47
22:BA:973:A:H5''	39:BR:81:LYS:HG3	1.96	0.47
22:BA:1026:G:H2'	22:BA:1027:A:H8	1.79	0.47
17:AQ:12:VAL:O	17:AQ:13:VAL:CB	2.61	0.47
27:BF:108:VAL:N	27:BF:109:PRO:CD	2.78	0.47
22:BA:2281:A:C2	22:BA:2282:G:C5	3.03	0.47
22:BA:1135:C:N4	22:BA:1139:G:C6	2.82	0.47
46:DY:9:LYS:H	46:DY:12:GLU:HG3	1.78	0.47
17:CQ:14:SER:OG	17:CQ:17:MET:CE	2.63	0.47
22:DA:961:C:C4	22:DA:2031:A:C4	3.01	0.47
24:DC:34:LEU:O	24:DC:35:GLU:CB	2.62	0.47
3:CC:138:VAL:O	3:CC:141:ALA:HB3	2.14	0.47
8:AH:49:PHE:HB3	8:AH:61:LEU:HD23	1.97	0.47
22:DA:79:C:O2	22:DA:108:G:C2	2.68	0.47
22:BA:1014:A:C6	22:BA:1015:U:C4	3.02	0.47
1:AA:1202:U:C2	14:AN:82:ILE:HG21	2.50	0.47
37:BP:14:LYS:NZ	37:BP:81:VAL:O	2.48	0.47
1:CA:1377:A:C5	7:CG:7:ILE:CD1	2.96	0.47
22:DA:2253:G:C5	22:DA:2254:C:C5	3.02	0.47
1:CA:781:A:H2'	1:CA:782:A:H5'	1.96	0.47
24:BC:31:ALA:HA	24:BC:34:LEU:HD12	1.96	0.47
22:DA:1833:C:C4	22:DA:1834:U:C5	3.02	0.47
20:AT:54:MET:HA	20:AT:57:ILE:HG22	1.96	0.47
20:AT:54:MET:HE3	20:AT:58:VAL:CG2	2.44	0.47
20:AT:69:LYS:HB2	20:AT:70:ASN:OD1	2.14	0.47
26:DE:197:GLU:O	26:DE:201:ALA:HB2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:18:ILE:HG23	10:AJ:19:ASP:N	2.29	0.47
1:CA:1053:G:N7	1:CA:1200:C:H5''	2.29	0.47
15:CO:60:VAL:O	15:CO:63:ARG:HB3	2.15	0.47
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.14	0.47
28:BG:118:PRO:O	28:BG:119:ALA:C	2.52	0.47
22:DA:17:G:H4'	38:DQ:25:TYR:CE1	2.48	0.47
1:CA:1537:U:H5''	1:CA:1538:C:OP2	2.14	0.47
28:BG:127:THR:HG22	28:BG:128:GLN:N	2.29	0.47
22:BA:1242:U:O2	33:BL:4:ASN:ND2	2.47	0.47
42:BU:54:GLN:N	42:BU:55:PRO:CD	2.77	0.47
28:DG:10:VAL:HG13	28:DG:10:VAL:O	2.14	0.47
22:BA:149:A:C5	22:BA:150:U:C5	3.02	0.47
1:AA:352:C:OP2	57:AA:1891:HOH:O	2.19	0.47
6:CF:38:ARG:HG2	6:CF:63:ASN:HB3	1.96	0.47
18:AR:34:THR:CG2	18:AR:38:LYS:HB2	2.45	0.47
29:BH:86:ASP:H	1:CA:359:G:H4'	1.80	0.47
14:CN:36:ALA:HB2	14:CN:41:ARG:HG3	1.95	0.47
38:DQ:61:TRP:HB3	38:DQ:92:ARG:O	2.15	0.47
2:AB:82:ASP:N	2:AB:85:LEU:HB3	2.29	0.47
1:CA:1098:C:C2	1:CA:1099:G:C8	3.02	0.47
22:BA:566:U:OP1	33:BL:29:LYS:HE3	2.15	0.47
24:BC:7:LYS:HB3	24:BC:8:PRO:HD2	1.95	0.47
22:BA:2321:U:C5'	22:BA:2322:A:OP2	2.57	0.47
22:DA:1609:A:H5''	57:DA:3645:HOH:O	2.13	0.47
22:DA:612:G:O2'	22:DA:613:A:C8	2.67	0.47
2:AB:113:ARG:O	2:AB:117:LEU:HB2	2.15	0.47
29:DH:32:PRO:HB3	45:DX:39:TRP:CB	2.43	0.47
22:BA:2839:G:OP1	35:BN:46:ARG:HD2	2.14	0.47
4:AD:171:LEU:HD12	4:AD:171:LEU:O	2.14	0.47
1:AA:8:A:H5'	5:AE:125:ALA:O	2.14	0.47
1:CA:1296:C:H5''	1:CA:1297:G:OP2	2.14	0.47
45:DX:33:LEU:O	45:DX:34:HIS:ND1	2.47	0.47
13:CM:45:ILE:O	13:CM:45:ILE:HG22	2.14	0.47
12:AL:43:LYS:HG2	12:AL:44:LYS:HD3	1.96	0.47
22:BA:205:G:O2'	22:BA:206:U:OP2	2.32	0.47
16:AP:68:SER:HB2	16:AP:71:VAL:HB	1.96	0.47
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.15	0.47
1:AA:148:G:C2'	1:AA:149:A:O5'	2.62	0.47
22:BA:1907:G:C8	22:BA:1908:C:C5	3.02	0.47
22:DA:1649:G:O6	22:DA:2009:A:N6	2.47	0.47
46:DY:28:LEU:HD23	46:DY:37:LEU:HD11	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:184:PHE:CE2	2:AB:198:PHE:HD2	2.31	0.47
1:CA:161:A:H2'	1:CA:162:A:C8	2.49	0.47
40:BS:43:ALA:HA	40:BS:46:LEU:HD12	1.95	0.47
29:DH:62:LEU:O	29:DH:62:LEU:HD22	2.14	0.47
23:DB:66:A:N6	23:DB:107:G:H2'	2.30	0.47
1:CA:756:C:C2	1:CA:757:U:C6	3.02	0.47
1:CA:821:G:H2'	1:CA:822:U:H6	1.79	0.47
1:CA:881:G:C5	1:CA:882:C:C5	3.03	0.47
1:AA:1418:A:C2	1:AA:1483:A:C2	3.03	0.47
22:BA:2267:A:H2	57:BA:3511:HOH:O	1.96	0.47
22:BA:26:G:C6	22:BA:27:G:C6	3.03	0.47
22:DA:1668:A:H4'	22:DA:1669:A:O5'	2.14	0.47
22:DA:2799:A:C6	22:DA:2801:G:C5	3.03	0.47
22:BA:1717:A:H2'	22:BA:1718:G:O4'	2.14	0.47
28:BG:121:ILE:HD12	28:BG:141:ILE:CG2	2.44	0.47
1:CA:439:U:H4'	4:CD:121:LYS:HD2	1.96	0.47
29:DH:5:LEU:HD13	29:DH:13:GLY:HA3	1.96	0.47
22:DA:1437:C:C4	22:DA:1438:U:C4	3.03	0.47
22:BA:2642:G:N2	22:BA:2773:C:C2	2.81	0.47
1:AA:903:G:H2'	1:AA:904:U:C6	2.50	0.47
22:DA:659:G:H4'	26:DE:95:LYS:HD3	1.95	0.47
20:AT:23:SER:OG	20:AT:24:ARG:HD2	2.14	0.47
22:DA:221:A:C8	22:DA:266:G:O6	2.68	0.47
22:BA:1446:C:H2'	22:BA:1447:C:C6	2.49	0.47
28:DG:93:GLY:HA2	28:DG:95:ARG:NH2	2.29	0.47
22:BA:1851:U:C4	22:BA:1852:U:C4	3.03	0.47
36:BO:36:TYR:N	36:BO:36:TYR:CD2	2.82	0.47
6:CF:24:ARG:O	6:CF:27:ALA:HB3	2.15	0.47
53:B5:180:SER:CB	53:B5:188:ASP:CB	2.91	0.47
22:DA:2280:G:O2'	22:DA:2388:A:N1	2.42	0.47
5:CE:81:LEU:O	5:CE:98:PRO:HB3	2.15	0.47
1:AA:1403:C:H1'	1:AA:1500:A:N1	2.29	0.47
22:BA:1060:U:H4'	22:BA:1061:U:H3'	1.94	0.47
22:BA:1098:A:N7	22:BA:1099:G:O6	2.47	0.47
1:AA:276:G:O3'	17:AQ:45:HIS:CE1	2.67	0.47
1:CA:582:C:C2	1:CA:760:G:N1	2.83	0.47
22:BA:2820:A:O2'	22:BA:2821:A:OP1	2.32	0.47
22:DA:2061:G:H2'	22:DA:2501:C:O2'	2.15	0.47
12:AL:23:ALA:O	12:AL:24:LEU:C	2.52	0.47
1:CA:66:A:C4'	1:CA:173:U:C4	2.98	0.47
22:DA:1351:C:O2'	22:DA:1571:A:H1'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1926:U:O2	22:BA:1927:A:OP2	2.32	0.47
26:BE:109:LEU:O	26:BE:112:LEU:N	2.47	0.47
42:DU:7:ARG:HG3	42:DU:8:ASP:H	1.79	0.47
1:CA:81:A:H2'	1:CA:82:G:C8	2.49	0.47
1:CA:935:A:N1	7:CG:3:ARG:NH1	2.62	0.47
1:AA:557:G:C6	1:AA:558:G:N1	2.82	0.47
22:BA:2674:G:C2	22:BA:2675:A:C4	3.03	0.47
22:BA:465:G:C6	22:BA:466:A:N6	2.82	0.47
1:CA:706:A:C5	1:CA:707:U:C4	3.02	0.47
1:CA:332:G:OP2	20:CT:5:LYS:HB3	2.14	0.47
22:DA:1469:A:N1	22:DA:1470:A:C6	2.82	0.47
4:AD:63:ARG:HA	4:AD:63:ARG:HE	1.79	0.47
17:AQ:12:VAL:O	17:AQ:13:VAL:HB	2.13	0.47
22:BA:1259:G:N2	22:BA:1260:A:C4	2.83	0.47
20:AT:3:ASN:O	20:AT:4:ILE:C	2.52	0.47
22:DA:301:G:C5	22:DA:317:G:C6	3.02	0.47
20:AT:80:THR:O	20:AT:83:ILE:HG13	2.14	0.47
35:BN:36:THR:HG22	35:BN:41:ALA:HB2	1.95	0.47
22:DA:135:U:H2'	22:DA:136:G:C8	2.49	0.47
40:DS:84:ARG:HB2	40:DS:96:ILE:CG1	2.44	0.47
22:BA:1078:U:H5''	22:BA:1079:C:OP1	2.15	0.47
1:AA:109:A:H2'	1:AA:326:G:N2	2.29	0.47
6:AF:81:ASN:O	6:AF:84:VAL:CG1	2.62	0.47
22:DA:548:G:H4'	22:DA:549:G:C2	2.50	0.47
17:CQ:28:PHE:CE2	17:CQ:39:LYS:HG3	2.49	0.47
3:AC:113:ALA:HB2	3:AC:183:ASP:O	2.14	0.47
36:BO:54:VAL:HG22	36:BO:54:VAL:O	2.15	0.47
22:DA:309:A:H4'	42:DU:16:GLY:HA2	1.97	0.47
22:DA:2109:U:H1'	22:DA:2181:U:O2	2.15	0.47
1:AA:994:A:N3	1:AA:994:A:H2'	2.29	0.47
22:DA:597:G:C2	22:DA:661:A:C2	3.03	0.47
3:CC:103:ILE:N	3:CC:103:ILE:HD12	2.29	0.47
25:BD:98:VAL:HG22	25:BD:98:VAL:O	2.15	0.47
23:BB:110:C:C4	23:BB:111:U:C5	3.02	0.47
28:BG:9:VAL:HG21	28:BG:73:ASN:HA	1.97	0.47
2:CB:104:TRP:CZ2	2:CB:156:GLY:N	2.83	0.47
22:DA:2084:C:C4	22:DA:2085:U:C4	3.02	0.47
34:DM:72:PRO:HB3	34:DM:92:TRP:CZ3	2.49	0.47
22:DA:216:A:C8	22:DA:432:A:C6	3.02	0.47
22:DA:1254:A:C6	26:DE:77:ILE:HD12	2.49	0.47
48:B0:40:ARG:O	48:B0:41:HIS:HB2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:43:ILE:O	41:BT:47:VAL:HG23	2.15	0.47
37:BP:92:VAL:HG21	37:BP:97:LEU:HD11	1.96	0.47
45:DX:71:LEU:HA	45:DX:74:ARG:HG2	1.96	0.47
38:DQ:50:ARG:NH2	39:DR:74:ILE:HG13	2.29	0.47
22:BA:303:G:C5	22:BA:304:U:C5	3.02	0.47
49:D1:8:LYS:HG3	49:D1:24:THR:HG22	1.95	0.47
4:AD:116:GLN:NE2	4:AD:120:HIS:CE1	2.82	0.47
22:BA:1042:G:C5	22:BA:1043:C:C5	3.03	0.47
22:DA:389:G:C8	22:DA:2413:G:H4'	2.48	0.47
29:BH:117:LEU:HD23	29:BH:121:VAL:HA	1.95	0.47
22:BA:2056:G:C4	22:BA:2577:A:C2	3.02	0.47
22:BA:747:U:C2	22:BA:2613:U:O4	2.67	0.47
1:AA:409:U:OP1	4:AD:22:LYS:O	2.33	0.47
5:CE:122:ASN:CG	5:CE:123:VAL:H	2.18	0.47
22:DA:2131:U:H4'	22:DA:2133:G:C1'	2.45	0.47
22:DA:2131:U:O4'	22:DA:2133:G:H1'	2.15	0.47
1:AA:1167:A:N7	1:AA:1169:A:C5	2.82	0.47
14:AN:46:LEU:C	14:AN:48:LEU:N	2.68	0.47
22:DA:1652:A:OP1	35:DN:8:ARG:NH2	2.43	0.47
30:BI:83:ALA:HB1	30:BI:109:ILE:HD13	1.96	0.47
22:BA:1494:A:H2'	22:BA:1495:A:C8	2.50	0.47
1:CA:33:A:H2'	1:CA:34:C:H6	1.78	0.47
22:BA:1084:A:C5	22:BA:1085:A:N6	2.82	0.47
22:DA:2214:C:C2	22:DA:2215:C:C6	3.03	0.47
22:BA:2516:A:C2	22:BA:2569:G:C4	3.03	0.47
26:BE:104:ALA:O	26:BE:105:LEU:C	2.52	0.47
26:BE:109:LEU:O	26:BE:110:SER:C	2.52	0.47
22:BA:1379:U:O2	22:BA:1379:U:H2'	2.15	0.47
1:AA:10:A:OP2	5:AE:131:THR:OG1	2.24	0.47
22:BA:2553:G:H5''	22:BA:2554:U:OP2	2.15	0.47
22:BA:2043:C:OP1	22:BA:2777:G:O2'	2.23	0.47
52:B4:1:MET:HB3	52:B4:34:LYS:HB3	1.97	0.47
6:CF:16:GLU:C	6:CF:18:VAL:H	2.17	0.47
22:DA:2033:A:P	57:DA:3476:HOH:O	2.73	0.47
22:DA:195:A:C5	22:DA:198:C:C5	3.03	0.47
1:CA:1137:C:H1'	1:CA:1138:G:N2	2.29	0.47
21:CU:19:PHE:HA	21:CU:22:SER:HB3	1.96	0.47
22:BA:1078:U:H1'	22:BA:1088:A:N1	2.30	0.47
1:CA:1337:G:C5'	1:CA:1338:G:OP1	2.62	0.47
22:DA:2013:A:N1	22:DA:2014:A:N3	2.63	0.47
22:BA:1007:C:C4	22:BA:1008:A:C5	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1033:G:H3'	1:CA:1034:G:H5''	1.97	0.47
13:AM:86:TYR:HA	13:AM:89:LEU:HD12	1.97	0.47
1:CA:1492:A:H3'	1:CA:1493:A:C8	2.50	0.47
39:DR:29:THR:CG2	39:DR:29:THR:O	2.63	0.47
1:AA:616:G:C2	1:AA:617:G:C8	3.03	0.47
7:AG:134:ALA:O	7:AG:137:LYS:HB3	2.14	0.47
22:DA:404:A:H1'	22:DA:405:U:OP2	2.15	0.47
1:CA:1320:C:N3	19:CS:36:ARG:NH1	2.63	0.47
1:AA:1270:G:N3	1:AA:1271:A:C8	2.82	0.47
28:BG:9:VAL:CG1	28:BG:50:LEU:HB2	2.45	0.47
45:DX:71:LEU:HB2	45:DX:76:GLU:HB2	1.95	0.47
1:AA:49:U:O4	1:AA:365:U:C5	2.68	0.47
1:CA:1061:G:C2	1:CA:1197:A:C2	3.03	0.47
15:AO:24:SER:O	15:AO:25:THR:C	2.53	0.47
31:BJ:23:LYS:O	31:BJ:63:ALA:HB3	2.15	0.47
1:CA:340:U:C2	1:CA:350:G:N2	2.82	0.47
22:BA:2761:A:H1'	28:BG:143:GLN:NE2	2.29	0.47
22:DA:1468:U:H2'	22:DA:1522:A:N6	2.30	0.47
22:BA:2865:U:C4	22:BA:2866:U:C4	3.02	0.47
1:CA:1365:G:H2'	1:CA:1366:C:O4'	2.15	0.47
1:CA:198:G:O2'	1:CA:199:A:H5'	2.15	0.47
2:CB:33:GLY:HA2	2:CB:40:ILE:H	1.79	0.47
22:BA:1767:G:C2	22:BA:1768:C:C6	3.02	0.47
1:CA:50:A:H1'	1:CA:52:C:O4'	2.15	0.47
46:BY:18:LEU:O	46:BY:22:LEU:HB2	2.14	0.47
1:AA:1419:G:C6	1:AA:1420:U:C4	3.03	0.47
1:AA:790:A:C6	1:AA:791:G:C6	3.03	0.47
12:CL:40:THR:HG22	12:CL:41:THR:N	2.30	0.47
6:AF:41:ASP:O	6:AF:43:GLY:N	2.47	0.47
39:DR:66:HIS:CD2	39:DR:94:THR:CG2	2.97	0.47
1:AA:159:G:N1	1:AA:163:C:N4	2.62	0.47
26:BE:115:GLN:OE1	26:BE:115:GLN:HA	2.12	0.47
22:BA:2512:C:H2'	22:BA:2513:A:O4'	2.15	0.47
22:BA:2579:C:O2'	25:BD:136:ASN:HA	2.15	0.47
22:BA:1846:G:N1	22:BA:1847:A:C2	2.82	0.47
22:BA:988:A:P	47:BZ:12:SER:CB	3.03	0.47
22:BA:975:A:N1	22:BA:990:A:C8	2.82	0.47
22:DA:974:G:H1'	22:DA:975:A:C8	2.50	0.47
2:AB:33:GLY:HA3	2:AB:40:ILE:N	2.29	0.47
22:BA:1673:G:C2'	22:BA:1674:G:H5'	2.44	0.47
22:BA:1919:A:C2	22:BA:1920:C:O4'	2.68	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:859:G:C8	1:CA:869:G:N2	2.83	0.47
22:BA:2305:U:O2'	27:BF:133:ARG:CD	2.63	0.47
1:AA:1157:A:C5	1:AA:1180:A:C6	3.03	0.47
22:BA:2824:C:C4	22:BA:2825:G:C5	3.03	0.47
24:DC:160:THR:N	24:DC:195:VAL:HG13	2.30	0.47
22:DA:53:A:N7	22:DA:54:G:C8	2.82	0.47
11:AK:34:ILE:HB	11:AK:74:VAL:HG11	1.96	0.47
1:AA:1151:A:O2'	1:AA:1152:A:P	2.73	0.47
27:BF:43:ALA:HB1	27:BF:46:ASP:O	2.14	0.47
4:CD:148:LYS:O	4:CD:150:LYS:N	2.48	0.47
1:CA:512:U:H2'	1:CA:513:C:C6	2.50	0.47
1:CA:619:U:H3	4:CD:131:ASN:HB3	1.79	0.47
4:CD:134:SER:O	4:CD:135:TYR:C	2.53	0.47
51:B3:4:ILE:HG22	51:B3:5:LYS:N	2.29	0.47
26:BE:18:THR:HA	26:BE:106:LYS:HG2	1.96	0.47
22:DA:2843:G:C2	22:DA:2875:C:N3	2.82	0.47
16:CP:5:ARG:O	16:CP:19:VAL:HA	2.15	0.47
42:DU:34:VAL:O	42:DU:64:ALA:HA	2.14	0.47
1:AA:1314:C:H41	19:AS:4:SER:HA	1.80	0.47
45:DX:13:VAL:O	45:DX:13:VAL:HG23	2.14	0.47
22:BA:2675:A:C6	22:BA:2676:C:C4	3.02	0.47
33:DL:110:VAL:HG12	33:DL:131:ALA:HB1	1.97	0.47
3:AC:22:TRP:CB	3:AC:59:ARG:HG2	2.45	0.47
2:CB:72:THR:HG22	2:CB:73:LYS:N	2.29	0.47
4:CD:48:LEU:CD2	4:CD:53:VAL:N	2.77	0.47
29:BH:14:SER:O	29:BH:15:LEU:CB	2.61	0.47
38:DQ:47:TYR:CE2	38:DQ:51:ARG:CZ	2.98	0.47
3:AC:181:ASP:OD2	3:AC:204:LYS:HB2	2.13	0.47
22:DA:352:A:H2'	22:DA:353:C:C6	2.50	0.47
22:DA:207:A:C2	22:DA:208:C:H1'	2.50	0.47
22:DA:190:A:H2'	22:DA:191:A:O4'	2.15	0.47
1:CA:1184:G:C4	1:CA:1185:G:C8	3.01	0.47
22:DA:2282:G:C2	22:DA:2425:A:N6	2.83	0.47
20:CT:79:LEU:O	20:CT:82:GLN:HB2	2.15	0.47
22:BA:1101:U:H6	22:BA:1101:U:O5'	1.97	0.47
1:CA:289:G:N1	1:CA:290:C:C4	2.82	0.47
27:BF:2:ALA:O	27:BF:4:LEU:N	2.48	0.47
22:DA:228:C:N4	22:DA:417:C:O2	2.44	0.47
1:AA:19:A:C2	1:AA:917:G:C2	3.03	0.47
1:AA:390:U:H2'	1:AA:391:G:H8	1.79	0.47
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:125:U:C2'	1:AA:126:G:H5'	2.45	0.47
1:AA:127:G:N2	1:AA:235:C:C2	2.83	0.47
22:DA:1993:U:H4'	25:DD:133:THR:HG22	1.95	0.47
42:DU:83:VAL:HG12	42:DU:84:GLY:N	2.30	0.47
1:AA:251:G:H4'	1:AA:252:U:O5'	2.15	0.47
1:CA:905:U:C5	1:CA:906:A:N7	2.82	0.47
22:DA:1529:G:O6	22:DA:1543:G:C2	2.68	0.47
17:CQ:52:GLU:HG2	17:CQ:53:CYS:N	2.30	0.47
1:CA:158:G:C4	1:CA:159:G:C8	3.02	0.47
41:BT:87:LEU:O	41:BT:89:GLU:N	2.47	0.47
17:CQ:15:ASP:N	17:CQ:17:MET:HE1	2.30	0.47
9:CI:92:GLU:HG3	9:CI:95:ARG:NH1	2.30	0.47
22:BA:1356:G:C6	22:BA:1357:C:C4	3.02	0.47
21:CU:40:LYS:H	21:CU:41:PRO:CD	2.27	0.47
26:BE:12:LEU:CD1	26:BE:190:ALA:HB1	2.44	0.47
1:CA:1431:A:N6	1:CA:1432:G:O6	2.48	0.47
20:CT:62:ALA:HA	20:CT:68:HIS:N	2.30	0.47
22:BA:858:G:C4	22:BA:2268:A:C2	3.02	0.47
35:BN:79:LEU:HA	35:BN:83:LEU:HB2	1.95	0.47
1:CA:280:C:H4'	1:CA:281:G:OP2	2.15	0.47
21:AU:25:LYS:CD	21:AU:26:ALA:N	2.77	0.47
1:CA:1417:G:N2	1:CA:1484:C:C4	2.83	0.47
4:AD:35:GLU:O	4:AD:38:PRO:HD3	2.15	0.47
22:DA:2195:U:N3	22:DA:2196:C:C5	2.82	0.47
1:AA:270:A:H2'	1:AA:271:C:O4'	2.15	0.47
1:CA:135:C:O2	16:CP:1:MET:HB2	2.14	0.47
3:CC:50:ALA:HB1	3:CC:76:VAL:HG22	1.97	0.47
8:CH:89:LYS:HG3	8:CH:90:ASP:N	2.29	0.47
22:BA:2681:C:OP2	25:BD:114:LYS:CE	2.63	0.47
25:BD:158:GLY:O	25:BD:159:LYS:C	2.53	0.47
1:AA:858:G:C2'	1:AA:859:G:H5'	2.44	0.47
9:AI:9:THR:HG22	9:AI:10:GLY:N	2.28	0.47
33:DL:92:LEU:HD21	33:DL:124:GLY:HA3	1.96	0.47
22:BA:2880:C:C2	22:BA:2881:U:C5	3.03	0.47
6:AF:46:GLN:HB2	6:AF:56:LYS:HE2	1.96	0.47
8:CH:30:SER:O	8:CH:34:VAL:HG23	2.14	0.47
1:AA:1387:G:H2'	1:AA:1388:C:C6	2.49	0.47
43:DV:87:GLN:O	43:DV:88:HIS:HB2	2.14	0.47
3:CC:12:LEU:HD13	3:CC:18:TRP:CE2	2.49	0.47
22:BA:768:G:H2'	22:BA:769:U:O5'	2.15	0.47
1:AA:318:G:C2	1:AA:336:A:C2	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:94:A:H2'	23:DB:95:U:O4'	2.15	0.47
32:BK:77:ILE:CD1	32:BK:77:ILE:N	2.78	0.47
3:AC:8:ASN:OD1	3:AC:8:ASN:C	2.53	0.47
40:DS:39:THR:O	40:DS:39:THR:HG22	2.15	0.47
5:CE:15:LEU:C	5:CE:15:LEU:HD12	2.34	0.47
22:DA:1304:A:C6	22:DA:1305:C:C4	3.02	0.47
33:DL:105:ILE:CG2	33:DL:107:PHE:O	2.63	0.47
41:DT:11:LEU:HG	41:DT:46:ALA:HB1	1.97	0.47
2:CB:152:LYS:HG3	2:CB:153:ASP:N	2.30	0.47
22:DA:2729:G:H2'	22:DA:2730:C:O4'	2.15	0.47
22:DA:848:C:H2'	22:DA:849:A:H8	1.79	0.47
3:CC:150:LYS:HB3	3:CC:169:ARG:HG2	1.96	0.47
2:AB:128:LYS:O	2:AB:129:LEU:C	2.52	0.47
2:AB:128:LYS:O	2:AB:129:LEU:O	2.33	0.47
3:CC:111:LEU:N	3:CC:111:LEU:CD2	2.77	0.47
45:BX:43:GLU:O	45:BX:44:LYS:C	2.52	0.47
5:CE:155:ALA:HB3	5:CE:156:LYS:HE3	1.97	0.47
2:AB:24:ASN:OD1	2:AB:24:ASN:C	2.53	0.47
39:BR:39:LEU:HA	39:BR:49:ILE:CG2	2.44	0.47
22:DA:836:G:H2'	22:DA:837:C:C6	2.50	0.47
22:DA:1605:C:H2'	22:DA:1606:C:H5'	1.96	0.47
22:DA:46:G:N1	22:DA:47:C:C5	2.83	0.47
22:DA:46:G:N1	22:DA:47:C:C4	2.83	0.47
1:CA:1280:A:C8	10:CJ:42:LEU:HD23	2.49	0.47
30:BI:39:CYS:O	30:BI:43:ASN:HB2	2.15	0.47
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.50	0.47
53:B5:167:ASP:CB	53:B5:176:VAL:O	2.63	0.47
11:CK:16:VAL:O	11:CK:17:SER:CB	2.62	0.47
1:CA:407:U:O2	1:CA:408:A:C8	2.68	0.47
22:DA:1791:A:C8	22:DA:1792:G:C8	3.03	0.47
1:AA:16:A:O2'	1:AA:17:U:H5'	2.15	0.47
1:AA:922:G:H1'	5:AE:24:THR:HG22	1.97	0.47
25:BD:84:LEU:HD22	25:BD:88:GLU:CB	2.45	0.47
16:AP:6:LEU:HD13	16:AP:71:VAL:HG23	1.96	0.47
3:AC:16:LYS:HG3	3:AC:17:PRO:HD2	1.96	0.47
22:DA:806:C:O2'	22:DA:2445:G:H4'	2.15	0.47
46:DY:31:GLN:HG2	46:DY:37:LEU:HB2	1.97	0.47
42:BU:18:ASP:O	42:BU:19:LYS:C	2.52	0.47
22:DA:630:G:C3'	22:DA:631:A:H5''	2.45	0.47
23:DB:71:C:C2	23:DB:106:G:N2	2.83	0.47
1:AA:496:A:C2	1:AA:497:G:C6	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:822:U:H2'	1:CA:823:C:H6	1.79	0.47
1:AA:1521:C:C2	1:AA:1522:U:C5	3.03	0.47
39:BR:68:ARG:HD3	39:BR:92:TRP:CZ2	2.50	0.47
1:CA:339:C:O2	1:CA:351:G:N2	2.47	0.47
22:DA:2798:U:H4'	22:DA:2799:A:H5'	1.96	0.47
1:AA:1421:G:C2	1:AA:1422:G:C8	3.03	0.47
1:CA:439:U:H1'	4:CD:119:SER:O	2.14	0.47
1:AA:36:C:OP1	12:AL:120:LYS:HE3	2.15	0.47
32:BK:6:THR:HG22	32:BK:7:MET:N	2.30	0.47
41:DT:2:ILE:HA	41:DT:3:ARG:CB	2.45	0.47
12:AL:3:THR:HG22	12:AL:5:ASN:N	2.30	0.47
22:BA:1132:U:H4'	31:BJ:75:TYR:CE1	2.50	0.47
22:DA:2540:C:H2'	22:DA:2541:A:C8	2.50	0.47
2:AB:128:LYS:HG3	2:AB:129:LEU:N	2.30	0.47
1:CA:36:C:OP1	12:CL:120:LYS:HE3	2.15	0.47
40:BS:14:ALA:O	40:BS:15:GLN:C	2.53	0.47
1:AA:370:C:C2	1:AA:371:A:C8	3.03	0.47
22:BA:38:A:C2	22:BA:442:G:C2	3.03	0.47
22:BA:288:U:C2	22:BA:289:G:C8	3.02	0.47
14:AN:14:VAL:HA	14:AN:60:GLN:OE1	2.14	0.47
22:BA:2229:U:O2	45:BX:34:HIS:HE1	1.98	0.47
11:CK:46:THR:O	11:CK:50:SER:OG	2.33	0.47
22:DA:1462:C:N3	22:DA:1463:C:C5	2.83	0.47
1:AA:1414:U:H2'	1:AA:1415:G:C8	2.49	0.47
20:AT:35:VAL:HG22	20:AT:50:ALA:CB	2.44	0.47
22:DA:2596:U:C5	22:DA:2597:G:C5	3.03	0.47
37:BP:27:GLU:O	37:BP:27:GLU:HG2	2.15	0.47
1:CA:675:A:OP1	18:CR:74:HIS:CE1	2.67	0.47
2:AB:19:GLN:HG2	2:AB:190:ASN:OD1	2.14	0.47
22:DA:2053:G:H5'	25:DD:149:ASN:O	2.15	0.47
22:DA:818:G:C2'	22:DA:819:A:H5''	2.44	0.47
22:BA:2293:G:C4	22:BA:2294:G:C8	3.03	0.47
39:BR:37:GLU:HG2	39:BR:53:PHE:CD2	2.50	0.47
22:DA:607:U:H5	22:DA:619:G:C5	2.32	0.47
22:BA:1141:U:OP2	31:BJ:65:THR:CG2	2.63	0.47
1:AA:1118:U:C5'	9:AI:106:ARG:HG3	2.44	0.47
13:AM:45:ILE:O	13:AM:45:ILE:CG2	2.63	0.47
22:DA:672:C:N4	22:DA:673:C:N4	2.63	0.47
22:DA:669:G:N3	22:DA:669:G:C2'	2.78	0.47
1:AA:554:A:C5'	12:AL:26:ALA:HB1	2.44	0.47
3:AC:203:PHE:CE1	3:AC:205:GLY:O	2.67	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1050:A:C2	22:DA:2751:G:C4	3.03	0.47
22:BA:1002:G:N2	22:BA:1003:G:H1'	2.30	0.47
1:AA:559:A:C8	1:AA:561:U:C5	3.03	0.47
5:AE:108:GLY:O	5:AE:109:GLY:C	2.52	0.47
14:CN:24:ARG:HG2	14:CN:27:LEU:HD12	1.97	0.47
1:AA:922:G:N1	1:AA:923:A:C2	2.83	0.47
22:DA:1934:C:H4'	22:DA:1974:C:O3'	2.15	0.47
22:DA:749:A:C6	22:DA:750:A:N7	2.83	0.47
9:AI:84:THR:HG21	9:AI:103:PHE:HB3	1.96	0.47
30:BI:33:VAL:HG21	30:BI:59:ILE:HG23	1.95	0.47
20:CT:79:LEU:O	20:CT:83:ILE:HG23	2.15	0.47
22:DA:1178:C:H2'	22:DA:1179:G:N7	2.30	0.47
22:DA:2392:A:C8	22:DA:2429:G:C2	3.03	0.47
8:AH:93:PRO:HG3	8:AH:125:ILE:CD1	2.45	0.47
22:BA:2328:A:H2'	22:BA:2329:U:C6	2.50	0.47
8:AH:89:LYS:HG3	8:AH:90:ASP:H	1.80	0.47
22:DA:2821:A:OP2	25:DD:115:GLY:N	2.48	0.47
22:BA:876:C:H2'	22:BA:877:A:O4'	2.15	0.47
22:BA:181:A:H2'	22:BA:182:A:C8	2.50	0.47
32:DK:4:GLU:C	32:DK:5:GLN:HG2	2.35	0.47
1:CA:1521:C:C4	1:CA:1522:U:C4	3.03	0.47
1:AA:760:G:N7	1:AA:761:G:C8	2.83	0.47
22:DA:1422:G:N2	22:DA:1577:C:H1'	2.30	0.47
22:BA:683:U:C2	22:BA:684:G:C8	3.03	0.47
26:DE:97:ASN:HB2	26:DE:100:MET:SD	2.55	0.47
22:DA:2408:U:H2'	22:DA:2409:G:C8	2.50	0.47
22:DA:17:G:H4'	38:DQ:25:TYR:HE1	1.80	0.47
1:AA:1272:G:H2'	1:AA:1273:C:O4'	2.15	0.47
7:CG:35:LYS:HB2	7:CG:38:THR:HG22	1.97	0.47
22:DA:137:U:H2'	22:DA:140:C:C2	2.49	0.47
9:CI:87:LEU:C	9:CI:89:GLU:H	2.18	0.47
26:DE:195:GLN:O	26:DE:199:MET:HB2	2.15	0.47
22:DA:2000:C:O2'	22:DA:2688:G:H5''	2.14	0.47
26:DE:61:ARG:HD2	26:DE:63:LYS:O	2.15	0.47
22:DA:508:A:C3'	22:DA:509:C:H5'	2.45	0.47
22:DA:1255:U:C2'	22:DA:1256:G:OP1	2.63	0.47
22:DA:167:A:C2	22:DA:168:G:H1'	2.50	0.47
34:BM:12:MET:HE3	34:BM:71:LYS:HG3	1.95	0.47
22:BA:410:G:N2	22:BA:2407:A:C4	2.82	0.47
22:BA:538:A:O2'	31:BJ:8:PRO:HD2	2.15	0.47
38:BQ:82:GLY:O	38:BQ:84:LYS:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:729:G:H4'	22:BA:763:G:C5'	2.45	0.47
51:B3:25:LYS:HG2	51:B3:26:HIS:N	2.28	0.47
2:CB:45:LYS:HG3	2:CB:45:LYS:O	2.15	0.47
44:BW:49:ALA:O	44:BW:50:ASN:HB2	2.14	0.47
22:DA:588:U:H1'	26:DE:85:PHE:CD1	2.49	0.47
32:DK:35:VAL:HG22	32:DK:69:VAL:HG12	1.96	0.47
27:BF:8:TYR:HA	27:BF:12:VAL:CG2	2.45	0.47
15:AO:71:LYS:O	15:AO:75:VAL:HG13	2.14	0.47
1:CA:53:A:C2	1:CA:359:G:C2	3.03	0.47
22:BA:996:A:N6	22:BA:1160:G:C6	2.83	0.47
22:DA:1154:G:P	38:DQ:58:ARG:HH11	2.38	0.47
22:BA:1917:U:N3	22:BA:1918:A:C4	2.83	0.47
22:BA:1918:A:H4'	22:BA:1919:A:OP1	2.15	0.47
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.81	0.47
22:BA:1190:G:P	33:BL:32:GLY:HA2	2.55	0.47
24:BC:222:GLY:O	24:BC:224:ALA:N	2.48	0.47
22:DA:1603:A:OP2	22:DA:1604:C:OP2	2.33	0.47
4:CD:174:ASP:O	4:CD:175:ALA:HB2	2.14	0.47
15:CO:17:ARG:O	15:CO:18:ASP:CB	2.62	0.47
13:CM:5:ALA:HB2	13:CM:57:ARG:CG	2.45	0.47
22:DA:1060:U:O4'	22:DA:1062:G:C5'	2.61	0.47
22:DA:2389:G:H5''	22:DA:2390:U:H5'	1.97	0.47
1:CA:542:G:C4	1:CA:543:U:C5	3.03	0.47
1:AA:173:U:C6	1:AA:197:A:C2	3.03	0.47
42:DU:28:VAL:HB	42:DU:34:VAL:HG12	1.97	0.47
22:DA:1736:U:H2'	22:DA:1737:G:O4'	2.15	0.47
1:AA:451:A:C5'	16:AP:70:ARG:NH2	2.78	0.47
2:AB:58:ASN:HA	2:AB:61:ALA:HB3	1.97	0.47
22:BA:1853:A:N6	22:BA:1889:A:C4	2.83	0.47
22:DA:1364:G:C8	45:DX:2:SER:CA	2.98	0.47
13:CM:11:ASP:HA	13:CM:45:ILE:HD13	1.97	0.47
2:AB:95:ARG:HG2	2:AB:95:ARG:NH1	2.29	0.47
20:AT:5:LYS:O	20:AT:6:SER:C	2.52	0.47
22:DA:208:C:H2'	22:DA:209:C:C6	2.50	0.47
1:CA:1182:G:H4'	1:CA:1183:U:C5'	2.43	0.47
1:CA:866:C:C5	1:CA:867:G:C1'	2.98	0.47
30:BI:58:VAL:CG1	30:BI:59:ILE:N	2.78	0.47
22:DA:642:U:H5'	22:DA:2349:G:O3'	2.15	0.47
1:AA:391:G:C6	1:AA:392:C:C4	3.03	0.47
22:DA:2024:G:N2	22:DA:2040:G:H1'	2.29	0.47
13:CM:19:LEU:HB3	13:CM:30:SER:OG	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:55:SER:O	11:AK:56:ARG:C	2.53	0.47
1:CA:468:A:N3	1:CA:468:A:O4'	2.48	0.47
1:AA:988:G:N2	1:AA:1217:C:O2	2.48	0.47
8:CH:59:LEU:CD1	8:CH:60:GLU:N	2.78	0.47
1:CA:1138:G:C2	1:CA:1140:C:C5	3.03	0.47
1:AA:645:G:C6	1:AA:646:G:N7	2.83	0.47
1:CA:575:G:C6	1:CA:821:G:C5	3.03	0.47
7:AG:89:VAL:CG2	7:AG:90:GLU:N	2.77	0.47
22:DA:2800:A:C2	22:DA:2895:G:H1'	2.49	0.47
25:BD:139:SER:HA	25:BD:142:VAL:CG1	2.45	0.47
1:CA:938:A:O3'	7:CG:95:ARG:NH2	2.48	0.47
39:BR:11:GLN:O	39:BR:12:HIS:CD2	2.67	0.47
22:BA:2531:A:C6	22:BA:2532:G:C5	3.02	0.47
22:BA:2008:C:C2'	22:BA:2009:A:O5'	2.63	0.47
22:DA:300:A:HO2'	22:DA:318:C:HO2'	1.55	0.47
22:BA:142:A:C6	22:BA:143:C:N3	2.83	0.47
25:DD:121:THR:HG21	25:DD:143:PRO:HB3	1.96	0.47
22:BA:150:U:H2'	22:BA:151:C:C6	2.50	0.47
1:AA:791:G:N2	1:AA:1497:G:O3'	2.45	0.47
14:AN:11:VAL:O	14:AN:14:VAL:HG12	2.15	0.47
1:CA:1163:A:C2	1:CA:1174:G:C2	3.04	0.47
22:BA:1469:A:C2	22:BA:1470:A:C4	3.03	0.47
11:AK:83:GLU:HG3	11:AK:109:ASN:HB2	1.97	0.47
22:BA:668:A:C2'	22:BA:669:G:OP1	2.63	0.47
22:DA:2849:U:H4'	22:DA:2868:A:C2	2.50	0.47
22:DA:392:U:H2'	22:DA:393:C:C6	2.50	0.47
1:CA:994:A:N3	1:CA:994:A:H2'	2.30	0.47
2:CB:30:PHE:CD1	2:CB:30:PHE:N	2.82	0.47
1:AA:353:A:C2'	1:AA:354:G:OP2	2.63	0.47
22:DA:1029:A:N7	22:DA:1030:C:C2	2.83	0.47
7:AG:107:ALA:O	7:AG:110:LYS:N	2.48	0.47
12:CL:79:VAL:O	12:CL:103:ASP:HB2	2.15	0.47
1:CA:1385:G:C6	1:CA:1386:G:C5	3.03	0.46
22:DA:2058:A:C6	22:DA:2059:A:N6	2.83	0.46
22:BA:944:C:H2'	57:BA:3351:HOH:O	2.14	0.46
1:AA:409:U:H2'	1:AA:410:G:C8	2.50	0.46
22:BA:1935:G:C6	22:BA:1962:C:C5	3.03	0.46
22:BA:1915:U:O2'	22:BA:1916:A:H5'	2.15	0.46
1:CA:828:U:H2'	1:CA:829:G:O5'	2.15	0.46
22:BA:364:C:H2'	22:BA:365:U:C6	2.50	0.46
22:DA:249:C:P	22:DA:2394:C:HO2'	2.37	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:37:GLU:HB3	39:BR:53:PHE:CE1	2.50	0.46
22:DA:866:A:O4'	22:DA:914:G:C2	2.68	0.46
22:BA:1695:G:H8	24:BC:8:PRO:HB2	1.80	0.46
22:DA:822:G:C6	22:DA:836:G:C2	3.02	0.46
22:DA:53:A:C8	22:DA:54:G:N7	2.82	0.46
22:BA:1754:A:H2'	22:BA:1755:A:C8	2.50	0.46
22:DA:512:G:OP1	22:DA:1234:U:O2'	2.31	0.46
1:AA:1299:A:N3	1:AA:1299:A:C2'	2.76	0.46
30:BI:122:ILE:HG23	30:BI:125:MET:SD	2.55	0.46
22:BA:360:U:H3'	22:BA:361:G:C8	2.49	0.46
22:DA:2267:A:H5''	22:DA:2268:A:C5'	2.46	0.46
22:BA:2856:A:C6	22:BA:2857:G:C6	3.03	0.46
40:BS:55:ILE:HG23	40:BS:66:ILE:HG12	1.96	0.46
10:AJ:92:LEU:O	10:AJ:93:ALA:HB3	2.14	0.46
14:CN:15:ALA:O	14:CN:17:ALA:N	2.48	0.46
3:AC:22:TRP:CG	3:AC:59:ARG:HG2	2.49	0.46
22:DA:1366:A:C2	22:DA:1367:A:H1'	2.50	0.46
1:AA:1329:A:H2'	1:AA:1330:U:H5'	1.97	0.46
10:AJ:32:THR:OG1	10:AJ:33:GLY:N	2.48	0.46
22:BA:2020:A:H5'	48:B0:9:THR:CG2	2.46	0.46
33:DL:56:PRO:HD2	33:DL:59:ARG:HB2	1.97	0.46
1:AA:1478:U:H2'	1:AA:1479:C:C6	2.49	0.46
22:DA:1599:U:C4	22:DA:1600:C:C4	3.03	0.46
27:BF:158:THR:CG2	27:BF:160:ALA:H	2.27	0.46
3:CC:19:ASN:OD1	3:CC:54:ARG:NE	2.48	0.46
22:BA:1045:C:H3'	22:BA:1046:A:C5'	2.45	0.46
1:CA:158:G:C5	1:CA:159:G:N7	2.83	0.46
30:BI:115:ALA:O	30:BI:116:ASP:HB2	2.15	0.46
22:DA:1665:A:C6	22:DA:1666:G:C5	3.03	0.46
22:DA:1831:G:C2	22:DA:1975:G:C4	3.03	0.46
22:BA:2688:G:N7	22:BA:2719:G:C6	2.83	0.46
25:DD:62:LYS:HB2	25:DD:63:PRO:HD3	1.97	0.46
1:AA:842:U:O2	1:AA:842:U:H2'	2.15	0.46
28:BG:121:ILE:HD11	28:BG:140:VAL:HG12	1.97	0.46
22:DA:2339:C:H2'	22:DA:2340:A:C8	2.51	0.46
1:AA:671:G:H2'	1:AA:672:U:O4'	2.14	0.46
22:DA:323:C:H6	22:DA:1205:A:N1	2.13	0.46
22:DA:2772:C:H5'	25:DD:173:GLN:NE2	2.30	0.46
1:CA:1443:C:H2'	1:CA:1444:U:O4'	2.15	0.46
22:BA:281:C:H2'	22:BA:282:A:C8	2.50	0.46
19:CS:55:ARG:NE	19:CS:79:THR:CG2	2.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:190:HIS:ND1	3:AC:195:VAL:HG22	2.30	0.46
43:BV:10:LYS:HG2	43:BV:11:GLU:HG2	1.98	0.46
36:DO:51:ALA:HB3	36:DO:78:VAL:HG22	1.97	0.46
1:CA:923:A:H2'	1:CA:924:C:O4'	2.15	0.46
1:AA:781:A:C5	1:AA:802:A:C2	3.03	0.46
22:BA:1021:A:O2'	22:BA:1123:C:OP1	2.24	0.46
4:CD:107:PHE:CD1	4:CD:107:PHE:N	2.81	0.46
35:BN:3:HIS:O	35:BN:4:ARG:HB2	2.14	0.46
6:AF:42:TRP:HZ2	6:AF:61:LEU:HD22	1.80	0.46
22:BA:420:C:O2'	22:BA:421:C:H5'	2.16	0.46
44:BW:34:GLY:N	44:BW:61:ALA:O	2.37	0.46
22:DA:1370:C:H2'	22:DA:1371:G:C8	2.50	0.46
22:BA:1917:U:C4	22:BA:1918:A:C6	3.02	0.46
6:CF:86:ARG:HD3	18:CR:64:TYR:CE1	2.50	0.46
33:BL:29:LYS:O	33:BL:31:GLY:N	2.48	0.46
2:AB:132:LYS:CG	2:AB:133:GLU:N	2.78	0.46
22:BA:608:A:N6	22:BA:609:A:C6	2.83	0.46
22:DA:1607:C:O2	22:DA:1621:U:C6	2.68	0.46
22:DA:2505:G:OP2	55:DA:3001:VIF:H6	2.15	0.46
22:BA:255:A:H2'	22:BA:256:A:O4'	2.15	0.46
22:DA:933:A:H5'	22:DA:934:U:OP2	2.14	0.46
42:DU:5:ILE:HG22	42:DU:6:ARG:N	2.30	0.46
42:DU:7:ARG:CG	42:DU:8:ASP:N	2.78	0.46
22:BA:1794:A:C1'	22:BA:1900:A:C2	2.98	0.46
22:DA:783:A:C8	22:DA:784:G:H4'	2.50	0.46
1:CA:1244:G:C6	1:CA:1245:C:C4	3.04	0.46
21:AU:14:VAL:HG13	21:AU:16:LEU:CG	2.45	0.46
22:DA:1364:G:N3	22:DA:1368:G:C2	2.83	0.46
2:AB:111:ILE:HD11	2:AB:151:ILE:HG12	1.96	0.46
22:DA:789:A:N1	57:DA:3312:HOH:O	2.36	0.46
4:AD:19:LEU:HD13	4:AD:63:ARG:HB2	1.98	0.46
9:AI:51:PRO:HB3	9:AI:84:THR:HG23	1.97	0.46
22:DA:204:A:C8	22:DA:206:U:C2	3.03	0.46
1:AA:204:G:H1'	1:AA:465:A:C2	2.50	0.46
1:CA:624:C:H4'	16:CP:10:GLY:O	2.14	0.46
22:DA:2499:C:C4	22:DA:2500:U:C4	3.04	0.46
22:DA:1197:G:H2'	22:DA:1198:U:H6	1.78	0.46
46:DY:51:ALA:O	46:DY:55:THR:OG1	2.32	0.46
22:DA:1801:A:C4	22:DA:2203:U:C5	3.03	0.46
8:AH:113:ASP:O	8:AH:117:ARG:HB2	2.14	0.46
2:CB:187:VAL:HB	2:CB:191:SER:CB	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1195:G:O2'	22:BA:1196:C:H5'	2.15	0.46
3:CC:130:PHE:CD2	3:CC:157:LEU:HD23	2.49	0.46
1:CA:158:G:C5	1:CA:164:G:C6	3.04	0.46
16:AP:38:PHE:CE2	16:AP:51:ARG:HB2	2.50	0.46
31:DJ:39:LYS:NZ	31:DJ:44:TYR:CZ	2.84	0.46
22:DA:630:G:N2	22:DA:633:A:OP2	2.38	0.46
22:DA:2087:G:C2	22:DA:2233:U:O2	2.68	0.46
1:AA:1426:G:H2'	1:AA:1427:C:O4'	2.16	0.46
43:DV:42:LEU:HD12	43:DV:47:VAL:HG21	1.97	0.46
22:BA:1248:G:OP1	26:BE:44:ARG:NH1	2.48	0.46
2:AB:70:VAL:O	2:AB:70:VAL:HG12	2.15	0.46
22:BA:744:U:C4	22:BA:745:G:C5	3.03	0.46
1:AA:1253:G:N1	1:AA:1285:A:N6	2.62	0.46
1:AA:347:G:C2'	1:AA:348:G:O5'	2.63	0.46
22:DA:2528:U:O2'	22:DA:2529:G:H3'	2.14	0.46
22:BA:422:A:N1	22:BA:423:A:C2	2.83	0.46
19:AS:11:ILE:HG13	19:AS:38:SER:HB3	1.96	0.46
22:BA:1428:C:N4	22:BA:1570:A:OP2	2.37	0.46
35:BN:51:LEU:O	35:BN:54:LEU:HB3	2.15	0.46
22:DA:2784:U:C4	22:DA:2785:C:N4	2.83	0.46
1:CA:644:U:H2'	1:CA:645:G:O4'	2.15	0.46
22:BA:141:G:H3'	22:BA:142:A:C8	2.51	0.46
22:BA:597:G:C2	22:BA:661:A:C2	3.03	0.46
26:BE:115:GLN:HB3	26:BE:117:ARG:HD3	1.98	0.46
2:CB:71:GLY:HA3	2:CB:164:ILE:CG2	2.45	0.46
13:CM:74:SER:O	13:CM:78:LYS:HG3	2.16	0.46
1:CA:613:C:C2	1:CA:628:G:N2	2.83	0.46
22:BA:909:A:H2'	22:BA:912:C:C5	2.50	0.46
40:DS:14:ALA:HB1	40:DS:18:ARG:CZ	2.45	0.46
22:BA:1501:G:O2'	22:BA:1502:A:H5'	2.16	0.46
24:DC:254:GLY:O	24:DC:255:LYS:CB	2.62	0.46
22:BA:2421:G:H5''	22:BA:2422:C:OP2	2.15	0.46
26:BE:145:ASP:HB3	26:BE:184:ASP:OD2	2.15	0.46
37:DP:16:ASP:OD2	37:DP:16:ASP:N	2.48	0.46
15:AO:46:HIS:C	15:AO:48:LYS:H	2.18	0.46
7:AG:87:VAL:HG12	7:AG:87:VAL:O	2.14	0.46
7:CG:13:LEU:CD1	7:CG:14:PRO:HD2	2.46	0.46
22:DA:1766:G:C6	22:DA:1987:A:C6	3.03	0.46
32:DK:107:LEU:O	32:DK:109:SER:N	2.48	0.46
13:CM:37:ALA:CB	13:CM:56:LEU:HG	2.45	0.46
27:DF:15:LYS:O	27:DF:19:GLU:HG3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:73:VAL:HB	31:DJ:75:TYR:CE2	2.50	0.46
16:AP:7:ALA:O	16:AP:9:HIS:N	2.48	0.46
1:CA:37:U:O2'	1:CA:500:G:H4'	2.15	0.46
36:BO:56:LYS:O	36:BO:57:ALA:C	2.54	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:2055:C:H5'	22:BA:2056:G:H5''	1.95	0.46
29:DH:41:LYS:O	29:DH:44:ILE:HG12	2.15	0.46
11:AK:127:ARG:N	21:AU:34:ARG:NH2	2.63	0.46
14:AN:46:LEU:O	14:AN:47:LYS:C	2.52	0.46
22:BA:1063:G:C8	22:BA:1064:C:C6	3.03	0.46
22:DA:1331:G:O2'	22:DA:1332:G:H5'	2.16	0.46
51:B3:27:ALA:O	51:B3:28:ASN:CB	2.56	0.46
35:BN:66:ALA:O	35:BN:69:ARG:O	2.33	0.46
22:DA:1061:U:O2	22:DA:1061:U:H2'	2.15	0.46
30:DI:89:GLY:HA2	30:DI:136:MET:HE3	1.96	0.46
1:AA:1349:A:C2	1:AA:1374:A:C4	3.03	0.46
42:DU:34:VAL:HG13	42:DU:67:VAL:HG23	1.98	0.46
22:DA:699:A:H2'	22:DA:700:G:O4'	2.14	0.46
4:AD:167:LYS:HA	4:AD:168:PRO:HD3	1.75	0.46
40:BS:84:ARG:HB2	40:BS:96:ILE:HD11	1.97	0.46
1:AA:587:G:H4'	8:AH:4:GLN:HA	1.96	0.46
1:AA:824:G:H1'	8:AH:2:SER:HA	1.97	0.46
4:CD:48:LEU:CD2	4:CD:52:GLY:C	2.84	0.46
48:B0:10:ARG:HB2	48:B0:13:ARG:HH21	1.80	0.46
27:BF:36:LEU:HD21	27:BF:99:PHE:CE1	2.50	0.46
25:BD:39:ASP:CG	25:BD:40:LEU:N	2.68	0.46
51:B3:31:HIS:CD2	51:B3:31:HIS:C	2.88	0.46
20:CT:33:LYS:O	20:CT:36:TYR:CD2	2.69	0.46
1:CA:328:C:O2	1:CA:328:C:C2'	2.64	0.46
22:DA:235:U:C2	22:DA:236:C:C6	3.03	0.46
22:DA:2531:A:C4	22:DA:2532:G:C8	3.03	0.46
1:AA:223:A:C6	1:AA:224:U:C4	3.03	0.46
53:B5:48:LEU:HD12	53:B5:57:GLN:HG2	1.97	0.46
22:BA:2182:U:H2'	22:BA:2183:A:C8	2.49	0.46
22:BA:1429:G:H2'	22:BA:1430:G:H8	1.80	0.46
14:AN:82:ILE:O	14:AN:86:GLU:HG3	2.16	0.46
1:AA:737:C:C2	1:AA:738:C:C6	3.03	0.46
22:BA:488:G:C2	22:BA:493:G:O6	2.68	0.46
1:AA:518:C:H5''	1:AA:519:C:C6	2.50	0.46
10:AJ:17:LEU:HD23	10:AJ:17:LEU:C	2.35	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2619:C:O2'	22:BA:2620:C:H5'	2.14	0.46
1:CA:1053:G:C4'	1:CA:1054:C:H5'	2.45	0.46
22:BA:2697:G:C6	22:BA:2711:A:N1	2.84	0.46
26:DE:148:ILE:HG21	26:DE:157:LEU:HD21	1.98	0.46
24:BC:209:GLY:O	24:BC:212:ARG:HB2	2.16	0.46
31:BJ:23:LYS:CE	31:BJ:142:ILE:OXT	2.63	0.46
22:BA:38:A:H2'	22:BA:39:G:O4'	2.15	0.46
29:BH:37:VAL:CG2	29:BH:38:PRO:HD2	2.45	0.46
34:BM:7:THR:OG1	34:BM:9:PHE:O	2.25	0.46
20:AT:34:LYS:O	20:AT:37:ALA:HB3	2.15	0.46
22:BA:1366:A:C2	22:BA:1367:A:H1'	2.50	0.46
22:DA:600:G:C5	22:DA:601:C:C4	3.04	0.46
1:AA:397:A:N6	1:AA:548:G:C5	2.84	0.46
1:AA:585:G:OP1	17:AQ:39:LYS:HE3	2.15	0.46
1:AA:412:A:H4'	1:AA:413:G:OP1	2.14	0.46
22:DA:1835:G:N7	57:DA:3468:HOH:O	2.35	0.46
50:D2:34:ARG:HB2	50:D2:42:LEU:CD1	2.45	0.46
14:CN:44:ALA:HA	14:CN:47:LYS:HG3	1.98	0.46
22:DA:2057:G:H2'	22:DA:2058:A:O4'	2.15	0.46
22:BA:2498:C:C2'	22:BA:2499:C:H5'	2.46	0.46
22:BA:2500:U:O2	22:BA:2504:U:C4	2.68	0.46
22:BA:991:C:H5'	22:BA:1185:G:H2'	1.96	0.46
22:BA:1171:G:C6	22:BA:1172:C:N3	2.84	0.46
22:DA:972:A:N1	22:DA:973:A:N6	2.63	0.46
22:DA:454:A:H4'	22:DA:455:C:OP2	2.15	0.46
17:AQ:17:MET:HB2	17:AQ:20:SER:HB3	1.97	0.46
1:AA:1160:G:HO2'	1:AA:1161:C:P	2.38	0.46
24:DC:159:GLY:H	24:DC:195:VAL:HG22	1.81	0.46
22:BA:2821:A:OP2	25:BD:115:GLY:CA	2.64	0.46
22:DA:2063:C:H4'	55:DA:3001:VIF:H37	1.96	0.46
24:BC:17:VAL:N	24:BC:204:VAL:HG22	2.31	0.46
12:AL:23:ALA:O	12:AL:24:LEU:O	2.33	0.46
22:BA:1869:G:C3'	22:BA:1870:C:H5'	2.39	0.46
4:AD:29:ASP:C	4:AD:30:THR:O	2.47	0.46
46:BY:5:GLU:HG3	46:BY:56:LEU:CD1	2.45	0.46
22:DA:845:A:H5'	22:DA:846:U:OP2	2.15	0.46
1:CA:670:G:N2	1:CA:737:C:O2	2.49	0.46
22:DA:1364:G:N7	45:DX:2:SER:N	2.64	0.46
22:DA:750:A:H5''	22:DA:751:A:OP2	2.15	0.46
16:AP:72:ALA:HA	16:AP:75:ILE:CD1	2.45	0.46
1:AA:450:G:C8	1:AA:481:G:O6	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:147:G:H2'	1:AA:148:G:C8	2.50	0.46
22:DA:2250:G:H8	22:DA:2250:G:O5'	1.98	0.46
22:DA:2297:A:N1	22:DA:2321:U:H5	2.11	0.46
21:AU:25:LYS:O	21:AU:29:LEU:CB	2.63	0.46
7:CG:116:MET:HA	7:CG:119:ARG:HD3	1.97	0.46
11:CK:29:ASN:OD1	11:CK:47:ALA:HB3	2.15	0.46
19:AS:23:VAL:HG12	19:AS:24:GLU:N	2.31	0.46
43:BV:14:LYS:HD3	43:BV:18:ARG:NH1	2.30	0.46
24:DC:176:LEU:O	24:DC:179:GLY:N	2.45	0.46
4:CD:54:GLN:HG2	4:CD:203:LEU:HB2	1.97	0.46
30:DI:10:LYS:HB3	30:DI:56:PRO:HB2	1.96	0.46
23:BB:109:A:C6	23:BB:110:C:C4	3.03	0.46
48:B0:41:HIS:HA	48:B0:49:TYR:OH	2.16	0.46
22:BA:39:G:H2'	22:BA:40:U:C6	2.50	0.46
46:DY:17:GLU:OE1	46:DY:53:VAL:HB	2.15	0.46
22:DA:874:G:C2	22:DA:904:G:C2	3.03	0.46
1:AA:640:A:O3'	8:AH:108:LYS:NZ	2.48	0.46
7:CG:55:GLY:O	7:CG:56:LYS:O	2.33	0.46
28:DG:45:HIS:HA	28:DG:50:LEU:HD23	1.97	0.46
1:CA:128:G:C2	1:CA:234:C:C2	3.03	0.46
1:AA:1409:C:H2'	1:AA:1410:A:H8	1.79	0.46
22:DA:2862:G:N2	22:DA:2863:C:C2	2.83	0.46
23:DB:89:U:O4'	23:DB:89:U:O2	2.34	0.46
22:DA:1494:A:H2'	22:DA:1495:A:C8	2.50	0.46
22:DA:2516:A:O2'	22:DA:2517:C:H5'	2.16	0.46
1:CA:354:G:C2	1:CA:355:C:C6	3.03	0.46
38:BQ:58:ARG:HA	38:BQ:61:TRP:CE3	2.51	0.46
22:BA:747:U:C6	22:BA:2613:U:C5	3.03	0.46
2:AB:33:GLY:O	2:AB:34:ALA:CB	2.60	0.46
29:BH:83:LYS:HG3	1:CA:55:A:N3	2.31	0.46
1:CA:8:A:O4'	5:CE:107:ALA:C	2.54	0.46
14:AN:72:GLY:O	14:AN:80:SER:HA	2.15	0.46
33:BL:30:THR:O	33:BL:32:GLY:N	2.48	0.46
1:AA:1181:G:O2'	1:AA:1182:G:N7	2.48	0.46
24:BC:222:GLY:HA2	24:BC:225:MET:CE	2.43	0.46
14:AN:93:ILE:HG21	14:AN:96:LEU:HD22	1.98	0.46
22:BA:700:G:C6	22:BA:733:G:C2	3.03	0.46
1:CA:496:A:C2	1:CA:497:G:C5	3.03	0.46
40:BS:37:THR:CG2	40:BS:38:TYR:CD1	2.96	0.46
39:DR:102:SER:O	39:DR:103:ALA:O	2.34	0.46
1:AA:937:A:N1	7:AG:2:PRO:HG2	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:373:A:O2'	1:CA:374:A:H5'	2.15	0.46
1:AA:1124:G:H3'	1:AA:1145:A:N6	2.30	0.46
4:AD:98:LEU:O	4:AD:99:ASP:C	2.53	0.46
2:AB:63:ARG:O	2:AB:64:LYS:CB	2.62	0.46
2:AB:94:HIS:O	2:AB:95:ARG:C	2.53	0.46
27:BF:132:VAL:HG22	27:BF:152:LEU:HB3	1.98	0.46
22:DA:1662:U:O2'	22:DA:2687:U:H5''	2.16	0.46
22:DA:205:G:O2'	22:DA:206:U:P	2.73	0.46
24:BC:143:ASN:OD1	24:BC:143:ASN:O	2.34	0.46
22:DA:185:G:N1	22:DA:212:G:C2	2.84	0.46
29:DH:34:GLY:O	29:DH:35:LYS:CG	2.64	0.46
22:DA:1916:A:H2'	22:DA:1917:U:O4'	2.16	0.46
1:CA:136:C:H2'	1:CA:137:U:C6	2.50	0.46
24:BC:141:VAL:HG11	24:BC:190:ALA:HB1	1.97	0.46
1:CA:841:C:H2'	1:CA:843:U:O4'	2.15	0.46
18:CR:33:ILE:O	18:CR:33:ILE:HG12	2.14	0.46
22:DA:627:A:C6	22:DA:637:A:C8	3.03	0.46
1:CA:1521:C:N3	1:CA:1522:U:C5	2.83	0.46
4:AD:91:LEU:HD21	4:AD:195:ILE:CD1	2.46	0.46
42:BU:49:VAL:O	42:BU:49:VAL:HG13	2.15	0.46
34:DM:2:LEU:O	34:DM:3:GLN:CB	2.63	0.46
43:DV:51:GLN:HA	43:DV:56:PHE:CB	2.46	0.46
36:BO:7:ARG:HG3	36:BO:96:GLY:HA3	1.97	0.46
22:DA:1802:A:C6	22:DA:1803:A:C6	3.04	0.46
22:BA:1575:C:H2'	22:BA:1576:U:O5'	2.15	0.46
8:CH:43:GLU:OE1	8:CH:112:THR:HG21	2.15	0.46
22:DA:909:A:C6	22:DA:912:C:C2	3.03	0.46
20:CT:37:ALA:O	20:CT:40:GLU:HB3	2.15	0.46
22:DA:181:A:H1'	22:DA:435:C:O4'	2.15	0.46
22:BA:1113:U:H2'	22:BA:1114:C:C6	2.50	0.46
22:DA:2204:G:C2	22:DA:2205:A:C8	3.03	0.46
22:BA:2703:C:H2'	22:BA:2704:C:H6	1.80	0.46
2:CB:64:LYS:HD3	2:CB:64:LYS:C	2.36	0.46
22:BA:796:C:H2'	22:BA:797:G:C8	2.51	0.46
1:AA:605:U:O2'	1:AA:606:G:H5'	2.16	0.46
22:DA:1767:G:C2	22:DA:1986:C:C2	3.04	0.46
28:BG:38:ASN:O	28:BG:39:ASP:HB2	2.16	0.46
22:BA:2499:C:C4	22:BA:2500:U:C4	3.04	0.46
22:BA:988:A:C2'	22:BA:989:G:O5'	2.63	0.46
1:CA:484:G:N7	1:CA:486:U:H1'	2.31	0.46
22:DA:1309:G:H4'	50:D2:7:PRO:HB2	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:59:PRO:HD3	26:BE:71:GLY:O	2.16	0.46
22:DA:673:C:OP1	26:DE:76:PRO:HG3	2.15	0.46
22:DA:1019:U:O2'	22:DA:1021:A:N7	2.37	0.46
1:AA:1099:G:C5	1:AA:1100:C:C5	3.03	0.46
22:DA:1293:C:H2'	22:DA:1294:U:O5'	2.15	0.46
22:BA:2516:A:C6	22:BA:2517:C:C4	3.03	0.46
22:BA:2515:C:N3	22:BA:2570:G:C6	2.84	0.46
22:DA:1428:C:C5	22:DA:1569:A:C5'	2.98	0.46
1:CA:511:C:O2	1:CA:512:U:C6	2.69	0.46
5:AE:151:GLU:C	5:AE:153:VAL:H	2.19	0.46
22:DA:1097:U:H3'	22:DA:1098:A:O4'	2.16	0.46
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.50	0.46
10:CJ:65:TYR:HB3	14:CN:96:LEU:CD1	2.44	0.46
55:BA:3001:VIF:H7	55:BA:3001:VIF:H6	1.58	0.46
22:DA:1682:G:C2	22:DA:1757:A:C1'	2.98	0.46
4:CD:9:LEU:O	4:CD:10:LYS:C	2.54	0.46
33:DL:82:LEU:HD23	33:DL:82:LEU:C	2.35	0.46
40:BS:95:ARG:NE	40:BS:97:LEU:HD22	2.29	0.46
9:AI:11:ARG:HB2	9:AI:15:SER:O	2.15	0.46
27:BF:105:THR:CG2	27:BF:106:ILE:HG23	2.45	0.46
6:AF:49:TYR:CE2	6:AF:51:ILE:HG22	2.50	0.46
1:AA:207:C:H2'	1:AA:208:U:C2	2.49	0.46
22:DA:1027:A:C5	22:DA:1126:A:N3	2.84	0.46
9:CI:26:GLY:H	9:CI:59:GLU:HA	1.80	0.46
22:DA:1529:G:C6	22:DA:1543:G:C2	3.03	0.46
22:DA:364:C:H2'	22:DA:365:U:O4'	2.15	0.46
22:BA:1324:G:H1'	22:BA:1616:A:N6	2.31	0.46
8:AH:49:PHE:C	8:AH:49:PHE:CD1	2.89	0.46
28:BG:11:VAL:HG23	28:BG:11:VAL:O	2.16	0.46
22:DA:1831:G:C6	22:DA:1832:C:C4	3.03	0.46
22:BA:340:A:H2'	22:BA:341:C:C5'	2.46	0.46
27:DF:13:VAL:O	27:DF:17:MET:HG2	2.16	0.46
22:BA:1300:G:H4'	22:BA:1301:A:H5'	1.97	0.46
2:AB:69:PHE:N	2:AB:90:PHE:O	2.40	0.46
39:DR:19:THR:HA	39:DR:96:VAL:O	2.16	0.46
22:DA:2244:U:H2'	22:DA:2245:U:O4'	2.15	0.46
9:CI:46:MET:O	9:CI:49:ARG:HB3	2.16	0.46
22:DA:657:U:C2	22:DA:658:U:C5	3.03	0.46
22:DA:621:A:H2'	22:DA:622:G:O4'	2.16	0.46
22:DA:7:G:H2'	22:DA:8:C:O4'	2.15	0.46
27:DF:58:ALA:O	27:DF:61:SER:O	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:357:G:C2	1:AA:358:U:C5	3.04	0.46
1:CA:445:G:N1	1:CA:446:G:C5	2.84	0.46
22:DA:2113:U:C2	22:DA:2114:A:C8	3.03	0.46
3:CC:9:GLY:HA2	3:CC:12:LEU:HG	1.97	0.46
22:BA:280:U:H2'	22:BA:281:C:O4'	2.15	0.46
36:BO:64:TYR:HB3	36:BO:67:ASN:ND2	2.30	0.46
22:BA:1806:C:H2'	22:BA:1807:G:O5'	2.15	0.46
9:CI:10:GLY:HA2	9:CI:81:HIS:ND1	2.31	0.46
22:BA:910:A:C6	22:BA:911:A:C6	3.04	0.46
33:DL:96:LYS:HD3	33:DL:103:ILE:HA	1.98	0.46
25:BD:163:GLY:O	25:BD:164:GLN:C	2.53	0.46
42:DU:26:LYS:HG2	42:DU:37:GLU:HB3	1.98	0.46
9:AI:86:ALA:C	9:AI:88:MET:N	2.69	0.46
48:D0:10:ARG:HG2	48:D0:11:SER:N	2.30	0.46
37:DP:103:ARG:HB3	37:DP:108:ALA:HB2	1.98	0.46
24:DC:135:ILE:O	24:DC:167:ARG:NH2	2.49	0.46
2:AB:22:TYR:CD1	2:AB:22:TYR:N	2.84	0.46
1:CA:223:A:C6	1:CA:224:U:C4	3.03	0.46
22:DA:487:C:C2	22:DA:494:G:N2	2.83	0.46
29:BH:94:ILE:HG23	29:BH:98:ASP:HB2	1.98	0.46
31:BJ:77:HIS:HA	31:BJ:83:GLY:O	2.16	0.46
22:DA:2125:G:C5'	22:DA:2126:A:OP2	2.62	0.46
17:CQ:21:ILE:HB	17:CQ:48:ASP:OD1	2.16	0.46
39:BR:39:LEU:O	39:BR:49:ILE:HG23	2.15	0.46
22:BA:475:C:N3	22:BA:481:G:C6	2.84	0.46
22:BA:481:G:C2	22:BA:507:A:C4	3.04	0.46
1:CA:582:C:C2	1:CA:760:G:C6	3.04	0.46
1:AA:1100:C:O2'	1:AA:1102:A:OP1	2.30	0.46
23:DB:49:C:OP1	36:DO:101:GLY:HA3	2.16	0.46
22:BA:1605:C:H2'	22:BA:1606:C:H5'	1.97	0.46
22:BA:1747:U:H2'	22:BA:1748:C:C6	2.50	0.46
42:DU:7:ARG:HD2	42:DU:8:ASP:OD2	2.16	0.46
4:AD:122:ALA:O	4:AD:123:ILE:CG2	2.62	0.46
4:AD:168:PRO:CG	4:AD:171:LEU:HD11	2.43	0.46
5:AE:115:LEU:HG	5:AE:123:VAL:HG21	1.98	0.46
1:AA:1079:G:H2'	1:AA:1080:A:C8	2.51	0.46
2:AB:106:THR:O	2:AB:107:VAL:CG2	2.64	0.46
22:DA:749:A:C5	22:DA:750:A:C8	3.04	0.46
9:AI:58:VAL:O	9:AI:59:GLU:HG2	2.15	0.46
22:DA:206:U:H2'	22:DA:207:A:H8	1.80	0.46
1:AA:625:U:H4'	16:AP:16:PHE:CZ	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1649:G:C6	22:DA:2009:A:N6	2.84	0.46
39:BR:67:GLY:C	39:BR:93:PHE:CE2	2.89	0.46
3:CC:53:SER:O	3:CC:54:ARG:HB2	2.15	0.46
1:AA:235:C:H2'	1:AA:236:A:H8	1.80	0.46
15:CO:88:ARG:HG3	15:CO:88:ARG:O	2.15	0.46
22:DA:961:C:C2	22:DA:2031:A:C6	3.04	0.46
22:BA:1588:G:C2	22:BA:1589:U:C5	3.03	0.46
34:BM:36:VAL:CG1	34:BM:36:VAL:O	2.63	0.46
40:DS:70:LYS:O	40:DS:107:VAL:HG23	2.16	0.46
1:AA:1204:A:P	57:AA:1780:HOH:O	2.74	0.46
22:BA:1106:G:C2	22:BA:1107:G:N9	2.83	0.46
25:BD:177:VAL:HG22	25:BD:177:VAL:O	2.14	0.46
22:DA:2854:G:C2	22:DA:2864:G:C2	3.04	0.46
1:CA:1260:G:OP1	1:CA:1284:C:O2'	2.29	0.46
1:AA:1442:G:H2'	1:AA:1443:C:C6	2.51	0.46
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.50	0.46
23:DB:114:C:C2	23:DB:115:A:C8	3.04	0.46
22:DA:2377:A:O2'	22:DA:2378:A:H5'	2.15	0.46
12:CL:75:GLN:O	12:CL:76:GLU:C	2.53	0.46
35:BN:52:ILE:HG21	35:BN:94:TYR:CD2	2.51	0.46
1:CA:862:C:H2'	1:CA:863:U:C6	2.50	0.46
22:DA:1753:G:C2	22:DA:1756:G:C2	3.04	0.46
50:D2:10:LEU:HD11	50:D2:14:ARG:CZ	2.46	0.46
22:DA:2718:G:C6	22:DA:2719:G:C4	3.04	0.46
22:DA:1502:A:C2	22:DA:1503:A:C4	3.03	0.46
37:DP:28:VAL:HG12	37:DP:30:VAL:HG23	1.97	0.46
22:BA:2109:U:H2'	22:BA:2110:G:C8	2.51	0.46
22:BA:199:A:C8	22:BA:2433:A:N6	2.83	0.46
3:AC:42:TYR:CZ	3:AC:90:VAL:HG21	2.51	0.46
22:BA:1786:A:C4	22:BA:1938:A:C6	3.03	0.46
32:BK:14:SER:O	32:BK:52:VAL:HG22	2.16	0.46
48:D0:13:ARG:HD2	48:D0:17:ARG:NH2	2.30	0.46
1:AA:878:A:H2'	1:AA:879:C:O4'	2.16	0.46
22:DA:1288:G:C4	22:DA:1327:A:C2	3.04	0.46
22:BA:226:A:C6	22:BA:227:A:C6	3.04	0.46
29:DH:60:GLU:HA	29:DH:60:GLU:OE2	2.15	0.46
22:DA:2603:G:C6	22:DA:2604:U:C4	3.03	0.46
13:AM:91:HIS:HA	13:AM:109:ARG:NH2	2.30	0.46
1:CA:414:A:C2	1:CA:415:A:H1'	2.51	0.46
38:BQ:66:ASN:CG	38:BQ:76:TYR:HB2	2.36	0.46
39:DR:80:ARG:HB3	39:DR:81:LYS:HD3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:445:C:H2'	22:DA:446:G:C8	2.51	0.46
21:AU:40:LYS:N	21:AU:41:PRO:CD	2.79	0.46
6:CF:93:LYS:C	6:CF:94:HIS:CG	2.90	0.46
22:BA:1059:G:H5''	22:BA:1060:U:H3'	1.98	0.46
22:DA:2061:G:C8	22:DA:2501:C:H4'	2.50	0.46
24:BC:17:VAL:HB	24:BC:204:VAL:HG13	1.98	0.46
2:AB:161:LEU:HD12	2:AB:181:ILE:HG21	1.97	0.46
22:DA:1095:A:C6	22:DA:1096:A:C2	3.04	0.46
14:CN:53:ARG:C	14:CN:55:SER:H	2.19	0.46
1:AA:451:A:C2	1:AA:480:U:C4	3.03	0.46
14:CN:61:ARG:O	14:CN:62:ASN:CB	2.62	0.46
24:DC:210:ALA:HA	24:DC:213:TRP:NE1	2.29	0.46
1:CA:706:A:C6	1:CA:707:U:C4	3.04	0.46
1:CA:110:C:H2'	1:CA:111:G:O4'	2.16	0.46
5:AE:101:GLU:HB3	5:AE:122:ASN:HB3	1.97	0.46
10:AJ:8:ILE:HG13	10:AJ:74:VAL:HB	1.97	0.46
38:DQ:47:TYR:C	38:DQ:47:TYR:CD2	2.89	0.46
9:AI:43:THR:O	9:AI:44:ALA:HB3	2.16	0.46
1:CA:791:G:C5	1:CA:792:A:N7	2.84	0.46
1:AA:175:C:O2'	1:AA:176:C:H5'	2.15	0.46
1:CA:991:U:C4	1:CA:1212:U:C1'	2.99	0.46
1:CA:263:A:OP2	20:CT:74:ARG:NH1	2.49	0.46
38:BQ:21:ALA:HB1	38:BQ:24:TYR:CD1	2.51	0.46
1:CA:289:G:C2	1:CA:290:C:C6	3.03	0.46
22:BA:2743:U:OP1	52:B4:34:LYS:NZ	2.33	0.46
1:CA:563:A:N7	1:CA:567:G:H1'	2.31	0.46
53:B5:65:LEU:HD11	53:B5:191:ARG:CA	2.45	0.46
22:BA:229:C:C2'	22:BA:230:G:O5'	2.64	0.46
6:CF:18:VAL:O	6:CF:21:MET:HB2	2.16	0.46
22:BA:2340:A:H2'	22:BA:2341:G:C8	2.50	0.46
42:DU:74:ASN:ND2	42:DU:96:PHE:CD1	2.84	0.46
22:BA:584:C:N4	57:BA:3282:HOH:O	2.44	0.46
41:BT:87:LEU:O	41:BT:88:LYS:C	2.54	0.46
38:DQ:76:TYR:CE2	38:DQ:80:ILE:HG13	2.51	0.46
1:CA:899:C:O2'	22:DA:1832:C:OP1	2.22	0.46
22:BA:1199:U:H2'	22:BA:1200:C:C6	2.51	0.46
19:AS:64:ASP:O	19:AS:65:GLU:HB3	2.16	0.46
22:BA:2196:C:O2'	22:BA:2197:U:H5'	2.16	0.46
41:DT:62:VAL:CG1	41:DT:63:VAL:N	2.79	0.46
1:AA:1254:A:H2'	1:AA:1255:G:C8	2.51	0.46
7:CG:42:ILE:CG2	7:CG:42:ILE:O	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:734:A:C4	22:BA:735:A:C8	3.04	0.46
26:DE:170:ARG:HG3	26:DE:174:GLY:C	2.35	0.46
21:CU:14:VAL:HG12	21:CU:16:LEU:HG	1.97	0.46
11:AK:87:LYS:HA	11:AK:114:THR:HG22	1.97	0.46
1:AA:958:A:N3	1:AA:985:C:O2'	2.39	0.46
22:DA:1285:A:C6	22:DA:1329:U:C5	3.04	0.46
1:AA:1363:A:C4	1:AA:1365:G:C6	3.04	0.46
45:BX:68:LEU:HD13	45:BX:78:TYR:CE1	2.51	0.46
22:BA:2299:U:O2'	22:BA:2300:C:H5'	2.16	0.46
22:DA:2096:C:H2'	22:DA:2097:A:C8	2.51	0.46
18:AR:62:ALA:HB3	18:AR:68:LEU:HD12	1.97	0.46
25:DD:114:LYS:HE2	25:DD:196:ALA:HA	1.96	0.46
1:CA:1402:C:H2'	1:CA:1403:C:O4'	2.16	0.46
4:CD:62:ARG:HG3	4:CD:72:PHE:CD2	2.51	0.46
2:AB:33:GLY:HA3	2:AB:39:HIS:CB	2.46	0.46
22:DA:2004:G:C4	22:DA:2005:A:C8	3.04	0.46
22:DA:33:C:O2	22:DA:447:A:N6	2.49	0.46
1:AA:1406:U:C5	1:AA:1407:C:C4	3.03	0.46
30:BI:102:SER:HB3	30:BI:105:GLN:NE2	2.31	0.46
1:CA:35:G:C2	1:CA:550:G:C2	3.04	0.46
11:AK:74:VAL:C	11:AK:76:GLU:N	2.68	0.46
22:BA:1867:G:C2'	22:BA:1868:C:H5'	2.46	0.46
1:AA:1060:U:OP1	14:AN:85:ARG:NH2	2.47	0.46
22:DA:1351:C:O3'	22:DA:1571:A:O2'	2.30	0.46
22:BA:2839:G:C6	22:BA:2840:C:C4	3.03	0.46
7:AG:40:GLU:HA	7:AG:43:VAL:HG23	1.97	0.46
9:AI:30:ILE:HA	9:AI:65:ILE:O	2.14	0.46
53:B5:45:HIS:CD2	53:B5:176:VAL:HA	2.50	0.46
1:AA:69:G:H2'	1:AA:69:G:N3	2.31	0.46
22:DA:777:G:N3	22:DA:778:G:C8	2.84	0.46
24:DC:53:HIS:O	24:DC:217:ARG:N	2.35	0.46
1:AA:1525:G:OP1	11:AK:122:ARG:NH2	2.44	0.46
10:AJ:36:VAL:HG12	10:AJ:36:VAL:O	2.16	0.46
22:BA:1005:C:N3	22:BA:1143:A:C2	2.84	0.46
45:BX:11:ARG:HB2	45:BX:12:PRO:HD2	1.98	0.46
5:CE:38:VAL:CG1	5:CE:117:VAL:HG21	2.46	0.46
32:BK:118:LEU:O	32:BK:119:ALA:HB3	2.16	0.46
22:DA:589:U:H2'	22:DA:590:A:C8	2.51	0.46
1:AA:392:C:C2	1:AA:393:A:C8	3.04	0.46
22:DA:2834:G:H2'	22:DA:2879:A:H61	1.80	0.46
15:CO:45:GLU:HG2	15:CO:46:HIS:N	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:645:G:C2	1:AA:646:G:C8	3.04	0.46
3:AC:116:VAL:O	3:AC:119:SER:HB3	2.16	0.46
17:AQ:49:GLU:O	17:AQ:52:GLU:OE2	2.33	0.46
17:AQ:50:ASN:O	17:AQ:51:ASN:O	2.33	0.46
1:AA:1379:G:C6	1:AA:1380:U:C4	3.03	0.46
22:DA:2648:G:H2'	22:DA:2649:C:O4'	2.16	0.46
1:AA:581:G:C6	1:AA:758:C:C5	3.04	0.46
11:AK:81:ASN:HB3	11:AK:106:ARG:CG	2.45	0.46
22:DA:532:A:H2'	38:DQ:28:ARG:NH1	2.31	0.46
33:DL:94:THR:O	33:DL:98:ALA:N	2.48	0.46
26:DE:29:HIS:HA	26:DE:32:VAL:HG23	1.98	0.46
53:B5:24:ASP:HB2	53:B5:185:LYS:O	2.15	0.46
22:DA:2563:U:C2	22:DA:2566:A:N7	2.84	0.46
42:DU:82:ARG:O	42:DU:97:LYS:HG2	2.16	0.46
36:BO:7:ARG:HD2	36:BO:97:PHE:CE2	2.51	0.46
13:AM:77:ILE:HG22	13:AM:81:MET:CE	2.46	0.46
4:CD:62:ARG:CG	4:CD:72:PHE:CD2	2.99	0.46
25:BD:5:VAL:HG21	25:BD:80:TRP:CD2	2.51	0.46
8:AH:75:ILE:HD13	8:AH:129:VAL:HG22	1.97	0.46
1:AA:1016:A:N7	1:AA:1017:U:O2	2.49	0.46
8:AH:79:SER:HA	8:AH:85:ILE:HG12	1.98	0.46
3:AC:47:LEU:HB3	3:AC:50:ALA:HB3	1.97	0.46
1:AA:949:A:N1	1:AA:950:U:C2	2.84	0.46
45:DX:69:ALA:O	45:DX:72:ARG:HB3	2.16	0.46
22:DA:1269:A:C6	22:DA:1270:C:N4	2.83	0.46
22:BA:773:U:O2	22:BA:778:G:O2'	2.33	0.46
24:BC:97:LYS:HD2	24:BC:97:LYS:N	2.31	0.46
3:AC:10:ILE:O	3:AC:10:ILE:HG13	2.16	0.46
53:B5:84:ILE:HG22	53:B5:84:ILE:O	2.16	0.46
25:BD:68:PHE:CE1	25:BD:75:ALA:HA	2.51	0.46
22:BA:1696:G:C6	22:BA:1697:G:C4	3.04	0.46
29:BH:90:LEU:HD21	29:BH:93:SER:HA	1.97	0.46
25:DD:148:GLN:HB2	25:DD:152:PRO:HG2	1.98	0.46
33:DL:23:ILE:HD12	39:DR:84:ARG:NE	2.31	0.46
2:CB:141:LEU:O	2:CB:144:LEU:N	2.48	0.46
1:CA:485:U:O2	1:CA:485:U:O4'	2.32	0.46
22:DA:310:A:C6	22:DA:330:A:C6	3.03	0.46
1:AA:1160:G:O6	1:AA:1181:G:C6	2.69	0.46
22:BA:1722:A:C2	22:BA:1739:A:H1'	2.51	0.46
22:DA:1345:C:H5'	22:DA:1396:U:C5	2.51	0.46
1:CA:1151:A:C2	1:CA:1152:A:C5	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:98:GLN:O	36:DO:100:HIS:N	2.47	0.46
1:AA:1152:A:OP1	10:AJ:15:HIS:HB2	2.15	0.46
1:CA:545:C:O2'	1:CA:549:C:H5''	2.16	0.46
8:AH:99:LEU:N	8:AH:99:LEU:HD23	2.31	0.46
22:BA:253:C:OP2	51:B3:5:LYS:CE	2.61	0.46
1:AA:557:G:C6	1:AA:558:G:C6	3.04	0.46
1:AA:89:U:O2'	1:AA:90:C:H5'	2.16	0.46
22:DA:1829:A:O2'	24:DC:15:HIS:CD2	2.69	0.46
1:CA:1298:U:O2	1:CA:1298:U:C2'	2.62	0.46
22:BA:1422:G:C5	22:BA:1423:G:N7	2.84	0.46
30:BI:65:ARG:HG3	30:BI:66:SER:N	2.30	0.46
22:BA:1139:G:N2	22:BA:1140:C:C2	2.84	0.46
1:AA:532:A:N7	3:AC:193:TYR:HB3	2.31	0.46
1:AA:213:G:N7	1:AA:214:C:C4	2.84	0.46
1:CA:623:C:C4	1:CA:624:C:C5	3.03	0.46
22:DA:184:C:H2'	22:DA:185:G:C8	2.50	0.46
1:CA:570:G:N3	1:CA:571:U:C5	2.84	0.46
4:CD:29:ASP:C	4:CD:31:LYS:N	2.70	0.46
1:CA:158:G:C6	1:CA:164:G:C6	3.04	0.46
22:DA:279:A:N6	22:DA:361:G:C2'	2.79	0.46
22:DA:2585:U:O2'	22:DA:2586:U:C5'	2.64	0.46
1:CA:137:U:H1'	1:CA:227:G:N2	2.30	0.46
22:BA:2181:U:H2'	22:BA:2182:U:O4'	2.16	0.46
1:CA:457:G:N2	1:CA:476:U:C2	2.84	0.46
11:CK:58:SER:O	11:CK:91:PRO:HG3	2.16	0.46
1:AA:181:A:N6	1:AA:195:A:C8	2.84	0.46
32:DK:6:THR:O	32:DK:8:LEU:HD12	2.15	0.46
2:CB:15:HIS:ND1	2:CB:15:HIS:O	2.49	0.46
43:DV:7:GLU:HB2	43:DV:41:GLU:OE2	2.16	0.46
8:CH:95:VAL:HG21	8:CH:128:TYR:HB3	1.98	0.46
45:BX:18:ARG:CZ	45:BX:24:ALA:HB2	2.45	0.46
49:B1:48:ILE:N	49:B1:48:ILE:HD12	2.32	0.46
22:BA:1268:A:H2'	22:BA:1269:A:O4'	2.16	0.46
30:DI:61:VAL:HG22	30:DI:67:PHE:HB3	1.98	0.46
22:DA:734:A:N7	22:DA:735:A:N7	2.63	0.46
1:CA:1491:G:C6	1:CA:1492:A:C6	3.03	0.46
25:BD:104:VAL:HG23	25:BD:177:VAL:HG11	1.97	0.46
49:D1:15:ALA:C	49:D1:17:THR:H	2.19	0.46
7:CG:116:MET:O	7:CG:120:LEU:HB2	2.16	0.46
22:DA:2824:C:N4	22:DA:2825:G:C5	2.84	0.46
1:CA:1053:G:O5'	1:CA:1054:C:H3'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:79:ARG:O	13:CM:83:LEU:HD23	2.16	0.46
22:DA:1437:C:N4	22:DA:1438:U:O4	2.49	0.46
1:AA:1302:C:C5	13:AM:17:ILE:HD13	2.51	0.46
32:BK:19:VAL:HG21	32:BK:84:CYS:SG	2.55	0.46
1:AA:1069:C:H4'	1:AA:1192:C:O2	2.16	0.46
1:AA:41:G:H2'	1:AA:42:G:H8	1.81	0.46
1:AA:1387:G:H2'	1:AA:1388:C:H6	1.81	0.46
22:DA:2516:A:C6	22:DA:2517:C:N4	2.84	0.46
48:D0:13:ARG:HG2	48:D0:17:ARG:NE	2.31	0.46
22:DA:86:G:C2	22:DA:87:U:C5	3.04	0.46
1:AA:29:U:C2'	1:AA:30:U:H5'	2.46	0.46
1:CA:1426:G:H2'	1:CA:1427:C:O4'	2.16	0.46
31:DJ:74:TYR:CD1	31:DJ:92:MET:HG3	2.50	0.46
41:BT:17:SER:O	41:BT:18:GLU:C	2.54	0.46
24:DC:232:HIS:NE2	24:DC:244:PRO:HA	2.31	0.46
22:BA:2232:C:C4	22:BA:2233:U:C4	3.04	0.46
50:B2:3:ARG:O	50:B2:6:GLN:NE2	2.43	0.46
1:CA:853:C:C4	1:CA:854:U:C5	3.04	0.46
22:BA:1174:U:O2	22:BA:1174:U:O4'	2.32	0.46
8:CH:49:PHE:CD1	8:CH:49:PHE:C	2.87	0.46
1:AA:522:C:N4	1:AA:523:A:C6	2.84	0.46
26:DE:171:ASP:CG	26:DE:172:ALA:N	2.69	0.46
15:AO:63:ARG:HG3	15:AO:67:LEU:HD12	1.97	0.46
29:BH:90:LEU:HD23	29:BH:93:SER:HA	1.97	0.45
29:BH:94:ILE:HG23	29:BH:98:ASP:CB	2.47	0.45
29:BH:91:PHE:HB3	1:CA:55:A:C4	2.49	0.45
22:BA:1964:G:C2	22:BA:1967:C:C5	3.03	0.45
11:AK:125:LYS:O	21:AU:34:ARG:NE	2.44	0.45
1:CA:485:U:O2	1:CA:485:U:C5'	2.65	0.45
17:CQ:70:THR:HG22	17:CQ:71:LYS:H	1.82	0.45
50:D2:31:LEU:HD21	50:D2:43:THR:CG2	2.46	0.45
33:BL:19:LEU:HD22	33:BL:31:GLY:O	2.16	0.45
17:AQ:21:ILE:HB	17:AQ:48:ASP:OD2	2.16	0.45
1:AA:1180:A:H5''	1:AA:1181:G:OP2	2.16	0.45
22:BA:2211:A:C2'	22:BA:2212:A:OP1	2.64	0.45
13:AM:48:LEU:HD23	13:AM:52:GLN:HB2	1.98	0.45
22:DA:1953:A:N1	22:DA:2550:G:H5'	2.31	0.45
1:CA:1095:U:P	57:CA:1852:HOH:O	2.73	0.45
22:DA:2199:A:O4'	29:DH:28:ASN:ND2	2.49	0.45
24:BC:204:VAL:O	24:BC:205:LEU:CB	2.57	0.45
1:CA:1150:A:H1'	1:CA:1280:A:N6	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1061:G:H5''	1:AA:1062:U:OP2	2.16	0.45
45:DX:39:TRP:HB2	45:DX:46:PHE:CE2	2.51	0.45
1:AA:451:A:C5'	16:AP:70:ARG:HH22	2.29	0.45
1:AA:1319:A:C5	1:AA:1323:G:C4	3.05	0.45
33:DL:77:ILE:HD13	33:DL:108:ALA:HB1	1.98	0.45
37:BP:23:GLY:O	37:BP:90:GLY:HA3	2.16	0.45
22:BA:847:U:C2'	22:BA:848:C:H5'	2.47	0.45
13:CM:10:PRO:O	13:CM:11:ASP:HB2	2.14	0.45
22:DA:751:A:C6	22:DA:789:A:C6	3.04	0.45
1:CA:790:A:C5	1:CA:791:G:C5	3.04	0.45
22:DA:188:G:O6	22:DA:189:G:C2	2.69	0.45
1:AA:174:A:C6	1:AA:175:C:C4	3.04	0.45
31:DJ:30:THR:HG22	31:DJ:31:GLU:N	2.30	0.45
2:CB:135:LEU:C	2:CB:137:ARG:H	2.19	0.45
10:AJ:10:LEU:HG	10:AJ:98:VAL:HG12	1.98	0.45
12:CL:88:LYS:O	12:CL:88:LYS:HG3	2.16	0.45
25:BD:101:PHE:HE2	25:BD:203:VAL:HG12	1.81	0.45
25:BD:4:LEU:HD21	25:BD:100:LEU:HD23	1.96	0.45
1:CA:577:G:C8	1:CA:816:A:C2	3.03	0.45
22:DA:1675:C:N3	25:DD:133:THR:HG21	2.31	0.45
3:CC:153:VAL:CG2	3:CC:157:LEU:HD21	2.46	0.45
22:DA:219:A:N6	22:DA:220:G:N1	2.63	0.45
1:CA:137:U:O2	1:CA:227:G:C2	2.69	0.45
22:DA:2468:A:N3	22:DA:2481:G:C2	2.84	0.45
41:DT:69:ARG:HA	41:DT:74:ILE:HG22	1.98	0.45
1:CA:666:G:C2	1:CA:667:G:C8	3.03	0.45
1:AA:495:A:C2	1:AA:496:A:C6	3.05	0.45
22:DA:2615:U:H2'	22:DA:2615:U:O2	2.16	0.45
22:BA:1536:C:H4'	22:BA:1537:G:C5'	2.45	0.45
22:DA:1944:U:C2	22:DA:1955:U:O4'	2.70	0.45
22:DA:627:A:OP1	33:DL:78:ARG:NH1	2.44	0.45
3:CC:186:THR:HG22	3:CC:187:SER:N	2.31	0.45
20:AT:54:MET:O	20:AT:57:ILE:HG22	2.17	0.45
22:DA:2100:G:C6	22:DA:2190:G:C5	3.05	0.45
24:DC:66:ASP:OD2	24:DC:102:ARG:HD3	2.15	0.45
22:DA:1679:A:N6	57:DA:3439:HOH:O	2.49	0.45
22:DA:2466:C:OP1	52:D4:4:ARG:CB	2.64	0.45
22:DA:2506:U:C2'	22:DA:2506:U:O2	2.64	0.45
26:BE:119:ILE:O	26:BE:187:VAL:HA	2.16	0.45
22:BA:184:C:H2'	22:BA:185:G:C8	2.50	0.45
22:BA:1767:G:O2'	22:BA:1768:C:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:288:U:N3	22:BA:289:G:N7	2.65	0.45
22:DA:600:G:C5'	26:DE:27:LEU:HD22	2.45	0.45
23:BB:14:U:O2	23:BB:107:G:H4'	2.16	0.45
14:AN:16:LEU:N	14:AN:16:LEU:HD23	2.31	0.45
28:DG:94:TYR:CD2	28:DG:107:LEU:HA	2.50	0.45
1:AA:866:C:H2'	1:AA:867:G:O4'	2.16	0.45
22:DA:871:U:C2	22:DA:907:G:C6	3.04	0.45
22:BA:852:U:H2'	22:BA:853:C:C6	2.51	0.45
23:BB:59:A:H2'	23:BB:60:C:O4'	2.16	0.45
14:CN:10:GLU:O	14:CN:11:VAL:C	2.54	0.45
10:CJ:28:THR:HG22	10:CJ:28:THR:O	2.16	0.45
1:AA:83:C:H4'	1:AA:83:C:OP1	2.16	0.45
22:DA:2765:A:H3'	22:DA:2765:A:N3	2.32	0.45
22:BA:979:A:H2'	22:BA:982:C:H42	1.81	0.45
29:BH:79:THR:HG23	29:BH:147:VAL:HB	1.98	0.45
22:BA:2446:G:C2	22:BA:2501:C:C5	3.04	0.45
22:BA:842:U:N3	22:BA:843:G:C8	2.84	0.45
5:CE:149:SER:HB2	5:CE:152:MET:HG2	1.97	0.45
22:BA:1179:G:C8	22:BA:1180:U:O4'	2.69	0.45
22:BA:1676:A:H2'	22:BA:1677:A:O4'	2.16	0.45
29:DH:83:LYS:HG3	29:DH:149:GLU:HG3	1.94	0.45
22:BA:1912:A:N1	22:BA:1919:A:N9	2.64	0.45
2:CB:140:GLU:O	2:CB:141:LEU:C	2.54	0.45
22:BA:272:A:H2'	22:BA:273:G:O4'	2.16	0.45
1:CA:413:G:O2'	1:CA:428:G:N2	2.49	0.45
22:BA:1069:A:N1	22:BA:1073:A:N6	2.64	0.45
22:BA:1482:G:H1'	22:BA:1509:A:H61	1.82	0.45
11:AK:19:GLY:O	11:AK:82:LEU:HA	2.17	0.45
22:BA:2715:C:C4	22:BA:2716:C:C5	3.05	0.45
22:DA:2209:G:N2	22:DA:2216:G:C2	2.85	0.45
20:AT:71:LYS:HD2	20:AT:74:ARG:HH21	1.82	0.45
1:CA:542:G:N3	1:CA:543:U:C5	2.83	0.45
22:BA:2061:G:H5''	22:BA:2503:A:C2	2.51	0.45
17:CQ:8:LEU:HD23	17:CQ:25:ILE:HD12	1.98	0.45
22:DA:729:G:C6	24:DC:207:LYS:HB2	2.51	0.45
1:CA:682:G:N2	1:CA:709:U:C2	2.84	0.45
5:AE:84:PRO:HB3	5:AE:97:GLN:HG2	1.98	0.45
5:AE:24:THR:HA	5:AE:29:ARG:HA	1.98	0.45
14:AN:75:ARG:O	14:AN:76:LYS:C	2.55	0.45
28:DG:61:GLY:O	28:DG:64:GLN:HB2	2.16	0.45
22:BA:848:C:H2'	22:BA:849:A:H8	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:190:ASP:O	4:AD:191:LEU:HG	2.16	0.45
27:BF:106:ILE:C	27:BF:109:PRO:HD2	2.37	0.45
23:BB:24:G:N2	23:BB:28:C:O2	2.49	0.45
37:BP:31:TRP:CE2	37:BP:40:LEU:CD1	2.97	0.45
22:DA:1333:G:C2	22:DA:1334:G:C8	3.04	0.45
20:CT:36:TYR:CD1	20:CT:36:TYR:C	2.90	0.45
22:BA:1688:U:C4	22:BA:1698:A:C2	3.04	0.45
20:AT:44:LYS:HB3	20:AT:87:ALA:HB1	1.97	0.45
22:DA:1855:U:C4	22:DA:1856:U:C4	3.05	0.45
22:DA:966:G:H4'	22:DA:2272:U:O2	2.15	0.45
30:DI:46:THR:HG22	30:DI:51:LYS:HG3	1.99	0.45
22:BA:309:A:O3'	42:BU:16:GLY:HA2	2.17	0.45
8:AH:49:PHE:HB3	8:AH:61:LEU:CD2	2.46	0.45
22:DA:1225:G:C6	22:DA:1226:A:N6	2.84	0.45
22:BA:1406:U:H2'	22:BA:1407:G:H8	1.80	0.45
1:AA:194:C:O2'	1:AA:195:A:H5'	2.16	0.45
27:DF:9:LYS:O	27:DF:13:VAL:CG2	2.64	0.45
22:BA:545:U:H1'	22:BA:548:G:OP2	2.16	0.45
1:CA:1480:A:H2'	1:CA:1481:U:O4'	2.16	0.45
26:DE:149:ILE:CG1	26:DE:188:MET:HE3	2.47	0.45
22:BA:1246:A:C2'	22:BA:1247:A:O5'	2.64	0.45
22:BA:1104:C:H2'	22:BA:1105:U:C6	2.51	0.45
22:BA:2480:C:H2'	22:BA:2481:G:H5'	1.97	0.45
1:AA:900:A:C6	1:AA:901:A:N1	2.85	0.45
25:BD:186:LEU:HD13	37:BP:8:LEU:HD11	1.98	0.45
26:DE:24:ASN:O	26:DE:28:VAL:HG23	2.16	0.45
22:DA:1760:C:H2'	22:DA:1761:C:O4'	2.15	0.45
22:BA:1489:C:C2	22:BA:1501:G:C2	3.04	0.45
31:DJ:88:THR:O	31:DJ:92:MET:N	2.45	0.45
8:CH:24:ALA:O	8:CH:25:VAL:HG23	2.17	0.45
22:DA:969:G:H2'	22:DA:970:U:C6	2.51	0.45
26:BE:48:THR:C	26:BE:50:ALA:H	2.19	0.45
53:B5:75:VAL:HA	53:B5:120:VAL:O	2.16	0.45
4:AD:60:LYS:NZ	4:AD:194:ASP:O	2.46	0.45
14:AN:36:ALA:HB2	14:AN:41:ARG:HE	1.81	0.45
30:DI:45:LYS:HA	30:DI:48:SER:HB3	1.99	0.45
26:BE:25:GLU:O	26:BE:28:VAL:N	2.49	0.45
22:DA:1731:G:C5	22:DA:1733:G:C8	3.04	0.45
29:DH:86:ASP:C	29:DH:88:GLY:H	2.19	0.45
13:CM:34:LEU:HD23	13:CM:34:LEU:N	2.31	0.45
22:BA:2170:A:OP2	22:BA:2170:A:C8	2.68	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:197:ASN:OD1	24:BC:197:ASN:C	2.54	0.45
16:CP:12:LYS:O	16:CP:13:LYS:HB2	2.16	0.45
9:AI:39:PHE:HA	9:AI:42:GLU:OE1	2.16	0.45
22:BA:2551:C:H2'	22:BA:2552:U:C6	2.51	0.45
22:BA:1344:U:O2'	22:BA:1345:C:P	2.75	0.45
1:CA:1387:G:C4	1:CA:1388:C:C5	3.04	0.45
22:BA:974:G:C4	22:BA:1186:G:C2	3.04	0.45
22:DA:370:G:C6	22:DA:424:G:C5	3.03	0.45
22:DA:2127:G:N3	22:DA:2162:G:N7	2.64	0.45
33:BL:28:GLY:O	39:BR:82:HIS:CE1	2.70	0.45
22:BA:2298:A:C5	22:BA:2321:U:C5	3.03	0.45
13:AM:3:ARG:HA	13:AM:9:ILE:HG12	1.98	0.45
15:CO:18:ASP:CG	15:CO:19:ALA:O	2.54	0.45
35:BN:65:LEU:O	35:BN:65:LEU:HD12	2.16	0.45
1:CA:211:G:H21	1:CA:212:G:H1'	1.81	0.45
22:BA:2192:U:N3	22:BA:2193:G:N7	2.64	0.45
1:CA:64:G:C2	1:CA:67:C:N4	2.84	0.45
2:CB:47:VAL:O	2:CB:50:PHE:CD2	2.70	0.45
7:AG:146:GLU:HA	7:AG:149:LYS:HB3	1.99	0.45
23:BB:97:C:C5	23:BB:98:G:C8	3.04	0.45
22:DA:1045:C:H4'	22:DA:1046:A:H5'	1.98	0.45
39:DR:76:LYS:HB2	39:DR:85:LYS:HB2	1.97	0.45
1:CA:407:U:C2	1:CA:408:A:N7	2.85	0.45
1:CA:718:A:H1'	11:CK:118:HIS:HA	1.98	0.45
40:DS:89:ALA:O	40:DS:90:LYS:HB2	2.15	0.45
16:AP:75:ILE:HG22	16:AP:80:LYS:HE2	1.99	0.45
22:DA:352:A:C5	22:DA:353:C:C4	3.04	0.45
22:DA:189:G:P	45:DX:26:LYS:HE2	2.56	0.45
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.52	0.45
1:AA:389:A:N3	1:AA:389:A:H2'	2.31	0.45
1:CA:913:A:H4'	1:CA:914:A:OP1	2.17	0.45
22:DA:60:G:C4	22:DA:74:A:C2	3.04	0.45
22:BA:1680:U:O2'	22:BA:1681:G:H5'	2.16	0.45
1:AA:1216:A:H2'	1:AA:1217:C:C6	2.51	0.45
9:CI:99:ARG:HA	9:CI:104:VAL:CG2	2.46	0.45
53:B5:174:ALA:O	53:B5:175:PRO:CB	2.65	0.45
22:DA:78:U:H2'	22:DA:79:C:O4'	2.16	0.45
22:BA:2507:C:OP2	57:BA:3714:HOH:O	2.21	0.45
12:AL:88:LYS:O	12:AL:89:ASP:HB2	2.16	0.45
1:AA:911:U:OP2	12:AL:94:ARG:NH1	2.49	0.45
22:DA:242:G:C5'	51:D3:64:TYR:CZ	2.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:573:A:C2	1:CA:574:A:C2	3.04	0.45
22:BA:2013:A:N3	22:BA:2013:A:H2'	2.32	0.45
7:AG:116:MET:O	7:AG:120:LEU:HB2	2.17	0.45
1:AA:1066:C:O2	1:AA:1066:C:C2'	2.64	0.45
1:AA:828:U:H2'	1:AA:829:G:O5'	2.16	0.45
22:BA:684:G:C6	22:BA:774:G:C4	3.03	0.45
22:DA:715:A:C6	22:DA:716:A:C5	3.04	0.45
1:CA:106:C:H2'	1:CA:107:G:H5'	1.98	0.45
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.52	0.45
1:AA:1296:C:H4'	1:AA:1302:C:N4	2.32	0.45
22:DA:1452:G:C6	22:DA:2702:G:N2	2.84	0.45
1:CA:652:U:C5	1:CA:752:G:N3	2.84	0.45
8:AH:105:SER:HB2	8:AH:126:ILE:HD11	1.99	0.45
8:AH:83:LEU:C	8:AH:83:LEU:CD2	2.85	0.45
22:BA:1802:A:N1	22:BA:1822:C:H1'	2.31	0.45
44:BW:69:PHE:CE1	44:BW:80:ILE:HD11	2.51	0.45
22:BA:1826:G:C5	22:BA:1827:U:C5	3.04	0.45
1:CA:28:A:C5	1:CA:29:U:C5	3.04	0.45
22:BA:49:A:H5''	22:BA:51:G:O4'	2.17	0.45
53:B5:88:GLU:HG3	53:B5:95:VAL:HG23	1.99	0.45
45:DX:68:LEU:HD22	45:DX:78:TYR:CZ	2.52	0.45
22:BA:2250:G:H8	22:BA:2250:G:O5'	2.00	0.45
22:DA:2576:G:O2'	22:DA:2579:C:OP2	2.20	0.45
28:DG:118:PRO:O	28:DG:119:ALA:C	2.54	0.45
1:CA:1397:C:O4'	1:CA:1397:C:O2	2.32	0.45
37:DP:33:VAL:HG12	37:DP:33:VAL:O	2.15	0.45
22:DA:2418:A:H2'	22:DA:2419:U:O4'	2.16	0.45
22:DA:1809:A:N6	22:DA:1810:A:N1	2.65	0.45
5:CE:150:PRO:C	5:CE:152:MET:H	2.20	0.45
22:DA:527:C:H2'	22:DA:2779:U:O2	2.16	0.45
5:CE:115:LEU:HD12	5:CE:120:VAL:HG21	1.99	0.45
22:BA:1075:C:H2'	22:BA:1076:C:C6	2.52	0.45
22:BA:2074:U:H1'	22:BA:2598:A:N3	2.32	0.45
22:DA:914:G:H5'	22:DA:915:C:OP2	2.16	0.45
22:BA:611:C:H2'	22:BA:612:G:H5'	1.98	0.45
22:BA:2296:U:C4'	22:BA:2297:A:OP1	2.65	0.45
18:CR:28:THR:O	18:CR:31:ASN:HB2	2.15	0.45
2:AB:141:LEU:O	2:AB:145:GLU:N	2.46	0.45
22:DA:1596:A:C6	22:DA:1597:A:C6	3.04	0.45
36:DO:33:ARG:O	36:DO:34:HIS:CD2	2.70	0.45
25:DD:33:ARG:HB3	25:DD:95:SER:OG	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:919:A:C6	1:CA:920:U:C5	3.04	0.45
1:AA:1350:A:C8	1:AA:1351:U:C5	3.05	0.45
22:DA:1351:C:C2	22:DA:1381:G:C2	3.04	0.45
22:BA:2310:C:C2	27:BF:77:PHE:CE1	3.04	0.45
1:CA:268:U:H2'	1:CA:269:C:H6	1.74	0.45
22:BA:2838:G:C6	22:BA:2839:G:C5	3.04	0.45
1:AA:64:G:C8	1:AA:99:C:C4	3.05	0.45
22:DA:2144:G:N3	22:DA:2146:C:O2	2.50	0.45
45:DX:13:VAL:HG22	45:DX:29:PHE:HB2	1.98	0.45
22:DA:479:A:H1'	22:DA:481:G:H5'	1.99	0.45
4:AD:86:THR:HG22	4:AD:201:VAL:HG22	1.99	0.45
32:BK:103:VAL:HB	32:BK:107:LEU:CD1	2.46	0.45
22:DA:1663:G:O6	22:DA:1992:G:C8	2.69	0.45
1:CA:1232:U:H5''	9:CI:126:GLN:O	2.16	0.45
22:BA:533:G:OP1	38:BQ:24:TYR:O	2.35	0.45
22:DA:2835:A:C2	22:DA:2879:A:N7	2.85	0.45
22:BA:583:G:O2'	22:BA:584:C:H5'	2.17	0.45
1:AA:1481:U:C2'	1:AA:1482:G:H5'	2.46	0.45
33:DL:70:LYS:O	33:DL:74:THR:HG23	2.17	0.45
35:BN:75:ILE:O	35:BN:79:LEU:HD12	2.16	0.45
5:AE:34:THR:HB	5:AE:50:TYR:CE2	2.51	0.45
2:CB:193:PRO:O	2:CB:195:GLY:N	2.47	0.45
11:CK:35:THR:OG1	11:CK:40:ASN:N	2.49	0.45
1:CA:819:A:H4'	1:CA:820:U:OP2	2.17	0.45
36:DO:49:VAL:HG21	36:DO:82:ALA:HA	1.98	0.45
22:DA:622:G:H2'	22:DA:623:C:C6	2.50	0.45
1:AA:828:U:C5	1:AA:859:G:C4	3.05	0.45
27:DF:136:ILE:O	27:DF:136:ILE:HG22	2.16	0.45
22:DA:675:A:C6	22:DA:676:A:N1	2.85	0.45
39:BR:3:ALA:HB3	39:BR:59:ILE:HD11	1.99	0.45
10:AJ:27:GLU:C	10:AJ:29:ALA:H	2.20	0.45
47:BZ:3:LYS:H	47:BZ:3:LYS:HE3	1.82	0.45
29:DH:112:LYS:HG2	29:DH:113:SER:N	2.32	0.45
45:DX:25:THR:HG22	45:DX:25:THR:O	2.15	0.45
11:CK:110:ILE:HG22	21:CU:17:ARG:NH1	2.29	0.45
1:AA:851:G:C2'	1:AA:852:G:H5'	2.47	0.45
45:BX:33:LEU:O	45:BX:34:HIS:CG	2.69	0.45
22:BA:1488:C:O2	22:BA:1502:A:C2	2.69	0.45
1:AA:29:U:O2'	1:AA:30:U:H5'	2.16	0.45
9:AI:39:PHE:HA	9:AI:42:GLU:CD	2.37	0.45
5:CE:50:TYR:O	5:CE:51:GLY:O	2.35	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:84:GLY:HA2	12:CL:95:TYR:HA	1.99	0.45
33:DL:132:ARG:O	33:DL:136:GLU:HG3	2.17	0.45
27:DF:108:VAL:HG11	27:DF:176:PRO:HG2	1.99	0.45
22:BA:1478:G:H1	22:BA:1513:U:H3	1.63	0.45
26:DE:125:SER:OG	26:DE:126:VAL:N	2.48	0.45
1:AA:594:U:C4	1:AA:595:A:C6	3.05	0.45
22:DA:38:A:C2	22:DA:442:G:C6	3.04	0.45
22:BA:2519:U:OP1	22:BA:2519:U:H3'	2.16	0.45
43:BV:43:ASP:OD1	43:BV:46:LYS:CG	2.65	0.45
22:BA:2525:G:C2	22:BA:2539:C:C2	3.04	0.45
20:CT:55:GLN:N	20:CT:56:PRO:CD	2.80	0.45
1:CA:1533:C:OP1	1:CA:1533:C:H4'	2.16	0.45
41:DT:26:LYS:HG2	41:DT:26:LYS:O	2.16	0.45
24:DC:267:ILE:HG22	24:DC:267:ILE:O	2.16	0.45
36:BO:41:ALA:HB2	36:BO:48:LEU:HD21	1.98	0.45
44:BW:29:GLU:O	44:BW:66:LYS:HA	2.16	0.45
15:AO:70:LEU:O	15:AO:73:LYS:N	2.49	0.45
29:BH:72:ILE:HG23	29:BH:142:VAL:HG22	1.99	0.45
22:BA:988:A:O5'	47:BZ:12:SER:HB2	2.17	0.45
44:DW:21:LEU:HD11	44:DW:41:ARG:HG2	1.97	0.45
38:DQ:65:ILE:HD11	38:DQ:92:ARG:HA	1.98	0.45
22:BA:747:U:N3	22:BA:2613:U:C4	2.85	0.45
29:BH:83:LYS:HE2	1:CA:55:A:H2'	1.98	0.45
1:CA:1198:G:H5''	57:CA:1835:HOH:O	2.17	0.45
22:BA:2259:U:C6	22:BA:2427:C:C4	3.04	0.45
22:BA:838:C:O2'	22:BA:839:U:H5'	2.17	0.45
1:AA:275:G:H4'	17:AQ:17:MET:HB3	1.97	0.45
22:DA:511:U:C2'	22:DA:512:G:H5'	2.46	0.45
22:DA:1343:G:C6	22:DA:1344:U:O4	2.69	0.45
22:BA:2199:A:C1'	29:BH:28:ASN:HD21	2.27	0.45
38:BQ:36:PHE:CE1	38:BQ:40:ILE:HD12	2.51	0.45
22:BA:2128:G:H5'	53:B5:36:ALA:HA	1.98	0.45
2:CB:50:PHE:CD1	2:CB:50:PHE:C	2.89	0.45
7:AG:145:ALA:O	7:AG:146:GLU:CB	2.63	0.45
1:CA:451:A:C8	1:CA:452:A:C6	3.04	0.45
30:DI:57:VAL:CG2	30:DI:71:THR:HB	2.46	0.45
22:BA:2649:C:H2'	22:BA:2650:U:C6	2.51	0.45
1:CA:1512:U:O2'	1:CA:1513:A:H5'	2.16	0.45
4:AD:105:MET:HG2	4:AD:171:LEU:HD22	1.97	0.45
5:AE:101:GLU:CB	5:AE:122:ASN:HB3	2.47	0.45
2:CB:72:THR:HG22	2:CB:95:ARG:NH1	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1252:G:N3	38:DQ:33:ARG:HG2	2.32	0.45
22:DA:231:A:N6	22:DA:232:G:C2	2.84	0.45
13:CM:114:LYS:CB	13:CM:115:PRO:HD3	2.47	0.45
36:BO:31:THR:HG22	36:BO:34:HIS:N	2.32	0.45
5:CE:58:ALA:O	5:CE:62:LYS:HB2	2.16	0.45
22:DA:538:A:C2	22:DA:556:A:C4	3.04	0.45
31:DJ:7:LYS:O	31:DJ:11:VAL:HG23	2.15	0.45
22:DA:1806:C:C5	22:DA:1807:G:N7	2.84	0.45
1:CA:21:G:H2'	1:CA:22:G:C8	2.51	0.45
1:AA:266:G:H4'	1:AA:267:C:OP1	2.16	0.45
17:CQ:50:ASN:O	17:CQ:51:ASN:C	2.55	0.45
17:CQ:14:SER:OG	17:CQ:17:MET:HE1	2.16	0.45
23:DB:78:A:C6	23:DB:99:A:C8	3.05	0.45
22:BA:1376:C:N4	22:BA:1377:G:N1	2.65	0.45
1:CA:145:G:C2	1:CA:146:G:C8	3.05	0.45
22:BA:1406:U:C2	22:BA:1407:G:C8	3.05	0.45
32:DK:7:MET:C	32:DK:8:LEU:HD12	2.37	0.45
24:DC:87:ARG:HB3	24:DC:87:ARG:CZ	2.47	0.45
12:CL:25:GLU:HB3	12:CL:27:CYS:SG	2.57	0.45
1:AA:737:C:H2'	1:AA:738:C:H6	1.80	0.45
1:AA:1452:C:O4'	1:AA:1453:G:C2	2.70	0.45
1:AA:841:C:O2	1:AA:843:U:C2	2.69	0.45
3:AC:152:GLU:HA	3:AC:166:GLU:O	2.16	0.45
22:BA:417:C:H2'	22:BA:418:C:C6	2.52	0.45
22:DA:1709:U:H2'	22:DA:1710:G:H8	1.82	0.45
1:AA:723:U:H5'	1:AA:724:G:P	2.57	0.45
33:BL:120:VAL:HG22	33:BL:121:THR:N	2.31	0.45
22:DA:681:G:C2	22:DA:682:G:C8	3.04	0.45
22:BA:141:G:H5''	22:BA:142:A:C5	2.51	0.45
22:DA:140:C:O2	22:DA:140:C:O4'	2.34	0.45
36:BO:7:ARG:CG	36:BO:96:GLY:HA3	2.46	0.45
25:BD:91:THR:O	25:BD:94:GLN:HB2	2.16	0.45
1:AA:570:G:C6	1:AA:873:A:C2	3.05	0.45
45:DX:7:VAL:HG12	45:DX:8:THR:N	2.31	0.45
33:BL:22:GLY:O	33:BL:25:SER:OG	2.35	0.45
1:AA:675:A:OP1	18:AR:74:HIS:NE2	2.47	0.45
40:DS:27:LYS:O	40:DS:71:VAL:HG23	2.17	0.45
32:DK:13:ASN:OD1	32:DK:97:THR:N	2.45	0.45
22:BA:2419:U:OP1	51:B3:41:LYS:HE2	2.17	0.45
23:BB:105:G:C2	23:BB:106:G:C8	3.04	0.45
22:BA:1299:G:O5'	22:BA:1299:G:H8	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:151:VAL:HG12	3:CC:200:VAL:HB	1.98	0.45
22:DA:864:G:C6	22:DA:865:C:N4	2.85	0.45
19:AS:27:ASP:OD2	19:AS:28:LYS:O	2.34	0.45
22:BA:713:G:C6	22:BA:714:U:C4	3.05	0.45
22:DA:2056:G:N3	22:DA:2056:G:H2'	2.31	0.45
5:CE:155:ALA:C	5:CE:156:LYS:HG3	2.37	0.45
22:BA:1131:G:C4	31:BJ:77:HIS:ND1	2.84	0.45
22:BA:2259:U:C5	22:BA:2427:C:N4	2.85	0.45
1:AA:1160:G:OP1	2:AB:132:LYS:NZ	2.42	0.45
34:DM:66:ARG:HB2	34:DM:101:VAL:O	2.15	0.45
22:BA:613:A:C8	22:BA:616:A:N1	2.85	0.45
1:CA:691:G:H4'	1:CA:798:U:OP1	2.17	0.45
22:DA:1332:G:C6	22:DA:1609:A:C5	3.05	0.45
11:AK:76:GLU:O	22:BA:2141:G:C5'	2.64	0.45
1:AA:67:C:O2'	1:AA:171:A:N3	2.39	0.45
2:AB:154:MET:O	2:AB:156:GLY:N	2.49	0.45
14:CN:52:PRO:O	14:CN:53:ARG:HB3	2.16	0.45
4:AD:98:LEU:HD23	4:AD:118:VAL:HG11	1.99	0.45
4:AD:78:GLU:CD	4:AD:81:ARG:NH1	2.70	0.45
1:AA:89:U:O2'	1:AA:90:C:H5''	2.16	0.45
22:DA:2091:C:C3'	22:DA:2092:U:H5''	2.45	0.45
22:BA:846:U:C2'	22:BA:847:U:OP2	2.64	0.45
2:AB:111:ILE:HG13	2:AB:151:ILE:HG12	1.98	0.45
9:AI:21:ILE:HG22	9:AI:22:LYS:N	2.32	0.45
22:DA:2291:U:H2'	22:DA:2292:U:H6	1.80	0.45
1:CA:1160:G:O6	1:CA:1181:G:C6	2.70	0.45
1:AA:174:A:C4	1:AA:175:C:C6	3.05	0.45
1:CA:1261:A:C6	1:CA:1275:A:C4	3.05	0.45
1:CA:200:G:C2'	1:CA:201:G:H5''	2.47	0.45
22:DA:2814:A:C6	22:DA:2815:C:C4	3.05	0.45
22:BA:1348:C:C5	22:BA:1349:C:C6	3.05	0.45
42:DU:72:ILE:HD11	42:DU:83:VAL:HG23	1.98	0.45
1:CA:891:U:C4	1:CA:906:A:C2	3.05	0.45
13:AM:95:LEU:CB	13:AM:96:PRO:CD	2.94	0.45
29:DH:34:GLY:O	29:DH:35:LYS:CD	2.65	0.45
22:DA:2298:A:C2	22:DA:2321:U:C5	3.05	0.45
30:BI:113:LYS:HE2	30:BI:116:ASP:OD1	2.17	0.45
22:BA:1148:U:O2'	22:BA:1149:G:H5'	2.17	0.45
2:CB:17:GLY:O	2:CB:39:HIS:O	2.34	0.45
33:BL:100:ILE:HG13	33:BL:100:ILE:O	2.17	0.45
34:BM:77:PRO:HD2	34:BM:80:VAL:HG21	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:102:G:N1	1:AA:103:U:C4	2.84	0.45
22:DA:308:G:H2'	22:DA:309:A:O4'	2.17	0.45
22:BA:102:U:O4	46:BY:2:LYS:HB2	2.17	0.45
22:BA:2784:U:C2	22:BA:2785:C:C5	3.04	0.45
10:AJ:56:HIS:O	10:AJ:57:VAL:O	2.35	0.45
7:AG:135:VAL:O	7:AG:139:GLU:HG2	2.16	0.45
1:CA:1053:G:O5'	1:CA:1054:C:H5'	2.17	0.45
1:CA:938:A:C2	1:CA:1345:U:O4	2.69	0.45
1:AA:115:G:H4'	1:AA:116:A:O5'	2.16	0.45
22:BA:1428:C:O2'	22:BA:1569:A:OP2	2.21	0.45
1:AA:1518:A:H2'	1:AA:1519:A:C8	2.52	0.45
9:AI:63:LEU:N	9:AI:63:LEU:CD2	2.79	0.45
24:DC:144:VAL:HB	24:DC:154:LEU:HB2	1.98	0.45
1:AA:1242:G:N1	1:AA:1243:C:C2	2.85	0.45
1:AA:711:G:H2'	1:AA:712:A:H8	1.82	0.45
22:BA:142:A:C2'	22:BA:143:C:O5'	2.65	0.45
22:DA:2728:U:O2'	22:DA:2729:G:C5'	2.65	0.45
22:BA:410:G:C2	22:BA:2407:A:C5	3.05	0.45
22:DA:600:G:H2'	22:DA:601:C:C6	2.52	0.45
22:DA:494:G:H4'	40:DS:6:LYS:HG3	1.99	0.45
22:DA:37:C:H2'	22:DA:38:A:C8	2.51	0.45
27:DF:28:VAL:HG22	27:DF:29:PRO:HD2	1.98	0.45
1:CA:431:A:H2'	1:CA:432:A:O4'	2.16	0.45
26:DE:56:GLY:O	26:DE:57:LYS:C	2.54	0.45
22:BA:1549:A:C6	22:BA:1550:C:C4	3.05	0.45
5:CE:68:ARG:O	5:CE:71:MET:HE3	2.16	0.45
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.16	0.45
22:DA:173:A:H2'	22:DA:174:U:C6	2.51	0.45
1:CA:282:A:C8	1:CA:283:U:C5	3.04	0.45
1:CA:195:A:C6	1:CA:196:A:N1	2.84	0.45
1:AA:306:A:H2'	1:AA:307:C:O4'	2.17	0.45
1:AA:864:A:H3'	1:AA:865:A:C8	2.52	0.45
1:CA:1031:C:H4'	1:CA:1032:G:C2	2.52	0.45
22:BA:946:C:OP2	57:BA:3347:HOH:O	2.21	0.45
1:CA:392:C:H2'	1:CA:393:A:C8	2.50	0.45
1:AA:417:G:C5	1:AA:418:C:C5	3.04	0.45
22:DA:1276:A:N1	22:DA:1295:C:C2	2.85	0.45
28:DG:111:HIS:O	28:DG:111:HIS:ND1	2.49	0.45
1:CA:597:G:H2'	1:CA:598:U:H5'	1.98	0.45
1:AA:1173:U:H2'	1:AA:1174:G:C8	2.51	0.45
1:AA:1258:G:H2'	1:AA:1259:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:807:A:C5	1:AA:808:C:C5	3.05	0.45
24:BC:83:TYR:CE2	57:BC:306:HOH:O	2.69	0.45
40:DS:17:VAL:HG12	40:DS:76:VAL:HG21	1.97	0.45
29:DH:93:SER:HB3	29:DH:123:ARG:HG3	1.99	0.45
29:BH:95:GLY:HA3	1:CA:368:U:OP1	2.15	0.45
22:DA:818:G:H2'	22:DA:819:A:H5''	1.98	0.45
1:CA:1098:C:H2'	1:CA:1099:G:O4'	2.17	0.45
22:BA:1085:A:C5	22:BA:1086:A:C6	3.05	0.45
52:B4:27:CYS:SG	52:B4:33:HIS:ND1	2.90	0.45
1:AA:995:C:C2	1:AA:1046:A:O2'	2.66	0.45
41:BT:2:ILE:CA	41:BT:3:ARG:HB2	2.47	0.45
3:AC:205:GLY:O	3:AC:206:GLU:CG	2.63	0.45
22:BA:1838:C:C4	22:BA:1899:A:C2	3.05	0.45
30:DI:80:LEU:HD11	30:DI:133:ALA:CB	2.46	0.45
22:BA:2128:G:OP2	53:B5:37:LYS:HE3	2.16	0.45
22:BA:973:A:C8	22:BA:1188:U:C2	3.05	0.45
1:CA:72:A:C5	1:CA:73:C:N4	2.84	0.45
24:DC:204:VAL:O	24:DC:206:GLY:N	2.49	0.45
1:AA:15:G:C4	1:AA:16:A:C8	3.05	0.45
1:AA:587:G:C2	1:AA:755:G:C5	3.05	0.45
22:DA:1973:G:C6	22:DA:1974:C:N4	2.84	0.45
9:AI:24:GLY:H	9:AI:61:LEU:HA	1.82	0.45
1:AA:624:C:C2	1:AA:625:U:C6	3.05	0.45
22:DA:1814:G:C6	22:DA:1815:A:N6	2.84	0.45
1:CA:435:A:C2	1:CA:436:C:N1	2.85	0.45
22:DA:185:G:C6	22:DA:212:G:N1	2.85	0.45
22:BA:877:A:N6	22:BA:899:A:C6	2.85	0.45
22:DA:132:G:N2	22:DA:148:U:O2	2.50	0.45
22:BA:2001:C:N3	22:BA:2002:G:C8	2.85	0.45
26:DE:182:ALA:HB2	33:DL:3:LEU:HD22	1.99	0.45
12:AL:86:ARG:HA	12:AL:94:ARG:HA	1.98	0.45
1:AA:438:U:N3	1:AA:494:G:C6	2.85	0.45
29:BH:40:THR:O	29:BH:42:LYS:N	2.48	0.45
39:DR:5:PHE:O	39:DR:11:GLN:HA	2.16	0.45
52:D4:25:VAL:HB	52:D4:35:GLN:HG3	1.98	0.45
26:BE:44:ARG:O	26:BE:45:ALA:HB2	2.16	0.45
22:BA:1588:G:N1	22:BA:1589:U:C4	2.84	0.45
16:AP:23:ASP:C	16:AP:23:ASP:OD1	2.55	0.45
11:CK:87:LYS:HA	11:CK:114:THR:HG22	1.99	0.45
22:DA:106:C:H2'	22:DA:106:C:O2	2.15	0.45
1:CA:607:A:C2	1:CA:608:A:C4	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:500:G:C2	22:DA:502:A:C8	3.04	0.45
22:DA:993:G:C6	22:DA:1162:G:C6	3.04	0.45
22:BA:2171:A:O2'	22:BA:2172:U:H5'	2.17	0.45
22:BA:164:C:H2'	22:BA:165:A:O4'	2.16	0.45
1:AA:34:C:H2'	1:AA:35:G:H8	1.81	0.45
7:AG:57:SER:OG	7:AG:58:GLU:N	2.49	0.45
11:CK:107:ILE:C	11:CK:107:ILE:HD13	2.37	0.45
6:AF:1:MET:HG2	6:AF:65:GLU:HG2	1.99	0.45
49:B1:51:GLU:O	49:B1:52:ALA:HB2	2.16	0.45
22:BA:962:G:N2	22:BA:2250:G:H1	2.14	0.45
43:BV:48:MET:O	43:BV:51:GLN:HG3	2.17	0.45
12:AL:29:GLN:HB2	12:AL:82:ILE:O	2.16	0.45
1:AA:747:A:H5'	1:AA:748:G:OP2	2.16	0.45
37:DP:106:LYS:HA	37:DP:109:ARG:CD	2.46	0.45
27:BF:129:SER:OG	27:BF:155:THR:OG1	2.31	0.45
22:DA:1532:A:C2	22:DA:1540:G:C6	3.05	0.45
4:CD:177:LYS:O	4:CD:178:MET:HB2	2.16	0.45
22:BA:1956:U:H2'	22:BA:1957:C:H5'	1.98	0.45
22:BA:1880:U:H2'	22:BA:1881:C:C6	2.51	0.45
51:D3:26:HIS:NE2	51:D3:48:ALA:HB2	2.32	0.45
1:CA:968:A:C8	1:CA:1062:U:H4'	2.51	0.45
29:DH:147:VAL:HG12	29:DH:148:ALA:N	2.32	0.45
6:AF:79:ARG:NE	6:AF:79:ARG:HA	2.32	0.45
29:BH:76:GLU:HA	29:BH:142:VAL:CG1	2.46	0.45
22:BA:713:G:C5	22:BA:714:U:C5	3.05	0.45
29:BH:97:ARG:NH1	1:CA:370:C:O4'	2.49	0.45
29:DH:39:ALA:O	29:DH:41:LYS:N	2.47	0.45
22:BA:2380:C:H5'	36:BO:17:LYS:NZ	2.31	0.45
22:DA:2302:U:O2'	27:DF:123:ASP:O	2.35	0.45
22:BA:2550:G:C2	22:BA:2559:C:O2	2.69	0.45
22:DA:2627:G:C6	22:DA:2628:C:C4	3.05	0.45
5:CE:102:GLY:C	5:CE:104:GLY:N	2.70	0.45
5:CE:95:PHE:O	5:CE:125:ALA:O	2.35	0.45
22:DA:2156:G:C6	22:DA:2157:G:C2	3.05	0.45
22:DA:1565:C:C5	22:DA:1567:G:C6	3.05	0.45
50:D2:31:LEU:HD21	50:D2:43:THR:HG22	1.99	0.45
22:BA:250:G:P	51:B3:13:ARG:NH1	2.89	0.45
22:DA:1309:G:OP1	50:D2:9:VAL:N	2.47	0.45
22:DA:1604:C:O2'	22:DA:1610:A:N1	2.43	0.45
22:BA:1754:A:N1	22:BA:2716:C:O2'	2.41	0.45
12:AL:21:VAL:O	12:AL:21:VAL:HG22	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:563:A:O2'	22:BA:564:C:H5'	2.17	0.45
2:CB:60:ILE:HD12	2:CB:61:ALA:N	2.31	0.45
22:BA:2310:C:C4	27:BF:77:PHE:CE1	3.04	0.45
16:AP:39:PHE:CD1	16:AP:39:PHE:C	2.90	0.45
16:AP:70:ARG:O	16:AP:74:LEU:HG	2.17	0.45
9:AI:113:ARG:NH2	14:AN:101:TRP:CZ2	2.85	0.45
21:AU:20:LYS:NZ	21:AU:20:LYS:HA	2.32	0.45
22:DA:949:G:C6	22:DA:950:G:N7	2.85	0.45
1:CA:519:C:H2'	1:CA:520:A:O4'	2.17	0.45
35:DN:118:ARG:O	35:DN:119:SER:HB2	2.17	0.45
1:AA:947:G:C2	1:AA:948:C:C2	3.05	0.45
10:AJ:36:VAL:HG22	10:AJ:76:ILE:HG12	1.98	0.45
22:DA:269:C:O2	22:DA:269:C:H2'	2.17	0.45
22:DA:1568:G:N7	24:DC:28:LYS:HE3	2.32	0.45
9:AI:44:ALA:O	9:AI:47:VAL:HG22	2.17	0.45
1:AA:201:G:H2'	1:AA:202:G:O4'	2.17	0.45
22:DA:592:A:C2	22:DA:593:U:C2	3.05	0.45
6:CF:54:LEU:C	6:CF:55:HIS:O	2.54	0.45
1:CA:1106:G:H2'	1:CA:1107:C:C6	2.51	0.45
22:DA:320:A:H4'	22:DA:322:A:N7	2.30	0.45
9:CI:57:MET:O	9:CI:60:LYS:HB2	2.16	0.45
13:CM:19:LEU:HB2	13:CM:30:SER:OG	2.16	0.45
48:D0:40:ARG:O	48:D0:41:HIS:HB2	2.15	0.45
14:AN:83:LYS:CD	14:AN:86:GLU:OE1	2.65	0.45
29:BH:12:LEU:HG	29:BH:13:GLY:N	2.31	0.45
35:DN:83:LEU:HD22	35:DN:115:LEU:HD13	1.98	0.45
30:DI:101:ILE:O	30:DI:102:SER:CB	2.64	0.45
22:BA:493:G:H2'	22:BA:494:G:O4'	2.17	0.45
1:CA:743:A:C5	1:CA:744:C:C5	3.05	0.45
9:CI:50:GLN:N	9:CI:51:PRO:HD2	2.32	0.45
15:CO:73:LYS:HA	15:CO:73:LYS:CE	2.47	0.45
22:BA:2680:U:H3	22:BA:2681:C:N4	2.15	0.45
22:DA:2824:C:C4	22:DA:2825:G:C5	3.05	0.45
22:DA:7:G:H4'	31:DJ:15:TRP:CZ2	2.52	0.45
29:DH:5:LEU:CD1	29:DH:13:GLY:CA	2.95	0.45
7:AG:17:LYS:O	7:AG:17:LYS:HG2	2.16	0.45
22:DA:1907:G:C6	22:DA:1924:C:N3	2.85	0.45
26:DE:1:MET:HG2	26:DE:14:VAL:HG23	1.99	0.45
22:DA:2069:G:N2	22:DA:2443:C:C2	2.85	0.45
3:AC:42:TYR:OH	3:AC:90:VAL:HG21	2.16	0.45
1:CA:414:A:C2	1:CA:415:A:C4	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:12:LYS:O	14:AN:16:LEU:HG	2.17	0.45
22:DA:959:A:H2'	22:DA:960:A:C8	2.51	0.45
22:DA:875:G:N2	22:DA:903:C:C2	2.85	0.45
1:AA:283:U:C5	1:AA:284:C:C5	3.05	0.45
18:AR:32:TYR:CG	18:AR:55:LEU:HD11	2.52	0.45
1:CA:754:C:H3'	1:CA:754:C:O2	2.16	0.45
1:CA:121:U:H3'	1:CA:122:G:H5'	1.98	0.45
22:BA:950:G:H2'	22:BA:951:C:C6	2.51	0.45
29:DH:15:LEU:N	29:DH:15:LEU:HD22	2.32	0.45
23:DB:32:U:C2	23:DB:51:G:N2	2.84	0.45
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.52	0.45
51:D3:15:LYS:HD3	51:D3:23:LYS:HE2	1.99	0.45
22:BA:693:A:O2'	22:BA:694:U:H5'	2.16	0.45
22:BA:2498:C:O2'	22:BA:2499:C:H5'	2.16	0.45
22:DA:1809:A:C6	22:DA:1810:A:C5	3.05	0.45
5:CE:156:LYS:HA	5:CE:159:LYS:NZ	2.31	0.45
22:BA:2754:U:H2'	22:BA:2756:U:OP1	2.16	0.45
38:DQ:88:VAL:CG1	38:DQ:90:ILE:HG13	2.47	0.45
21:AU:37:PHE:O	21:AU:38:TYR:CB	2.64	0.45
22:BA:1073:A:H2'	22:BA:1074:G:H5''	1.98	0.45
22:DA:1817:G:O2'	22:DA:1818:U:H5'	2.16	0.45
27:BF:133:ARG:O	27:BF:134:GLU:CB	2.65	0.45
22:BA:572:A:P	57:BA:3570:HOH:O	2.74	0.45
22:DA:2199:A:C5	22:DA:2225:A:N1	2.84	0.45
22:BA:1791:A:O3'	24:BC:204:VAL:O	2.35	0.45
5:CE:66:LYS:O	5:CE:69:ARG:O	2.35	0.45
1:CA:64:G:N2	1:CA:67:C:C4	2.85	0.45
4:CD:129:VAL:CG1	4:CD:129:VAL:O	2.64	0.45
29:DH:31:VAL:CG1	29:DH:32:PRO:HD3	2.47	0.45
1:CA:501:C:H2'	1:CA:502:A:C8	2.52	0.45
22:BA:2310:C:C5	27:BF:77:PHE:CZ	3.04	0.45
26:BE:104:ALA:O	26:BE:108:ILE:HG23	2.17	0.45
26:BE:106:LYS:HG3	26:BE:200:LEU:HG	1.99	0.45
1:CA:376:G:H5''	16:CP:5:ARG:HB2	1.98	0.45
22:DA:1740:G:H2'	22:DA:1741:C:C6	2.52	0.45
1:AA:451:A:C2	1:AA:480:U:N3	2.85	0.45
33:DL:110:VAL:CG2	33:DL:127:VAL:HG22	2.47	0.45
22:DA:1773:A:C2	22:DA:1978:A:C2	3.05	0.45
1:AA:1237:C:C4	1:AA:1336:C:N3	2.85	0.45
36:DO:26:LEU:HD23	36:DO:117:PHE:CE2	2.51	0.45
53:B5:50:ILE:HG23	53:B5:51:ASP:H	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1308:U:OP2	13:AM:98:ARG:CG	2.65	0.45
3:AC:11:ARG:NH1	3:AC:182:ILE:HG13	2.32	0.45
15:AO:4:SER:O	15:AO:7:ALA:N	2.50	0.45
38:BQ:24:TYR:HB3	38:BQ:28:ARG:HB3	1.99	0.45
1:CA:117:G:H2'	1:CA:118:U:O4'	2.17	0.45
51:B3:32:ILE:O	51:B3:32:ILE:HG22	2.15	0.45
1:CA:563:A:H2'	1:CA:567:G:C8	2.52	0.45
22:DA:482:A:O2'	22:DA:497:A:N1	2.39	0.45
22:BA:1937:A:C2	22:BA:1939:U:C4	3.05	0.45
6:CF:1:MET:HG2	6:CF:65:GLU:HG2	1.98	0.45
1:CA:1103:C:C4	1:CA:1104:G:N7	2.85	0.45
22:DA:538:A:H5''	31:DJ:7:LYS:HE3	1.97	0.45
22:DA:319:G:H2'	22:DA:320:A:O4'	2.17	0.45
26:BE:124:PHE:O	26:BE:125:SER:CB	2.65	0.45
22:BA:706:A:H2'	22:BA:707:G:O4'	2.16	0.45
1:CA:158:G:C6	1:CA:164:G:C5	3.05	0.45
31:BJ:38:GLY:O	31:BJ:40:HIS:N	2.50	0.45
1:CA:1118:U:H1'	1:CA:1179:A:C5	2.52	0.45
51:B3:45:ARG:N	51:B3:46:PRO:CD	2.79	0.45
39:BR:68:ARG:HD3	39:BR:92:TRP:CE2	2.52	0.45
30:BI:67:PHE:HD2	30:BI:67:PHE:N	2.14	0.45
22:DA:1669:A:O4'	32:DK:5:GLN:HG3	2.17	0.45
22:BA:570:G:H8	22:BA:570:G:O5'	2.00	0.45
22:DA:1833:C:N4	22:DA:1834:U:O4	2.50	0.45
35:DN:45:ARG:O	35:DN:49:GLU:HG3	2.16	0.45
7:AG:103:TRP:CD2	7:AG:137:LYS:HG2	2.52	0.45
19:AS:15:LEU:O	19:AS:19:VAL:HG23	2.16	0.45
24:BC:209:GLY:O	24:BC:212:ARG:N	2.50	0.45
22:DA:2784:U:C4	22:DA:2785:C:C4	3.05	0.45
25:BD:57:ALA:C	25:BD:59:ARG:H	2.21	0.45
40:DS:66:ILE:O	40:DS:68:ASP:N	2.49	0.45
6:CF:38:ARG:HG2	6:CF:63:ASN:CB	2.46	0.45
22:DA:2771:C:H2'	22:DA:2772:C:C6	2.52	0.45
22:BA:1366:A:C5	22:BA:1367:A:C8	3.05	0.45
22:DA:1287:A:C2'	22:DA:1288:G:H5'	2.47	0.45
8:AH:83:LEU:HD22	8:AH:85:ILE:HD13	1.99	0.45
1:AA:725:G:C2	1:AA:726:C:C5	3.04	0.45
2:AB:175:GLU:O	2:AB:178:ASN:HB3	2.17	0.45
1:AA:243:A:C2	1:AA:246:A:C8	3.05	0.45
22:DA:2804:U:H2'	22:DA:2805:C:C6	2.52	0.45
8:AH:39:VAL:HG13	8:AH:112:THR:HG22	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BO:76:LYS:O	36:BO:77:ALA:C	2.56	0.45
3:AC:23:PHE:CE1	10:AJ:13:PHE:CE2	3.05	0.45
22:BA:189:G:OP1	45:BX:26:LYS:HD2	2.17	0.45
32:BK:1:MET:HE3	32:BK:32:TYR:CZ	2.51	0.45
22:DA:2699:C:O2	22:DA:2709:G:C2	2.70	0.45
22:BA:90:U:H2'	22:BA:91:A:C8	2.52	0.45
27:DF:70:ALA:O	27:DF:72:LYS:N	2.50	0.45
23:BB:2:G:C6	23:BB:119:A:C2	3.04	0.45
31:DJ:36:LEU:HG	31:DJ:54:ILE:HD12	1.99	0.45
1:CA:1204:A:P	57:CA:1845:HOH:O	2.74	0.45
46:BY:16:THR:HA	46:BY:19:LEU:HD12	1.98	0.45
35:DN:18:GLN:HG2	35:DN:18:GLN:O	2.17	0.45
47:BZ:45:ARG:HD3	47:BZ:45:ARG:HA	1.76	0.45
6:CF:51:ILE:O	6:CF:51:ILE:HG12	2.17	0.45
52:D4:3:VAL:CG2	52:D4:3:VAL:O	2.65	0.45
22:DA:1114:C:H2'	22:DA:1115:G:C8	2.52	0.45
24:BC:125:LYS:HB2	24:BC:126:PRO:HD2	1.99	0.45
22:DA:1858:A:C2	22:DA:1859:U:C2	3.05	0.45
22:BA:1153:C:N4	22:BA:1154:G:C6	2.85	0.45
11:AK:35:THR:HG23	11:AK:36:ASP:O	2.16	0.45
22:BA:2579:C:C2'	22:BA:2580:U:H5'	2.47	0.45
2:AB:79:ALA:C	2:AB:82:ASP:OD2	2.56	0.45
1:AA:409:U:OP1	4:AD:24:GLY:HA3	2.17	0.45
17:CQ:47:HIS:HB3	17:CQ:74:THR:OG1	2.16	0.45
22:DA:310:A:O2'	22:DA:311:A:P	2.72	0.45
22:BA:1482:G:C6	22:BA:1508:A:C6	3.04	0.45
22:BA:2622:U:O2'	22:BA:2825:G:N7	2.50	0.45
13:AM:12:HIS:HA	13:AM:44:LYS:NZ	2.32	0.45
22:BA:475:C:C4	22:BA:481:G:C6	3.05	0.45
22:DA:1604:C:C5'	57:DA:3404:HOH:O	2.64	0.45
28:DG:158:LYS:O	28:DG:159:GLY:C	2.56	0.45
22:DA:27:G:HO2'	22:DA:28:A:P	2.34	0.45
1:CA:209:U:C4'	1:CA:210:C:OP2	2.62	0.45
38:BQ:40:ILE:HG22	38:BQ:44:GLN:OE1	2.16	0.45
22:BA:2365:G:H4'	44:BW:60:PHE:CE1	2.52	0.45
32:DK:76:VAL:HG12	37:DP:73:VAL:HG22	1.98	0.45
26:BE:180:LEU:HD23	26:BE:180:LEU:HA	1.83	0.45
14:CN:88:ALA:N	14:CN:93:ILE:HD12	2.32	0.45
1:AA:1043:G:H3'	1:AA:1044:A:H5''	1.99	0.45
9:CI:55:VAL:HG23	9:CI:55:VAL:O	2.16	0.45
28:BG:10:VAL:O	28:BG:12:PRO:HD3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1215:G:C4	1:CA:1216:A:C8	3.05	0.45
22:BA:2520:C:C6	22:BA:2567:G:C1'	3.00	0.45
33:DL:54:GLN:HG2	33:DL:55:MET:N	2.32	0.45
22:DA:2264:C:O2	22:DA:2277:G:C2	2.69	0.45
22:BA:2583:G:C5	22:BA:2584:U:C5	3.04	0.45
1:CA:1169:A:N6	1:CA:1170:A:N6	2.65	0.45
22:DA:235:U:N3	22:DA:236:C:C5	2.85	0.45
22:DA:1654:A:OP2	35:DN:1:MET:HA	2.17	0.45
41:DT:51:PHE:C	41:DT:52:GLU:HG2	2.37	0.45
40:DS:33:LEU:HD21	40:DS:52:GLU:HG2	1.99	0.45
1:CA:295:C:N3	1:CA:296:U:C5	2.85	0.45
1:CA:575:G:C6	1:CA:821:G:N7	2.85	0.45
1:AA:1277:C:O2'	1:AA:1279:G:H8	2.00	0.45
22:BA:1080:A:C2	22:BA:1081:U:C5	3.05	0.45
40:BS:17:VAL:HG12	40:BS:76:VAL:HG21	1.97	0.45
24:BC:30:PHE:O	24:BC:31:ALA:C	2.54	0.45
3:CC:147:LYS:HG3	3:CC:204:LYS:O	2.17	0.45
28:DG:98:VAL:HG21	28:DG:124:GLU:HA	1.99	0.45
16:CP:6:LEU:CD1	16:CP:71:VAL:HG23	2.47	0.45
1:AA:1378:C:C2'	1:AA:1379:G:O5'	2.64	0.45
4:AD:62:ARG:NH2	4:AD:68:LEU:HD13	2.32	0.45
1:AA:591:U:H2'	1:AA:592:G:C8	2.52	0.45
1:CA:165:G:N2	1:CA:166:U:O2	2.50	0.45
10:CJ:46:LYS:HG2	10:CJ:68:ARG:HG2	1.99	0.45
3:CC:67:THR:OG1	3:CC:102:ASN:ND2	2.50	0.45
22:DA:2114:A:C5	22:DA:2167:U:H4'	2.52	0.45
22:DA:168:G:C2	22:DA:169:G:C8	3.06	0.45
22:DA:134:G:C2	22:DA:146:A:C2	3.05	0.45
10:AJ:66:GLU:HB3	14:AN:99:ALA:CB	2.47	0.45
43:BV:4:ILE:HD11	43:BV:50:MET:HE1	1.99	0.45
1:CA:1126:U:O4	10:CJ:73:LEU:HD12	2.16	0.45
24:DC:125:LYS:HB2	24:DC:126:PRO:HD2	1.99	0.45
7:CG:69:VAL:HG21	7:CG:104:ILE:HD11	1.98	0.45
22:DA:1430:G:H2'	22:DA:1431:A:O4'	2.17	0.45
22:DA:2624:G:H1'	48:D0:19:HIS:HE1	1.82	0.45
1:CA:1004:A:C2	1:CA:1026:G:N3	2.85	0.45
37:DP:75:GLN:O	37:DP:78:SER:HB3	2.16	0.45
22:DA:372:G:P	45:DX:62:LYS:HZ2	2.40	0.45
22:BA:412:A:H2'	22:BA:413:C:H5'	1.99	0.45
2:CB:111:ILE:O	2:CB:114:LEU:HB3	2.17	0.45
26:DE:187:VAL:CG1	26:DE:187:VAL:O	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:266:PHE:CD1	24:BC:266:PHE:N	2.84	0.45
22:DA:498:G:C6	22:DA:499:U:C4	3.05	0.45
22:BA:1846:G:H2'	22:BA:1847:A:C8	2.53	0.44
44:DW:19:LYS:O	44:DW:21:LEU:HD23	2.17	0.44
22:DA:1358:G:H1'	22:DA:1374:G:N2	2.31	0.44
22:DA:973:A:P	39:DR:81:LYS:NZ	2.88	0.44
1:CA:1099:G:H2'	1:CA:1100:C:O4'	2.17	0.44
22:BA:479:A:H4'	22:BA:480:A:OP1	2.16	0.44
22:DA:1607:C:N4	22:DA:1622:G:C5	2.85	0.44
1:CA:839:C:C2'	1:CA:840:C:H5'	2.47	0.44
4:CD:173:VAL:O	4:CD:174:ASP:CB	2.65	0.44
29:DH:1:MET:CE	29:DH:27:ARG:NH1	2.80	0.44
22:DA:1248:G:O2'	38:DQ:3:ARG:HA	2.17	0.44
1:CA:921:U:H2'	1:CA:922:G:O4'	2.16	0.44
1:CA:403:C:H5'	4:CD:132:ILE:HG23	2.00	0.44
22:BA:1925:C:H5''	22:BA:1926:U:C4	2.53	0.44
22:DA:2111:U:O2	22:DA:2118:U:H1'	2.17	0.44
48:B0:48:TYR:CE2	48:B0:53:LYS:HB2	2.51	0.44
22:DA:468:G:H2'	22:DA:469:G:O4'	2.16	0.44
1:AA:957:U:H1'	1:AA:960:U:C4	2.52	0.44
1:AA:961:U:OP2	1:AA:1223:C:H1'	2.18	0.44
13:CM:14:HIS:HB2	13:CM:17:ILE:CD1	2.46	0.44
1:AA:948:C:OP2	13:AM:107:ARG:HB2	2.17	0.44
9:AI:50:GLN:O	9:AI:52:LEU:N	2.51	0.44
1:AA:463:U:H5'	1:AA:464:U:OP2	2.16	0.44
22:DA:1805:A:C4	22:DA:1813:G:N2	2.85	0.44
22:BA:2261:C:O2'	22:BA:2262:U:H5'	2.17	0.44
31:DJ:6:ALA:O	31:DJ:7:LYS:HG3	2.17	0.44
22:DA:2029:G:C2	22:DA:2033:A:N7	2.85	0.44
43:BV:23:ALA:O	43:BV:24:ASN:C	2.54	0.44
22:DA:483:A:C8	42:DU:45:HIS:CD2	3.05	0.44
22:DA:609:A:H2'	22:DA:610:C:O4'	2.17	0.44
2:AB:10:LEU:HD23	2:AB:10:LEU:C	2.37	0.44
22:BA:1324:G:C4	22:BA:1328:A:N6	2.85	0.44
19:CS:51:VAL:O	19:CS:58:VAL:HG12	2.17	0.44
1:AA:195:A:C5	1:AA:196:A:C6	3.05	0.44
22:BA:547:A:H8	22:BA:548:G:N3	2.15	0.44
22:DA:1644:C:C2'	22:DA:1644:C:O2	2.65	0.44
45:BX:18:ARG:NE	45:BX:24:ALA:HB2	2.32	0.44
1:AA:1503:A:H8	1:AA:1531:A:HO2'	1.56	0.44
7:AG:71:PRO:HD2	7:AG:96:ARG:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:102:G:N3	1:AA:103:U:C6	2.85	0.44
1:CA:399:G:C6	1:CA:400:C:N4	2.85	0.44
1:AA:162:A:H1'	1:AA:348:G:O2'	2.17	0.44
41:DT:38:ALA:O	41:DT:39:THR:CB	2.65	0.44
1:CA:939:G:C6	1:CA:940:C:C4	3.05	0.44
11:CK:19:GLY:O	11:CK:82:LEU:HA	2.17	0.44
22:BA:2880:C:H1'	35:BN:92:GLY:O	2.16	0.44
26:BE:119:ILE:HB	26:BE:187:VAL:HG22	2.00	0.44
33:DL:68:SER:O	33:DL:69:ARG:HB2	2.17	0.44
22:DA:265:A:H4'	22:DA:266:G:OP1	2.17	0.44
1:CA:1195:C:H2'	1:CA:1197:A:O4'	2.18	0.44
8:CH:30:SER:O	8:CH:33:LYS:HB2	2.17	0.44
13:CM:39:ILE:HG13	13:CM:56:LEU:HD21	1.99	0.44
1:CA:1426:G:C4	1:CA:1475:G:C2	3.05	0.44
22:BA:49:A:C8	22:BA:51:G:N2	2.84	0.44
28:BG:2:SER:C	28:BG:4:VAL:N	2.70	0.44
22:BA:1441:G:H2'	22:BA:1442:U:C6	2.52	0.44
45:DX:52:SER:OG	45:DX:55:GLY:N	2.44	0.44
22:DA:522:A:H2'	22:DA:523:C:O4'	2.17	0.44
22:BA:2443:C:H2'	22:BA:2444:G:H8	1.82	0.44
4:AD:4:TYR:CE2	4:AD:6:GLY:O	2.70	0.44
22:BA:1288:G:C4	22:BA:1327:A:C2	3.05	0.44
53:B5:25:GLU:HG2	53:B5:25:GLU:O	2.17	0.44
41:BT:12:ARG:N	41:BT:12:ARG:HD2	2.32	0.44
22:DA:2453:A:H8	22:DA:2453:A:O5'	2.00	0.44
18:CR:48:ARG:N	18:CR:48:ARG:HD2	2.31	0.44
40:DS:79:GLY:HA2	40:DS:102:HIS:NE2	2.32	0.44
7:AG:99:LEU:O	7:AG:102:ARG:N	2.50	0.44
1:AA:118:U:O4	1:AA:288:A:H2'	2.17	0.44
1:AA:410:G:H5''	1:AA:411:A:P	2.57	0.44
1:AA:1118:U:H5''	9:AI:106:ARG:HG3	1.98	0.44
1:CA:840:C:C4	1:CA:842:U:C5'	3.01	0.44
1:CA:32:A:C2	1:CA:33:A:C4	3.05	0.44
22:DA:1338:G:H4'	41:DT:18:GLU:OE2	2.17	0.44
22:DA:2093:G:C2	22:DA:2094:A:C5	3.05	0.44
22:BA:2847:U:H2'	22:BA:2848:G:H5'	1.99	0.44
22:DA:1343:G:C5	22:DA:1344:U:O4	2.70	0.44
41:BT:1:MET:O	41:BT:2:ILE:HG13	2.17	0.44
4:AD:153:SER:O	4:AD:154:ARG:C	2.56	0.44
23:DB:52:A:C5	36:DO:33:ARG:NH2	2.85	0.44
1:AA:1061:G:C5	1:AA:1197:A:C2	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:402:G:H4'	1:CA:620:C:O2	2.18	0.44
22:BA:1925:C:C4'	22:BA:1926:U:C4	2.99	0.44
5:AE:104:GLY:O	5:AE:105:ILE:CG2	2.63	0.44
4:AD:3:ARG:CZ	4:AD:115:ARG:CD	2.93	0.44
1:AA:452:A:C8	1:AA:452:A:C3'	3.01	0.44
4:AD:168:PRO:HB2	4:AD:171:LEU:CD1	2.47	0.44
1:AA:346:G:P	32:BK:105:ARG:NH1	2.90	0.44
22:BA:2683:C:O2'	22:BA:2684:U:H5'	2.17	0.44
22:DA:1773:A:C2'	22:DA:1774:C:H5'	2.48	0.44
5:AE:100:SER:O	5:AE:101:GLU:C	2.55	0.44
22:BA:1439:A:C2	22:BA:1553:A:C4	3.04	0.44
53:B5:50:ILE:CG2	53:B5:51:ASP:H	2.31	0.44
1:AA:652:U:C2	1:AA:752:G:N2	2.86	0.44
16:AP:15:PRO:O	16:AP:16:PHE:HB2	2.17	0.44
1:CA:949:A:C2'	1:CA:971:G:O6	2.65	0.44
22:DA:2636:C:H4'	25:DD:81:GLU:CD	2.37	0.44
22:DA:1355:G:O2'	22:DA:1356:G:H5'	2.17	0.44
1:CA:1071:C:O2	1:CA:1072:G:C8	2.69	0.44
1:CA:714:G:H21	1:CA:777:A:H1'	1.82	0.44
1:AA:987:G:N2	1:AA:988:G:C4	2.85	0.44
1:CA:1346:A:C8	1:CA:1348:U:C2	3.05	0.44
22:BA:1405:U:C2	22:BA:1406:U:C5	3.05	0.44
22:BA:1840:G:N1	22:BA:1841:U:C2	2.86	0.44
22:BA:2886:A:C5	22:BA:2887:A:C8	3.06	0.44
23:DB:76:G:H2'	23:DB:77:U:O4'	2.17	0.44
22:DA:2014:A:H2	22:DA:2613:U:C2	2.36	0.44
22:DA:1668:A:C2	22:DA:1670:C:N3	2.85	0.44
4:AD:35:GLU:C	4:AD:35:GLU:CD	2.76	0.44
42:BU:89:ASP:CG	42:BU:90:GLY:N	2.70	0.44
9:CI:107:ASP:OD2	9:CI:109:ARG:HG3	2.18	0.44
1:CA:49:U:C5	1:CA:364:A:C6	3.05	0.44
47:DZ:10:THR:HG22	47:DZ:54:MET:HA	1.99	0.44
25:DD:112:THR:O	25:DD:112:THR:HG22	2.17	0.44
7:CG:68:ASN:HB3	7:CG:130:ASN:HB3	1.99	0.44
22:BA:142:A:H2'	22:BA:143:C:O5'	2.17	0.44
22:DA:1462:C:C2	22:DA:1463:C:C5	3.05	0.44
41:BT:16:VAL:O	41:BT:17:SER:HB3	2.17	0.44
22:BA:946:C:P	57:BA:3347:HOH:O	2.75	0.44
1:AA:119:A:C4	1:AA:240:G:N7	2.85	0.44
1:AA:119:A:C5	1:AA:240:G:N7	2.85	0.44
24:DC:108:LYS:HA	24:DC:196:GLY:HA2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:509:A:C2'	1:AA:543:U:O2'	2.65	0.44
43:BV:28:ALA:HA	43:BV:88:HIS:CD2	2.52	0.44
32:DK:62:VAL:HA	32:DK:84:CYS:HB3	1.98	0.44
22:DA:1889:A:N3	22:DA:2086:U:O2'	2.44	0.44
7:AG:80:VAL:O	7:AG:81:GLY:C	2.56	0.44
29:BH:57:LYS:CG	29:BH:58:LEU:N	2.81	0.44
1:AA:650:G:C2'	1:AA:651:C:H5'	2.47	0.44
7:CG:18:PHE:CZ	7:CG:58:GLU:HG2	2.52	0.44
40:DS:80:PRO:HD2	40:DS:100:THR:OG1	2.17	0.44
1:CA:361:G:O6	1:CA:362:G:N1	2.50	0.44
44:DW:70:GLU:O	44:DW:79:PHE:N	2.45	0.44
7:CG:78:ARG:HD3	7:CG:80:VAL:CG2	2.48	0.44
15:AO:37:ASN:O	15:AO:38:HIS:C	2.54	0.44
30:DI:75:PRO:HG2	30:DI:78:VAL:HG22	2.00	0.44
22:BA:1949:G:N2	22:BA:1958:C:C2	2.86	0.44
22:BA:2706:A:N1	22:BA:2707:U:C2	2.85	0.44
1:AA:1438:G:C6	1:AA:1439:G:C5	3.06	0.44
22:BA:1700:A:H5'	22:BA:1701:A:OP2	2.18	0.44
1:CA:53:A:N3	1:CA:359:G:C2	2.86	0.44
25:DD:149:ASN:OD1	25:DD:150:GLN:N	2.50	0.44
22:BA:988:A:H2'	22:BA:989:G:O5'	2.18	0.44
22:BA:975:A:C6	22:BA:990:A:N7	2.85	0.44
5:CE:153:VAL:HG23	5:CE:157:ARG:CB	2.47	0.44
39:DR:81:LYS:O	39:DR:82:HIS:C	2.54	0.44
4:AD:132:ILE:HD12	4:AD:135:TYR:N	2.32	0.44
5:CE:107:ALA:HA	5:CE:125:ALA:HB3	1.98	0.44
22:BA:1935:G:N2	22:BA:1964:G:C8	2.85	0.44
22:BA:1910:G:H2'	22:BA:1911:U:C6	2.53	0.44
22:BA:2490:G:H4'	22:BA:2491:U:OP1	2.17	0.44
30:BI:89:GLY:O	30:BI:90:SER:C	2.54	0.44
22:BA:1056:G:O2'	22:BA:1086:A:H8	2.00	0.44
2:AB:120:GLN:HG2	2:AB:125:THR:O	2.17	0.44
1:CA:1078:U:O2	5:CE:90:THR:HG21	2.17	0.44
5:CE:133:PRO:O	5:CE:137:VAL:CG1	2.65	0.44
22:DA:176:A:C5	22:DA:177:G:C6	3.05	0.44
30:DI:80:LEU:HD23	30:DI:84:ALA:HB2	2.00	0.44
24:DC:72:ASP:O	24:DC:74:ILE:N	2.45	0.44
1:AA:658:C:O4'	15:AO:22:THR:OG1	2.30	0.44
22:BA:1116:G:H2'	22:BA:1116:G:N3	2.31	0.44
1:CA:708:C:H2'	1:CA:709:U:C6	2.53	0.44
22:DA:775:G:O6	22:DA:787:C:H2'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:27:LYS:H	3:AC:27:LYS:HD2	1.82	0.44
22:DA:2747:G:O2'	28:DG:67:THR:HG22	2.16	0.44
22:DA:1366:A:C2	22:DA:1367:A:N9	2.85	0.44
1:AA:1337:G:C5'	1:AA:1338:G:OP1	2.65	0.44
16:AP:78:VAL:CG1	16:AP:78:VAL:O	2.65	0.44
30:BI:58:VAL:HG12	30:BI:59:ILE:H	1.81	0.44
39:BR:16:GLU:HA	39:BR:98:ILE:HG22	2.00	0.44
37:DP:21:ARG:HB3	37:DP:22:PRO:HD2	1.99	0.44
6:AF:97:THR:O	6:AF:98:GLU:HG2	2.16	0.44
26:DE:52:VAL:CG2	26:DE:81:GLY:HA2	2.47	0.44
22:DA:2038:G:N7	22:DA:2039:U:C5	2.86	0.44
22:DA:2591:C:P	24:DC:238:ARG:HG3	2.56	0.44
4:AD:157:ALA:HA	4:AD:160:GLU:HB3	1.99	0.44
22:DA:2235:G:C5	22:DA:2236:U:C5	3.06	0.44
22:BA:2627:G:C5	22:BA:2628:C:C4	3.05	0.44
7:CG:37:SER:OG	9:CI:43:THR:HG23	2.16	0.44
22:DA:1671:U:O2	22:DA:1673:G:C8	2.70	0.44
36:BO:79:ALA:HA	36:BO:115:LEU:HD13	1.99	0.44
3:CC:203:PHE:CE1	3:CC:205:GLY:O	2.71	0.44
1:CA:1434:A:N6	1:CA:1435:G:N1	2.65	0.44
1:CA:1409:C:H4'	22:DA:1915:U:O4	2.18	0.44
13:CM:83:LEU:CD2	13:CM:83:LEU:N	2.79	0.44
6:AF:64:VAL:CG1	6:AF:65:GLU:N	2.80	0.44
22:BA:1805:A:O2'	24:BC:50:THR:HA	2.17	0.44
10:CJ:12:ALA:HB3	10:CJ:18:ILE:HB	1.99	0.44
26:BE:119:ILE:HB	26:BE:187:VAL:CG2	2.47	0.44
44:BW:10:THR:O	44:BW:11:ARG:HB2	2.18	0.44
22:BA:595:C:H2'	22:BA:596:U:C6	2.52	0.44
22:DA:2597:G:O2'	22:DA:2598:A:H5'	2.18	0.44
22:DA:2718:G:O2'	37:DP:96:LYS:HG3	2.18	0.44
22:DA:2443:C:H2'	22:DA:2444:G:O4'	2.17	0.44
22:DA:1269:A:H2'	22:DA:1270:C:C6	2.52	0.44
20:CT:55:GLN:N	20:CT:56:PRO:HD2	2.32	0.44
22:BA:536:G:C6	22:BA:537:G:C4	3.06	0.44
1:AA:666:G:C5	1:AA:741:G:C6	3.05	0.44
45:DX:49:LEU:O	45:DX:51:VAL:HG13	2.17	0.44
23:BB:39:A:C2	23:BB:44:G:C4	3.05	0.44
1:CA:458:U:H2'	1:CA:459:A:C8	2.52	0.44
28:BG:86:LYS:HG2	28:BG:132:VAL:HG13	1.99	0.44
22:BA:201:C:C2'	22:BA:202:U:H5'	2.47	0.44
15:AO:3:LEU:HD13	15:AO:35:GLN:HG2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:231:A:C6	22:BA:232:G:C2	3.06	0.44
27:DF:36:LEU:N	27:DF:36:LEU:HD13	2.32	0.44
23:DB:60:C:N3	23:DB:61:G:N7	2.65	0.44
1:CA:1328:C:H5''	13:CM:28:THR:CG2	2.47	0.44
37:BP:48:ILE:HG22	37:BP:100:LEU:HD12	2.00	0.44
29:BH:100:ALA:HB2	29:BH:115:VAL:HG21	1.98	0.44
22:DA:2059:A:H4'	26:DE:64:GLY:O	2.18	0.44
22:BA:1177:G:C2'	22:BA:1178:C:O5'	2.66	0.44
22:BA:1180:U:O2'	22:BA:1181:U:H5'	2.17	0.44
22:BA:1674:G:N2	22:BA:1677:A:N1	2.59	0.44
4:AD:9:LEU:CD2	4:AD:22:LYS:HB2	2.47	0.44
5:CE:103:THR:O	5:CE:122:ASN:HA	2.18	0.44
5:CE:125:ALA:O	5:CE:126:LYS:HB3	2.18	0.44
1:CA:1098:C:C4	1:CA:1099:G:N7	2.85	0.44
24:BC:71:LYS:HB2	24:BC:96:TYR:CE2	2.52	0.44
22:DA:2554:U:H2'	22:DA:2555:U:H6	1.82	0.44
2:AB:73:LYS:HE3	2:AB:205:ASP:HB2	1.99	0.44
1:CA:1124:G:N2	1:CA:1127:G:N2	2.66	0.44
22:DA:1248:G:C5	26:DE:46:GLN:NE2	2.86	0.44
22:BA:2191:A:N1	22:BA:2192:U:N3	2.65	0.44
1:AA:1368:A:OP2	9:AI:114:LYS:O	2.35	0.44
22:DA:1095:A:C5	22:DA:1096:A:C2	3.05	0.44
22:DA:934:U:H2'	22:DA:935:C:C6	2.52	0.44
22:DA:563:A:C2	22:DA:2018:G:N3	2.85	0.44
22:BA:2856:A:C6	22:BA:2857:G:C5	3.05	0.44
1:AA:11:G:C4	1:AA:12:U:C5	3.04	0.44
1:AA:977:A:H1'	1:AA:982:U:O4	2.17	0.44
22:DA:982:C:H5''	22:DA:983:A:OP2	2.17	0.44
41:BT:19:LYS:C	41:BT:21:SER:N	2.70	0.44
22:DA:1364:G:C8	45:DX:2:SER:N	2.86	0.44
25:BD:12:THR:HG21	37:BP:9:GLU:OE2	2.17	0.44
27:BF:108:VAL:CG1	27:BF:114:PHE:CE2	3.01	0.44
27:BF:36:LEU:HD22	27:BF:91:LEU:CD1	2.44	0.44
9:CI:91:ASP:OD2	9:CI:91:ASP:C	2.55	0.44
2:CB:131:LYS:HE2	2:CB:131:LYS:HA	1.98	0.44
11:CK:27:PHE:CZ	11:CK:89:PRO:CG	3.00	0.44
22:BA:2262:U:H4'	22:BA:2328:A:C2	2.53	0.44
6:CF:21:MET:O	6:CF:25:TYR:CG	2.70	0.44
35:DN:2:ARG:O	35:DN:3:HIS:C	2.56	0.44
15:CO:87:LEU:C	15:CO:87:LEU:HD23	2.37	0.44
1:AA:339:C:O2'	1:AA:340:U:H5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:117:ARG:NH1	33:DL:2:ARG:HD3	2.33	0.44
11:CK:60:PRO:N	11:CK:91:PRO:HB3	2.32	0.44
23:DB:70:C:H2'	23:DB:71:C:C6	2.52	0.44
34:BM:4:PRO:CG	34:BM:70:ASP:HA	2.46	0.44
22:DA:2544:G:H2'	22:DA:2545:G:C8	2.52	0.44
22:BA:1587:G:C5	22:BA:1588:G:N7	2.86	0.44
22:DA:1082:U:OP1	30:DI:124:ALA:CB	2.65	0.44
22:DA:1797:G:O3'	24:DC:256:LYS:HA	2.18	0.44
36:DO:18:LEU:O	36:DO:22:GLY:N	2.50	0.44
22:BA:736:C:N3	22:BA:737:C:C5	2.85	0.44
1:AA:682:G:C2	1:AA:709:U:C2	3.06	0.44
1:AA:1242:G:C2	1:AA:1243:C:C2	3.06	0.44
11:CK:122:ARG:CZ	21:CU:36:GLU:HG2	2.48	0.44
22:DA:2563:U:H1'	22:DA:2566:A:N6	2.33	0.44
8:AH:126:ILE:HG22	8:AH:127:CYS:N	2.32	0.44
20:AT:35:VAL:HG11	20:AT:79:LEU:HD13	1.99	0.44
50:D2:34:ARG:CB	50:D2:42:LEU:HD13	2.48	0.44
1:AA:119:A:C5	1:AA:240:G:C8	3.05	0.44
25:BD:9:VAL:HB	25:BD:26:VAL:O	2.17	0.44
30:DI:103:ARG:HB3	30:DI:142:ASP:OD2	2.18	0.44
22:DA:2807:U:O2	22:DA:2892:G:C2	2.70	0.44
22:DA:2440:C:N3	22:DA:2441:U:H1'	2.32	0.44
22:DA:1790:C:O2'	24:DC:208:ALA:HB2	2.18	0.44
27:DF:38:MET:HB2	27:DF:57:LEU:HD11	1.99	0.44
14:AN:18:ASP:O	14:AN:19:LYS:C	2.55	0.44
41:BT:30:ILE:HD11	41:BT:32:LEU:HD11	2.00	0.44
27:BF:94:GLU:HG3	27:BF:98:GLU:OE1	2.18	0.44
44:DW:46:HIS:NE2	44:DW:77:ARG:HD3	2.32	0.44
36:DO:67:ASN:O	36:DO:69:ASP:N	2.50	0.44
22:BA:2040:G:H2'	22:BA:2041:U:O4'	2.16	0.44
23:DB:13:G:H1	23:DB:69:G:HO2'	1.64	0.44
3:CC:172:ARG:O	3:CC:174:PRO:HD3	2.17	0.44
22:DA:543:G:C2	22:DA:551:G:C5	3.06	0.44
47:DZ:5:ILE:HD11	47:DZ:57:VAL:HG21	1.99	0.44
27:DF:60:ILE:HG23	27:DF:138:PHE:CE1	2.53	0.44
8:AH:14:ILE:O	8:AH:15:ARG:C	2.54	0.44
22:DA:2776:A:C6	22:DA:2778:A:C6	3.05	0.44
4:AD:136:GLN:OE1	4:AD:136:GLN:HA	2.17	0.44
22:BA:1972:G:H2'	22:BA:1973:G:H8	1.81	0.44
19:CS:67:VAL:O	19:CS:67:VAL:HG12	2.16	0.44
22:DA:2015:A:C5	48:D0:3:VAL:HG21	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:109:C:C2	22:DA:110:G:C8	3.06	0.44
26:DE:25:GLU:CD	33:DL:6:LEU:HA	2.38	0.44
46:BY:30:MET:O	46:BY:34:SER:OG	2.21	0.44
22:DA:380:G:O3'	45:DX:16:ASN:HB2	2.17	0.44
29:BH:89:LYS:CE	29:BH:124:THR:HG22	2.48	0.44
1:CA:53:A:C2	1:CA:359:G:C6	3.05	0.44
22:BA:2512:C:H1'	25:BD:145:SER:O	2.17	0.44
22:BA:2513:A:C6	22:BA:2514:U:C4	3.05	0.44
29:BH:97:ARG:O	29:BH:101:ASP:HB2	2.17	0.44
22:DA:2303:G:O4'	27:DF:123:ASP:HA	2.18	0.44
5:CE:101:GLU:OE2	5:CE:101:GLU:O	2.36	0.44
22:DA:2117:A:N1	22:DA:2171:A:N1	2.65	0.44
22:BA:610:C:H2'	22:BA:611:C:H6	1.82	0.44
22:DA:822:G:C6	22:DA:836:G:N1	2.85	0.44
1:CA:1000:A:C2	1:CA:1041:G:C2	3.05	0.44
2:AB:117:LEU:HG	2:AB:141:LEU:CD1	2.47	0.44
22:DA:1596:A:N6	22:DA:1597:A:C6	2.86	0.44
22:BA:1791:A:O2'	24:BC:206:GLY:CA	2.65	0.44
4:CD:150:LYS:HG2	4:CD:151:LYS:N	2.32	0.44
2:CB:213:TYR:O	2:CB:217:VAL:HG23	2.18	0.44
1:AA:537:G:H2'	1:AA:538:G:C8	2.52	0.44
1:AA:978:A:C5	1:AA:1319:A:C2	3.06	0.44
1:AA:8:A:H1'	5:AE:108:GLY:HA2	1.99	0.44
1:CA:1244:G:C2	1:CA:1294:G:C2	3.05	0.44
22:BA:1731:G:C2	22:BA:1733:G:C4	3.05	0.44
22:BA:2808:G:C2	22:BA:2891:U:C5	3.06	0.44
1:CA:436:C:C2	1:CA:437:U:C5	3.05	0.44
4:CD:57:GLU:O	4:CD:58:LYS:C	2.55	0.44
52:D4:36:ARG:O	52:D4:37:GLN:C	2.56	0.44
8:AH:93:PRO:HG3	8:AH:125:ILE:HD12	1.97	0.44
22:DA:2264:C:C2	22:DA:2277:G:N2	2.86	0.44
22:DA:1806:C:N4	22:DA:1807:G:C5	2.86	0.44
11:AK:52:PHE:HB3	11:AK:56:ARG:HB3	1.99	0.44
14:AN:3:LYS:O	14:AN:4:GLN:C	2.56	0.44
29:BH:31:VAL:N	29:BH:32:PRO:CD	2.80	0.44
19:CS:11:ILE:HG21	19:CS:41:PHE:CE2	2.52	0.44
22:BA:2204:G:C5	22:BA:2221:G:C2	3.06	0.44
22:DA:2799:A:N6	22:DA:2801:G:C6	2.86	0.44
3:AC:112:ASP:O	3:AC:116:VAL:HG23	2.17	0.44
1:AA:110:C:O2'	16:AP:25:ARG:O	2.34	0.44
11:CK:25:ALA:O	11:CK:88:GLY:HA3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:881:G:H2'	1:AA:882:C:O4'	2.17	0.44
22:BA:102:U:C4	46:BY:2:LYS:HB2	2.52	0.44
22:DA:2854:G:N2	22:DA:2864:G:C4	2.86	0.44
29:DH:25:TYR:O	29:DH:29:PHE:HB3	2.18	0.44
1:AA:828:U:C5	1:AA:859:G:C5	3.06	0.44
1:CA:748:G:H2'	1:CA:749:A:H8	1.83	0.44
8:CH:67:GLN:C	8:CH:69:LYS:H	2.19	0.44
22:BA:1799:G:OP2	24:BC:270:ARG:NH2	2.46	0.44
8:AH:11:LEU:HD11	8:AH:127:CYS:CB	2.48	0.44
49:D1:23:THR:OG1	49:D1:24:THR:N	2.50	0.44
1:CA:391:G:H2'	1:CA:392:C:O4'	2.17	0.44
1:AA:542:G:C2	1:AA:543:U:C6	3.06	0.44
45:DX:21:ALA:O	45:DX:22:LEU:HB2	2.17	0.44
27:BF:58:ALA:O	27:BF:61:SER:O	2.36	0.44
14:AN:90:ARG:HB2	14:AN:92:GLU:HG3	1.99	0.44
24:DC:197:ASN:OD1	24:DC:200:HIS:HB2	2.17	0.44
22:BA:1369:G:C2'	22:BA:1370:C:O5'	2.66	0.44
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.52	0.44
18:CR:32:TYR:CD2	18:CR:55:LEU:HD21	2.52	0.44
26:BE:148:ILE:N	26:BE:148:ILE:HD13	2.33	0.44
14:AN:13:ARG:O	14:AN:17:ALA:HB2	2.17	0.44
22:BA:2312:U:OP1	27:BF:71:ARG:N	2.51	0.44
22:DA:1726:C:H2'	22:DA:1727:C:H6	1.82	0.44
49:D1:9:ILE:HB	49:D1:52:ALA:HA	1.99	0.44
12:CL:61:PHE:CD1	12:CL:61:PHE:N	2.85	0.44
10:CJ:10:LEU:HD12	10:CJ:10:LEU:N	2.32	0.44
8:AH:34:VAL:O	8:AH:36:ILE:N	2.51	0.44
20:CT:58:VAL:HG13	20:CT:72:ALA:HA	2.00	0.44
40:DS:29:VAL:CG1	40:DS:55:ILE:HD11	2.47	0.44
1:AA:402:G:H4'	1:AA:620:C:O2	2.18	0.44
22:DA:1152:C:C3'	57:DA:3360:HOH:O	2.63	0.44
2:AB:20:THR:HA	2:AB:38:VAL:HA	1.98	0.44
22:BA:1784:A:OP1	57:BA:3698:HOH:O	2.21	0.44
1:CA:1074:G:N2	1:CA:1075:U:H1'	2.33	0.44
22:DA:1651:G:H5''	35:DN:10:LEU:HD23	1.99	0.44
22:BA:1190:G:N2	22:BA:1191:G:C4	2.86	0.44
22:BA:573:U:O2'	22:BA:574:A:H3'	2.18	0.44
13:AM:11:ASP:OD1	13:AM:45:ILE:HB	2.17	0.44
22:DA:1277:G:N1	22:DA:1294:U:C2	2.85	0.44
22:BA:2190:G:H3'	22:BA:2191:A:H8	1.83	0.44
4:AD:147:GLU:HA	4:AD:150:LYS:CD	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:D1:25:LYS:HE2	49:D1:30:LYS:O	2.17	0.44
22:BA:2569:G:C2	22:BA:2570:G:C8	3.06	0.44
27:BF:41:GLY:C	27:BF:43:ALA:N	2.71	0.44
1:AA:1351:U:H2'	1:AA:1352:C:H6	1.83	0.44
10:AJ:53:ILE:HG22	10:AJ:61:ALA:HB1	1.99	0.44
23:BB:8:C:O2'	36:BO:40:ILE:HD13	2.18	0.44
35:BN:33:ILE:CG2	35:BN:118:ARG:HD2	2.47	0.44
1:AA:64:G:N2	1:AA:67:C:C4	2.86	0.44
24:DC:75:PRO:HB2	24:DC:97:LYS:CG	2.48	0.44
22:BA:18:U:O2'	22:BA:19:A:H5'	2.16	0.44
46:BY:9:LYS:HB3	46:BY:12:GLU:CG	2.45	0.44
22:BA:2684:U:O5'	22:BA:2684:U:H6	2.00	0.44
3:AC:25:ASN:O	3:AC:27:LYS:HG2	2.17	0.44
45:DX:31:PRO:O	45:DX:33:LEU:N	2.51	0.44
22:BA:190:A:C5	22:BA:207:A:C2	3.06	0.44
22:DA:2345:G:H4'	22:DA:2346:A:H5''	1.99	0.44
9:AI:25:ASN:C	9:AI:59:GLU:HA	2.37	0.44
1:AA:215:C:H2'	1:AA:216:U:O4'	2.17	0.44
22:DA:13:A:H4'	22:DA:14:A:OP1	2.16	0.44
25:BD:39:ASP:OD2	25:BD:41:ALA:N	2.43	0.44
11:CK:89:PRO:HD3	21:CU:29:LEU:CD1	2.48	0.44
22:DA:301:G:C2	22:DA:302:C:N3	2.86	0.44
1:CA:1070:U:C2	1:CA:1071:C:C5	3.06	0.44
42:BU:99:ASN:O	42:BU:100:SER:C	2.56	0.44
22:DA:319:G:P	26:DE:132:LYS:HE3	2.58	0.44
35:DN:2:ARG:HG3	35:DN:3:HIS:N	2.33	0.44
24:BC:157:SER:O	24:BC:160:THR:HG23	2.16	0.44
1:CA:777:A:C2	1:CA:778:G:H1'	2.52	0.44
42:DU:44:LYS:O	42:DU:59:VAL:N	2.51	0.44
22:BA:583:G:C2'	22:BA:584:C:O5'	2.65	0.44
11:AK:23:ILE:HD13	11:AK:96:THR:HG21	1.99	0.44
22:DA:609:A:N7	22:DA:610:C:C2	2.85	0.44
22:BA:1356:G:C2	22:BA:1357:C:N1	2.85	0.44
1:CA:476:U:C2'	1:CA:477:C:H5'	2.48	0.44
22:BA:1079:C:H2'	22:BA:1080:A:O4'	2.17	0.44
2:CB:91:PHE:O	2:CB:91:PHE:CD2	2.71	0.44
1:CA:1329:A:H5''	13:CM:25:VAL:HA	2.00	0.44
22:DA:2014:A:H5'	40:DS:94:ASP:OD1	2.18	0.44
22:BA:2688:G:N7	22:BA:2719:G:C5	2.86	0.44
31:BJ:37:ARG:HG2	31:BJ:37:ARG:O	2.17	0.44
22:BA:2093:G:C6	22:BA:2225:A:C8	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:54:LEU:CD2	35:DN:66:ALA:HB2	2.48	0.44
22:DA:1422:G:H2'	22:DA:1423:G:O4'	2.17	0.44
33:BL:93:ASN:O	33:BL:94:THR:CB	2.65	0.44
29:DH:37:VAL:HG22	29:DH:38:PRO:HD2	1.98	0.44
10:AJ:56:HIS:O	10:AJ:57:VAL:HG12	2.17	0.44
22:DA:1862:G:C2	22:DA:1881:C:C2	3.05	0.44
17:AQ:81:LYS:O	17:AQ:82:ALA:C	2.56	0.44
22:DA:8:C:O2'	22:DA:9:G:H5'	2.17	0.44
1:AA:832:G:C6	1:AA:833:G:N7	2.86	0.44
20:CT:60:ARG:O	20:CT:64:LYS:HB2	2.18	0.44
8:CH:86:TYR:C	8:CH:87:LYS:HD2	2.38	0.44
22:DA:1052:C:C2'	22:DA:1053:C:H5'	2.48	0.44
2:AB:28:LYS:HB3	2:AB:29:PRO:HD3	1.99	0.44
42:DU:36:VAL:O	42:DU:37:GLU:C	2.56	0.44
22:DA:2820:A:C8	25:DD:196:ALA:CB	3.01	0.44
1:CA:29:U:N3	1:CA:30:U:C5	2.86	0.44
1:CA:28:A:H2'	1:CA:29:U:O4'	2.17	0.44
43:BV:43:ASP:OD1	43:BV:46:LYS:HG2	2.17	0.44
4:CD:177:LYS:HB2	4:CD:177:LYS:HE2	1.82	0.44
1:AA:118:U:H2'	1:AA:119:A:H5''	1.99	0.44
1:AA:908:A:C2	1:AA:909:A:C4	3.05	0.44
1:AA:819:A:N7	1:AA:1529:G:C2	2.85	0.44
11:AK:97:ILE:HG13	11:AK:98:ARG:N	2.32	0.44
25:BD:137:SER:O	25:BD:138:LEU:CB	2.64	0.44
22:BA:2844:G:H2'	22:BA:2845:U:O4'	2.18	0.44
22:DA:977:G:N7	57:DA:3586:HOH:O	2.36	0.44
34:DM:68:PHE:O	34:DM:69:PRO:O	2.36	0.44
7:AG:83:SER:HB2	7:AG:85:TYR:CD2	2.52	0.44
22:DA:980:A:C4	22:DA:1136:G:O4'	2.71	0.44
1:CA:179:A:H2'	1:CA:180:U:C6	2.53	0.44
15:CO:74:ASP:CG	15:CO:77:ARG:HG3	2.38	0.44
22:BA:2218:G:O2'	22:BA:2219:U:H5'	2.16	0.44
1:CA:738:C:H2'	1:CA:739:C:H6	1.81	0.44
1:CA:720:C:O2'	18:CR:56:ALA:HB2	2.18	0.44
4:AD:46:PRO:O	4:AD:48:LEU:HD22	2.17	0.44
31:BJ:21:THR:HA	31:BJ:61:LYS:HB3	1.99	0.44
1:CA:745:G:H5''	1:CA:851:G:O2'	2.17	0.44
22:DA:2025:C:H2'	22:DA:2026:U:C6	2.52	0.44
38:BQ:68:ALA:CB	38:BQ:99:ALA:HB1	2.48	0.44
22:DA:2619:C:H4'	25:DD:156:PHE:O	2.17	0.44
22:DA:466:A:N1	22:DA:795:C:O2'	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:129:PRO:HG3	26:DE:156:ASN:OD1	2.18	0.44
22:DA:1290:C:N3	22:DA:1291:C:C5	2.85	0.44
17:AQ:5:ILE:N	17:AQ:5:ILE:HD12	2.33	0.44
17:AQ:67:LEU:N	17:AQ:67:LEU:HD12	2.33	0.44
29:BH:62:LEU:O	29:BH:62:LEU:HD12	2.17	0.44
1:CA:874:G:C6	1:CA:875:U:C4	3.05	0.44
7:CG:27:VAL:HG12	7:CG:43:VAL:HG21	1.99	0.44
22:DA:2054:A:OP1	22:DA:2055:C:O2'	2.30	0.44
5:CE:154:ALA:HA	5:CE:157:ARG:HB3	1.99	0.44
1:AA:1157:A:C6	1:AA:1180:A:C5	3.06	0.44
22:BA:609:A:H2'	22:BA:610:C:O4'	2.17	0.44
22:DA:54:G:C6	22:DA:55:G:N7	2.86	0.44
22:DA:2213:U:H4'	22:DA:2214:C:OP2	2.17	0.44
1:CA:1269:A:C2	1:CA:1313:U:O4'	2.71	0.44
22:BA:1605:C:C2'	22:BA:1606:C:H5'	2.48	0.44
22:BA:563:A:N7	22:BA:2018:G:C6	2.85	0.44
1:CA:441:A:C2	1:CA:497:G:C5	3.06	0.44
19:AS:51:VAL:HB	19:AS:58:VAL:HG22	1.99	0.44
22:DA:1096:A:C6	22:DA:1097:U:C5	3.06	0.44
22:DA:1045:C:C4'	22:DA:1046:A:H5'	2.48	0.44
22:DA:1045:C:H41	22:DA:1111:A:H2'	1.81	0.44
1:AA:1124:G:OP1	10:AJ:37:ARG:C	2.56	0.44
31:DJ:80:HIS:O	31:DJ:81:ILE:C	2.56	0.44
22:DA:2430:A:P	57:DA:3344:HOH:O	2.76	0.44
22:DA:2230:G:H2'	22:DA:2231:U:C6	2.51	0.44
16:AP:42:ILE:CG2	16:AP:42:ILE:O	2.66	0.44
22:DA:1470:A:C2'	22:DA:1471:G:O5'	2.66	0.44
1:AA:1333:A:C2	1:AA:1334:G:H1'	2.53	0.44
1:AA:1307:U:H2'	1:AA:1308:U:H6	1.82	0.44
2:AB:51:ASN:O	2:AB:52:GLU:CB	2.66	0.44
22:DA:2425:A:H4'	22:DA:2426:A:O5'	2.18	0.44
22:DA:2897:U:H2'	22:DA:2898:U:C6	2.52	0.44
6:CF:54:LEU:O	6:CF:55:HIS:O	2.36	0.44
1:AA:330:C:O2'	1:AA:331:G:H5'	2.18	0.44
22:DA:2835:A:H4'	22:DA:2836:U:OP1	2.18	0.44
1:AA:602:A:C2	1:AA:603:U:O2	2.71	0.44
22:BA:1047:G:N2	22:BA:1110:G:C4	2.86	0.44
39:DR:61:ALA:HB2	39:DR:98:ILE:HA	2.00	0.44
22:DA:630:G:H3'	22:DA:631:A:C5'	2.48	0.44
22:DA:633:A:H5''	33:DL:70:LYS:HD3	1.99	0.44
22:DA:78:U:OP2	46:DY:2:LYS:HD3	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:35:GLU:HB2	21:CU:19:PHE:HZ	1.80	0.44
15:AO:62:GLN:O	15:AO:65:LYS:N	2.51	0.44
13:CM:22:ILE:HB	13:CM:25:VAL:CG1	2.48	0.44
1:CA:246:A:N3	1:CA:279:A:N6	2.66	0.44
1:CA:1516:G:C2	1:CA:1518:A:OP2	2.71	0.44
1:AA:843:U:OP1	1:AA:846:G:N2	2.48	0.44
29:DH:127:GLU:CG	29:DH:144:VAL:O	2.65	0.44
13:AM:85:CYS:SG	13:AM:87:ARG:HG3	2.57	0.44
22:BA:1718:G:C2	22:BA:1719:G:C8	3.05	0.44
22:DA:2325:G:C6	22:DA:2326:C:N4	2.86	0.44
1:AA:858:G:O2'	1:AA:859:G:C5'	2.66	0.44
43:DV:30:ILE:HD11	43:DV:63:ILE:HD12	1.99	0.44
42:DU:53:ASN:OD1	42:DU:53:ASN:N	2.50	0.44
3:AC:85:GLU:OE1	3:AC:88:ARG:CZ	2.66	0.44
22:DA:1480:C:C4	22:DA:1481:U:C4	3.06	0.44
15:CO:33:THR:HA	15:CO:63:ARG:HH11	1.82	0.44
3:AC:155:GLY:N	3:AC:164:ARG:O	2.51	0.44
22:BA:513:A:C2'	22:BA:514:A:H5'	2.48	0.44
22:BA:597:G:C5	22:BA:598:U:C4	3.05	0.44
6:CF:38:ARG:NH1	6:CF:63:ASN:HB2	2.33	0.44
1:CA:1397:C:H3'	1:CA:1398:A:H5''	2.00	0.44
27:DF:108:VAL:N	27:DF:109:PRO:CD	2.81	0.44
15:AO:2:SER:O	15:AO:3:LEU:CB	2.65	0.44
22:DA:543:G:C2	22:DA:551:G:C4	3.06	0.44
1:CA:179:A:C5	1:CA:180:U:C4	3.06	0.44
1:AA:457:G:C6	1:AA:458:U:N3	2.85	0.44
1:AA:457:G:N2	1:AA:476:U:C2	2.85	0.44
1:AA:834:U:C4	1:AA:835:U:C4	3.05	0.44
22:DA:1702:G:C6	22:DA:1703:G:C5	3.05	0.44
22:DA:2749:A:OP1	28:DG:2:SER:HB3	2.18	0.44
31:DJ:29:ALA:HA	31:DJ:105:VAL:HG22	1.98	0.44
32:BK:4:GLU:O	32:BK:5:GLN:HB2	2.18	0.44
37:DP:43:PHE:CD2	37:DP:72:ARG:HD3	2.53	0.44
25:DD:168:GLU:O	25:DD:170:VAL:HG22	2.18	0.44
27:DF:143:TYR:O	27:DF:146:VAL:HG22	2.18	0.44
3:CC:162:ILE:O	3:CC:162:ILE:HD12	2.18	0.44
24:BC:187:ASP:OD1	24:BC:187:ASP:N	2.50	0.44
22:BA:2518:A:H2'	22:BA:2518:A:N3	2.31	0.44
22:DA:1588:G:H3'	22:DA:1589:U:C6	2.53	0.44
35:DN:24:MET:HE3	35:DN:44:LEU:HD22	2.00	0.44
1:CA:149:A:C2	1:CA:150:U:C2	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:99:ILE:CD1	29:BH:117:LEU:HD13	2.48	0.44
22:BA:991:C:N4	22:BA:1185:G:O6	2.51	0.44
22:BA:974:G:O4'	22:BA:1186:G:N2	2.51	0.44
5:CE:150:PRO:C	5:CE:152:MET:N	2.71	0.44
30:BI:80:LEU:HD13	30:BI:136:MET:SD	2.57	0.44
26:DE:40:ARG:NH2	26:DE:92:HIS:CD2	2.86	0.44
11:AK:21:ALA:HB2	11:AK:82:LEU:HD12	2.00	0.44
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.53	0.44
22:DA:1257:C:N4	22:DA:1258:U:O4	2.51	0.44
22:DA:118:A:C8	22:DA:119:A:N7	2.85	0.44
5:AE:41:ASP:C	5:AE:41:ASP:OD1	2.56	0.44
1:CA:375:U:C2	1:CA:376:G:C8	3.06	0.44
22:BA:1040:A:C2	22:BA:1116:G:N1	2.86	0.44
22:DA:758:C:O2'	22:DA:1981:A:N3	2.38	0.44
1:AA:956:U:C5	1:AA:957:U:C5	3.05	0.44
1:CA:429:U:H4'	1:CA:430:A:OP1	2.14	0.44
22:DA:481:G:C4	22:DA:507:A:C2	3.06	0.44
1:AA:945:G:C2	1:AA:946:A:C8	3.05	0.44
29:BH:4:ILE:HG23	29:BH:17:ASP:O	2.17	0.44
22:DA:1691:C:C4	22:DA:1692:U:C4	3.06	0.44
22:DA:1128:G:C4	22:DA:1129:A:C2	3.06	0.44
32:BK:113:MET:O	32:BK:116:ILE:HG13	2.16	0.44
22:DA:2024:G:C2	22:DA:2040:G:N3	2.86	0.44
42:DU:72:ILE:HG12	42:DU:83:VAL:HG23	2.00	0.44
1:CA:1220:G:H4'	19:CS:34:TRP:O	2.17	0.44
14:CN:30:ILE:O	14:CN:33:ASP:HB3	2.16	0.44
17:CQ:12:VAL:HG12	17:CQ:13:VAL:N	2.32	0.44
22:DA:1056:G:C6	22:DA:1102:C:OP2	2.71	0.44
19:CS:53:ASN:HB3	19:CS:75:ALA:HB1	1.99	0.44
1:CA:663:A:H2'	1:CA:664:G:O4'	2.17	0.44
28:DG:89:LEU:HD13	28:DG:89:LEU:N	2.32	0.44
22:BA:2267:A:C2	57:BA:3511:HOH:O	2.56	0.44
25:BD:37:VAL:HG12	25:BD:38:LYS:N	2.33	0.44
22:DA:747:U:O2	22:DA:2014:A:H1'	2.18	0.44
2:AB:67:ILE:HG21	2:AB:69:PHE:CE2	2.53	0.44
2:AB:90:PHE:CD2	2:AB:90:PHE:N	2.85	0.44
22:BA:1229:C:H2'	22:BA:1230:A:C8	2.53	0.44
3:CC:121:THR:CB	3:CC:187:SER:OG	2.65	0.44
1:CA:309:A:H1'	1:CA:608:A:C2	2.53	0.44
34:DM:58:LYS:O	34:DM:60:GLN:N	2.46	0.44
22:BA:109:C:H2'	22:BA:110:G:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:696:G:N1	22:DA:767:U:C2	2.86	0.44
41:DT:37:ASP:OD2	41:DT:38:ALA:N	2.51	0.44
15:AO:30:ALA:HA	15:AO:85:LEU:HD21	1.99	0.44
1:CA:1130:A:C1'	1:CA:1146:A:C2	3.01	0.44
42:BU:7:ARG:O	42:BU:8:ASP:O	2.36	0.44
22:DA:1437:C:N3	22:DA:1438:U:C4	2.86	0.44
22:DA:798:G:C2	22:DA:799:G:C5	3.06	0.44
32:BK:60:ALA:HB1	32:BK:84:CYS:HB2	2.00	0.44
36:DO:80:GLU:O	36:DO:84:GLU:HG3	2.17	0.44
22:BA:1661:G:H2'	22:BA:1662:U:H6	1.82	0.44
22:DA:1286:A:N6	22:DA:1329:U:O2'	2.40	0.44
22:DA:2602:A:H4'	22:DA:2603:G:H5'	1.99	0.44
22:BA:962:G:O2'	22:BA:963:U:H5'	2.17	0.44
29:BH:57:LYS:HG3	29:BH:58:LEU:N	2.33	0.44
22:DA:244:A:H5''	33:DL:67:THR:HG21	1.99	0.44
22:BA:372:G:OP2	45:BX:61:LYS:HD3	2.18	0.44
22:DA:693:A:H2'	22:DA:694:U:O4'	2.17	0.44
27:DF:42:GLU:HB2	27:DF:49:LEU:HD23	1.99	0.44
7:AG:133:THR:O	7:AG:136:LYS:HB3	2.18	0.44
8:CH:40:LEU:O	8:CH:45:PHE:HB2	2.18	0.44
1:AA:104:G:O2'	1:AA:105:G:H5'	2.18	0.44
8:CH:55:THR:C	8:CH:57:PRO:HD3	2.38	0.44
9:AI:83:ILE:O	9:AI:87:LEU:HD13	2.17	0.44
19:AS:37:ARG:O	19:AS:70:LYS:HD2	2.17	0.44
9:CI:8:GLY:N	9:CI:86:ALA:HB2	2.33	0.44
36:DO:70:ALA:O	36:DO:74:VAL:HB	2.17	0.44
10:AJ:80:THR:O	10:AJ:82:LYS:N	2.51	0.44
16:AP:19:VAL:HG13	16:AP:37:GLY:C	2.38	0.44
11:AK:16:VAL:HG12	11:AK:77:TYR:HB3	1.99	0.44
1:AA:511:C:C2	1:AA:512:U:C5	3.06	0.44
8:AH:32:LEU:CD1	8:AH:32:LEU:C	2.86	0.44
41:DT:91:GLN:NE2	41:DT:91:GLN:O	2.48	0.44
18:CR:45:THR:OG1	18:CR:45:THR:O	2.31	0.44
29:BH:89:LYS:HE3	29:BH:124:THR:HG22	1.98	0.44
1:CA:1386:G:C2	1:CA:1387:G:C8	3.05	0.44
22:BA:2756:U:H5''	52:B4:19:ARG:HG2	2.00	0.44
22:DA:450:G:H2'	22:DA:451:U:H5''	2.00	0.44
22:DA:2043:C:C2	22:DA:2044:C:C5	3.06	0.44
22:BA:1915:U:H2'	22:BA:1916:A:O4'	2.18	0.44
1:CA:673:A:O3'	6:CF:86:ARG:NH2	2.51	0.44
14:AN:46:LEU:HD12	14:AN:46:LEU:C	2.38	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1651:G:C2	22:DA:2007:U:C2	3.06	0.44
22:BA:819:A:H1'	22:BA:1189:A:N1	2.33	0.44
33:BL:29:LYS:CG	33:BL:30:THR:HG23	2.47	0.44
22:BA:478:A:C6	22:BA:480:A:N6	2.86	0.44
22:DA:1034:G:C6	22:DA:1035:U:N3	2.86	0.44
22:DA:1435:G:O2'	22:DA:1436:G:H5'	2.18	0.44
24:DC:74:ILE:HG22	24:DC:75:PRO:O	2.18	0.44
1:AA:1050:G:C2	1:AA:1209:C:O2	2.71	0.44
42:DU:7:ARG:CG	42:DU:8:ASP:H	2.29	0.44
24:BC:78:VAL:HG21	24:BC:110:LEU:CD2	2.47	0.44
48:B0:48:TYR:CZ	48:B0:53:LYS:HD2	2.53	0.44
22:DA:1721:G:H2'	22:DA:1738:G:H22	1.83	0.44
1:CA:728:A:OP1	15:CO:54:ARG:NH2	2.51	0.44
30:DI:57:VAL:HG21	30:DI:69:PHE:HB2	2.00	0.44
1:AA:560:A:H5'	1:AA:566:G:N2	2.33	0.44
1:AA:569:C:H2'	1:AA:569:C:O2	2.17	0.44
1:AA:69:G:O6	1:AA:98:A:N6	2.51	0.44
1:AA:375:U:C2	1:AA:376:G:C8	3.06	0.44
22:DA:478:A:C2	22:DA:480:A:C4	3.06	0.44
22:BA:973:A:H5'	22:BA:1188:U:C1'	2.48	0.44
22:BA:973:A:H5'	22:BA:1188:U:H1'	2.00	0.44
22:BA:1420:A:O2'	22:BA:1421:G:H5'	2.18	0.44
17:AQ:12:VAL:O	17:AQ:13:VAL:HG12	2.18	0.44
3:AC:14:ILE:O	3:AC:16:LYS:N	2.51	0.44
27:BF:108:VAL:N	27:BF:109:PRO:HD2	2.33	0.44
48:B0:13:ARG:O	48:B0:17:ARG:HG3	2.18	0.44
46:DY:9:LYS:HG2	46:DY:10:SER:N	2.33	0.44
22:DA:945:A:N7	22:DA:2448:A:C2	2.86	0.44
22:DA:301:G:N3	22:DA:302:C:C2	2.86	0.44
1:AA:773:G:H2'	1:AA:774:G:O4'	2.18	0.44
25:BD:100:LEU:HD12	25:BD:100:LEU:O	2.18	0.44
25:BD:4:LEU:HD12	25:BD:32:ASN:CG	2.38	0.44
42:DU:57:GLY:O	42:DU:59:VAL:HG23	2.18	0.44
17:CQ:50:ASN:O	17:CQ:52:GLU:N	2.51	0.44
22:DA:279:A:N6	22:DA:361:G:H1'	2.33	0.44
1:AA:1093:A:H2'	1:AA:1095:U:OP1	2.18	0.44
22:DA:534:U:H5'	38:DQ:42:ALA:HB1	1.99	0.44
6:CF:40:GLU:HB2	6:CF:42:TRP:HE1	1.83	0.44
24:DC:35:GLU:HG3	24:DC:35:GLU:O	2.18	0.44
22:DA:630:G:H5''	22:DA:631:A:OP2	2.17	0.44
1:AA:221:C:C2	1:AA:222:C:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:73:VAL:HG12	7:AG:90:GLU:CG	2.48	0.44
22:DA:1668:A:C4	22:DA:1674:G:N7	2.86	0.44
22:BA:1876:A:N1	22:BA:1877:A:C4	2.86	0.44
1:CA:77:A:C2	1:CA:93:U:N3	2.86	0.44
1:CA:517:G:C8	1:CA:531:U:C5	3.06	0.44
20:AT:57:ILE:HD12	20:AT:60:ARG:HD2	1.98	0.44
22:DA:2491:U:H5'	22:DA:2570:G:C5'	2.48	0.44
13:AM:85:CYS:O	13:AM:89:LEU:HD12	2.17	0.44
9:CI:49:ARG:C	9:CI:51:PRO:HD2	2.38	0.44
19:CS:30:PRO:HA	19:CS:48:THR:O	2.18	0.44
22:DA:568:U:H2'	22:DA:570:G:OP2	2.18	0.44
22:DA:1262:A:H2'	22:DA:1262:A:N3	2.33	0.44
6:CF:71:ILE:HG22	6:CF:72:ASP:N	2.33	0.44
43:BV:14:LYS:HD2	43:BV:18:ARG:NH1	2.32	0.44
22:BA:2403:C:C4	22:BA:2415:G:N1	2.86	0.44
22:BA:1649:G:C6	22:BA:2009:A:N1	2.86	0.44
1:AA:1302:C:N3	13:AM:17:ILE:HD11	2.33	0.44
37:DP:4:ILE:O	37:DP:8:LEU:HB2	2.17	0.44
15:AO:25:THR:HG22	15:AO:26:GLU:N	2.33	0.44
11:AK:108:THR:HG22	11:AK:109:ASN:ND2	2.32	0.44
1:AA:307:C:H5''	1:AA:308:C:OP2	2.18	0.44
1:AA:417:G:C6	1:AA:418:C:C4	3.06	0.44
1:AA:239:U:H5''	1:AA:240:G:OP2	2.17	0.44
22:BA:1627:G:C2	22:BA:1628:G:C8	3.06	0.44
1:CA:75:G:C2	1:CA:96:U:C2	3.06	0.44
8:AH:111:MET:HE2	8:AH:116:ALA:N	2.33	0.44
1:AA:830:G:H2'	1:AA:831:A:H8	1.83	0.44
2:AB:193:PRO:O	2:AB:195:GLY:N	2.44	0.44
22:BA:1465:G:C6	22:BA:1466:U:N3	2.86	0.44
50:B2:11:LYS:HE2	57:B2:101:HOH:O	2.17	0.44
22:BA:1590:A:C2	22:BA:1591:A:C5	3.05	0.44
27:BF:17:MET:O	27:BF:21:ASN:HA	2.18	0.44
22:DA:1490:A:N3	22:DA:1490:A:H2'	2.32	0.44
28:BG:52:PHE:N	28:BG:52:PHE:CD2	2.86	0.44
3:CC:167:TRP:C	3:CC:167:TRP:HE3	2.21	0.44
22:DA:545:U:O5'	22:DA:545:U:O2	2.35	0.44
22:DA:2247:A:H3'	57:DA:3504:HOH:O	2.17	0.44
41:DT:65:GLY:O	41:DT:66:LYS:C	2.56	0.44
22:DA:1361:G:C5	22:DA:1362:C:C5	3.06	0.43
22:DA:1361:G:C6	22:DA:1362:C:C5	3.06	0.43
1:CA:688:G:O2'	1:CA:704:A:N1	2.46	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1072:C:OP2	22:BA:1075:C:N4	2.51	0.43
39:BR:53:PHE:CD1	39:BR:53:PHE:N	2.83	0.43
22:BA:1483:G:C2	22:BA:1484:U:C2	3.06	0.43
30:BI:39:CYS:HA	30:BI:42:PHE:HB3	1.99	0.43
22:BA:278:A:N1	22:BA:362:A:C8	2.86	0.43
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.47	0.43
10:AJ:53:ILE:CG2	10:AJ:61:ALA:HB1	2.47	0.43
22:DA:1064:C:O4'	30:DI:90:SER:HB2	2.18	0.43
4:CD:105:MET:SD	4:CD:143:VAL:HG13	2.57	0.43
4:CD:124:MET:CE	4:CD:146:ARG:HD2	2.47	0.43
37:DP:53:ARG:CB	37:DP:56:HIS:HB2	2.48	0.43
22:BA:587:C:H3'	22:BA:588:U:H5'	2.00	0.43
1:AA:1249:C:H5''	9:AI:38:TYR:OH	2.17	0.43
22:DA:563:A:C6	22:DA:564:C:N3	2.85	0.43
1:CA:373:A:N3	1:CA:374:A:C8	2.86	0.43
1:CA:15:G:C2	1:CA:16:A:C4	3.06	0.43
22:DA:699:A:H2'	22:DA:700:G:C5'	2.47	0.43
1:AA:1322:C:O2'	1:AA:1323:G:OP2	2.27	0.43
22:BA:1492:G:C6	22:BA:1499:C:N3	2.86	0.43
18:AR:72:ASP:OD2	21:AU:4:ILE:HG13	2.18	0.43
22:BA:2392:A:C8	22:BA:2429:G:C6	3.06	0.43
13:AM:107:ARG:HH11	13:AM:107:ARG:CG	2.29	0.43
1:AA:464:U:N3	1:AA:466:A:H5''	2.33	0.43
2:CB:135:LEU:C	2:CB:137:ARG:N	2.71	0.43
4:CD:188:ARG:O	4:CD:191:LEU:HD12	2.18	0.43
38:DQ:27:ALA:HB1	38:DQ:31:VAL:CG2	2.48	0.43
26:DE:131:THR:O	26:DE:135:ALA:N	2.50	0.43
25:BD:101:PHE:CE2	25:BD:203:VAL:CG1	3.00	0.43
22:BA:1250:G:H5'	38:BQ:6:ARG:HD3	2.00	0.43
22:BA:813:U:C2	22:BA:1195:G:N2	2.86	0.43
22:BA:1047:G:C2	22:BA:1110:G:C4	3.06	0.43
1:AA:223:A:C6	1:AA:224:U:O4	2.71	0.43
22:DA:2298:A:C4	22:DA:2321:U:C5	3.06	0.43
22:DA:2323:G:C5	22:DA:2324:U:C5	3.06	0.43
22:DA:630:G:C5'	22:DA:631:A:OP2	2.66	0.43
22:DA:1581:G:C4	22:DA:1582:C:C5	3.06	0.43
1:AA:1202:U:H1'	14:AN:69:ARG:HD2	1.99	0.43
3:AC:143:ARG:CG	3:AC:144:LEU:HD13	2.48	0.43
17:CQ:28:PHE:CE1	17:CQ:37:PHE:O	2.71	0.43
1:CA:1463:U:H2'	1:CA:1464:U:C6	2.54	0.43
22:DA:562:U:H2'	22:DA:572:A:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:772:U:O2'	1:CA:773:G:H5'	2.17	0.43
22:BA:695:G:C6	22:BA:696:G:N7	2.86	0.43
1:CA:1489:G:C2'	1:CA:1490:U:H5'	2.48	0.43
8:CH:88:ARG:O	8:CH:89:LYS:HB3	2.18	0.43
22:BA:2619:C:H2'	22:BA:2620:C:H6	1.82	0.43
7:AG:103:TRP:CH2	7:AG:141:VAL:HG21	2.53	0.43
22:DA:2222:C:H2'	22:DA:2223:G:O5'	2.18	0.43
22:BA:864:G:O2'	22:BA:865:C:H5'	2.18	0.43
1:AA:582:C:C4	1:AA:583:A:N7	2.86	0.43
25:DD:172:VAL:HG23	25:DD:194:PRO:HD3	1.99	0.43
22:BA:669:G:C2'	22:BA:669:G:N3	2.80	0.43
2:CB:71:GLY:O	2:CB:93:ASN:HA	2.17	0.43
28:BG:38:ASN:O	28:BG:39:ASP:CB	2.66	0.43
1:CA:222:C:C2	1:CA:223:A:C8	3.06	0.43
45:BX:64:ILE:CD1	45:BX:68:LEU:HG	2.48	0.43
5:CE:35:ALA:O	5:CE:50:TYR:O	2.37	0.43
15:AO:69:TYR:O	15:AO:72:ARG:HB3	2.18	0.43
1:AA:818:G:O2'	1:AA:819:A:H5'	2.18	0.43
44:DW:40:GLN:OE1	44:DW:44:LYS:N	2.51	0.43
24:BC:146:MET:SD	24:BC:154:LEU:HD21	2.57	0.43
37:BP:46:VAL:O	37:BP:61:VAL:HA	2.18	0.43
17:AQ:46:VAL:HG11	17:AQ:61:ILE:HG13	2.00	0.43
24:BC:174:LEU:O	24:BC:181:MET:HA	2.17	0.43
17:CQ:55:ILE:HG12	17:CQ:56:GLY:N	2.33	0.43
22:DA:2741:A:H2'	22:DA:2742:G:O4'	2.18	0.43
26:DE:140:ASP:C	26:DE:142:ALA:H	2.21	0.43
22:BA:2607:G:H2'	22:BA:2608:G:O4'	2.18	0.43
31:BJ:70:THR:C	31:BJ:71:ASP:OD2	2.56	0.43
26:DE:147:LEU:HB3	26:DE:186:VAL:HG22	2.00	0.43
22:BA:2892:G:H5''	22:BA:2894:G:N2	2.33	0.43
22:DA:1655:A:C6	22:DA:1656:C:C2	3.05	0.43
22:BA:1538:G:OP2	22:BA:1538:G:H8	2.00	0.43
38:DQ:71:GLN:HA	38:DQ:71:GLN:OE1	2.17	0.43
1:AA:439:U:H2'	1:AA:440:C:O5'	2.17	0.43
10:AJ:49:PHE:CD2	14:AN:77:PHE:CE1	3.05	0.43
22:BA:878:A:H5'	22:BA:879:G:OP2	2.18	0.43
22:DA:971:G:H2'	22:DA:972:A:O4'	2.18	0.43
33:DL:23:ILE:HG12	39:DR:82:HIS:CD2	2.53	0.43
24:BC:222:GLY:C	24:BC:224:ALA:H	2.22	0.43
22:DA:2551:C:H2'	22:DA:2552:U:C6	2.52	0.43
22:BA:2718:G:O3'	37:BP:96:LYS:HG3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:211:G:O2'	1:CA:212:G:O4'	2.36	0.43
1:AA:1367:C:P	9:AI:114:LYS:HZ1	2.40	0.43
30:DI:80:LEU:HD23	30:DI:84:ALA:CB	2.48	0.43
22:BA:1926:U:C2'	22:BA:1926:U:O2	2.66	0.43
22:DA:1070:A:C2	22:DA:1097:U:O2'	2.70	0.43
1:CA:451:A:H4'	1:CA:452:A:O5'	2.17	0.43
18:CR:23:TYR:HA	18:CR:58:ALA:HB1	2.00	0.43
2:AB:62:SER:O	2:AB:64:LYS:N	2.51	0.43
5:AE:111:MET:HE1	5:AE:125:ALA:HB1	2.00	0.43
4:AD:78:GLU:O	4:AD:79:ALA:C	2.56	0.43
40:BS:83:LYS:HD2	40:BS:97:LEU:HD11	2.00	0.43
1:AA:922:G:C6	1:AA:923:A:C6	3.06	0.43
1:CA:1055:A:C6	1:CA:1206:G:C4	3.06	0.43
21:CU:53:VAL:HG13	21:CU:54:LYS:H	1.83	0.43
22:DA:2873:A:H1'	35:DN:4:ARG:O	2.18	0.43
36:DO:110:ALA:HB3	36:DO:117:PHE:HE2	1.84	0.43
1:CA:1211:U:H1'	1:CA:1213:A:C2	2.52	0.43
22:DA:232:G:N1	22:DA:420:C:OP1	2.46	0.43
33:DL:56:PRO:O	33:DL:60:ARG:HB3	2.18	0.43
1:CA:1048:G:H4'	14:CN:3:LYS:CE	2.49	0.43
2:CB:186:ILE:HA	2:CB:200:ILE:O	2.18	0.43
31:DJ:7:LYS:O	31:DJ:11:VAL:HG22	2.18	0.43
22:DA:1801:A:C4	24:DC:262:ARG:NH2	2.85	0.43
22:DA:334:C:OP1	22:DA:335:C:N4	2.51	0.43
24:BC:195:VAL:CG2	24:BC:196:GLY:N	2.81	0.43
22:DA:199:A:N6	22:DA:2434:A:C5	2.87	0.43
22:DA:2497:A:N3	22:DA:2498:C:N4	2.66	0.43
24:BC:141:VAL:CG1	24:BC:190:ALA:HB1	2.47	0.43
1:CA:841:C:N3	1:CA:843:U:C5	2.86	0.43
8:AH:49:PHE:C	8:AH:49:PHE:HD1	2.21	0.43
22:DA:2298:A:C4	22:DA:2321:U:H5	2.36	0.43
11:CK:92:GLY:O	11:CK:94:GLU:N	2.51	0.43
35:DN:103:ARG:CB	35:DN:110:MET:HE3	2.48	0.43
19:CS:58:VAL:CG1	19:CS:75:ALA:HB2	2.48	0.43
22:BA:1845:G:C6	22:BA:1896:G:C6	3.05	0.43
22:DA:2893:A:O4'	22:DA:2894:G:C2	2.71	0.43
1:CA:575:G:N2	1:CA:881:G:H1'	2.33	0.43
1:CA:823:C:O2'	1:CA:824:G:H5'	2.18	0.43
22:BA:547:A:C8	22:BA:548:G:N3	2.86	0.43
22:DA:1936:A:OP1	22:DA:1937:A:H5'	2.18	0.43
20:AT:54:MET:CE	20:AT:58:VAL:HG21	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2100:G:C5	22:DA:2190:G:C6	3.06	0.43
22:BA:816:C:C2	22:BA:1192:G:C2	3.06	0.43
1:CA:802:A:C2	1:CA:803:G:H1'	2.53	0.43
22:DA:293:U:C5'	22:DA:294:A:OP2	2.66	0.43
1:CA:926:G:C6	1:CA:1505:G:C6	3.05	0.43
1:CA:844:G:H3'	1:CA:844:G:OP1	2.18	0.43
1:AA:33:A:H2'	1:AA:34:C:C6	2.53	0.43
9:CI:12:ARG:O	9:CI:12:ARG:HG3	2.16	0.43
1:AA:116:A:H2'	1:AA:117:G:C8	2.53	0.43
21:CU:43:THR:O	21:CU:46:LYS:HB3	2.17	0.43
1:AA:591:U:H2'	1:AA:592:G:H8	1.83	0.43
11:CK:109:ASN:HB3	21:CU:6:VAL:O	2.18	0.43
22:DA:2718:G:O3'	37:DP:96:LYS:HG3	2.18	0.43
22:DA:2602:A:H4'	22:DA:2603:G:C5'	2.48	0.43
12:CL:63:VAL:HG21	12:CL:95:TYR:CD2	2.54	0.43
22:BA:2519:U:C5	22:BA:2541:A:C6	3.06	0.43
1:AA:246:A:N3	1:AA:247:G:H1'	2.32	0.43
26:DE:25:GLU:HG2	33:DL:6:LEU:HD23	2.00	0.43
7:AG:65:ALA:HA	7:AG:128:ALA:HA	2.00	0.43
24:BC:144:VAL:HG12	24:BC:145:GLU:O	2.17	0.43
4:CD:73:ARG:O	4:CD:76:TYR:N	2.51	0.43
25:BD:71:ALA:HA	25:BD:92:VAL:HG11	2.00	0.43
22:BA:815:C:C2	22:BA:1193:G:C2	3.05	0.43
1:CA:996:A:H2'	1:CA:997:U:C6	2.53	0.43
26:DE:8:ALA:O	26:DE:9:GLN:HB2	2.17	0.43
1:CA:190:A:H2'	1:CA:191:G:O4'	2.17	0.43
5:AE:46:VAL:HG11	5:AE:118:ALA:HB2	1.99	0.43
3:CC:34:ASP:O	3:CC:38:LYS:HB2	2.17	0.43
28:BG:173:GLU:OE1	28:BG:173:GLU:HA	2.17	0.43
22:BA:2343:U:O2	22:BA:2343:U:H2'	2.17	0.43
30:DI:127:ARG:HA	30:DI:130:GLU:HB2	1.98	0.43
22:DA:303:G:H2'	22:DA:304:U:C6	2.53	0.43
35:DN:31:HIS:O	35:DN:33:ILE:HG22	2.18	0.43
22:BA:2377:A:O2'	22:BA:2378:A:H5'	2.18	0.43
22:BA:2379:G:H4'	36:BO:21:LEU:HD11	2.00	0.43
29:BH:76:GLU:HA	29:BH:142:VAL:HG12	2.00	0.43
29:BH:80:ILE:HG21	29:BH:94:ILE:HG13	2.00	0.43
22:DA:1361:G:C5	22:DA:1371:G:N2	2.86	0.43
22:DA:1362:C:C2'	22:DA:1363:C:H5'	2.48	0.43
8:CH:66:PHE:C	8:CH:66:PHE:CD1	2.89	0.43
4:AD:124:MET:HG3	4:AD:146:ARG:HG2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1077:G:N2	1:AA:1081:A:C4	2.87	0.43
1:CA:57:G:C5	1:CA:58:C:C4	3.06	0.43
1:AA:1406:U:H2'	1:AA:1407:C:H5'	1.99	0.43
22:BA:1915:U:C2	22:BA:1916:A:C8	3.06	0.43
22:BA:1097:U:H3'	22:BA:1098:A:H4'	2.00	0.43
35:DN:38:LEU:HD11	35:DN:42:LYS:HE3	2.00	0.43
18:CR:25:ASP:C	18:CR:27:ALA:H	2.21	0.43
1:AA:1342:C:O2'	9:AI:126:GLN:CG	2.66	0.43
22:DA:1309:G:H2'	22:DA:1310:G:O4'	2.19	0.43
10:AJ:65:TYR:HB2	14:AN:96:LEU:HD11	2.00	0.43
22:DA:223:A:C5	22:DA:422:A:C8	3.05	0.43
1:AA:1098:C:H2'	1:AA:1099:G:O4'	2.18	0.43
22:BA:554:U:C2'	22:BA:555:G:H5'	2.48	0.43
22:DA:510:C:C2'	22:DA:511:U:H5'	2.48	0.43
1:CA:1078:U:C2	5:CE:90:THR:HG21	2.53	0.43
1:CA:1078:U:C5	1:CA:1079:G:C5	3.05	0.43
29:BH:27:ARG:O	29:BH:28:ASN:CB	2.66	0.43
4:CD:26:ARG:CG	4:CD:27:ALA:N	2.67	0.43
36:DO:31:THR:HG22	36:DO:33:ARG:O	2.18	0.43
1:AA:107:G:C2'	1:AA:108:G:H5''	2.48	0.43
1:CA:541:G:H2'	1:CA:542:G:O4'	2.17	0.43
4:CD:97:ARG:O	4:CD:101:VAL:HG23	2.19	0.43
22:DA:2118:U:H5'	22:DA:2119:A:OP1	2.18	0.43
1:AA:1140:C:O2	1:AA:1141:C:C5	2.70	0.43
1:CA:81:A:C2	1:CA:89:U:C2	3.06	0.43
14:CN:53:ARG:C	14:CN:55:SER:N	2.72	0.43
40:BS:54:ALA:O	40:BS:55:ILE:C	2.57	0.43
22:DA:947:A:O2'	22:DA:984:A:H2	2.01	0.43
1:CA:976:G:C2	1:CA:1363:A:C2	3.06	0.43
1:CA:111:G:C6	1:CA:330:C:N4	2.84	0.43
1:AA:663:A:C6	1:AA:743:A:N1	2.86	0.43
1:AA:1035:A:H2'	1:AA:1036:A:C1'	2.49	0.43
9:AI:50:GLN:NE2	9:AI:103:PHE:CZ	2.86	0.43
5:CE:56:VAL:N	5:CE:57:PRO:CD	2.80	0.43
27:BF:38:MET:CE	27:BF:152:LEU:HD13	2.48	0.43
1:CA:867:G:H2'	1:CA:868:C:C6	2.54	0.43
22:DA:150:U:H2'	22:DA:151:C:C6	2.54	0.43
2:CB:133:GLU:O	2:CB:137:ARG:HB3	2.18	0.43
22:BA:790:U:O2'	22:BA:791:C:OP2	2.31	0.43
1:AA:259:G:N2	1:AA:260:G:H1'	2.33	0.43
1:CA:1169:A:C2	1:CA:1170:A:C4	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:158:THR:HG22	27:BF:160:ALA:H	1.83	0.43
22:DA:2024:G:C4	22:DA:2040:G:N2	2.87	0.43
22:BA:812:C:O2	22:BA:812:C:H2'	2.19	0.43
2:AB:184:PHE:N	2:AB:184:PHE:CD2	2.86	0.43
1:CA:1349:A:C2	1:CA:1374:A:C4	3.06	0.43
22:DA:952:G:C6	22:DA:966:G:N1	2.87	0.43
22:BA:2409:G:C6	22:BA:2410:G:C5	3.06	0.43
22:BA:1358:G:N2	22:BA:1374:G:C6	2.87	0.43
22:BA:1374:G:C5	22:BA:1375:U:C5	3.06	0.43
22:DA:1224:U:C4	22:DA:1225:G:C6	3.07	0.43
35:DN:103:ARG:NE	35:DN:110:MET:CE	2.81	0.43
1:CA:575:G:O2'	1:CA:821:G:OP2	2.13	0.43
19:CS:80:TYR:CG	19:CS:81:ARG:N	2.87	0.43
30:BI:112:THR:O	30:BI:113:LYS:C	2.56	0.43
22:DA:2514:U:H2'	22:DA:2515:C:H6	1.83	0.43
17:CQ:36:LYS:HG3	17:CQ:37:PHE:N	2.33	0.43
14:AN:43:ASN:C	14:AN:45:VAL:N	2.71	0.43
22:BA:13:A:N6	22:BA:525:U:C5	2.86	0.43
22:BA:1225:G:C2	22:BA:1226:A:N1	2.86	0.43
22:DA:2581:G:C1'	22:DA:2582:G:N7	2.81	0.43
9:CI:44:ALA:HB1	9:CI:47:VAL:HG21	2.00	0.43
34:DM:56:ALA:C	34:DM:58:LYS:N	2.70	0.43
18:AR:25:ASP:O	18:AR:26:ILE:C	2.54	0.43
22:BA:416:U:H2'	22:BA:417:C:O4'	2.18	0.43
22:BA:1505:A:H2'	22:BA:1506:U:O4'	2.18	0.43
46:BY:46:VAL:O	46:BY:47:ARG:C	2.55	0.43
2:AB:57:LEU:O	2:AB:60:ILE:HG13	2.18	0.43
47:BZ:3:LYS:HE3	47:BZ:3:LYS:N	2.33	0.43
1:AA:655:A:C2	1:AA:656:G:C4	3.06	0.43
1:CA:198:G:N2	1:CA:199:A:H1'	2.33	0.43
1:CA:198:G:H2'	1:CA:199:A:C5'	2.48	0.43
22:BA:768:G:C2'	22:BA:769:U:O5'	2.66	0.43
15:AO:2:SER:O	15:AO:3:LEU:HB2	2.18	0.43
17:AQ:61:ILE:CG2	17:AQ:73:TRP:CE3	3.02	0.43
22:BA:1665:A:H2'	22:BA:1666:G:O4'	2.18	0.43
25:BD:8:LYS:HE2	25:BD:193:VAL:HG22	2.00	0.43
9:CI:28:ILE:HB	9:CI:35:LEU:HB2	1.99	0.43
22:BA:2048:G:H2'	22:BA:2049:G:O5'	2.18	0.43
30:DI:49:ILE:O	30:DI:50:GLU:HB2	2.18	0.43
7:CG:137:LYS:O	7:CG:141:VAL:HG23	2.18	0.43
22:DA:1303:G:H1'	22:DA:1641:A:N1	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:698:G:C6	1:AA:699:C:C4	3.06	0.43
22:DA:1562:U:H2'	22:DA:1563:U:O4'	2.19	0.43
41:BT:61:LEU:C	41:BT:61:LEU:HD12	2.38	0.43
15:CO:27:VAL:O	15:CO:31:LEU:HD12	2.18	0.43
22:DA:1208:C:C4	22:DA:1209:U:C5	3.06	0.43
22:DA:495:G:H4'	40:DS:4:ILE:O	2.18	0.43
29:BH:96:THR:O	29:BH:100:ALA:N	2.50	0.43
22:BA:2056:G:C5	22:BA:2577:A:C4	3.07	0.43
1:CA:55:A:N6	1:CA:56:U:C2	2.86	0.43
4:CD:206:LYS:O	4:CD:206:LYS:CD	2.66	0.43
2:CB:139:ARG:HD2	2:CB:140:GLU:N	2.32	0.43
22:BA:1063:G:N3	30:BI:136:MET:HA	2.33	0.43
22:DA:2011:U:H2'	22:DA:2012:G:O4'	2.18	0.43
39:BR:49:ILE:HG22	39:BR:53:PHE:CA	2.48	0.43
22:DA:1338:G:O2'	22:DA:1392:A:N6	2.51	0.43
35:BN:103:ARG:CZ	35:BN:110:MET:HE2	2.48	0.43
47:BZ:21:LYS:O	47:BZ:24:LEU:N	2.51	0.43
22:BA:1829:A:C8	22:BA:1830:C:C5	3.07	0.43
19:CS:6:LYS:HB2	19:CS:7:LYS:HG2	2.00	0.43
1:CA:1359:C:O2'	1:CA:1361:G:N7	2.50	0.43
1:CA:978:A:P	1:CA:1362:A:H61	2.41	0.43
9:AI:117:GLY:C	9:AI:118:LEU:HD12	2.38	0.43
22:DA:2283:C:H2'	22:DA:2284:A:O4'	2.19	0.43
29:DH:31:VAL:CB	29:DH:32:PRO:HD3	2.47	0.43
4:CD:98:LEU:O	4:CD:101:VAL:N	2.51	0.43
1:AA:64:G:N7	1:AA:99:C:C4	2.86	0.43
39:DR:41:ILE:HD13	39:DR:103:ALA:HA	1.99	0.43
42:DU:5:ILE:HD13	42:DU:67:VAL:HG13	2.01	0.43
1:AA:452:A:N7	1:AA:453:G:C4	2.86	0.43
22:DA:784:G:C6	22:DA:792:A:C4	3.07	0.43
4:CD:24:GLY:O	4:CD:161:LEU:HD11	2.18	0.43
33:DL:122:VAL:HB	33:DL:142:ILE:HG12	2.00	0.43
24:DC:207:LYS:HE2	24:DC:213:TRP:CH2	2.54	0.43
25:DD:140:HIS:CD2	57:DD:302:HOH:O	2.66	0.43
22:DA:1645:G:H5''	22:DA:1646:C:O4'	2.17	0.43
22:DA:2307:G:N2	22:DA:2312:U:C2	2.86	0.43
1:CA:327:A:N1	1:CA:329:A:C2	2.86	0.43
1:CA:884:U:H4'	1:CA:885:G:H5''	2.01	0.43
42:DU:44:LYS:CG	42:DU:45:HIS:N	2.81	0.43
22:DA:533:G:H2'	22:DA:534:U:C6	2.53	0.43
1:CA:1137:C:O2	1:CA:1137:C:O4'	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:756:C:H2'	1:CA:757:U:H5'	2.01	0.43
22:BA:1429:G:H2'	22:BA:1430:G:C8	2.52	0.43
22:BA:13:A:N3	22:BA:15:G:C6	2.86	0.43
22:DA:2787:C:O4'	25:DD:63:PRO:HA	2.19	0.43
22:BA:2093:G:H4'	29:BH:25:TYR:N	2.33	0.43
7:CG:65:ALA:HB1	7:CG:127:ALA:HB3	2.01	0.43
22:BA:1106:G:C2	22:BA:1107:G:C4	3.06	0.43
22:DA:1679:A:H2'	22:DA:1680:U:C6	2.53	0.43
42:DU:53:ASN:C	42:DU:55:PRO:HD3	2.39	0.43
26:DE:1:MET:HG3	26:DE:14:VAL:CG2	2.49	0.43
35:BN:51:LEU:O	35:BN:52:ILE:C	2.57	0.43
6:AF:46:GLN:HB2	6:AF:56:LYS:CE	2.48	0.43
22:BA:1132:U:C3'	22:BA:1133:A:H5''	2.48	0.43
17:AQ:59:VAL:CG2	17:AQ:60:GLU:N	2.81	0.43
9:CI:19:VAL:HG21	9:CI:83:ILE:N	2.33	0.43
1:AA:971:G:C8	1:AA:1365:G:H4'	2.53	0.43
22:BA:1863:G:N2	22:BA:1880:U:H1'	2.34	0.43
22:BA:201:C:H2'	22:BA:202:U:H5'	2.00	0.43
22:BA:1972:G:H2'	22:BA:1973:G:C8	2.52	0.43
1:CA:745:G:H1'	1:CA:836:G:O2'	2.18	0.43
22:DA:89:A:C2	22:DA:90:U:C2	3.06	0.43
42:DU:40:ASN:HB3	42:DU:63:ALA:HB3	2.00	0.43
22:BA:632:A:H2'	22:BA:633:A:C8	2.53	0.43
22:BA:1237:A:H4'	22:BA:1238:G:OP1	2.19	0.43
1:CA:130:A:C2	1:CA:264:C:C2	3.06	0.43
35:DN:59:SER:O	35:DN:63:ARG:HB2	2.19	0.43
1:CA:1222:G:H5''	19:CS:78:ARG:NH1	2.34	0.43
1:CA:731:G:H5'	1:CA:766:A:H4'	2.00	0.43
23:BB:81:G:C2'	23:BB:82:U:H5'	2.48	0.43
38:DQ:78:LYS:HE2	38:DQ:117:LEU:HD21	1.99	0.43
48:B0:12:LYS:HD2	48:B0:12:LYS:HA	1.82	0.43
24:BC:76:ALA:HA	24:BC:95:LEU:O	2.19	0.43
36:BO:27:VAL:CG2	36:BO:27:VAL:O	2.65	0.43
13:CM:3:ARG:HA	13:CM:9:ILE:HG12	2.00	0.43
5:CE:157:ARG:C	5:CE:159:LYS:N	2.66	0.43
22:BA:1171:G:C2	22:BA:1172:C:C2	3.07	0.43
2:AB:33:GLY:HA3	2:AB:39:HIS:HB3	2.00	0.43
22:BA:945:A:P	57:BA:3345:HOH:O	2.68	0.43
6:CF:90:MET:O	6:CF:91:ARG:O	2.37	0.43
6:CF:88:MET:HE3	18:CR:64:TYR:CE2	2.54	0.43
14:AN:47:LYS:HD3	19:AS:13:LEU:HD21	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:21:ILE:HD13	17:AQ:48:ASP:OD1	2.18	0.43
22:DA:1310:G:N2	22:DA:1605:C:C2	2.87	0.43
22:DA:1606:C:O2'	22:DA:1607:C:P	2.76	0.43
22:DA:1142:A:C2	22:DA:1144:A:C1'	3.01	0.43
22:BA:1606:C:O2'	22:BA:1607:C:O5'	2.36	0.43
22:BA:2352:A:H2'	22:BA:2353:G:H5'	2.00	0.43
1:CA:552:U:C4'	12:CL:83:ARG:HD2	2.49	0.43
16:AP:3:THR:HG22	16:AP:4:ILE:N	2.34	0.43
1:AA:515:G:N2	1:AA:537:G:C4	2.86	0.43
1:AA:373:A:C8	1:AA:482:A:C8	3.06	0.43
1:CA:407:U:N3	1:CA:408:A:N7	2.66	0.43
11:CK:118:HIS:O	11:CK:119:ASN:HB2	2.17	0.43
28:BG:174:ALA:O	28:BG:175:LYS:CB	2.63	0.43
31:DJ:142:ILE:OXT	31:DJ:142:ILE:CG2	2.66	0.43
22:BA:1022:G:C5	22:BA:1140:C:C4	3.05	0.43
1:AA:212:G:C2	1:AA:213:G:C5	3.07	0.43
1:AA:1280:A:C3'	1:AA:1281:C:H5'	2.47	0.43
1:CA:1261:A:C2	1:CA:1262:C:C5	3.06	0.43
20:AT:44:LYS:HD3	20:AT:87:ALA:HA	2.00	0.43
32:BK:34:GLY:N	32:BK:37:ASP:OD2	2.50	0.43
28:DG:129:THR:O	28:DG:130:GLU:HG2	2.19	0.43
1:CA:93:U:C2'	1:CA:94:G:H5''	2.49	0.43
29:BH:9:VAL:O	29:BH:10:ALA:O	2.36	0.43
15:CO:70:LEU:CD1	15:CO:78:TYR:HA	2.48	0.43
22:BA:2469:A:H4'	34:BM:55:ARG:HH12	1.83	0.43
14:AN:23:LYS:O	14:AN:25:ALA:N	2.52	0.43
11:CK:52:PHE:CE2	11:CK:62:ALA:HB1	2.53	0.43
22:DA:622:G:OP2	57:DA:3294:HOH:O	2.21	0.43
1:AA:616:G:C2	1:AA:617:G:C5	3.06	0.43
9:AI:17:ALA:HB2	9:AI:67:VAL:CG2	2.48	0.43
1:CA:939:G:N1	1:CA:940:C:N3	2.67	0.43
10:AJ:27:GLU:HA	10:AJ:30:LYS:HE2	2.01	0.43
45:BX:37:ARG:NH2	45:BX:46:PHE:CD1	2.86	0.43
42:DU:82:ARG:O	42:DU:97:LYS:CG	2.66	0.43
22:BA:1366:A:C6	22:BA:1367:A:C4	3.06	0.43
1:CA:1397:C:C3'	1:CA:1398:A:H5''	2.48	0.43
23:DB:46:A:C5	23:DB:47:C:C5	3.07	0.43
43:BV:84:PRO:O	43:BV:85:LYS:HG2	2.18	0.43
22:BA:2006:C:O2'	22:BA:2823:A:C2'	2.67	0.43
22:BA:807:U:H2'	22:BA:808:G:O4'	2.18	0.43
3:AC:167:TRP:O	3:AC:168:TYR:CD1	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:73:ILE:HA	13:CM:76:SER:OG	2.18	0.43
22:DA:2726:A:HO2'	22:DA:2727:A:C5'	2.31	0.43
22:DA:2201:G:H2'	22:DA:2202:U:C6	2.54	0.43
33:BL:56:PRO:HB2	33:BL:58:TYR:CD2	2.53	0.43
22:BA:2526:G:C2	22:BA:2538:C:O2	2.72	0.43
1:CA:590:U:H2'	1:CA:591:U:C6	2.54	0.43
21:AU:47:ARG:HG3	21:AU:47:ARG:O	2.18	0.43
42:BU:74:ASN:O	42:BU:77:THR:N	2.48	0.43
22:BA:2901:C:N4	22:BA:2902:C:C4	2.87	0.43
22:BA:2901:C:C4	22:BA:2902:C:C5	3.06	0.43
1:AA:1078:U:O4'	5:AE:89:HIS:HE1	2.02	0.43
29:BH:103:VAL:O	29:BH:108:VAL:O	2.37	0.43
25:DD:151:THR:HG22	25:DD:152:PRO:HD3	1.99	0.43
2:AB:24:ASN:HA	2:AB:25:PRO:HD2	1.91	0.43
22:DA:528:A:N1	22:DA:2043:C:O5'	2.51	0.43
22:DA:2127:G:O2'	22:DA:2173:A:C2	2.71	0.43
22:BA:1920:C:H3'	22:BA:1920:C:C6	2.54	0.43
1:AA:1505:G:C5'	1:AA:1506:U:O5'	2.67	0.43
18:CR:24:LYS:C	18:CR:26:ILE:H	2.20	0.43
22:DA:223:A:H2'	22:DA:408:G:N3	2.33	0.43
22:DA:1264:A:N7	22:DA:1265:A:C5	2.86	0.43
22:BA:243:U:C2'	22:BA:244:A:H5'	2.49	0.43
1:CA:1151:A:C2	1:CA:1152:A:C4	3.07	0.43
22:BA:1868:C:H2'	22:BA:1869:G:O4'	2.18	0.43
22:DA:49:A:N6	22:DA:177:G:C4	2.86	0.43
22:BA:1837:C:C2	22:BA:1899:A:N6	2.87	0.43
22:DA:1062:G:C5	22:DA:1088:A:H2'	2.54	0.43
40:BS:69:LEU:HA	40:BS:108:SER:O	2.18	0.43
33:DL:81:ASP:O	33:DL:82:LEU:CB	2.66	0.43
22:DA:982:C:H4'	22:DA:983:A:OP1	2.19	0.43
16:AP:43:ALA:O	16:AP:44:SER:OG	2.32	0.43
14:CN:17:ALA:HA	14:CN:21:PHE:HB2	2.01	0.43
1:AA:1079:G:C2	1:AA:1080:A:C6	3.06	0.43
1:AA:1149:C:N4	1:AA:1150:A:N6	2.65	0.43
22:DA:1973:G:C5	22:DA:1974:C:C5	3.06	0.43
22:DA:1999:C:O2	22:DA:2687:U:O2'	2.31	0.43
16:AP:10:GLY:O	16:AP:11:ALA:HB2	2.18	0.43
1:CA:1211:U:H2'	1:CA:1212:U:OP2	2.18	0.43
11:CK:15:GLN:O	11:CK:15:GLN:HG3	2.18	0.43
22:DA:374:A:N6	22:DA:400:G:O2'	2.48	0.43
22:DA:1356:G:C2	22:DA:1357:C:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:174:ASP:OD1	4:AD:177:LYS:HE2	2.18	0.43
13:AM:15:ALA:O	13:AM:19:LEU:HD23	2.19	0.43
51:D3:34:THR:CG2	51:D3:35:LYS:N	2.81	0.43
22:DA:2078:C:N4	22:DA:2079:U:O4	2.51	0.43
1:AA:340:U:C2	1:AA:341:C:C5	3.06	0.43
23:DB:78:A:C5	23:DB:99:A:C8	3.06	0.43
1:AA:1370:G:O5'	9:AI:111:VAL:HG21	2.18	0.43
1:AA:437:U:C4	1:AA:438:U:C5	3.06	0.43
1:CA:821:G:H2'	1:CA:822:U:C6	2.54	0.43
1:AA:821:G:C6	1:AA:822:U:C4	3.06	0.43
30:BI:72:LYS:N	30:BI:72:LYS:HD3	2.33	0.43
2:AB:68:LEU:HD22	2:AB:70:VAL:HG23	2.00	0.43
2:AB:140:GLU:O	2:AB:144:LEU:CD2	2.66	0.43
18:AR:22:ASP:OD2	18:AR:24:LYS:HB2	2.19	0.43
46:DY:1:MET:N	46:DY:4:LYS:HD3	2.33	0.43
1:AA:1452:C:H4'	1:AA:1453:G:H5''	2.00	0.43
22:DA:1497:U:C2	22:DA:1578:U:OP1	2.71	0.43
40:BS:40:ASN:O	40:BS:41:LYS:HG2	2.19	0.43
22:DA:1262:A:C6	22:DA:1263:U:N3	2.86	0.43
21:CU:25:LYS:HD3	21:CU:26:ALA:H	1.84	0.43
10:AJ:81:GLU:C	10:AJ:84:VAL:HG12	2.39	0.43
35:BN:92:GLY:HA2	35:BN:94:TYR:CZ	2.53	0.43
22:BA:2456:C:H2'	22:BA:2457:U:H5'	2.01	0.43
25:DD:55:LYS:NZ	25:DD:77:ARG:O	2.51	0.43
1:CA:454:G:N2	1:CA:479:U:O2	2.50	0.43
22:BA:1661:G:C4	22:BA:1662:U:C6	3.07	0.43
22:DA:266:G:N2	22:DA:427:U:H1'	2.34	0.43
46:BY:18:LEU:O	46:BY:22:LEU:CB	2.66	0.43
20:AT:35:VAL:HG12	20:AT:39:ILE:CD1	2.49	0.43
19:AS:42:PRO:HD3	19:AS:67:VAL:HG13	2.00	0.43
22:BA:956:G:OP1	34:BM:86:LYS:HG3	2.18	0.43
53:B5:212:SER:HA	53:B5:221:PRO:CB	2.48	0.43
5:CE:96:MET:HE3	5:CE:111:MET:CE	2.49	0.43
8:AH:95:VAL:O	8:AH:96:MET:C	2.57	0.43
1:AA:299:G:H2'	1:AA:300:A:C8	2.53	0.43
24:DC:265:LYS:O	24:DC:265:LYS:HD3	2.19	0.43
1:CA:1495:U:H2'	1:CA:1496:C:O4'	2.18	0.43
22:DA:1492:G:C2	22:DA:1499:C:O2	2.72	0.43
22:BA:338:G:N2	22:BA:339:U:H1'	2.33	0.43
1:AA:1269:A:H2	1:AA:1312:G:N3	2.16	0.43
53:B5:46:ALA:HA	53:B5:211:ARG:HA	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:356:A:C2'	1:CA:357:G:H5'	2.47	0.43
22:BA:2575:C:O2'	22:BA:2578:G:N7	2.40	0.43
11:AK:35:THR:OG1	11:AK:40:ASN:N	2.51	0.43
22:BA:975:A:C4	22:BA:990:A:C5	3.07	0.43
22:BA:1171:G:N2	22:BA:1179:G:C6	2.86	0.43
1:AA:403:C:OP1	4:AD:134:SER:OG	2.27	0.43
2:CB:208:ARG:O	2:CB:211:THR:N	2.52	0.43
5:CE:105:ILE:H	5:CE:122:ASN:HA	1.84	0.43
1:AA:1167:A:N7	1:AA:1169:A:C6	2.87	0.43
17:CQ:19:LYS:CD	17:CQ:49:GLU:HA	2.47	0.43
22:BA:1142:A:C2	22:BA:1144:A:O4'	2.72	0.43
33:BL:87:GLY:O	33:BL:89:VAL:HG12	2.18	0.43
24:BC:8:PRO:CB	24:BC:14:ARG:HB2	2.48	0.43
35:BN:2:ARG:NH2	35:BN:5:LYS:O	2.52	0.43
22:DA:2550:G:C5	22:DA:2551:C:C5	3.06	0.43
1:AA:1299:A:C6	1:AA:1301:U:O2	2.72	0.43
22:BA:244:A:OP2	51:B3:8:ARG:NH2	2.47	0.43
22:BA:1773:A:N7	22:BA:1829:A:H1'	2.33	0.43
38:BQ:41:LYS:HA	38:BQ:44:GLN:CG	2.45	0.43
23:DB:27:C:OP1	36:DO:34:HIS:NE2	2.51	0.43
22:DA:2286:G:H5''	22:DA:2287:A:OP1	2.18	0.43
1:AA:107:G:C3'	1:AA:108:G:H5''	2.48	0.43
1:AA:1054:C:C5	1:AA:1196:A:H2'	2.53	0.43
2:CB:50:PHE:HD1	2:CB:54:LEU:HD23	1.84	0.43
1:AA:1050:G:H2'	1:AA:1050:G:N3	2.34	0.43
7:AG:31:MET:SD	7:AG:36:LYS:HD3	2.58	0.43
13:AM:20:THR:HA	13:AM:25:VAL:HG23	2.01	0.43
22:DA:1047:G:N2	22:DA:1110:G:O2'	2.52	0.43
1:AA:453:G:H2'	1:AA:454:G:O4'	2.18	0.43
33:DL:90:VAL:N	33:DL:121:THR:O	2.51	0.43
22:BA:2684:U:C2'	22:BA:2685:G:O5'	2.67	0.43
1:AA:1080:A:OP1	5:AE:52:LYS:HE3	2.18	0.43
1:AA:920:U:H1'	1:AA:1080:A:C2	2.54	0.43
22:DA:1364:G:C8	45:DX:2:SER:HA	2.54	0.43
2:AB:146:ASN:O	2:AB:147:SER:OG	2.31	0.43
2:AB:186:ILE:HD11	2:AB:204:ASP:HA	2.00	0.43
22:DA:269:C:N4	22:DA:270:A:N7	2.67	0.43
22:DA:2345:G:C4	22:DA:2347:C:C5	3.06	0.43
1:CA:102:G:H2'	1:CA:103:U:H6	1.84	0.43
22:DA:717:C:N4	22:DA:718:A:N3	2.67	0.43
22:BA:1687:G:N1	22:BA:1688:U:C4	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:503:A:C2	22:DA:506:G:C4	3.07	0.43
13:AM:65:VAL:HG23	13:AM:66:GLU:HB2	2.00	0.43
13:AM:66:GLU:O	13:AM:67:GLY:C	2.57	0.43
46:DY:48:ARG:O	46:DY:51:ALA:HB3	2.19	0.43
1:CA:1072:G:OP1	5:CE:62:LYS:NZ	2.52	0.43
42:BU:98:SER:OG	42:BU:98:SER:O	2.37	0.43
22:DA:1801:A:C5	22:DA:2203:U:C5	3.06	0.43
1:CA:1534:A:H4'	1:CA:1535:C:H2'	2.01	0.43
46:BY:35:GLY:O	46:BY:36:GLN:O	2.37	0.43
22:DA:136:G:H1	22:DA:143:C:H42	1.67	0.43
20:CT:24:ARG:O	20:CT:27:MET:HG3	2.17	0.43
7:CG:114:LYS:HB2	7:CG:118:LEU:HD12	2.00	0.43
22:BA:1138:G:O2'	31:BJ:107:GLY:HA3	2.19	0.43
22:BA:2627:G:N3	22:BA:2781:A:H2	2.15	0.43
22:BA:116:C:C4	22:BA:117:G:C5	3.07	0.43
22:BA:1430:G:C6	22:BA:1431:A:C5	3.06	0.43
1:AA:1277:C:O2'	1:AA:1279:G:H1'	2.18	0.43
1:AA:1278:G:H4'	1:AA:1279:G:C8	2.52	0.43
1:CA:1484:C:H2'	1:CA:1485:U:O4'	2.18	0.43
36:DO:38:GLN:HA	36:DO:50:ALA:HA	2.01	0.43
1:CA:1381:U:C5	1:CA:1382:C:H5	2.37	0.43
25:BD:105:LYS:O	25:BD:177:VAL:HG12	2.18	0.43
1:CA:878:A:N6	1:CA:879:C:N4	2.67	0.43
1:AA:858:G:O6	1:AA:869:G:C8	2.71	0.43
9:AI:9:THR:O	9:AI:17:ALA:O	2.36	0.43
1:AA:357:G:N3	1:AA:358:U:C6	2.87	0.43
35:BN:52:ILE:O	35:BN:53:THR:C	2.56	0.43
10:CJ:18:ILE:CG2	10:CJ:19:ASP:N	2.82	0.43
11:CK:122:ARG:NH1	21:CU:36:GLU:CG	2.81	0.43
22:DA:738:G:C6	22:DA:739:A:C6	3.07	0.43
49:D1:26:ASN:O	49:D1:27:LYS:C	2.57	0.43
26:BE:145:ASP:HB3	26:BE:184:ASP:HB2	2.01	0.43
1:AA:38:G:N1	1:AA:397:A:C2	2.87	0.43
1:AA:397:A:C6	1:AA:548:G:N7	2.87	0.43
22:DA:1802:A:C2	22:DA:1803:A:C2	3.06	0.43
38:BQ:68:ALA:HB2	38:BQ:99:ALA:HB1	2.01	0.43
22:DA:1290:C:C2	22:DA:1291:C:C6	3.06	0.43
1:CA:875:U:C4	1:CA:876:C:C5	3.06	0.43
22:BA:994:C:H3'	38:BQ:54:LYS:HE3	1.99	0.43
53:B5:55:SER:OG	53:B5:203:GLU:CB	2.67	0.43
28:BG:5:ALA:HB2	28:BG:66:GLY:CA	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:41:LYS:HA	29:BH:44:ILE:HG12	2.01	0.43
4:AD:10:LYS:HA	4:AD:13:ARG:HG3	2.01	0.43
22:BA:653:U:H2'	22:BA:654:A:OP1	2.18	0.43
22:DA:1350:C:N3	22:DA:1382:G:C2	2.86	0.43
5:AE:65:GLU:HG2	5:AE:69:ARG:NH2	2.33	0.43
36:DO:71:ALA:O	36:DO:75:GLY:N	2.51	0.43
26:BE:16:GLU:O	26:BE:20:GLY:N	2.52	0.43
38:BQ:91:ASP:O	38:BQ:95:LEU:HD12	2.18	0.43
23:BB:61:G:H2'	23:BB:62:C:C6	2.54	0.43
22:BA:685:A:H1'	22:BA:688:U:O4	2.19	0.43
35:BN:116:VAL:O	35:BN:116:VAL:HG13	2.18	0.43
42:DU:61:LYS:HD2	42:DU:61:LYS:HA	1.87	0.43
39:BR:15:SER:O	39:BR:18:GLN:HB2	2.18	0.43
29:BH:94:ILE:CD1	29:BH:98:ASP:HB3	2.48	0.43
22:DA:2262:U:C2	22:DA:2279:G:N2	2.86	0.43
22:DA:1153:C:OP1	38:DQ:92:ARG:NH1	2.52	0.43
31:BJ:77:HIS:HD2	31:BJ:79:GLY:N	2.16	0.43
22:BA:569:U:O2'	22:BA:983:A:N1	2.43	0.43
1:CA:9:G:OP2	5:CE:126:LYS:CE	2.67	0.43
22:BA:1967:C:H2'	22:BA:1968:G:H5'	2.01	0.43
1:CA:1101:A:H4'	1:CA:1102:A:O5'	2.18	0.43
22:DA:1651:G:H4'	35:DN:39:PRO:HG2	1.99	0.43
30:BI:101:ILE:HG22	30:BI:105:GLN:HB2	2.00	0.43
6:AF:90:MET:O	6:AF:91:ARG:O	2.36	0.43
6:AF:92:THR:HG22	6:AF:93:LYS:H	1.78	0.43
28:DG:158:LYS:C	28:DG:160:LYS:N	2.72	0.43
22:BA:1087:G:N2	22:BA:1090:A:N7	2.67	0.43
22:DA:1338:G:H4'	41:DT:18:GLU:OE1	2.18	0.43
22:DA:1034:G:C6	22:DA:1035:U:C4	3.06	0.43
1:AA:1130:A:H8	1:AA:1130:A:O5'	2.01	0.43
1:CA:1144:G:N1	1:CA:1145:A:C2	2.87	0.43
25:DD:13:ARG:HD2	25:DD:15:PHE:CZ	2.54	0.43
22:BA:1182:G:C6	22:BA:1183:U:C2	3.07	0.43
7:AG:27:VAL:O	7:AG:31:MET:N	2.51	0.43
13:AM:22:ILE:HB	13:AM:25:VAL:HG22	2.01	0.43
22:DA:2147:A:H2'	22:DA:2148:G:O4'	2.19	0.43
30:DI:8:TYR:HD2	30:DI:58:VAL:HG13	1.84	0.43
22:DA:396:G:O3'	45:DX:30:LEU:O	2.35	0.43
22:DA:740:C:N4	22:DA:758:C:O2	2.52	0.43
22:DA:792:A:C3'	22:DA:793:A:H5'	2.47	0.43
22:DA:684:G:C2	22:DA:794:A:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1419:A:C4	22:BA:1421:G:C8	3.06	0.43
22:DA:1869:G:C3'	22:DA:1870:C:H5'	2.49	0.43
48:B0:20:ASP:O	48:B0:21:ALA:C	2.57	0.43
22:DA:1662:U:O2	22:DA:2687:U:C5'	2.67	0.43
22:DA:1998:A:H4'	22:DA:2724:U:O2'	2.19	0.43
1:CA:867:G:H2'	1:CA:868:C:H6	1.83	0.43
22:DA:1599:U:P	41:DT:40:LYS:HD2	2.59	0.43
6:CF:17:GLN:O	6:CF:21:MET:HG3	2.19	0.43
22:DA:2591:C:C2	22:DA:2592:G:C8	3.07	0.43
24:BC:160:THR:H	24:BC:195:VAL:HG13	1.84	0.43
22:DA:60:G:C5	22:DA:62:U:C4	3.07	0.43
22:BA:78:U:H2'	22:BA:79:C:H6	1.81	0.43
1:CA:158:G:C2'	1:CA:159:G:H5''	2.48	0.43
17:AQ:4:LYS:HG3	17:AQ:7:THR:HG23	2.01	0.43
9:CI:99:ARG:HA	9:CI:104:VAL:HG21	2.01	0.43
24:DC:36:LYS:O	24:DC:36:LYS:CG	2.66	0.43
8:CH:29:SER:HB2	8:CH:59:LEU:HB2	2.00	0.43
1:AA:1372:U:C5	1:AA:1373:G:N7	2.87	0.43
22:DA:2298:A:N3	22:DA:2321:U:C5	2.87	0.43
2:CB:69:PHE:O	2:CB:91:PHE:HA	2.19	0.43
22:DA:2544:G:H5'	22:DA:2645:G:C2	2.53	0.43
3:CC:121:THR:CB	3:CC:187:SER:HG	2.32	0.43
18:AR:27:ALA:O	18:AR:30:LYS:HG3	2.19	0.43
7:AG:138:ARG:O	7:AG:142:HIS:HB2	2.19	0.43
2:CB:125:THR:O	2:CB:126:PHE:HB3	2.19	0.43
7:AG:91:VAL:HG23	7:AG:95:ARG:HD3	2.01	0.43
22:BA:1394:U:H2'	22:BA:1395:A:O4'	2.18	0.43
24:BC:269:ARG:HG2	24:BC:269:ARG:HH11	1.84	0.43
30:DI:28:LEU:C	30:DI:28:LEU:HD12	2.38	0.43
39:DR:66:HIS:CD2	39:DR:94:THR:HG22	2.53	0.43
22:DA:2772:C:H2'	22:DA:2773:C:H6	1.84	0.43
1:CA:753:A:H4'	1:CA:754:C:O5'	2.18	0.43
7:CG:100:ALA:O	7:CG:104:ILE:HG13	2.18	0.43
22:DA:2015:A:C6	48:D0:3:VAL:HG23	2.54	0.43
8:AH:95:VAL:HG12	8:AH:96:MET:N	2.34	0.43
22:DA:2638:G:O2'	22:DA:2775:G:N2	2.38	0.43
19:AS:52:HIS:CD2	19:AS:54:GLY:H	2.37	0.43
22:DA:1659:G:C6	22:DA:1660:G:C5	3.07	0.43
1:CA:764:C:C4	1:CA:765:G:C5	3.06	0.43
38:BQ:115:ALA:C	38:BQ:117:LEU:H	2.22	0.43
24:DC:225:MET:O	24:DC:233:GLY:HA2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1191:A:H5''	3:CC:4:LYS:HE3	2.01	0.43
3:AC:65:ARG:O	3:AC:100:GLN:O	2.36	0.43
3:AC:58:GLU:HG3	3:AC:65:ARG:HB3	2.01	0.43
22:DA:815:C:H2'	22:DA:816:C:C6	2.53	0.43
7:AG:12:ILE:HD11	7:AG:25:LYS:HG3	2.01	0.43
1:AA:692:U:O4	11:AK:54:GLY:HA2	2.19	0.43
4:CD:40:GLN:OE1	4:CD:41:HIS:NE2	2.51	0.43
1:CA:1399:C:H4'	1:CA:1400:C:O5'	2.19	0.43
12:AL:122:PRO:O	12:AL:124:ALA:N	2.52	0.43
22:BA:1929:G:H5''	22:BA:1929:G:N3	2.33	0.43
22:BA:1054:A:C6	22:BA:1055:G:C5	3.07	0.43
31:DJ:117:ALA:HA	31:DJ:120:ARG:HD2	2.00	0.43
1:CA:229:U:H2'	1:CA:230:G:O4'	2.19	0.43
1:AA:628:G:H2'	1:AA:629:A:O4'	2.19	0.43
22:BA:2510:C:H2'	22:BA:2511:U:H5'	2.01	0.43
2:AB:82:ASP:O	2:AB:83:ALA:C	2.55	0.43
22:BA:1670:C:C5	22:BA:1671:U:C4	3.07	0.43
29:DH:82:SER:O	29:DH:83:LYS:C	2.57	0.43
1:CA:869:G:H4'	1:CA:872:A:C8	2.54	0.43
1:CA:1074:G:H4'	2:CB:103:ASN:HB2	1.99	0.43
17:CQ:47:HIS:HB2	17:CQ:67:LEU:HD13	2.01	0.43
22:DA:200:U:O4	22:DA:248:G:C2	2.72	0.43
33:BL:28:GLY:O	39:BR:82:HIS:HE1	2.01	0.43
17:AQ:45:HIS:ND1	17:AQ:70:THR:CG2	2.82	0.43
22:BA:2801:G:H2'	22:BA:2802:G:C8	2.54	0.43
10:AJ:65:TYR:HB3	14:AN:96:LEU:CD1	2.49	0.43
22:DA:673:C:OP1	26:DE:76:PRO:CG	2.67	0.43
24:BC:133:ARG:HG3	24:BC:134:ASN:OD1	2.18	0.43
4:CD:173:VAL:HG13	4:CD:174:ASP:H	1.82	0.43
4:CD:174:ASP:O	4:CD:175:ALA:HB3	2.18	0.43
22:DA:53:A:N7	22:DA:54:G:N7	2.67	0.43
22:BA:2690:U:C4	22:BA:2873:A:N1	2.87	0.43
12:AL:95:TYR:N	12:AL:95:TYR:CD2	2.86	0.43
38:BQ:41:LYS:HB2	38:BQ:41:LYS:HE3	1.86	0.43
46:BY:6:LEU:O	46:BY:60:LYS:NZ	2.49	0.43
22:BA:28:A:C5	22:BA:29:U:C5	3.07	0.43
1:AA:173:U:C2	1:AA:197:A:C6	3.07	0.43
39:DR:41:ILE:O	39:DR:47:VAL:N	2.52	0.43
1:CA:87:C:H2'	1:CA:88:U:C6	2.54	0.43
14:CN:53:ARG:O	14:CN:59:ARG:HD2	2.19	0.43
30:DI:8:TYR:HB3	30:DI:59:ILE:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:976:G:N2	1:CA:1363:A:N3	2.67	0.43
22:BA:517:C:OP1	48:B0:13:ARG:NH2	2.52	0.43
22:DA:593:U:C2	22:DA:594:U:C5	3.06	0.43
22:DA:399:U:C4	22:DA:400:G:C6	3.07	0.43
46:DY:28:LEU:CD2	46:DY:37:LEU:HD11	2.49	0.43
6:CF:22:ILE:HG22	6:CF:22:ILE:O	2.18	0.43
26:DE:83:VAL:HG11	26:DE:86:ALA:HA	2.00	0.43
1:AA:126:G:O2'	1:AA:635:A:H4'	2.18	0.43
24:BC:189:ARG:O	24:BC:190:ALA:CB	2.65	0.43
22:BA:1331:G:C5	22:BA:1333:G:N7	2.87	0.43
22:BA:1011:G:C5	22:BA:1013:C:C4	3.07	0.43
1:CA:1308:U:O3'	13:CM:91:HIS:HE1	2.01	0.43
11:AK:61:PHE:O	11:AK:64:GLN:HB3	2.19	0.43
22:DA:2104:C:C2	22:DA:2186:G:N2	2.87	0.43
22:BA:1866:A:C2	22:BA:1876:A:C4	3.06	0.43
22:DA:2799:A:O2'	22:DA:2800:A:H5''	2.19	0.43
41:DT:23:ALA:O	41:DT:27:SER:HB3	2.19	0.43
3:AC:113:ALA:O	3:AC:116:VAL:HB	2.19	0.43
43:DV:20:LEU:O	43:DV:25:LYS:HB2	2.18	0.43
1:AA:829:G:C6	1:AA:858:G:C2	3.07	0.43
1:AA:858:G:O2'	1:AA:859:G:H5'	2.18	0.43
1:CA:940:C:H2'	1:CA:941:G:C8	2.54	0.43
1:AA:114:U:H2'	1:AA:115:G:C8	2.53	0.43
10:AJ:25:ILE:HG22	10:AJ:26:VAL:N	2.33	0.43
47:BZ:3:LYS:CE	47:BZ:3:LYS:H	2.31	0.43
3:CC:102:ASN:C	3:CC:103:ILE:HG13	2.39	0.43
1:CA:489:C:O2'	1:CA:490:C:H5'	2.19	0.43
1:AA:47:C:O4'	1:AA:365:U:C5	2.72	0.43
15:AO:26:GLU:HG3	15:AO:81:LEU:HD22	2.01	0.43
22:BA:1767:G:C2	22:BA:1768:C:C5	3.07	0.43
13:AM:77:ILE:HD13	13:AM:91:HIS:CD2	2.54	0.43
15:AO:69:TYR:CZ	15:AO:73:LYS:HG3	2.54	0.43
27:DF:40:VAL:O	27:DF:42:GLU:N	2.51	0.43
23:BB:62:C:H2'	23:BB:63:C:H6	1.82	0.43
22:DA:1659:G:C6	22:DA:1660:G:N7	2.87	0.43
9:AI:35:LEU:HD11	9:AI:48:VAL:HG21	1.99	0.43
22:DA:321:U:C1'	26:DE:159:LEU:HD23	2.49	0.43
22:DA:1794:A:H2'	22:DA:1795:C:C6	2.54	0.43
24:DC:124:ILE:HD13	24:DC:136:PRO:HD3	2.00	0.43
22:DA:985:C:C2	22:DA:986:C:C5	3.07	0.43
48:B0:34:SER:OG	48:B0:36:GLU:CG	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:15:A:H1'	23:DB:109:A:N7	2.33	0.43
4:CD:17:THR:HG22	4:CD:18:ASP:N	2.34	0.43
41:BT:67:VAL:CG1	41:BT:68:LYS:N	2.82	0.43
17:CQ:29:VAL:HG22	17:CQ:29:VAL:O	2.19	0.43
9:CI:67:VAL:HG13	9:CI:67:VAL:O	2.18	0.43
44:BW:56:ASP:O	44:BW:57:HIS:HB2	2.19	0.43
31:DJ:114:LEU:O	31:DJ:118:MET:HG2	2.19	0.43
31:DJ:4:PHE:HB3	38:DQ:64:ARG:NH1	2.34	0.43
15:AO:87:LEU:CD2	15:AO:87:LEU:N	2.82	0.43
22:BA:2577:A:C2'	22:BA:2578:G:OP1	2.67	0.43
22:BA:947:A:H2'	22:BA:948:C:H6	1.82	0.43
14:AN:47:LYS:HD3	19:AS:13:LEU:CD2	2.48	0.43
6:AF:3:HIS:O	6:AF:4:TYR:CD1	2.72	0.43
22:BA:616:A:H2'	22:BA:617:G:O4'	2.19	0.43
22:BA:1090:A:C2'	22:BA:1091:G:H5'	2.49	0.43
5:CE:133:PRO:O	5:CE:137:VAL:HG13	2.18	0.43
22:DA:120:U:O4	22:DA:177:G:C8	2.72	0.43
35:DN:12:ARG:O	35:DN:17:ARG:NH2	2.47	0.43
22:BA:1203:U:C4	22:BA:1204:A:C6	3.06	0.43
9:AI:114:LYS:NZ	9:AI:118:LEU:O	2.52	0.43
22:DA:327:G:H21	42:DU:68:SER:HB2	1.84	0.43
22:DA:740:C:C5	22:DA:1981:A:C2	3.07	0.43
1:CA:409:U:H2'	1:CA:410:G:O4'	2.18	0.43
1:CA:718:A:N7	1:CA:719:C:C5	2.87	0.43
22:DA:1566:A:C2	24:DC:213:TRP:CD2	3.07	0.43
26:BE:7:ASP:C	26:BE:9:GLN:H	2.23	0.43
4:AD:58:LYS:HG2	4:AD:203:LEU:CD2	2.49	0.43
22:BA:582:A:C6	22:BA:1259:G:C6	3.07	0.43
9:AI:26:GLY:CA	9:AI:59:GLU:HA	2.49	0.43
22:DA:188:G:C2	22:DA:209:C:N3	2.87	0.43
38:BQ:21:ALA:HB1	38:BQ:24:TYR:HD1	1.83	0.43
1:AA:208:U:H5	1:AA:210:C:C4	2.37	0.43
12:CL:90:LEU:HB3	12:CL:93:VAL:CG2	2.49	0.43
1:AA:252:U:O4	1:AA:253:A:N6	2.52	0.43
22:BA:1355:G:C2'	22:BA:1356:G:H5'	2.48	0.43
1:CA:1140:C:O2'	1:CA:1141:C:P	2.76	0.43
22:DA:1223:G:N2	22:DA:1226:A:OP2	2.47	0.43
31:BJ:31:GLU:OE2	31:BJ:35:ARG:NH1	2.51	0.43
29:DH:62:LEU:HD13	29:DH:63:ALA:N	2.34	0.43
22:BA:1148:U:C2'	22:BA:1149:G:H5'	2.49	0.43
1:AA:1202:U:H4'	14:AN:69:ARG:HG3	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1301:A:C2	22:BA:1303:G:C6	3.07	0.43
8:CH:126:ILE:HD12	8:CH:126:ILE:N	2.34	0.43
7:AG:74:GLU:O	7:AG:89:VAL:HG13	2.19	0.43
37:BP:14:LYS:H	37:BP:77:HIS:CE1	2.37	0.43
1:CA:585:G:OP1	17:CQ:39:LYS:HE3	2.18	0.43
10:CJ:48:ARG:NH1	10:CJ:48:ARG:CG	2.80	0.43
1:AA:1449:C:H2'	1:AA:1450:U:O4'	2.19	0.43
1:CA:78:A:C6	1:CA:79:G:C6	3.06	0.43
38:DQ:106:PHE:HA	38:DQ:109:LEU:HD12	2.01	0.43
22:DA:2796:U:O4	22:DA:2798:U:C4	2.72	0.43
1:CA:793:U:O2	1:CA:1516:G:H4'	2.19	0.43
22:DA:182:A:H2'	22:DA:183:C:C6	2.54	0.43
39:DR:67:GLY:C	39:DR:93:PHE:CE2	2.92	0.43
31:BJ:37:ARG:HG3	31:BJ:118:MET:SD	2.58	0.43
10:CJ:36:VAL:HG12	10:CJ:38:GLY:H	1.84	0.43
22:BA:2093:G:O2'	29:BH:25:TYR:CB	2.67	0.43
22:BA:2093:G:O2'	29:BH:25:TYR:HB2	2.19	0.43
20:AT:69:LYS:NZ	20:AT:69:LYS:HB2	2.33	0.43
27:BF:63:GLN:OE1	27:BF:95:ARG:HD3	2.18	0.43
14:AN:23:LYS:O	14:AN:24:ARG:C	2.57	0.43
3:AC:40:ARG:CZ	3:AC:57:ILE:HD12	2.49	0.43
1:AA:768:A:N3	1:AA:1512:U:O2'	2.49	0.43
36:BO:53:THR:HG23	36:BO:74:VAL:HG21	2.01	0.43
22:DA:571:U:C4	22:DA:2030:A:N1	2.87	0.43
12:CL:42:PRO:HA	12:CL:89:ASP:O	2.19	0.43
5:AE:45:ARG:CG	5:AE:73:ASN:HB3	2.49	0.43
22:BA:2455:G:C6	22:BA:2456:C:N4	2.87	0.43
22:DA:1452:G:C6	22:DA:2702:G:C2	3.07	0.43
22:DA:2597:G:C2	22:DA:2598:A:C2	3.07	0.43
22:DA:1798:U:O2'	22:DA:1802:A:N3	2.45	0.43
22:BA:1575:C:C2'	22:BA:1576:U:O5'	2.66	0.43
48:D0:17:ARG:HA	48:D0:20:ASP:OD1	2.19	0.43
1:CA:282:A:H3'	1:CA:283:U:H6	1.84	0.43
37:DP:106:LYS:HA	37:DP:109:ARG:HD3	2.00	0.43
18:AR:20:GLU:HA	18:AR:55:LEU:CD2	2.48	0.43
22:DA:1113:U:H2'	22:DA:1114:C:C6	2.54	0.43
4:AD:4:TYR:O	4:AD:5:LEU:HB2	2.18	0.43
37:DP:43:PHE:CE2	37:DP:72:ARG:HD3	2.54	0.43
22:BA:372:G:C4	45:BX:61:LYS:HE3	2.54	0.43
16:AP:64:GLY:O	16:AP:65:ALA:O	2.37	0.43
1:CA:1420:U:H2'	1:CA:1421:G:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:150:THR:C	26:DE:192:ALA:HB2	2.39	0.43
22:BA:2387:U:H5''	22:BA:2388:A:OP2	2.18	0.43
27:BF:112:ARG:O	27:BF:113:ASP:HB2	2.18	0.43
29:BH:45:GLU:HA	29:BH:48:GLU:HB2	2.01	0.43
34:BM:89:VAL:HG12	34:BM:90:GLU:N	2.34	0.43
16:CP:52:LEU:HD21	16:CP:57:ILE:CD1	2.48	0.43
22:BA:463:G:N1	22:BA:467:G:C6	2.87	0.43
22:DA:1705:A:C5	22:DA:1706:C:C4	3.07	0.43
16:CP:21:VAL:HG21	16:CP:60:TRP:CD1	2.54	0.43
22:BA:920:A:C6	22:BA:921:C:C4	3.07	0.43
8:CH:106:THR:HG21	8:CH:121:LEU:HD13	2.00	0.43
1:CA:733:G:H4'	1:CA:734:G:OP1	2.19	0.43
22:DA:2663:G:H2'	22:DA:2664:G:O4'	2.18	0.43
22:DA:2662:A:H2'	22:DA:2663:G:O4'	2.19	0.43
33:BL:37:GLY:O	33:BL:41:ARG:HG2	2.19	0.43
43:BV:82:TYR:N	43:BV:82:TYR:CD2	2.87	0.43
47:BZ:10:THR:HG22	47:BZ:11:ARG:HG3	2.01	0.43
42:DU:95:PHE:O	42:DU:95:PHE:CG	2.72	0.43
35:DN:28:LEU:O	35:DN:32:GLU:HA	2.19	0.43
1:AA:1082:A:H2'	1:AA:1083:U:O4'	2.18	0.43
43:DV:38:LEU:HB3	43:DV:40:ILE:HD11	2.01	0.43
29:BH:79:THR:CG2	29:BH:147:VAL:CG2	2.97	0.42
5:CE:156:LYS:HG2	8:CH:71:VAL:HG22	2.00	0.42
22:DA:1009:A:C6	22:DA:1010:A:N1	2.87	0.42
22:BA:2345:G:H4'	22:BA:2346:A:O5'	2.19	0.42
6:CF:13:ASP:O	6:CF:15:SER:N	2.48	0.42
21:AU:34:ARG:O	21:AU:36:GLU:N	2.52	0.42
22:BA:819:A:OP2	22:BA:1187:G:N1	2.52	0.42
22:BA:839:U:H1'	22:BA:1191:G:H1'	2.00	0.42
7:CG:146:GLU:OE1	7:CG:149:LYS:HE2	2.19	0.42
24:DC:159:GLY:HA3	24:DC:198:ALA:HA	2.00	0.42
22:DA:56:A:C2	22:DA:57:C:O2	2.72	0.42
22:DA:2552:U:O2	22:DA:2554:U:H5'	2.18	0.42
22:BA:1838:C:C4	22:BA:1899:A:N3	2.87	0.42
1:AA:972:C:H4'	10:AJ:59:LYS:CE	2.49	0.42
30:DI:76:ALA:HA	30:DI:79:LEU:HB2	2.01	0.42
22:DA:1351:C:O2'	22:DA:1571:A:N3	2.43	0.42
22:DA:858:G:C4	22:DA:2268:A:C2	3.07	0.42
1:CA:504:C:H1'	1:CA:510:A:C4	2.53	0.42
1:AA:1377:A:C4	7:AG:7:ILE:HD11	2.53	0.42
1:CA:81:A:H61	1:CA:87:C:N4	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:89:U:H2'	1:CA:90:C:C6	2.54	0.42
1:CA:17:U:O2	1:CA:18:C:C6	2.72	0.42
1:AA:451:A:H2	1:AA:480:U:C4	2.37	0.42
1:AA:452:A:N7	1:AA:453:G:N9	2.66	0.42
1:CA:410:G:H5''	1:CA:411:A:OP1	2.19	0.42
33:DL:77:ILE:CG2	33:DL:81:ASP:OD2	2.66	0.42
22:BA:2637:U:OP1	25:BD:83:ARG:NH2	2.50	0.42
21:CU:53:VAL:HG22	21:CU:54:LYS:H	1.83	0.42
1:AA:751:U:C5	1:AA:752:G:C5	3.07	0.42
1:CA:1182:G:H5'	1:CA:1184:G:H5''	2.00	0.42
1:CA:1184:G:C2	1:CA:1185:G:C8	3.06	0.42
20:CT:83:ILE:O	20:CT:87:ALA:HB3	2.19	0.42
10:AJ:10:LEU:O	10:AJ:71:LEU:HA	2.19	0.42
22:DA:186:G:C2	22:DA:211:C:O2	2.72	0.42
11:AK:55:SER:O	11:AK:58:SER:N	2.52	0.42
1:AA:1371:G:P	9:AI:13:LYS:HD3	2.59	0.42
32:DK:105:ARG:CZ	37:DP:34:GLU:HG3	2.49	0.42
35:DN:103:ARG:CD	35:DN:110:MET:HE3	2.48	0.42
28:DG:129:THR:C	28:DG:130:GLU:HG2	2.40	0.42
27:DF:17:MET:O	27:DF:21:ASN:HA	2.19	0.42
22:DA:1819:A:H4'	22:DA:1820:U:H5''	2.01	0.42
22:BA:1301:A:C5	22:BA:1303:G:C8	3.06	0.42
52:D4:16:ILE:HG22	52:D4:17:VAL:N	2.34	0.42
24:BC:260:ASN:O	24:BC:261:LYS:HB2	2.19	0.42
22:DA:1936:A:C8	22:DA:1945:G:C6	3.07	0.42
22:DA:1081:U:O3'	30:DI:124:ALA:HB1	2.19	0.42
25:BD:142:VAL:CB	25:BD:143:PRO:CD	2.96	0.42
1:AA:1503:A:H8	1:AA:1531:A:O2'	1.99	0.42
22:BA:46:G:N2	22:BA:47:C:C2	2.86	0.42
1:CA:1491:G:C5	1:CA:1492:A:C5	3.07	0.42
22:DA:1984:G:C5	22:DA:1985:C:C5	3.07	0.42
22:DA:1:G:C2	22:DA:2:G:C4	3.07	0.42
22:DA:579:G:C2	22:DA:1262:A:C5	3.07	0.42
22:DA:2478:A:C8	22:DA:2529:G:N7	2.87	0.42
22:DA:1997:C:P	25:DD:129:THR:OG1	2.77	0.42
22:BA:262:A:C2	22:BA:430:A:N3	2.87	0.42
22:BA:1946:U:C2	22:BA:1947:C:C6	3.07	0.42
22:DA:1594:U:H2'	22:DA:1595:C:C6	2.53	0.42
22:DA:2378:A:N7	22:DA:2379:G:H1'	2.34	0.42
22:DA:798:G:H2'	22:DA:799:G:H8	1.83	0.42
46:BY:23:ARG:O	46:BY:27:ASN:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1068:G:H2'	1:AA:1069:C:H5'	2.01	0.42
21:CU:6:VAL:HG11	21:CU:17:ARG:HG3	2.01	0.42
22:BA:661:A:H2'	22:BA:662:G:O4'	2.19	0.42
1:AA:1410:A:C2	1:AA:1411:C:C2	3.07	0.42
22:DA:1494:A:H2'	22:DA:1495:A:O4'	2.19	0.42
22:DA:1858:A:C2	22:DA:1859:U:H1'	2.54	0.42
30:DI:103:ARG:O	30:DI:107:GLN:HB2	2.19	0.42
22:BA:2217:G:O2'	22:BA:2218:G:H5'	2.19	0.42
1:AA:104:G:C2	1:AA:105:G:C8	3.07	0.42
22:BA:1054:A:C5	22:BA:1055:G:N7	2.86	0.42
51:D3:8:ARG:O	51:D3:12:LYS:HG3	2.19	0.42
22:DA:1751:U:H2'	22:DA:1752:C:C6	2.54	0.42
1:AA:844:G:N3	1:AA:845:A:N7	2.67	0.42
6:AF:12:PRO:O	6:AF:15:SER:N	2.51	0.42
34:DM:73:ILE:HG13	34:DM:91:TYR:CE2	2.54	0.42
42:BU:102:THR:CG2	42:BU:103:ILE:N	2.81	0.42
3:CC:100:GLN:O	3:CC:101:ILE:HB	2.18	0.42
34:DM:34:LYS:HD3	43:DV:82:TYR:HA	2.01	0.42
22:BA:152:A:H2'	22:BA:153:U:C6	2.54	0.42
7:CG:31:MET:O	7:CG:31:MET:HG2	2.19	0.42
53:B5:40:GLU:HA	53:B5:181:PHE:HA	2.01	0.42
15:AO:87:LEU:O	15:AO:88:ARG:HB3	2.18	0.42
22:BA:716:A:C6	22:BA:717:C:C5	3.08	0.42
1:AA:516:U:C4	1:AA:517:G:C6	3.08	0.42
22:DA:756:A:C5	22:DA:757:G:C8	3.08	0.42
22:BA:2728:U:O2	22:BA:2729:G:C8	2.72	0.42
22:BA:2345:G:C4	22:BA:2381:A:C2	3.07	0.42
1:AA:411:A:C5	1:AA:429:U:C5	3.07	0.42
1:AA:1406:U:C2'	1:AA:1407:C:H5'	2.49	0.42
6:CF:92:THR:O	6:CF:93:LYS:C	2.57	0.42
2:CB:102:THR:O	2:CB:103:ASN:CB	2.67	0.42
35:DN:90:ARG:NH1	35:DN:116:VAL:HG11	2.34	0.42
22:BA:2297:A:N1	22:BA:2321:U:H5	2.17	0.42
13:AM:45:ILE:HG13	13:AM:48:LEU:HD13	2.01	0.42
22:DA:1604:C:H5''	57:DA:3404:HOH:O	2.19	0.42
24:BC:71:LYS:CB	24:BC:96:TYR:CE2	3.02	0.42
24:DC:160:THR:H	24:DC:195:VAL:HG13	1.84	0.42
22:DA:669:G:H2'	22:DA:670:A:N7	2.34	0.42
1:AA:1060:U:H5''	10:AJ:53:ILE:HG23	2.02	0.42
22:BA:2352:A:C2'	22:BA:2353:G:H5'	2.49	0.42
2:CB:54:LEU:HA	2:CB:57:LEU:CB	2.42	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2308:G:C5	27:BF:77:PHE:CZ	3.07	0.42
35:BN:28:LEU:O	35:BN:32:GLU:N	2.52	0.42
1:CA:620:C:C6	4:CD:132:ILE:HD13	2.54	0.42
53:B5:59:VAL:HG12	53:B5:63:VAL:HG21	2.01	0.42
1:AA:75:G:N3	1:AA:75:G:H2'	2.34	0.42
1:CA:671:G:N2	1:CA:736:C:C2	2.87	0.42
1:CA:707:U:H2'	1:CA:708:C:C6	2.54	0.42
22:DA:125:A:H3'	50:D2:19:ARG:HG3	2.01	0.42
30:BI:96:ASP:OD1	30:BI:97:LYS:N	2.52	0.42
22:DA:1469:A:C2	22:DA:1470:A:C6	3.07	0.42
45:DX:33:LEU:HD23	45:DX:50:ARG:CZ	2.48	0.42
22:BA:846:U:O2'	22:BA:847:U:OP2	2.37	0.42
10:AJ:74:VAL:HG12	10:AJ:75:ASP:N	2.33	0.42
1:AA:481:G:O2'	1:AA:483:C:N4	2.52	0.42
52:D4:33:HIS:N	52:D4:33:HIS:CD2	2.87	0.42
22:DA:580:U:O2'	22:DA:581:C:H5'	2.19	0.42
22:BA:2281:A:N1	22:BA:2282:G:C6	2.86	0.42
1:AA:212:G:C2	1:AA:213:G:C4	3.07	0.42
25:DD:45:TYR:HB2	25:DD:83:ARG:NH1	2.34	0.42
1:CA:327:A:C2	1:CA:329:A:N3	2.87	0.42
20:AT:80:THR:O	20:AT:81:ALA:C	2.58	0.42
42:DU:72:ILE:HD13	42:DU:96:PHE:CE2	2.54	0.42
42:DU:44:LYS:HG2	42:DU:45:HIS:N	2.34	0.42
22:BA:1046:A:H3'	22:BA:1047:G:C5'	2.48	0.42
4:CD:29:ASP:O	4:CD:31:LYS:N	2.46	0.42
17:CQ:16:LYS:O	17:CQ:17:MET:SD	2.77	0.42
1:AA:991:U:C4	1:AA:1212:U:H1'	2.54	0.42
1:CA:822:U:N3	1:CA:823:C:C5	2.87	0.42
1:AA:575:G:C5	1:AA:821:G:C8	3.07	0.42
31:DJ:64:VAL:HG11	31:DJ:89:PHE:CE2	2.55	0.42
34:BM:18:ARG:CG	34:BM:18:ARG:HH21	2.31	0.42
1:AA:220:G:C2'	1:AA:221:C:H5'	2.49	0.42
8:CH:11:LEU:HD11	8:CH:127:CYS:CB	2.50	0.42
8:CH:126:ILE:HG22	8:CH:127:CYS:SG	2.59	0.42
37:BP:75:GLN:O	37:BP:76:THR:C	2.58	0.42
2:CB:192:ASP:O	2:CB:193:PRO:O	2.36	0.42
1:AA:810:C:C2'	1:AA:810:C:O2	2.64	0.42
22:BA:518:G:H4'	40:BS:18:ARG:CZ	2.48	0.42
1:AA:1503:A:C5	1:AA:1531:A:N3	2.87	0.42
7:AG:71:PRO:HD2	7:AG:96:ARG:HG2	2.01	0.42
7:CG:125:SER:C	7:CG:127:ALA:N	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:567:U:H2'	22:DA:568:U:O5'	2.19	0.42
15:AO:32:LEU:HA	15:AO:32:LEU:HD23	1.82	0.42
22:DA:404:A:O4'	22:DA:405:U:OP2	2.37	0.42
5:AE:45:ARG:HA	5:AE:73:ASN:HB3	2.00	0.42
40:DS:59:GLU:OE1	40:DS:66:ILE:HD11	2.18	0.42
1:AA:851:G:H2'	1:AA:852:G:H5'	2.01	0.42
42:DU:82:ARG:HB2	42:DU:97:LYS:HG3	2.01	0.42
24:DC:202:LEU:HD12	24:DC:202:LEU:HA	1.80	0.42
31:BJ:97:PRO:O	31:BJ:99:ARG:N	2.52	0.42
49:B1:17:THR:HG22	49:B1:42:VAL:HG11	2.00	0.42
1:CA:996:A:H2'	1:CA:997:U:C5	2.53	0.42
5:CE:94:VAL:CG1	5:CE:111:MET:HE3	2.49	0.42
1:AA:540:G:C6	1:AA:541:G:C5	3.07	0.42
26:BE:41:GLN:NE2	26:BE:43:THR:HG21	2.34	0.42
14:CN:69:ARG:HA	14:CN:70:PRO:HD3	1.90	0.42
22:DA:413:C:N4	57:DA:3564:HOH:O	2.52	0.42
22:BA:1902:C:N4	22:BA:1903:G:C4	2.87	0.42
5:CE:42:GLY:O	5:CE:119:GLY:HA3	2.19	0.42
51:D3:58:VAL:HG12	51:D3:62:LEU:HD12	2.01	0.42
45:DX:32:ASN:ND2	45:DX:53:ALA:HB2	2.34	0.42
22:BA:559:G:H2'	22:BA:560:C:O4'	2.19	0.42
42:DU:22:ARG:CZ	42:DU:73:PHE:CE2	3.02	0.42
23:DB:2:G:N3	23:DB:2:G:H2'	2.33	0.42
22:DA:1695:G:H3'	22:DA:1695:G:N3	2.33	0.42
11:CK:85:MET:HA	11:CK:111:THR:O	2.19	0.42
39:BR:25:LEU:H	39:BR:94:THR:HG23	1.84	0.42
22:DA:446:G:H4'	22:DA:447:A:OP1	2.19	0.42
5:CE:100:SER:O	5:CE:101:GLU:C	2.57	0.42
1:CA:486:U:OP2	1:CA:486:U:C6	2.73	0.42
30:BI:103:ARG:HE	30:BI:104:ALA:N	2.17	0.42
22:BA:2243:U:O2	22:BA:2434:A:C2	2.72	0.42
22:BA:608:A:C2	22:BA:609:A:N3	2.87	0.42
1:CA:34:C:H2'	1:CA:35:G:C8	2.54	0.42
22:DA:1265:A:C8	22:DA:1267:U:C2	3.06	0.42
1:AA:1062:U:C2'	1:AA:1063:C:C6	2.98	0.42
1:AA:1061:G:C6	1:AA:1197:A:C2	3.08	0.42
30:DI:77:ALA:HA	30:DI:80:LEU:HD12	2.01	0.42
12:AL:110:ARG:NH1	12:AL:113:ALA:HB3	2.35	0.42
1:AA:71:A:H3'	1:AA:71:A:P	2.59	0.42
39:DR:3:ALA:HB2	39:DR:101:ILE:CG2	2.49	0.42
39:DR:47:VAL:CG1	39:DR:54:VAL:HG21	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2147:A:C8	22:DA:2148:G:C8	3.07	0.42
31:DJ:81:ILE:HG12	31:DJ:82:GLY:N	2.34	0.42
1:AA:559:A:H2'	1:AA:559:A:N3	2.33	0.42
1:CA:769:G:C2'	1:CA:770:C:H5'	2.49	0.42
22:BA:2684:U:H2'	22:BA:2685:G:O5'	2.20	0.42
1:CA:73:C:O2'	1:CA:74:A:P	2.77	0.42
1:AA:93:U:C2'	1:AA:94:G:H5''	2.49	0.42
1:AA:923:A:C6	1:AA:924:C:C4	3.07	0.42
29:BH:114:GLU:CB	29:BH:133:GLN:O	2.66	0.42
27:BF:105:THR:HG23	27:BF:106:ILE:HG23	2.00	0.42
1:AA:230:G:C6	1:AA:231:U:C4	3.06	0.42
1:CA:990:C:N3	1:CA:991:U:O4	2.52	0.42
46:DY:56:LEU:O	46:DY:57:LEU:HB2	2.16	0.42
1:AA:532:A:OP2	1:AA:532:A:O4'	2.38	0.42
1:CA:811:C:H4'	1:CA:900:A:N6	2.35	0.42
51:D3:45:ARG:N	51:D3:46:PRO:HD2	2.33	0.42
1:CA:437:U:C4	1:CA:438:U:C5	3.06	0.42
4:AD:173:VAL:HG22	4:AD:174:ASP:N	2.34	0.42
1:CA:1108:G:H5''	3:CC:176:HIS:CD2	2.55	0.42
6:CF:18:VAL:HG12	6:CF:19:PRO:CD	2.50	0.42
22:DA:2033:A:H4'	22:DA:2034:U:OP1	2.18	0.42
1:AA:235:C:H2'	1:AA:236:A:C8	2.54	0.42
22:BA:585:G:C5'	22:BA:586:A:P	3.05	0.42
5:AE:35:ALA:CB	5:AE:60:ILE:HA	2.49	0.42
22:DA:2266:A:C2	22:DA:2272:U:C5	3.07	0.42
8:CH:27:MET:HG2	8:CH:59:LEU:HB3	2.01	0.42
22:DA:2322:A:C5	22:DA:2323:G:C8	3.07	0.42
22:DA:958:U:OP2	34:DM:14:LYS:HD2	2.20	0.42
24:DC:145:GLU:HB2	24:DC:188:CYS:HB3	2.01	0.42
1:AA:448:A:C5	1:AA:487:A:C2	3.08	0.42
2:AB:206:ALA:O	2:AB:210:VAL:HG22	2.19	0.42
29:DH:127:GLU:HA	29:DH:144:VAL:O	2.19	0.42
22:BA:2094:A:H4'	29:BH:25:TYR:CZ	2.55	0.42
34:BM:72:PRO:HB3	34:BM:92:TRP:CZ3	2.54	0.42
3:AC:20:SER:OG	3:AC:40:ARG:NH2	2.50	0.42
1:AA:270:A:C6	1:AA:271:C:N3	2.87	0.42
7:AG:130:ASN:O	7:AG:130:ASN:OD1	2.36	0.42
35:DN:49:GLU:N	35:DN:50:PRO:HD2	2.35	0.42
17:AQ:81:LYS:HE2	17:AQ:81:LYS:CA	2.48	0.42
28:DG:87:LEU:CD2	28:DG:148:LEU:HB2	2.48	0.42
1:AA:832:G:C2	1:AA:833:G:C8	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2221:G:C2'	22:DA:2222:C:H5'	2.49	0.42
33:BL:110:VAL:O	33:BL:131:ALA:HB2	2.18	0.42
22:BA:2543:G:H5'	22:BA:2766:A:O3'	2.20	0.42
37:DP:8:LEU:O	37:DP:8:LEU:HD23	2.19	0.42
11:CK:97:ILE:HD13	11:CK:110:ILE:HD11	2.00	0.42
11:CK:110:ILE:HG22	21:CU:17:ARG:CZ	2.50	0.42
24:BC:199:GLU:O	24:BC:200:HIS:C	2.56	0.42
22:BA:2761:A:N1	22:BA:2762:C:C2	2.87	0.42
22:DA:1464:G:C4	22:DA:1465:G:C8	3.07	0.42
1:AA:522:C:H2'	1:AA:523:A:O4'	2.20	0.42
22:BA:1826:G:H2'	22:BA:1827:U:H6	1.85	0.42
22:DA:1115:G:C2	22:DA:1116:G:C5	3.08	0.42
22:BA:2749:A:OP1	28:BG:2:SER:N	2.52	0.42
22:BA:2376:A:H2'	22:BA:2377:A:O4'	2.19	0.42
1:CA:264:C:H2'	1:CA:265:G:O4'	2.18	0.42
22:DA:95:A:H4'	46:DY:38:GLN:O	2.19	0.42
22:DA:2047:C:O2'	22:DA:2048:G:H5'	2.19	0.42
1:CA:442:G:C6	1:CA:443:C:C4	3.07	0.42
22:BA:460:A:H2'	22:BA:461:C:O4'	2.19	0.42
53:B5:19:LYS:HG2	53:B5:23:ILE:HD11	2.01	0.42
1:AA:1113:C:H2'	1:AA:1114:C:H6	1.84	0.42
17:CQ:60:GLU:HB3	17:CQ:76:VAL:HG23	2.00	0.42
13:AM:40:ALA:O	13:AM:43:VAL:HG22	2.19	0.42
25:BD:35:THR:O	25:BD:36:GLN:HB2	2.19	0.42
9:CI:115:LYS:HB2	9:CI:118:LEU:HD22	2.01	0.42
36:BO:35:ILE:HG23	36:BO:35:ILE:O	2.20	0.42
1:CA:983:A:N3	1:CA:983:A:C2'	2.81	0.42
7:AG:45:SER:HA	7:AG:48:GLU:HB2	2.01	0.42
22:BA:2812:G:C2	22:BA:2813:A:H1'	2.55	0.42
25:DD:99:GLU:HG2	25:DD:182:ALA:HB2	2.01	0.42
11:CK:71:ALA:O	11:CK:75:LYS:HG3	2.18	0.42
22:BA:1239:G:H2'	22:BA:1240:U:O4'	2.18	0.42
22:BA:975:A:H2'	22:BA:976:G:H5'	2.01	0.42
22:DA:1362:C:H2'	22:DA:1363:C:C5'	2.50	0.42
22:DA:2045:C:C2'	22:DA:2046:G:O5'	2.68	0.42
22:BA:57:C:H2'	22:BA:58:G:O4'	2.20	0.42
6:CF:9:MET:HE2	6:CF:59:TYR:CD1	2.54	0.42
22:BA:1187:G:H5'	39:BR:83:TYR:CE2	2.54	0.42
22:BA:2242:G:H2'	22:BA:2243:U:O4'	2.18	0.42
26:BE:1:MET:HG3	26:BE:14:VAL:HG23	2.01	0.42
1:CA:583:A:N7	1:CA:584:G:N7	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:103:ARG:CD	35:BN:110:MET:CE	2.91	0.42
22:BA:361:G:O2'	22:BA:362:A:O5'	2.33	0.42
1:AA:1288:A:C2	1:AA:1289:A:C4	3.06	0.42
35:BN:32:GLU:HB3	35:BN:115:LEU:HD12	2.00	0.42
26:BE:108:ILE:HG13	26:BE:109:LEU:N	2.34	0.42
22:DA:1050:A:O2'	22:DA:2752:C:H1'	2.18	0.42
1:AA:1134:G:C2	1:AA:1141:C:N4	2.87	0.42
1:CA:408:A:H2'	1:CA:409:U:O4'	2.18	0.42
34:BM:136:MET:CE	43:BV:57:TYR:HD2	2.29	0.42
36:BO:24:THR:HG22	36:BO:42:PRO:CD	2.45	0.42
5:AE:82:GLN:OE1	5:AE:148:ASN:O	2.37	0.42
5:AE:77:ASN:HB2	5:AE:82:GLN:CG	2.48	0.42
40:BS:84:ARG:HB2	40:BS:96:ILE:CD1	2.49	0.42
22:BA:2636:C:H4'	25:BD:81:GLU:CD	2.40	0.42
1:CA:108:G:N3	1:CA:108:G:C5'	2.83	0.42
21:AU:14:VAL:CG1	21:AU:16:LEU:HD21	2.50	0.42
10:AJ:7:ARG:O	10:AJ:100:ILE:O	2.37	0.42
1:AA:1031:C:H4'	1:AA:1032:G:H5''	2.01	0.42
2:AB:164:ILE:HG23	2:AB:165:ASP:H	1.83	0.42
53:B5:52:PRO:HB2	53:B5:205:ALA:HB3	2.01	0.42
1:CA:151:A:H2'	1:CA:152:A:O4'	2.20	0.42
22:BA:2021:C:OP1	48:B0:9:THR:CG2	2.66	0.42
22:DA:305:C:C2	22:DA:313:G:N1	2.87	0.42
24:DC:246:THR:C	24:DC:248:TRP:H	2.22	0.42
22:DA:301:G:N2	22:DA:302:C:O2	2.53	0.42
45:DX:54:LYS:O	45:DX:57:ARG:HB2	2.19	0.42
46:DY:46:VAL:O	46:DY:50:VAL:HG23	2.19	0.42
1:CA:1072:G:C6	1:CA:1104:G:C2	3.07	0.42
10:CJ:74:VAL:HG12	10:CJ:75:ASP:N	2.34	0.42
26:DE:83:VAL:HG12	26:DE:86:ALA:HA	2.02	0.42
22:BA:760:G:H2'	22:BA:761:A:O4'	2.20	0.42
26:DE:177:PRO:O	26:DE:181:ILE:HG13	2.20	0.42
22:DA:1230:A:H2'	22:DA:1231:U:C6	2.55	0.42
22:DA:1669:A:C1'	32:DK:5:GLN:HG3	2.50	0.42
22:DA:2294:G:OP2	36:DO:94:ARG:NH1	2.52	0.42
22:DA:2341:G:C6	22:DA:2342:C:N4	2.88	0.42
29:DH:72:ILE:O	29:DH:72:ILE:CG2	2.67	0.42
22:BA:476:G:O4'	22:BA:505:A:C2	2.73	0.42
22:DA:2712:C:C2	22:DA:2715:C:OP1	2.73	0.42
1:CA:252:U:O4	1:CA:253:A:N6	2.52	0.42
30:BI:54:PRO:O	30:BI:75:PRO:HD2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:43:LEU:HG	2:CB:44:GLU:HG3	2.01	0.42
46:BY:23:ARG:O	46:BY:24:GLU:C	2.58	0.42
22:DA:848:C:H2'	22:DA:849:A:C8	2.54	0.42
1:AA:1414:U:H2'	1:AA:1415:G:H8	1.84	0.42
22:DA:2204:G:N3	22:DA:2205:A:C8	2.88	0.42
9:AI:85:ARG:O	9:AI:88:MET:HB2	2.20	0.42
1:CA:282:A:H3'	1:CA:283:U:C6	2.55	0.42
41:BT:67:VAL:CG2	41:BT:76:ARG:HG3	2.49	0.42
1:CA:676:A:C2	1:CA:677:U:C4	3.08	0.42
35:DN:36:THR:HG23	35:DN:41:ALA:HB2	2.02	0.42
22:BA:629:G:N3	22:BA:639:U:O2'	2.48	0.42
26:BE:128:ALA:HB1	26:BE:129:PRO:HD2	2.02	0.42
1:AA:749:A:H2'	1:AA:750:C:H6	1.84	0.42
3:CC:26:THR:OG1	14:CN:76:LYS:HE3	2.20	0.42
24:BC:33:LEU:O	24:BC:64:ILE:HG13	2.19	0.42
24:BC:168:ASP:CG	24:BC:169:GLY:N	2.73	0.42
22:BA:2759:G:C5	22:BA:2760:C:C5	3.08	0.42
14:CN:87:ALA:HA	14:CN:92:GLU:HG3	2.00	0.42
24:BC:182:ARG:NH2	24:BC:183:LYS:O	2.53	0.42
16:AP:30:GLY:O	16:AP:31:ARG:C	2.58	0.42
22:BA:1934:C:H4'	22:BA:1974:C:O3'	2.20	0.42
2:AB:78:GLU:C	2:AB:80:VAL:H	2.22	0.42
4:AD:100:ASN:C	4:AD:102:VAL:H	2.22	0.42
22:BA:120:U:OP2	57:BA:3214:HOH:O	2.21	0.42
51:D3:47:LYS:HA	51:D3:47:LYS:HD3	1.79	0.42
1:AA:4:U:O2	1:AA:4:U:C2'	2.68	0.42
34:BM:16:ARG:HD3	34:BM:16:ARG:HA	1.87	0.42
5:AE:79:GLY:O	5:AE:121:HIS:N	2.48	0.42
1:AA:1171:A:H2'	1:AA:1172:C:C6	2.55	0.42
22:BA:2732:G:H3'	22:BA:2733:A:C5'	2.49	0.42
22:BA:2733:A:C2	22:BA:2734:A:C4	3.07	0.42
1:CA:1139:G:N2	1:CA:1143:G:C6	2.87	0.42
22:BA:2511:U:C4	22:BA:2512:C:C4	3.08	0.42
22:BA:1343:G:C4	22:BA:1344:U:C5	3.08	0.42
1:AA:683:G:H21	11:AK:40:ASN:HA	1.85	0.42
22:BA:2579:C:H2'	22:BA:2580:U:O4'	2.19	0.42
22:DA:971:G:OP2	22:DA:974:G:N2	2.52	0.42
22:BA:2291:U:H5''	22:BA:2380:C:O2'	2.19	0.42
22:BA:1671:U:O2	22:BA:1673:G:C8	2.73	0.42
22:DA:2127:G:H2'	22:DA:2128:G:C8	2.54	0.42
22:DA:2136:G:C2	22:DA:2156:G:H1'	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1920:C:O5'	22:BA:1920:C:H6	2.02	0.42
1:AA:1505:G:H5'	1:AA:1506:U:O5'	2.18	0.42
17:CQ:47:HIS:HA	17:CQ:71:LYS:HE2	2.01	0.42
6:AF:92:THR:CG2	6:AF:93:LYS:H	2.32	0.42
1:AA:1160:G:O6	1:AA:1181:G:O6	2.37	0.42
29:DH:121:VAL:O	29:DH:122:LEU:CB	2.67	0.42
22:DA:1120:G:C6	22:DA:1121:C:C4	3.07	0.42
22:BA:2720:U:C2'	22:BA:2721:A:O5'	2.68	0.42
23:DB:29:A:H2'	23:DB:30:C:C6	2.55	0.42
1:AA:1350:A:N7	1:AA:1351:U:C5	2.87	0.42
1:AA:1367:C:P	9:AI:114:LYS:NZ	2.93	0.42
1:AA:132:C:H2'	1:AA:133:U:O4'	2.20	0.42
20:AT:67:ILE:HG12	20:AT:71:LYS:HG2	2.00	0.42
1:AA:144:G:C5	1:AA:179:A:N1	2.87	0.42
22:DA:377:G:C6	22:DA:378:C:C5	3.07	0.42
1:AA:1319:A:C8	1:AA:1323:G:C6	3.07	0.42
5:AE:81:LEU:HD22	5:AE:81:LEU:N	2.34	0.42
22:DA:832:U:H2'	22:DA:833:A:C8	2.55	0.42
32:BK:108:ARG:O	32:BK:109:SER:C	2.56	0.42
12:CL:21:VAL:N	12:CL:22:PRO:CD	2.82	0.42
22:DA:126:A:C5	22:DA:127:A:C2	3.07	0.42
3:AC:11:ARG:NH1	3:AC:182:ILE:HB	2.33	0.42
1:CA:1157:A:H5'	1:CA:1158:C:C6	2.55	0.42
1:AA:624:C:C4	1:AA:625:U:C4	3.07	0.42
8:CH:94:LYS:HD3	8:CH:98:GLY:CA	2.49	0.42
1:AA:201:G:H2'	1:AA:202:G:C8	2.55	0.42
1:CA:463:U:H3'	1:CA:464:U:C6	2.54	0.42
22:BA:1688:U:H2'	22:BA:1698:A:N6	2.34	0.42
6:AF:16:GLU:OE2	4:CD:192:SER:HB3	2.19	0.42
1:CA:298:A:H2'	1:CA:299:G:O4'	2.20	0.42
22:DA:371:A:N6	22:DA:402:A:OP2	2.45	0.42
1:CA:328:C:H2'	1:CA:328:C:O2	2.20	0.42
6:CF:19:PRO:HA	6:CF:22:ILE:HD12	2.01	0.42
22:DA:2819:G:H5''	57:DA:3808:HOH:O	2.19	0.42
46:DY:11:VAL:O	46:DY:15:ASN:CG	2.58	0.42
4:AD:160:GLU:C	4:AD:162:ALA:H	2.22	0.42
27:BF:28:VAL:O	27:BF:28:VAL:CG1	2.68	0.42
1:AA:1216:A:H5''	14:AN:5:SER:HB3	2.01	0.42
22:BA:1045:C:O5'	22:BA:1046:A:H5'	2.20	0.42
1:CA:890:G:N2	1:CA:906:A:H2'	2.35	0.42
17:AQ:4:LYS:HG3	17:AQ:7:THR:HG22	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:73:SER:HB2	27:BF:81:GLN:H	1.84	0.42
22:BA:1000:A:N6	22:BA:1001:A:C6	2.88	0.42
22:DA:2297:A:C2	22:DA:2298:A:C8	3.07	0.42
19:CS:58:VAL:HG11	19:CS:75:ALA:CA	2.50	0.42
22:BA:2318:G:H2'	22:BA:2319:G:O4'	2.20	0.42
1:CA:1308:U:H2'	1:CA:1309:G:C8	2.54	0.42
12:AL:73:ASN:O	12:AL:74:LEU:HD22	2.19	0.42
22:DA:1669:A:H3'	22:DA:1669:A:N3	2.35	0.42
1:AA:736:C:H2'	1:AA:737:C:H6	1.83	0.42
1:CA:1462:C:H2'	1:CA:1463:U:C6	2.54	0.42
22:BA:1359:A:C5	22:BA:1373:A:C2	3.08	0.42
10:CJ:35:GLN:C	10:CJ:36:VAL:HG23	2.40	0.42
22:DA:2581:G:H8	22:DA:2582:G:O6	2.02	0.42
34:DM:58:LYS:C	34:DM:60:GLN:H	2.23	0.42
22:DA:2864:G:H2'	22:DA:2865:U:O4'	2.19	0.42
35:DN:46:ARG:O	35:DN:50:PRO:CG	2.68	0.42
22:DA:1750:G:O2'	22:DA:2860:A:N1	2.45	0.42
43:DV:63:ILE:HD11	43:DV:91:PHE:CD1	2.54	0.42
1:AA:1446:A:C2'	1:AA:1447:A:H5'	2.48	0.42
1:AA:1296:C:H4'	1:AA:1302:C:H41	1.84	0.42
22:BA:2766:A:N3	22:BA:2766:A:H2'	2.35	0.42
22:DA:2563:U:C1'	22:DA:2566:A:N6	2.82	0.42
23:BB:109:A:C5	23:BB:110:C:C5	3.07	0.42
26:DE:77:ILE:CG1	26:DE:77:ILE:O	2.67	0.42
22:BA:303:G:C4	22:BA:304:U:C6	3.08	0.42
22:BA:729:G:N3	22:BA:729:G:H2'	2.34	0.42
4:AD:6:GLY:O	4:AD:8:LYS:N	2.51	0.42
22:DA:2776:A:C5	22:DA:2778:A:C6	3.07	0.42
22:DA:693:A:C5	22:DA:694:U:C5	3.07	0.42
22:DA:2741:A:H2'	22:DA:2742:G:H5'	2.02	0.42
10:AJ:49:PHE:CD2	14:AN:77:PHE:HE1	2.37	0.42
22:BA:687:C:H2'	22:BA:688:U:O4'	2.19	0.42
22:DA:816:C:C2	22:DA:1192:G:C2	3.08	0.42
29:BH:45:GLU:C	29:BH:47:PHE:N	2.72	0.42
16:CP:52:LEU:HD21	16:CP:57:ILE:HD12	2.01	0.42
1:AA:4:U:O2	1:AA:4:U:H2'	2.18	0.42
1:AA:630:A:C2	1:AA:631:C:C2	3.07	0.42
1:CA:1305:G:C6	1:CA:1331:G:C2	3.07	0.42
45:DX:36:HIS:O	45:DX:48:THR:HA	2.20	0.42
38:DQ:9:ILE:HD12	38:DQ:9:ILE:O	2.20	0.42
17:CQ:31:HIS:CD2	17:CQ:34:TYR:CD1	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1444:G:C2	22:BA:1548:A:C2	3.08	0.42
22:BA:451:U:H5'	57:BA:3238:HOH:O	2.18	0.42
1:AA:58:C:O2'	1:AA:59:A:H5'	2.19	0.42
1:CA:1446:A:N6	1:CA:1447:A:N6	2.68	0.42
34:DM:136:MET:O	43:DV:79:ARG:NH2	2.53	0.42
30:BI:108:GLU:HA	30:BI:111:GLN:HB3	2.02	0.42
22:DA:2655:G:O2'	22:DA:2656:U:P	2.78	0.42
18:CR:59:ILE:O	18:CR:63:ARG:HD2	2.19	0.42
13:CM:16:VAL:HG13	13:CM:41:GLU:HA	2.02	0.42
22:BA:496:G:C2	22:BA:497:A:H1'	2.55	0.42
1:CA:929:G:C5	1:CA:930:C:C5	3.07	0.42
1:CA:775:G:C6	1:CA:776:G:C5	3.07	0.42
15:CO:85:LEU:HA	15:CO:85:LEU:HD12	1.92	0.42
2:AB:122:GLN:H	2:AB:122:GLN:CD	2.23	0.42
22:BA:929:U:H1'	47:BZ:26:GLY:O	2.20	0.42
11:AK:22:HIS:HD2	11:AK:35:THR:HG22	1.84	0.42
4:AD:23:SER:O	4:AD:24:GLY:O	2.36	0.42
4:CD:206:LYS:O	4:CD:206:LYS:CG	2.64	0.42
1:AA:1394:A:C6	1:AA:1501:C:H4'	2.53	0.42
2:CB:222:ARG:NE	2:CB:223:GLU:HB2	2.35	0.42
22:BA:819:A:OP2	22:BA:1187:G:C2	2.72	0.42
22:BA:742:A:C2	22:BA:756:A:C2	3.08	0.42
18:CR:24:LYS:C	18:CR:26:ILE:N	2.73	0.42
35:BN:103:ARG:CD	35:BN:110:MET:HE2	2.49	0.42
22:DA:2504:U:C5	55:DA:3001:VIF:C14	2.99	0.42
1:CA:208:U:C5	1:CA:210:C:H6	2.38	0.42
22:BA:65:U:H2'	22:BA:66:C:H6	1.84	0.42
22:DA:2208:C:C2	22:DA:2217:G:N2	2.88	0.42
5:CE:25:VAL:O	5:CE:26:LYS:C	2.58	0.42
1:CA:66:A:H5'	1:CA:173:U:O4	2.20	0.42
22:BA:2127:G:O2'	22:BA:2128:G:O4'	2.28	0.42
29:DH:31:VAL:HG12	29:DH:32:PRO:HD3	2.02	0.42
29:DH:32:PRO:CB	45:DX:39:TRP:HB3	2.46	0.42
22:BA:1789:A:H2'	22:BA:1790:C:O4'	2.20	0.42
22:BA:1747:U:O2'	22:BA:1748:C:H5'	2.20	0.42
37:DP:53:ARG:HB2	37:DP:56:HIS:HB2	2.02	0.42
4:CD:98:LEU:HB2	4:CD:135:TYR:HB3	2.02	0.42
22:DA:845:A:N3	22:DA:845:A:H3'	2.33	0.42
1:CA:375:U:OP1	16:CP:70:ARG:HD3	2.20	0.42
1:CA:728:A:C6	1:CA:729:A:C6	3.08	0.42
45:DX:13:VAL:O	45:DX:13:VAL:CG2	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:792:A:H3'	22:DA:793:A:H5'	1.99	0.42
1:AA:1322:C:P	19:AS:78:ARG:NH2	2.93	0.42
33:DL:122:VAL:HG11	33:DL:127:VAL:HG21	2.00	0.42
22:DA:485:C:C2	22:DA:496:G:C2	3.08	0.42
1:AA:1539:C:H5''	21:AU:18:ARG:CG	2.50	0.42
22:DA:187:G:N2	22:DA:210:C:C2	2.88	0.42
1:AA:1149:C:O5'	1:AA:1149:C:H6	2.03	0.42
23:DB:84:G:N2	23:DB:93:C:O2	2.52	0.42
31:BJ:24:THR:HG21	31:BJ:27:ARG:HD2	2.00	0.42
22:DA:353:C:H3'	22:DA:354:A:C8	2.55	0.42
40:DS:43:ALA:O	40:DS:44:ALA:C	2.57	0.42
1:CA:1343:G:C6	1:CA:1344:C:N4	2.87	0.42
1:CA:1048:G:P	57:CA:1846:HOH:O	2.75	0.42
22:DA:2448:A:HO2'	22:DA:2449:U:H5	1.67	0.42
22:BA:1922:G:C5	22:BA:1923:U:C5	3.06	0.42
25:BD:122:VAL:HB	25:BD:141:ARG:NH1	2.35	0.42
22:BA:2590:A:H2'	22:BA:2591:C:C6	2.55	0.42
22:BA:2591:C:P	24:BC:238:ARG:HG3	2.60	0.42
13:AM:64:VAL:HG12	13:AM:64:VAL:O	2.19	0.42
4:AD:174:ASP:OD1	4:AD:177:LYS:NZ	2.50	0.42
1:CA:1105:A:C2	1:CA:1106:G:N7	2.87	0.42
6:AF:52:ASN:C	6:AF:53:LYS:O	2.56	0.42
6:CF:25:TYR:CD2	6:CF:25:TYR:N	2.88	0.42
22:DA:1584:U:O2	22:DA:1584:U:C3'	2.68	0.42
1:CA:1348:U:OP1	9:CI:112:GLU:N	2.45	0.42
9:CI:95:ARG:HA	9:CI:98:LEU:HB3	2.00	0.42
22:DA:1230:A:C2	22:DA:1231:U:C2	3.07	0.42
22:BA:2888:C:O2	22:BA:2888:C:C2'	2.67	0.42
1:CA:1478:U:H2'	1:CA:1479:C:C6	2.55	0.42
1:CA:68:G:O4'	1:CA:171:A:H1'	2.19	0.42
18:AR:23:TYR:CE1	18:AR:24:LYS:HG3	2.54	0.42
22:BA:969:G:C5	22:BA:970:U:C5	3.08	0.42
1:CA:104:G:H4'	1:CA:174:A:O4'	2.19	0.42
22:BA:2657:A:C2	22:BA:2665:A:C4	3.07	0.42
1:CA:1364:U:O2	1:CA:1364:U:C2'	2.68	0.42
1:AA:142:G:C6	1:AA:143:A:C5	3.07	0.42
1:AA:1446:A:N6	1:AA:1447:A:N6	2.68	0.42
22:BA:1947:C:N3	22:BA:1960:A:C2	2.87	0.42
49:B1:10:LYS:O	49:B1:51:GLU:HG3	2.20	0.42
25:DD:179:ARG:HB2	25:DD:188:LEU:HD12	2.02	0.42
22:BA:598:U:H2'	22:BA:599:A:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:440:C:O2'	22:BA:441:U:H5'	2.18	0.42
7:CG:33:ASP:CB	7:CG:35:LYS:HE3	2.50	0.42
43:DV:48:MET:O	43:DV:51:GLN:NE2	2.50	0.42
22:DA:16:C:O3'	48:D0:11:SER:OG	2.38	0.42
22:BA:693:A:C2'	22:BA:694:U:H5'	2.49	0.42
5:CE:96:MET:HE1	5:CE:140:THR:HG22	2.02	0.42
22:BA:1165:A:H2'	22:BA:1166:G:H8	1.83	0.42
22:BA:1351:C:C4	22:BA:1352:U:C4	3.08	0.42
4:CD:115:ARG:HG3	4:CD:133:ALA:CB	2.49	0.42
22:DA:2461:A:H1'	22:DA:2492:U:C2	2.53	0.42
22:BA:567:U:C2'	22:BA:568:U:O5'	2.67	0.42
53:B5:131:ILE:HA	53:B5:135:ARG:CB	2.50	0.42
28:DG:8:PRO:HG3	28:DG:51:THR:HG22	2.02	0.42
22:DA:2671:G:C2	22:DA:2672:U:C2	3.08	0.42
29:DH:69:ALA:HB2	29:DH:138:VAL:HG12	2.02	0.42
22:DA:2685:G:C4	22:DA:2686:G:C8	3.07	0.42
30:DI:62:TYR:C	30:DI:64:ASP:H	2.23	0.42
25:BD:67:HIS:O	25:BD:67:HIS:CD2	2.73	0.42
31:DJ:135:GLN:CD	31:DJ:135:GLN:N	2.73	0.42
16:AP:76:LYS:O	16:AP:76:LYS:HG3	2.19	0.42
13:CM:46:SER:O	13:CM:47:GLU:HB3	2.19	0.42
26:BE:10:SER:OG	26:BE:10:SER:O	2.34	0.42
1:AA:524:G:C6	1:AA:525:C:N4	2.87	0.42
22:DA:201:C:C4	22:DA:202:U:C5	3.08	0.42
1:AA:1086:U:O2'	1:AA:1087:G:H5'	2.19	0.42
34:BM:96:ILE:HG21	34:BM:126:ILE:CD1	2.49	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
29:BH:89:LYS:O	29:BH:90:LEU:C	2.58	0.42
22:DA:1370:C:O4'	22:DA:1810:A:H2	2.02	0.42
21:AU:41:PRO:HA	21:AU:45:ARG:NH1	2.34	0.42
22:BA:1060:U:OP1	30:BI:132:THR:HG21	2.20	0.42
22:DA:1651:G:O6	22:DA:1652:A:C6	2.72	0.42
22:DA:250:G:H2'	22:DA:251:A:C8	2.55	0.42
21:CU:12:PHE:CD1	21:CU:13:ASP:N	2.88	0.42
22:DA:306:U:C5	22:DA:307:G:C5	3.08	0.42
22:DA:310:A:C6	22:DA:330:A:C5	3.08	0.42
22:BA:2211:A:H1'	22:BA:2212:A:OP1	2.19	0.42
22:BA:1090:A:H2'	22:BA:1091:G:C5'	2.49	0.42
52:B4:11:CYS:SG	52:B4:14:CYS:SG	3.17	0.42
22:DA:56:A:C2	22:DA:115:C:C2	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1344:U:HO2'	22:DA:1345:C:P	2.37	0.42
41:BT:2:ILE:CA	41:BT:3:ARG:C	2.87	0.42
22:DA:2287:A:C8	22:DA:2289:G:C8	3.08	0.42
22:DA:1096:A:H2'	22:DA:1097:U:H5''	2.01	0.42
1:AA:1462:C:H2'	1:AA:1463:U:O4'	2.19	0.42
1:CA:728:A:C6	1:CA:729:A:N6	2.87	0.42
1:AA:1225:A:H2'	1:AA:1226:C:C6	2.53	0.42
2:AB:62:SER:C	2:AB:64:LYS:H	2.23	0.42
4:AD:199:LEU:O	4:AD:202:GLU:HB2	2.19	0.42
22:DA:1566:A:H5'	24:DC:214:ARG:CZ	2.50	0.42
22:DA:687:C:C2	22:DA:788:A:O4'	2.73	0.42
22:BA:1585:C:H2'	22:BA:1586:A:H5'	2.02	0.42
1:AA:923:A:N6	1:AA:924:C:N4	2.68	0.42
1:CA:532:A:N6	3:CC:193:TYR:HD2	2.17	0.42
22:DA:2091:C:O2	45:DX:34:HIS:CE1	2.73	0.42
52:D4:30:GLU:CB	52:D4:33:HIS:CD2	3.02	0.42
22:DA:2436:G:N3	22:DA:2437:G:C8	2.88	0.42
1:AA:545:C:O2	1:AA:545:C:H2'	2.20	0.42
20:CT:83:ILE:O	20:CT:87:ALA:CB	2.67	0.42
1:AA:463:U:O2	1:AA:463:U:H2'	2.18	0.42
3:AC:130:PHE:CE1	3:AC:131:ARG:HD2	2.54	0.42
22:DA:2037:A:C6	22:DA:2038:G:C5	3.08	0.42
22:BA:583:G:OP1	38:BQ:7:GLY:HA2	2.20	0.42
1:CA:295:C:C2	1:CA:296:U:C6	3.07	0.42
46:BY:37:LEU:C	46:BY:37:LEU:HD12	2.40	0.42
24:DC:65:VAL:HB	24:DC:67:PHE:CE1	2.54	0.42
22:DA:2531:A:C5'	28:DG:157:TYR:CZ	3.03	0.42
40:BS:45:VAL:HG12	40:BS:46:LEU:N	2.34	0.42
22:BA:1374:G:H2'	22:BA:1375:U:O4'	2.20	0.42
26:DE:108:ILE:HD12	26:DE:108:ILE:O	2.19	0.42
23:BB:94:A:H2'	23:BB:95:U:H6	1.85	0.42
53:B5:48:LEU:HD11	53:B5:174:ALA:HB3	2.01	0.42
22:DA:629:G:H4'	22:DA:650:C:O2	2.19	0.42
1:CA:456:A:C6	1:CA:457:G:C5	3.07	0.42
35:DN:103:ARG:NE	35:DN:110:MET:HE3	2.35	0.42
1:AA:575:G:O2'	1:AA:821:G:H5'	2.19	0.42
1:CA:684:U:O2'	11:CK:40:ASN:O	2.32	0.42
22:DA:1239:G:C6	22:DA:1240:U:C4	3.07	0.42
1:AA:1503:A:C4	1:AA:1531:A:N3	2.87	0.42
22:DA:1526:C:N4	22:DA:1527:G:C6	2.87	0.42
24:BC:30:PHE:CE2	24:BC:32:PRO:HB2	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:141:G:H2'	1:AA:142:G:O4'	2.19	0.42
22:DA:734:A:C4	22:DA:735:A:C8	3.08	0.42
25:BD:103:ASP:O	25:BD:104:VAL:CG2	2.68	0.42
1:AA:1253:G:H2'	1:AA:1254:A:C8	2.55	0.42
17:AQ:80:GLU:C	17:AQ:81:LYS:HD3	2.40	0.42
22:BA:1505:A:C2	22:BA:1506:U:O2	2.73	0.42
22:DA:706:A:C4	22:DA:707:G:C8	3.07	0.42
1:CA:1130:A:C8	1:CA:1146:A:N1	2.88	0.42
1:CA:304:U:O2'	1:CA:305:G:H5'	2.19	0.42
34:BM:42:THR:HG22	34:BM:93:VAL:HG12	2.02	0.42
12:CL:42:PRO:HD3	12:CL:48:ALA:O	2.19	0.42
1:AA:1241:G:C2	1:AA:1242:G:C5	3.08	0.42
1:CA:952:U:O4	13:CM:103:LYS:HD3	2.19	0.42
1:AA:399:G:H2'	1:AA:400:C:C6	2.54	0.42
1:AA:719:C:O2'	18:AR:38:LYS:HB3	2.19	0.42
1:AA:38:G:N2	1:AA:397:A:C4	2.88	0.42
1:CA:1426:G:C5	1:CA:1475:G:C2	3.07	0.42
45:DX:68:LEU:HD22	45:DX:78:TYR:CE1	2.54	0.42
45:DX:5:CYS:O	45:DX:7:VAL:N	2.53	0.42
7:AG:111:ARG:HB3	7:AG:119:ARG:HG2	2.02	0.42
45:BX:66:THR:O	45:BX:69:ALA:HB3	2.20	0.42
1:CA:615:G:C2	1:CA:616:G:C8	3.07	0.42
41:BT:51:PHE:O	41:BT:53:VAL:HG13	2.20	0.42
1:CA:1394:A:C5	1:CA:1501:C:H4'	2.55	0.42
11:CK:56:ARG:O	11:CK:59:THR:HG23	2.19	0.42
1:CA:1112:C:C4	3:CC:178:LEU:HD23	2.54	0.42
1:CA:346:G:N3	1:CA:346:G:H3'	2.34	0.42
6:CF:82:ASP:OD2	6:CF:82:ASP:N	2.52	0.42
30:BI:86:ILE:HD12	30:BI:86:ILE:N	2.35	0.42
34:BM:62:LYS:HD3	34:BM:64:TRP:CZ2	2.54	0.42
27:DF:12:VAL:O	27:DF:16:LEU:HG	2.18	0.42
42:DU:51:ALA:O	42:DU:52:LEU:HB2	2.20	0.42
31:DJ:126:ALA:O	31:DJ:127:GLY:O	2.37	0.42
22:BA:2577:A:H2'	22:BA:2578:G:OP1	2.20	0.42
25:BD:140:HIS:CE1	57:BD:302:HOH:O	2.52	0.42
4:CD:206:LYS:HD3	4:CD:206:LYS:O	2.20	0.42
5:CE:105:ILE:CG1	5:CE:112:ARG:HG3	2.50	0.42
22:BA:1916:A:P	22:BA:1917:U:OP2	2.78	0.42
8:AH:64:LYS:HB2	8:AH:71:VAL:CG2	2.49	0.42
30:BI:80:LEU:HD11	30:BI:133:ALA:HA	2.01	0.42
2:CB:222:ARG:HG2	2:CB:223:GLU:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:4:ILE:HD11	13:AM:10:PRO:CG	2.49	0.42
22:DA:2452:C:C2	55:DA:3001:VIF:O05	2.73	0.42
22:DA:511:U:H2'	22:DA:512:G:H5'	2.01	0.42
29:DH:27:ARG:NE	45:DX:60:ASP:CG	2.71	0.42
22:DA:1384:A:O2'	22:DA:1404:C:O2	2.35	0.42
35:DN:17:ARG:O	35:DN:21:PHE:HB2	2.19	0.42
38:BQ:41:LYS:HG2	38:BQ:45:TYR:CE1	2.55	0.42
13:CM:57:ARG:O	13:CM:60:VAL:HG13	2.20	0.42
22:BA:2517:C:C6	22:BA:2542:A:N7	2.87	0.42
22:BA:1897:G:N2	22:BA:1898:U:O2	2.53	0.42
14:AN:81:ARG:HA	14:AN:84:VAL:HB	2.01	0.42
22:DA:1087:G:C6	22:DA:1089:A:C2	3.07	0.42
30:DI:133:ALA:C	30:DI:138:LEU:HD12	2.40	0.42
22:BA:2127:G:N1	22:BA:2161:C:O2	2.53	0.42
29:DH:31:VAL:HB	29:DH:32:PRO:HD2	2.00	0.42
22:BA:1926:U:H2'	22:BA:1927:A:OP2	2.20	0.42
1:CA:81:A:H2'	1:CA:82:G:H8	1.84	0.42
22:BA:1794:A:C4	22:BA:1795:C:C5	3.07	0.42
22:BA:1795:C:C2	22:BA:1796:U:C6	3.08	0.42
5:AE:81:LEU:HD21	5:AE:123:VAL:CG1	2.50	0.42
2:AB:17:GLY:HA2	2:AB:41:ILE:HG23	2.02	0.42
37:BP:15:GLN:O	37:BP:16:ASP:CB	2.65	0.42
22:DA:126:A:OP2	50:D2:19:ARG:HG3	2.20	0.42
1:AA:920:U:H2'	1:AA:921:U:C6	2.54	0.42
22:BA:1422:G:C6	22:BA:1423:G:N7	2.88	0.42
28:DG:64:GLN:O	28:DG:67:THR:OG1	2.37	0.42
2:AB:164:ILE:HG23	2:AB:165:ASP:N	2.34	0.42
2:AB:97:LEU:O	2:AB:100:MET:HB3	2.20	0.42
52:D4:30:GLU:CG	52:D4:33:HIS:CD2	3.03	0.42
1:AA:1308:U:OP2	13:AM:98:ARG:HG2	2.19	0.42
22:DA:581:C:OP1	38:DQ:33:ARG:HB2	2.20	0.42
1:AA:202:G:C2	1:AA:216:U:O2	2.73	0.42
23:BB:28:C:OP1	36:BO:31:THR:HG21	2.20	0.42
1:AA:389:A:C6	1:AA:390:U:H1'	2.54	0.42
1:CA:577:G:C1'	1:CA:816:A:H2'	2.49	0.42
2:CB:187:VAL:HB	2:CB:191:SER:HB2	2.02	0.42
22:DA:60:G:H1'	22:DA:61:C:OP1	2.19	0.42
11:AK:53:ARG:O	11:AK:56:ARG:CG	2.67	0.42
26:DE:181:ILE:HG23	33:DL:2:ARG:NH1	2.35	0.42
1:CA:146:G:N2	1:CA:147:G:H1'	2.35	0.42
30:BI:110:ALA:HB1	30:BI:129:ILE:HG13	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:24:MET:HG2	35:BN:44:LEU:HD22	2.02	0.42
35:BN:24:MET:HG2	35:BN:44:LEU:CD2	2.50	0.42
12:AL:72:HIS:ND1	12:AL:74:LEU:HB2	2.35	0.42
5:AE:133:PRO:C	5:AE:135:ASN:N	2.73	0.42
22:DA:309:A:H5'	42:DU:17:LYS:HG2	2.00	0.42
16:CP:38:PHE:CE2	16:CP:51:ARG:HD3	2.54	0.42
1:CA:1130:A:C4	1:CA:1146:A:C2	3.07	0.42
22:BA:2198:A:C2	29:BH:29:PHE:HB2	2.55	0.42
7:AG:95:ARG:O	7:AG:97:ASN:N	2.52	0.42
19:AS:19:VAL:O	19:AS:23:VAL:HG23	2.18	0.42
35:BN:52:ILE:HG21	35:BN:94:TYR:CG	2.55	0.42
10:CJ:12:ALA:CB	10:CJ:18:ILE:HB	2.50	0.42
2:AB:207:ILE:CD1	2:AB:207:ILE:N	2.83	0.42
22:DA:681:G:C2	22:DA:682:G:N9	2.88	0.42
40:DS:62:ASP:O	40:DS:63:GLY:C	2.57	0.42
36:BO:11:ALA:HB2	36:BO:96:GLY:CA	2.50	0.42
23:DB:51:G:N7	36:DO:64:TYR:HE2	2.18	0.42
24:DC:126:PRO:HA	24:DC:192:LEU:O	2.20	0.42
1:AA:666:G:C6	1:AA:741:G:C6	3.08	0.42
8:AH:109:GLY:O	8:AH:111:MET:HG3	2.19	0.42
1:CA:974:A:OP1	14:CN:69:ARG:NH1	2.51	0.42
14:CN:87:ALA:HB1	14:CN:92:GLU:HB2	2.01	0.42
13:CM:63:PHE:O	13:CM:65:VAL:HG13	2.20	0.42
39:BR:27:ILE:HG22	39:BR:28:ALA:N	2.33	0.42
28:BG:55:ARG:O	28:BG:56:ASP:C	2.58	0.42
15:AO:79:THR:O	15:AO:83:GLU:OE1	2.37	0.42
22:BA:634:C:H2'	22:BA:635:C:C6	2.54	0.42
22:DA:2193:G:H2'	22:DA:2194:U:C6	2.55	0.42
1:CA:418:C:H1'	1:CA:540:G:O2'	2.19	0.42
22:BA:961:C:C4	22:BA:2031:A:C4	3.07	0.42
1:CA:1306:A:H1'	1:CA:1332:A:C5	2.55	0.42
33:DL:135:ILE:HG22	33:DL:140:GLY:HA2	2.02	0.42
2:CB:24:ASN:O	2:CB:26:LYS:N	2.52	0.42
22:BA:104:A:C5	22:BA:105:C:C5	3.07	0.42
22:DA:2657:A:H1'	22:DA:2665:A:N6	2.35	0.42
30:BI:55:ILE:HG12	30:BI:74:PRO:CA	2.50	0.42
31:BJ:109:LEU:HB3	31:BJ:110:PRO:CD	2.50	0.42
1:CA:1014:A:N7	1:CA:1015:G:C6	2.88	0.42
8:CH:83:LEU:O	8:CH:83:LEU:HD13	2.20	0.42
21:CU:47:ARG:HE	21:CU:47:ARG:HA	1.85	0.42
22:BA:2633:G:H2'	22:BA:2634:A:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1477:A:N6	22:BA:1514:G:O2'	2.52	0.42
31:DJ:49:ASP:OD1	31:DJ:121:LYS:HD3	2.20	0.42
11:CK:18:ASP:HA	11:CK:81:ASN:O	2.19	0.42
45:BX:59:ILE:HA	45:BX:67:VAL:HG21	2.01	0.42
22:DA:2055:C:H5'	22:DA:2056:G:OP1	2.20	0.42
22:DA:370:G:C8	57:DA:3559:HOH:O	2.69	0.42
22:DA:160:A:H2'	22:DA:161:A:C8	2.55	0.42
36:DO:36:TYR:HD2	36:DO:52:SER:HB2	1.85	0.42
22:DA:2503:A:C8	55:DA:3001:VIF:C10	2.99	0.42
22:DA:1121:C:N3	22:DA:1122:G:C8	2.87	0.42
22:BA:2097:A:C2	22:BA:2193:G:C5	3.08	0.42
22:BA:1204:A:O4'	22:BA:1206:G:C8	2.73	0.42
1:CA:919:A:C2	1:CA:920:U:C6	3.08	0.42
2:CB:165:ASP:O	2:CB:168:HIS:HB3	2.19	0.42
22:BA:1644:C:C2'	22:BA:1644:C:O2	2.64	0.42
16:CP:40:ASN:HB3	16:CP:43:ALA:HB2	2.02	0.42
22:DA:2142:A:N6	22:DA:2143:C:N4	2.68	0.42
22:DA:468:G:C2'	22:DA:469:G:H5'	2.50	0.42
1:CA:15:G:O4'	5:CE:29:ARG:NH2	2.52	0.42
32:BK:105:ARG:C	32:BK:107:LEU:N	2.72	0.42
10:AJ:48:ARG:NH1	14:AN:101:TRP:CZ3	2.87	0.42
22:DA:1791:A:H5'	24:DC:207:LYS:O	2.20	0.42
22:DA:787:C:C5	22:DA:791:C:C4	3.08	0.42
5:AE:106:ILE:HD11	5:AE:124:LEU:HB3	2.02	0.42
1:AA:1308:U:O2'	1:AA:1309:G:H5'	2.19	0.42
1:AA:1329:A:OP1	13:AM:26:GLY:O	2.38	0.42
22:DA:2291:U:H5''	22:DA:2380:C:O2	2.20	0.42
22:DA:1998:A:O3'	22:DA:2724:U:H4'	2.19	0.42
22:DA:189:G:C5	22:DA:205:G:C2	3.08	0.42
22:DA:1250:G:C5'	38:DQ:6:ARG:HD2	2.50	0.42
22:BA:2520:C:C5	22:BA:2567:G:C4	3.07	0.42
4:CD:33:LYS:O	4:CD:34:ILE:C	2.59	0.42
22:DA:503:A:C2	22:DA:506:G:C5	3.08	0.42
22:DA:319:G:C4	22:DA:333:G:N2	2.88	0.42
9:CI:57:MET:HA	9:CI:60:LYS:HB3	2.02	0.42
1:CA:295:C:N4	1:CA:296:U:C4	2.88	0.42
29:BH:1:MET:HE3	29:BH:23:ALA:HA	2.02	0.42
24:DC:36:LYS:HG3	24:DC:36:LYS:O	2.19	0.42
31:DJ:89:PHE:CE2	31:DJ:100:VAL:HG11	2.55	0.42
22:BA:1013:C:H2'	22:BA:1014:A:C8	2.55	0.42
2:CB:91:PHE:CD2	2:CB:150:GLY:HA3	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:79:LEU:O	35:BN:80:PHE:HB2	2.20	0.42
1:CA:1377:A:N3	7:CG:2:PRO:HG3	2.35	0.42
6:AF:68:GLN:O	6:AF:69:GLU:HB2	2.20	0.42
22:DA:1713:A:C5	22:DA:1716:U:H1'	2.55	0.42
2:AB:210:VAL:O	2:AB:214:LEU:CB	2.68	0.42
10:CJ:27:GLU:O	10:CJ:31:ARG:HB3	2.20	0.42
22:BA:102:U:N1	46:BY:2:LYS:HE3	2.35	0.42
22:BA:2118:U:O4	22:BA:2149:U:H5'	2.19	0.42
26:DE:23:PHE:CE1	26:DE:28:VAL:HG21	2.55	0.42
22:DA:1438:U:C2	22:DA:1555:G:N2	2.87	0.42
12:CL:76:GLU:O	12:CL:77:HIS:O	2.37	0.42
32:BK:41:ILE:HD11	32:BK:86:LEU:CD2	2.49	0.42
2:AB:128:LYS:CG	2:AB:129:LEU:N	2.83	0.42
40:DS:18:ARG:HA	40:DS:21:ALA:HB3	2.01	0.42
1:AA:725:G:C2	1:AA:726:C:C6	3.08	0.42
1:AA:457:G:C6	1:AA:458:U:C4	3.08	0.42
22:DA:244:A:H2'	22:DA:245:G:O4'	2.20	0.42
3:CC:101:ILE:HG23	3:CC:101:ILE:O	2.20	0.42
22:DA:1874:C:H3'	22:DA:1875:G:C8	2.55	0.42
30:BI:29:GLY:O	30:BI:35:ILE:HD11	2.20	0.42
22:DA:2634:A:C2	22:DA:2635:A:C4	3.08	0.42
13:AM:16:VAL:HG22	13:AM:41:GLU:O	2.19	0.42
1:CA:538:G:H2'	1:CA:539:A:O4'	2.20	0.42
25:DD:51:THR:OG1	25:DD:76:GLY:HA3	2.20	0.42
22:DA:2826:A:C5	22:DA:2827:C:C5	3.07	0.42
24:BC:23:GLU:OE1	24:BC:81:LEU:HD12	2.19	0.42
19:AS:62:VAL:HG12	19:AS:63:THR:N	2.34	0.42
12:AL:114:ARG:O	12:AL:116:LYS:O	2.37	0.42
12:AL:106:GLY:HA3	12:AL:118:GLY:O	2.19	0.42
22:BA:1682:G:H2'	22:BA:1683:U:C6	2.55	0.42
1:AA:1234:C:H2'	1:AA:1235:U:H6	1.85	0.42
1:CA:63:C:O2'	1:CA:380:G:H4'	2.19	0.42
13:CM:93:ARG:CZ	13:CM:93:ARG:HB3	2.50	0.42
6:CF:78:PHE:N	6:CF:78:PHE:CD2	2.87	0.42
27:DF:64:LYS:O	27:DF:64:LYS:HG2	2.19	0.42
22:BA:1999:C:H5''	22:BA:2723:C:O2'	2.19	0.42
25:DD:4:LEU:HG	25:DD:32:ASN:OD1	2.20	0.42
22:DA:677:A:O2'	22:DA:2071:A:H5'	2.19	0.42
3:AC:145:GLY:O	3:AC:146:ALA:HB3	2.20	0.42
22:BA:976:G:C2	22:BA:977:G:N7	2.88	0.42
2:CB:208:ARG:O	2:CB:210:VAL:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2370:G:C6	22:BA:2371:G:C5	3.08	0.42
22:BA:1673:G:H2'	22:BA:1674:G:H5'	2.02	0.42
6:CF:59:TYR:C	6:CF:60:VAL:HG23	2.40	0.42
2:CB:96:TRP:CZ3	2:CB:175:GLU:OE2	2.72	0.42
22:BA:1062:G:OP1	22:BA:1070:A:H4'	2.19	0.42
1:CA:254:G:O2'	17:CQ:18:GLU:O	2.36	0.42
21:CU:9:ASN:N	21:CU:12:PHE:HE2	2.18	0.42
1:AA:1118:U:O4'	1:AA:1179:A:H1'	2.20	0.42
1:CA:582:C:C4	1:CA:760:G:O6	2.72	0.42
29:DH:53:GLU:C	29:DH:55:GLU:N	2.72	0.42
1:CA:210:C:H5''	1:CA:211:G:OP1	2.19	0.42
22:DA:2212:A:C2	22:DA:2214:C:N4	2.88	0.42
4:AD:25:VAL:HG12	4:AD:26:ARG:N	2.34	0.42
22:BA:1607:C:N3	22:BA:1622:G:OP2	2.53	0.42
1:AA:1356:G:C2	1:AA:1367:C:O2	2.73	0.42
10:AJ:61:ALA:O	10:AJ:62:ARG:HB2	2.20	0.42
34:BM:114:ARG:HA	34:BM:130:PHE:CE1	2.55	0.42
4:CD:129:VAL:HG23	4:CD:146:ARG:HD3	2.01	0.42
22:DA:2683:C:OP1	37:DP:56:HIS:CB	2.68	0.42
1:AA:179:A:C6	1:AA:180:U:N3	2.88	0.42
24:DC:72:ASP:O	24:DC:74:ILE:HD12	2.19	0.42
22:DA:328:U:H4'	42:DU:66:GLN:NE2	2.35	0.42
1:CA:73:C:O2'	1:CA:74:A:O5'	2.31	0.42
2:AB:99:GLY:O	2:AB:103:ASN:CB	2.68	0.42
1:AA:877:G:H21	8:AH:2:SER:N	2.18	0.42
22:BA:1422:G:N3	22:BA:1423:G:C8	2.88	0.42
3:CC:84:VAL:HA	3:CC:87:LEU:HD12	2.01	0.42
1:AA:1304:G:C2	1:AA:1305:G:N2	2.87	0.42
1:AA:945:G:C6	1:AA:1337:G:C5	3.08	0.42
1:AA:1034:G:H2'	1:AA:1035:A:O4'	2.20	0.42
29:BH:104:THR:CG2	29:BH:110:VAL:O	2.68	0.42
20:CT:80:THR:O	20:CT:81:ALA:C	2.56	0.42
1:CA:971:G:OP1	1:CA:972:C:H5''	2.19	0.42
49:D1:10:LYS:O	49:D1:51:GLU:CG	2.66	0.42
22:DA:2428:G:C2	33:DL:54:GLN:OE1	2.73	0.42
4:CD:35:GLU:HG3	4:CD:36:GLN:N	2.34	0.42
1:CA:436:C:N3	1:CA:437:U:C4	2.88	0.42
22:DA:503:A:H4'	22:DA:504:A:O5'	2.20	0.42
4:CD:59:GLN:OE1	4:CD:59:GLN:CA	2.67	0.42
41:DT:64:LYS:HB3	41:DT:76:ARG:NH2	2.35	0.42
39:BR:21:ARG:O	39:BR:22:LEU:HD23	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2536:G:C6	22:DA:2537:U:N3	2.88	0.42
6:CF:16:GLU:O	6:CF:18:VAL:N	2.52	0.42
1:CA:12:U:H4'	1:CA:526:C:H4'	2.02	0.42
22:DA:2815:C:O2'	48:D0:41:HIS:ND1	2.41	0.42
22:DA:60:G:HO2'	22:DA:62:U:P	2.38	0.42
22:DA:363:G:H2'	22:DA:364:C:C6	2.55	0.42
22:DA:609:A:C6	22:DA:610:C:O2	2.73	0.42
26:DE:181:ILE:HB	33:DL:3:LEU:HD13	2.01	0.42
15:CO:46:HIS:C	15:CO:48:LYS:N	2.72	0.42
34:BM:2:LEU:N	34:BM:2:LEU:HD22	2.35	0.42
22:BA:406:G:C6	22:BA:407:G:N7	2.88	0.42
42:BU:12:ILE:CG2	42:BU:80:ALA:HB2	2.50	0.42
22:DA:1581:G:C5	22:DA:1582:C:N4	2.88	0.42
22:DA:1665:A:H2'	22:DA:1666:G:O4'	2.20	0.42
22:BA:1536:C:O4'	22:BA:1537:G:C2	2.72	0.42
22:BA:1300:G:N9	22:BA:1626:A:C2	2.87	0.42
30:BI:21:SER:N	30:BI:22:PRO:CD	2.82	0.42
41:DT:21:SER:O	41:DT:23:ALA:N	2.52	0.42
35:DN:71:ARG:CG	35:DN:71:ARG:HH21	2.32	0.42
22:DA:1379:U:H2'	22:DA:1379:U:O2	2.20	0.42
9:CI:51:PRO:HD3	9:CI:80:ARG:HG2	2.02	0.42
22:BA:1985:C:H2'	22:BA:1986:C:O5'	2.19	0.42
22:DA:957:C:C4	22:DA:2459:A:C1'	3.03	0.42
1:CA:878:A:C5	1:CA:879:C:C5	3.08	0.42
13:CM:81:MET:O	13:CM:82:ASP:C	2.57	0.42
2:CB:100:MET:CA	2:CB:107:VAL:HG21	2.50	0.42
22:BA:644:A:H2'	22:BA:645:C:O4'	2.20	0.42
20:AT:79:LEU:O	20:AT:82:GLN:HB2	2.20	0.42
8:CH:102:ALA:O	8:CH:112:THR:HA	2.19	0.42
37:DP:28:VAL:HG21	37:DP:74:PHE:CE2	2.55	0.42
24:DC:244:PRO:O	24:DC:245:VAL:HG13	2.20	0.42
22:BA:1512:C:C2'	22:BA:1513:U:H5'	2.50	0.42
22:DA:2624:G:H1'	48:D0:19:HIS:CE1	2.55	0.42
26:BE:148:ILE:HG21	26:BE:157:LEU:HD21	2.02	0.42
22:DA:1640:A:H2'	22:DA:1641:A:C8	2.54	0.42
35:DN:58:ASP:O	35:DN:59:SER:HB3	2.18	0.42
22:BA:567:U:H2'	22:BA:568:U:O5'	2.19	0.42
1:CA:615:G:C2	1:CA:626:G:C5	3.08	0.42
22:BA:723:C:H2'	22:BA:724:U:C6	2.55	0.42
31:BJ:32:LEU:O	31:BJ:36:LEU:HG	2.20	0.42
22:DA:1071:G:O2'	22:DA:1072:C:C5'	2.68	0.42

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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	0.42
22:BA:393:C:C2	22:BA:394:C:C5	3.08	0.42
40:BS:65:ASP:OD1	40:BS:67:ASP:HB2	2.19	0.42
50:B2:32:ALA:O	50:B2:33:ARG:C	2.58	0.42
11:CK:43:GLY:HA3	11:CK:74:VAL:HG12	2.02	0.42
28:BG:159:GLY:O	28:BG:160:LYS:C	2.57	0.42
1:AA:974:A:H4'	1:AA:975:A:O5'	2.20	0.42
22:DA:1745:A:C4	22:DA:1746:A:C8	3.08	0.42
37:BP:73:VAL:O	37:BP:73:VAL:HG22	2.18	0.42
34:BM:14:LYS:HB2	34:BM:14:LYS:HE3	1.94	0.42
27:DF:85:ILE:HG23	27:DF:85:ILE:O	2.18	0.42
14:AN:49:GLN:OE1	14:AN:49:GLN:HA	2.19	0.42
4:AD:139:PRO:O	4:AD:140:ASN:HB2	2.20	0.42
14:CN:45:VAL:HG23	14:CN:46:LEU:H	1.85	0.42
29:BH:139:PHE:O	29:BH:140:ALA:HB3	2.20	0.41
22:BA:2573:C:O5'	22:BA:2573:C:H6	2.03	0.41
22:DA:192:C:H5'	22:DA:678:C:H1'	2.02	0.41
2:AB:33:GLY:HA3	2:AB:40:ILE:H	1.85	0.41
2:AB:40:ILE:HD13	2:AB:40:ILE:N	2.35	0.41
22:DA:604:G:C6	22:DA:605:G:C6	3.08	0.41
22:BA:569:U:OP1	22:BA:945:A:O2'	2.19	0.41
22:BA:1961:C:C5	22:BA:1962:C:C4	3.08	0.41
22:BA:1097:U:H1'	30:BI:9:VAL:HG12	2.02	0.41
6:AF:3:HIS:CB	6:AF:92:THR:HG23	2.50	0.41
22:BA:2074:U:H2'	22:BA:2075:U:C6	2.55	0.41
22:BA:480:A:OP2	42:BU:44:LYS:NZ	2.43	0.41
22:DA:668:A:H3'	22:DA:669:G:H5''	2.02	0.41
47:BZ:21:LYS:C	47:BZ:23:THR:N	2.73	0.41
12:AL:21:VAL:N	12:AL:22:PRO:CD	2.83	0.41
12:AL:21:VAL:C	12:AL:23:ALA:H	2.23	0.41
5:CE:89:HIS:CE1	5:CE:138:ARG:HD3	2.55	0.41
22:BA:928:A:C2	47:BZ:47:MET:HE1	2.54	0.41
1:CA:978:A:H4'	1:CA:1322:C:C5	2.55	0.41
1:AA:262:A:N1	1:AA:263:A:C2	2.88	0.41
1:CA:502:A:C2	1:CA:503:C:C2	3.07	0.41
1:CA:270:A:H2'	1:CA:271:C:C6	2.54	0.41
24:DC:75:PRO:HB2	24:DC:97:LYS:HG3	2.02	0.41
1:AA:1048:G:C2	1:AA:1050:G:N7	2.87	0.41
22:DA:846:U:O2'	22:DA:847:U:P	2.77	0.41
2:AB:154:MET:HE3	2:AB:158:PRO:HG3	2.01	0.41
22:BA:2502:G:H5'	22:BA:2503:A:C5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:4:LYS:HD2	30:DI:5:VAL:H	1.85	0.41
22:BA:2152:G:C5	22:BA:2153:C:C5	3.08	0.41
1:AA:451:A:H4'	1:AA:452:A:O4'	2.19	0.41
22:DA:776:G:C8	22:DA:793:A:C5	3.08	0.41
1:CA:406:G:N3	1:CA:407:U:C6	2.88	0.41
33:DL:121:THR:O	33:DL:121:THR:HG22	2.19	0.41
28:BG:155:GLU:HG2	28:BG:156:PRO:HD2	2.01	0.41
53:B5:42:VAL:O	53:B5:179:ALA:HB3	2.19	0.41
1:CA:716:A:C2'	1:CA:717:U:O5'	2.68	0.41
2:AB:16:PHE:O	2:AB:41:ILE:HD12	2.20	0.41
1:CA:706:A:O2'	11:CK:31:ILE:HD11	2.20	0.41
22:DA:788:A:OP1	22:DA:791:C:N4	2.47	0.41
1:CA:1296:C:H4'	1:CA:1302:C:C4	2.54	0.41
1:AA:1537:U:C4	1:AA:1538:C:C4	3.07	0.41
22:DA:2091:C:H1'	45:DX:34:HIS:CD2	2.54	0.41
25:BD:84:LEU:HD23	25:BD:84:LEU:HA	1.80	0.41
1:AA:462:G:H3'	1:AA:463:U:H6	1.85	0.41
1:CA:1342:C:H2'	1:CA:1343:G:C8	2.55	0.41
24:DC:147:LYS:HB2	24:DC:150:LYS:CB	2.47	0.41
1:AA:212:G:N2	1:AA:213:G:N3	2.67	0.41
46:DY:9:LYS:O	46:DY:12:GLU:HB2	2.19	0.41
51:D3:31:HIS:O	51:D3:36:LYS:NZ	2.52	0.41
4:CD:34:ILE:HG23	4:CD:34:ILE:O	2.19	0.41
1:CA:1105:A:N3	1:CA:1106:G:C8	2.88	0.41
35:BN:36:THR:O	35:BN:111:ALA:N	2.51	0.41
22:DA:335:C:H2'	22:DA:336:C:H6	1.83	0.41
22:DA:2819:G:N3	22:DA:2828:G:C2	2.88	0.41
22:BA:2340:A:H2'	22:BA:2341:G:H8	1.84	0.41
3:CC:134:MET:SD	3:CC:153:VAL:HG13	2.60	0.41
22:DA:360:U:C4	22:DA:361:G:C6	3.08	0.41
23:DB:97:C:C4	23:DB:98:G:C8	3.08	0.41
22:DA:2321:U:H3'	22:DA:2322:A:H5'	2.01	0.41
22:BA:2267:A:H5''	22:BA:2268:A:C5'	2.50	0.41
1:CA:1179:A:C2'	1:CA:1180:A:H5'	2.50	0.41
14:AN:63:ARG:O	14:AN:65:ARG:N	2.53	0.41
22:DA:1940:U:C2	22:DA:1965:C:OP2	2.73	0.41
22:DA:2314:A:C2	22:DA:2315:G:C5	3.08	0.41
7:CG:122:ASN:O	7:CG:125:SER:HB2	2.19	0.41
9:CI:47:VAL:O	9:CI:80:ARG:HG2	2.19	0.41
22:DA:2549:G:N3	22:DA:2560:A:C2	2.87	0.41
1:AA:161:A:C2'	1:AA:162:A:O5'	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1324:G:H1'	22:DA:1616:A:N6	2.35	0.41
6:AF:8:PHE:CD1	6:AF:8:PHE:C	2.94	0.41
22:DA:2767:C:H2'	22:DA:2768:U:H5'	2.01	0.41
39:BR:3:ALA:CB	39:BR:59:ILE:HD11	2.50	0.41
18:AR:49:ALA:O	18:AR:50:LYS:C	2.58	0.41
41:DT:2:ILE:HA	41:DT:3:ARG:HB2	2.02	0.41
40:DS:63:GLY:O	40:DS:64:ALA:HB3	2.20	0.41
11:CK:23:ILE:HG21	11:CK:96:THR:HG21	2.02	0.41
33:DL:68:SER:O	33:DL:69:ARG:HG3	2.19	0.41
13:CM:39:ILE:HG13	13:CM:56:LEU:HD11	2.01	0.41
1:CA:128:G:N1	1:CA:129:A:C6	2.88	0.41
34:DM:2:LEU:N	34:DM:2:LEU:HD12	2.35	0.41
26:BE:48:THR:C	26:BE:50:ALA:N	2.72	0.41
22:BA:1769:U:C2'	22:BA:1770:G:O5'	2.67	0.41
23:DB:60:C:C2	23:DB:61:G:C8	3.08	0.41
38:BQ:90:ILE:HG22	38:BQ:95:LEU:HG	2.00	0.41
22:DA:201:C:C5	22:DA:202:U:C5	3.08	0.41
27:DF:8:TYR:OH	27:DF:30:ARG:HB3	2.19	0.41
22:DA:529:A:H4'	22:DA:530:G:OP1	2.19	0.41
1:CA:276:G:H2'	1:CA:277:C:O4'	2.19	0.41
22:DA:1623:G:C2	22:DA:1624:U:C6	3.08	0.41
22:BA:2070:A:C2	22:BA:2442:C:C2	3.08	0.41
1:CA:825:A:O2'	1:CA:826:C:H5'	2.19	0.41
39:BR:74:ILE:O	39:BR:86:GLN:HA	2.20	0.41
12:AL:108:LYS:O	12:AL:109:ASP:HB2	2.19	0.41
22:BA:123:G:H2'	22:BA:124:G:O4'	2.19	0.41
22:DA:1002:G:C5	22:DA:1003:G:C8	3.08	0.41
31:DJ:138:GLN:HG3	31:DJ:138:GLN:O	2.20	0.41
4:CD:106:GLY:O	4:CD:159:LEU:N	2.53	0.41
26:BE:191:ASP:O	26:BE:195:GLN:HG3	2.20	0.41
20:AT:9:LYS:O	20:AT:13:GLN:HB2	2.19	0.41
22:BA:2055:C:H5'	22:BA:2056:G:OP1	2.20	0.41
22:BA:974:G:C8	22:BA:989:G:N3	2.89	0.41
22:DA:1360:G:C2	22:DA:1361:G:H1'	2.55	0.41
22:BA:1179:G:N7	22:BA:1180:U:O4'	2.52	0.41
29:DH:41:LYS:HE2	29:DH:44:ILE:CD1	2.50	0.41
22:BA:2346:A:H3'	22:BA:2347:C:H5''	2.02	0.41
22:BA:1669:A:H5''	22:BA:2550:G:OP1	2.20	0.41
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.18	0.41
1:CA:690:G:H2'	1:CA:691:G:O4'	2.19	0.41
22:BA:2846:G:OP2	37:BP:52:ASN:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:167:ASP:OD1	2:AB:167:ASP:C	2.59	0.41
47:BZ:23:THR:HG21	47:BZ:51:VAL:HG13	2.02	0.41
22:DA:1091:G:N3	22:DA:1092:C:C5	2.88	0.41
22:DA:1475:G:O2'	22:DA:1476:U:P	2.78	0.41
1:AA:1367:C:OP2	9:AI:114:LYS:NZ	2.43	0.41
22:DA:1076:C:H2'	22:DA:1077:A:O4'	2.19	0.41
7:AG:47:LEU:HD12	7:AG:47:LEU:HA	1.92	0.41
1:AA:1124:G:H2'	1:AA:1145:A:C6	2.55	0.41
22:BA:1559:U:H4'	22:BA:1560:G:OP2	2.19	0.41
19:AS:4:SER:O	19:AS:6:LYS:N	2.54	0.41
13:AM:114:LYS:O	13:AM:115:PRO:OXT	2.38	0.41
40:BS:30:SER:O	40:BS:31:GLN:C	2.57	0.41
22:DA:2230:G:O3'	45:DX:30:LEU:HB2	2.20	0.41
1:AA:1223:C:P	19:AS:78:ARG:NH1	2.93	0.41
12:CL:24:LEU:HD22	12:CL:59:ASN:OD1	2.20	0.41
1:CA:683:G:C6	1:CA:708:C:N3	2.88	0.41
20:CT:5:LYS:O	20:CT:6:SER:C	2.57	0.41
22:BA:1585:C:H2'	22:BA:1586:A:O4'	2.20	0.41
1:AA:923:A:C5	1:AA:924:C:C5	3.07	0.41
1:AA:1538:C:H2'	1:AA:1539:C:H5'	2.02	0.41
22:DA:1364:G:OP2	45:DX:50:ARG:NH2	2.52	0.41
27:BF:175:PHE:HA	27:BF:176:PRO:HD2	1.84	0.41
1:AA:209:U:H5''	1:AA:210:C:OP2	2.20	0.41
22:DA:2788:C:H2'	22:DA:2789:C:H6	1.84	0.41
1:CA:1319:A:OP2	19:CS:5:LEU:HD21	2.21	0.41
22:DA:228:C:O2	22:DA:418:C:H4'	2.19	0.41
1:CA:435:A:C2	1:CA:436:C:C1'	3.03	0.41
1:AA:258:G:C4	1:AA:259:G:C8	3.08	0.41
25:DD:104:VAL:O	25:DD:105:LYS:HB2	2.20	0.41
46:DY:28:LEU:HD12	46:DY:46:VAL:HG21	2.03	0.41
3:CC:53:SER:HB2	3:CC:115:LEU:HG	2.01	0.41
9:CI:26:GLY:HA2	9:CI:61:LEU:O	2.19	0.41
1:AA:603:U:H2'	1:AA:604:G:C8	2.55	0.41
22:DA:2078:C:H1'	22:DA:2434:A:H1'	2.03	0.41
22:BA:1324:G:N2	22:BA:1328:A:N1	2.69	0.41
45:DX:40:VAL:CG2	45:DX:45:ARG:O	2.68	0.41
22:DA:2323:G:H2'	22:DA:2324:U:C6	2.54	0.41
35:BN:55:ALA:CB	35:BN:79:LEU:HB3	2.50	0.41
22:BA:1301:A:C2	22:BA:1303:G:C5	3.08	0.41
22:DA:2103:C:C2	22:DA:2104:C:C5	3.08	0.41
22:DA:1083:U:H2'	22:DA:1085:A:OP2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1166:G:H2'	1:CA:1168:U:OP2	2.20	0.41
15:CO:67:LEU:HD23	15:CO:78:TYR:CE1	2.55	0.41
30:DI:101:ILE:HG22	30:DI:102:SER:N	2.35	0.41
23:DB:65:U:C4	23:DB:108:A:C4	3.08	0.41
20:AT:54:MET:HE3	20:AT:58:VAL:HG21	2.02	0.41
20:AT:69:LYS:HZ3	20:AT:69:LYS:HB2	1.84	0.41
1:AA:767:A:H2'	1:AA:768:A:O4'	2.20	0.41
22:BA:1107:G:C4	22:BA:1108:U:C6	3.08	0.41
3:CC:50:ALA:O	3:CC:51:SER:HB2	2.20	0.41
10:AJ:19:ASP:HA	10:AJ:22:THR:HB	2.02	0.41
22:BA:2125:G:N2	22:BA:2171:A:O5'	2.48	0.41
37:DP:51:ARG:HG2	37:DP:51:ARG:O	2.19	0.41
1:AA:35:G:H2'	1:AA:36:C:H6	1.84	0.41
3:CC:184:TYR:CD1	3:CC:201:TRP:CD1	3.07	0.41
18:AR:34:THR:HG22	18:AR:38:LYS:HB2	2.01	0.41
22:BA:1041:G:O2'	22:BA:1042:G:H5'	2.19	0.41
7:CG:13:LEU:HD13	7:CG:14:PRO:HD2	2.02	0.41
23:BB:58:A:H2'	23:BB:59:A:O4'	2.20	0.41
22:BA:2418:A:C5	22:BA:2419:U:C5	3.07	0.41
6:AF:76:THR:O	6:AF:79:ARG:N	2.49	0.41
1:CA:1025:U:H5''	1:CA:1026:G:OP1	2.20	0.41
30:DI:75:PRO:HG2	30:DI:78:VAL:CG2	2.50	0.41
44:DW:75:LYS:HD2	44:DW:77:ARG:CZ	2.51	0.41
22:BA:1800:C:H3'	24:BC:146:MET:HE1	2.01	0.41
43:BV:85:LYS:HB3	43:BV:85:LYS:HE3	1.83	0.41
1:AA:693:G:O2'	1:AA:694:A:H5'	2.20	0.41
24:BC:167:ARG:O	24:BC:168:ASP:HB3	2.19	0.41
1:AA:57:G:H2'	1:AA:58:C:C6	2.54	0.41
25:DD:32:ASN:N	25:DD:96:ILE:O	2.52	0.41
22:DA:529:A:C6	22:DA:2023:C:C2	3.08	0.41
30:DI:92:LYS:HB3	30:DI:95:LYS:HE3	2.01	0.41
22:BA:1623:G:C2'	22:BA:1624:U:H5'	2.50	0.41
3:CC:120:ILE:HD11	3:CC:137:ALA:CB	2.49	0.41
22:DA:467:G:H4'	22:DA:796:C:O2'	2.19	0.41
1:AA:1385:G:O2'	1:AA:1386:G:H5'	2.20	0.41
27:DF:100:PHE:O	27:DF:104:ILE:HG12	2.20	0.41
39:BR:69:GLY:C	39:BR:70:GLU:O	2.58	0.41
25:BD:25:THR:HG22	25:BD:27:ILE:HG13	2.02	0.41
3:CC:124:LEU:HD13	3:CC:196:ILE:HG21	2.01	0.41
22:BA:92:U:O2	22:BA:92:U:H2'	2.19	0.41
19:AS:31:LEU:HD12	19:AS:31:LEU:HA	1.95	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:532:A:N3	22:BA:532:A:H2'	2.35	0.41
22:DA:239:C:O2	22:DA:239:C:H2'	2.21	0.41
35:DN:106:ASP:OD1	35:DN:106:ASP:C	2.59	0.41
25:BD:14:ILE:N	25:BD:14:ILE:HD13	2.35	0.41
16:CP:74:LEU:N	16:CP:74:LEU:HD23	2.35	0.41
29:DH:135:HIS:CG	29:DH:136:SER:N	2.89	0.41
23:DB:100:G:H2'	23:DB:101:A:O4'	2.19	0.41
22:DA:1299:G:H5'	22:DA:1301:A:O4'	2.20	0.41
26:BE:58:LYS:HZ2	26:BE:62:GLN:N	2.18	0.41
22:BA:1617:C:OP1	57:BA:3644:HOH:O	2.22	0.41
2:CB:211:THR:HA	2:CB:214:LEU:HB2	2.02	0.41
1:CA:965:U:OP1	1:CA:1198:G:H5''	2.20	0.41
22:DA:2133:G:N3	22:DA:2158:A:C6	2.88	0.41
22:BA:1919:A:N1	22:BA:1920:C:O4'	2.54	0.41
30:BI:11:LEU:O	30:BI:24:VAL:HG11	2.20	0.41
39:BR:1:MET:HG3	39:BR:42:ALA:O	2.20	0.41
22:BA:818:G:H5'	22:BA:839:U:OP1	2.20	0.41
22:BA:616:A:H4'	26:BE:101:TYR:CE2	2.55	0.41
22:BA:1474:U:C4	22:BA:1475:G:N2	2.87	0.41
35:DN:12:ARG:CZ	35:DN:20:MET:HE3	2.51	0.41
13:CM:54:ASP:HA	13:CM:57:ARG:CB	2.50	0.41
1:AA:1355:G:O2'	1:AA:1356:G:H5'	2.20	0.41
9:AI:120:LYS:HG3	9:AI:123:ARG:HB3	2.02	0.41
25:DD:15:PHE:HA	25:DD:20:VAL:O	2.21	0.41
40:BS:37:THR:HG21	40:BS:38:TYR:CE1	2.54	0.41
22:DA:1096:A:N1	22:DA:1097:U:C5	2.88	0.41
23:BB:77:U:H2'	23:BB:78:A:H5'	2.01	0.41
13:AM:22:ILE:HB	13:AM:25:VAL:CG2	2.50	0.41
1:CA:1022:A:C5	1:CA:1023:U:C5	3.09	0.41
1:AA:1143:G:C4	1:AA:1144:G:C8	3.08	0.41
42:DU:33:LYS:HB3	42:DU:64:ALA:HB1	2.03	0.41
22:BA:1434:A:C2	22:BA:1435:G:C5	3.08	0.41
1:AA:1128:C:H4'	1:AA:1148:U:O2	2.20	0.41
30:DI:57:VAL:CG2	30:DI:58:VAL:N	2.83	0.41
40:BS:28:LYS:O	40:BS:30:SER:N	2.53	0.41
1:AA:559:A:H4'	1:AA:560:A:O5'	2.21	0.41
4:AD:123:ILE:HD13	4:AD:123:ILE:H	1.83	0.41
1:AA:452:A:N6	1:AA:480:U:C2	2.88	0.41
1:AA:982:U:H4'	1:AA:983:A:C5'	2.51	0.41
22:DA:788:A:H1'	50:D2:4:THR:CG2	2.50	0.41
28:DG:41:VAL:HG23	28:DG:64:GLN:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1365:A:C5	22:DA:1366:A:N7	2.88	0.41
1:AA:1335:U:H5''	1:AA:1336:C:H5'	2.03	0.41
22:DA:2346:A:C3'	22:DA:2347:C:C5'	2.97	0.41
45:BX:12:PRO:HB3	45:BX:30:LEU:CD2	2.47	0.41
1:CA:790:A:N6	1:CA:791:G:N1	2.68	0.41
48:B0:13:ARG:HD2	48:B0:17:ARG:CZ	2.50	0.41
22:BA:24:G:C2	22:BA:517:C:C2	3.07	0.41
27:BF:99:PHE:O	27:BF:102:ARG:N	2.53	0.41
16:AP:10:GLY:HA3	16:AP:15:PRO:HA	2.01	0.41
1:CA:991:U:H4'	1:CA:992:U:OP1	2.21	0.41
10:AJ:42:LEU:HB3	10:AJ:71:LEU:HB3	2.00	0.41
25:BD:39:ASP:O	25:BD:43:ASP:N	2.51	0.41
26:BE:91:ASP:OD1	26:BE:91:ASP:C	2.58	0.41
3:CC:6:HIS:C	3:CC:8:ASN:H	2.23	0.41
22:BA:1449:G:H2'	22:BA:1450:G:O5'	2.20	0.41
22:DA:371:A:H61	22:DA:401:A:H3'	1.85	0.41
22:BA:2508:G:C2	22:BA:2582:G:C6	3.09	0.41
2:CB:154:MET:CE	2:CB:158:PRO:HG3	2.51	0.41
42:DU:83:VAL:CG1	42:DU:84:GLY:N	2.83	0.41
17:CQ:11:ARG:CZ	17:CQ:12:VAL:O	2.68	0.41
22:BA:1000:A:N6	22:BA:1001:A:N6	2.68	0.41
26:DE:108:ILE:HD11	26:DE:180:LEU:CB	2.50	0.41
15:CO:45:GLU:O	15:CO:46:HIS:CB	2.67	0.41
22:DA:2645:G:OP2	22:DA:2645:G:N2	2.46	0.41
25:BD:142:VAL:HB	25:BD:143:PRO:HD3	2.02	0.41
22:DA:2786:U:O2'	25:DD:63:PRO:O	2.34	0.41
22:DA:2512:C:H2'	22:DA:2513:A:O4'	2.20	0.41
22:DA:770:G:O4'	22:DA:1379:U:C5	2.73	0.41
2:AB:55:ALA:O	2:AB:59:LYS:HB2	2.20	0.41
24:DC:189:ARG:O	24:DC:190:ALA:HB2	2.21	0.41
22:DA:404:A:H1'	22:DA:405:U:P	2.60	0.41
22:DA:1456:G:C4	22:DA:1457:U:C6	3.09	0.41
22:BA:1813:G:N3	24:BC:50:THR:OG1	2.46	0.41
1:AA:1296:C:H5''	1:AA:1297:G:OP2	2.20	0.41
3:AC:108:LYS:O	3:AC:111:LEU:HB2	2.21	0.41
1:AA:654:G:C2'	1:AA:655:A:H5'	2.50	0.41
22:DA:2563:U:O4'	22:DA:2566:A:N6	2.53	0.41
41:BT:47:VAL:HG11	41:BT:85:VAL:HG11	2.02	0.41
1:AA:1408:A:H2'	1:AA:1409:C:C6	2.55	0.41
1:AA:523:A:C2	1:AA:527:G:O6	2.73	0.41
1:AA:594:U:O4	1:AA:595:A:N6	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:4:TYR:O	4:AD:5:LEU:CB	2.67	0.41
4:AD:44:ARG:O	4:AD:46:PRO:HD3	2.19	0.41
2:CB:130:THR:HB	2:CB:132:LYS:HB3	2.02	0.41
1:CA:1240:U:H3'	1:CA:1241:G:H5'	2.02	0.41
22:DA:870:U:H5''	34:DM:6:ARG:O	2.20	0.41
35:DN:25:ALA:HA	35:DN:48:VAL:HG22	2.02	0.41
1:AA:549:C:C4	1:AA:550:G:N7	2.89	0.41
47:DZ:13:ALA:HB2	47:DZ:24:LEU:CD1	2.50	0.41
1:CA:39:G:N2	1:CA:40:C:C2	2.88	0.41
22:BA:323:C:O2	26:BE:163:ASN:ND2	2.53	0.41
9:CI:128:SER:O	9:CI:129:LYS:C	2.59	0.41
22:BA:2174:C:O2'	22:BA:2175:C:H5'	2.20	0.41
22:DA:1664:A:C8	22:DA:1664:A:OP2	2.73	0.41
4:CD:195:ILE:CG1	4:CD:195:ILE:O	2.68	0.41
9:AI:127:PHE:CD2	9:AI:127:PHE:C	2.93	0.41
23:BB:53:A:H2'	23:BB:53:A:N3	2.34	0.41
4:CD:15:GLU:HA	4:CD:15:GLU:OE1	2.20	0.41
22:BA:1490:A:N3	22:BA:1490:A:H2'	2.35	0.41
17:AQ:29:VAL:O	17:AQ:38:ILE:HD12	2.19	0.41
34:DM:36:VAL:HG22	34:DM:129:THR:HB	2.02	0.41
22:DA:1211:C:H5''	22:DA:1212:G:C8	2.55	0.41
3:AC:156:ARG:NH2	3:AC:161:GLU:HA	2.35	0.41
29:BH:90:LEU:HD13	29:BH:125:THR:HA	2.03	0.41
11:AK:37:ARG:O	11:AK:39:GLY:N	2.52	0.41
22:DA:2572:A:N7	25:DD:150:GLN:HB3	2.36	0.41
22:BA:1914:C:C4	22:BA:1915:U:C4	3.08	0.41
22:BA:1784:A:P	57:BA:3698:HOH:O	2.77	0.41
12:CL:116:LYS:O	12:CL:117:TYR:CD1	2.73	0.41
22:DA:247:G:N7	22:DA:249:C:N1	2.67	0.41
21:CU:11:PRO:O	21:CU:12:PHE:CB	2.68	0.41
22:DA:1567:G:O2'	24:DC:63:ARG:NH1	2.54	0.41
1:AA:1160:G:C6	1:AA:1181:G:O6	2.73	0.41
22:BA:2599:G:OP2	24:BC:235:GLY:O	2.39	0.41
18:CR:27:ALA:O	18:CR:30:LYS:HG2	2.21	0.41
22:DA:1313:U:H2'	22:DA:1313:U:O2	2.20	0.41
22:BA:2714:G:O2'	22:BA:2715:C:H5'	2.20	0.41
22:DA:1384:A:H1'	22:DA:1405:U:H1'	2.03	0.41
30:BI:43:ASN:HA	30:BI:46:THR:HB	2.01	0.41
13:CM:4:ILE:O	13:CM:6:GLY:N	2.53	0.41
22:DA:2286:G:H5'	22:DA:2287:A:O4'	2.20	0.41
1:CA:920:U:H2'	1:CA:921:U:H6	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1838:C:N4	22:BA:1899:A:O4'	2.53	0.41
22:BA:563:A:C8	22:BA:2018:G:N1	2.88	0.41
50:B2:43:THR:O	50:B2:44:VAL:HB	2.20	0.41
1:AA:1461:G:H2'	1:AA:1462:C:H6	1.85	0.41
1:AA:568:G:H2'	1:AA:569:C:H6	1.84	0.41
22:BA:2648:G:H2'	22:BA:2649:C:O4'	2.21	0.41
22:DA:475:C:N3	22:DA:481:G:C6	2.89	0.41
4:AD:90:LEU:HD23	4:AD:200:ILE:HD11	2.01	0.41
1:AA:663:A:H5'	1:AA:836:G:OP1	2.20	0.41
22:DA:1364:G:H2'	22:DA:1365:A:H5'	2.02	0.41
22:DA:1366:A:C2	22:DA:1367:A:C1'	3.03	0.41
22:BA:1027:A:N1	22:BA:1126:A:N9	2.68	0.41
23:DB:40:U:N3	23:DB:44:G:OP2	2.46	0.41
9:AI:22:LYS:HE3	9:AI:22:LYS:HB3	1.90	0.41
20:AT:3:ASN:OD1	20:AT:3:ASN:C	2.59	0.41
27:BF:174:ASP:O	27:BF:175:PHE:C	2.59	0.41
20:CT:44:LYS:HD3	20:CT:87:ALA:HA	2.03	0.41
1:CA:1232:U:OP1	9:CI:126:GLN:NE2	2.53	0.41
3:AC:130:PHE:O	3:AC:134:MET:HG3	2.19	0.41
22:DA:2276:G:C2'	22:DA:2277:G:O5'	2.68	0.41
1:CA:632:U:H3'	1:CA:633:G:H5'	2.03	0.41
22:DA:2290:G:H4'	22:DA:2381:A:O2'	2.20	0.41
3:CC:64:ILE:HG22	3:CC:97:VAL:HG23	2.02	0.41
9:CI:57:MET:SD	9:CI:57:MET:N	2.94	0.41
22:DA:937:C:H2'	22:DA:938:G:O4'	2.21	0.41
2:CB:68:LEU:HD13	2:CB:161:LEU:HD11	2.02	0.41
22:DA:2586:U:O2	22:DA:2586:U:H2'	2.20	0.41
1:CA:1036:A:H5'	1:CA:1037:C:OP2	2.20	0.41
1:AA:821:G:H4'	57:AA:1741:HOH:O	2.19	0.41
22:DA:976:G:O6	22:DA:988:A:C2	2.73	0.41
22:DA:1831:G:H2'	22:DA:1832:C:C6	2.55	0.41
1:CA:1308:U:OP2	13:CM:98:ARG:HG3	2.20	0.41
6:AF:38:ARG:HG3	6:AF:39:LEU:H	1.85	0.41
2:AB:68:LEU:CD2	2:AB:92:VAL:HG23	2.51	0.41
41:DT:22:THR:HA	41:DT:25:GLU:CG	2.51	0.41
11:CK:88:GLY:H	11:CK:114:THR:HG22	1.85	0.41
28:DG:176:LYS:O	28:DG:177:LYS:CB	2.68	0.41
35:DN:69:ARG:C	35:DN:70:THR:HG23	2.40	0.41
22:DA:1577:C:H2'	22:DA:1578:U:O4'	2.20	0.41
29:DH:2:GLN:O	29:DH:3:VAL:O	2.38	0.41
1:AA:269:C:N4	1:AA:270:A:N6	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1842:G:C4	22:BA:1901:A:C2	3.08	0.41
1:AA:670:G:C2'	1:AA:671:G:O5'	2.67	0.41
22:DA:1786:A:H1'	22:DA:1938:A:N6	2.35	0.41
19:AS:11:ILE:HG13	19:AS:15:LEU:HD23	2.01	0.41
24:DC:154:LEU:HD13	24:DC:176:LEU:HD21	2.03	0.41
22:BA:1649:G:C2	22:BA:1650:A:C8	3.08	0.41
1:AA:192:A:C6	1:AA:193:C:C4	3.08	0.41
22:DA:2444:G:P	26:DE:63:LYS:HD2	2.60	0.41
22:BA:1489:C:C2	22:BA:1501:G:N2	2.88	0.41
22:DA:16:C:H4'	48:D0:11:SER:OG	2.20	0.41
18:AR:67:LEU:O	18:AR:68:LEU:HG	2.20	0.41
3:CC:172:ARG:C	3:CC:174:PRO:HD3	2.40	0.41
1:CA:851:G:C2	1:CA:852:G:C8	3.08	0.41
27:DF:40:VAL:HG11	27:DF:50:LEU:HD13	2.01	0.41
27:BF:17:MET:HE1	27:BF:22:TYR:O	2.21	0.41
22:DA:2246:G:H2'	22:DA:2247:A:O4'	2.20	0.41
10:AJ:49:PHE:CD1	10:AJ:49:PHE:N	2.88	0.41
22:DA:1350:C:C2	22:DA:1382:G:C2	3.08	0.41
9:CI:114:LYS:HG2	9:CI:115:LYS:N	2.35	0.41
9:CI:118:LEU:N	9:CI:118:LEU:HD12	2.36	0.41
29:BH:33:GLN:O	29:BH:35:LYS:N	2.53	0.41
22:DA:2355:G:OP1	44:DW:25:ARG:NH2	2.53	0.41
40:BS:36:LEU:HD13	40:BS:48:LYS:HB2	2.03	0.41
16:CP:55:ASP:O	16:CP:58:ALA:HB3	2.20	0.41
8:CH:41:LYS:HD2	8:CH:48:ASP:HA	2.03	0.41
7:CG:106:GLU:O	7:CG:110:LYS:HG2	2.20	0.41
10:AJ:5:ARG:HG2	10:AJ:79:PRO:HG3	2.03	0.41
24:DC:252:THR:HG22	24:DC:253:LYS:N	2.36	0.41
50:B2:31:LEU:HD22	50:B2:42:LEU:HG	2.03	0.41
22:DA:1926:U:H1'	22:DA:1929:G:C6	2.56	0.41
1:AA:422:C:OP1	1:AA:422:C:O4'	2.38	0.41
33:BL:116:VAL:HG13	33:BL:116:VAL:O	2.21	0.41
16:CP:39:PHE:CD1	16:CP:39:PHE:C	2.92	0.41
1:CA:558:G:H8	1:CA:558:G:O5'	2.03	0.41
53:B5:192:ALA:O	53:B5:196:ALA:HB3	2.20	0.41
22:BA:1153:C:N4	22:BA:1154:G:C2	2.88	0.41
22:BA:2509:G:N2	22:BA:2510:C:H1'	2.36	0.41
22:DA:2241:A:H2'	22:DA:2242:G:C8	2.55	0.41
22:DA:1362:C:H2'	22:DA:1363:C:H5'	2.02	0.41
14:CN:36:ALA:CB	14:CN:41:ARG:HG3	2.50	0.41
21:AU:40:LYS:N	21:AU:41:PRO:HD2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1501:C:N3	1:AA:1504:G:C6	2.89	0.41
39:BR:46:GLU:CA	39:BR:46:GLU:OE1	2.67	0.41
26:DE:59:PRO:HB2	26:DE:70:SER:OG	2.20	0.41
22:DA:1332:G:N3	22:DA:1332:G:H2'	2.36	0.41
22:BA:1056:G:C4'	22:BA:1086:A:C8	3.03	0.41
1:AA:1299:A:C5	1:AA:1301:U:O2	2.73	0.41
22:DA:1336:A:H2'	22:DA:1337:G:C8	2.54	0.41
22:DA:1257:C:C4	22:DA:1258:U:C4	3.08	0.41
22:BA:64:A:H2'	22:BA:65:U:H6	1.77	0.41
19:CS:6:LYS:CB	19:CS:7:LYS:HE3	2.50	0.41
1:CA:1318:A:O2'	19:CS:37:ARG:HD3	2.20	0.41
22:DA:1475:G:H4'	22:DA:1732:C:C5	2.55	0.41
30:DI:80:LEU:HD22	30:DI:138:LEU:HD11	2.02	0.41
22:DA:1570:A:C6	22:DA:1571:A:C6	3.08	0.41
1:AA:263:A:P	20:AT:74:ARG:HH12	2.42	0.41
22:DA:2752:C:C5	22:DA:2753:A:N7	2.89	0.41
1:AA:1133:G:N2	1:AA:1142:G:C4	2.88	0.41
1:CA:728:A:N1	1:CA:729:A:C6	2.88	0.41
18:CR:23:TYR:CD1	18:CR:23:TYR:O	2.74	0.41
35:DN:79:LEU:O	35:DN:80:PHE:HB2	2.20	0.41
32:BK:107:LEU:C	32:BK:109:SER:N	2.74	0.41
26:BE:7:ASP:C	26:BE:9:GLN:N	2.74	0.41
41:BT:19:LYS:O	41:BT:20:ALA:C	2.59	0.41
10:AJ:7:ARG:CB	10:AJ:75:ASP:OD1	2.69	0.41
10:AJ:8:ILE:HD11	10:AJ:74:VAL:HG11	2.02	0.41
1:AA:872:A:N7	1:AA:874:G:C8	2.87	0.41
22:DA:2347:C:O2'	49:D1:39:PHE:HB3	2.20	0.41
48:B0:13:ARG:HD2	48:B0:17:ARG:NH1	2.36	0.41
30:BI:33:VAL:CG1	30:BI:34:ASN:N	2.83	0.41
22:DA:526:A:C6	22:DA:2626:C:H4'	2.55	0.41
1:CA:1262:C:C4	1:CA:1263:C:C4	3.09	0.41
1:CA:213:G:C8	1:CA:214:C:C6	3.08	0.41
41:BT:73:ARG:HB3	41:BT:73:ARG:CZ	2.50	0.41
30:DI:46:THR:CG2	30:DI:51:LYS:HG3	2.51	0.41
42:BU:16:GLY:C	42:BU:18:ASP:H	2.24	0.41
1:CA:1036:A:H2'	1:CA:1036:A:N3	2.35	0.41
22:DA:1231:U:H6	22:DA:1231:U:O5'	2.04	0.41
1:AA:1425:U:O2	1:AA:1476:A:C2	2.74	0.41
24:BC:122:ALA:O	24:BC:123:ALA:C	2.58	0.41
22:BA:1300:G:O4'	22:BA:1626:A:H2	2.03	0.41
22:BA:2687:U:O4	22:BA:2688:G:C2	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:63:ALA:HB2	11:AK:92:GLY:HA3	2.03	0.41
1:CA:1516:G:C2	1:CA:1520:C:O2	2.74	0.41
3:CC:181:ASP:OD2	3:CC:204:LYS:HB2	2.19	0.41
14:AN:28:LYS:HG3	14:AN:29:ALA:N	2.35	0.41
1:CA:247:G:O6	1:CA:278:G:C6	2.74	0.41
22:BA:1983:G:C6	22:BA:1984:G:N7	2.88	0.41
22:BA:1983:G:H2'	22:BA:1984:G:O5'	2.21	0.41
9:CI:18:ARG:HG3	9:CI:66:THR:OG1	2.21	0.41
24:DC:95:LEU:HD13	24:DC:101:ARG:CZ	2.51	0.41
22:BA:735:A:H3'	22:BA:736:C:H6	1.85	0.41
1:AA:615:G:C2	1:AA:616:G:C8	3.09	0.41
23:DB:4:C:H2'	23:DB:5:U:O4'	2.21	0.41
1:CA:1089:G:C5	1:CA:1090:U:C5	3.09	0.41
22:BA:966:G:C6	22:BA:967:U:C4	3.08	0.41
2:CB:10:LEU:HB2	2:CB:43:LEU:HD22	2.03	0.41
3:AC:155:GLY:CA	3:AC:163:ALA:HB1	2.50	0.41
22:DA:2410:G:C6	22:DA:2411:A:C4	3.09	0.41
23:DB:94:A:OP1	43:DV:19:ARG:HD3	2.20	0.41
5:CE:15:LEU:C	5:CE:15:LEU:CD1	2.88	0.41
22:DA:1731:G:C6	22:DA:1733:G:C5	3.08	0.41
1:AA:1164:G:C2	1:AA:1173:U:O2	2.74	0.41
1:AA:119:A:C4	1:AA:240:G:C8	3.08	0.41
22:DA:2432:A:N1	45:DX:21:ALA:HA	2.35	0.41
1:AA:457:G:N7	1:AA:458:U:C5	2.89	0.41
27:DF:42:GLU:O	27:DF:44:ILE:N	2.53	0.41
8:AH:111:MET:HE1	8:AH:119:ALA:HB2	2.02	0.41
22:DA:1562:U:C4	22:DA:1563:U:C4	3.09	0.41
52:D4:1:MET:HB2	52:D4:34:LYS:O	2.21	0.41
3:CC:126:ARG:O	3:CC:127:ARG:CB	2.67	0.41
7:CG:40:GLU:HB2	7:CG:44:TYR:CE2	2.56	0.41
30:DI:117:MET:SD	30:DI:125:MET:HG2	2.60	0.41
52:B4:7:VAL:HG22	52:B4:38:GLY:HA3	2.02	0.41
1:AA:838:G:H2'	1:AA:839:C:C6	2.55	0.41
36:DO:37:ALA:HB2	36:DO:106:LEU:HD11	2.02	0.41
10:CJ:34:ALA:O	10:CJ:78:GLU:HB3	2.20	0.41
36:DO:66:GLY:HA2	36:DO:102:ARG:NH2	2.36	0.41
1:AA:953:G:H2'	1:AA:954:G:O4'	2.21	0.41
27:DF:121:SER:O	27:DF:128:TYR:HA	2.21	0.41
1:CA:491:G:O2'	1:CA:492:C:H5'	2.20	0.41
22:BA:86:G:C2	22:BA:97:C:C2	3.09	0.41
22:BA:1518:C:C2	22:BA:1519:G:C8	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1244:A:C2'	22:BA:1245:G:H5'	2.51	0.41
13:CM:96:PRO:HB2	13:CM:100:GLN:OE1	2.20	0.41
3:CC:71:ALA:O	3:CC:73:PRO:HD3	2.20	0.41
22:DA:2242:G:C5	22:DA:2243:U:C5	3.08	0.41
22:DA:1359:A:N7	22:DA:1373:A:C2	2.89	0.41
5:CE:153:VAL:HG23	5:CE:157:ARG:HB2	2.02	0.41
29:DH:40:THR:OG1	29:DH:43:ASN:ND2	2.53	0.41
5:CE:103:THR:O	5:CE:121:HIS:O	2.39	0.41
35:DN:8:ARG:HB3	35:DN:10:LEU:HG	2.03	0.41
30:BI:105:GLN:O	30:BI:106:LEU:CB	2.68	0.41
39:BR:51:VAL:CB	39:BR:52:PRO:CD	2.99	0.41
39:BR:51:VAL:O	39:BR:52:PRO:O	2.38	0.41
22:BA:250:G:P	51:B3:13:ARG:HH12	2.44	0.41
22:BA:784:G:O2'	22:BA:785:G:C5'	2.68	0.41
22:DA:672:C:H4'	26:DE:84:THR:CG2	2.51	0.41
1:CA:1002:G:H2'	1:CA:1003:G:O4'	2.20	0.41
14:AN:10:GLU:OE2	14:AN:61:ARG:N	2.51	0.41
22:DA:1234:U:H2'	22:DA:1235:G:O4'	2.21	0.41
43:BV:9:ARG:HD2	43:BV:40:ILE:O	2.21	0.41
13:CM:5:ALA:O	13:CM:7:ILE:N	2.54	0.41
22:BA:2192:U:H2'	22:BA:2193:G:O4'	2.21	0.41
3:AC:172:ARG:HB3	3:AC:203:PHE:CD2	2.55	0.41
30:DI:80:LEU:HD11	30:DI:133:ALA:HB2	2.03	0.41
10:CJ:53:ILE:HG13	14:CN:85:ARG:HD2	2.02	0.41
22:DA:2284:A:OP1	49:D1:4:GLY:O	2.39	0.41
42:BU:5:ILE:CD1	42:BU:72:ILE:HG23	2.50	0.41
4:CD:130:VAL:HG11	4:CD:135:TYR:CG	2.55	0.41
1:AA:64:G:C2	1:AA:67:C:C4	3.09	0.41
22:DA:2118:U:O4	22:DA:2149:U:H1'	2.20	0.41
45:DX:13:VAL:CG2	45:DX:29:PHE:HB2	2.50	0.41
22:BA:140:C:O2	22:BA:140:C:O4'	2.37	0.41
1:CA:31:G:C5	1:CA:306:A:H1'	2.55	0.41
16:AP:46:LYS:HD3	16:AP:46:LYS:C	2.41	0.41
28:DG:60:ASP:O	28:DG:61:GLY:C	2.59	0.41
2:AB:49:MET:O	2:AB:53:ALA:CB	2.65	0.41
25:BD:87:GLY:O	25:BD:88:GLU:C	2.58	0.41
1:AA:1309:G:C6	1:AA:1329:A:C6	3.09	0.41
27:BF:36:LEU:HD11	27:BF:99:PHE:CZ	2.55	0.41
1:CA:942:G:C2	1:CA:1342:C:C2	3.09	0.41
1:CA:216:U:C4	1:CA:217:C:N4	2.88	0.41
33:DL:57:LEU:HD12	33:DL:60:ARG:HD2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:77:TYR:CD1	11:CK:77:TYR:N	2.88	0.41
22:DA:995:C:O2	31:DJ:3:THR:OG1	2.27	0.41
22:DA:333:G:C5	22:DA:334:C:C5	3.09	0.41
6:CF:10:VAL:HG21	6:CF:18:VAL:CG2	2.50	0.41
6:CF:18:VAL:CG1	6:CF:19:PRO:N	2.80	0.41
22:DA:60:G:P	22:DA:60:G:H3'	2.61	0.41
22:BA:1047:G:N3	22:BA:1110:G:C2	2.89	0.41
1:CA:1375:A:C5	1:CA:1376:U:C5	3.08	0.41
11:AK:32:VAL:HG12	11:AK:32:VAL:O	2.20	0.41
22:DA:2235:G:C4	22:DA:2236:U:C6	3.08	0.41
23:BB:94:A:H2'	23:BB:95:U:O5'	2.20	0.41
22:DA:2323:G:H2'	22:DA:2324:U:O4'	2.21	0.41
22:DA:491:G:O6	22:DA:492:A:C6	2.74	0.41
22:DA:1240:U:HO2'	22:DA:1241:A:C5'	2.33	0.41
28:BG:124:GLU:HA	28:BG:124:GLU:OE1	2.20	0.41
22:DA:1707:G:C5	22:DA:1708:C:C4	3.09	0.41
23:DB:6:G:C2	23:DB:115:A:C2	3.09	0.41
27:DF:134:GLU:HB3	27:DF:137:ILE:HG23	2.02	0.41
1:CA:439:U:H4'	4:CD:121:LYS:HG3	2.02	0.41
2:AB:54:LEU:HA	2:AB:57:LEU:HB3	2.02	0.41
22:DA:1585:C:C5	22:DA:1586:A:C5	3.08	0.41
1:AA:1058:G:C5	1:AA:1059:C:C5	3.09	0.41
1:CA:652:U:C5	1:CA:752:G:C2	3.08	0.41
31:BJ:140:LEU:HG	31:BJ:142:ILE:HB	2.02	0.41
1:AA:159:G:N2	1:AA:163:C:C4	2.89	0.41
8:AH:83:LEU:HD22	8:AH:83:LEU:C	2.40	0.41
26:DE:126:VAL:HG22	26:DE:133:LEU:HD22	2.03	0.41
22:BA:1881:C:H2'	22:BA:1882:U:O4'	2.21	0.41
22:BA:2443:C:H2'	22:BA:2444:G:C8	2.56	0.41
22:DA:1790:C:C5	22:DA:1828:G:C2	3.08	0.41
7:AG:125:SER:O	7:AG:128:ALA:HB3	2.21	0.41
24:BC:201:MET:HG3	24:BC:202:LEU:HD13	2.03	0.41
8:CH:21:ASN:O	8:CH:22:LYS:C	2.59	0.41
27:DF:31:VAL:HG22	27:DF:96:MET:SD	2.60	0.41
7:AG:79:ARG:NH1	7:AG:82:GLY:O	2.53	0.41
22:DA:425:G:C2	22:DA:426:C:C2	3.09	0.41
1:CA:1271:A:H2'	1:CA:1272:G:C8	2.55	0.41
22:BA:659:G:C6	22:BA:660:C:C4	3.09	0.41
26:BE:164:LEU:HB3	26:BE:167:VAL:HB	2.03	0.41
3:CC:23:PHE:CD2	3:CC:24:ALA:N	2.88	0.41
22:DA:1843:C:H4'	24:DC:251:GLN:OE1	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:883:C:N3	1:AA:884:U:C4	2.88	0.41
30:DI:105:GLN:O	30:DI:106:LEU:CB	2.68	0.41
30:DI:105:GLN:O	30:DI:106:LEU:HG	2.21	0.41
33:BL:101:ILE:HG13	33:BL:102:GLY:N	2.35	0.41
1:AA:1448:C:H2'	1:AA:1448:C:O2	2.21	0.41
1:CA:188:C:O2	1:CA:188:C:H2'	2.18	0.41
11:CK:45:ALA:HB3	11:CK:70:CYS:HB2	2.03	0.41
29:BH:100:ALA:HB2	29:BH:115:VAL:CG2	2.50	0.41
29:BH:95:GLY:HA2	29:BH:117:LEU:CD2	2.51	0.41
1:AA:411:A:C6	1:AA:429:U:C5	3.09	0.41
22:DA:2044:C:N3	22:DA:2045:C:C5	2.88	0.41
22:DA:527:C:OP2	22:DA:2779:U:N3	2.51	0.41
22:BA:1961:C:H5	22:BA:1962:C:C4	2.38	0.41
21:AU:41:PRO:HA	21:AU:45:ARG:HH11	1.85	0.41
1:CA:483:C:H2'	1:CA:484:G:C8	2.56	0.41
22:DA:1652:A:C2	22:DA:2006:C:O2	2.74	0.41
22:BA:1482:G:C6	22:BA:1508:A:N1	2.89	0.41
13:AM:3:ARG:HG2	13:AM:4:ILE:N	2.33	0.41
22:BA:499:U:O4	22:BA:500:G:C6	2.74	0.41
22:BA:481:G:N3	22:BA:507:A:C2	2.88	0.41
2:AB:117:LEU:HA	2:AB:120:GLN:OE1	2.20	0.41
1:AA:980:C:H2'	1:AA:981:U:H5'	2.03	0.41
37:BP:52:ASN:C	37:BP:53:ARG:HG2	2.40	0.41
22:DA:2199:A:N7	22:DA:2225:A:C6	2.89	0.41
22:BA:65:U:H2'	22:BA:66:C:C6	2.55	0.41
22:DA:2215:C:H2'	22:DA:2216:G:C8	2.56	0.41
22:BA:1607:C:C4	22:BA:1622:G:N7	2.89	0.41
22:DA:1352:U:H5	57:DA:3395:HOH:O	2.04	0.41
1:CA:509:A:C6	1:CA:510:A:C6	3.09	0.41
22:BA:589:U:H2'	22:BA:590:A:H8	1.86	0.41
1:AA:1141:C:O2'	1:AA:1142:G:O5'	2.39	0.41
1:AA:978:A:C5	1:AA:1318:A:C6	3.09	0.41
22:DA:475:C:H6	22:DA:475:C:O5'	2.04	0.41
5:AE:82:GLN:HG2	5:AE:150:PRO:HB3	2.01	0.41
22:DA:833:A:H2'	22:DA:834:G:H8	1.86	0.41
22:BA:1414:C:N3	22:BA:1415:U:H5	2.17	0.41
21:AU:4:ILE:HD13	21:AU:20:LYS:NZ	2.35	0.41
2:AB:99:GLY:O	2:AB:103:ASN:HB2	2.20	0.41
25:BD:85:ALA:HB3	25:BD:88:GLU:HG3	2.03	0.41
22:BA:1258:U:C2	22:BA:1259:G:C8	3.08	0.41
22:DA:352:A:C6	22:DA:353:C:N3	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:B0:20:ASP:N	48:B0:20:ASP:OD2	2.53	0.41
27:BF:99:PHE:O	27:BF:100:PHE:C	2.59	0.41
22:DA:2789:C:H5'	22:DA:2809:A:H1'	2.01	0.41
11:AK:102:ALA:C	11:AK:104:GLY:N	2.72	0.41
14:CN:3:LYS:HB3	14:CN:6:MET:HG2	2.01	0.41
22:BA:1922:G:N2	22:BA:1923:U:H1'	2.35	0.41
22:BA:1687:G:C6	22:BA:1688:U:O4	2.73	0.41
1:AA:771:G:H2'	1:AA:772:U:H5'	2.00	0.41
1:CA:1107:C:C4	1:CA:1108:G:N7	2.89	0.41
22:BA:585:G:O2'	26:BE:77:ILE:HG23	2.21	0.41
22:BA:1006:C:C2	22:BA:1138:G:C2	3.08	0.41
1:CA:1202:U:H2'	1:CA:1203:C:H5'	2.03	0.41
1:CA:755:G:C2	1:CA:756:C:C6	3.09	0.41
1:AA:1521:C:H2'	1:AA:1522:U:C6	2.56	0.41
1:AA:195:A:H1'	1:AA:222:C:O2'	2.20	0.41
22:DA:1581:G:C6	22:DA:1582:C:N4	2.89	0.41
28:BG:105:LEU:HD13	28:BG:107:LEU:HD11	2.02	0.41
28:DG:123:ALA:HB2	28:DG:133:LEU:HB3	2.03	0.41
2:AB:139:ARG:HG3	2:AB:140:GLU:N	2.36	0.41
22:BA:387:U:H4'	22:BA:388:G:O5'	2.21	0.41
22:DA:1525:A:C6	22:DA:1526:C:N3	2.88	0.41
1:AA:880:C:H2'	1:AA:881:G:H5'	2.03	0.41
21:CU:21:ARG:NH1	21:CU:25:LYS:HG3	2.36	0.41
37:BP:22:PRO:HA	37:BP:47:VAL:HG12	2.01	0.41
22:BA:1832:C:C4	22:BA:1833:C:C5	3.09	0.41
22:DA:1410:G:C2	22:DA:1593:A:C6	3.09	0.41
1:CA:106:C:O2	1:CA:379:C:C5'	2.68	0.41
14:CN:22:ALA:N	14:CN:25:ALA:CB	2.83	0.41
25:BD:57:ALA:C	25:BD:59:ARG:N	2.74	0.41
33:BL:4:ASN:ND2	33:BL:4:ASN:O	2.54	0.41
1:CA:853:C:C2	1:CA:854:U:C6	3.08	0.41
22:BA:1826:G:C6	22:BA:1827:U:C4	3.09	0.41
44:BW:66:LYS:HG3	44:BW:85:GLU:HB3	2.02	0.41
1:AA:675:A:O2'	11:AK:116:ILE:O	2.39	0.41
30:DI:54:PRO:O	30:DI:75:PRO:HD2	2.19	0.41
22:DA:1290:C:C4	22:DA:1291:C:C5	3.09	0.41
53:B5:23:ILE:O	53:B5:26:ALA:HB3	2.21	0.41
24:BC:201:MET:HG3	24:BC:202:LEU:CD1	2.50	0.41
8:CH:20:ALA:O	8:CH:21:ASN:HB2	2.21	0.41
10:CJ:15:HIS:HB3	10:CJ:70:HIS:CD2	2.55	0.41
17:CQ:24:ALA:HB1	17:CQ:41:THR:CG2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:35:VAL:HG21	20:CT:54:MET:HG2	2.02	0.41
26:DE:136:GLN:O	26:DE:138:LEU:N	2.53	0.41
1:CA:860:A:N6	1:CA:861:G:C2	2.89	0.41
1:AA:968:A:H4'	1:AA:969:A:OP2	2.21	0.41
15:AO:50:HIS:O	15:AO:53:ARG:HB3	2.21	0.41
39:DR:6:GLN:O	39:DR:7:SER:HB2	2.20	0.41
22:DA:892:A:H2'	22:DA:892:A:N3	2.35	0.41
19:AS:7:LYS:HA	19:AS:7:LYS:HD2	1.93	0.41
47:DZ:38:ARG:HD3	47:DZ:38:ARG:HA	1.86	0.41
25:BD:42:ASN:O	25:BD:42:ASN:CG	2.59	0.41
15:CO:23:GLY:O	15:CO:24:SER:C	2.59	0.41
22:DA:942:G:C2'	22:DA:943:A:H5'	2.51	0.41
1:AA:419:C:C5	1:AA:420:U:C5	3.08	0.41
27:DF:166:GLY:O	27:DF:167:ARG:C	2.59	0.41
1:CA:355:C:C2	1:CA:356:A:C8	3.08	0.41
22:DA:2045:C:H2'	22:DA:2046:G:O5'	2.20	0.41
22:DA:2131:U:H1'	22:DA:2158:A:H61	1.86	0.41
1:AA:1524:C:OP2	11:AK:125:LYS:NZ	2.41	0.41
8:AH:47:GLU:HG2	8:AH:64:LYS:HG2	2.03	0.41
21:CU:12:PHE:HD1	21:CU:13:ASP:N	2.19	0.41
22:BA:1189:A:N7	22:BA:1190:G:C8	2.88	0.41
22:DA:618:G:C2	22:DA:619:G:H1'	2.55	0.41
1:AA:1157:A:H5'	1:AA:1158:C:C6	2.55	0.41
26:DE:59:PRO:HG2	26:DE:70:SER:HB2	2.02	0.41
28:DG:91:GLY:HA3	28:DG:160:LYS:CG	2.50	0.41
22:BA:195:A:C4	22:BA:198:C:N4	2.89	0.41
4:CD:173:VAL:CG1	4:CD:174:ASP:N	2.83	0.41
22:BA:1206:G:C6	22:BA:1207:C:C4	3.09	0.41
36:DO:31:THR:HG23	36:DO:32:PRO:HD2	2.02	0.41
3:AC:172:ARG:O	3:AC:173:VAL:HG22	2.20	0.41
46:BY:56:LEU:O	46:BY:57:LEU:HB2	2.18	0.41
4:CD:124:MET:O	4:CD:143:VAL:HA	2.20	0.41
1:CA:496:A:N3	1:CA:496:A:H2'	2.34	0.41
1:CA:509:A:N1	1:CA:510:A:N1	2.68	0.41
22:DA:1434:A:H2'	22:DA:1435:G:C8	2.56	0.41
22:DA:1109:C:C4	22:DA:1110:G:O6	2.74	0.41
48:B0:53:LYS:HE2	48:B0:56:ALA:HA	2.01	0.41
22:DA:197:A:H62	22:DA:2430:A:C2'	2.28	0.41
22:DA:1683:U:O5'	22:DA:1683:U:H6	2.02	0.41
22:DA:783:A:C4	22:DA:785:G:H1'	2.56	0.41
1:CA:429:U:H3'	4:CD:9:LEU:CD2	2.47	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:670:G:N2	1:CA:737:C:C2	2.88	0.41
1:CA:735:C:H2'	1:CA:736:C:C6	2.56	0.41
35:DN:55:ALA:CB	35:DN:79:LEU:HB3	2.50	0.41
22:DA:691:C:H5'	24:DC:217:ARG:HD2	2.03	0.41
22:DA:950:G:C2	22:DA:951:C:C2	3.08	0.41
1:CA:73:C:O2	1:CA:74:A:C8	2.73	0.41
1:AA:1079:G:P	57:AA:1791:HOH:O	2.78	0.41
1:AA:1441:A:H2	37:BP:114:LEU:HD22	1.86	0.41
12:AL:43:LYS:O	12:AL:44:LYS:C	2.59	0.41
22:BA:190:A:C8	22:BA:207:A:C6	3.09	0.41
22:DA:2345:G:C5	22:DA:2347:C:C4	3.09	0.41
3:AC:14:ILE:O	3:AC:15:VAL:HG22	2.21	0.41
40:DS:44:ALA:O	40:DS:48:LYS:HB3	2.21	0.41
20:CT:44:LYS:NZ	20:CT:86:LEU:O	2.47	0.41
22:BA:1139:G:O3'	31:BJ:26:GLY:HA3	2.21	0.41
10:CJ:52:LEU:HB2	14:CN:81:ARG:HD2	2.03	0.41
1:CA:622:A:H5''	1:CA:623:C:OP2	2.21	0.41
22:BA:1907:G:H3'	22:BA:1908:C:H6	1.85	0.41
22:DA:67:U:C4	22:DA:68:G:N7	2.89	0.41
53:B5:65:LEU:HD11	53:B5:191:ARG:HA	2.03	0.41
22:DA:995:C:N3	31:DJ:3:THR:HB	2.36	0.41
35:BN:36:THR:CG2	35:BN:37:THR:N	2.84	0.41
22:DA:2038:G:C5	22:DA:2039:U:C5	3.09	0.41
22:DA:2039:U:H2'	22:DA:2040:G:C8	2.56	0.41
2:CB:68:LEU:HD12	2:CB:158:PRO:CG	2.50	0.41
4:AD:160:GLU:C	4:AD:162:ALA:N	2.74	0.41
22:DA:279:A:H61	22:DA:361:G:C2'	2.33	0.41
25:DD:22:ILE:HG22	25:DD:24:VAL:HG13	2.02	0.41
1:AA:1277:C:C2'	1:AA:1279:G:H8	2.33	0.41
1:CA:899:C:H6	1:CA:899:C:OP1	2.04	0.41
47:DZ:52:SER:HA	47:DZ:55:VAL:CG2	2.51	0.41
6:CF:6:ILE:O	6:CF:61:LEU:HD12	2.21	0.41
15:CO:55:GLY:O	15:CO:59:MET:HG3	2.21	0.41
2:AB:87:CYS:HB2	2:AB:89:GLN:CD	2.41	0.41
11:AK:25:ALA:O	11:AK:88:GLY:HA3	2.21	0.41
1:CA:174:A:C2	1:CA:175:C:H1'	2.56	0.41
7:CG:65:ALA:O	7:CG:127:ALA:HB1	2.20	0.41
22:BA:1105:U:H2'	22:BA:1106:G:H8	1.85	0.41
7:CG:70:ARG:HG3	7:CG:96:ARG:HG2	2.03	0.41
27:DF:106:ILE:HD11	27:DF:139:PRO:HG2	2.02	0.41
22:BA:2620:C:N3	22:BA:2621:G:C8	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:18:ARG:O	21:CU:21:ARG:N	2.54	0.41
22:BA:1637:A:H5'	22:BA:1760:C:O2'	2.20	0.41
22:DA:2222:C:N3	22:DA:2223:G:C8	2.89	0.41
26:DE:170:ARG:NH1	26:DE:176:ASP:OD1	2.53	0.41
49:B1:52:ALA:O	49:B1:53:LYS:OXT	2.38	0.41
42:BU:40:ASN:HB3	42:BU:63:ALA:O	2.21	0.41
22:DA:167:A:H2'	22:DA:168:G:O4'	2.21	0.41
22:DA:487:C:H1'	40:DS:53:SER:OG	2.21	0.41
3:AC:89:LYS:HG2	3:AC:90:VAL:N	2.36	0.41
22:BA:225:C:H2'	22:BA:226:A:O4'	2.21	0.41
22:BA:2541:A:H4'	22:BA:2764:A:N1	2.35	0.41
1:AA:1163:A:H2'	1:AA:1164:G:C8	2.55	0.41
51:D3:25:LYS:HG2	51:D3:26:HIS:N	2.36	0.41
22:DA:2624:G:H2'	22:DA:2625:G:O4'	2.21	0.41
22:BA:463:G:N2	22:BA:467:G:C4	2.89	0.41
38:DQ:9:ILE:HG13	38:DQ:10:ALA:N	2.33	0.41
22:DA:1746:A:H2'	22:DA:1747:U:C6	2.56	0.41
39:BR:74:ILE:N	39:BR:74:ILE:HD12	2.36	0.41
50:B2:42:LEU:HD12	50:B2:42:LEU:HA	1.87	0.41
22:DA:83:A:H5''	22:DA:84:A:OP1	2.21	0.41
43:DV:75:GLN:HB2	43:DV:92:VAL:HG23	2.03	0.41
24:BC:24:LEU:HD12	24:BC:24:LEU:HA	1.89	0.41
28:DG:9:VAL:O	28:DG:49:THR:HA	2.21	0.41
9:AI:6:TYR:HB3	9:AI:89:GLU:HG2	2.01	0.41
16:CP:77:GLU:C	16:CP:79:ASN:H	2.24	0.41
22:DA:1273:U:H4'	22:DA:1275:A:P	2.60	0.41
37:DP:89:ARG:NH1	37:DP:115:ASN:OXT	2.53	0.41
7:CG:138:ARG:HE	7:CG:138:ARG:HB3	1.69	0.41
22:BA:679:C:H2'	22:BA:680:C:C6	2.56	0.41
22:BA:958:U:H2'	23:BB:89:U:C2	2.55	0.41
3:AC:79:LYS:O	3:AC:82:GLU:HG3	2.20	0.41
28:DG:139:GLN:CD	28:DG:139:GLN:C	2.80	0.41
43:BV:55:GLU:N	43:BV:55:GLU:OE2	2.54	0.41
1:CA:250:A:N3	1:CA:250:A:H5'	2.36	0.41
30:BI:45:LYS:HE2	30:BI:45:LYS:HB2	1.90	0.41
22:DA:1519:G:H2'	22:DA:1519:G:N3	2.36	0.41
4:CD:155:VAL:CG2	4:CD:155:VAL:O	2.68	0.41
9:AI:130:ARG:NH1	9:AI:130:ARG:HB3	2.35	0.41
9:AI:97:GLU:N	9:AI:97:GLU:OE2	2.54	0.41
22:DA:2051:A:C2	22:DA:2052:A:N6	2.89	0.41
29:BH:88:GLY:C	29:BH:125:THR:OG1	2.59	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:82:SER:HB3	29:BH:146:VAL:HG12	2.03	0.41
29:BH:82:SER:HG	29:BH:90:LEU:HG	1.86	0.41
29:BH:90:LEU:HG	29:BH:92:GLY:C	2.41	0.41
1:CA:358:U:H2'	1:CA:359:G:C8	2.56	0.41
22:DA:2261:C:C2	22:DA:2280:G:C2	3.09	0.41
22:BA:1178:C:O3'	22:BA:1179:G:C8	2.74	0.41
22:DA:566:U:O4	39:DR:80:ARG:HD3	2.20	0.41
22:BA:1964:G:H4'	22:BA:1965:C:OP2	2.21	0.41
22:DA:2134:A:C8	22:DA:2158:A:N3	2.89	0.41
2:CB:117:LEU:HB3	2:CB:141:LEU:HD11	2.03	0.41
22:BA:1062:G:N2	22:BA:1077:A:C2	2.89	0.41
50:D2:43:THR:OG1	50:D2:44:VAL:N	2.54	0.41
39:BR:40:MET:HG2	39:BR:41:ILE:N	2.36	0.41
39:BR:51:VAL:HB	39:BR:52:PRO:HD2	2.02	0.41
17:AQ:48:ASP:OD2	17:AQ:48:ASP:N	2.54	0.41
2:AB:130:THR:HB	2:AB:132:LYS:HB3	2.01	0.41
2:AB:132:LYS:O	2:AB:133:GLU:C	2.59	0.41
26:BE:149:ILE:HD12	26:BE:150:THR:N	2.36	0.41
1:AA:1074:G:N2	1:AA:1075:U:H1'	2.36	0.41
22:DA:2199:A:C6	22:DA:2200:C:N3	2.89	0.41
29:DH:1:MET:HB3	29:DH:21:VAL:O	2.20	0.41
12:AL:24:LEU:CG	12:AL:25:GLU:H	2.27	0.41
4:AD:147:GLU:O	4:AD:150:LYS:HB2	2.20	0.41
1:CA:1361:G:C2'	1:CA:1362:A:H5''	2.50	0.41
22:DA:2286:G:OP1	49:D1:30:LYS:HE3	2.20	0.41
22:BA:1897:G:C2	22:BA:1898:U:C2	3.09	0.41
1:AA:1350:A:P	9:AI:123:ARG:HD3	2.60	0.41
22:DA:2283:C:C4	22:DA:2389:G:C4	3.09	0.41
2:CB:219:ALA:O	2:CB:220:THR:HB	2.21	0.41
1:CA:503:C:H2'	1:CA:504:C:H6	1.86	0.41
7:AG:88:PRO:HG3	7:AG:145:ALA:HA	2.03	0.41
5:AE:151:GLU:O	5:AE:153:VAL:N	2.54	0.41
1:AA:66:A:H4'	1:AA:173:U:C5	2.56	0.41
1:CA:619:U:C2	4:CD:132:ILE:HD11	2.56	0.41
1:CA:374:A:OP1	1:CA:452:A:N1	2.54	0.41
1:CA:1007:U:C2'	1:CA:1008:U:H5''	2.51	0.41
22:DA:1187:G:OP1	39:DR:85:LYS:CE	2.66	0.41
22:BA:2451:A:C2	55:BA:3001:VIF:C15	3.03	0.41
22:BA:1794:A:H1'	22:BA:1900:A:C2	2.56	0.41
22:DA:460:A:H2'	22:DA:461:C:O4'	2.21	0.41
30:DI:57:VAL:HB	30:DI:71:THR:HB	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1317:C:H2'	1:AA:1318:A:C5'	2.51	0.41
35:DN:55:ALA:HB1	35:DN:80:PHE:N	2.36	0.41
38:DQ:79:PHE:CE2	38:DQ:110:VAL:HG22	2.56	0.41
1:CA:715:A:N6	1:CA:716:A:N6	2.69	0.41
12:CL:24:LEU:CD2	12:CL:59:ASN:OD1	2.68	0.41
22:DA:684:G:P	50:D2:16:HIS:HD1	2.40	0.41
22:BA:825:A:H4'	22:BA:2428:G:C5	2.56	0.41
1:AA:923:A:N6	1:AA:1392:G:O6	2.53	0.41
1:AA:925:G:C2	1:AA:927:G:C8	3.09	0.41
24:DC:92:ALA:HB2	24:DC:106:ALA:HB2	2.02	0.41
3:AC:59:ARG:HA	3:AC:63:SER:O	2.21	0.41
1:AA:662:U:H2'	1:AA:663:A:C8	2.55	0.41
39:BR:76:LYS:CD	39:BR:85:LYS:HD2	2.48	0.41
1:CA:1157:A:C5	1:CA:1181:G:C6	3.08	0.41
1:CA:1181:G:O2'	1:CA:1182:G:C5	2.74	0.41
1:AA:624:C:N3	1:AA:625:U:C4	2.89	0.41
1:CA:1213:A:C5	1:CA:1215:G:C4	3.08	0.41
29:DH:130:VAL:CG1	29:DH:131:SER:N	2.82	0.41
1:CA:464:U:N3	1:CA:467:U:OP2	2.47	0.41
16:CP:20:VAL:HG21	16:CP:32:PHE:CG	2.56	0.41
24:DC:25:HIS:HB2	24:DC:80:ARG:HG3	2.02	0.41
1:AA:1280:A:H5''	10:AJ:42:LEU:HD21	2.03	0.41
22:BA:12:U:C2'	22:BA:12:U:O2	2.65	0.41
4:AD:145:ILE:N	4:AD:145:ILE:CD1	2.84	0.41
22:DA:595:C:O2	22:DA:663:G:C2	2.74	0.41
22:DA:1805:A:O2'	24:DC:50:THR:HA	2.21	0.41
22:DA:2899:A:H2'	22:DA:2900:A:H8	1.85	0.41
40:DS:28:LYS:HD3	40:DS:31:GLN:OE1	2.20	0.41
22:DA:1125:G:H4'	52:D4:37:GLN:NE2	2.36	0.41
6:AF:16:GLU:OE1	4:CD:188:ARG:NH2	2.54	0.41
35:BN:38:LEU:N	35:BN:109:PRO:O	2.51	0.41
46:DY:50:VAL:O	46:DY:54:LYS:HG3	2.21	0.41
46:DY:45:GLN:O	46:DY:46:VAL:C	2.59	0.41
27:BF:126:GLY:O	27:BF:158:THR:HG22	2.21	0.41
1:CA:913:A:H4'	1:CA:914:A:H4'	2.03	0.41
22:DA:2818:U:H2'	22:DA:2819:G:C8	2.55	0.41
22:DA:2391:G:H1'	22:DA:2424:C:H41	1.86	0.41
1:CA:642:A:N3	8:CH:105:SER:OG	2.50	0.41
42:DU:72:ILE:HG13	42:DU:72:ILE:H	1.75	0.41
1:AA:251:G:O6	1:AA:266:G:O6	2.39	0.41
22:BA:1680:U:C2'	22:BA:1681:G:H5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:51:GLY:O	11:AK:52:PHE:CD2	2.74	0.41
5:AE:57:PRO:O	5:AE:61:GLN:HB2	2.20	0.41
22:DA:952:G:C2	22:DA:966:G:C2	3.09	0.41
17:CQ:51:ASN:O	17:CQ:51:ASN:ND2	2.54	0.41
1:AA:338:A:N6	1:AA:339:C:N4	2.69	0.41
29:BH:30:LEU:C	29:BH:32:PRO:HD2	2.41	0.41
22:DA:2297:A:N7	22:DA:2320:U:C4	2.89	0.41
22:DA:1193:G:C2	22:DA:1194:A:C4	3.09	0.41
1:AA:1211:U:O2'	1:AA:1212:U:O5'	2.34	0.41
1:CA:756:C:C4	1:CA:757:U:C5	3.08	0.41
18:CR:40:VAL:HA	18:CR:41:PRO:HD2	1.91	0.41
22:DA:697:G:C6	22:DA:698:C:N4	2.89	0.41
22:DA:340:A:H2'	22:DA:341:C:O4'	2.20	0.41
22:BA:1840:G:C6	22:BA:1841:U:C4	3.09	0.41
22:DA:1582:C:H2'	22:DA:1583:A:H1'	2.03	0.41
22:DA:976:G:H5'	22:DA:1156:A:C6	2.56	0.41
1:AA:100:G:C6	1:AA:101:A:C6	3.09	0.41
1:AA:100:G:C8	1:AA:101:A:N7	2.89	0.41
11:AK:89:PRO:HB3	21:AU:29:LEU:HD13	2.01	0.41
42:DU:71:ALA:HB3	42:DU:80:ALA:HB1	2.03	0.41
22:BA:1875:G:HO2'	22:BA:1876:A:P	2.43	0.41
41:DT:23:ALA:O	41:DT:27:SER:N	2.50	0.41
31:DJ:140:LEU:C	31:DJ:140:LEU:HD12	2.41	0.41
11:CK:20:VAL:HB	11:CK:35:THR:CG2	2.49	0.41
1:AA:155:A:C2	1:AA:167:A:C2	3.09	0.41
22:DA:1838:C:C5	22:DA:1899:A:C5	3.09	0.41
3:CC:182:ILE:HD11	3:CC:203:PHE:HB2	2.03	0.41
28:DG:137:ASP:HB3	28:DG:140:VAL:HG23	2.03	0.41
43:BV:35:GLU:HB2	43:BV:93:ARG:NH1	2.36	0.41
22:DA:308:G:H4'	42:DU:17:LYS:NZ	2.36	0.41
22:DA:2508:G:N2	22:DA:2582:G:C6	2.89	0.41
22:BA:2810:A:O3'	25:BD:62:LYS:HB2	2.20	0.41
25:BD:62:LYS:CB	25:BD:63:PRO:HD3	2.51	0.41
34:BM:72:PRO:C	34:BM:73:ILE:HD13	2.41	0.41
30:DI:32:GLY:HA3	30:DI:61:VAL:HG11	2.02	0.41
22:DA:2648:G:H2'	22:DA:2649:C:C6	2.56	0.41
9:CI:44:ALA:HB1	9:CI:47:VAL:CG2	2.51	0.41
1:AA:141:G:C4	1:AA:142:G:C8	3.09	0.41
1:CA:1492:A:H3'	1:CA:1493:A:H8	1.86	0.41
22:DA:905:A:H2'	22:DA:906:U:H5'	2.01	0.41
25:BD:103:ASP:CG	25:BD:104:VAL:N	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1107:C:N3	1:AA:1108:G:C8	2.89	0.41
7:AG:135:VAL:HB	7:AG:138:ARG:HH21	1.84	0.41
1:CA:1085:U:C2	1:CA:1094:G:O6	2.74	0.41
40:BS:41:LYS:O	40:BS:44:ALA:HB3	2.21	0.41
28:DG:148:LEU:HA	28:DG:151:TYR:HD1	1.86	0.41
15:AO:33:THR:HG21	15:AO:85:LEU:HG	2.02	0.41
22:DA:567:U:C2'	22:DA:568:U:O5'	2.68	0.41
22:BA:1275:A:C1'	35:BN:16:HIS:CE1	3.04	0.41
27:DF:136:ILE:HA	27:DF:141:ILE:HG21	2.03	0.41
22:DA:2794:C:H2'	22:DA:2794:C:O2	2.21	0.41
24:DC:182:ARG:NH1	24:DC:266:PHE:HB2	2.36	0.41
22:DA:2223:G:C2'	22:DA:2224:G:H5'	2.51	0.41
22:DA:648:G:H1'	22:DA:2351:G:OP1	2.21	0.41
22:DA:1906:G:C2	22:DA:1907:G:C8	3.09	0.41
28:DG:85:LYS:HG3	28:DG:141:ILE:HD12	2.02	0.41
1:CA:421:U:OP1	1:CA:421:U:H4'	2.21	0.41
1:CA:182:A:C8	1:CA:184:G:N7	2.89	0.41
22:DA:1500:G:C6	22:DA:1501:G:C5	3.08	0.41
22:DA:295:G:C2	22:DA:296:U:C6	3.09	0.41
1:AA:22:G:C6	1:AA:23:C:C4	3.08	0.41
1:AA:723:U:O2'	1:AA:855:U:H4'	2.21	0.41
22:BA:2414:G:O2'	22:BA:2415:G:H5'	2.21	0.41
22:DA:2540:C:C2	22:DA:2541:A:C8	3.09	0.41
1:AA:1270:G:C2	1:AA:1271:A:C4	3.08	0.41
47:DZ:7:ILE:CG2	47:DZ:8:THR:N	2.83	0.41
1:CA:1061:G:C2	1:CA:1197:A:N3	2.89	0.41
32:BK:68:GLY:HA3	32:BK:77:ILE:O	2.21	0.41
22:DA:2688:G:C8	22:DA:2719:G:C6	3.08	0.41
1:AA:353:A:H2'	1:AA:354:G:OP2	2.21	0.41
8:CH:43:GLU:OE2	8:CH:43:GLU:HA	2.21	0.41
45:DX:69:ALA:HA	45:DX:72:ARG:HB3	2.03	0.41
45:DX:69:ALA:O	45:DX:72:ARG:N	2.54	0.41
22:BA:2233:U:H2'	22:BA:2234:G:C8	2.56	0.41
9:AI:39:PHE:CZ	9:AI:76:ALA:HB2	2.56	0.41
1:CA:754:C:OP1	15:CO:72:ARG:NH2	2.54	0.41
22:BA:1769:U:O4'	22:BA:1958:C:H5''	2.21	0.41
49:D1:9:ILE:HD11	49:D1:11:LEU:HD21	2.02	0.41
22:BA:2343:U:O2	22:BA:2343:U:C2'	2.67	0.41
1:CA:130:A:OP1	17:CQ:65:ARG:HD2	2.21	0.41
38:DQ:81:ASN:ND2	38:DQ:117:LEU:HD11	2.35	0.41
22:BA:31:C:O3'	22:BA:1238:G:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:11:LYS:HD3	34:BM:86:LYS:HG2	2.03	0.41
1:AA:300:A:H2'	1:AA:301:G:O4'	2.21	0.41
23:BB:62:C:H2'	23:BB:63:C:C6	2.56	0.41
1:CA:1399:C:C2	1:CA:1401:G:C5	3.09	0.41
1:AA:692:U:O2	1:AA:694:A:C8	2.74	0.41
17:CQ:31:HIS:CD2	17:CQ:34:TYR:HD1	2.38	0.41
22:DA:2460:U:H2'	22:DA:2461:A:O4'	2.21	0.41
14:CN:46:LEU:HD12	14:CN:49:GLN:HB2	2.03	0.41
22:DA:1301:A:H2'	22:DA:1301:A:N3	2.36	0.41
22:DA:1926:U:H2'	22:DA:1928:A:N7	2.35	0.41
22:DA:2355:G:C6	22:DA:2356:U:N3	2.89	0.41
40:BS:48:LYS:O	40:BS:48:LYS:HG2	2.21	0.41
13:CM:90:ARG:HD2	13:CM:96:PRO:O	2.21	0.41
22:DA:2526:G:O2'	52:D4:34:LYS:HE2	2.20	0.41
26:BE:79:ARG:O	26:BE:80:SER:CB	2.69	0.41
39:BR:8:GLY:O	39:BR:10:LYS:NZ	2.40	0.41
23:BB:36:C:H5''	23:BB:37:C:OP2	2.21	0.41
22:DA:2567:G:H2'	22:DA:2568:U:C6	2.56	0.41
29:BH:129:GLU:C	29:BH:130:VAL:HG23	2.41	0.41
23:BB:7:G:H5'	36:BO:29:HIS:CE1	2.56	0.41
22:BA:854:C:C2'	22:BA:855:G:H5'	2.51	0.41
22:BA:115:C:O2'	22:BA:127:A:O2'	2.36	0.41
16:AP:36:VAL:HG22	16:AP:36:VAL:O	2.21	0.41
10:CJ:89:ARG:HB2	10:CJ:89:ARG:NH1	2.36	0.41
11:CK:72:ASP:O	11:CK:73:ALA:HB3	2.21	0.41
22:BA:600:G:H2'	22:BA:601:C:C6	2.56	0.41
28:DG:156:PRO:O	28:DG:171:THR:HG22	2.20	0.41
33:BL:130:GLY:O	33:BL:133:ALA:N	2.53	0.41
1:CA:977:A:O2'	1:CA:1223:C:N4	2.53	0.41
22:BA:854:C:O2	22:BA:924:G:C2	2.73	0.41
34:BM:50:ARG:O	34:BM:53:MET:HG3	2.20	0.41
22:BA:709:U:H2'	22:BA:710:U:C6	2.55	0.41
25:DD:1:MET:SD	25:DD:100:LEU:HD11	2.61	0.41
22:BA:1817:G:H2'	22:BA:1818:U:H5'	2.02	0.41
22:BA:2397:G:C6	22:BA:2398:U:C4	3.09	0.41
22:BA:1641:A:H2'	22:BA:1642:G:O4'	2.21	0.41
22:BA:2869:G:H2'	22:BA:2870:C:O4'	2.21	0.41
1:AA:134:G:H1'	1:AA:325:A:C5	2.56	0.41
4:AD:61:VAL:HA	4:AD:64:ILE:HD12	2.03	0.41
4:AD:126:ASN:HA	4:AD:142:VAL:CG2	2.51	0.41
26:DE:31:VAL:O	26:DE:31:VAL:HG12	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2395:C:H6	22:DA:2395:C:O5'	2.03	0.41
14:CN:26:GLU:C	14:CN:28:LYS:H	2.23	0.41
22:BA:2284:A:C6	22:BA:2285:C:C4	3.09	0.41
22:BA:1846:G:H2'	22:BA:1847:A:N9	2.35	0.41
22:BA:747:U:C5	22:BA:2613:U:C6	3.07	0.41
1:CA:55:A:C5	1:CA:56:U:C4	3.09	0.41
1:CA:57:G:H2'	1:CA:58:C:C6	2.56	0.41
22:DA:449:A:C5	22:DA:450:G:C8	3.09	0.41
22:BA:1936:A:C5	22:BA:1945:G:C5	3.09	0.41
1:CA:857:C:H2'	1:CA:858:G:O4'	2.21	0.41
30:BI:136:MET:SD	30:BI:138:LEU:HD11	2.61	0.41
22:BA:783:A:H8	22:BA:784:G:H4'	1.86	0.41
22:BA:478:A:N1	22:BA:500:G:H4'	2.36	0.41
22:DA:1308:A:C6	22:DA:1309:G:C2	3.09	0.41
1:CA:842:U:O2	1:CA:845:A:OP1	2.38	0.41
22:DA:2210:U:H4'	22:DA:2211:A:H5'	2.02	0.41
1:CA:978:A:C5	1:CA:1318:A:N6	2.89	0.41
22:BA:361:G:H8	22:BA:361:G:OP2	2.04	0.41
2:CB:47:VAL:O	2:CB:50:PHE:HD2	2.04	0.41
1:CA:513:C:H2'	1:CA:514:C:C6	2.56	0.41
1:AA:66:A:C6	1:AA:67:C:C5	3.09	0.41
26:BE:147:LEU:HD23	26:BE:180:LEU:HD23	2.03	0.41
7:AG:27:VAL:CG2	7:AG:28:ASN:N	2.84	0.41
24:BC:107:PRO:HD2	24:BC:110:LEU:HD22	2.02	0.41
14:CN:51:LEU:HB3	14:CN:52:PRO:HD2	2.01	0.41
2:AB:64:LYS:HD3	2:AB:65:GLY:N	2.36	0.41
10:AJ:86:ALA:O	10:AJ:90:LEU:HB2	2.20	0.41
32:BK:63:VAL:HG12	32:BK:107:LEU:HD21	2.02	0.41
9:AI:12:ARG:O	9:AI:15:SER:HB2	2.21	0.41
2:AB:148:LEU:CA	2:AB:151:ILE:HG22	2.51	0.41
2:AB:151:ILE:HG23	2:AB:152:LYS:H	1.85	0.41
38:DQ:47:TYR:CZ	38:DQ:51:ARG:NH2	2.89	0.41
16:AP:75:ILE:HG13	16:AP:75:ILE:H	1.66	0.41
1:AA:481:G:H4'	1:AA:481:G:OP1	2.20	0.41
9:AI:104:VAL:HG23	9:AI:105:THR:N	2.36	0.41
22:BA:1026:G:H2'	22:BA:1027:A:C8	2.54	0.41
9:AI:52:LEU:HA	9:AI:55:VAL:HG23	2.02	0.41
9:AI:57:MET:HB3	9:AI:61:LEU:CD2	2.51	0.41
1:AA:721:G:C6	1:AA:733:G:C2	3.09	0.41
22:BA:2176:A:C5	22:BA:2177:C:N4	2.89	0.41
10:AJ:41:PRO:O	10:AJ:42:LEU:CB	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:19:A:C2	1:AA:917:G:C5	3.09	0.41
20:AT:44:LYS:HE2	20:AT:86:LEU:O	2.21	0.41
10:CJ:7:ARG:HD3	10:CJ:75:ASP:OD1	2.21	0.41
25:BD:4:LEU:HD22	25:BD:100:LEU:HD23	1.99	0.41
25:BD:101:PHE:HE2	25:BD:203:VAL:HG11	1.86	0.41
22:BA:812:C:O2	22:BA:812:C:C2'	2.68	0.41
22:BA:1254:A:N6	26:BE:77:ILE:CG2	2.84	0.41
1:CA:570:G:N3	1:CA:571:U:C6	2.89	0.41
17:CQ:13:VAL:HG12	17:CQ:22:VAL:O	2.21	0.41
22:DA:2531:A:H4'	28:DG:157:TYR:CD1	2.56	0.41
1:AA:1370:G:C2	1:AA:1371:G:C8	3.09	0.41
22:BA:2627:G:C6	22:BA:2628:C:C4	3.09	0.41
1:AA:1211:U:HO2'	1:AA:1212:U:C5'	2.33	0.41
31:BJ:30:THR:HG22	31:BJ:31:GLU:H	1.86	0.41
22:BA:540:C:C2	22:BA:541:A:C8	3.08	0.41
22:BA:1467:U:C5	22:BA:1546:G:N3	2.89	0.41
30:DI:17:MET:SD	30:DI:23:PRO:HG2	2.61	0.41
1:CA:1431:A:C5	1:CA:1432:G:C6	3.09	0.41
30:BI:76:ALA:HB1	30:BI:129:ILE:HG23	2.03	0.41
1:CA:1308:U:O3'	13:CM:91:HIS:CE1	2.74	0.41
1:CA:1479:C:C2	1:CA:1480:A:C8	3.09	0.41
22:DA:1667:G:H5''	32:DK:5:GLN:O	2.21	0.41
4:AD:34:ILE:HG12	4:AD:35:GLU:N	2.35	0.41
1:CA:662:U:O2	1:CA:662:U:H2'	2.21	0.41
41:DT:21:SER:O	41:DT:22:THR:C	2.59	0.41
22:DA:1782:U:O2	22:DA:2608:G:O2'	2.19	0.41
22:BA:493:G:O2'	40:BS:7:HIS:HA	2.21	0.41
22:BA:1985:C:C2'	22:BA:1986:C:O5'	2.69	0.41
1:CA:1493:A:H8	1:CA:1493:A:OP2	2.04	0.41
24:DC:141:VAL:CG1	24:DC:190:ALA:HB1	2.51	0.41
41:DT:8:LEU:HD21	46:DY:22:LEU:HA	2.03	0.41
17:AQ:81:LYS:N	17:AQ:81:LYS:HD3	2.36	0.41
1:AA:1489:G:C2'	1:AA:1490:U:H5'	2.51	0.41
44:DW:37:ILE:HG21	44:DW:80:ILE:HG21	2.03	0.41
1:CA:49:U:C6	1:CA:364:A:N6	2.89	0.41
49:B1:34:LEU:H	49:B1:52:ALA:HB3	1.85	0.41
11:AK:87:LYS:HE2	11:AK:113:VAL:HG23	2.02	0.41
22:DA:2784:U:C4	22:DA:2785:C:C5	3.09	0.41
40:DS:59:GLU:HA	40:DS:64:ALA:HA	2.03	0.41
22:DA:1464:G:H2'	22:DA:1465:G:C8	2.56	0.41
26:DE:61:ARG:O	26:DE:62:GLN:C	2.60	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:173:GLN:O	25:DD:175:LEU:N	2.54	0.41
2:CB:71:GLY:CA	2:CB:164:ILE:CG2	2.99	0.41
42:DU:24:LYS:N	42:DU:37:GLU:HG2	2.35	0.41
22:DA:1270:C:O2'	22:DA:1648:U:OP2	2.37	0.41
1:AA:594:U:C4	1:AA:595:A:N6	2.89	0.41
18:AR:20:GLU:HA	18:AR:55:LEU:HD23	2.02	0.41
15:AO:35:GLN:HB3	15:AO:59:MET:HE1	2.02	0.41
1:CA:731:G:OP1	1:CA:766:A:H1'	2.21	0.41
22:DA:1659:G:C5	22:DA:1660:G:C8	3.09	0.41
1:CA:676:A:N1	1:CA:677:U:C4	2.89	0.41
22:BA:1351:C:H2'	22:BA:1352:U:C1'	2.51	0.41
1:CA:1240:U:H5'	1:CA:1241:G:C8	2.56	0.41
10:CJ:15:HIS:CG	10:CJ:16:ARG:N	2.88	0.41
24:BC:21:ASN:HB3	24:BC:24:LEU:HD22	2.02	0.41
29:BH:129:GLU:C	29:BH:130:VAL:CG2	2.90	0.41
1:AA:720:C:H5'	18:AR:41:PRO:HA	2.02	0.41
40:DS:86:MET:HA	40:DS:87:PRO:HD3	1.93	0.41
3:AC:138:VAL:CG1	3:AC:170:GLU:HB3	2.51	0.41
39:BR:57:GLY:C	39:BR:58:VAL:HG12	2.42	0.41
1:CA:815:A:H4'	1:CA:817:C:C5	2.57	0.41
22:BA:832:U:H2'	22:BA:833:A:C8	2.56	0.41
22:BA:753:A:H2'	22:BA:754:U:H6	1.85	0.41
1:AA:139:A:O2'	1:AA:140:U:H5'	2.21	0.41
22:DA:2674:G:H2'	22:DA:2675:A:C8	2.56	0.41
32:BK:61:VAL:HG12	32:BK:87:LEU:HD11	2.03	0.41
28:BG:154:PRO:HD3	28:BG:162:VAL:O	2.20	0.41
36:DO:17:LYS:HA	36:DO:17:LYS:HD3	1.88	0.41
22:BA:1067:A:H2'	22:BA:1067:A:N3	2.34	0.41
7:CG:66:LEU:HG	7:CG:66:LEU:O	2.20	0.41
23:DB:11:C:O5'	23:DB:11:C:H6	2.03	0.41
33:BL:63:LYS:HA	51:B3:12:LYS:O	2.21	0.41
43:DV:32:GLY:O	43:DV:93:ARG:HD3	2.21	0.41
22:BA:2459:A:C5	22:BA:2460:U:C5	3.09	0.41
5:CE:44:GLY:O	5:CE:45:ARG:C	2.59	0.41
29:BH:132:PHE:CE2	29:BH:142:VAL:CG2	3.04	0.40
22:BA:976:G:C2	22:BA:977:G:C8	3.09	0.40
38:DQ:90:ILE:HG22	38:DQ:95:LEU:HG	2.04	0.40
2:CB:211:THR:HA	2:CB:214:LEU:CB	2.52	0.40
1:CA:55:A:C6	1:CA:56:U:N3	2.89	0.40
22:BA:945:A:N7	57:BA:3263:HOH:O	2.50	0.40
1:AA:1394:A:N1	1:AA:1500:A:O2'	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:271:G:C4'	22:BA:272:A:OP1	2.69	0.40
17:CQ:48:ASP:O	17:CQ:49:GLU:C	2.59	0.40
22:DA:223:A:C4	22:DA:422:A:C8	3.09	0.40
22:BA:553:G:C5	22:BA:554:U:C5	3.09	0.40
22:DA:2211:A:N3	22:DA:2211:A:H5''	2.36	0.40
1:CA:1313:U:P	19:CS:6:LYS:HB3	2.62	0.40
36:DO:100:HIS:CG	36:DO:101:GLY:N	2.87	0.40
1:CA:268:U:C4	1:CA:269:C:N4	2.89	0.40
1:AA:170:U:O2'	1:AA:171:A:H5'	2.21	0.40
22:BA:1925:C:C5'	22:BA:1926:U:C4	3.05	0.40
1:AA:1249:C:O2'	9:AI:71:GLY:HA2	2.20	0.40
1:CA:15:G:H4'	5:CE:29:ARG:NH1	2.36	0.40
1:AA:957:U:H4'	19:AS:79:THR:O	2.21	0.40
46:BY:12:GLU:O	46:BY:15:ASN:HB2	2.21	0.40
1:CA:505:G:C2	1:CA:506:G:C5	3.10	0.40
16:AP:78:VAL:O	16:AP:79:ASN:C	2.60	0.40
4:AD:191:LEU:O	4:AD:192:SER:HB2	2.20	0.40
22:DA:353:C:H3'	22:DA:354:A:H8	1.86	0.40
1:CA:289:G:C2	1:CA:290:C:C4	3.09	0.40
22:DA:1801:A:OP2	24:DC:153:GLN:NE2	2.48	0.40
26:DE:48:THR:HG22	26:DE:86:ALA:HB3	2.02	0.40
1:AA:604:G:C6	1:AA:635:A:N1	2.89	0.40
1:CA:22:G:H4'	1:CA:885:G:C8	2.56	0.40
22:BA:1820:U:O2'	24:BC:158:ALA:O	2.16	0.40
1:AA:1359:C:H4'	1:AA:1362:A:N6	2.36	0.40
1:CA:38:G:C2	1:CA:397:A:C2	3.09	0.40
41:DT:48:GLN:O	41:DT:52:GLU:HA	2.22	0.40
22:DA:2370:G:H4'	49:D1:44:ARG:NH1	2.36	0.40
22:DA:218:A:C2	22:DA:219:A:C4	3.09	0.40
22:DA:219:A:N3	22:DA:234:U:O2'	2.47	0.40
1:AA:1417:G:N2	1:AA:1482:G:H2'	2.36	0.40
1:CA:570:G:C2	1:CA:571:U:C5	3.09	0.40
22:BA:2051:A:OP2	57:BA:3484:HOH:O	2.22	0.40
1:AA:1371:G:C5	1:AA:1372:U:C4	3.10	0.40
1:CA:455:G:C2	1:CA:478:A:C2	3.09	0.40
23:DB:66:A:H61	23:DB:107:G:H2'	1.86	0.40
22:BA:1334:G:C2	22:BA:1335:C:C2	3.09	0.40
1:CA:246:A:C4	1:CA:279:A:C6	3.08	0.40
6:AF:38:ARG:CG	6:AF:39:LEU:N	2.84	0.40
22:BA:1248:G:O2'	38:BQ:3:ARG:HA	2.21	0.40
22:DA:1668:A:N3	22:DA:1674:G:C8	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:35:THR:HG23	11:CK:36:ASP:O	2.21	0.40
22:BA:1223:G:N2	22:BA:1227:G:C4	2.90	0.40
24:BC:29:PRO:HG2	24:BC:34:LEU:HD11	2.02	0.40
22:BA:1842:G:N2	22:BA:1901:A:C4	2.89	0.40
22:DA:2340:A:H2'	22:DA:2341:G:C8	2.56	0.40
22:DA:2109:U:H4'	22:DA:2110:G:OP1	2.19	0.40
1:AA:1405:G:O4'	1:AA:1519:A:H4'	2.21	0.40
1:CA:951:G:C4	1:CA:1231:G:C2	3.09	0.40
1:AA:590:U:N3	1:AA:591:U:C4	2.90	0.40
22:BA:1860:G:O2'	22:BA:1861:G:H5'	2.22	0.40
25:DD:193:VAL:HB	25:DD:194:PRO:CD	2.51	0.40
22:BA:1241:A:H2'	22:BA:1242:U:H5'	2.02	0.40
22:BA:669:G:H2'	22:BA:669:G:N3	2.34	0.40
5:CE:34:THR:HB	5:CE:50:TYR:CZ	2.56	0.40
23:DB:23:G:N2	23:DB:61:G:C4	2.89	0.40
1:AA:510:A:H5''	1:AA:511:C:P	2.61	0.40
23:DB:15:A:H1'	23:DB:109:A:C5	2.57	0.40
7:CG:28:ASN:O	7:CG:31:MET:HB3	2.21	0.40
1:AA:750:C:O2	15:AO:23:GLY:HA3	2.22	0.40
1:CA:775:G:C2'	1:CA:776:G:H5'	2.51	0.40
22:BA:832:U:OP1	33:BL:39:LYS:HG2	2.21	0.40
17:AQ:27:ARG:HG2	17:AQ:40:ARG:O	2.21	0.40
28:DG:131:ILE:HG22	28:DG:132:VAL:N	2.36	0.40
1:CA:1249:C:O3'	9:CI:75:GLN:NE2	2.51	0.40
9:CI:20:PHE:O	9:CI:63:LEU:HA	2.21	0.40
31:DJ:99:ARG:HB3	31:DJ:103:ILE:HD12	2.03	0.40
22:DA:615:U:O4	26:DE:39:ALA:HB2	2.21	0.40
7:CG:79:ARG:HG2	7:CG:84:THR:HG23	2.03	0.40
15:AO:28:GLN:O	15:AO:31:LEU:HD12	2.21	0.40
22:BA:2796:U:C4	22:BA:2798:U:C5	3.08	0.40
22:DA:1549:A:C6	22:DA:1550:C:N3	2.89	0.40
22:DA:286:U:H2'	22:DA:287:G:C8	2.56	0.40
16:AP:28:ARG:HG2	16:AP:29:ASN:OD1	2.21	0.40
3:CC:80:LYS:HA	3:CC:80:LYS:HE3	2.02	0.40
1:CA:750:C:H4'	15:CO:21:ASP:HA	2.02	0.40
25:BD:33:ARG:NH2	25:BD:74:GLU:O	2.54	0.40
22:DA:679:C:H2'	22:DA:680:C:H6	1.85	0.40
34:DM:41:LEU:HD21	34:DM:124:LEU:HD13	2.02	0.40
22:BA:1180:U:C2'	22:BA:1181:U:C5'	2.96	0.40
5:CE:105:ILE:H	5:CE:122:ASN:C	2.24	0.40
22:DA:1601:G:C6	22:DA:1602:U:C4	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1407:C:HO2'	22:BA:1912:A:N6	1.95	0.40
22:BA:1778:U:H2'	22:BA:1784:A:N6	2.36	0.40
22:DA:1353:A:C4	22:DA:1378:A:C6	3.10	0.40
33:DL:58:TYR:O	51:D3:13:ARG:CD	2.69	0.40
22:BA:576:U:H2'	22:BA:577:G:H8	1.80	0.40
39:BR:79:ARG:O	39:BR:80:ARG:HB2	2.22	0.40
22:BA:499:U:C4	22:BA:500:G:C5	3.09	0.40
50:D2:9:VAL:O	50:D2:13:ASN:ND2	2.43	0.40
22:BA:2820:A:H2'	22:BA:2821:A:OP1	2.21	0.40
22:DA:1121:C:C2	22:DA:1122:G:C8	3.09	0.40
1:AA:1101:A:N3	1:AA:1102:A:H1'	2.37	0.40
30:BI:124:ALA:C	30:BI:126:THR:N	2.73	0.40
27:BF:41:GLY:O	27:BF:42:GLU:C	2.58	0.40
22:DA:1087:G:N9	22:DA:1089:A:H1'	2.36	0.40
33:BL:78:ARG:HB3	33:BL:113:ALA:HB3	2.04	0.40
22:BA:2306:C:C4	22:BA:2307:G:C5	3.09	0.40
22:BA:1434:A:C2	22:BA:1435:G:C4	3.09	0.40
53:B5:63:VAL:O	53:B5:164:PHE:CB	2.69	0.40
22:BA:2564:A:OP1	22:BA:2648:G:H4'	2.21	0.40
1:AA:74:A:C2	1:AA:97:G:C5	3.09	0.40
5:AE:111:MET:O	5:AE:115:LEU:HB2	2.21	0.40
1:CA:1243:C:N4	1:CA:1244:G:O6	2.54	0.40
38:BQ:31:VAL:HB	38:BQ:34:VAL:HG23	2.03	0.40
27:BF:38:MET:HE3	27:BF:57:LEU:HG	2.04	0.40
1:CA:1343:G:C5	1:CA:1344:C:C4	3.09	0.40
1:CA:117:G:O6	1:CA:289:G:H1'	2.21	0.40
22:DA:591:U:HO2'	51:D3:2:PRO:N	2.19	0.40
1:CA:1262:C:H2'	1:CA:1263:C:O4'	2.22	0.40
4:CD:58:LYS:HG3	4:CD:59:GLN:N	2.33	0.40
41:DT:76:ARG:O	41:DT:77:ARG:O	2.40	0.40
22:DA:2290:G:N2	22:DA:2343:U:H1'	2.36	0.40
22:BA:2114:A:N3	22:BA:2114:A:C2'	2.81	0.40
3:CC:56:VAL:O	3:CC:66:VAL:HA	2.21	0.40
1:CA:805:C:N3	1:CA:806:C:C5	2.89	0.40
1:AA:125:U:O2'	1:AA:126:G:H5'	2.21	0.40
1:AA:635:A:H2'	1:AA:636:U:C6	2.56	0.40
57:BA:3784:HOH:O	31:BJ:39:LYS:HE3	2.20	0.40
22:BA:1250:G:H5''	38:BQ:6:ARG:HD3	2.03	0.40
17:CQ:57:ASP:OD2	17:CQ:57:ASP:N	2.55	0.40
22:DA:1439:A:C2	22:DA:1553:A:C5	3.08	0.40
45:DX:41:GLU:O	45:DX:42:SER:C	2.58	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:42:C:OP1	27:BF:64:LYS:HE3	2.21	0.40
22:BA:2318:G:C5	22:BA:2319:G:C6	3.10	0.40
22:DA:2571:U:C4	22:DA:2574:G:H8	2.37	0.40
26:DE:118:LEU:HD11	26:DE:188:MET:HG3	2.03	0.40
1:CA:781:A:H4'	1:CA:1522:U:O2'	2.21	0.40
22:DA:1838:C:C5	22:DA:1899:A:C6	3.09	0.40
2:AB:88:ASP:C	2:AB:89:GLN:HG3	2.42	0.40
7:CG:125:SER:O	7:CG:127:ALA:N	2.54	0.40
34:BM:92:TRP:N	34:BM:92:TRP:CD1	2.89	0.40
17:AQ:81:LYS:HE2	17:AQ:81:LYS:N	2.36	0.40
52:D4:12:ARG:HB2	52:D4:12:ARG:CZ	2.51	0.40
6:AF:72:ASP:C	6:AF:74:LEU:H	2.24	0.40
27:BF:88:LYS:HG3	27:BF:89:VAL:N	2.36	0.40
28:BG:6:LYS:HD3	28:BG:62:TRP:CH2	2.57	0.40
22:BA:966:G:C6	22:BA:967:U:N3	2.89	0.40
1:AA:648:A:H2'	1:AA:649:A:C8	2.56	0.40
1:AA:291:U:H2'	1:AA:292:G:O4'	2.22	0.40
8:AH:76:GLN:O	8:AH:127:CYS:HB2	2.21	0.40
1:CA:1253:G:C2	1:CA:1285:A:N6	2.89	0.40
22:BA:304:U:H2'	22:BA:305:C:C6	2.56	0.40
3:CC:12:LEU:HD23	3:CC:12:LEU:HA	1.84	0.40
2:CB:151:ILE:O	2:CB:152:LYS:C	2.59	0.40
22:DA:2444:G:OP2	26:DE:63:LYS:HD2	2.20	0.40
22:BA:1113:U:H2'	22:BA:1114:C:H6	1.86	0.40
22:BA:796:C:H2'	22:BA:797:G:H8	1.87	0.40
1:AA:246:A:C6	1:AA:282:A:N7	2.89	0.40
7:AG:83:SER:HB2	7:AG:85:TYR:CE2	2.56	0.40
1:AA:457:G:H5'	1:AA:458:U:OP2	2.20	0.40
10:AJ:80:THR:C	10:AJ:82:LYS:N	2.74	0.40
11:AK:77:TYR:O	11:AK:78:GLY:C	2.59	0.40
22:BA:324:A:N6	22:BA:338:G:O2'	2.48	0.40
22:BA:1054:A:H3'	22:BA:1055:G:H8	1.87	0.40
42:BU:102:THR:HG22	42:BU:103:ILE:N	2.35	0.40
31:DJ:58:ASN:HA	31:DJ:126:ALA:O	2.21	0.40
50:D2:1:MET:O	50:D2:2:LYS:C	2.60	0.40
1:CA:1527:U:H2'	1:CA:1528:U:C6	2.57	0.40
1:AA:934:C:OP1	57:AA:1769:HOH:O	2.22	0.40
13:AM:27:LYS:O	13:AM:31:LYS:HG3	2.22	0.40
14:AN:20:TYR:CE1	14:AN:52:PRO:HG2	2.56	0.40
22:DA:722:A:H2'	22:DA:723:C:O4'	2.20	0.40
48:D0:26:THR:O	48:D0:28:LEU:HD12	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:66:TYR:CD2	12:AL:87:VAL:HG21	2.56	0.40
1:CA:931:C:H2'	1:CA:932:C:H6	1.87	0.40
22:DA:1280:G:C6	22:DA:1281:G:C5	3.09	0.40
1:CA:888:G:H4'	1:CA:1488:G:O2'	2.21	0.40
3:CC:3:GLN:N	3:CC:3:GLN:OE1	2.54	0.40
24:BC:124:ILE:HG22	24:BC:124:ILE:O	2.21	0.40
11:AK:107:ILE:HG23	11:AK:107:ILE:O	2.21	0.40
34:DM:33:LEU:HB2	34:DM:117:PHE:CD2	2.57	0.40
29:DH:96:THR:O	29:DH:98:ASP:N	2.54	0.40
22:BA:138:U:OP2	22:BA:139:U:H5''	2.21	0.40
22:BA:1692:U:H2'	22:BA:1694:C:C5	2.57	0.40
22:DA:2054:A:C2	22:DA:2616:C:O2	2.74	0.40
22:BA:987:C:C2'	22:BA:988:A:H5'	2.51	0.40
1:CA:389:A:C6	1:CA:390:U:H1'	2.56	0.40
22:DA:2261:C:N3	22:DA:2280:G:C2	2.90	0.40
4:AD:125:VAL:HG11	4:AD:135:TYR:CE2	2.56	0.40
22:BA:747:U:C4	22:BA:2613:U:C6	3.10	0.40
2:AB:23:TRP:HB3	2:AB:39:HIS:HE1	1.87	0.40
22:BA:1964:G:N2	22:BA:1967:C:C6	2.89	0.40
22:DA:2135:A:H4'	22:DA:2160:C:H4'	2.04	0.40
24:DC:29:PRO:HB2	24:DC:30:PHE:H	1.78	0.40
38:BQ:105:ALA:HA	39:BR:46:GLU:OE2	2.21	0.40
2:AB:132:LYS:O	2:AB:136:MET:SD	2.79	0.40
24:BC:235:GLY:HA3	24:BC:239:ASN:HB2	2.02	0.40
22:DA:46:G:N3	22:DA:47:C:C6	2.90	0.40
22:BA:278:A:H2'	22:BA:278:A:N3	2.36	0.40
5:CE:25:VAL:HG22	5:CE:28:GLY:O	2.22	0.40
1:AA:1152:A:H5'	10:AJ:15:HIS:CD2	2.57	0.40
22:BA:1844:C:C2	22:BA:1897:G:N2	2.89	0.40
34:BM:117:PHE:HD2	34:BM:130:PHE:CE1	2.39	0.40
32:DK:76:VAL:CG1	37:DP:73:VAL:CG2	2.97	0.40
2:CB:58:ASN:HA	2:CB:61:ALA:HB3	2.03	0.40
4:CD:99:ASP:OD1	4:CD:100:ASN:N	2.53	0.40
39:DR:52:PRO:O	39:DR:53:PHE:CG	2.74	0.40
40:BS:59:GLU:HG3	40:BS:66:ILE:HD11	2.03	0.40
45:DX:12:PRO:HB3	45:DX:28:ARG:HH21	1.85	0.40
1:AA:26:A:H5''	1:AA:27:G:OP2	2.21	0.40
1:AA:97:G:H2'	1:AA:98:A:O5'	2.22	0.40
22:DA:777:G:N7	22:DA:793:A:C2	2.86	0.40
1:CA:409:U:C4	1:CA:410:G:C5	3.10	0.40
22:BA:370:G:O2'	22:BA:424:G:OP1	2.26	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:948:C:H2'	22:DA:949:G:C8	2.57	0.40
22:DA:950:G:H2'	22:DA:951:C:O4'	2.22	0.40
22:BA:622:G:C6	22:BA:623:C:C4	3.09	0.40
22:DA:2756:U:H1'	22:DA:2757:A:H5''	2.02	0.40
1:AA:1032:G:C2	1:AA:1033:G:H1'	2.57	0.40
1:AA:1033:G:N3	1:AA:1033:G:H2'	2.36	0.40
22:BA:580:U:H2'	22:BA:581:C:C6	2.56	0.40
27:BF:114:PHE:CZ	27:BF:116:GLY:HA2	2.56	0.40
22:DA:1127:A:C3'	22:DA:1128:G:H5''	2.50	0.40
22:BA:2742:G:OP1	52:B4:36:ARG:HD3	2.22	0.40
22:BA:2603:G:C5	22:BA:2604:U:C5	3.10	0.40
22:DA:371:A:N6	22:DA:401:A:H3'	2.36	0.40
1:AA:390:U:H2'	1:AA:391:G:C8	2.56	0.40
22:DA:319:G:C5	22:DA:333:G:C2	3.09	0.40
1:CA:805:C:H2'	1:CA:806:C:H6	1.87	0.40
25:DD:133:THR:HG23	25:DD:134:HIS:H	1.84	0.40
22:BA:1735:A:C2	22:BA:1736:U:N1	2.89	0.40
2:AB:184:PHE:N	2:AB:184:PHE:HD2	2.18	0.40
22:DA:2369:A:H2'	22:DA:2370:G:O4'	2.21	0.40
22:BA:1355:G:N2	22:BA:1377:G:H1'	2.36	0.40
24:BC:141:VAL:CG2	24:BC:192:LEU:HD13	2.52	0.40
1:AA:763:G:N2	1:AA:764:C:C2	2.90	0.40
1:CA:1291:U:H4'	9:CI:42:GLU:HG2	2.04	0.40
30:BI:113:LYS:HE3	30:BI:116:ASP:HB3	2.04	0.40
43:DV:9:ARG:CG	43:DV:41:GLU:HB3	2.51	0.40
1:CA:1416:G:C2	1:CA:1485:U:O2	2.73	0.40
22:DA:2196:C:N3	22:DA:2197:U:C4	2.89	0.40
22:BA:1199:U:H1'	38:BQ:4:VAL:HG22	2.04	0.40
1:CA:1520:C:H2'	1:CA:1521:C:H6	1.86	0.40
11:CK:112:ASP:OD1	11:CK:114:THR:HG23	2.21	0.40
22:DA:105:C:H2'	22:DA:106:C:H6	1.84	0.40
20:AT:51:PHE:O	20:AT:54:MET:HG3	2.21	0.40
34:BM:47:GLU:OE2	34:BM:51:ARG:NE	2.55	0.40
37:BP:5:ILE:HG22	37:BP:6:LYS:N	2.36	0.40
1:AA:36:C:H2'	1:AA:37:U:O4'	2.22	0.40
6:CF:70:VAL:CG2	6:CF:71:ILE:N	2.84	0.40
22:DA:1453:A:C2	35:DN:77:ALA:HB2	2.56	0.40
22:BA:1283:G:N1	22:BA:1286:A:OP2	2.52	0.40
1:AA:712:A:O2'	1:AA:713:G:H5'	2.22	0.40
22:DA:681:G:N3	22:DA:682:G:C8	2.89	0.40
22:BA:2544:G:H2'	22:BA:2545:G:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:652:U:C5	1:CA:752:G:C4	3.09	0.40
22:DA:2688:G:N7	22:DA:2719:G:C6	2.89	0.40
22:DA:2862:G:C2	22:DA:2863:C:C2	3.09	0.40
1:CA:28:A:N7	1:CA:29:U:C5	2.90	0.40
22:BA:1769:U:H2'	22:BA:1770:G:O5'	2.22	0.40
1:CA:178:C:H2'	1:CA:179:A:O4'	2.21	0.40
22:DA:2685:G:C2	22:DA:2686:G:C8	3.10	0.40
25:DD:31:ALA:HB1	25:DD:96:ILE:O	2.21	0.40
7:CG:138:ARG:CZ	7:CG:139:GLU:HG2	2.52	0.40
32:DK:73:ASP:OD2	32:DK:75:SER:OG	2.38	0.40
22:BA:20:C:H2'	22:BA:21:A:H8	1.86	0.40
22:DA:1509:A:HO2'	22:DA:1510:G:P	2.44	0.40
22:BA:1638:C:O3'	22:BA:2709:G:N2	2.54	0.40
1:AA:895:G:H2'	1:AA:896:C:C6	2.56	0.40
35:DN:53:THR:HA	35:DN:56:LYS:CG	2.52	0.40
39:BR:43:ASN:HB3	39:BR:44:GLY:H	1.73	0.40
33:BL:79:LEU:HB2	33:BL:114:GLY:O	2.22	0.40
5:CE:83:HIS:HB2	5:CE:84:PRO:HD2	2.02	0.40
22:BA:2227:A:H2'	22:BA:2228:G:O4'	2.21	0.40
1:AA:303:A:C5	1:AA:304:U:C5	3.10	0.40
5:AE:48:PHE:O	5:AE:70:ASN:ND2	2.55	0.40
22:DA:1385:A:H1'	22:DA:1386:C:C6	2.56	0.40
22:BA:1963:U:H6	22:BA:1963:U:O5'	2.04	0.40
27:BF:31:VAL:CG2	27:BF:31:VAL:O	2.69	0.40
22:BA:1635:A:H2'	22:BA:1635:A:N3	2.35	0.40
5:CE:134:ILE:HD12	5:CE:134:ILE:H	1.86	0.40
5:CE:12:GLN:HG3	5:CE:12:GLN:O	2.20	0.40
32:DK:1:MET:HG2	32:DK:32:TYR:CD1	2.56	0.40
1:CA:1044:A:N7	1:CA:1045:C:H1'	2.37	0.40
22:DA:1306:C:C2	22:DA:1307:A:C8	3.09	0.40
1:CA:1234:C:O2'	1:CA:1235:U:H5'	2.21	0.40
5:CE:149:SER:CB	5:CE:152:MET:HG3	2.50	0.40
22:BA:2747:G:P	28:BG:138:LYS:HE2	2.61	0.40
22:BA:2380:C:H2'	22:BA:2381:A:C8	2.56	0.40
48:D0:12:LYS:HD2	48:D0:12:LYS:HA	1.94	0.40
17:AQ:14:SER:HB3	17:AQ:22:VAL:HG12	2.02	0.40
18:CR:25:ASP:O	18:CR:26:ILE:C	2.60	0.40
22:DA:1609:A:O2'	22:DA:1610:A:H5'	2.22	0.40
1:CA:840:C:C2	1:CA:842:U:H4'	2.57	0.40
35:BN:108:ALA:O	35:BN:110:MET:N	2.54	0.40
11:AK:21:ALA:HB2	11:AK:34:ILE:CD1	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:64:G:C8	1:CA:99:C:C4	3.09	0.40
30:DI:80:LEU:HD13	30:DI:136:MET:SD	2.62	0.40
4:CD:147:GLU:O	4:CD:150:LYS:HB3	2.21	0.40
22:DA:2389:G:C5'	22:DA:2390:U:H5'	2.50	0.40
22:BA:1744:A:H2'	22:BA:1745:A:O4'	2.20	0.40
48:D0:55:ILE:CG2	48:D0:56:ALA:N	2.76	0.40
1:CA:728:A:N6	1:CA:729:A:N6	2.68	0.40
1:CA:1408:A:N1	1:CA:1494:G:C5	2.89	0.40
1:AA:1225:A:O2'	1:AA:1225:A:N3	2.53	0.40
4:AD:198:HIS:HA	4:AD:201:VAL:HB	2.03	0.40
22:DA:686:U:H2'	22:DA:788:A:N1	2.36	0.40
22:DA:775:G:C2	22:DA:794:A:C8	3.10	0.40
16:AP:42:ILE:O	16:AP:43:ALA:C	2.58	0.40
22:DA:1773:A:H2'	22:DA:1774:C:H5'	2.03	0.40
22:BA:1422:G:C2	22:BA:1423:G:C8	3.10	0.40
9:AI:11:ARG:HA	9:AI:78:ALA:CB	2.52	0.40
22:DA:2347:C:H2'	22:DA:2348:U:C6	2.56	0.40
23:DB:34:A:H2'	23:DB:35:C:OP2	2.21	0.40
1:AA:469:C:N4	1:AA:470:C:N4	2.69	0.40
22:DA:231:A:N6	22:DA:232:G:N1	2.70	0.40
2:AB:166:ALA:HB2	2:AB:187:VAL:HG12	2.03	0.40
22:DA:2066:C:C2	22:DA:2445:G:N2	2.90	0.40
4:CD:57:GLU:OE1	4:CD:57:GLU:HA	2.21	0.40
25:DD:103:ASP:O	25:DD:104:VAL:C	2.59	0.40
45:DX:10:LYS:HE3	45:DX:54:LYS:HD2	2.02	0.40
39:DR:46:GLU:C	39:DR:46:GLU:CD	2.79	0.40
1:CA:1071:C:C2	1:CA:1072:G:C8	3.09	0.40
26:DE:52:VAL:O	26:DE:74:LYS:HD3	2.21	0.40
22:DA:1806:C:O2	24:DC:44:ASN:ND2	2.55	0.40
1:AA:600:A:OP1	8:AH:89:LYS:HG2	2.22	0.40
1:CA:1348:U:OP1	9:CI:111:VAL:HA	2.21	0.40
17:CQ:14:SER:HB3	17:CQ:22:VAL:CG1	2.52	0.40
8:AH:59:LEU:HD11	8:AH:61:LEU:HD21	2.03	0.40
45:DX:42:SER:OG	45:DX:43:GLU:N	2.54	0.40
9:AI:91:ASP:C	9:AI:91:ASP:OD2	2.59	0.40
1:AA:381:C:H2'	1:AA:382:A:O5'	2.22	0.40
6:AF:66:ALA:HB1	6:AF:67:PRO:HD2	2.04	0.40
22:BA:1663:G:H5'	22:BA:2687:U:OP1	2.22	0.40
46:DY:1:MET:CA	46:DY:4:LYS:HD3	2.52	0.40
22:DA:1057:A:C2	22:DA:1082:U:N3	2.90	0.40
22:BA:1199:U:H5''	57:BA:3707:HOH:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:155:A:N1	1:AA:167:A:C2	2.90	0.40
22:DA:2189:U:C2'	22:DA:2190:G:H5''	2.51	0.40
1:CA:1350:A:N6	1:CA:1373:G:N2	2.70	0.40
2:CB:21:ARG:C	2:CB:22:TYR:CD1	2.95	0.40
1:CA:1415:G:C6	1:CA:1486:G:C6	3.09	0.40
3:CC:43:LEU:CD2	3:CC:68:ILE:HD11	2.51	0.40
22:DA:2529:G:H4'	28:DG:175:LYS:HG3	2.02	0.40
22:DA:1483:G:N3	22:DA:1483:G:H2'	2.37	0.40
1:CA:1540:U:H4'	21:CU:18:ARG:HG2	2.04	0.40
22:DA:647:G:C5	22:DA:648:G:C5	3.09	0.40
22:DA:2856:A:C6	22:DA:2857:G:C5	3.09	0.40
21:CU:15:ALA:O	21:CU:16:LEU:C	2.59	0.40
22:BA:1946:U:C2	22:BA:1947:C:C5	3.10	0.40
28:BG:62:TRP:O	28:BG:65:ALA:HB3	2.21	0.40
42:BU:6:ARG:O	42:BU:7:ARG:C	2.58	0.40
43:BV:14:LYS:CD	43:BV:18:ARG:HH11	2.34	0.40
22:BA:186:G:O2'	22:BA:187:G:H5'	2.21	0.40
22:DA:295:G:H2'	22:DA:295:G:N3	2.37	0.40
11:AK:87:LYS:HG3	11:AK:114:THR:HA	2.02	0.40
1:AA:363:A:C2	1:AA:364:A:C4	3.10	0.40
11:CK:122:ARG:CZ	21:CU:36:GLU:CG	3.00	0.40
22:BA:2544:G:H5'	22:BA:2645:G:C2	2.56	0.40
22:DA:1463:C:H2'	22:DA:1464:G:O4'	2.21	0.40
37:BP:27:GLU:CG	37:BP:27:GLU:O	2.70	0.40
27:BF:12:VAL:HG13	27:BF:172:ALA:CB	2.52	0.40
12:CL:102:LEU:HB3	12:CL:103:ASP:H	1.77	0.40
1:CA:1443:C:C2	1:CA:1444:U:C6	3.09	0.40
23:BB:14:U:H3'	23:BB:15:A:H5'	2.04	0.40
22:BA:950:G:H2'	22:BA:951:C:H6	1.86	0.40
30:DI:54:PRO:O	30:DI:75:PRO:CD	2.69	0.40
22:BA:1689:A:C6	22:BA:1700:A:C2	3.10	0.40
3:AC:167:TRP:HE3	3:AC:167:TRP:C	2.25	0.40
1:CA:765:G:C6	1:CA:812:G:C4	3.10	0.40
38:BQ:112:LYS:O	38:BQ:115:ALA:HB3	2.21	0.40
22:DA:942:G:H2'	22:DA:943:A:H5'	2.03	0.40
22:DA:84:A:C2	22:DA:98:G:N3	2.89	0.40
33:BL:129:LYS:O	33:BL:130:GLY:C	2.59	0.40
1:CA:931:C:H2'	1:CA:932:C:C6	2.56	0.40
30:DI:114:ALA:O	30:DI:115:ALA:HB2	2.22	0.40
22:DA:2088:A:C6	22:DA:2089:C:N4	2.90	0.40
1:CA:521:G:O6	1:CA:529:G:C6	2.75	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:109:LYS:CG	33:DL:126:ARG:HB3	2.51	0.40
22:DA:1980:G:O2'	22:DA:1982:U:OP2	2.35	0.40
22:DA:1520:U:O4	22:DA:1521:G:C6	2.74	0.40
47:DZ:31:ARG:HG2	47:DZ:34:HIS:HB2	2.03	0.40
42:DU:87:PHE:HA	42:DU:91:LYS:O	2.21	0.40
22:BA:2849:U:N3	22:BA:2867:G:O4'	2.50	0.40
2:CB:162:PHE:HA	2:CB:184:PHE:O	2.22	0.40
22:DA:2486:C:N3	22:DA:2487:G:C8	2.90	0.40
8:AH:18:GLN:NE2	8:AH:72:VAL:HG23	2.37	0.40
1:AA:1238:A:C2	1:AA:1303:C:H4'	2.55	0.40
50:D2:25:LYS:O	50:D2:25:LYS:HG3	2.21	0.40
10:CJ:22:THR:HG23	10:CJ:22:THR:O	2.20	0.40
46:DY:7:ARG:O	46:DY:7:ARG:HG3	2.21	0.40
43:DV:49:ASN:O	43:DV:52:ALA:HB3	2.21	0.40
1:CA:354:G:C4	1:CA:355:C:C5	3.10	0.40
2:AB:20:THR:HB	2:AB:37:LYS:O	2.22	0.40
22:DA:2046:G:OP1	48:D0:12:LYS:NZ	2.54	0.40
2:CB:117:LEU:O	2:CB:118:GLU:C	2.59	0.40
30:BI:11:LEU:HD12	30:BI:24:VAL:HG12	2.04	0.40
30:BI:101:ILE:HD11	30:BI:138:LEU:HD13	2.02	0.40
24:DC:31:ALA:O	24:DC:33:LEU:N	2.53	0.40
39:BR:42:ALA:CA	39:BR:46:GLU:HB2	2.48	0.40
22:BA:1738:G:O2'	22:BA:1739:A:H8	2.05	0.40
22:DA:1034:G:C5	22:DA:1035:U:C5	3.10	0.40
1:AA:1074:G:C6	1:AA:1075:U:C4	3.10	0.40
22:DA:1344:U:O5'	22:DA:1344:U:H6	2.04	0.40
22:BA:63:A:C2	22:BA:64:A:C5	3.10	0.40
22:BA:277:G:H1'	22:BA:361:G:O6	2.21	0.40
5:CE:66:LYS:O	5:CE:70:ASN:HB2	2.21	0.40
22:DA:1063:G:H2'	22:DA:1064:C:O4'	2.21	0.40
25:BD:13:ARG:CD	25:BD:15:PHE:CZ	3.01	0.40
20:AT:74:ARG:O	20:AT:78:ASN:OD1	2.39	0.40
1:CA:496:A:H2'	1:CA:497:G:N7	2.36	0.40
22:DA:478:A:C2	22:DA:480:A:C5	3.10	0.40
32:BK:107:LEU:O	32:BK:108:ARG:C	2.58	0.40
20:CT:3:ASN:O	20:CT:4:ILE:C	2.59	0.40
22:BA:2392:A:C8	22:BA:2429:G:N1	2.90	0.40
1:AA:587:G:H4'	8:AH:4:GLN:CA	2.51	0.40
3:AC:22:TRP:CZ2	3:AC:32:ASN:HB3	2.56	0.40
10:AJ:74:VAL:O	10:AJ:75:ASP:HB2	2.21	0.40
9:AI:12:ARG:NH2	9:AI:107:ASP:OD1	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:38:MET:CE	27:BF:57:LEU:HG	2.51	0.40
40:DS:36:LEU:HD13	40:DS:48:LYS:HB2	2.04	0.40
8:CH:77:ARG:CZ	8:CH:79:SER:O	2.69	0.40
22:BA:1907:G:C6	22:BA:1908:C:C4	3.09	0.40
22:DA:301:G:N2	22:DA:302:C:C2	2.89	0.40
6:CF:55:HIS:O	6:CF:56:LYS:O	2.40	0.40
6:CF:64:VAL:CG1	6:CF:65:GLU:N	2.83	0.40
46:DY:45:GLN:O	46:DY:48:ARG:N	2.54	0.40
46:DY:20:ASN:CB	46:DY:50:VAL:HG22	2.51	0.40
20:AT:44:LYS:HD3	20:AT:87:ALA:OXT	2.22	0.40
22:BA:2076:U:C4'	22:BA:2076:U:O2	2.70	0.40
6:AF:52:ASN:OD1	6:AF:85:ILE:HG22	2.22	0.40
1:CA:570:G:C5	1:CA:873:A:C6	3.09	0.40
8:AH:54:ASP:CG	8:AH:55:THR:H	2.24	0.40
1:CA:474:G:C6	1:CA:475:C:C4	3.10	0.40
26:BE:5:LEU:HD11	26:BE:12:LEU:HB2	2.03	0.40
22:DA:491:G:C2	22:DA:492:A:C4	3.10	0.40
22:BA:511:U:O4	22:BA:512:G:N1	2.54	0.40
1:CA:572:A:H5'	1:CA:573:A:P	2.61	0.40
28:BG:24:ILE:CD1	28:BG:72:LEU:HD21	2.51	0.40
22:DA:1082:U:H5''	22:DA:1083:U:OP2	2.22	0.40
1:AA:809:G:C6	1:AA:810:C:C5	3.10	0.40
41:DT:22:THR:HA	41:DT:25:GLU:HG2	2.03	0.40
23:DB:21:G:N2	23:DB:63:C:C2	2.89	0.40
22:BA:636:G:C6	33:BL:111:ILE:HD11	2.57	0.40
22:BA:2186:G:C5	22:BA:2187:U:C4	3.09	0.40
22:DA:1526:C:H2'	22:DA:1527:G:O4'	2.22	0.40
1:CA:1255:G:C6	1:CA:1279:G:N7	2.89	0.40
22:DA:1067:A:C2	22:DA:1068:G:N7	2.89	0.40
1:CA:308:C:H2'	1:CA:309:A:C8	2.56	0.40
1:AA:715:A:H2'	1:AA:716:A:C8	2.57	0.40
22:DA:1997:C:OP2	25:DD:129:THR:OG1	2.36	0.40
49:B1:33:LYS:HA	49:B1:52:ALA:HB3	2.03	0.40
22:DA:2728:U:O2'	22:DA:2729:G:H5'	2.22	0.40
22:BA:441:U:H2'	22:BA:442:G:C8	2.56	0.40
23:DB:51:G:C8	36:DO:64:TYR:HE2	2.39	0.40
17:AQ:61:ILE:HG23	17:AQ:73:TRP:HE3	1.86	0.40
26:DE:147:LEU:HB3	26:DE:186:VAL:HG13	2.02	0.40
28:BG:5:ALA:HB2	28:BG:66:GLY:HA2	2.04	0.40
1:CA:1306:A:H2'	1:CA:1307:U:O4'	2.21	0.40
1:CA:1306:A:H1'	1:CA:1332:A:N7	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:51:THR:HB	25:DD:79:LEU:HD23	2.04	0.40
22:BA:127:A:H5''	22:BA:128:C:O4'	2.22	0.40
8:AH:6:PRO:O	8:AH:9:ASP:HB3	2.21	0.40
22:BA:354:A:C6	22:BA:355:U:C4	3.10	0.40
1:AA:597:G:C2	1:AA:644:U:C2	3.09	0.40
37:DP:55:LEU:HA	37:DP:77:HIS:CD2	2.56	0.40
2:AB:114:LEU:O	2:AB:118:GLU:HG2	2.22	0.40
3:AC:64:ILE:HG12	3:AC:66:VAL:HG23	2.03	0.40
22:DA:1922:G:H2'	22:DA:1923:U:O4'	2.21	0.40
22:DA:927:A:H2'	22:DA:928:A:C8	2.56	0.40
22:BA:2252:G:H2'	22:BA:2253:G:O4'	2.22	0.40
28:BG:30:ASN:CG	28:BG:30:ASN:O	2.60	0.40
24:BC:137:VAL:O	24:BC:137:VAL:HG12	2.22	0.40
44:DW:57:HIS:N	44:DW:57:HIS:CD2	2.90	0.40
1:AA:613:C:N4	1:AA:614:C:N4	2.70	0.40
31:DJ:113:PRO:HA	31:DJ:116:ARG:NH2	2.36	0.40
32:DK:104:THR:HB	32:DK:106:GLU:OE1	2.21	0.40
22:BA:521:U:H2'	22:BA:522:A:C8	2.56	0.40

All (5) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:368:U:OP2	29:DH:123:ARG:NE[4_455]	1.71	0.49
1:AA:368:U:OP2	29:DH:123:ARG:CZ[4_455]	1.89	0.31
1:AA:368:U:OP2	29:DH:123:ARG:NH2[4_455]	2.04	0.16
1:AA:368:U:OP1	29:DH:93:SER:OG[4_455]	2.10	0.10
1:CA:204:G:OP1	22:DA:289:G:O2'[3_545]	2.12	0.08

## 5.3 Torsion angles ⓘ

### 5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AB	216/218 (99%)	125 (58%)	36 (17%)	55 (26%)	0	0
2	CB	216/218 (99%)	126 (58%)	54 (25%)	36 (17%)	0	0
3	AC	204/206 (99%)	144 (71%)	48 (24%)	12 (6%)	2	6
3	CC	204/206 (99%)	146 (72%)	41 (20%)	17 (8%)	1	2
4	AD	203/205 (99%)	140 (69%)	38 (19%)	25 (12%)	0	1
4	CD	203/205 (99%)	148 (73%)	35 (17%)	20 (10%)	1	2
5	AE	148/150 (99%)	107 (72%)	24 (16%)	17 (12%)	0	1
5	CE	148/150 (99%)	100 (68%)	25 (17%)	23 (16%)	0	0
6	AF	98/100 (98%)	67 (68%)	17 (17%)	14 (14%)	0	0
6	CF	98/100 (98%)	65 (66%)	16 (16%)	17 (17%)	0	0
7	AG	149/151 (99%)	101 (68%)	33 (22%)	15 (10%)	1	2
7	CG	149/151 (99%)	120 (80%)	19 (13%)	10 (7%)	1	4
8	AH	127/129 (98%)	88 (69%)	29 (23%)	10 (8%)	1	3
8	CH	127/129 (98%)	101 (80%)	19 (15%)	7 (6%)	2	7
9	AI	125/127 (98%)	87 (70%)	23 (18%)	15 (12%)	0	1
9	CI	125/127 (98%)	91 (73%)	25 (20%)	9 (7%)	1	3
10	AJ	96/98 (98%)	63 (66%)	12 (12%)	21 (22%)	0	0
10	CJ	96/98 (98%)	72 (75%)	15 (16%)	9 (9%)	1	2
11	AK	115/117 (98%)	85 (74%)	17 (15%)	13 (11%)	0	1
11	CK	115/117 (98%)	83 (72%)	23 (20%)	9 (8%)	1	3
12	AL	121/123 (98%)	96 (79%)	15 (12%)	10 (8%)	1	2
12	CL	121/123 (98%)	92 (76%)	17 (14%)	12 (10%)	1	2
13	AM	112/114 (98%)	83 (74%)	17 (15%)	12 (11%)	0	1
13	CM	112/114 (98%)	80 (71%)	21 (19%)	11 (10%)	1	2
14	AN	92/100 (92%)	55 (60%)	25 (27%)	12 (13%)	0	1
14	CN	92/100 (92%)	57 (62%)	20 (22%)	15 (16%)	0	0
15	AO	86/88 (98%)	63 (73%)	18 (21%)	5 (6%)	2	6
15	CO	86/88 (98%)	63 (73%)	19 (22%)	4 (5%)	3	11
16	AP	80/82 (98%)	44 (55%)	17 (21%)	19 (24%)	0	0
16	CP	80/82 (98%)	57 (71%)	18 (22%)	5 (6%)	2	5
17	AQ	78/80 (98%)	53 (68%)	16 (20%)	9 (12%)	0	1
17	CQ	78/80 (98%)	55 (70%)	14 (18%)	9 (12%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
18	AR	53/55 (96%)	44 (83%)	7 (13%)	2 (4%)	4	16
18	CR	53/55 (96%)	42 (79%)	7 (13%)	4 (8%)	1	3
19	AS	77/79 (98%)	53 (69%)	16 (21%)	8 (10%)	1	1
19	CS	77/79 (98%)	61 (79%)	13 (17%)	3 (4%)	4	15
20	AT	83/85 (98%)	57 (69%)	20 (24%)	6 (7%)	1	3
20	CT	83/85 (98%)	62 (75%)	13 (16%)	8 (10%)	1	2
21	AU	49/51 (96%)	27 (55%)	10 (20%)	12 (24%)	0	0
21	CU	49/51 (96%)	24 (49%)	12 (24%)	13 (26%)	0	0
24	BC	269/271 (99%)	213 (79%)	39 (14%)	17 (6%)	2	5
24	DC	269/271 (99%)	200 (74%)	49 (18%)	20 (7%)	1	3
25	BD	207/209 (99%)	167 (81%)	33 (16%)	7 (3%)	5	19
25	DD	207/209 (99%)	165 (80%)	33 (16%)	9 (4%)	3	13
26	BE	199/201 (99%)	153 (77%)	39 (20%)	7 (4%)	4	18
26	DE	199/201 (99%)	146 (73%)	40 (20%)	13 (6%)	1	4
27	BF	175/177 (99%)	136 (78%)	30 (17%)	9 (5%)	2	9
27	DF	175/177 (99%)	136 (78%)	26 (15%)	13 (7%)	1	3
28	BG	174/176 (99%)	145 (83%)	19 (11%)	10 (6%)	2	6
28	DG	174/176 (99%)	129 (74%)	30 (17%)	15 (9%)	1	2
29	BH	147/149 (99%)	89 (60%)	37 (25%)	21 (14%)	0	0
29	DH	147/149 (99%)	100 (68%)	32 (22%)	15 (10%)	1	2
30	BI	139/141 (99%)	71 (51%)	44 (32%)	24 (17%)	0	0
30	DI	139/141 (99%)	75 (54%)	49 (35%)	15 (11%)	0	1
31	BJ	140/142 (99%)	124 (89%)	12 (9%)	4 (3%)	6	23
31	DJ	140/142 (99%)	123 (88%)	12 (9%)	5 (4%)	4	18
32	BK	120/122 (98%)	96 (80%)	16 (13%)	8 (7%)	1	4
32	DK	120/122 (98%)	97 (81%)	16 (13%)	7 (6%)	2	6
33	BL	141/143 (99%)	106 (75%)	20 (14%)	15 (11%)	0	1
33	DL	141/143 (99%)	104 (74%)	27 (19%)	10 (7%)	1	3
34	BM	134/136 (98%)	117 (87%)	15 (11%)	2 (2%)	13	42
34	DM	134/136 (98%)	111 (83%)	17 (13%)	6 (4%)	3	12
35	BN	118/120 (98%)	92 (78%)	19 (16%)	7 (6%)	2	6

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
35	DN	118/120 (98%)	91 (77%)	19 (16%)	8 (7%)	1	4
36	BO	114/116 (98%)	91 (80%)	19 (17%)	4 (4%)	4	18
36	DO	114/116 (98%)	97 (85%)	11 (10%)	6 (5%)	2	8
37	BP	112/114 (98%)	101 (90%)	6 (5%)	5 (4%)	3	12
37	DP	112/114 (98%)	89 (80%)	16 (14%)	7 (6%)	2	5
38	BQ	115/117 (98%)	93 (81%)	16 (14%)	6 (5%)	2	8
38	DQ	115/117 (98%)	104 (90%)	10 (9%)	1 (1%)	21	57
39	BR	101/103 (98%)	83 (82%)	9 (9%)	9 (9%)	1	2
39	DR	101/103 (98%)	80 (79%)	14 (14%)	7 (7%)	1	4
40	BS	108/110 (98%)	83 (77%)	18 (17%)	7 (6%)	1	4
40	DS	108/110 (98%)	88 (82%)	13 (12%)	7 (6%)	1	4
41	BT	91/93 (98%)	69 (76%)	8 (9%)	14 (15%)	0	0
41	DT	91/93 (98%)	65 (71%)	14 (15%)	12 (13%)	0	1
42	BU	100/102 (98%)	75 (75%)	16 (16%)	9 (9%)	1	2
42	DU	100/102 (98%)	70 (70%)	19 (19%)	11 (11%)	0	1
43	BV	92/94 (98%)	85 (92%)	6 (6%)	1 (1%)	17	51
43	DV	92/94 (98%)	76 (83%)	14 (15%)	2 (2%)	8	31
44	BW	74/76 (97%)	70 (95%)	4 (5%)	0	100	100
44	DW	73/76 (96%)	59 (81%)	11 (15%)	3 (4%)	3	14
45	BX	75/77 (97%)	66 (88%)	6 (8%)	3 (4%)	4	15
45	DX	75/77 (97%)	57 (76%)	14 (19%)	4 (5%)	2	8
46	BY	61/63 (97%)	35 (57%)	19 (31%)	7 (12%)	0	1
46	DY	61/63 (97%)	42 (69%)	14 (23%)	5 (8%)	1	2
47	BZ	56/58 (97%)	47 (84%)	9 (16%)	0	100	100
47	DZ	56/58 (97%)	53 (95%)	1 (2%)	2 (4%)	4	18
48	B0	54/56 (96%)	44 (82%)	7 (13%)	3 (6%)	2	7
48	D0	54/56 (96%)	38 (70%)	12 (22%)	4 (7%)	1	3
49	B1	48/50 (96%)	39 (81%)	5 (10%)	4 (8%)	1	2
49	D1	48/50 (96%)	40 (83%)	5 (10%)	3 (6%)	2	5
50	B2	44/46 (96%)	36 (82%)	7 (16%)	1 (2%)	8	30
50	D2	44/46 (96%)	36 (82%)	6 (14%)	2 (4%)	3	12

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
51	B3	62/64 (97%)	54 (87%)	7 (11%)	1 (2%)	12	40
51	D3	62/64 (97%)	49 (79%)	10 (16%)	3 (5%)	3	10
52	B4	36/38 (95%)	31 (86%)	5 (14%)	0	100	100
52	D4	36/38 (95%)	28 (78%)	4 (11%)	4 (11%)	0	1
53	B5	183/228 (80%)	100 (55%)	49 (27%)	34 (19%)	0	0
All	All	11418/11672 (98%)	8486 (74%)	1941 (17%)	991 (9%)	1	2

All (991) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	12	ALA
2	AB	16	PHE
2	AB	22	TYR
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	83	ALA
2	AB	87	CYS
2	AB	107	VAL
2	AB	116	ASP
2	AB	120	GLN
2	AB	129	LEU
2	AB	133	GLU
2	AB	134	ALA
2	AB	148	LEU
2	AB	152	LYS
2	AB	201	PRO
2	AB	207	ILE
2	AB	212	LEU
2	AB	220	THR
3	AC	3	GLN
3	AC	17	PRO
3	AC	18	TRP
3	AC	26	THR
3	AC	139	GLN
3	AC	140	ASN
4	AD	7	PRO

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Mol	Chain	Res	Type
4	AD	23	SER
4	AD	29	ASP
4	AD	33	LYS
4	AD	35	GLU
4	AD	49	SER
4	AD	126	ASN
4	AD	151	LYS
4	AD	153	SER
4	AD	160	GLU
4	AD	168	PRO
4	AD	191	LEU
4	AD	192	SER
5	AE	26	LYS
5	AE	43	ASN
5	AE	100	SER
5	AE	105	ILE
5	AE	122	ASN
5	AE	138	ARG
6	AF	68	GLN
6	AF	91	ARG
6	AF	92	THR
6	AF	99	ALA
7	AG	51	ALA
7	AG	130	ASN
8	AH	3	MET
8	AH	67	GLN
8	AH	88	ARG
9	AI	41	ARG
9	AI	44	ALA
9	AI	91	ASP
10	AJ	33	GLY
10	AJ	34	ALA
10	AJ	57	VAL
10	AJ	101	SER
11	AK	14	LYS
11	AK	52	PHE
11	AK	73	ALA
12	AL	23	ALA
12	AL	24	LEU
12	AL	44	LYS
13	AM	4	ILE
13	AM	5	ALA

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Mol	Chain	Res	Type
13	AM	11	ASP
13	AM	12	HIS
13	AM	27	LYS
13	AM	100	GLN
13	AM	114	LYS
14	AN	21	PHE
14	AN	28	LYS
14	AN	47	LYS
14	AN	49	GLN
14	AN	52	PRO
14	AN	62	ASN
14	AN	64	CYS
14	AN	92	GLU
16	AP	8	ARG
16	AP	43	ALA
16	AP	46	LYS
16	AP	53	ASP
16	AP	65	ALA
16	AP	79	ASN
17	AQ	13	VAL
17	AQ	51	ASN
17	AQ	69	LYS
18	AR	50	LYS
19	AS	5	LEU
19	AS	29	LYS
19	AS	65	GLU
20	AT	4	ILE
20	AT	6	SER
21	AU	11	PRO
21	AU	24	GLU
21	AU	36	GLU
21	AU	38	TYR
21	AU	40	LYS
24	BC	71	LYS
24	BC	122	ALA
24	BC	196	GLY
25	BD	152	PRO
26	BE	86	ALA
27	BF	41	GLY
27	BF	42	GLU
27	BF	73	SER
27	BF	176	PRO

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Mol	Chain	Res	Type
28	BG	119	ALA
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	6	GLN
30	BI	19	ASN
30	BI	45	LYS
30	BI	60	THR
30	BI	63	ALA
30	BI	90	SER
30	BI	117	MET
30	BI	134	ARG
31	BJ	81	ILE
32	BK	35	VAL
32	BK	91	SER
32	BK	108	ARG
33	BL	15	ALA
33	BL	29	LYS
33	BL	30	THR
33	BL	31	GLY
33	BL	88	GLY
33	BL	94	THR
33	BL	111	ILE
33	BL	115	GLU
34	BM	69	PRO
36	BO	77	ALA
36	BO	87	ILE
36	BO	88	LYS
37	BP	16	ASP
37	BP	94	LYS
37	BP	105	GLY
38	BQ	25	TYR
38	BQ	83	LEU
38	BQ	102	ASP
39	BR	49	ILE
39	BR	51	VAL
39	BR	53	PHE

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Mol	Chain	Res	Type
39	BR	55	ASP
40	BS	29	VAL
40	BS	64	ALA
41	BT	25	GLU
41	BT	72	GLN
41	BT	88	LYS
41	BT	89	GLU
42	BU	8	ASP
42	BU	100	SER
43	BV	24	ASN
45	BX	3	ARG
46	BY	22	LEU
46	BY	24	GLU
46	BY	36	GLN
46	BY	46	VAL
48	B0	56	ALA
49	B1	17	THR
49	B1	52	ALA
53	B5	41	THR
53	B5	53	ARG
53	B5	62	THR
53	B5	134	PRO
53	B5	141	PRO
53	B5	154	ILE
53	B5	174	ALA
53	B5	175	PRO
53	B5	205	ALA
53	B5	210	LEU
53	B5	221	PRO
2	CB	16	PHE
2	CB	36	ASN
2	CB	73	LYS
2	CB	74	ARG
2	CB	86	SER
2	CB	87	CYS
2	CB	100	MET
2	CB	126	PHE
2	CB	136	MET
2	CB	170	HIS
2	CB	193	PRO
2	CB	207	ILE
2	CB	220	THR

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Mol	Chain	Res	Type
2	CB	222	ARG
3	CC	17	PRO
3	CC	146	ALA
4	CD	29	ASP
4	CD	33	LYS
4	CD	35	GLU
4	CD	36	GLN
5	CE	45	ARG
5	CE	98	PRO
5	CE	101	GLU
5	CE	103	THR
5	CE	111	MET
5	CE	123	VAL
5	CE	158	GLY
6	CF	27	ALA
6	CF	55	HIS
6	CF	56	LYS
6	CF	86	ARG
6	CF	91	ARG
6	CF	92	THR
6	CF	93	LYS
6	CF	98	GLU
7	CG	56	LYS
7	CG	130	ASN
7	CG	146	GLU
8	CH	66	PHE
9	CI	41	ARG
9	CI	120	LYS
9	CI	129	LYS
10	CJ	57	VAL
10	CJ	86	ALA
10	CJ	93	ALA
11	CK	52	PHE
11	CK	91	PRO
11	CK	127	ARG
12	CL	4	VAL
12	CL	17	ALA
12	CL	34	CYS
12	CL	44	LYS
12	CL	76	GLU
12	CL	77	HIS
12	CL	89	ASP

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Mol	Chain	Res	Type
12	CL	117	TYR
13	CM	7	ILE
13	CM	11	ASP
13	CM	41	GLU
13	CM	114	LYS
14	CN	22	ALA
14	CN	52	PRO
14	CN	59	ARG
14	CN	92	GLU
17	CQ	5	ILE
17	CQ	51	ASN
17	CQ	52	GLU
17	CQ	53	CYS
18	CR	21	ILE
18	CR	47	THR
19	CS	5	LEU
20	CT	4	ILE
20	CT	6	SER
20	CT	41	ALA
20	CT	68	HIS
21	CU	9	ASN
21	CU	12	PHE
21	CU	24	GLU
21	CU	36	GLU
21	CU	37	PHE
21	CU	40	LYS
21	CU	46	LYS
21	CU	52	ALA
24	DC	10	SER
24	DC	29	PRO
24	DC	35	GLU
24	DC	36	LYS
24	DC	58	HIS
24	DC	71	LYS
24	DC	239	ASN
24	DC	255	LYS
25	DD	104	VAL
25	DD	151	THR
25	DD	152	PRO
25	DD	174	SER
26	DE	6	LYS
26	DE	86	ALA

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Mol	Chain	Res	Type
26	DE	122	GLU
27	DF	9	LYS
27	DF	123	ASP
27	DF	176	PRO
28	DG	61	GLY
28	DG	92	VAL
28	DG	119	ALA
28	DG	159	GLY
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	19	ASN
30	DI	93	PRO
30	DI	102	SER
31	DJ	81	ILE
32	DK	92	GLU
32	DK	108	ARG
34	DM	3	GLN
34	DM	69	PRO
35	DN	2	ARG
35	DN	88	ALA
35	DN	104	ALA
35	DN	119	SER
36	DO	34	HIS
36	DO	116	GLN
37	DP	66	ASN
39	DR	31	GLU
39	DR	102	SER
40	DS	28	LYS
40	DS	29	VAL
40	DS	62	ASP
41	DT	18	GLU
41	DT	39	THR
41	DT	52	GLU
41	DT	73	ARG

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Mol	Chain	Res	Type
41	DT	77	ARG
41	DT	88	LYS
42	DU	7	ARG
42	DU	19	LYS
42	DU	53	ASN
42	DU	55	PRO
42	DU	89	ASP
45	DX	3	ARG
45	DX	62	LYS
46	DY	61	ALA
47	DZ	4	THR
47	DZ	14	ILE
48	D0	56	ALA
49	D1	5	ILE
50	D2	44	VAL
50	D2	45	SER
2	AB	14	VAL
2	AB	52	GLU
2	AB	68	LEU
2	AB	97	LEU
2	AB	117	LEU
2	AB	126	PHE
2	AB	143	LYS
2	AB	150	GLY
2	AB	170	HIS
2	AB	183	VAL
2	AB	203	ASN
2	AB	210	VAL
3	AC	15	VAL
3	AC	80	LYS
3	AC	141	ALA
4	AD	24	GLY
4	AD	101	VAL
4	AD	107	PHE
4	AD	175	ALA
5	AE	12	GLN
5	AE	45	ARG
5	AE	51	GLY
5	AE	78	ASN
5	AE	88	VAL
5	AE	110	ALA
6	AF	6	ILE

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Mol	Chain	Res	Type
6	AF	7	VAL
6	AF	69	GLU
6	AF	95	ALA
7	AG	15	ASP
7	AG	59	LEU
7	AG	69	VAL
7	AG	81	GLY
7	AG	96	ARG
8	AH	35	ALA
9	AI	72	ILE
9	AI	116	VAL
10	AJ	17	LEU
10	AJ	38	GLY
10	AJ	41	PRO
10	AJ	61	ALA
10	AJ	74	VAL
10	AJ	81	GLU
11	AK	72	ASP
11	AK	103	ALA
11	AK	125	LYS
11	AK	126	LYS
12	AL	25	GLU
12	AL	89	ASP
12	AL	98	VAL
12	AL	123	LYS
13	AM	67	GLY
14	AN	4	GLN
14	AN	34	VAL
14	AN	53	ARG
15	AO	25	THR
16	AP	16	PHE
16	AP	31	ARG
16	AP	68	SER
16	AP	78	VAL
16	AP	80	LYS
17	AQ	10	GLY
17	AQ	18	GLU
17	AQ	70	THR
19	AS	4	SER
20	AT	68	HIS
21	AU	35	ARG
21	AU	37	PHE

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Mol	Chain	Res	Type
24	BC	13	ARG
24	BC	190	ALA
24	BC	223	THR
24	BC	233	GLY
25	BD	114	LYS
26	BE	8	ALA
26	BE	110	SER
27	BF	3	LYS
27	BF	21	ASN
28	BG	32	GLU
28	BG	39	ASP
28	BG	61	GLY
28	BG	80	THR
28	BG	82	GLY
28	BG	173	GLU
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	24	VAL
30	BI	65	ARG
30	BI	75	PRO
30	BI	83	ALA
30	BI	98	VAL
30	BI	106	LEU
33	BL	69	ARG
33	BL	86	GLU
35	BN	52	ILE
38	BQ	7	GLY
38	BQ	46	ALA
39	BR	31	GLU
39	BR	102	SER
40	BS	89	ALA
41	BT	20	ALA
41	BT	71	GLY
42	BU	19	LYS
42	BU	99	ASN
46	BY	10	SER
46	BY	62	GLY
50	B2	44	VAL

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Mol	Chain	Res	Type
51	B3	28	ASN
53	B5	36	ALA
53	B5	51	ASP
53	B5	90	ALA
53	B5	136	GLY
53	B5	144	GLY
53	B5	146	VAL
53	B5	171	ALA
53	B5	180	SER
53	B5	185	LYS
2	CB	33	GLY
2	CB	34	ALA
2	CB	51	ASN
2	CB	82	ASP
2	CB	103	ASN
2	CB	120	GLN
2	CB	124	GLY
2	CB	141	LEU
3	CC	80	LYS
3	CC	82	GLU
3	CC	84	VAL
3	CC	101	ILE
3	CC	127	ARG
4	CD	4	TYR
4	CD	27	ALA
4	CD	32	CYS
4	CD	34	ILE
4	CD	47	ARG
4	CD	85	ASN
4	CD	174	ASP
4	CD	175	ALA
5	CE	51	GLY
5	CE	70	ASN
5	CE	99	ALA
5	CE	102	GLY
5	CE	138	ARG
5	CE	150	PRO
6	CF	14	GLN
6	CF	68	GLN
7	CG	9	GLN
7	CG	140	ASP
8	CH	89	LYS

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Mol	Chain	Res	Type
9	CI	55	VAL
9	CI	72	ILE
10	CJ	17	LEU
10	CJ	35	GLN
10	CJ	36	VAL
11	CK	17	SER
11	CK	92	GLY
11	CK	93	ARG
12	CL	102	LEU
12	CL	123	LYS
13	CM	6	GLY
13	CM	82	ASP
14	CN	11	VAL
14	CN	16	LEU
14	CN	23	LYS
14	CN	29	ALA
14	CN	31	ILE
14	CN	62	ASN
16	CP	77	GLU
16	CP	80	LYS
18	CR	25	ASP
18	CR	26	ILE
19	CS	6	LYS
20	CT	7	ALA
21	CU	13	ASP
24	DC	218	PRO
24	DC	240	PHE
24	DC	251	GLN
25	DD	105	LYS
26	DE	7	ASP
26	DE	8	ALA
26	DE	61	ARG
26	DE	69	ARG
26	DE	81	GLY
26	DE	84	THR
26	DE	144	GLU
27	DF	21	ASN
27	DF	71	ARG
27	DF	103	LEU
27	DF	150	ARG
28	DG	20	ASN
29	DH	31	VAL

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Mol	Chain	Res	Type
29	DH	77	THR
29	DH	118	PRO
30	DI	72	LYS
30	DI	88	SER
30	DI	90	SER
30	DI	106	LEU
30	DI	115	ALA
31	DJ	6	ALA
31	DJ	25	LEU
31	DJ	127	GLY
32	DK	35	VAL
32	DK	105	ARG
33	DL	9	ALA
33	DL	17	LYS
33	DL	111	ILE
35	DN	3	HIS
35	DN	106	ASP
37	DP	80	VAL
37	DP	94	LYS
37	DP	105	GLY
38	DQ	87	SER
39	DR	7	SER
39	DR	50	GLY
40	DS	63	GLY
41	DT	21	SER
41	DT	72	GLN
42	DU	57	GLY
43	DV	65	VAL
46	DY	57	LEU
49	D1	16	GLY
52	D4	20	ASP
2	AB	115	LYS
2	AB	128	LYS
2	AB	147	SER
2	AB	182	PRO
2	AB	188	ASP
2	AB	209	ALA
3	AC	61	ALA
4	AD	161	LEU
4	AD	167	LYS
4	AD	169	THR
5	AE	24	THR

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Mol	Chain	Res	Type
5	AE	76	LEU
5	AE	134	ILE
5	AE	157	ARG
6	AF	56	LYS
7	AG	14	PRO
7	AG	50	LEU
8	AH	54	ASP
9	AI	88	MET
9	AI	99	ARG
9	AI	100	LYS
10	AJ	32	THR
10	AJ	36	VAL
10	AJ	91	ASP
10	AJ	92	LEU
10	AJ	93	ALA
11	AK	36	ASP
11	AK	38	GLN
11	AK	56	ARG
11	AK	127	ARG
12	AL	22	PRO
12	AL	26	ALA
13	AM	112	PRO
15	AO	20	ASN
15	AO	46	HIS
15	AO	73	LYS
16	AP	10	GLY
16	AP	24	SER
16	AP	49	GLY
17	AQ	82	ALA
18	AR	30	LYS
19	AS	30	PRO
21	AU	10	GLU
21	AU	25	LYS
21	AU	31	GLU
24	BC	131	PRO
24	BC	137	VAL
24	BC	189	ARG
25	BD	86	GLU
25	BD	159	LYS
26	BE	125	SER
28	BG	12	PRO
28	BG	79	VAL

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Mol	Chain	Res	Type
29	BH	9	VAL
29	BH	30	LEU
29	BH	85	GLY
29	BH	93	SER
29	BH	105	ALA
30	BI	4	LYS
30	BI	7	ALA
30	BI	31	GLN
30	BI	113	LYS
32	BK	93	GLN
33	BL	68	SER
34	BM	58	LYS
35	BN	109	PRO
35	BN	118	ARG
36	BO	60	GLU
37	BP	111	LYS
38	BQ	82	GLY
39	BR	24	LYS
39	BR	52	PRO
39	BR	70	GLU
41	BT	26	LYS
41	BT	52	GLU
42	BU	7	ARG
42	BU	98	SER
46	BY	23	ARG
48	B0	55	ILE
53	B5	46	ALA
53	B5	86	GLU
53	B5	133	GLY
53	B5	183	PRO
53	B5	203	GLU
53	B5	214	TYR
2	CB	21	ARG
2	CB	75	ALA
2	CB	102	THR
2	CB	129	LEU
2	CB	135	LEU
3	CC	54	ARG
3	CC	89	LYS
3	CC	166	GLU
4	CD	10	LYS
4	CD	26	ARG

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Mol	Chain	Res	Type
4	CD	154	ARG
4	CD	165	ARG
5	CE	24	THR
5	CE	26	LYS
5	CE	68	ARG
5	CE	100	SER
5	CE	155	ALA
6	CF	13	ASP
6	CF	17	GLN
6	CF	53	LYS
6	CF	54	LEU
6	CF	63	ASN
7	CG	10	ARG
7	CG	84	THR
8	CH	22	LYS
8	CH	31	LYS
9	CI	91	ASP
10	CJ	92	LEU
11	CK	15	GLN
12	CL	22	PRO
12	CL	23	ALA
13	CM	24	GLY
14	CN	34	VAL
14	CN	42	TRP
15	CO	18	ASP
15	CO	20	ASN
15	CO	46	HIS
15	CO	60	VAL
16	CP	10	GLY
16	CP	26	ASN
17	CQ	13	VAL
19	CS	32	ARG
20	CT	20	HIS
21	CU	11	PRO
24	DC	13	ARG
24	DC	205	LEU
24	DC	238	ARG
25	DD	36	GLN
25	DD	43	ASP
26	DE	18	THR
27	DF	27	GLN
27	DF	43	ALA

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Mol	Chain	Res	Type
27	DF	174	ASP
28	DG	8	PRO
28	DG	46	ALA
28	DG	175	LYS
29	DH	16	GLY
29	DH	40	THR
30	DI	101	ILE
32	DK	109	SER
33	DL	4	ASN
33	DL	115	GLU
34	DM	59	ARG
35	DN	70	THR
35	DN	118	ARG
36	DO	68	LYS
36	DO	99	TYR
37	DP	111	LYS
37	DP	114	LEU
41	DT	22	THR
41	DT	37	ASP
41	DT	40	LYS
42	DU	9	ASP
42	DU	98	SER
44	DW	21	LEU
44	DW	35	SER
45	DX	6	GLN
45	DX	32	ASN
46	DY	37	LEU
48	D0	55	ILE
52	D4	29	ALA
2	AB	25	PRO
2	AB	53	ALA
2	AB	88	ASP
2	AB	95	ARG
2	AB	132	LYS
2	AB	161	LEU
2	AB	224	GLY
4	AD	26	ARG
4	AD	85	ASN
4	AD	149	ALA
5	AE	69	ARG
7	AG	18	PHE
7	AG	77	SER

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Mol	Chain	Res	Type
7	AG	78	ARG
7	AG	113	ASP
8	AH	97	ALA
9	AI	57	MET
10	AJ	42	LEU
10	AJ	58	ASN
10	AJ	62	ARG
10	AJ	95	GLY
11	AK	41	ALA
11	AK	89	PRO
13	AM	41	GLU
14	AN	24	ARG
15	AO	26	GLU
16	AP	11	ALA
16	AP	50	THR
17	AQ	12	VAL
17	AQ	81	LYS
19	AS	6	LYS
20	AT	20	HIS
21	AU	27	GLY
24	BC	36	LYS
24	BC	37	ASN
24	BC	236	GLU
25	BD	104	VAL
26	BE	104	ALA
29	BH	83	LYS
30	BI	58	VAL
30	BI	66	SER
30	BI	72	LYS
30	BI	84	ALA
32	BK	72	PRO
32	BK	119	ALA
33	BL	12	SER
35	BN	2	ARG
35	BN	119	SER
37	BP	35	GLY
40	BS	55	ILE
41	BT	17	SER
41	BT	19	LYS
49	B1	23	THR
53	B5	65	LEU
53	B5	202	PRO

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Mol	Chain	Res	Type
2	CB	88	ASP
2	CB	152	LYS
2	CB	166	ALA
2	CB	205	ASP
3	CC	12	LEU
3	CC	191	THR
5	CE	151	GLU
6	CF	60	VAL
9	CI	57	MET
9	CI	58	VAL
10	CJ	41	PRO
13	CM	12	HIS
14	CN	3	LYS
17	CQ	20	SER
17	CQ	49	GLU
20	CT	73	ALA
20	CT	74	ARG
21	CU	35	ARG
21	CU	53	VAL
26	DE	200	LEU
27	DF	116	GLY
28	DG	17	VAL
28	DG	47	ASP
28	DG	80	THR
29	DH	9	VAL
30	DI	9	VAL
30	DI	84	ALA
32	DK	93	GLN
32	DK	110	GLU
36	DO	57	ALA
40	DS	67	ASP
41	DT	24	MET
44	DW	20	ARG
48	D0	26	THR
51	D3	18	GLY
2	AB	63	ARG
2	AB	124	GLY
2	AB	157	LEU
2	AB	193	PRO
3	AC	66	VAL
6	AF	16	GLU
6	AF	42	TRP

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Mol	Chain	Res	Type
6	AF	54	LEU
6	AF	82	ASP
9	AI	9	THR
9	AI	37	GLN
10	AJ	43	PRO
10	AJ	75	ASP
12	AL	85	GLY
13	AM	66	GLU
16	AP	15	PRO
16	AP	77	GLU
19	AS	76	PRO
20	AT	9	LYS
24	BC	29	PRO
25	BD	18	ASP
25	BD	88	GLU
26	BE	6	LYS
26	BE	105	LEU
27	BF	134	GLU
27	BF	146	VAL
27	BF	175	PHE
29	BH	120	GLY
30	BI	101	ILE
31	BJ	25	LEU
31	BJ	39	LYS
31	BJ	60	ASP
32	BK	48	PRO
35	BN	30	ARG
35	BN	51	LEU
40	BS	15	GLN
40	BS	30	SER
45	BX	60	ASP
53	B5	104	ILE
53	B5	126	SER
2	CB	134	ALA
2	CB	209	ALA
3	CC	14	ILE
4	CD	149	ALA
5	CE	113	ALA
5	CE	122	ASN
5	CE	126	LYS
5	CE	143	GLY
7	CG	126	ASP

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Mol	Chain	Res	Type
8	CH	67	GLN
11	CK	89	PRO
13	CM	5	ALA
13	CM	94	GLY
14	CN	50	THR
14	CN	81	ARG
16	CP	11	ALA
17	CQ	17	MET
17	CQ	70	THR
21	CU	38	TYR
24	DC	66	ASP
24	DC	260	ASN
26	DE	72	SER
31	DJ	93	ILE
33	DL	30	THR
33	DL	42	SER
33	DL	69	ARG
36	DO	77	ALA
39	DR	53	PHE
46	DY	55	THR
51	D3	57	LEU
52	D4	23	ILE
52	D4	37	GLN
4	AD	156	LYS
7	AG	87	VAL
8	AH	31	LYS
8	AH	57	PRO
9	AI	24	GLY
16	AP	36	VAL
20	AT	67	ILE
32	BK	92	GLU
33	BL	71	ALA
40	BS	66	ILE
41	BT	14	PRO
41	BT	18	GLU
41	BT	57	VAL
42	BU	50	PRO
53	B5	50	ILE
53	B5	66	PRO
53	B5	215	VAL
2	CB	17	GLY
2	CB	19	GLN

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Mol	Chain	Res	Type
6	CF	33	GLU
7	CG	8	GLY
7	CG	80	VAL
8	CH	44	GLY
13	CM	10	PRO
24	DC	57	GLY
27	DF	41	GLY
27	DF	175	PHE
28	DG	154	PRO
30	DI	5	VAL
30	DI	13	VAL
33	DL	29	LYS
34	DM	53	MET
42	DU	41	LEU
42	DU	52	LEU
46	DY	36	GLN
49	D1	27	LYS
2	AB	202	GLY
7	AG	71	PRO
8	AH	14	ILE
9	AI	51	PRO
24	BC	136	PRO
24	BC	169	GLY
49	B1	47	VAL
3	CC	66	VAL
3	CC	103	ILE
9	CI	10	GLY
11	CK	120	GLY
34	DM	23	GLY
34	DM	77	PRO
40	DS	35	ILE
40	DS	74	ILE
2	AB	41	ILE
4	AD	125	VAL
6	AF	36	ILE
21	AU	28	VAL
24	BC	227	PRO
28	BG	54	PRO
41	BT	2	ILE
2	CB	180	GLY
24	DC	73	GLY
24	DC	245	VAL

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Mol	Chain	Res	Type
25	DD	120	GLY
28	DG	4	VAL
33	DL	103	ILE
39	DR	47	VAL
48	D0	43	ILE
2	AB	155	GLY
3	AC	101	ILE
9	AI	50	GLN
19	AS	11	ILE
30	BI	52	GLY
33	BL	114	GLY
42	BU	16	GLY
42	BU	54	GLN
4	CD	37	ALA
4	CD	167	LYS
8	CH	78	VAL
10	CJ	42	LEU
24	DC	235	GLY
30	DI	24	VAL
42	DU	25	VAL
8	AH	25	VAL
9	AI	23	PRO
33	BL	130	GLY
48	B0	54	VAL
53	B5	181	PHE
3	CC	64	ILE
3	CC	174	PRO
4	CD	28	ILE
28	DG	12	PRO
28	DG	79	VAL
37	DP	32	VAL
39	DR	49	ILE
43	DV	81	PRO
51	D3	20	GLY
13	AM	65	VAL
45	BX	64	ILE
25	DD	2	ILE

### 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%)	117 (65%)	63 (35%)	0	0
2	CB	180/180 (100%)	130 (72%)	50 (28%)	0	1
3	AC	170/170 (100%)	134 (79%)	36 (21%)	1	4
3	CC	170/170 (100%)	134 (79%)	36 (21%)	1	4
4	AD	172/172 (100%)	135 (78%)	37 (22%)	1	4
4	CD	172/172 (100%)	136 (79%)	36 (21%)	1	4
5	AE	113/113 (100%)	86 (76%)	27 (24%)	1	2
5	CE	113/113 (100%)	85 (75%)	28 (25%)	1	2
6	AF	87/87 (100%)	60 (69%)	27 (31%)	0	1
6	CF	87/87 (100%)	61 (70%)	26 (30%)	0	1
7	AG	124/124 (100%)	94 (76%)	30 (24%)	1	2
7	CG	124/124 (100%)	91 (73%)	33 (27%)	0	2
8	AH	104/104 (100%)	81 (78%)	23 (22%)	1	3
8	CH	104/104 (100%)	81 (78%)	23 (22%)	1	3
9	AI	105/105 (100%)	75 (71%)	30 (29%)	0	1
9	CI	105/105 (100%)	76 (72%)	29 (28%)	0	1
10	AJ	86/86 (100%)	63 (73%)	23 (27%)	0	2
10	CJ	86/86 (100%)	68 (79%)	18 (21%)	1	4
11	AK	90/90 (100%)	67 (74%)	23 (26%)	0	2
11	CK	90/90 (100%)	71 (79%)	19 (21%)	1	4
12	AL	103/103 (100%)	81 (79%)	22 (21%)	1	4
12	CL	103/103 (100%)	76 (74%)	27 (26%)	0	2
13	AM	92/92 (100%)	73 (79%)	19 (21%)	1	4
13	CM	92/92 (100%)	71 (77%)	21 (23%)	1	3
14	AN	79/83 (95%)	62 (78%)	17 (22%)	1	4
14	CN	79/83 (95%)	69 (87%)	10 (13%)	5	16
15	AO	75/76 (99%)	58 (77%)	17 (23%)	1	3
15	CO	75/76 (99%)	59 (79%)	16 (21%)	1	4
16	AP	65/65 (100%)	47 (72%)	18 (28%)	0	1

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
16	CP	65/65 (100%)	52 (80%)	13 (20%)	1	5
17	AQ	74/74 (100%)	49 (66%)	25 (34%)	0	0
17	CQ	74/74 (100%)	52 (70%)	22 (30%)	0	1
18	AR	48/48 (100%)	42 (88%)	6 (12%)	6	17
18	CR	48/48 (100%)	39 (81%)	9 (19%)	2	6
19	AS	70/70 (100%)	61 (87%)	9 (13%)	5	16
19	CS	70/70 (100%)	57 (81%)	13 (19%)	2	6
20	AT	65/65 (100%)	52 (80%)	13 (20%)	1	5
20	CT	65/65 (100%)	49 (75%)	16 (25%)	1	2
21	AU	44/44 (100%)	25 (57%)	19 (43%)	0	0
21	CU	44/44 (100%)	29 (66%)	15 (34%)	0	0
24	BC	216/216 (100%)	187 (87%)	29 (13%)	5	13
24	DC	216/216 (100%)	185 (86%)	31 (14%)	4	12
25	BD	164/164 (100%)	150 (92%)	14 (8%)	13	37
25	DD	164/164 (100%)	148 (90%)	16 (10%)	10	30
26	BE	165/165 (100%)	134 (81%)	31 (19%)	2	6
26	DE	165/165 (100%)	134 (81%)	31 (19%)	2	6
27	BF	148/148 (100%)	122 (82%)	26 (18%)	2	7
27	DF	148/148 (100%)	120 (81%)	28 (19%)	2	6
28	BG	137/137 (100%)	120 (88%)	17 (12%)	6	17
28	DG	137/137 (100%)	123 (90%)	14 (10%)	9	27
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%)	81 (74%)	28 (26%)	0	2
30	DI	109/109 (100%)	86 (79%)	23 (21%)	1	4
31	BJ	116/116 (100%)	97 (84%)	19 (16%)	3	8
31	DJ	116/116 (100%)	100 (86%)	16 (14%)	4	13
32	BK	103/103 (100%)	86 (84%)	17 (16%)	3	8
32	DK	103/103 (100%)	91 (88%)	12 (12%)	7	19
33	BL	102/102 (100%)	83 (81%)	19 (19%)	2	6
33	DL	102/102 (100%)	78 (76%)	24 (24%)	1	2

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
34	BM	109/109 (100%)	96 (88%)	13 (12%)	6	19
34	DM	109/109 (100%)	98 (90%)	11 (10%)	9	28
35	BN	100/100 (100%)	85 (85%)	15 (15%)	3	11
35	DN	100/100 (100%)	82 (82%)	18 (18%)	2	6
36	BO	86/86 (100%)	68 (79%)	18 (21%)	1	4
36	DO	86/86 (100%)	70 (81%)	16 (19%)	2	6
37	BP	99/99 (100%)	91 (92%)	8 (8%)	15	39
37	DP	99/99 (100%)	82 (83%)	17 (17%)	2	7
38	BQ	89/89 (100%)	77 (86%)	12 (14%)	5	13
38	DQ	89/89 (100%)	74 (83%)	15 (17%)	2	8
39	BR	84/84 (100%)	71 (84%)	13 (16%)	3	10
39	DR	84/84 (100%)	74 (88%)	10 (12%)	6	19
40	BS	93/93 (100%)	75 (81%)	18 (19%)	2	5
40	DS	93/93 (100%)	80 (86%)	13 (14%)	4	12
41	BT	80/80 (100%)	70 (88%)	10 (12%)	6	17
41	DT	80/80 (100%)	67 (84%)	13 (16%)	3	8
42	BU	83/83 (100%)	71 (86%)	12 (14%)	4	12
42	DU	83/83 (100%)	63 (76%)	20 (24%)	1	2
43	BV	78/78 (100%)	63 (81%)	15 (19%)	2	5
43	DV	78/78 (100%)	68 (87%)	10 (13%)	5	16
44	BW	57/58 (98%)	49 (86%)	8 (14%)	4	12
44	DW	56/58 (97%)	51 (91%)	5 (9%)	12	35
45	BX	67/67 (100%)	57 (85%)	10 (15%)	4	11
45	DX	67/67 (100%)	55 (82%)	12 (18%)	2	6
46	BY	55/55 (100%)	48 (87%)	7 (13%)	5	16
46	DY	55/55 (100%)	43 (78%)	12 (22%)	1	3
47	BZ	48/48 (100%)	38 (79%)	10 (21%)	1	4
47	DZ	48/48 (100%)	37 (77%)	11 (23%)	1	3
48	B0	47/47 (100%)	40 (85%)	7 (15%)	4	11
48	D0	47/47 (100%)	41 (87%)	6 (13%)	5	16
49	B1	45/45 (100%)	41 (91%)	4 (9%)	12	35

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
49	D1	45/45 (100%)	37 (82%)	8 (18%)	2	6
50	B2	38/38 (100%)	31 (82%)	7 (18%)	2	6
50	D2	38/38 (100%)	31 (82%)	7 (18%)	2	6
51	B3	51/51 (100%)	45 (88%)	6 (12%)	6	19
51	D3	51/51 (100%)	45 (88%)	6 (12%)	6	19
52	B4	34/34 (100%)	31 (91%)	3 (9%)	12	35
52	D4	34/34 (100%)	26 (76%)	8 (24%)	1	2
53	B5	61/180 (34%)	48 (79%)	13 (21%)	1	4
All	All	9386/9518 (99%)	7568 (81%)	1818 (19%)	2	5

All (1818) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	10	LEU
2	AB	14	VAL
2	AB	15	HIS
2	AB	19	GLN
2	AB	20	THR
2	AB	21	ARG
2	AB	22	TYR
2	AB	23	TRP
2	AB	27	MET
2	AB	31	ILE
2	AB	32	PHE
2	AB	38	VAL
2	AB	39	HIS
2	AB	41	ILE
2	AB	43	LEU
2	AB	44	GLU
2	AB	46	THR
2	AB	50	PHE
2	AB	52	GLU
2	AB	56	GLU
2	AB	57	LEU
2	AB	64	LYS
2	AB	66	LYS
2	AB	68	LEU
2	AB	82	ASP
2	AB	85	LEU

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Mol	Chain	Res	Type
2	AB	89	GLN
2	AB	90	PHE
2	AB	91	PHE
2	AB	100	MET
2	AB	101	LEU
2	AB	111	ILE
2	AB	112	LYS
2	AB	117	LEU
2	AB	126	PHE
2	AB	129	LEU
2	AB	130	THR
2	AB	131	LYS
2	AB	132	LYS
2	AB	133	GLU
2	AB	135	LEU
2	AB	136	MET
2	AB	139	ARG
2	AB	140	GLU
2	AB	141	LEU
2	AB	144	LEU
2	AB	151	ILE
2	AB	152	LYS
2	AB	161	LEU
2	AB	163	VAL
2	AB	164	ILE
2	AB	174	LYS
2	AB	181	ILE
2	AB	186	ILE
2	AB	188	ASP
2	AB	199	VAL
2	AB	205	ASP
2	AB	207	ILE
2	AB	208	ARG
2	AB	210	VAL
2	AB	213	TYR
2	AB	220	THR
2	AB	225	ARG
3	AC	3	GLN
3	AC	11	ARG
3	AC	14	ILE
3	AC	15	VAL
3	AC	16	LYS

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Mol	Chain	Res	Type
3	AC	18	TRP
3	AC	19	ASN
3	AC	26	THR
3	AC	27	LYS
3	AC	28	GLU
3	AC	33	LEU
3	AC	35	SER
3	AC	37	PHE
3	AC	43	LEU
3	AC	51	SER
3	AC	52	VAL
3	AC	55	ILE
3	AC	58	GLU
3	AC	59	ARG
3	AC	64	ILE
3	AC	82	GLU
3	AC	86	LYS
3	AC	93	ASP
3	AC	103	ILE
3	AC	107	ARG
3	AC	119	SER
3	AC	121	THR
3	AC	140	ASN
3	AC	142	MET
3	AC	144	LEU
3	AC	165	THR
3	AC	166	GLU
3	AC	167	TRP
3	AC	173	VAL
3	AC	185	ASN
3	AC	200	VAL
4	AD	5	LEU
4	AD	9	LEU
4	AD	13	ARG
4	AD	17	THR
4	AD	23	SER
4	AD	26	ARG
4	AD	31	LYS
4	AD	32	CYS
4	AD	34	ILE
4	AD	35	GLU
4	AD	44	ARG

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Mol	Chain	Res	Type
4	AD	53	VAL
4	AD	58	LYS
4	AD	60	LYS
4	AD	63	ARG
4	AD	69	GLU
4	AD	70	ARG
4	AD	83	LYS
4	AD	104	ARG
4	AD	110	THR
4	AD	111	ARG
4	AD	116	GLN
4	AD	123	ILE
4	AD	128	ARG
4	AD	138	SER
4	AD	143	VAL
4	AD	152	GLN
4	AD	161	LEU
4	AD	163	GLU
4	AD	164	GLN
4	AD	167	LYS
4	AD	171	LEU
4	AD	177	LYS
4	AD	190	ASP
4	AD	195	ILE
4	AD	197	GLU
4	AD	206	LYS
5	AE	10	GLU
5	AE	15	LEU
5	AE	18	VAL
5	AE	21	VAL
5	AE	22	SER
5	AE	29	ARG
5	AE	32	SER
5	AE	38	VAL
5	AE	46	VAL
5	AE	54	ARG
5	AE	56	VAL
5	AE	69	ARG
5	AE	73	ASN
5	AE	83	HIS
5	AE	92	SER
5	AE	93	ARG

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Mol	Chain	Res	Type
5	AE	114	VAL
5	AE	115	LEU
5	AE	122	ASN
5	AE	123	VAL
5	AE	124	LEU
5	AE	126	LYS
5	AE	131	THR
5	AE	134	ILE
5	AE	136	VAL
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	44	ARG
6	AF	45	ARG
6	AF	51	ILE
6	AF	52	ASN
6	AF	54	LEU
6	AF	55	HIS
6	AF	62	MET
6	AF	63	ASN
6	AF	68	GLN
6	AF	77	THR
6	AF	82	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	97	THR
6	AF	100	SER
7	AG	4	ARG
7	AG	6	VAL
7	AG	7	ILE
7	AG	9	GLN

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Mol	Chain	Res	Type
7	AG	10	ARG
7	AG	13	LEU
7	AG	23	LEU
7	AG	32	VAL
7	AG	36	LYS
7	AG	37	SER
7	AG	43	VAL
7	AG	48	GLU
7	AG	49	THR
7	AG	52	GLN
7	AG	59	LEU
7	AG	62	PHE
7	AG	63	GLU
7	AG	75	VAL
7	AG	76	LYS
7	AG	78	ARG
7	AG	79	ARG
7	AG	80	VAL
7	AG	89	VAL
7	AG	95	ARG
7	AG	115	SER
7	AG	120	LEU
7	AG	135	VAL
7	AG	136	LYS
7	AG	142	HIS
7	AG	144	MET
8	AH	3	MET
8	AH	11	LEU
8	AH	13	ARG
8	AH	22	LYS
8	AH	26	THR
8	AH	30	SER
8	AH	32	LEU
8	AH	42	GLU
8	AH	47	GLU
8	AH	49	PHE
8	AH	77	ARG
8	AH	79	SER
8	AH	83	LEU
8	AH	87	LYS
8	AH	89	LYS
8	AH	90	ASP

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Mol	Chain	Res	Type
8	AH	99	LEU
8	AH	104	VAL
8	AH	107	SER
8	AH	111	MET
8	AH	112	THR
8	AH	121	LEU
8	AH	125	ILE
9	AI	7	TYR
9	AI	11	ARG
9	AI	12	ARG
9	AI	18	ARG
9	AI	22	LYS
9	AI	30	ILE
9	AI	33	ARG
9	AI	36	GLU
9	AI	43	THR
9	AI	45	ARG
9	AI	46	MET
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	68	LYS
9	AI	85	ARG
9	AI	88	MET
9	AI	89	GLU
9	AI	90	TYR
9	AI	94	LEU
9	AI	97	GLU
9	AI	106	ARG
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	17	LEU
10	AJ	25	ILE
10	AJ	27	GLU

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Mol	Chain	Res	Type
10	AJ	28	THR
10	AJ	40	ILE
10	AJ	42	LEU
10	AJ	44	THR
10	AJ	47	GLU
10	AJ	50	THR
10	AJ	52	LEU
10	AJ	53	ILE
10	AJ	59	LYS
10	AJ	63	ASP
10	AJ	73	LEU
10	AJ	75	ASP
10	AJ	83	THR
10	AJ	84	VAL
10	AJ	89	ARG
10	AJ	91	ASP
10	AJ	92	LEU
10	AJ	101	SER
11	AK	16	VAL
11	AK	17	SER
11	AK	23	ILE
11	AK	31	ILE
11	AK	38	GLN
11	AK	50	SER
11	AK	52	PHE
11	AK	58	SER
11	AK	65	VAL
11	AK	74	VAL
11	AK	76	GLU
11	AK	79	ILE
11	AK	81	ASN
11	AK	97	ILE
11	AK	101	ASN
11	AK	107	ILE
11	AK	111	THR
11	AK	112	ASP
11	AK	114	THR
11	AK	119	ASN
11	AK	126	LYS
11	AK	128	ARG
11	AK	129	VAL
12	AL	4	VAL

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Mol	Chain	Res	Type
12	AL	5	ASN
12	AL	10	LYS
12	AL	21	VAL
12	AL	25	GLU
12	AL	29	GLN
12	AL	44	LYS
12	AL	51	LYS
12	AL	54	ARG
12	AL	58	THR
12	AL	62	GLU
12	AL	63	VAL
12	AL	74	LEU
12	AL	76	GLU
12	AL	80	ILE
12	AL	86	ARG
12	AL	89	ASP
12	AL	102	LEU
12	AL	105	SER
12	AL	110	ARG
12	AL	116	LYS
12	AL	121	ARG
13	AM	4	ILE
13	AM	7	ILE
13	AM	11	ASP
13	AM	13	LYS
13	AM	14	HIS
13	AM	16	VAL
13	AM	25	VAL
13	AM	27	LYS
13	AM	29	ARG
13	AM	55	THR
13	AM	63	PHE
13	AM	68	ASP
13	AM	72	GLU
13	AM	80	LEU
13	AM	87	ARG
13	AM	89	LEU
13	AM	90	ARG
13	AM	107	ARG
13	AM	108	THR
14	AN	7	LYS
14	AN	24	ARG

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Mol	Chain	Res	Type
14	AN	26	GLU
14	AN	28	LYS
14	AN	41	ARG
14	AN	43	ASN
14	AN	46	LEU
14	AN	49	GLN
14	AN	51	LEU
14	AN	59	ARG
14	AN	62	ASN
14	AN	63	ARG
14	AN	69	ARG
14	AN	76	LYS
14	AN	85	ARG
14	AN	98	LYS
14	AN	100	SER
15	AO	4	SER
15	AO	6	GLU
15	AO	17	ARG
15	AO	18	ASP
15	AO	31	LEU
15	AO	39	LEU
15	AO	40	GLN
15	AO	48	LYS
15	AO	57	LEU
15	AO	58	ARG
15	AO	59	MET
15	AO	67	LEU
15	AO	70	LEU
15	AO	75	VAL
15	AO	79	THR
15	AO	85	LEU
15	AO	87	LEU
16	AP	1	MET
16	AP	2	VAL
16	AP	5	ARG
16	AP	6	LEU
16	AP	8	ARG
16	AP	20	VAL
16	AP	31	ARG
16	AP	33	ILE
16	AP	39	PHE
16	AP	46	LYS

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Mol	Chain	Res	Type
16	AP	51	ARG
16	AP	63	GLN
16	AP	67	ILE
16	AP	71	VAL
16	AP	75	ILE
16	AP	76	LYS
16	AP	78	VAL
16	AP	80	LYS
17	AQ	4	LYS
17	AQ	11	ARG
17	AQ	13	VAL
17	AQ	14	SER
17	AQ	16	LYS
17	AQ	17	MET
17	AQ	19	LYS
17	AQ	21	ILE
17	AQ	22	VAL
17	AQ	26	GLU
17	AQ	28	PHE
17	AQ	29	VAL
17	AQ	38	ILE
17	AQ	51	ASN
17	AQ	52	GLU
17	AQ	53	CYS
17	AQ	55	ILE
17	AQ	59	VAL
17	AQ	64	CYS
17	AQ	67	LEU
17	AQ	75	LEU
17	AQ	76	VAL
17	AQ	77	ARG
17	AQ	81	LYS
17	AQ	83	VAL
18	AR	29	LEU
18	AR	30	LYS
18	AR	36	SER
18	AR	43	ARG
18	AR	55	LEU
18	AR	71	THR
19	AS	6	LYS
19	AS	15	LEU
19	AS	21	LYS

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Mol	Chain	Res	Type
19	AS	27	ASP
19	AS	55	ARG
19	AS	63	THR
19	AS	65	GLU
19	AS	71	LEU
19	AS	79	THR
20	AT	3	ASN
20	AT	5	LYS
20	AT	8	LYS
20	AT	12	ILE
20	AT	27	MET
20	AT	30	THR
20	AT	34	LYS
20	AT	36	TYR
20	AT	54	MET
20	AT	69	LYS
20	AT	70	ASN
20	AT	76	LYS
20	AT	84	ASN
21	AU	5	LYS
21	AU	9	ASN
21	AU	10	GLU
21	AU	12	PHE
21	AU	16	LEU
21	AU	17	ARG
21	AU	18	ARG
21	AU	19	PHE
21	AU	20	LYS
21	AU	28	VAL
21	AU	29	LEU
21	AU	33	ARG
21	AU	34	ARG
21	AU	37	PHE
21	AU	44	GLU
21	AU	46	LYS
21	AU	47	ARG
21	AU	53	VAL
21	AU	54	LYS
24	BC	5	LYS
24	BC	14	ARG
24	BC	18	LYS
24	BC	24	LEU

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Mol	Chain	Res	Type
24	BC	39	LYS
24	BC	50	THR
24	BC	64	ILE
24	BC	97	LYS
24	BC	105	LEU
24	BC	111	LYS
24	BC	117	GLN
24	BC	121	ASP
24	BC	125	LYS
24	BC	130	LEU
24	BC	139	SER
24	BC	156	ARG
24	BC	164	ILE
24	BC	174	LEU
24	BC	177	ARG
24	BC	181	MET
24	BC	187	ASP
24	BC	195	VAL
24	BC	197	ASN
24	BC	199	GLU
24	BC	213	TRP
24	BC	245	VAL
24	BC	258	ARG
24	BC	265	LYS
24	BC	268	VAL
25	BD	12	THR
25	BD	13	ARG
25	BD	52	THR
25	BD	73	VAL
25	BD	83	ARG
25	BD	89	GLU
25	BD	95	SER
25	BD	116	LYS
25	BD	121	THR
25	BD	136	ASN
25	BD	150	GLN
25	BD	157	LYS
25	BD	177	VAL
25	BD	204	LYS
26	BE	4	VAL
26	BE	40	ARG
26	BE	44	ARG

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Mol	Chain	Res	Type
26	BE	49	ARG
26	BE	55	SER
26	BE	72	SER
26	BE	77	ILE
26	BE	80	SER
26	BE	88	ARG
26	BE	90	GLN
26	BE	93	SER
26	BE	107	SER
26	BE	108	ILE
26	BE	109	LEU
26	BE	111	GLU
26	BE	114	ARG
26	BE	115	GLN
26	BE	116	ASP
26	BE	120	VAL
26	BE	123	LYS
26	BE	126	VAL
26	BE	136	GLN
26	BE	149	ILE
26	BE	159	LEU
26	BE	163	ASN
26	BE	170	ARG
26	BE	171	ASP
26	BE	176	ASP
26	BE	181	ILE
26	BE	189	THR
26	BE	198	GLU
27	BF	3	LYS
27	BF	14	LYS
27	BF	17	MET
27	BF	25	VAL
27	BF	27	GLN
27	BF	31	VAL
27	BF	35	THR
27	BF	36	LEU
27	BF	42	GLU
27	BF	44	ILE
27	BF	48	LYS
27	BF	51	ASP
27	BF	57	LEU
27	BF	61	SER

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Mol	Chain	Res	Type
27	BF	78	LYS
27	BF	83	TYR
27	BF	95	ARG
27	BF	105	THR
27	BF	108	VAL
27	BF	113	ASP
27	BF	141	ILE
27	BF	142	ASP
27	BF	147	ASP
27	BF	155	THR
27	BF	158	THR
27	BF	176	PRO
28	BG	10	VAL
28	BG	11	VAL
28	BG	20	ASN
28	BG	27	LYS
28	BG	39	ASP
28	BG	67	THR
28	BG	77	ILE
28	BG	80	THR
28	BG	87	LEU
28	BG	92	VAL
28	BG	124	GLU
28	BG	139	GLN
28	BG	149	ARG
28	BG	152	ARG
28	BG	155	GLU
28	BG	166	ASP
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
29	BH	62	LEU
29	BH	66	ASN
29	BH	75	LEU
29	BH	77	THR
29	BH	79	THR

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Mol	Chain	Res	Type
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	3	LYS
30	BI	8	TYR
30	BI	9	VAL
30	BI	11	LEU
30	BI	28	LEU
30	BI	31	GLN
30	BI	34	ASN
30	BI	38	PHE
30	BI	47	ASP
30	BI	50	GLU
30	BI	60	THR
30	BI	62	TYR
30	BI	67	PHE
30	BI	69	PHE
30	BI	72	LYS
30	BI	82	LYS
30	BI	86	ILE
30	BI	87	LYS
30	BI	96	ASP
30	BI	97	LYS
30	BI	100	LYS
30	BI	102	SER
30	BI	103	ARG
30	BI	108	GLU
30	BI	111	GLN
30	BI	132	THR
30	BI	135	SER
30	BI	136	MET
31	BJ	1	MET

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Mol	Chain	Res	Type
31	BJ	13	ARG
31	BJ	23	LYS
31	BJ	27	ARG
31	BJ	30	THR
31	BJ	39	LYS
31	BJ	40	HIS
31	BJ	43	GLU
31	BJ	61	LYS
31	BJ	64	VAL
31	BJ	65	THR
31	BJ	69	ARG
31	BJ	70	THR
31	BJ	78	THR
31	BJ	96	ARG
31	BJ	101	ILE
31	BJ	109	LEU
31	BJ	124	VAL
31	BJ	135	GLN
32	BK	20	MET
32	BK	21	CYS
32	BK	38	ILE
32	BK	41	ILE
32	BK	49	ARG
32	BK	58	LEU
32	BK	61	VAL
32	BK	66	LYS
32	BK	70	ARG
32	BK	77	ILE
32	BK	80	ASP
32	BK	84	CYS
32	BK	88	ASN
32	BK	91	SER
32	BK	92	GLU
32	BK	107	LEU
32	BK	117	SER
33	BL	2	ARG
33	BL	7	SER
33	BL	19	LEU
33	BL	21	ARG
33	BL	27	LEU
33	BL	39	LYS
33	BL	40	SER

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
33	BL	47	ARG
33	BL	48	ARG
33	BL	76	GLU
33	BL	78	ARG
33	BL	82	LEU
33	BL	85	VAL
33	BL	86	GLU
33	BL	93	ASN
33	BL	100	ILE
33	BL	115	GLU
33	BL	126	ARG
33	BL	144	GLU
34	BM	10	ARG
34	BM	18	ARG
34	BM	24	THR
34	BM	46	ILE
34	BM	58	LYS
34	BM	69	PRO
34	BM	70	ASP
34	BM	100	LYS
34	BM	106	ASP
34	BM	110	GLU
34	BM	115	GLU
34	BM	134	THR
34	BM	135	VAL
35	BN	2	ARG
35	BN	15	SER
35	BN	24	MET
35	BN	27	SER
35	BN	32	GLU
35	BN	36	THR
35	BN	69	ARG
35	BN	70	THR
35	BN	71	ARG
35	BN	89	SER
35	BN	90	ARG
35	BN	96	ARG
35	BN	116	VAL
35	BN	117	ASP
35	BN	120	GLU
36	BO	2	ASP
36	BO	4	LYS

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Mol	Chain	Res	Type
36	BO	5	SER
36	BO	9	ARG
36	BO	17	LYS
36	BO	18	LEU
36	BO	28	VAL
36	BO	31	THR
36	BO	36	TYR
36	BO	45	SER
36	BO	47	VAL
36	BO	49	VAL
36	BO	65	THR
36	BO	74	VAL
36	BO	78	VAL
36	BO	88	LYS
36	BO	89	ASP
36	BO	102	ARG
37	BP	2	SER
37	BP	27	GLU
37	BP	63	LYS
37	BP	68	GLU
37	BP	72	ARG
37	BP	109	ARG
37	BP	110	ILE
37	BP	114	LEU
38	BQ	6	ARG
38	BQ	9	ILE
38	BQ	17	ILE
38	BQ	18	LEU
38	BQ	29	SER
38	BQ	51	ARG
38	BQ	52	GLN
38	BQ	58	ARG
38	BQ	78	LYS
38	BQ	87	SER
38	BQ	92	ARG
38	BQ	112	LYS
39	BR	6	GLN
39	BR	10	LYS
39	BR	14	VAL
39	BR	16	GLU
39	BR	20	VAL
39	BR	38	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
39	BR	41	ILE
39	BR	48	LYS
39	BR	54	VAL
39	BR	58	VAL
39	BR	85	LYS
39	BR	94	THR
39	BR	102	SER
40	BS	1	MET
40	BS	4	ILE
40	BS	6	LYS
40	BS	11	ARG
40	BS	15	GLN
40	BS	19	LEU
40	BS	28	LYS
40	BS	30	SER
40	BS	47	VAL
40	BS	76	VAL
40	BS	81	SER
40	BS	82	MET
40	BS	95	ARG
40	BS	97	LEU
40	BS	101	SER
40	BS	107	VAL
40	BS	108	SER
40	BS	109	ASP
41	BT	1	MET
41	BT	5	GLU
41	BT	11	LEU
41	BT	22	THR
41	BT	30	ILE
41	BT	39	THR
41	BT	49	LYS
41	BT	50	LEU
41	BT	74	ILE
41	BT	89	GLU
42	BU	9	ASP
42	BU	14	LEU
42	BU	21	LYS
42	BU	24	LYS
42	BU	26	LYS
42	BU	29	LEU
42	BU	52	LEU

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Mol	Chain	Res	Type
42	BU	61	LYS
42	BU	62	GLU
42	BU	68	SER
42	BU	72	ILE
42	BU	100	SER
43	BV	1	MET
43	BV	3	THR
43	BV	8	VAL
43	BV	10	LYS
43	BV	11	GLU
43	BV	17	SER
43	BV	18	ARG
43	BV	20	LEU
43	BV	29	ILE
43	BV	53	LYS
43	BV	58	SER
43	BV	61	LEU
43	BV	65	VAL
43	BV	77	VAL
43	BV	85	LYS
44	BW	20	ARG
44	BW	44	LYS
44	BW	60	PHE
44	BW	64	ASP
44	BW	66	LYS
44	BW	72	LYS
44	BW	77	ARG
44	BW	81	SER
45	BX	2	SER
45	BX	5	CYS
45	BX	18	ARG
45	BX	25	THR
45	BX	28	ARG
45	BX	37	ARG
45	BX	40	VAL
45	BX	48	THR
45	BX	51	VAL
45	BX	77	LYS
46	BY	6	LEU
46	BY	12	GLU
46	BY	13	GLU
46	BY	16	THR

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Mol	Chain	Res	Type
46	BY	29	ARG
46	BY	37	LEU
46	BY	59	GLU
47	BZ	3	LYS
47	BZ	8	THR
47	BZ	10	THR
47	BZ	23	THR
47	BZ	25	LEU
47	BZ	31	ARG
47	BZ	32	ILE
47	BZ	45	ARG
47	BZ	57	VAL
47	BZ	59	GLU
48	B0	15	MET
48	B0	17	ARG
48	B0	23	THR
48	B0	29	SER
48	B0	36	GLU
48	B0	40	ARG
48	B0	57	LYS
49	B1	43	VAL
49	B1	46	HIS
49	B1	47	VAL
49	B1	51	GLU
50	B2	1	MET
50	B2	8	SER
50	B2	11	LYS
50	B2	15	SER
50	B2	35	ARG
50	B2	42	LEU
50	B2	45	SER
51	B3	15	LYS
51	B3	16	LYS
51	B3	17	THR
51	B3	31	HIS
51	B3	41	LYS
51	B3	47	LYS
52	B4	3	VAL
52	B4	6	SER
52	B4	18	LYS
53	B5	21	TYR
53	B5	35	THR

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Mol	Chain	Res	Type
53	B5	37	LYS
53	B5	38	PHE
53	B5	39	ASP
53	B5	47	LYS
53	B5	48	LEU
53	B5	58	ASN
53	B5	59	VAL
53	B5	65	LEU
53	B5	73	VAL
53	B5	78	ILE
53	B5	86	GLU
2	CB	9	MET
2	CB	14	VAL
2	CB	15	HIS
2	CB	16	PHE
2	CB	18	HIS
2	CB	19	GLN
2	CB	20	THR
2	CB	23	TRP
2	CB	24	ASN
2	CB	27	MET
2	CB	28	LYS
2	CB	35	ARG
2	CB	40	ILE
2	CB	43	LEU
2	CB	49	MET
2	CB	50	PHE
2	CB	62	SER
2	CB	66	LYS
2	CB	67	ILE
2	CB	68	LEU
2	CB	77	SER
2	CB	88	ASP
2	CB	89	GLN
2	CB	91	PHE
2	CB	94	HIS
2	CB	95	ARG
2	CB	96	TRP
2	CB	103	ASN
2	CB	106	THR
2	CB	117	LEU
2	CB	122	GLN

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Mol	Chain	Res	Type
2	CB	125	THR
2	CB	126	PHE
2	CB	130	THR
2	CB	133	GLU
2	CB	136	MET
2	CB	139	ARG
2	CB	140	GLU
2	CB	143	LYS
2	CB	144	LEU
2	CB	163	VAL
2	CB	164	ILE
2	CB	174	LYS
2	CB	188	ASP
2	CB	205	ASP
2	CB	207	ILE
2	CB	210	VAL
2	CB	220	THR
2	CB	222	ARG
2	CB	223	GLU
3	CC	3	GLN
3	CC	15	VAL
3	CC	16	LYS
3	CC	18	TRP
3	CC	25	ASN
3	CC	26	THR
3	CC	27	LYS
3	CC	28	GLU
3	CC	29	PHE
3	CC	33	LEU
3	CC	36	ASP
3	CC	37	PHE
3	CC	43	LEU
3	CC	45	LYS
3	CC	70	THR
3	CC	80	LYS
3	CC	102	ASN
3	CC	103	ILE
3	CC	107	ARG
3	CC	111	LEU
3	CC	119	SER
3	CC	121	THR
3	CC	129	MET

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Mol	Chain	Res	Type
3	CC	131	ARG
3	CC	132	ARG
3	CC	140	ASN
3	CC	144	LEU
3	CC	151	VAL
3	CC	153	VAL
3	CC	167	TRP
3	CC	168	TYR
3	CC	175	LEU
3	CC	179	ARG
3	CC	190	HIS
3	CC	192	THR
3	CC	193	TYR
4	CD	8	LYS
4	CD	9	LEU
4	CD	12	SER
4	CD	23	SER
4	CD	28	ILE
4	CD	29	ASP
4	CD	32	CYS
4	CD	33	LYS
4	CD	47	ARG
4	CD	48	LEU
4	CD	54	GLN
4	CD	55	LEU
4	CD	56	ARG
4	CD	58	LYS
4	CD	59	GLN
4	CD	60	LYS
4	CD	63	ARG
4	CD	69	GLU
4	CD	83	LYS
4	CD	125	VAL
4	CD	126	ASN
4	CD	129	VAL
4	CD	138	SER
4	CD	151	LYS
4	CD	152	GLN
4	CD	153	SER
4	CD	155	VAL
4	CD	161	LEU
4	CD	163	GLU

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Mol	Chain	Res	Type
4	CD	179	GLU
4	CD	184	ARG
4	CD	191	LEU
4	CD	199	LEU
4	CD	200	ILE
4	CD	203	LEU
4	CD	206	LYS
5	CE	10	GLU
5	CE	15	LEU
5	CE	26	LYS
5	CE	32	SER
5	CE	39	VAL
5	CE	46	VAL
5	CE	52	LYS
5	CE	65	GLU
5	CE	69	ARG
5	CE	77	ASN
5	CE	81	LEU
5	CE	92	SER
5	CE	93	ARG
5	CE	96	MET
5	CE	101	GLU
5	CE	112	ARG
5	CE	114	VAL
5	CE	115	LEU
5	CE	120	VAL
5	CE	124	LEU
5	CE	126	LYS
5	CE	131	THR
5	CE	137	VAL
5	CE	140	THR
5	CE	149	SER
5	CE	151	GLU
5	CE	152	MET
5	CE	156	LYS
6	CF	1	MET
6	CF	2	ARG
6	CF	7	VAL
6	CF	8	PHE
6	CF	18	VAL
6	CF	23	GLU
6	CF	24	ARG

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Mol	Chain	Res	Type
6	CF	26	THR
6	CF	29	ILE
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	63	ASN
6	CF	68	GLN
6	CF	69	GLU
6	CF	71	ILE
6	CF	73	GLU
6	CF	75	GLU
6	CF	80	PHE
6	CF	87	SER
6	CF	93	LYS
6	CF	97	THR
7	CG	3	ARG
7	CG	4	ARG
7	CG	5	ARG
7	CG	6	VAL
7	CG	11	LYS
7	CG	22	LEU
7	CG	23	LEU
7	CG	30	LEU
7	CG	36	LYS
7	CG	47	LEU
7	CG	48	GLU
7	CG	53	ARG
7	CG	59	LEU
7	CG	60	GLU
7	CG	62	PHE
7	CG	66	LEU
7	CG	69	VAL
7	CG	70	ARG
7	CG	75	VAL
7	CG	78	ARG
7	CG	84	THR
7	CG	87	VAL
7	CG	91	VAL

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Mol	Chain	Res	Type
7	CG	95	ARG
7	CG	120	LEU
7	CG	123	GLU
7	CG	129	GLU
7	CG	133	THR
7	CG	135	VAL
7	CG	138	ARG
7	CG	139	GLU
7	CG	140	ASP
7	CG	146	GLU
8	CH	3	MET
8	CH	13	ARG
8	CH	22	LYS
8	CH	31	LYS
8	CH	33	LYS
8	CH	42	GLU
8	CH	45	PHE
8	CH	47	GLU
8	CH	49	PHE
8	CH	54	ASP
8	CH	55	THR
8	CH	59	LEU
8	CH	75	ILE
8	CH	77	ARG
8	CH	80	ARG
8	CH	87	LYS
8	CH	90	ASP
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	11	ARG
9	CI	13	LYS
9	CI	18	ARG
9	CI	33	ARG
9	CI	34	SER
9	CI	43	THR
9	CI	45	ARG
9	CI	46	MET

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Mol	Chain	Res	Type
9	CI	48	VAL
9	CI	49	ARG
9	CI	56	ASP
9	CI	57	MET
9	CI	61	LEU
9	CI	68	LYS
9	CI	85	ARG
9	CI	88	MET
9	CI	89	GLU
9	CI	90	TYR
9	CI	94	LEU
9	CI	96	SER
9	CI	97	GLU
9	CI	99	ARG
9	CI	100	LYS
9	CI	105	THR
9	CI	112	GLU
9	CI	126	GLN
9	CI	127	PHE
9	CI	129	LYS
10	CJ	9	ARG
10	CJ	22	THR
10	CJ	25	ILE
10	CJ	27	GLU
10	CJ	32	THR
10	CJ	35	GLN
10	CJ	45	ARG
10	CJ	48	ARG
10	CJ	51	VAL
10	CJ	59	LYS
10	CJ	63	ASP
10	CJ	66	GLU
10	CJ	80	THR
10	CJ	83	THR
10	CJ	84	VAL
10	CJ	87	LEU
10	CJ	89	ARG
10	CJ	92	LEU
11	CK	13	ARG
11	CK	14	LYS
11	CK	15	GLN
11	CK	31	ILE

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Mol	Chain	Res	Type
11	CK	50	SER
11	CK	52	PHE
11	CK	64	GLN
11	CK	65	VAL
11	CK	81	ASN
11	CK	82	LEU
11	CK	83	GLU
11	CK	87	LYS
11	CK	96	THR
11	CK	101	ASN
11	CK	105	PHE
11	CK	106	ARG
11	CK	107	ILE
11	CK	126	LYS
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	21	VAL
12	CL	29	GLN
12	CL	30	LYS
12	CL	44	LYS
12	CL	58	THR
12	CL	59	ASN
12	CL	62	GLU
12	CL	63	VAL
12	CL	82	ILE
12	CL	83	ARG
12	CL	89	ASP
12	CL	90	LEU
12	CL	93	VAL
12	CL	94	ARG
12	CL	105	SER
12	CL	110	ARG
12	CL	111	LYS
12	CL	116	LYS
12	CL	121	ARG

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Mol	Chain	Res	Type
13	CM	19	LEU
13	CM	25	VAL
13	CM	29	ARG
13	CM	30	SER
13	CM	31	LYS
13	CM	33	ILE
13	CM	34	LEU
13	CM	41	GLU
13	CM	48	LEU
13	CM	53	ILE
13	CM	56	LEU
13	CM	59	GLU
13	CM	60	VAL
13	CM	63	PHE
13	CM	68	ASP
13	CM	72	GLU
13	CM	80	LEU
13	CM	83	LEU
13	CM	90	ARG
13	CM	91	HIS
13	CM	101	ARG
14	CN	4	GLN
14	CN	23	LYS
14	CN	26	GLU
14	CN	28	LYS
14	CN	35	ASN
14	CN	48	LEU
14	CN	53	ARG
14	CN	71	HIS
14	CN	80	SER
14	CN	90	ARG
15	CO	6	GLU
15	CO	17	ARG
15	CO	18	ASP
15	CO	22	THR
15	CO	26	GLU
15	CO	35	GLN
15	CO	38	HIS
15	CO	48	LYS
15	CO	58	ARG
15	CO	64	ARG
15	CO	70	LEU

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Mol	Chain	Res	Type
15	CO	73	LYS
15	CO	79	THR
15	CO	85	LEU
15	CO	87	LEU
15	CO	88	ARG
16	CP	1	MET
16	CP	2	VAL
16	CP	3	THR
16	CP	5	ARG
16	CP	20	VAL
16	CP	26	ASN
16	CP	31	ARG
16	CP	36	VAL
16	CP	46	LYS
16	CP	63	GLN
16	CP	74	LEU
16	CP	77	GLU
16	CP	80	LYS
17	CQ	4	LYS
17	CQ	5	ILE
17	CQ	11	ARG
17	CQ	14	SER
17	CQ	17	MET
17	CQ	18	GLU
17	CQ	23	VAL
17	CQ	25	ILE
17	CQ	28	PHE
17	CQ	29	VAL
17	CQ	40	ARG
17	CQ	48	ASP
17	CQ	50	ASN
17	CQ	52	GLU
17	CQ	55	ILE
17	CQ	65	ARG
17	CQ	75	LEU
17	CQ	76	VAL
17	CQ	78	VAL
17	CQ	79	VAL
17	CQ	81	LYS
17	CQ	83	VAL
18	CR	29	LEU
18	CR	33	ILE

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Mol	Chain	Res	Type
18	CR	42	SER
18	CR	45	THR
18	CR	47	THR
18	CR	48	ARG
18	CR	57	ARG
18	CR	59	ILE
18	CR	67	LEU
19	CS	5	LEU
19	CS	6	LYS
19	CS	11	ILE
19	CS	13	LEU
19	CS	14	HIS
19	CS	16	LEU
19	CS	23	VAL
19	CS	27	ASP
19	CS	28	LYS
19	CS	33	THR
19	CS	49	ILE
19	CS	56	GLN
19	CS	73	GLU
20	CT	5	LYS
20	CT	6	SER
20	CT	8	LYS
20	CT	10	ARG
20	CT	14	SER
20	CT	15	GLU
20	CT	24	ARG
20	CT	27	MET
20	CT	29	ARG
20	CT	36	TYR
20	CT	49	LYS
20	CT	64	LYS
20	CT	67	ILE
20	CT	76	LYS
20	CT	78	ASN
20	CT	79	LEU
21	CU	5	LYS
21	CU	7	ARG
21	CU	10	GLU
21	CU	12	PHE
21	CU	14	VAL
21	CU	16	LEU

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Mol	Chain	Res	Type
21	CU	19	PHE
21	CU	24	GLU
21	CU	28	VAL
21	CU	34	ARG
21	CU	36	GLU
21	CU	37	PHE
21	CU	38	TYR
21	CU	43	THR
21	CU	47	ARG
24	DC	3	VAL
24	DC	20	VAL
24	DC	28	LYS
24	DC	36	LYS
24	DC	40	SER
24	DC	48	ARG
24	DC	52	ARG
24	DC	54	ILE
24	DC	64	ILE
24	DC	80	ARG
24	DC	98	ASP
24	DC	103	TYR
24	DC	104	ILE
24	DC	105	LEU
24	DC	111	LYS
24	DC	130	LEU
24	DC	156	ARG
24	DC	157	SER
24	DC	160	THR
24	DC	174	LEU
24	DC	175	ARG
24	DC	189	ARG
24	DC	191	THR
24	DC	195	VAL
24	DC	202	LEU
24	DC	205	LEU
24	DC	250	VAL
24	DC	256	LYS
24	DC	259	SER
24	DC	266	PHE
24	DC	267	ILE
25	DD	1	MET
25	DD	4	LEU

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Mol	Chain	Res	Type
25	DD	12	THR
25	DD	28	GLU
25	DD	33	ARG
25	DD	86	GLU
25	DD	91	THR
25	DD	95	SER
25	DD	100	LEU
25	DD	104	VAL
25	DD	150	GLN
25	DD	154	LYS
25	DD	170	VAL
25	DD	172	VAL
25	DD	189	VAL
25	DD	200	ASP
26	DE	22	ASP
26	DE	32	VAL
26	DE	40	ARG
26	DE	41	GLN
26	DE	46	GLN
26	DE	63	LYS
26	DE	69	ARG
26	DE	77	ILE
26	DE	78	TRP
26	DE	83	VAL
26	DE	84	THR
26	DE	91	ASP
26	DE	102	ARG
26	DE	107	SER
26	DE	108	ILE
26	DE	114	ARG
26	DE	118	LEU
26	DE	120	VAL
26	DE	125	SER
26	DE	127	GLU
26	DE	131	THR
26	DE	133	LEU
26	DE	149	ILE
26	DE	159	LEU
26	DE	164	LEU
26	DE	170	ARG
26	DE	171	ASP
26	DE	173	THR

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Mol	Chain	Res	Type
26	DE	181	ILE
26	DE	187	VAL
26	DE	200	LEU
27	DF	4	LEU
27	DF	6	ASP
27	DF	10	ASP
27	DF	14	LYS
27	DF	21	ASN
27	DF	26	MET
27	DF	28	VAL
27	DF	32	GLU
27	DF	35	THR
27	DF	36	LEU
27	DF	52	ASN
27	DF	64	LYS
27	DF	67	ILE
27	DF	74	VAL
27	DF	81	GLN
27	DF	83	TYR
27	DF	87	CYS
27	DF	92	ARG
27	DF	95	ARG
27	DF	106	ILE
27	DF	125	ARG
27	DF	133	ARG
27	DF	147	ASP
27	DF	149	VAL
27	DF	157	THR
27	DF	162	SER
27	DF	174	ASP
27	DF	178	ARG
28	DG	11	VAL
28	DG	29	LYS
28	DG	30	ASN
28	DG	42	GLU
28	DG	44	LYS
28	DG	48	ASN
28	DG	51	THR
28	DG	89	LEU
28	DG	95	ARG
28	DG	127	THR
28	DG	129	THR

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Mol	Chain	Res	Type
28	DG	141	ILE
28	DG	152	ARG
28	DG	155	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
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	12	GLN
30	DI	17	MET
30	DI	24	VAL
30	DI	31	GLN
30	DI	40	LYS
30	DI	48	SER
30	DI	68	THR
30	DI	69	PHE
30	DI	72	LYS

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Mol	Chain	Res	Type
30	DI	87	LYS
30	DI	95	LYS
30	DI	96	ASP
30	DI	97	LYS
30	DI	105	GLN
30	DI	117	MET
30	DI	125	MET
30	DI	127	ARG
30	DI	128	SER
30	DI	134	ARG
31	DJ	1	MET
31	DJ	3	THR
31	DJ	37	ARG
31	DJ	39	LYS
31	DJ	40	HIS
31	DJ	64	VAL
31	DJ	72	LYS
31	DJ	73	VAL
31	DJ	81	ILE
31	DJ	86	GLN
31	DJ	90	GLU
31	DJ	129	GLU
31	DJ	131	ASN
31	DJ	138	GLN
31	DJ	140	LEU
31	DJ	142	ILE
32	DK	41	ILE
32	DK	42	THR
32	DK	49	ARG
32	DK	53	LYS
32	DK	67	LYS
32	DK	70	ARG
32	DK	90	ASN
32	DK	92	GLU
32	DK	95	ILE
32	DK	104	THR
32	DK	110	GLU
32	DK	114	LYS
33	DL	6	LEU
33	DL	12	SER
33	DL	19	LEU
33	DL	27	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
33	DL	42	SER
33	DL	46	VAL
33	DL	47	ARG
33	DL	48	ARG
33	DL	59	ARG
33	DL	60	ARG
33	DL	78	ARG
33	DL	80	SER
33	DL	82	LEU
33	DL	85	VAL
33	DL	91	ASP
33	DL	94	THR
33	DL	95	LEU
33	DL	96	LYS
33	DL	100	ILE
33	DL	103	ILE
33	DL	107	PHE
33	DL	118	THR
33	DL	126	ARG
33	DL	143	GLU
34	DM	6	ARG
34	DM	14	LYS
34	DM	59	ARG
34	DM	70	ASP
34	DM	74	THR
34	DM	108	VAL
34	DM	124	LEU
34	DM	126	ILE
34	DM	127	LYS
34	DM	128	THR
34	DM	132	THR
35	DN	2	ARG
35	DN	6	SER
35	DN	8	ARG
35	DN	14	SER
35	DN	20	MET
35	DN	22	ARG
35	DN	53	THR
35	DN	63	ARG
35	DN	70	THR
35	DN	71	ARG
35	DN	76	VAL

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Mol	Chain	Res	Type
35	DN	79	LEU
35	DN	82	GLU
35	DN	96	ARG
35	DN	100	CYS
35	DN	114	GLU
35	DN	115	LEU
35	DN	116	VAL
36	DO	9	ARG
36	DO	18	LEU
36	DO	26	LEU
36	DO	31	THR
36	DO	47	VAL
36	DO	48	LEU
36	DO	67	ASN
36	DO	74	VAL
36	DO	78	VAL
36	DO	88	LYS
36	DO	89	ASP
36	DO	95	SER
36	DO	100	HIS
36	DO	102	ARG
36	DO	103	VAL
36	DO	116	GLN
37	DP	19	SER
37	DP	26	VAL
37	DP	32	VAL
37	DP	34	GLU
37	DP	36	SER
37	DP	37	LYS
37	DP	51	ARG
37	DP	64	ILE
37	DP	65	SER
37	DP	66	ASN
37	DP	80	VAL
37	DP	81	VAL
37	DP	85	SER
37	DP	93	ARG
37	DP	109	ARG
37	DP	110	ILE
37	DP	114	LEU
38	DQ	5	LYS
38	DQ	8	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
38	DQ	9	ILE
38	DQ	11	ARG
38	DQ	13	ARG
38	DQ	16	LYS
38	DQ	22	LYS
38	DQ	33	ARG
38	DQ	41	LYS
38	DQ	51	ARG
38	DQ	53	ARG
38	DQ	54	LYS
38	DQ	92	ARG
38	DQ	94	ILE
38	DQ	100	VAL
39	DR	12	HIS
39	DR	38	VAL
39	DR	43	ASN
39	DR	46	GLU
39	DR	47	VAL
39	DR	48	LYS
39	DR	51	VAL
39	DR	58	VAL
39	DR	86	GLN
39	DR	94	THR
40	DS	3	THR
40	DS	4	ILE
40	DS	6	LYS
40	DS	13	SER
40	DS	19	LEU
40	DS	23	LEU
40	DS	67	ASP
40	DS	78	GLU
40	DS	86	MET
40	DS	96	ILE
40	DS	97	LEU
40	DS	104	THR
40	DS	109	ASP
41	DT	3	ARG
41	DT	7	LEU
41	DT	16	VAL
41	DT	30	ILE
41	DT	31	VAL
41	DT	44	LYS

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Mol	Chain	Res	Type
41	DT	49	LYS
41	DT	52	GLU
41	DT	57	VAL
41	DT	70	HIS
41	DT	77	ARG
41	DT	86	THR
41	DT	91	GLN
42	DU	7	ARG
42	DU	11	VAL
42	DU	15	THR
42	DU	18	ASP
42	DU	21	LYS
42	DU	28	VAL
42	DU	29	LEU
42	DU	31	SER
42	DU	40	ASN
42	DU	41	LEU
42	DU	45	HIS
42	DU	46	GLN
42	DU	47	LYS
42	DU	53	ASN
42	DU	54	GLN
42	DU	68	SER
42	DU	72	ILE
42	DU	81	ASP
42	DU	99	ASN
42	DU	100	SER
43	DV	2	PHE
43	DV	8	VAL
43	DV	21	ARG
43	DV	26	PHE
43	DV	29	ILE
43	DV	42	LEU
43	DV	45	ASP
43	DV	50	MET
43	DV	53	LYS
43	DV	61	LEU
44	DW	16	SER
44	DW	20	ARG
44	DW	39	ARG
44	DW	41	ARG
44	DW	77	ARG

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Mol	Chain	Res	Type
45	DX	11	ARG
45	DX	18	ARG
45	DX	23	ASN
45	DX	25	THR
45	DX	33	LEU
45	DX	40	VAL
45	DX	46	PHE
45	DX	48	THR
45	DX	54	LYS
45	DX	64	ILE
45	DX	66	THR
45	DX	71	LEU
46	DY	2	LYS
46	DY	6	LEU
46	DY	8	GLU
46	DY	13	GLU
46	DY	16	THR
46	DY	29	ARG
46	DY	37	LEU
46	DY	38	GLN
46	DY	39	GLN
46	DY	49	ASP
46	DY	56	LEU
46	DY	58	ASN
47	DZ	3	LYS
47	DZ	10	THR
47	DZ	11	ARG
47	DZ	16	ARG
47	DZ	25	LEU
47	DZ	31	ARG
47	DZ	36	VAL
47	DZ	41	THR
47	DZ	45	ARG
47	DZ	57	VAL
47	DZ	58	GLU
48	D0	23	THR
48	D0	25	VAL
48	D0	28	LEU
48	D0	37	LYS
48	D0	46	ASP
48	D0	52	ARG
49	D1	6	ARG

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Mol	Chain	Res	Type
49	D1	9	ILE
49	D1	10	LYS
49	D1	12	VAL
49	D1	25	LYS
49	D1	26	ASN
49	D1	30	LYS
49	D1	38	LYS
50	D2	1	MET
50	D2	4	THR
50	D2	10	LEU
50	D2	24	THR
50	D2	41	ARG
50	D2	44	VAL
50	D2	46	LYS
51	D3	6	THR
51	D3	8	ARG
51	D3	13	ARG
51	D3	30	ARG
51	D3	31	HIS
51	D3	47	LYS
52	D4	2	LYS
52	D4	3	VAL
52	D4	4	ARG
52	D4	11	CYS
52	D4	12	ARG
52	D4	17	VAL
52	D4	26	ILE
52	D4	35	GLN

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (40) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	15	HIS
3	AC	6	HIS
5	AE	82	GLN
5	AE	122	ASN
8	AH	18	GLN
10	AJ	56	HIS
10	AJ	70	HIS
11	AK	22	HIS
15	AO	46	HIS
24	BC	142	HIS

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Mol	Chain	Res	Type
25	BD	136	ASN
29	BH	119	ASN
29	BH	135	HIS
49	B1	19	HIS
2	CB	18	HIS
2	CB	103	ASN
2	CB	177	ASN
3	CC	6	HIS
3	CC	176	HIS
4	CD	152	GLN
5	CE	89	HIS
10	CJ	70	HIS
13	CM	91	HIS
13	CM	105	ASN
24	DC	134	ASN
25	DD	150	GLN
27	DF	63	GLN
28	DG	115	HIS
28	DG	139	GLN
28	DG	143	GLN
29	DH	128	HIS
33	DL	35	HIS
38	DQ	37	GLN
39	DR	89	HIS
40	DS	7	HIS
42	DU	74	ASN
46	DY	41	HIS
49	D1	19	HIS
49	D1	26	ASN
51	D3	31	HIS

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1537/1539 (99%)	349 (22%)	15 (0%)
1	CA	1538/1539 (99%)	331 (21%)	9 (0%)
22	BA	2895/2903 (99%)	643 (22%)	30 (1%)
22	DA	2895/2903 (99%)	637 (22%)	29 (1%)
23	BB	118/119 (99%)	21 (17%)	0
23	DB	117/119 (98%)	25 (21%)	0
All	All	9100/9122 (99%)	2006 (22%)	83 (0%)

All (2006) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	4	U
1	AA	5	U
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	48	C
1	AA	50	A
1	AA	51	A
1	AA	70	U
1	AA	71	A
1	AA	72	A
1	AA	74	A
1	AA	75	G
1	AA	76	G
1	AA	77	A
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	88	U
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	109	A
1	AA	111	G
1	AA	115	G
1	AA	116	A
1	AA	117	G
1	AA	121	U
1	AA	122	G
1	AA	130	A
1	AA	131	A

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Mol	Chain	Res	Type
1	AA	137	U
1	AA	138	G
1	AA	141	G
1	AA	142	G
1	AA	143	A
1	AA	144	G
1	AA	149	A
1	AA	159	G
1	AA	162	A
1	AA	168	G
1	AA	181	A
1	AA	182	A
1	AA	183	C
1	AA	185	U
1	AA	195	A
1	AA	204	G
1	AA	205	A
1	AA	209	U
1	AA	210	C
1	AA	214	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	331	G
1	AA	332	G
1	AA	338	A
1	AA	341	C
1	AA	346	G
1	AA	352	C

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Mol	Chain	Res	Type
1	AA	354	G
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	382	A
1	AA	384	G
1	AA	406	G
1	AA	408	A
1	AA	409	U
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	423	G
1	AA	424	G
1	AA	429	U
1	AA	430	A
1	AA	435	A
1	AA	439	U
1	AA	440	C
1	AA	445	G
1	AA	453	G
1	AA	454	G
1	AA	456	A
1	AA	457	G
1	AA	458	U
1	AA	459	A
1	AA	462	G
1	AA	463	U
1	AA	465	A
1	AA	466	A
1	AA	467	U
1	AA	468	A
1	AA	474	G
1	AA	479	U
1	AA	481	G
1	AA	482	A
1	AA	485	U
1	AA	486	U
1	AA	491	G

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Mol	Chain	Res	Type
1	AA	492	C
1	AA	495	A
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	547	A
1	AA	559	A
1	AA	562	U
1	AA	564	C
1	AA	570	G
1	AA	572	A
1	AA	573	A
1	AA	576	C
1	AA	615	G
1	AA	650	G
1	AA	653	U
1	AA	661	G
1	AA	665	A
1	AA	671	G
1	AA	702	A
1	AA	703	G
1	AA	720	C
1	AA	721	G
1	AA	723	U
1	AA	724	G
1	AA	731	G
1	AA	733	G
1	AA	753	A
1	AA	755	G
1	AA	766	A
1	AA	772	U
1	AA	773	G
1	AA	777	A
1	AA	778	G
1	AA	792	A
1	AA	793	U
1	AA	794	A

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Mol	Chain	Res	Type
1	AA	815	A
1	AA	817	C
1	AA	828	U
1	AA	829	G
1	AA	841	C
1	AA	842	U
1	AA	843	U
1	AA	845	A
1	AA	846	G
1	AA	849	G
1	AA	859	G
1	AA	860	A
1	AA	870	U
1	AA	910	C
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	932	C
1	AA	934	C
1	AA	935	A
1	AA	938	A
1	AA	960	U
1	AA	963	G
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	988	G
1	AA	989	U
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	995	C
1	AA	1002	G
1	AA	1004	A

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Mol	Chain	Res	Type
1	AA	1007	U
1	AA	1008	U
1	AA	1009	U
1	AA	1016	A
1	AA	1017	U
1	AA	1024	G
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	1035	A
1	AA	1036	A
1	AA	1037	C
1	AA	1039	G
1	AA	1042	A
1	AA	1043	G
1	AA	1044	A
1	AA	1047	G
1	AA	1049	U
1	AA	1050	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	1069	C
1	AA	1086	U
1	AA	1089	G
1	AA	1094	G
1	AA	1098	C
1	AA	1101	A
1	AA	1103	C
1	AA	1104	G
1	AA	1124	G
1	AA	1125	U
1	AA	1127	G

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Mol	Chain	Res	Type
1	AA	1133	G
1	AA	1135	U
1	AA	1136	C
1	AA	1137	C
1	AA	1139	G
1	AA	1140	C
1	AA	1141	C
1	AA	1142	G
1	AA	1145	A
1	AA	1146	A
1	AA	1152	A
1	AA	1154	G
1	AA	1159	U
1	AA	1160	G
1	AA	1161	C
1	AA	1168	U
1	AA	1169	A
1	AA	1171	A
1	AA	1181	G
1	AA	1182	G
1	AA	1183	U
1	AA	1184	G
1	AA	1188	A
1	AA	1196	A
1	AA	1197	A
1	AA	1202	U
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1227	A
1	AA	1228	C
1	AA	1238	A
1	AA	1239	A
1	AA	1240	U
1	AA	1253	G
1	AA	1256	A
1	AA	1257	A
1	AA	1260	G
1	AA	1280	A
1	AA	1281	C
1	AA	1286	U
1	AA	1287	A

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Mol	Chain	Res	Type
1	AA	1293	C
1	AA	1299	A
1	AA	1300	G
1	AA	1302	C
1	AA	1304	G
1	AA	1305	G
1	AA	1317	C
1	AA	1318	A
1	AA	1319	A
1	AA	1320	C
1	AA	1321	U
1	AA	1322	C
1	AA	1323	G
1	AA	1325	C
1	AA	1328	C
1	AA	1329	A
1	AA	1332	A
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	1368	A
1	AA	1370	G
1	AA	1378	C
1	AA	1379	G
1	AA	1398	A
1	AA	1401	G
1	AA	1418	A
1	AA	1419	G
1	AA	1425	U
1	AA	1426	G
1	AA	1429	A
1	AA	1430	A
1	AA	1441	A
1	AA	1442	G
1	AA	1446	A
1	AA	1452	C
1	AA	1453	G
1	AA	1454	G
1	AA	1493	A

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Mol	Chain	Res	Type
1	AA	1497	G
1	AA	1499	A
1	AA	1503	A
1	AA	1505	G
1	AA	1506	U
1	AA	1517	G
1	AA	1526	G
1	AA	1529	G
1	AA	1530	G
1	AA	1533	C
1	AA	1534	A
1	AA	1535	C
1	AA	1539	C
22	BA	10	A
22	BA	12	U
22	BA	13	A
22	BA	19	A
22	BA	23	G
22	BA	26	G
22	BA	31	C
22	BA	34	U
22	BA	35	G
22	BA	46	G
22	BA	58	G
22	BA	61	C
22	BA	63	A
22	BA	71	A
22	BA	72	U
22	BA	74	A
22	BA	75	G
22	BA	87	U
22	BA	98	G
22	BA	101	A
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	137	U
22	BA	138	U
22	BA	139	U

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Mol	Chain	Res	Type
22	BA	140	C
22	BA	141	G
22	BA	142	A
22	BA	143	C
22	BA	148	U
22	BA	158	U
22	BA	180	G
22	BA	181	A
22	BA	196	A
22	BA	200	U
22	BA	207	A
22	BA	208	C
22	BA	215	G
22	BA	216	A
22	BA	221	A
22	BA	222	A
22	BA	248	G
22	BA	255	A
22	BA	265	A
22	BA	266	G
22	BA	267	C
22	BA	272	A
22	BA	273	G
22	BA	276	U
22	BA	277	G
22	BA	278	A
22	BA	279	A
22	BA	302	C
22	BA	310	A
22	BA	311	A
22	BA	329	G
22	BA	330	A
22	BA	331	C
22	BA	339	U
22	BA	343	C
22	BA	353	C
22	BA	359	G
22	BA	361	G
22	BA	362	A
22	BA	371	A
22	BA	372	G
22	BA	386	G

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Mol	Chain	Res	Type
22	BA	389	G
22	BA	404	A
22	BA	405	U
22	BA	406	G
22	BA	411	G
22	BA	424	G
22	BA	429	A
22	BA	443	A
22	BA	451	U
22	BA	455	C
22	BA	457	A
22	BA	479	A
22	BA	480	A
22	BA	481	G
22	BA	489	G
22	BA	491	G
22	BA	504	A
22	BA	505	A
22	BA	508	A
22	BA	509	C
22	BA	514	A
22	BA	528	A
22	BA	531	C
22	BA	532	A
22	BA	533	G
22	BA	538	A
22	BA	543	G
22	BA	544	C
22	BA	546	U
22	BA	547	A
22	BA	548	G
22	BA	549	G
22	BA	550	C
22	BA	557	C
22	BA	560	C
22	BA	563	A
22	BA	571	U
22	BA	573	U
22	BA	575	A
22	BA	576	U
22	BA	581	C
22	BA	585	G

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Mol	Chain	Res	Type
22	BA	586	A
22	BA	603	A
22	BA	613	A
22	BA	614	A
22	BA	615	U
22	BA	618	G
22	BA	622	G
22	BA	627	A
22	BA	631	A
22	BA	637	A
22	BA	644	A
22	BA	645	C
22	BA	647	G
22	BA	648	G
22	BA	654	A
22	BA	655	A
22	BA	668	A
22	BA	670	A
22	BA	671	C
22	BA	686	U
22	BA	702	U
22	BA	713	G
22	BA	716	A
22	BA	730	A
22	BA	731	C
22	BA	738	G
22	BA	740	C
22	BA	744	U
22	BA	747	U
22	BA	756	A
22	BA	757	G
22	BA	762	U
22	BA	765	C
22	BA	769	U
22	BA	775	G
22	BA	776	G
22	BA	778	G
22	BA	782	A
22	BA	784	G
22	BA	785	G
22	BA	791	C
22	BA	792	A

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Mol	Chain	Res	Type
22	BA	801	G
22	BA	805	G
22	BA	806	C
22	BA	812	C
22	BA	819	A
22	BA	827	U
22	BA	828	U
22	BA	831	G
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	861	A
22	BA	866	A
22	BA	869	G
22	BA	878	A
22	BA	879	G
22	BA	885	C
22	BA	896	A
22	BA	900	A
22	BA	910	A
22	BA	913	U
22	BA	914	G
22	BA	915	C
22	BA	919	U
22	BA	932	U
22	BA	941	A
22	BA	946	C
22	BA	961	C
22	BA	974	G
22	BA	983	A
22	BA	984	A
22	BA	985	C
22	BA	990	A
22	BA	991	C
22	BA	992	C
22	BA	995	C
22	BA	996	A
22	BA	997	G
22	BA	999	U

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Mol	Chain	Res	Type
22	BA	1005	C
22	BA	1012	U
22	BA	1013	C
22	BA	1023	U
22	BA	1024	G
22	BA	1026	G
22	BA	1033	U
22	BA	1046	A
22	BA	1047	G
22	BA	1051	G
22	BA	1057	A
22	BA	1061	U
22	BA	1062	G
22	BA	1066	U
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	1081	U
22	BA	1087	G
22	BA	1088	A
22	BA	1089	A
22	BA	1092	C
22	BA	1098	A
22	BA	1099	G
22	BA	1100	C
22	BA	1101	U
22	BA	1104	C
22	BA	1106	G
22	BA	1112	G
22	BA	1132	U
22	BA	1133	A
22	BA	1135	C
22	BA	1136	G
22	BA	1138	G
22	BA	1139	G
22	BA	1141	U
22	BA	1142	A
22	BA	1145	C

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Mol	Chain	Res	Type
22	BA	1150	C
22	BA	1168	G
22	BA	1170	C
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	1185	G
22	BA	1186	G
22	BA	1187	G
22	BA	1205	A
22	BA	1211	C
22	BA	1212	G
22	BA	1222	U
22	BA	1238	G
22	BA	1247	A
22	BA	1249	U
22	BA	1252	G
22	BA	1253	A
22	BA	1255	U
22	BA	1256	G
22	BA	1258	U
22	BA	1265	A
22	BA	1266	G
22	BA	1271	G
22	BA	1272	A
22	BA	1273	U
22	BA	1300	G
22	BA	1301	A
22	BA	1303	G
22	BA	1305	C
22	BA	1311	G
22	BA	1321	A
22	BA	1325	U
22	BA	1329	U
22	BA	1332	G

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Mol	Chain	Res	Type
22	BA	1345	C
22	BA	1352	U
22	BA	1359	A
22	BA	1365	A
22	BA	1367	A
22	BA	1368	G
22	BA	1370	C
22	BA	1374	G
22	BA	1378	A
22	BA	1379	U
22	BA	1380	G
22	BA	1383	A
22	BA	1386	C
22	BA	1407	G
22	BA	1416	G
22	BA	1419	A
22	BA	1420	A
22	BA	1428	C
22	BA	1435	G
22	BA	1450	G
22	BA	1452	G
22	BA	1453	A
22	BA	1460	U
22	BA	1461	C
22	BA	1482	G
22	BA	1483	G
22	BA	1493	C
22	BA	1494	A
22	BA	1495	A
22	BA	1504	A
22	BA	1508	A
22	BA	1509	A
22	BA	1510	G
22	BA	1515	A
22	BA	1523	U
22	BA	1528	A
22	BA	1529	G
22	BA	1532	A
22	BA	1533	C
22	BA	1534	U
22	BA	1535	A
22	BA	1536	C

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Mol	Chain	Res	Type
22	BA	1554	U
22	BA	1558	C
22	BA	1561	C
22	BA	1566	A
22	BA	1569	A
22	BA	1575	C
22	BA	1576	U
22	BA	1578	U
22	BA	1582	C
22	BA	1583	A
22	BA	1584	U
22	BA	1585	C
22	BA	1597	A
22	BA	1607	C
22	BA	1608	A
22	BA	1609	A
22	BA	1610	A
22	BA	1616	A
22	BA	1619	G
22	BA	1632	A
22	BA	1634	A
22	BA	1646	C
22	BA	1647	U
22	BA	1648	U
22	BA	1649	G
22	BA	1651	G
22	BA	1652	A
22	BA	1674	G
22	BA	1677	A
22	BA	1695	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	1738	G
22	BA	1739	A
22	BA	1744	A
22	BA	1755	A
22	BA	1758	U

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Mol	Chain	Res	Type
22	BA	1764	C
22	BA	1773	A
22	BA	1782	U
22	BA	1786	A
22	BA	1800	C
22	BA	1801	A
22	BA	1802	A
22	BA	1804	C
22	BA	1806	C
22	BA	1808	A
22	BA	1813	G
22	BA	1816	C
22	BA	1828	G
22	BA	1829	A
22	BA	1842	G
22	BA	1844	C
22	BA	1859	U
22	BA	1865	U
22	BA	1870	C
22	BA	1873	G
22	BA	1876	A
22	BA	1884	G
22	BA	1885	A
22	BA	1897	G
22	BA	1902	C
22	BA	1906	G
22	BA	1909	C
22	BA	1910	G
22	BA	1911	U
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	1920	C
22	BA	1921	G
22	BA	1923	U
22	BA	1925	C
22	BA	1926	U
22	BA	1927	A
22	BA	1929	G

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Mol	Chain	Res	Type
22	BA	1930	G
22	BA	1931	U
22	BA	1932	A
22	BA	1935	G
22	BA	1936	A
22	BA	1937	A
22	BA	1938	A
22	BA	1944	U
22	BA	1951	U
22	BA	1955	U
22	BA	1960	A
22	BA	1965	C
22	BA	1967	C
22	BA	1970	A
22	BA	1972	G
22	BA	1983	G
22	BA	1986	C
22	BA	1991	U
22	BA	1993	U
22	BA	1997	C
22	BA	2001	C
22	BA	2008	C
22	BA	2009	A
22	BA	2021	C
22	BA	2022	U
22	BA	2023	C
22	BA	2031	A
22	BA	2032	G
22	BA	2033	A
22	BA	2035	G
22	BA	2043	C
22	BA	2051	A
22	BA	2053	G
22	BA	2054	A
22	BA	2055	C
22	BA	2056	G
22	BA	2059	A
22	BA	2060	A
22	BA	2061	G
22	BA	2062	A
22	BA	2063	C
22	BA	2064	C

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Mol	Chain	Res	Type
22	BA	2066	C
22	BA	2067	G
22	BA	2069	G
22	BA	2072	C
22	BA	2077	A
22	BA	2092	U
22	BA	2093	G
22	BA	2096	C
22	BA	2101	A
22	BA	2102	G
22	BA	2107	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	2128	G
22	BA	2132	U
22	BA	2133	G
22	BA	2136	G
22	BA	2145	C
22	BA	2147	A
22	BA	2148	G
22	BA	2149	U
22	BA	2157	G
22	BA	2158	A
22	BA	2159	G
22	BA	2162	G
22	BA	2164	C
22	BA	2165	C
22	BA	2167	U
22	BA	2169	A
22	BA	2170	A
22	BA	2171	A
22	BA	2172	U

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Mol	Chain	Res	Type
22	BA	2173	A
22	BA	2178	C
22	BA	2179	C
22	BA	2183	A
22	BA	2187	U
22	BA	2188	U
22	BA	2190	G
22	BA	2195	U
22	BA	2198	A
22	BA	2203	U
22	BA	2204	G
22	BA	2211	A
22	BA	2212	A
22	BA	2214	C
22	BA	2220	U
22	BA	2225	A
22	BA	2226	C
22	BA	2238	G
22	BA	2239	G
22	BA	2242	G
22	BA	2243	U
22	BA	2258	C
22	BA	2267	A
22	BA	2268	A
22	BA	2278	A
22	BA	2280	G
22	BA	2283	C
22	BA	2286	G
22	BA	2287	A
22	BA	2296	U
22	BA	2297	A
22	BA	2305	U
22	BA	2308	G
22	BA	2311	A
22	BA	2312	U
22	BA	2322	A
22	BA	2325	G
22	BA	2326	C
22	BA	2327	A
22	BA	2331	G
22	BA	2333	A
22	BA	2335	A

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Mol	Chain	Res	Type
22	BA	2340	A
22	BA	2345	G
22	BA	2347	C
22	BA	2350	C
22	BA	2354	C
22	BA	2357	G
22	BA	2361	G
22	BA	2376	A
22	BA	2383	G
22	BA	2385	C
22	BA	2389	G
22	BA	2391	G
22	BA	2392	A
22	BA	2393	U
22	BA	2396	G
22	BA	2402	U
22	BA	2403	C
22	BA	2406	A
22	BA	2410	G
22	BA	2412	A
22	BA	2421	G
22	BA	2422	C
22	BA	2424	C
22	BA	2425	A
22	BA	2426	A
22	BA	2429	G
22	BA	2430	A
22	BA	2431	U
22	BA	2435	A
22	BA	2441	U
22	BA	2443	C
22	BA	2448	A
22	BA	2465	C
22	BA	2474	U
22	BA	2476	A
22	BA	2478	A
22	BA	2491	U
22	BA	2496	C
22	BA	2497	A
22	BA	2498	C
22	BA	2499	C
22	BA	2500	U

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Mol	Chain	Res	Type
22	BA	2502	G
22	BA	2503	A
22	BA	2504	U
22	BA	2505	G
22	BA	2506	U
22	BA	2516	A
22	BA	2518	A
22	BA	2520	C
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	2572	A
22	BA	2573	C
22	BA	2574	G
22	BA	2578	G
22	BA	2584	U
22	BA	2599	G
22	BA	2601	C
22	BA	2602	A
22	BA	2603	G
22	BA	2609	U
22	BA	2613	U
22	BA	2627	G
22	BA	2629	U
22	BA	2662	A
22	BA	2685	G
22	BA	2689	U
22	BA	2690	U
22	BA	2700	A
22	BA	2702	G
22	BA	2714	G
22	BA	2721	A
22	BA	2725	A
22	BA	2726	A
22	BA	2729	G
22	BA	2733	A
22	BA	2748	A
22	BA	2751	G
22	BA	2752	C

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Mol	Chain	Res	Type
22	BA	2756	U
22	BA	2757	A
22	BA	2778	A
22	BA	2791	G
22	BA	2792	A
22	BA	2798	U
22	BA	2799	A
22	BA	2800	A
22	BA	2811	G
22	BA	2818	U
22	BA	2820	A
22	BA	2821	A
22	BA	2827	C
22	BA	2836	U
22	BA	2837	A
22	BA	2858	C
22	BA	2862	G
22	BA	2867	G
22	BA	2873	A
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	2903	U
23	BB	2	G
23	BB	4	C
23	BB	9	G
23	BB	13	G
23	BB	15	A
23	BB	16	G
23	BB	25	U
23	BB	35	C
23	BB	36	C
23	BB	37	C
23	BB	41	G
23	BB	44	G
23	BB	56	G
23	BB	66	A
23	BB	89	U
23	BB	90	C

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Mol	Chain	Res	Type
23	BB	91	C
23	BB	98	G
23	BB	99	A
23	BB	109	A
23	BB	119	A
1	CA	5	U
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	67	C
1	CA	68	G
1	CA	70	U
1	CA	71	A
1	CA	74	A
1	CA	81	A
1	CA	83	C
1	CA	84	U
1	CA	85	U
1	CA	87	C
1	CA	88	U
1	CA	91	U
1	CA	94	G
1	CA	95	C
1	CA	108	G
1	CA	116	A
1	CA	120	A
1	CA	121	U
1	CA	122	G
1	CA	129	A
1	CA	130	A
1	CA	131	A
1	CA	137	U
1	CA	142	G
1	CA	143	A
1	CA	144	G

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Mol	Chain	Res	Type
1	CA	154	U
1	CA	155	A
1	CA	159	G
1	CA	163	C
1	CA	181	A
1	CA	182	A
1	CA	183	C
1	CA	184	G
1	CA	187	G
1	CA	189	A
1	CA	197	A
1	CA	200	G
1	CA	201	G
1	CA	204	G
1	CA	206	C
1	CA	207	C
1	CA	208	U
1	CA	210	C
1	CA	211	G
1	CA	212	G
1	CA	240	G
1	CA	241	G
1	CA	245	U
1	CA	247	G
1	CA	249	U
1	CA	251	G
1	CA	266	G
1	CA	267	C
1	CA	269	C
1	CA	280	C
1	CA	289	G
1	CA	298	A
1	CA	308	C
1	CA	309	A
1	CA	320	A
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	330	C
1	CA	332	G
1	CA	333	U
1	CA	337	G

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Mol	Chain	Res	Type
1	CA	347	G
1	CA	352	C
1	CA	354	G
1	CA	357	G
1	CA	358	U
1	CA	359	G
1	CA	367	U
1	CA	370	C
1	CA	372	C
1	CA	373	A
1	CA	377	G
1	CA	378	G
1	CA	384	G
1	CA	389	A
1	CA	398	U
1	CA	399	G
1	CA	406	G
1	CA	409	U
1	CA	411	A
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	421	U
1	CA	422	C
1	CA	424	G
1	CA	429	U
1	CA	430	A
1	CA	458	U
1	CA	459	A
1	CA	463	U
1	CA	466	A
1	CA	467	U
1	CA	468	A
1	CA	469	C
1	CA	474	G
1	CA	477	C
1	CA	478	A
1	CA	479	U
1	CA	481	G
1	CA	482	A
1	CA	484	G
1	CA	485	U

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Mol	Chain	Res	Type
1	CA	486	U
1	CA	495	A
1	CA	498	A
1	CA	499	A
1	CA	509	A
1	CA	511	C
1	CA	518	C
1	CA	519	C
1	CA	524	G
1	CA	527	G
1	CA	532	A
1	CA	533	A
1	CA	545	C
1	CA	547	A
1	CA	550	G
1	CA	559	A
1	CA	564	C
1	CA	568	G
1	CA	572	A
1	CA	573	A
1	CA	576	C
1	CA	577	G
1	CA	581	G
1	CA	582	C
1	CA	619	U
1	CA	622	A
1	CA	650	G
1	CA	653	U
1	CA	654	G
1	CA	665	A
1	CA	666	G
1	CA	687	A
1	CA	695	A
1	CA	719	C
1	CA	720	C
1	CA	721	G
1	CA	723	U
1	CA	724	G
1	CA	731	G
1	CA	734	G
1	CA	747	A
1	CA	752	G

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Mol	Chain	Res	Type
1	CA	754	C
1	CA	755	G
1	CA	758	C
1	CA	765	G
1	CA	777	A
1	CA	778	G
1	CA	785	G
1	CA	793	U
1	CA	794	A
1	CA	802	A
1	CA	804	U
1	CA	809	G
1	CA	814	A
1	CA	815	A
1	CA	817	C
1	CA	821	G
1	CA	827	U
1	CA	828	U
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	874	G
1	CA	876	C
1	CA	914	A
1	CA	922	G
1	CA	926	G
1	CA	931	C
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	966	G
1	CA	969	A
1	CA	971	G
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	983	A
1	CA	987	G
1	CA	989	U

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Mol	Chain	Res	Type
1	CA	993	G
1	CA	994	A
1	CA	995	C
1	CA	996	A
1	CA	1004	A
1	CA	1005	A
1	CA	1008	U
1	CA	1009	U
1	CA	1017	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	1047	G
1	CA	1050	G
1	CA	1054	C
1	CA	1055	A
1	CA	1056	U
1	CA	1065	U
1	CA	1072	G
1	CA	1073	U
1	CA	1084	G
1	CA	1086	U
1	CA	1088	G
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1124	G
1	CA	1125	U
1	CA	1129	C
1	CA	1132	C

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Mol	Chain	Res	Type
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	1156	G
1	CA	1157	A
1	CA	1159	U
1	CA	1160	G
1	CA	1161	C
1	CA	1167	A
1	CA	1183	U
1	CA	1184	G
1	CA	1192	C
1	CA	1196	A
1	CA	1202	U
1	CA	1203	C
1	CA	1212	U
1	CA	1213	A
1	CA	1227	A
1	CA	1238	A
1	CA	1240	U
1	CA	1243	C
1	CA	1253	G
1	CA	1260	G
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	1299	A
1	CA	1300	G
1	CA	1302	C
1	CA	1304	G

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Mol	Chain	Res	Type
1	CA	1305	G
1	CA	1317	C
1	CA	1318	A
1	CA	1322	C
1	CA	1324	A
1	CA	1331	G
1	CA	1337	G
1	CA	1338	G
1	CA	1346	A
1	CA	1362	A
1	CA	1363	A
1	CA	1364	U
1	CA	1370	G
1	CA	1377	A
1	CA	1378	C
1	CA	1379	G
1	CA	1394	A
1	CA	1398	A
1	CA	1419	G
1	CA	1440	U
1	CA	1441	A
1	CA	1442	G
1	CA	1446	A
1	CA	1452	C
1	CA	1454	G
1	CA	1480	A
1	CA	1491	G
1	CA	1492	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	1528	U
1	CA	1529	G
1	CA	1530	G
1	CA	1531	A
1	CA	1533	C
1	CA	1535	C
1	CA	1537	U

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Mol	Chain	Res	Type
22	DA	10	A
22	DA	12	U
22	DA	15	G
22	DA	30	G
22	DA	31	C
22	DA	34	U
22	DA	41	C
22	DA	42	A
22	DA	46	G
22	DA	55	G
22	DA	57	C
22	DA	58	G
22	DA	61	C
22	DA	71	A
22	DA	73	A
22	DA	74	A
22	DA	75	G
22	DA	82	U
22	DA	84	A
22	DA	91	A
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	128	C
22	DA	138	U
22	DA	139	U
22	DA	140	C
22	DA	141	G
22	DA	142	A
22	DA	149	A
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	197	A
22	DA	199	A
22	DA	206	U

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Mol	Chain	Res	Type
22	DA	212	G
22	DA	215	G
22	DA	216	A
22	DA	222	A
22	DA	223	A
22	DA	225	C
22	DA	248	G
22	DA	249	C
22	DA	250	G
22	DA	255	A
22	DA	264	C
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	280	U
22	DA	281	C
22	DA	285	G
22	DA	294	A
22	DA	299	A
22	DA	311	A
22	DA	329	G
22	DA	330	A
22	DA	350	G
22	DA	353	C
22	DA	354	A
22	DA	361	G
22	DA	362	A
22	DA	367	G
22	DA	371	A
22	DA	372	G
22	DA	385	C
22	DA	386	G
22	DA	396	G
22	DA	399	U
22	DA	405	U
22	DA	411	G
22	DA	412	A
22	DA	417	C
22	DA	424	G

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Mol	Chain	Res	Type
22	DA	447	A
22	DA	449	A
22	DA	451	U
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	509	C
22	DA	510	C
22	DA	511	U
22	DA	526	A
22	DA	529	A
22	DA	531	C
22	DA	532	A
22	DA	533	G
22	DA	538	A
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	573	U
22	DA	575	A
22	DA	586	A
22	DA	587	C
22	DA	593	U
22	DA	603	A
22	DA	613	A
22	DA	615	U
22	DA	622	G
22	DA	627	A
22	DA	630	G
22	DA	631	A

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Mol	Chain	Res	Type
22	DA	637	A
22	DA	641	U
22	DA	642	U
22	DA	645	C
22	DA	646	U
22	DA	647	G
22	DA	648	G
22	DA	654	A
22	DA	655	A
22	DA	656	G
22	DA	663	G
22	DA	664	G
22	DA	676	A
22	DA	686	U
22	DA	695	G
22	DA	702	U
22	DA	715	A
22	DA	717	C
22	DA	726	G
22	DA	727	A
22	DA	728	G
22	DA	729	G
22	DA	730	A
22	DA	740	C
22	DA	746	U
22	DA	747	U
22	DA	749	A
22	DA	751	A
22	DA	752	A
22	DA	755	U
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	802	A
22	DA	805	G
22	DA	812	C
22	DA	819	A
22	DA	820	A

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Mol	Chain	Res	Type
22	DA	827	U
22	DA	828	U
22	DA	829	A
22	DA	830	G
22	DA	845	A
22	DA	846	U
22	DA	847	U
22	DA	858	G
22	DA	859	G
22	DA	878	A
22	DA	880	G
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	910	A
22	DA	914	G
22	DA	915	C
22	DA	931	U
22	DA	932	U
22	DA	934	U
22	DA	941	A
22	DA	946	C
22	DA	953	G
22	DA	961	C
22	DA	974	G
22	DA	982	C
22	DA	983	A
22	DA	995	C
22	DA	996	A
22	DA	997	G
22	DA	998	C
22	DA	1005	C
22	DA	1012	U
22	DA	1013	C
22	DA	1022	G
22	DA	1023	U
22	DA	1025	G
22	DA	1026	G
22	DA	1033	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	DA	1041	G
22	DA	1046	A
22	DA	1047	G
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	1067	A
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	1090	A
22	DA	1092	C
22	DA	1094	U
22	DA	1097	U
22	DA	1098	A
22	DA	1100	C
22	DA	1104	C
22	DA	1105	U
22	DA	1110	G
22	DA	1111	A
22	DA	1112	G
22	DA	1119	U
22	DA	1122	G
22	DA	1128	G
22	DA	1132	U
22	DA	1133	A
22	DA	1135	C
22	DA	1136	G
22	DA	1139	G
22	DA	1141	U

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Mol	Chain	Res	Type
22	DA	1142	A
22	DA	1153	C
22	DA	1155	A
22	DA	1156	A
22	DA	1168	G
22	DA	1171	G
22	DA	1172	C
22	DA	1173	U
22	DA	1175	A
22	DA	1176	U
22	DA	1178	C
22	DA	1179	G
22	DA	1180	U
22	DA	1186	G
22	DA	1197	G
22	DA	1205	A
22	DA	1208	C
22	DA	1212	G
22	DA	1221	C
22	DA	1230	A
22	DA	1231	U
22	DA	1232	G
22	DA	1236	G
22	DA	1238	G
22	DA	1241	A
22	DA	1253	A
22	DA	1255	U
22	DA	1256	G
22	DA	1257	C
22	DA	1262	A
22	DA	1264	A
22	DA	1266	G
22	DA	1269	A
22	DA	1271	G
22	DA	1272	A
22	DA	1275	A
22	DA	1276	A
22	DA	1300	G
22	DA	1301	A
22	DA	1305	C
22	DA	1318	U
22	DA	1325	U

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Mol	Chain	Res	Type
22	DA	1345	C
22	DA	1352	U
22	DA	1355	G
22	DA	1359	A
22	DA	1365	A
22	DA	1376	C
22	DA	1378	A
22	DA	1379	U
22	DA	1380	G
22	DA	1383	A
22	DA	1386	C
22	DA	1387	A
22	DA	1390	U
22	DA	1391	U
22	DA	1395	A
22	DA	1411	U
22	DA	1414	C
22	DA	1416	G
22	DA	1419	A
22	DA	1420	A
22	DA	1423	G
22	DA	1426	G
22	DA	1428	C
22	DA	1434	A
22	DA	1436	G
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	1493	C
22	DA	1495	A
22	DA	1504	A
22	DA	1509	A
22	DA	1510	G
22	DA	1515	A
22	DA	1523	U
22	DA	1527	G
22	DA	1530	G

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Mol	Chain	Res	Type
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	1565	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	1603	A
22	DA	1604	C
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	1623	G
22	DA	1625	C
22	DA	1639	C
22	DA	1646	C
22	DA	1647	U
22	DA	1648	U
22	DA	1649	G
22	DA	1651	G
22	DA	1660	G
22	DA	1664	A
22	DA	1665	A
22	DA	1674	G
22	DA	1690	A
22	DA	1694	C
22	DA	1705	A
22	DA	1714	U
22	DA	1715	G

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Mol	Chain	Res	Type
22	DA	1728	C
22	DA	1729	U
22	DA	1730	C
22	DA	1731	G
22	DA	1732	C
22	DA	1735	A
22	DA	1738	G
22	DA	1739	A
22	DA	1740	G
22	DA	1744	A
22	DA	1756	G
22	DA	1758	U
22	DA	1764	C
22	DA	1773	A
22	DA	1774	C
22	DA	1776	G
22	DA	1782	U
22	DA	1800	C
22	DA	1801	A
22	DA	1802	A
22	DA	1808	A
22	DA	1811	G
22	DA	1816	C
22	DA	1823	G
22	DA	1829	A
22	DA	1847	A
22	DA	1848	A
22	DA	1858	A
22	DA	1859	U
22	DA	1869	G
22	DA	1870	C
22	DA	1871	A
22	DA	1874	C
22	DA	1876	A
22	DA	1880	U
22	DA	1884	G
22	DA	1893	C
22	DA	1903	G
22	DA	1906	G
22	DA	1907	G
22	DA	1913	A
22	DA	1914	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	DA	1927	A
22	DA	1929	G
22	DA	1930	G
22	DA	1935	G
22	DA	1937	A
22	DA	1947	C
22	DA	1955	U
22	DA	1961	C
22	DA	1964	G
22	DA	1965	C
22	DA	1967	C
22	DA	1970	A
22	DA	1971	U
22	DA	1972	G
22	DA	1975	G
22	DA	1991	U
22	DA	1992	G
22	DA	1993	U
22	DA	1997	C
22	DA	2020	A
22	DA	2021	C
22	DA	2022	U
22	DA	2023	C
22	DA	2030	A
22	DA	2031	A
22	DA	2033	A
22	DA	2043	C
22	DA	2055	C
22	DA	2056	G
22	DA	2060	A
22	DA	2061	G
22	DA	2062	A
22	DA	2069	G
22	DA	2072	C
22	DA	2073	C
22	DA	2080	A
22	DA	2083	G
22	DA	2092	U
22	DA	2093	G
22	DA	2095	A
22	DA	2102	G
22	DA	2103	C

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Mol	Chain	Res	Type
22	DA	2107	G
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	2169	A
22	DA	2170	A
22	DA	2171	A
22	DA	2172	U
22	DA	2173	A
22	DA	2177	C
22	DA	2178	C
22	DA	2181	U
22	DA	2184	A
22	DA	2189	U
22	DA	2190	G
22	DA	2194	U
22	DA	2198	A
22	DA	2203	U

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Mol	Chain	Res	Type
22	DA	2204	G
22	DA	2211	A
22	DA	2212	A
22	DA	2225	A
22	DA	2226	C
22	DA	2230	G
22	DA	2238	G
22	DA	2239	G
22	DA	2241	A
22	DA	2242	G
22	DA	2243	U
22	DA	2268	A
22	DA	2269	G
22	DA	2273	A
22	DA	2278	A
22	DA	2280	G
22	DA	2283	C
22	DA	2287	A
22	DA	2297	A
22	DA	2305	U
22	DA	2307	G
22	DA	2308	G
22	DA	2309	A
22	DA	2311	A
22	DA	2312	U
22	DA	2320	U
22	DA	2322	A
22	DA	2324	U
22	DA	2325	G
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	2356	U
22	DA	2357	G
22	DA	2361	G
22	DA	2383	G
22	DA	2385	C
22	DA	2402	U
22	DA	2403	C

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Mol	Chain	Res	Type
22	DA	2406	A
22	DA	2407	A
22	DA	2410	G
22	DA	2423	U
22	DA	2424	C
22	DA	2425	A
22	DA	2426	A
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	2447	G
22	DA	2448	A
22	DA	2449	U
22	DA	2455	G
22	DA	2476	A
22	DA	2484	G
22	DA	2491	U
22	DA	2498	C
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
22	DA	2534	A
22	DA	2535	G
22	DA	2547	A
22	DA	2554	U
22	DA	2566	A
22	DA	2567	G
22	DA	2572	A
22	DA	2573	C
22	DA	2580	U
22	DA	2581	G
22	DA	2582	G
22	DA	2585	U
22	DA	2586	U
22	DA	2589	A

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Mol	Chain	Res	Type
22	DA	2600	A
22	DA	2602	A
22	DA	2603	G
22	DA	2606	C
22	DA	2609	U
22	DA	2613	U
22	DA	2614	A
22	DA	2615	U
22	DA	2624	G
22	DA	2629	U
22	DA	2630	G
22	DA	2646	C
22	DA	2663	G
22	DA	2682	A
22	DA	2689	U
22	DA	2690	U
22	DA	2703	C
22	DA	2714	G
22	DA	2716	C
22	DA	2718	G
22	DA	2726	A
22	DA	2729	G
22	DA	2748	A
22	DA	2757	A
22	DA	2758	A
22	DA	2764	A
22	DA	2765	A
22	DA	2768	U
22	DA	2770	G
22	DA	2778	A
22	DA	2791	G
22	DA	2794	C
22	DA	2798	U
22	DA	2799	A
22	DA	2818	U
22	DA	2820	A
22	DA	2826	A
22	DA	2833	U
22	DA	2835	A
22	DA	2861	U
22	DA	2867	G
22	DA	2872	A

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Mol	Chain	Res	Type
22	DA	2873	A
22	DA	2879	A
22	DA	2880	C
22	DA	2883	A
22	DA	2891	U
22	DA	2894	G
22	DA	2901	C
23	DB	13	G
23	DB	15	A
23	DB	16	G
23	DB	22	U
23	DB	24	G
23	DB	25	U
23	DB	35	C
23	DB	36	C
23	DB	40	U
23	DB	44	G
23	DB	51	G
23	DB	54	G
23	DB	56	G
23	DB	58	A
23	DB	64	G
23	DB	66	A
23	DB	67	G
23	DB	73	A
23	DB	88	C
23	DB	89	U
23	DB	90	C
23	DB	91	C
23	DB	99	A
23	DB	105	G
23	DB	109	A

All (83) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	115	G
1	AA	148	G
1	AA	209	U
1	AA	351	G
1	AA	353	A
1	AA	429	U

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Mol	Chain	Res	Type
1	AA	653	U
1	AA	772	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	1533	C
22	BA	70	G
22	BA	196	A
22	BA	199	A
22	BA	271	G
22	BA	310	A
22	BA	404	A
22	BA	479	A
22	BA	585	G
22	BA	764	A
22	BA	800	A
22	BA	960	A
22	BA	984	A
22	BA	1185	G
22	BA	1344	U
22	BA	1378	A
22	BA	1494	A
22	BA	1606	C
22	BA	1610	A
22	BA	1738	G
22	BA	1757	A
22	BA	1875	G
22	BA	2062	A
22	BA	2127	G
22	BA	2211	A
22	BA	2282	G
22	BA	2286	G
22	BA	2324	U
22	BA	2326	C
22	BA	2425	A
22	BA	2873	A
1	CA	115	G
1	CA	209	U
1	CA	429	U

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Mol	Chain	Res	Type
1	CA	559	A
1	CA	733	G
1	CA	793	U
1	CA	1049	U
1	CA	1201	A
1	CA	1211	U
22	DA	60	G
22	DA	271	G
22	DA	404	A
22	DA	479	A
22	DA	503	A
22	DA	614	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	1738	G
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	2296	U
22	DA	2308	G
22	DA	2311	A
22	DA	2326	C
22	DA	2425	A
22	DA	2585	U
22	DA	2602	A
22	DA	2756	U

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

There are no non-standard protein/DNA/RNA residues in this entry.

## 5.5 Carbohydrates

There are no carbohydrates in this entry.

## 5.6 Ligand geometry

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	$\# Z  > 2$
55	VIF	BA	3001	-	35,40,40	2.57	13 (37%)	41,55,55	1.87	9 (21%)
55	VIF	DA	3001	-	35,40,40	2.53	11 (31%)	41,55,55	2.13	14 (34%)

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

All (24) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	DA	3001	VIF	F-C07	-6.39	1.25	1.41
55	BA	3001	VIF	F-C07	-6.01	1.26	1.41
55	BA	3001	VIF	O01-C06	-4.79	1.37	1.44
55	BA	3001	VIF	C11-C09	-4.52	1.43	1.53
55	BA	3001	VIF	O01-C08	-4.28	1.24	1.34
55	DA	3001	VIF	O01-C06	-4.18	1.38	1.44
55	DA	3001	VIF	C11-C09	-4.17	1.43	1.53
55	DA	3001	VIF	O04-C22	-4.03	1.35	1.43
55	DA	3001	VIF	O01-C08	-3.92	1.25	1.34
55	BA	3001	VIF	C09-N01	-3.73	1.39	1.47
55	DA	3001	VIF	C09-N01	-2.98	1.40	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	BA	3001	VIF	C09-C08	-2.95	1.46	1.52
55	BA	3001	VIF	O04-C22	-2.58	1.38	1.43
55	BA	3001	VIF	C13-N01	-2.48	1.42	1.47
55	DA	3001	VIF	C26-C05	-2.36	1.46	1.53
55	DA	3001	VIF	C23-N	-2.35	1.30	1.37
55	DA	3001	VIF	C13-N01	-2.30	1.43	1.47
55	BA	3001	VIF	C26-C05	-2.26	1.46	1.53
55	BA	3001	VIF	C23-N	-2.24	1.30	1.37
55	BA	3001	VIF	O-C03	-2.10	1.20	1.24
55	DA	3001	VIF	C03-N02	4.51	1.40	1.34
55	BA	3001	VIF	C03-N02	5.31	1.41	1.34
55	BA	3001	VIF	C15-N01	5.43	1.44	1.35
55	DA	3001	VIF	C15-N01	5.71	1.44	1.35

All (23) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	DA	3001	VIF	C17-N02-C03	-5.55	115.49	121.76
55	BA	3001	VIF	C18-C10-C20	-4.82	118.40	125.75
55	DA	3001	VIF	C18-C10-C20	-4.36	119.09	125.75
55	DA	3001	VIF	C17-C18-C10	-4.19	113.05	125.31
55	DA	3001	VIF	O-C03-N02	-4.06	117.31	122.53
55	BA	3001	VIF	C18-C17-N02	-3.38	100.43	112.49
55	DA	3001	VIF	C26-C05-C02	-2.84	103.11	110.07
55	BA	3001	VIF	C26-C05-C02	-2.73	103.38	110.07
55	BA	3001	VIF	C14-C22-C21	-2.69	106.66	112.17
55	DA	3001	VIF	C19-C-C16	-2.62	102.97	110.67
55	DA	3001	VIF	F-C07-C14	-2.17	104.82	108.73
55	DA	3001	VIF	O01-C08-O02	-2.12	119.53	123.89
55	DA	3001	VIF	C24-C20-C10	2.18	121.72	118.10
55	DA	3001	VIF	O01-C06-C05	2.20	110.83	107.08
55	BA	3001	VIF	C11-C09-N01	2.31	106.28	102.99
55	DA	3001	VIF	C26-C05-C06	2.35	115.56	111.08
55	DA	3001	VIF	C01-C03-N02	2.51	120.64	114.87
55	BA	3001	VIF	O04-C22-C21	3.09	115.89	108.98
55	BA	3001	VIF	C17-N02-C03	3.33	125.53	121.76
55	BA	3001	VIF	O01-C08-C09	3.63	118.43	110.56
55	DA	3001	VIF	O01-C08-C09	3.83	118.88	110.56
55	BA	3001	VIF	C06-O01-C08	4.23	125.39	118.01
55	DA	3001	VIF	C06-O01-C08	4.47	125.80	118.01

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

2 monomers are involved in 16 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
55	BA	3001	VIF	5	0
55	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 [i](#)

### 6.1 Protein, DNA and RNA chains [i](#)

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%)	-0.01	37 (2%) 62 57	13, 51, 135, 177	0
1	CA	1539/1539 (100%)	0.25	72 (4%) 35 29	27, 71, 143, 176	0
2	AB	218/218 (100%)	1.05	43 (19%) 1 1	40, 71, 99, 129	0
2	CB	218/218 (100%)	1.44	65 (29%) 1 0	57, 81, 107, 126	0
3	AC	206/206 (100%)	0.23	9 (4%) 38 32	36, 57, 81, 94	0
3	CC	206/206 (100%)	1.36	47 (22%) 1 0	53, 75, 93, 113	0
4	AD	205/205 (100%)	0.37	13 (6%) 23 17	33, 55, 79, 108	0
4	CD	205/205 (100%)	0.18	8 (3%) 43 36	21, 40, 74, 90	0
5	AE	150/150 (100%)	0.25	7 (4%) 35 29	28, 50, 82, 111	0
5	CE	150/150 (100%)	0.50	9 (6%) 25 18	33, 57, 84, 105	0
6	AF	100/100 (100%)	0.03	1 (1%) 84 82	33, 56, 75, 84	0
6	CF	100/100 (100%)	0.54	8 (8%) 15 10	47, 72, 95, 105	0
7	AG	151/151 (100%)	0.85	27 (17%) 2 1	49, 74, 98, 107	0
7	CG	151/151 (100%)	2.59	87 (57%) 0 0	77, 94, 106, 113	0
8	AH	129/129 (100%)	0.21	2 (1%) 74 72	29, 48, 71, 80	0
8	CH	129/129 (100%)	0.62	11 (8%) 13 8	47, 63, 82, 88	0
9	AI	127/127 (100%)	1.01	22 (17%) 2 1	45, 70, 95, 115	0
9	CI	127/127 (100%)	1.77	47 (37%) 0 0	68, 88, 106, 130	0
10	AJ	98/98 (100%)	0.89	16 (16%) 2 1	44, 64, 93, 121	0
10	CJ	98/98 (100%)	2.69	58 (59%) 0 0	68, 90, 109, 123	0
11	AK	117/117 (100%)	0.69	15 (12%) 5 3	27, 61, 87, 107	0
11	CK	117/117 (100%)	0.45	6 (5%) 32 25	37, 65, 83, 90	0
12	AL	123/123 (100%)	0.30	5 (4%) 41 34	24, 37, 71, 101	0
12	CL	123/123 (100%)	0.54	10 (8%) 15 9	38, 51, 79, 102	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	AM	114/114 (100%)	0.52	10 (8%) 12 8	46, 67, 90, 104	0
13	CM	114/114 (100%)	3.14	80 (70%) 0 0	84, 100, 114, 118	0
14	AN	96/100 (96%)	0.80	17 (17%) 2 1	41, 58, 92, 107	0
14	CN	96/100 (96%)	2.32	50 (52%) 0 0	64, 88, 107, 118	0
15	AO	88/88 (100%)	0.17	5 (5%) 27 21	31, 50, 66, 98	0
15	CO	88/88 (100%)	0.40	4 (4%) 37 31	39, 62, 84, 105	0
16	AP	82/82 (100%)	0.79	9 (10%) 7 4	33, 45, 80, 103	0
16	CP	82/82 (100%)	1.36	21 (25%) 1 0	44, 62, 89, 105	0
17	AQ	80/80 (100%)	0.56	6 (7%) 17 11	29, 54, 83, 123	0
17	CQ	80/80 (100%)	1.45	26 (32%) 1 0	41, 70, 96, 108	0
18	AR	55/55 (100%)	0.04	4 (7%) 18 12	37, 51, 76, 113	0
18	CR	55/55 (100%)	0.47	3 (5%) 29 22	39, 54, 82, 112	0
19	AS	79/79 (100%)	1.10	17 (21%) 1 0	46, 67, 92, 97	0
19	CS	79/79 (100%)	4.33	61 (77%) 0 0	82, 100, 113, 125	0
20	AT	85/85 (100%)	0.71	7 (8%) 14 9	33, 48, 72, 115	0
20	CT	85/85 (100%)	2.01	35 (41%) 0 0	53, 69, 91, 97	0
21	AU	51/51 (100%)	1.28	15 (29%) 1 0	45, 71, 92, 105	0
21	CU	51/51 (100%)	0.71	8 (15%) 3 1	42, 69, 92, 107	0
22	BA	2897/2903 (99%)	0.23	121 (4%) 40 33	2, 18, 128, 195	0
22	DA	2897/2903 (99%)	0.42	145 (5%) 32 26	44, 82, 142, 183	0
23	BB	119/119 (100%)	-0.25	0 100 100	5, 27, 53, 94	0
23	DB	118/119 (99%)	0.25	4 (3%) 49 41	68, 110, 132, 142	0
24	BC	271/271 (100%)	-0.04	1 (0%) 93 92	6, 24, 44, 62	0
24	DC	271/271 (100%)	0.95	43 (15%) 3 1	40, 61, 75, 83	0
25	BD	209/209 (100%)	-0.14	0 100 100	2, 14, 42, 69	0
25	DD	209/209 (100%)	1.06	40 (19%) 2 1	47, 65, 84, 98	0
26	BE	201/201 (100%)	-0.15	2 (0%) 84 82	4, 27, 55, 94	0
26	DE	201/201 (100%)	1.92	82 (40%) 0 0	38, 78, 97, 108	0
27	BF	177/177 (100%)	0.32	9 (5%) 32 25	23, 45, 85, 101	0
27	DF	177/177 (100%)	3.55	140 (79%) 0 0	80, 99, 114, 125	0
28	BG	176/176 (100%)	0.17	5 (2%) 56 50	21, 40, 66, 93	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
28	DG	176/176 (100%)	2.43	101 (57%) 0 0	68, 87, 103, 118	0
29	BH	149/149 (100%)	3.59	95 (63%) 0 0	25, 102, 121, 129	0
29	DH	149/149 (100%)	1.85	61 (40%) 0 0	25, 92, 107, 115	0
30	BI	141/141 (100%)	3.69	96 (68%) 0 0	82, 105, 120, 135	0
30	DI	141/141 (100%)	5.40	132 (93%) 0 0	95, 111, 121, 124	0
31	BJ	142/142 (100%)	-0.19	0 100 100	2, 11, 33, 52	0
31	DJ	142/142 (100%)	1.08	30 (21%) 1 1	50, 65, 81, 97	0
32	BK	122/122 (100%)	-0.26	0 100 100	6, 18, 37, 68	0
32	DK	122/122 (100%)	1.04	25 (20%) 1 1	46, 61, 80, 94	0
33	BL	143/143 (100%)	-0.06	0 100 100	3, 24, 50, 81	0
33	DL	143/143 (100%)	2.13	69 (48%) 0 0	45, 74, 91, 111	0
34	BM	136/136 (100%)	-0.22	0 100 100	3, 14, 33, 93	0
34	DM	136/136 (100%)	1.21	35 (25%) 1 0	44, 66, 82, 109	0
35	BN	120/120 (100%)	-0.22	0 100 100	6, 13, 25, 68	0
35	DN	120/120 (100%)	1.44	29 (24%) 1 0	53, 71, 88, 111	0
36	BO	116/116 (100%)	-0.03	1 (0%) 85 84	19, 29, 51, 57	0
36	DO	116/116 (100%)	3.12	78 (67%) 0 0	70, 88, 102, 113	0
37	BP	114/114 (100%)	-0.09	0 100 100	11, 21, 49, 73	0
37	DP	114/114 (100%)	1.08	23 (20%) 1 1	54, 67, 84, 91	0
38	BQ	117/117 (100%)	-0.18	0 100 100	3, 8, 19, 51	0
38	DQ	117/117 (100%)	0.92	21 (17%) 2 1	51, 65, 79, 82	0
39	BR	103/103 (100%)	-0.13	1 (0%) 84 82	3, 17, 36, 65	0
39	DR	103/103 (100%)	1.70	38 (36%) 0 0	52, 73, 87, 96	0
40	BS	110/110 (100%)	-0.11	1 (0%) 85 84	3, 8, 28, 88	0
40	DS	110/110 (100%)	2.06	50 (45%) 0 0	56, 70, 88, 96	0
41	BT	93/93 (100%)	0.33	2 (2%) 65 60	13, 30, 83, 101	0
41	DT	93/93 (100%)	3.00	66 (70%) 0 0	62, 81, 103, 109	0
42	BU	102/102 (100%)	-0.09	2 (1%) 68 64	13, 31, 60, 95	0
42	DU	102/102 (100%)	3.59	64 (62%) 0 0	66, 84, 105, 111	0
43	BV	94/94 (100%)	-0.12	1 (1%) 82 80	10, 24, 47, 58	0
43	DV	94/94 (100%)	1.15	22 (23%) 1 0	65, 79, 94, 97	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
44	BW	76/76 (100%)	-0.07	1 (1%) 79 78	9, 17, 38, 57	0
44	DW	75/76 (98%)	2.20	36 (48%) 0 0	51, 77, 88, 108	0
45	BX	77/77 (100%)	-0.19	1 (1%) 79 78	10, 26, 52, 79	0
45	DX	77/77 (100%)	1.01	14 (18%) 2 1	47, 67, 84, 89	0
46	BY	63/63 (100%)	0.41	5 (7%) 15 10	20, 44, 71, 96	0
46	DY	63/63 (100%)	2.10	30 (47%) 0 0	68, 88, 96, 103	0
47	BZ	58/58 (100%)	-0.13	0 100 100	6, 11, 36, 41	0
47	DZ	58/58 (100%)	0.99	13 (22%) 1 0	52, 70, 83, 88	0
48	B0	56/56 (100%)	-0.18	0 100 100	3, 14, 40, 75	0
48	D0	56/56 (100%)	1.41	17 (30%) 1 0	51, 71, 91, 105	0
49	B1	50/50 (100%)	-0.07	1 (2%) 68 64	20, 32, 58, 92	0
49	D1	50/50 (100%)	1.70	13 (26%) 1 0	64, 80, 92, 104	0
50	B2	46/46 (100%)	0.02	1 (2%) 65 60	7, 13, 20, 95	0
50	D2	46/46 (100%)	1.85	18 (39%) 0 0	51, 66, 79, 99	0
51	B3	64/64 (100%)	-0.08	0 100 100	9, 15, 25, 33	0
51	D3	64/64 (100%)	1.50	18 (28%) 1 0	54, 68, 79, 83	0
52	B4	38/38 (100%)	0.07	0 100 100	15, 22, 37, 55	0
52	D4	38/38 (100%)	2.24	20 (52%) 0 0	59, 72, 84, 97	0
53	B5	191/228 (83%)	6.59	186 (97%) 0 0	78, 108, 120, 133	0
All	All	20734/20794 (99%)	0.75	3012 (14%) 3 2	2, 62, 117, 195	0

All (3012) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
30	DI	2	ALA	21.3
30	DI	3	LYS	19.1
22	BA	2104	C	18.1
30	BI	53	LEU	17.7
53	B5	111	PHE	17.6
10	AJ	102	LEU	17.5
22	BA	2100	G	17.4
22	BA	2103	C	17.2
22	BA	2184	A	17.1
53	B5	55	SER	16.5
29	BH	96	THR	16.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
30	DI	67	PHE	16.2
53	B5	110	ASP	15.6
1	AA	1535	C	15.3
30	DI	68	THR	14.3
30	BI	3	LYS	14.2
53	B5	218	THR	14.1
29	BH	110	VAL	13.9
22	BA	2102	G	13.6
29	BH	115	VAL	13.4
53	B5	157	ILE	13.3
29	BH	97	ARG	13.2
53	B5	203	GLU	13.2
1	AA	1536	C	13.1
53	B5	156	GLU	13.0
53	B5	109	MET	12.8
30	BI	2	ALA	12.5
53	B5	97	GLY	12.4
30	DI	6	GLN	12.4
30	DI	69	PHE	12.4
42	DU	26	LYS	12.3
19	CS	74	PHE	12.3
22	BA	2101	A	12.2
27	DF	128	TYR	12.0
1	AA	1534	A	11.8
22	BA	2158	A	11.8
53	B5	48	LEU	11.7
7	CG	62	PHE	11.7
22	BA	2185	U	11.7
22	BA	2135	A	11.6
53	B5	207	GLY	11.5
2	AB	155	GLY	11.4
29	BH	146	VAL	11.4
30	DI	63	ALA	11.4
22	BA	2159	G	11.4
29	BH	113	SER	11.4
22	BA	2140	G	11.4
53	B5	52	PRO	11.3
30	DI	7	ALA	11.3
22	BA	2178	C	11.3
13	CM	84	GLY	11.3
1	CA	1536	C	11.2
53	B5	208	THR	11.0

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Mol	Chain	Res	Type	RSRZ
36	DO	24	THR	10.9
42	DU	77	THR	10.8
53	B5	217	THR	10.8
30	BI	13	VAL	10.8
53	B5	204	GLY	10.7
22	BA	2144	G	10.7
22	BA	2136	G	10.7
29	BH	130	VAL	10.7
42	DU	78	GLY	10.7
30	DI	61	VAL	10.6
53	B5	20	VAL	10.6
33	DL	92	LEU	10.6
22	BA	2145	C	10.6
30	DI	34	ASN	10.5
17	AQ	83	VAL	10.5
30	BI	4	LYS	10.5
53	B5	60	ARG	10.3
30	DI	4	LYS	10.3
30	DI	5	VAL	10.2
19	CS	66	MET	10.2
53	B5	122	GLY	10.2
10	CJ	74	VAL	10.1
7	CG	39	ALA	10.0
22	BA	2138	G	9.9
22	BA	2165	C	9.9
53	B5	141	PRO	9.9
53	B5	54	ARG	9.9
53	B5	132	LEU	9.8
2	AB	157	LEU	9.8
53	B5	66	PRO	9.8
53	B5	143	ALA	9.8
1	CA	1539	C	9.8
9	CI	128	SER	9.7
53	B5	183	PRO	9.7
30	DI	60	THR	9.7
53	B5	223	VAL	9.7
30	DI	66	SER	9.6
53	B5	173	HIS	9.6
30	DI	8	TYR	9.6
29	BH	144	VAL	9.6
41	DT	15	HIS	9.6
1	CA	1535	C	9.5

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Mol	Chain	Res	Type	RSRZ
53	B5	224	ARG	9.5
22	BA	2177	C	9.5
30	DI	58	VAL	9.5
42	DU	60	GLU	9.5
27	DF	156	ILE	9.5
42	DU	79	LYS	9.5
19	CS	37	ARG	9.5
29	BH	68	ARG	9.4
42	DU	25	VAL	9.4
46	BY	63	ALA	9.3
42	DU	58	ILE	9.3
29	BH	136	SER	9.2
29	BH	91	PHE	9.2
53	B5	59	VAL	9.2
19	CS	29	LYS	9.2
28	DG	52	PHE	9.2
53	B5	202	PRO	9.2
19	CS	39	THR	9.2
9	AI	43	THR	9.2
30	BI	39	CYS	9.2
30	BI	14	ALA	9.1
22	BA	2117	A	9.1
19	CS	12	ASP	9.1
30	DI	31	GLN	9.1
22	BA	2148	G	9.1
29	BH	148	ALA	9.1
13	CM	85	CYS	9.0
30	DI	59	ILE	9.0
53	B5	67	HIS	9.0
27	DF	130	MET	9.0
30	BI	22	PRO	9.0
53	B5	182	PRO	9.0
53	B5	221	PRO	8.9
22	BA	2163	A	8.9
22	BA	2183	A	8.9
29	BH	98	ASP	8.9
22	BA	2142	A	8.9
27	DF	176	PRO	8.8
42	DU	36	VAL	8.8
22	DA	1175	A	8.8
42	DU	52	LEU	8.8
53	B5	96	GLY	8.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
22	BA	2189	U	8.8
29	BH	106	ALA	8.8
22	BA	2150	C	8.7
36	DO	117	PHE	8.6
53	B5	62	THR	8.6
2	CB	32	PHE	8.6
30	DI	47	ASP	8.6
30	DI	30	GLN	8.6
53	B5	50	ILE	8.6
53	B5	45	HIS	8.6
53	B5	107	GLY	8.5
30	DI	53	LEU	8.5
7	AG	88	PRO	8.5
53	B5	200	HIS	8.5
29	DH	142	VAL	8.5
42	DU	12	ILE	8.5
53	B5	65	LEU	8.5
29	BH	123	ARG	8.5
30	BI	41	ALA	8.5
22	BA	2115	G	8.5
36	DO	40	ILE	8.5
22	BA	2152	G	8.4
30	BI	11	LEU	8.4
53	B5	106	ASP	8.4
53	B5	184	GLU	8.4
42	DU	13	VAL	8.4
53	B5	108	TRP	8.4
22	BA	2127	G	8.4
53	B5	94	TYR	8.3
30	DI	70	VAL	8.3
27	DF	155	THR	8.3
22	BA	2162	G	8.3
22	BA	2143	C	8.3
30	BI	12	GLN	8.3
22	BA	2175	C	8.2
53	B5	53	ARG	8.2
26	DE	119	ILE	8.2
20	CT	3	ASN	8.2
30	DI	35	ILE	8.1
30	DI	112	THR	8.1
30	BI	23	PRO	8.1
9	CI	129	LYS	8.1

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Mol	Chain	Res	Type	RSRZ
29	BH	55	GLU	8.1
53	B5	146	VAL	8.1
36	DO	19	GLN	8.1
19	CS	30	PRO	8.1
27	DF	120	LYS	8.1
30	DI	11	LEU	8.0
29	BH	69	ALA	8.0
22	BA	2176	A	8.0
22	BA	2161	C	8.0
2	CB	151	ILE	8.0
53	B5	216	THR	8.0
1	CA	1032	G	8.0
53	B5	105	LEU	8.0
42	DU	80	ALA	8.0
53	B5	149	ASN	8.0
53	B5	133	GLY	7.9
7	CG	66	LEU	7.9
27	DF	118	SER	7.9
5	AE	159	LYS	7.9
33	DL	144	GLU	7.9
30	BI	87	LYS	7.9
46	DY	10	SER	7.9
27	DF	117	LEU	7.9
30	DI	48	SER	7.9
22	BA	2153	C	7.8
9	CI	43	THR	7.8
53	B5	76	LEU	7.8
30	BI	79	LEU	7.8
53	B5	49	GLY	7.8
41	DT	2	ILE	7.8
7	CG	18	PHE	7.8
1	AA	1538	C	7.8
22	BA	2160	C	7.8
29	BH	112	LYS	7.8
49	D1	36	LEU	7.8
22	BA	2174	C	7.7
19	CS	42	PRO	7.7
27	DF	113	ASP	7.7
48	D0	27	SER	7.7
29	BH	120	GLY	7.7
53	B5	95	VAL	7.7
30	DI	32	GLY	7.7

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Mol	Chain	Res	Type	RSRZ
53	B5	89	GLU	7.7
27	DF	67	ILE	7.6
33	DL	101	ILE	7.6
22	BA	2179	C	7.6
20	AT	68	HIS	7.6
19	CS	60	VAL	7.6
22	BA	2114	A	7.6
53	B5	38	PHE	7.6
53	B5	199	ALA	7.6
27	DF	65	PRO	7.6
19	CS	24	GLU	7.6
20	CT	4	ILE	7.5
30	BI	83	ALA	7.5
53	B5	159	ALA	7.5
19	CS	49	ILE	7.5
1	CA	1534	A	7.5
2	AB	156	GLY	7.4
22	BA	2147	A	7.4
53	B5	68	GLY	7.4
30	BI	114	ALA	7.4
53	B5	206	LYS	7.4
22	DA	1536	C	7.4
36	DO	64	TYR	7.4
30	DI	64	ASP	7.4
46	DY	13	GLU	7.4
28	DG	45	HIS	7.4
2	CB	164	ILE	7.3
27	DF	106	ILE	7.3
19	CS	71	LEU	7.3
53	B5	152	GLU	7.3
19	CS	41	PHE	7.3
53	B5	39	ASP	7.3
22	BA	2099	U	7.3
53	B5	69	LEU	7.3
53	B5	169	THR	7.3
44	DW	83	GLU	7.2
22	BA	2112	G	7.2
30	BI	5	VAL	7.2
53	B5	194	ILE	7.2
27	DF	175	PHE	7.2
29	BH	54	LEU	7.2
13	CM	64	VAL	7.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
30	BI	69	PHE	7.2
30	DI	21	SER	7.2
53	B5	140	ASN	7.2
53	B5	150	ILE	7.2
53	B5	41	THR	7.2
53	B5	147	GLY	7.2
30	DI	13	VAL	7.2
41	DT	10	VAL	7.2
53	B5	148	PHE	7.1
14	CN	44	ALA	7.1
50	D2	46	LYS	7.1
29	BH	58	LEU	7.1
4	CD	25	VAL	7.1
22	BA	2164	C	7.1
53	B5	213	VAL	7.1
30	BI	120	ALA	7.1
30	DI	52	GLY	7.0
30	DI	54	PRO	7.0
29	BH	72	ILE	7.0
10	CJ	77	VAL	7.0
42	DU	43	LYS	7.0
29	DH	12	LEU	7.0
44	DW	63	ALA	7.0
53	B5	214	TYR	7.0
30	DI	133	ALA	7.0
35	DN	28	LEU	7.0
19	CS	43	ASN	7.0
53	B5	98	GLU	7.0
53	B5	77	ALA	7.0
27	DF	114	PHE	7.0
30	BI	67	PHE	7.0
53	B5	123	ALA	7.0
28	DG	105	LEU	7.0
20	CT	38	ALA	6.9
33	DL	3	LEU	6.9
40	DS	84	ARG	6.9
30	DI	43	ASN	6.9
22	BA	2123	G	6.9
36	DO	92	PHE	6.9
13	CM	98	ARG	6.9
22	BA	2139	U	6.9
53	B5	73	VAL	6.9

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Mol	Chain	Res	Type	RSRZ
1	CA	1538	C	6.9
53	B5	104	ILE	6.9
13	CM	63	PHE	6.8
30	DI	62	TYR	6.8
2	AB	9	MET	6.8
29	DH	15	LEU	6.8
29	DH	18	GLN	6.8
24	DC	27	GLY	6.8
33	DL	106	GLU	6.8
10	CJ	16	ARG	6.8
53	B5	222	SER	6.8
22	BA	2156	G	6.8
49	D1	53	LYS	6.8
53	B5	174	ALA	6.8
53	B5	84	ILE	6.8
19	CS	76	PRO	6.8
30	BI	115	ALA	6.7
53	B5	179	ALA	6.7
22	BA	2186	G	6.7
13	CM	45	ILE	6.7
53	B5	225	ILE	6.7
30	BI	17	MET	6.7
14	CN	48	LEU	6.7
53	B5	57	GLN	6.7
27	DF	121	SER	6.7
30	BI	101	ILE	6.7
42	DU	62	GLU	6.7
30	BI	20	PRO	6.7
53	B5	42	VAL	6.7
29	BH	101	ASP	6.7
53	B5	70	GLY	6.7
40	DS	92	ARG	6.7
10	CJ	76	ILE	6.7
27	DF	154	ILE	6.7
14	CN	36	ALA	6.7
41	DT	83	ALA	6.7
7	CG	85	TYR	6.6
22	BA	2107	G	6.6
39	DR	50	GLY	6.6
19	CS	11	ILE	6.6
22	BA	885	C	6.6
26	DE	55	SER	6.6

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Mol	Chain	Res	Type	RSRZ
1	AA	1539	C	6.6
42	DU	63	ALA	6.6
30	DI	20	PRO	6.6
19	CS	44	MET	6.6
42	DU	50	PRO	6.6
53	B5	134	PRO	6.6
53	B5	212	SER	6.6
30	DI	106	LEU	6.6
52	D4	10	LEU	6.6
14	CN	21	PHE	6.5
3	CC	144	LEU	6.5
9	AI	130	ARG	6.5
22	BA	2116	G	6.5
27	DF	115	ARG	6.5
53	B5	64	SER	6.5
22	BA	2125	G	6.5
34	DM	136	MET	6.5
53	B5	209	PHE	6.5
19	CS	15	LEU	6.5
46	DY	16	THR	6.5
30	DI	15	ALA	6.5
29	BH	129	GLU	6.5
41	DT	60	THR	6.5
51	D3	61	CYS	6.5
53	B5	126	SER	6.5
19	CS	67	VAL	6.5
28	DG	9	VAL	6.5
30	BI	54	PRO	6.5
22	DA	613	A	6.5
22	DA	1537	G	6.4
22	BA	2154	A	6.4
19	CS	75	ALA	6.4
53	B5	165	ARG	6.4
41	DT	1	MET	6.4
53	B5	170	GLY	6.4
7	AG	147	ALA	6.4
34	DM	56	ALA	6.4
27	DF	122	PHE	6.4
27	DF	35	THR	6.4
29	BH	118	PRO	6.4
19	CS	10	PHE	6.4
22	BA	2120	G	6.4

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Mol	Chain	Res	Type	RSRZ
22	BA	2121	G	6.4
53	B5	85	LYS	6.4
10	CJ	87	LEU	6.4
29	BH	119	ASN	6.3
41	DT	34	VAL	6.3
8	CH	122	GLY	6.3
30	DI	46	THR	6.3
41	DT	43	ILE	6.3
10	CJ	100	ILE	6.3
21	AU	38	TYR	6.3
27	DF	79	ILE	6.3
29	DH	117	LEU	6.3
36	DO	25	ARG	6.3
53	B5	28	ARG	6.3
53	B5	160	GLY	6.3
29	DH	79	THR	6.3
27	DF	129	SER	6.3
28	DG	2	SER	6.3
30	DI	89	GLY	6.3
28	DG	148	LEU	6.3
8	CH	123	GLY	6.3
27	DF	13	VAL	6.2
30	DI	78	VAL	6.2
22	BA	2124	G	6.2
30	BI	68	THR	6.2
29	BH	102	ALA	6.2
53	B5	193	PHE	6.2
30	BI	99	GLY	6.2
53	B5	79	ALA	6.2
53	B5	93	ASP	6.2
10	CJ	8	ILE	6.2
53	B5	61	GLY	6.2
14	CN	51	LEU	6.2
19	CS	64	ASP	6.2
27	DF	54	ALA	6.1
53	B5	187	ALA	6.1
30	DI	55	ILE	6.1
36	DO	87	ILE	6.1
53	B5	121	MET	6.1
30	BI	71	THR	6.1
27	DF	177	PHE	6.1
53	B5	198	GLU	6.1

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Mol	Chain	Res	Type	RSRZ
36	DO	58	ILE	6.1
20	AT	36	TYR	6.1
22	BA	2182	U	6.1
29	BH	89	LYS	6.1
53	B5	92	ALA	6.1
28	DG	33	LEU	6.1
53	B5	145	THR	6.1
19	AS	3	ARG	6.1
53	B5	161	ARG	6.1
36	DO	88	LYS	6.1
3	CC	37	PHE	6.0
17	CQ	4	LYS	6.0
19	CS	51	VAL	6.0
17	CQ	50	ASN	6.0
53	B5	88	GLU	6.0
53	B5	46	ALA	6.0
9	CI	38	TYR	6.0
2	CB	9	MET	6.0
19	CS	18	LYS	6.0
31	DJ	97	PRO	6.0
9	CI	58	VAL	6.0
53	B5	78	ILE	6.0
27	DF	149	VAL	6.0
9	CI	130	ARG	6.0
42	DU	48	PRO	6.0
16	AP	80	LYS	6.0
30	BI	52	GLY	6.0
30	DI	139	VAL	5.9
39	DR	37	GLU	5.9
30	DI	22	PRO	5.9
30	DI	45	LYS	5.9
53	B5	27	ALA	5.9
52	D4	8	LYS	5.9
53	B5	166	ASN	5.9
13	CM	80	LEU	5.9
53	B5	211	ARG	5.9
34	DM	124	LEU	5.8
35	DN	76	VAL	5.8
53	B5	100	ILE	5.8
53	B5	142	LYS	5.8
30	BI	8	TYR	5.8
43	DV	94	ALA	5.8

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Mol	Chain	Res	Type	RSRZ
13	CM	95	LEU	5.8
41	DT	6	ARG	5.8
16	CP	47	GLU	5.8
36	DO	90	VAL	5.8
30	DI	25	GLY	5.8
42	DU	20	GLY	5.8
13	CM	46	SER	5.8
19	CS	13	LEU	5.7
29	DH	6	LEU	5.7
13	CM	12	HIS	5.7
53	B5	87	ALA	5.7
1	AA	1018	G	5.7
29	BH	132	PHE	5.7
53	B5	82	GLU	5.7
13	CM	10	PRO	5.7
13	CM	115	PRO	5.7
13	CM	99	GLY	5.7
9	AI	41	ARG	5.7
22	BA	2106	U	5.7
2	AB	131	LYS	5.7
49	D1	52	ALA	5.7
29	BH	149	GLU	5.7
1	AA	78	A	5.7
50	B2	46	LYS	5.7
30	BI	80	LEU	5.7
29	BH	86	ASP	5.7
33	DL	121	THR	5.7
28	DG	6	LYS	5.6
41	DT	55	VAL	5.6
53	B5	22	THR	5.6
53	B5	103	LYS	5.6
14	CN	95	GLY	5.6
53	B5	63	VAL	5.6
29	BH	83	LYS	5.6
33	DL	80	SER	5.6
27	DF	152	LEU	5.6
33	DL	89	VAL	5.6
19	CS	52	HIS	5.6
29	BH	67	ALA	5.6
30	BI	100	LYS	5.6
32	DK	111	LYS	5.6
27	DF	133	ARG	5.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
27	DF	21	ASN	5.6
2	CB	191	SER	5.6
51	D3	14	PHE	5.6
2	CB	139	ARG	5.6
16	AP	81	ALA	5.6
42	DU	28	VAL	5.6
30	BI	55	ILE	5.6
30	DI	17	MET	5.5
22	DA	345	A	5.5
19	CS	63	THR	5.5
30	BI	24	VAL	5.5
27	DF	23	ASN	5.5
53	B5	192	ALA	5.5
10	CJ	41	PRO	5.5
9	CI	90	TYR	5.5
30	DI	36	MET	5.5
18	AR	20	GLU	5.5
28	DG	32	GLU	5.5
46	DY	59	GLU	5.5
42	DU	35	ILE	5.5
1	AA	1020	G	5.5
30	DI	96	ASP	5.5
22	BA	2108	A	5.5
12	CL	124	ALA	5.5
27	DF	111	ILE	5.5
30	DI	28	LEU	5.5
36	DO	26	LEU	5.5
53	B5	215	VAL	5.5
20	CT	24	ARG	5.5
26	DE	175	ILE	5.5
29	DH	82	SER	5.5
7	CG	118	LEU	5.5
40	DS	19	LEU	5.5
27	DF	142	ASP	5.4
30	DI	14	ALA	5.4
24	DC	26	LYS	5.4
30	DI	16	GLY	5.4
22	BA	2157	G	5.4
20	CT	42	GLY	5.4
30	DI	29	GLY	5.4
13	CM	83	LEU	5.4
17	CQ	8	LEU	5.4

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Mol	Chain	Res	Type	RSRZ
29	BH	122	LEU	5.4
22	DA	1535	A	5.4
22	BA	2141	G	5.4
29	BH	105	ALA	5.4
30	DI	120	ALA	5.4
53	B5	81	GLY	5.4
42	DU	61	LYS	5.4
13	CM	40	ALA	5.4
22	BA	2188	U	5.4
22	DA	1073	A	5.4
10	CJ	86	ALA	5.4
19	CS	40	ILE	5.4
27	DF	116	GLY	5.4
36	DO	61	GLN	5.4
28	DG	50	LEU	5.4
28	DG	4	VAL	5.4
29	BH	121	VAL	5.4
30	DI	126	THR	5.4
42	DU	70	VAL	5.4
53	B5	125	GLY	5.4
29	DH	123	ARG	5.4
27	DF	34	ILE	5.4
41	DT	36	LYS	5.4
42	DU	39	ILE	5.4
2	CB	161	LEU	5.4
22	BA	2146	C	5.4
7	CG	134	ALA	5.3
30	DI	75	PRO	5.3
35	DN	63	ARG	5.3
7	CG	151	PHE	5.3
53	B5	220	GLY	5.3
41	DT	37	ASP	5.3
28	DG	57	GLY	5.3
30	DI	77	ALA	5.3
28	DG	131	ILE	5.3
13	CM	113	ARG	5.3
29	DH	144	VAL	5.3
30	DI	76	ALA	5.3
53	B5	47	LYS	5.3
30	DI	38	PHE	5.3
41	DT	3	ARG	5.3
42	DU	27	ASN	5.3

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Mol	Chain	Res	Type	RSRZ
53	B5	51	ASP	5.3
28	DG	80	THR	5.3
53	B5	26	ALA	5.3
7	CG	16	PRO	5.3
21	CU	38	TYR	5.3
30	BI	40	LYS	5.3
39	DR	27	ILE	5.3
1	AA	1030	U	5.3
27	DF	164	GLU	5.3
33	DL	108	ALA	5.2
7	CG	72	THR	5.2
27	DF	170	LEU	5.2
13	CM	97	VAL	5.2
29	BH	142	VAL	5.2
53	B5	74	ARG	5.2
22	BA	2113	U	5.2
29	BH	109	GLU	5.2
30	DI	49	ILE	5.2
2	CB	136	MET	5.2
22	BA	138	U	5.2
26	DE	172	ALA	5.2
22	DA	1172	C	5.2
30	DI	86	ILE	5.2
22	BA	2172	U	5.2
27	DF	26	MET	5.2
29	BH	84	ALA	5.2
36	DO	51	ALA	5.2
19	CS	38	SER	5.2
30	DI	12	GLN	5.2
22	BA	2134	A	5.2
45	DX	49	LEU	5.2
22	DA	2174	C	5.2
7	CG	27	VAL	5.2
47	DZ	2	ALA	5.2
53	B5	154	ILE	5.2
28	DG	62	TRP	5.2
53	B5	131	ILE	5.1
26	DE	143	LEU	5.1
35	DN	73	ASN	5.1
53	B5	58	ASN	5.1
2	AB	221	VAL	5.1
28	DG	10	VAL	5.1

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Mol	Chain	Res	Type	RSRZ
30	DI	39	CYS	5.1
2	CB	186	ILE	5.1
10	CJ	102	LEU	5.1
30	BI	142	ASP	5.1
2	CB	213	TYR	5.1
52	D4	1	MET	5.1
7	CG	17	LYS	5.1
21	AU	32	VAL	5.1
13	CM	77	ILE	5.1
53	B5	43	GLU	5.1
53	B5	210	LEU	5.1
36	DO	85	LYS	5.1
53	B5	180	SER	5.1
53	B5	201	LYS	5.1
27	DF	25	VAL	5.1
30	BI	47	ASP	5.1
26	DE	148	ILE	5.1
44	DW	32	LEU	5.1
27	DF	10	ASP	5.1
13	AM	114	LYS	5.1
33	DL	73	ILE	5.1
25	DD	25	THR	5.1
27	DF	153	ASP	5.1
46	DY	33	ALA	5.1
30	DI	99	GLY	5.1
40	DS	20	VAL	5.1
52	D4	9	LYS	5.1
27	DF	66	LEU	5.1
42	DU	31	SER	5.0
2	CB	40	ILE	5.0
7	CG	38	THR	5.0
1	CA	82	G	5.0
22	BA	2168	G	5.0
53	B5	19	LYS	5.0
10	CJ	71	LEU	5.0
40	DS	46	LEU	5.0
22	DA	1100	C	5.0
53	B5	83	LYS	5.0
22	BA	1175	A	5.0
22	BA	2173	A	5.0
16	CP	80	LYS	5.0
28	DG	166	ASP	5.0

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Mol	Chain	Res	Type	RSRZ
39	DR	20	VAL	5.0
1	CA	1021	A	5.0
2	CB	148	LEU	5.0
30	DI	98	VAL	5.0
22	DA	1067	A	5.0
22	BA	2190	G	5.0
53	B5	124	VAL	5.0
40	DS	110	ARG	5.0
29	DH	13	GLY	5.0
53	B5	136	GLY	5.0
26	DE	124	PHE	5.0
22	BA	2149	U	4.9
10	AJ	89	ARG	4.9
8	AH	2	SER	4.9
13	AM	115	PRO	4.9
26	DE	120	VAL	4.9
29	BH	85	GLY	4.9
53	B5	153	ILE	4.9
53	B5	219	MET	4.9
36	DO	60	GLU	4.9
53	B5	196	ALA	4.9
7	CG	49	THR	4.9
27	DF	100	PHE	4.9
53	B5	24	ASP	4.9
44	DW	38	VAL	4.9
39	DR	38	VAL	4.9
4	AD	28	ILE	4.9
27	DF	32	GLU	4.9
42	DU	29	LEU	4.9
29	BH	61	VAL	4.9
11	AK	19	GLY	4.9
30	DI	130	GLU	4.9
40	DS	85	ILE	4.9
53	B5	75	VAL	4.9
27	DF	8	TYR	4.9
30	BI	118	THR	4.9
39	DR	29	THR	4.9
22	DA	1093	G	4.9
30	BI	88	SER	4.9
26	DE	104	ALA	4.9
27	DF	38	MET	4.9
33	DL	71	ALA	4.9

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Mol	Chain	Res	Type	RSRZ
42	DU	51	ALA	4.9
16	CP	54	LEU	4.9
30	DI	80	LEU	4.9
51	D3	57	LEU	4.9
27	DF	85	ILE	4.9
42	DU	72	ILE	4.9
18	CR	20	GLU	4.9
7	CG	13	LEU	4.9
41	DT	87	LEU	4.9
50	D2	42	LEU	4.8
19	CS	28	LYS	4.8
30	DI	79	LEU	4.8
53	B5	158	LYS	4.8
45	DX	11	ARG	4.8
42	DU	59	VAL	4.8
49	D1	47	VAL	4.8
19	CS	31	LEU	4.8
28	DG	151	TYR	4.8
7	AG	79	ARG	4.8
26	DE	118	LEU	4.8
27	DF	112	ARG	4.8
53	B5	164	PHE	4.8
27	DF	76	GLY	4.8
24	DC	49	ILE	4.8
22	DA	2150	C	4.8
30	DI	83	ALA	4.8
42	DU	71	ALA	4.8
53	B5	102	GLN	4.8
53	B5	130	ARG	4.8
30	BI	96	ASP	4.8
36	DO	65	THR	4.8
20	CT	67	ILE	4.8
27	DF	93	GLY	4.8
50	D2	33	ARG	4.8
29	DH	130	VAL	4.8
6	CF	39	LEU	4.8
20	CT	79	LEU	4.8
26	DE	147	LEU	4.8
30	BI	26	PRO	4.8
1	AA	1492	A	4.8
10	AJ	74	VAL	4.8
10	CJ	72	ARG	4.7

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Mol	Chain	Res	Type	RSRZ
10	CJ	39	PRO	4.7
27	DF	83	TYR	4.7
2	AB	57	LEU	4.7
28	DG	168	VAL	4.7
9	CI	64	TYR	4.7
53	B5	72	GLN	4.7
53	B5	144	GLY	4.7
26	DE	121	VAL	4.7
30	DI	57	VAL	4.7
7	CG	88	PRO	4.7
13	CM	61	ALA	4.7
40	DS	5	ALA	4.7
7	CG	139	GLU	4.7
14	CN	43	ASN	4.7
28	DG	82	GLY	4.7
53	B5	151	GLY	4.7
29	DH	47	PHE	4.7
28	DG	103	ILE	4.7
48	D0	57	LYS	4.7
44	DW	52	GLY	4.7
53	B5	191	ARG	4.7
26	DE	128	ALA	4.7
30	DI	42	PHE	4.7
14	CN	34	VAL	4.7
30	DI	24	VAL	4.7
30	DI	65	ARG	4.7
26	DE	23	PHE	4.7
22	BA	2110	G	4.7
11	AK	14	LYS	4.7
38	DQ	29	SER	4.7
31	DJ	55	ILE	4.7
53	B5	101	ILE	4.7
53	B5	86	GLU	4.7
27	DF	103	LEU	4.6
1	CA	1537	U	4.6
44	DW	68	LYS	4.6
22	BA	2171	A	4.6
19	CS	68	GLY	4.6
32	DK	68	GLY	4.6
27	DF	17	MET	4.6
7	CG	148	ASN	4.6
33	DL	143	GLU	4.6

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Mol	Chain	Res	Type	RSRZ
1	AA	1537	U	4.6
27	DF	40	VAL	4.6
7	CG	15	ASP	4.6
9	CI	20	PHE	4.6
28	DG	20	ASN	4.6
2	CB	132	LYS	4.6
14	CN	11	VAL	4.6
41	DT	16	VAL	4.6
13	CM	86	TYR	4.6
30	DI	82	LYS	4.6
22	DA	2126	A	4.6
49	D1	45	GLN	4.6
35	DN	24	MET	4.6
7	CG	69	VAL	4.6
7	CG	131	LYS	4.6
42	DU	33	LYS	4.6
29	BH	116	ARG	4.6
53	B5	162	ILE	4.6
7	CG	30	LEU	4.6
30	BI	95	LYS	4.6
44	DW	26	PHE	4.6
30	DI	27	ALA	4.6
10	CJ	96	VAL	4.6
26	DE	186	VAL	4.6
33	DL	122	VAL	4.6
36	DO	78	VAL	4.6
16	CP	17	TYR	4.6
46	DY	28	LEU	4.6
1	CA	211	G	4.6
4	AD	36	GLN	4.6
1	CA	1031	C	4.6
13	CM	33	ILE	4.6
25	DD	27	ILE	4.6
36	DO	52	SER	4.6
29	BH	95	GLY	4.6
36	DO	103	VAL	4.6
1	CA	1020	G	4.5
22	DA	2168	G	4.5
19	CS	72	GLY	4.5
30	BI	82	LYS	4.5
51	D3	58	VAL	4.5
14	CN	27	LEU	4.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
4	AD	151	LYS	4.5
36	DO	76	LYS	4.5
13	CM	47	GLU	4.5
52	D4	33	HIS	4.5
26	DE	168	ASP	4.5
7	AG	75	VAL	4.5
7	CG	20	SER	4.5
19	AS	9	PRO	4.5
29	BH	19	VAL	4.5
30	BI	21	SER	4.5
19	CS	16	LEU	4.5
21	CU	37	PHE	4.5
30	DI	41	ALA	4.5
3	CC	192	THR	4.5
26	DE	13	THR	4.5
17	CQ	5	ILE	4.5
19	CS	58	VAL	4.5
24	DC	93	LEU	4.5
1	CA	94	G	4.5
40	DS	54	ALA	4.5
20	CT	39	ILE	4.5
29	BH	137	GLU	4.5
41	BT	69	ARG	4.5
27	DF	12	VAL	4.5
28	DG	102	VAL	4.5
20	CT	86	LEU	4.5
33	DL	107	PHE	4.5
36	DO	106	LEU	4.5
30	DI	9	VAL	4.5
41	DT	53	VAL	4.5
14	CN	46	LEU	4.5
24	DC	249	GLY	4.5
28	DG	58	TYR	4.5
28	DG	104	ASN	4.5
13	CM	108	THR	4.5
19	CS	59	PRO	4.5
20	CT	85	LYS	4.5
19	CS	48	THR	4.5
7	CG	152	ALA	4.5
53	B5	25	GLU	4.5
44	DW	42	GLY	4.4
36	DO	2	ASP	4.4

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Mol	Chain	Res	Type	RSRZ
53	B5	40	GLU	4.4
2	CB	34	ALA	4.4
13	CM	69	LEU	4.4
24	DC	237	GLY	4.4
7	CG	53	ARG	4.4
29	DH	21	VAL	4.4
36	DO	54	VAL	4.4
22	BA	2169	A	4.4
2	CB	206	ALA	4.4
3	CC	167	TRP	4.4
22	BA	2166	U	4.4
30	DI	88	SER	4.4
35	DN	119	SER	4.4
41	DT	49	LYS	4.4
42	DU	21	LYS	4.4
30	DI	85	GLY	4.4
35	DN	111	ALA	4.4
24	DC	242	LYS	4.4
1	CA	1314	C	4.4
1	CA	1030	U	4.4
7	AG	151	PHE	4.4
12	CL	25	GLU	4.4
7	CG	103	TRP	4.4
19	CS	25	SER	4.4
22	BA	2105	U	4.4
2	CB	212	LEU	4.4
19	AS	41	PHE	4.4
29	DH	132	PHE	4.4
10	CJ	10	LEU	4.4
22	BA	2126	A	4.4
29	BH	11	ASN	4.4
27	DF	119	ALA	4.4
22	DA	1171	G	4.4
13	CM	48	LEU	4.4
2	CB	104	TRP	4.4
3	CC	173	VAL	4.3
41	DT	58	VAL	4.3
53	B5	171	ALA	4.3
53	B5	195	ARG	4.3
1	AA	87	C	4.3
7	CG	68	ASN	4.3
29	BH	147	VAL	4.3

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Mol	Chain	Res	Type	RSRZ
30	BI	140	VAL	4.3
42	DU	87	PHE	4.3
27	DF	68	THR	4.3
2	CB	135	LEU	4.3
7	CG	57	SER	4.3
22	BA	2122	U	4.3
27	DF	22	TYR	4.3
13	CM	39	ILE	4.3
30	DI	72	LYS	4.3
31	DJ	119	PHE	4.3
30	BI	78	VAL	4.3
44	DW	62	LYS	4.3
42	DU	37	GLU	4.3
42	DU	49	VAL	4.3
35	DN	25	ALA	4.3
20	CT	71	LYS	4.3
1	AA	86	G	4.3
1	CA	79	G	4.3
22	BA	2193	G	4.3
25	DD	6	GLY	4.3
36	DO	57	ALA	4.3
36	DO	63	LYS	4.3
30	BI	135	SER	4.3
33	DL	114	GLY	4.3
35	DN	120	GLU	4.3
41	DT	24	MET	4.3
42	DU	40	ASN	4.3
7	CG	111	ARG	4.3
41	DT	76	ARG	4.3
40	DS	3	THR	4.3
30	BI	119	GLY	4.3
14	CN	20	TYR	4.3
1	AA	1019	A	4.3
29	DH	81	ALA	4.3
40	DS	36	LEU	4.3
53	B5	99	GLU	4.3
36	DO	116	GLN	4.3
10	CJ	90	LEU	4.3
36	DO	16	ARG	4.2
19	CS	19	VAL	4.2
29	DH	19	VAL	4.2
25	DD	31	ALA	4.2

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Mol	Chain	Res	Type	RSRZ
41	DT	50	LEU	4.2
22	BA	2133	G	4.2
14	CN	32	SER	4.2
24	DC	172	VAL	4.2
28	DG	43	VAL	4.2
30	BI	30	GLN	4.2
12	AL	25	GLU	4.2
40	DS	97	LEU	4.2
42	DU	41	LEU	4.2
53	B5	197	LEU	4.2
30	DI	23	PRO	4.2
16	CP	57	ILE	4.2
10	CJ	99	GLN	4.2
10	CJ	9	ARG	4.2
4	CD	28	ILE	4.2
53	B5	155	ARG	4.2
53	B5	120	VAL	4.2
29	DH	90	LEU	4.2
53	B5	90	ALA	4.2
48	D0	39	LEU	4.2
51	D3	37	ALA	4.2
27	DF	157	THR	4.2
19	CS	3	ARG	4.2
25	DD	105	LYS	4.2
41	DT	73	ARG	4.2
26	DE	144	GLU	4.2
36	DO	112	GLU	4.2
35	DN	83	LEU	4.2
41	DT	8	LEU	4.2
10	CJ	89	ARG	4.2
30	DI	118	THR	4.2
48	D0	55	ILE	4.2
29	BH	17	ASP	4.2
30	DI	87	LYS	4.2
36	DO	107	ALA	4.2
40	DS	68	ASP	4.2
30	DI	81	LYS	4.2
33	DL	132	ARG	4.2
39	DR	96	VAL	4.2
53	B5	205	ALA	4.2
1	AA	1017	U	4.2
13	CM	68	ASP	4.2

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Mol	Chain	Res	Type	RSRZ
33	DL	70	LYS	4.1
16	CP	4	ILE	4.1
29	BH	80	ILE	4.1
2	CB	129	LEU	4.1
26	DE	164	LEU	4.1
26	DE	190	ALA	4.1
28	DG	133	LEU	4.1
42	DU	42	VAL	4.1
28	DG	44	LYS	4.1
28	DG	106	SER	4.1
43	DV	84	PRO	4.1
25	DD	96	ILE	4.1
32	DK	89	ASN	4.1
52	D4	16	ILE	4.1
28	DG	132	VAL	4.1
30	BI	98	VAL	4.1
30	DI	44	ALA	4.1
10	CJ	45	ARG	4.1
51	D3	52	LYS	4.1
4	CD	36	GLN	4.1
53	B5	137	LEU	4.1
44	DW	78	LYS	4.1
53	B5	56	ASP	4.1
16	CP	39	PHE	4.1
28	DG	83	PHE	4.1
9	AI	90	TYR	4.1
13	CM	74	SER	4.1
30	BI	48	SER	4.1
13	CM	71	ARG	4.1
16	AP	22	ALA	4.1
30	BI	92	LYS	4.1
48	D0	23	THR	4.1
9	CI	39	PHE	4.1
22	DA	1174	U	4.1
13	CM	38	GLY	4.1
14	CN	58	SER	4.1
53	B5	80	LYS	4.1
24	DC	112	ALA	4.1
27	DF	91	LEU	4.1
49	D1	24	THR	4.1
22	BA	1847	A	4.1
22	BA	2131	U	4.1

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Mol	Chain	Res	Type	RSRZ
47	DZ	29	LEU	4.1
53	B5	167	ASP	4.1
29	DH	4	ILE	4.1
31	DJ	54	ILE	4.1
3	CC	42	TYR	4.1
35	DN	29	VAL	4.1
22	BA	2128	G	4.1
22	DA	2112	G	4.1
19	CS	61	PHE	4.1
36	DO	46	GLU	4.1
2	CB	71	GLY	4.1
7	CG	73	VAL	4.1
11	AK	82	LEU	4.1
13	CM	96	PRO	4.1
29	BH	93	SER	4.1
46	DY	29	ARG	4.1
30	DI	121	ASP	4.1
44	DW	85	GLU	4.1
22	BA	139	U	4.0
29	DH	143	ILE	4.0
4	AD	21	LEU	4.0
26	DE	24	ASN	4.0
4	CD	24	GLY	4.0
29	BH	92	GLY	4.0
40	DS	16	LYS	4.0
30	DI	129	ILE	4.0
22	BA	2155	U	4.0
29	BH	87	GLU	4.0
7	CG	35	LYS	4.0
33	DL	28	GLY	4.0
27	DF	136	ILE	4.0
22	BA	2098	U	4.0
36	DO	82	ALA	4.0
22	DA	1870	C	4.0
2	AB	90	PHE	4.0
10	CJ	82	LYS	4.0
31	DJ	74	TYR	4.0
30	BI	38	PHE	4.0
42	DU	89	ASP	4.0
22	BA	2181	U	4.0
25	DD	185	ASN	4.0
29	BH	73	ASN	4.0

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Mol	Chain	Res	Type	RSRZ
35	DN	62	ASN	4.0
4	CD	177	LYS	4.0
3	CC	193	TYR	4.0
3	CC	180	ALA	4.0
7	AG	5	ARG	4.0
27	DF	33	LYS	4.0
27	DF	78	LYS	4.0
28	DG	72	LEU	4.0
16	CP	60	TRP	4.0
7	CG	26	PHE	4.0
7	CG	71	PRO	4.0
25	DD	97	SER	4.0
10	CJ	46	LYS	4.0
14	AN	30	ILE	4.0
53	B5	44	VAL	4.0
22	DA	2124	G	4.0
40	DS	40	ASN	4.0
27	DF	108	VAL	4.0
7	CG	14	PRO	4.0
27	DF	165	GLU	4.0
29	BH	82	SER	4.0
7	CG	23	LEU	4.0
47	DZ	48	ILE	4.0
40	DS	37	THR	4.0
13	CM	52	GLN	3.9
2	CB	83	ALA	3.9
26	DE	72	SER	3.9
27	DF	107	ALA	3.9
28	DG	40	ALA	3.9
36	DO	77	ALA	3.9
51	D3	49	MET	3.9
13	CM	79	ARG	3.9
14	CN	47	LYS	3.9
30	BI	76	ALA	3.9
53	B5	37	LYS	3.9
53	B5	168	LYS	3.9
7	CG	91	VAL	3.9
25	DD	26	VAL	3.9
35	DN	47	VAL	3.9
36	DO	86	GLY	3.9
32	DK	112	PHE	3.9
44	DW	60	PHE	3.9

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Mol	Chain	Res	Type	RSRZ
22	BA	2130	U	3.9
13	CM	43	VAL	3.9
29	DH	78	VAL	3.9
3	CC	102	ASN	3.9
14	AN	21	PHE	3.9
28	DG	125	CYS	3.9
2	CB	67	ILE	3.9
10	CJ	67	ILE	3.9
19	AS	49	ILE	3.9
34	DM	80	VAL	3.9
30	BI	94	ASN	3.9
42	DU	73	PHE	3.9
30	BI	16	GLY	3.9
37	DP	9	GLU	3.9
49	B1	53	LYS	3.9
19	AS	56	GLN	3.9
28	DG	174	ALA	3.9
30	BI	15	ALA	3.9
42	DU	64	ALA	3.9
9	AI	129	LYS	3.9
27	DF	110	ARG	3.9
28	DG	164	TYR	3.9
36	DO	38	GLN	3.9
36	DO	108	ASP	3.9
9	CI	108	ALA	3.9
30	BI	97	LYS	3.9
40	DS	95	ARG	3.9
2	CB	107	VAL	3.9
1	CA	1033	G	3.9
2	AB	88	ASP	3.9
27	DF	174	ASP	3.9
36	DO	56	LYS	3.9
36	DO	93	ASP	3.9
42	DU	47	LYS	3.9
7	CG	59	LEU	3.9
10	CJ	15	HIS	3.9
46	DY	9	LYS	3.9
41	DT	71	GLY	3.8
1	CA	1540	U	3.8
7	CG	67	GLU	3.8
20	CT	84	ASN	3.8
1	CA	999	C	3.8

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Mol	Chain	Res	Type	RSRZ
17	CQ	21	ILE	3.8
13	CM	29	ARG	3.8
48	D0	38	HIS	3.8
39	DR	32	THR	3.8
9	AI	17	ALA	3.8
30	DI	114	ALA	3.8
22	DA	143	C	3.8
22	DA	1095	A	3.8
30	DI	97	LYS	3.8
36	DO	99	TYR	3.8
14	AN	24	ARG	3.8
29	DH	92	GLY	3.8
36	DO	89	ASP	3.8
36	DO	109	ALA	3.8
29	BH	94	ILE	3.8
46	DY	21	LEU	3.8
53	B5	172	ILE	3.8
22	DA	1068	G	3.8
3	CC	79	LYS	3.8
26	DE	173	THR	3.8
41	DT	88	LYS	3.8
19	CS	23	VAL	3.8
30	DI	122	ILE	3.8
15	AO	89	ARG	3.8
41	DT	91	GLN	3.8
16	CP	81	ALA	3.8
29	DH	74	ALA	3.8
43	DV	74	ALA	3.8
51	D3	48	ALA	3.8
41	DT	5	GLU	3.8
3	CC	23	PHE	3.8
35	DN	21	PHE	3.8
22	BA	2118	U	3.8
1	CA	1312	G	3.8
13	CM	2	ALA	3.8
22	DA	549	G	3.8
30	DI	18	ALA	3.8
7	CG	41	SER	3.8
27	DF	9	LYS	3.8
27	DF	77	PHE	3.8
40	DS	47	VAL	3.8
53	B5	23	ILE	3.8

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Mol	Chain	Res	Type	RSRZ
14	AN	52	PRO	3.8
26	DE	157	LEU	3.8
30	DI	127	ARG	3.8
16	AP	4	ILE	3.8
33	DL	142	ILE	3.8
22	BA	1925	C	3.8
27	DF	95	ARG	3.7
8	CH	59	LEU	3.7
36	DO	115	LEU	3.7
7	CG	12	ILE	3.7
22	DA	138	U	3.7
37	DP	84	ILE	3.7
43	DV	82	TYR	3.7
13	CM	78	LYS	3.7
19	AS	39	THR	3.7
34	DM	99	GLY	3.7
53	B5	91	GLY	3.7
14	CN	52	PRO	3.7
10	CJ	19	ASP	3.7
40	DS	94	ASP	3.7
27	DF	87	CYS	3.7
36	DO	111	ARG	3.7
41	BT	2	ILE	3.7
26	DE	17	THR	3.7
26	DE	155	GLU	3.7
36	DO	80	GLU	3.7
2	AB	134	ALA	3.7
3	CC	109	PRO	3.7
13	AM	92	ARG	3.7
16	CP	52	LEU	3.7
26	DE	165	HIS	3.7
28	DG	87	LEU	3.7
33	DL	123	ARG	3.7
46	DY	14	LEU	3.7
27	DF	60	ILE	3.7
36	DO	41	ALA	3.7
7	CG	137	LYS	3.7
40	BS	110	ARG	3.7
13	CM	76	SER	3.7
50	D2	1	MET	3.7
38	DQ	23	GLY	3.7
20	CT	9	LYS	3.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
7	AG	84	THR	3.7
28	DG	84	THR	3.7
22	DA	2158	A	3.7
2	CB	92	VAL	3.7
10	CJ	75	ASP	3.7
53	B5	129	GLY	3.7
36	DO	37	ALA	3.7
29	BH	76	GLU	3.7
30	BI	66	SER	3.7
30	DI	56	PRO	3.7
39	DR	59	ILE	3.7
11	AK	126	LYS	3.6
13	CM	109	ARG	3.6
13	CM	4	ILE	3.6
13	CM	58	ASP	3.6
28	DG	25	THR	3.6
28	DG	53	GLY	3.6
41	DT	62	VAL	3.6
30	DI	84	ALA	3.6
50	D2	37	LYS	3.6
25	DD	186	LEU	3.6
27	DF	99	PHE	3.6
28	DG	12	PRO	3.6
36	DO	104	GLN	3.6
7	CG	65	ALA	3.6
22	DA	228	C	3.6
42	DU	76	ALA	3.6
53	B5	181	PHE	3.6
13	CM	8	ASN	3.6
13	CM	75	MET	3.6
17	CQ	46	VAL	3.6
30	BI	116	ASP	3.6
37	DP	110	ILE	3.6
40	DS	4	ILE	3.6
1	AA	844	G	3.6
6	CF	91	ARG	3.6
17	CQ	65	ARG	3.6
22	BA	2119	A	3.6
31	DJ	95	ARG	3.6
28	DG	107	LEU	3.6
30	DI	95	LYS	3.6
32	DK	2	ILE	3.6

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Mol	Chain	Res	Type	RSRZ
53	B5	190	ILE	3.6
44	DW	70	GLU	3.6
7	CG	61	ALA	3.6
20	CT	81	ALA	3.6
14	CN	53	ARG	3.6
27	DF	86	GLY	3.6
19	CS	27	ASP	3.6
14	AN	43	ASN	3.6
27	DF	90	THR	3.6
11	CK	42	LEU	3.6
24	DC	241	GLY	3.6
7	CG	87	VAL	3.6
2	CB	154	MET	3.6
9	AI	89	GLU	3.6
25	DD	74	GLU	3.6
37	DP	50	ILE	3.6
40	DS	107	VAL	3.6
14	CN	56	SER	3.6
36	DO	59	ALA	3.6
22	DA	546	U	3.6
39	DR	54	VAL	3.6
25	DD	1	MET	3.6
13	CM	32	ALA	3.6
13	CM	51	GLY	3.6
43	DV	56	PHE	3.6
30	DI	37	GLU	3.6
19	CS	80	TYR	3.6
3	CC	196	ILE	3.6
28	DG	92	VAL	3.6
20	CT	43	ASP	3.6
42	DU	5	ILE	3.6
14	CN	22	ALA	3.6
30	BI	43	ASN	3.6
33	DL	83	ALA	3.6
14	CN	68	GLY	3.6
41	DT	61	LEU	3.5
33	DL	81	ASP	3.5
44	DW	80	ILE	3.5
41	DT	45	ALA	3.5
27	DF	138	PHE	3.5
53	B5	185	LYS	3.5
29	BH	44	ILE	3.5

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Mol	Chain	Res	Type	RSRZ
26	DE	88	ARG	3.5
45	DX	61	LYS	3.5
31	DJ	56	VAL	3.5
2	CB	108	ARG	3.5
1	CA	206	C	3.5
12	CL	44	LYS	3.5
24	DC	28	LYS	3.5
28	DG	78	GLY	3.5
27	DF	37	ASN	3.5
44	DW	50	ASN	3.5
7	CG	52	GLN	3.5
22	BA	2191	A	3.5
29	DH	124	THR	3.5
30	BI	122	ILE	3.5
30	DI	101	ILE	3.5
30	BI	103	ARG	3.5
45	DX	50	ARG	3.5
11	AK	43	GLY	3.5
50	D2	32	ALA	3.5
30	BI	42	PHE	3.5
37	DP	43	PHE	3.5
39	DR	53	PHE	3.5
1	AA	1031	C	3.5
1	CA	207	C	3.5
32	DK	82	ASN	3.5
29	BH	14	SER	3.5
48	D0	34	SER	3.5
7	CG	44	TYR	3.5
22	BA	2109	U	3.5
28	DG	126	PRO	3.5
7	CG	86	GLN	3.5
30	BI	33	VAL	3.5
40	DS	73	LYS	3.5
53	B5	176	VAL	3.5
13	CM	22	ILE	3.5
49	D1	21	TYR	3.5
24	DC	18	LYS	3.5
27	DF	64	LYS	3.5
52	D4	15	LYS	3.5
2	CB	133	GLU	3.5
5	AE	65	GLU	3.5
10	CJ	27	GLU	3.5

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Mol	Chain	Res	Type	RSRZ
42	DU	32	GLY	3.5
1	AA	1032	G	3.5
2	AB	30	PHE	3.5
9	AI	20	PHE	3.5
10	CJ	80	THR	3.5
43	DV	57	TYR	3.5
20	CT	34	LYS	3.5
24	DC	245	VAL	3.5
51	D3	24	HIS	3.5
7	CG	83	SER	3.5
22	BA	715	A	3.5
28	BG	166	ASP	3.5
30	DI	91	GLY	3.5
21	CU	47	ARG	3.5
27	DF	47	LYS	3.5
37	DP	111	LYS	3.5
42	DU	44	LYS	3.5
14	AN	50	THR	3.5
26	DE	129	PRO	3.4
28	DG	79	VAL	3.4
1	CA	1028	C	3.4
22	DA	2300	C	3.4
38	DQ	65	ILE	3.4
53	B5	135	ARG	3.4
12	AL	124	ALA	3.4
22	DA	2173	A	3.4
27	DF	55	ALA	3.4
28	DG	96	ALA	3.4
19	AS	74	PHE	3.4
27	DF	20	PHE	3.4
13	CM	62	LYS	3.4
13	CM	114	LYS	3.4
41	DT	68	LYS	3.4
24	DC	94	VAL	3.4
26	DE	33	VAL	3.4
36	DO	39	VAL	3.4
30	DI	109	ILE	3.4
42	DU	38	GLY	3.4
2	CB	55	ALA	3.4
29	BH	39	ALA	3.4
29	DH	86	ASP	3.4
9	CI	127	PHE	3.4

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Mol	Chain	Res	Type	RSRZ
22	DA	2313	C	3.4
30	BI	133	ALA	3.4
42	DU	95	PHE	3.4
7	CG	5	ARG	3.4
44	DW	25	ARG	3.4
40	DS	31	GLN	3.4
41	DT	33	LYS	3.4
10	CJ	26	VAL	3.4
22	BA	1926	U	3.4
33	DL	100	ILE	3.4
27	DF	51	ASP	3.4
46	DY	32	ALA	3.4
1	CA	209	U	3.4
10	CJ	101	SER	3.4
26	DE	134	LEU	3.4
27	DF	96	MET	3.4
32	DK	101	GLY	3.4
44	DW	23	VAL	3.4
17	CQ	53	CYS	3.4
7	CG	143	ARG	3.4
9	CI	103	PHE	3.4
36	DO	113	ALA	3.4
38	DQ	99	ALA	3.4
47	DZ	56	LYS	3.4
30	DI	105	GLN	3.4
45	DX	78	TYR	3.4
14	CN	24	ARG	3.4
14	AN	36	ALA	3.4
30	BI	7	ALA	3.4
6	CF	79	ARG	3.4
7	CG	109	ARG	3.4
27	DF	171	ALA	3.4
29	BH	139	PHE	3.4
30	BI	84	ALA	3.4
2	CB	88	ASP	3.4
25	DD	55	LYS	3.4
1	CA	83	C	3.4
31	DJ	62	VAL	3.4
39	DR	47	VAL	3.4
27	DF	7	TYR	3.4
2	AB	34	ALA	3.4
2	AB	74	ARG	3.4

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Mol	Chain	Res	Type	RSRZ
13	CM	55	THR	3.4
26	DE	102	ARG	3.4
40	DS	9	HIS	3.4
42	DU	86	ARG	3.4
13	CM	103	LYS	3.4
30	BI	6	GLN	3.4
30	DI	51	LYS	3.4
26	DE	199	MET	3.3
7	AG	69	VAL	3.3
30	DI	102	SER	3.3
46	DY	40	SER	3.3
10	CJ	94	ALA	3.3
29	BH	111	ALA	3.3
14	CN	33	ASP	3.3
22	DA	139	U	3.3
33	DL	20	GLY	3.3
27	DF	132	VAL	3.3
13	CM	30	SER	3.3
19	CS	4	SER	3.3
3	CC	71	ALA	3.3
3	CC	92	ALA	3.3
30	DI	74	PRO	3.3
27	DF	147	ASP	3.3
19	CS	69	HIS	3.3
3	CC	67	THR	3.3
16	CP	3	THR	3.3
28	DG	51	THR	3.3
9	AI	19	VAL	3.3
17	CQ	78	VAL	3.3
1	CA	90	C	3.3
27	DF	24	SER	3.3
42	DU	75	ALA	3.3
24	DC	12	GLY	3.3
26	DE	127	GLU	3.3
34	DM	33	LEU	3.3
35	DN	38	LEU	3.3
21	AU	35	ARG	3.3
34	DM	79	ALA	3.3
14	CN	10	GLU	3.3
13	CM	89	LEU	3.3
19	CS	14	HIS	3.3
40	DS	98	LYS	3.3

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Mol	Chain	Res	Type	RSRZ
44	DW	43	THR	3.3
28	BG	24	ILE	3.3
1	AA	990	C	3.3
12	CL	92	GLY	3.3
27	DF	39	GLY	3.3
30	BI	81	LYS	3.3
41	DT	75	GLY	3.3
10	CJ	52	LEU	3.3
27	DF	57	LEU	3.3
2	CB	217	VAL	3.3
7	CG	64	VAL	3.3
30	DI	71	THR	3.3
30	DI	140	VAL	3.3
40	DS	82	MET	3.3
12	CL	14	ARG	3.3
13	CM	70	ARG	3.3
26	DE	183	PHE	3.3
19	CS	17	LYS	3.3
10	CJ	85	ASP	3.3
34	DM	103	TYR	3.3
7	CG	133	THR	3.3
10	CJ	49	PHE	3.3
31	DJ	142	ILE	3.3
20	CT	66	LEU	3.3
1	CA	1132	C	3.3
7	CG	79	ARG	3.3
16	AP	47	GLU	3.3
19	CS	65	GLU	3.3
31	DJ	98	GLU	3.3
41	DT	4	GLU	3.3
9	CI	63	LEU	3.3
14	CN	57	PRO	3.3
33	DL	19	LEU	3.3
53	B5	21	TYR	3.3
22	BA	2132	U	3.2
29	BH	74	ALA	3.2
3	CC	70	THR	3.2
3	CC	156	ARG	3.2
41	DT	12	ARG	3.2
26	DE	153	LEU	3.2
21	AU	31	GLU	3.2
2	CB	216	ALA	3.2

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Mol	Chain	Res	Type	RSRZ
13	CM	73	ILE	3.2
45	DX	46	PHE	3.2
31	DJ	13	ARG	3.2
28	DG	88	GLN	3.2
50	D2	43	THR	3.2
1	AA	1016	A	3.2
53	B5	186	LEU	3.2
21	CU	44	GLU	3.2
13	CM	23	TYR	3.2
17	AQ	20	SER	3.2
2	CB	225	ARG	3.2
13	CM	37	ALA	3.2
27	DF	173	PHE	3.2
33	DL	78	ARG	3.2
33	DL	102	GLY	3.2
39	DR	101	ILE	3.2
1	CA	204	G	3.2
36	DO	62	LEU	3.2
22	DA	2172	U	3.2
44	DW	74	PRO	3.2
7	AG	143	ARG	3.2
30	BI	62	TYR	3.2
33	DL	124	GLY	3.2
44	DW	84	ALA	3.2
6	CF	17	GLN	3.2
14	CN	49	GLN	3.2
7	CG	130	ASN	3.2
9	CI	4	ASN	3.2
22	DA	2157	G	3.2
9	AI	51	PRO	3.2
28	DG	176	LYS	3.2
26	DE	14	VAL	3.2
27	BF	116	GLY	3.2
28	BG	111	HIS	3.2
29	DH	100	ALA	3.2
33	DL	88	GLY	3.2
9	CI	21	ILE	3.2
22	DA	1092	C	3.2
20	CT	13	GLN	3.2
16	CP	35	ARG	3.2
19	CS	47	LEU	3.2
42	BU	52	LEU	3.2

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Mol	Chain	Res	Type	RSRZ
46	DY	47	ARG	3.2
14	CN	19	LYS	3.2
26	DE	191	ASP	3.2
1	AA	79	G	3.2
1	CA	1271	A	3.2
22	DA	2120	G	3.2
7	CG	43	VAL	3.2
10	CJ	51	VAL	3.2
27	DF	41	GLY	3.2
50	D2	18	PHE	3.2
30	BI	49	ILE	3.2
34	DM	126	ILE	3.2
41	DT	56	GLU	3.2
49	D1	48	ILE	3.2
17	CQ	17	MET	3.2
24	DC	239	ASN	3.2
1	AA	412	A	3.2
2	AB	187	VAL	3.2
28	DG	127	THR	3.2
29	BH	124	THR	3.2
31	DJ	21	THR	3.2
36	DO	66	GLY	3.2
40	DS	105	VAL	3.2
1	AA	1003	G	3.2
1	CA	1018	G	3.2
22	DA	289	G	3.2
36	DO	50	ALA	3.2
2	AB	139	ARG	3.2
33	DL	126	ARG	3.2
27	DF	36	LEU	3.2
5	AE	31	PHE	3.2
28	DG	169	VAL	3.2
9	CI	44	ALA	3.2
13	CM	44	LYS	3.2
24	DC	92	ALA	3.2
29	BH	59	ALA	3.2
33	DL	72	ALA	3.2
34	DM	132	THR	3.2
43	DV	34	LYS	3.2
40	DS	108	SER	3.2
33	DL	79	LEU	3.2
22	DA	1076	C	3.2

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Mol	Chain	Res	Type	RSRZ
21	CU	45	ARG	3.1
27	BF	72	LYS	3.1
40	DS	49	LYS	3.1
19	CS	22	ALA	3.1
22	BA	2170	A	3.1
22	DA	2169	A	3.1
46	DY	41	HIS	3.1
3	CC	72	ARG	3.1
30	DI	117	MET	3.1
22	DA	268	C	3.1
28	DG	27	LYS	3.1
41	DT	40	LYS	3.1
33	DL	85	VAL	3.1
42	DU	99	ASN	3.1
30	BI	59	ILE	3.1
2	CB	22	TYR	3.1
21	CU	35	ARG	3.1
26	DE	10	SER	3.1
33	DL	6	LEU	3.1
51	D3	47	LYS	3.1
22	DA	2125	G	3.1
20	CT	87	ALA	3.1
27	DF	43	ALA	3.1
39	DR	28	ALA	3.1
22	BA	613	A	3.1
25	DD	38	LYS	3.1
45	DX	20	HIS	3.1
5	CE	10	GLU	3.1
29	DH	140	ALA	3.1
35	DN	97	ILE	3.1
43	DV	81	PRO	3.1
22	BA	1094	U	3.1
22	DA	280	U	3.1
46	DY	36	GLN	3.1
26	DE	150	THR	3.1
2	CB	167	ASP	3.1
14	AN	33	ASP	3.1
24	DC	3	VAL	3.1
35	DN	102	PHE	3.1
39	DR	35	PHE	3.1
1	CA	1302	C	3.1
3	CC	14	ILE	3.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
29	BH	20	ASN	3.1
1	CA	1257	A	3.1
7	CG	60	GLU	3.1
9	CI	98	LEU	3.1
16	CP	45	GLU	3.1
33	DL	82	LEU	3.1
24	DC	103	TYR	3.1
31	DJ	96	ARG	3.1
37	DP	74	PHE	3.1
43	DV	43	ASP	3.1
43	DV	58	SER	3.1
45	DX	3	ARG	3.1
37	DP	42	ALA	3.1
41	DT	35	ALA	3.1
50	D2	30	VAL	3.1
22	DA	2110	G	3.1
17	CQ	7	THR	3.1
29	DH	125	THR	3.1
44	DW	53	CYS	3.1
7	CG	97	ASN	3.1
9	AI	23	PRO	3.1
10	AJ	87	LEU	3.1
14	CN	35	ASN	3.1
3	CC	195	VAL	3.1
28	DG	41	VAL	3.1
32	DK	35	VAL	3.1
7	CG	4	ARG	3.1
36	DO	9	ARG	3.1
13	CM	27	LYS	3.1
1	CA	210	C	3.1
22	DA	1117	C	3.1
22	DA	356	G	3.0
27	DF	28	VAL	3.0
44	DW	64	ASP	3.0
26	DE	131	THR	3.0
13	AM	4	ILE	3.0
30	BI	86	ILE	3.0
38	DQ	112	LYS	3.0
30	DI	119	GLY	3.0
27	DF	45	ALA	3.0
30	BI	61	VAL	3.0
30	DI	33	VAL	3.0

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Mol	Chain	Res	Type	RSRZ
13	CM	56	LEU	3.0
41	DT	32	LEU	3.0
27	DF	102	ARG	3.0
7	AG	48	GLU	3.0
10	CJ	11	LYS	3.0
24	DC	232	HIS	3.0
30	DI	128	SER	3.0
1	AA	82	G	3.0
10	AJ	90	LEU	3.0
24	DC	110	LEU	3.0
35	DN	46	ARG	3.0
12	CL	123	LYS	3.0
27	DF	109	PRO	3.0
40	DS	83	LYS	3.0
2	AB	18	HIS	3.0
22	DA	896	A	3.0
39	DR	103	ALA	3.0
9	CI	30	ILE	3.0
9	CI	124	ARG	3.0
26	DE	149	ILE	3.0
33	DL	18	ARG	3.0
10	CJ	73	LEU	3.0
11	AK	96	THR	3.0
10	CJ	81	GLU	3.0
46	DY	24	GLU	3.0
13	CM	15	ALA	3.0
26	DE	11	ALA	3.0
40	DS	71	VAL	3.0
15	CO	89	ARG	3.0
22	BA	1067	A	3.0
22	DA	101	A	3.0
26	DE	141	MET	3.0
40	DS	35	ILE	3.0
14	AN	26	GLU	3.0
21	AU	44	GLU	3.0
29	DH	75	LEU	3.0
19	CS	9	PRO	3.0
3	CC	153	VAL	3.0
39	DR	43	ASN	3.0
39	DR	63	VAL	3.0
19	AS	40	ILE	3.0
34	DM	96	ILE	3.0

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Mol	Chain	Res	Type	RSRZ
46	DY	37	LEU	3.0
14	CN	29	ALA	3.0
33	DL	8	PRO	3.0
29	DH	119	ASN	3.0
42	DU	53	ASN	3.0
1	AA	1027	C	3.0
1	CA	1270	G	3.0
2	AB	27	MET	3.0
14	CN	101	TRP	3.0
48	D0	42	HIS	3.0
11	AK	42	LEU	3.0
29	BH	12	LEU	3.0
38	DQ	117	LEU	3.0
14	CN	61	ARG	3.0
14	CN	63	ARG	3.0
24	DC	101	ARG	3.0
20	CT	64	LYS	3.0
2	AB	217	VAL	3.0
7	CG	2	PRO	3.0
20	CT	72	ALA	3.0
26	DE	193	VAL	3.0
41	DT	20	ALA	3.0
24	DC	99	GLY	3.0
9	CI	112	GLU	3.0
27	DF	42	GLU	3.0
29	BH	143	ILE	3.0
34	DM	63	ILE	3.0
14	CN	9	ARG	3.0
32	DK	108	ARG	3.0
22	BA	1063	G	3.0
7	CG	37	SER	3.0
2	AB	210	VAL	2.9
17	CQ	83	VAL	2.9
26	DE	4	VAL	2.9
29	DH	65	ALA	2.9
53	B5	188	ASP	2.9
18	AR	74	HIS	2.9
26	DE	1	MET	2.9
46	DY	30	MET	2.9
50	D2	34	ARG	2.9
28	DG	111	HIS	2.9
28	DG	71	LEU	2.9

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Mol	Chain	Res	Type	RSRZ
40	DS	48	LYS	2.9
3	AC	168	TYR	2.9
39	DR	51	VAL	2.9
39	DR	75	VAL	2.9
12	AL	123	LYS	2.9
21	AU	4	ILE	2.9
1	CA	81	A	2.9
22	DA	267	C	2.9
41	DT	80	TRP	2.9
22	BA	2111	U	2.9
2	CB	209	ALA	2.9
41	DT	52	GLU	2.9
35	DN	26	GLY	2.9
48	D0	24	ALA	2.9
9	AI	28	ILE	2.9
19	AS	71	LEU	2.9
28	DG	38	ASN	2.9
30	DI	94	ASN	2.9
39	DR	39	LEU	2.9
21	AU	21	ARG	2.9
22	DA	2165	C	2.9
24	DC	238	ARG	2.9
29	BH	47	PHE	2.9
28	DG	167	GLU	2.9
30	DI	50	GLU	2.9
7	CG	54	SER	2.9
26	DE	56	GLY	2.9
28	DG	28	GLY	2.9
38	DQ	39	VAL	2.9
40	DS	106	VAL	2.9
42	DU	30	SER	2.9
22	DA	1112	G	2.9
22	DA	1715	G	2.9
22	DA	2903	U	2.9
36	DO	53	THR	2.9
11	AK	53	ARG	2.9
29	BH	117	LEU	2.9
42	DU	14	LEU	2.9
45	DX	22	LEU	2.9
1	AA	81	A	2.9
52	D4	32	LYS	2.9
4	AD	27	ALA	2.9

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Mol	Chain	Res	Type	RSRZ
6	CF	28	ALA	2.9
14	CN	45	VAL	2.9
27	DF	74	VAL	2.9
29	BH	138	VAL	2.9
31	DJ	73	VAL	2.9
41	DT	67	VAL	2.9
36	DO	13	ARG	2.9
1	CA	1043	G	2.9
9	CI	57	MET	2.9
29	BH	75	LEU	2.9
31	DJ	140	LEU	2.9
37	DP	97	LEU	2.9
47	DZ	8	THR	2.9
17	CQ	45	HIS	2.9
24	DC	240	PHE	2.9
38	DQ	106	PHE	2.9
44	DW	79	PHE	2.9
2	CB	163	VAL	2.9
22	DA	1170	C	2.9
25	DD	104	VAL	2.9
30	BI	9	VAL	2.9
30	BI	58	VAL	2.9
10	CJ	91	ASP	2.9
18	AR	73	ARG	2.9
21	AU	13	ASP	2.9
25	DD	154	LYS	2.9
31	DJ	106	LYS	2.9
10	CJ	66	GLU	2.9
36	DO	21	LEU	2.9
9	AI	39	PHE	2.9
19	CS	46	GLY	2.9
3	CC	88	ARG	2.9
51	D3	11	ALA	2.9
26	DE	187	VAL	2.9
51	D3	64	TYR	2.9
22	DA	2143	C	2.9
30	DI	142	ASP	2.9
9	CI	73	SER	2.9
37	DP	65	SER	2.9
48	D0	28	LEU	2.9
15	CO	15	PHE	2.9
28	DG	75	MET	2.9

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Mol	Chain	Res	Type	RSRZ
29	BH	128	HIS	2.9
33	DL	74	THR	2.9
2	AB	35	ARG	2.9
24	DC	235	GLY	2.9
30	BI	25	GLY	2.9
8	CH	130	ALA	2.9
22	BA	1065	U	2.9
42	DU	22	ARG	2.9
9	AI	27	LYS	2.9
25	DD	180	VAL	2.9
26	DE	32	VAL	2.9
52	D4	2	LYS	2.9
10	CJ	97	ASP	2.9
22	DA	281	C	2.9
22	DA	357	C	2.9
22	DA	2795	C	2.9
38	DQ	89	GLU	2.9
2	CB	23	TRP	2.9
17	CQ	20	SER	2.9
21	AU	7	ARG	2.9
27	BF	80	ARG	2.9
34	DM	29	GLY	2.9
30	DI	10	LYS	2.9
25	DD	47	ALA	2.9
27	DF	172	ALA	2.9
29	BH	63	ALA	2.9
41	DT	59	ASN	2.9
42	BU	53	ASN	2.9
27	DF	143	TYR	2.8
39	DR	33	VAL	2.8
27	BF	113	ASP	2.8
35	DN	72	ASP	2.8
29	BH	5	LEU	2.8
44	DW	82	ILE	2.8
31	DJ	92	MET	2.8
33	DL	31	GLY	2.8
10	CJ	22	THR	2.8
17	CQ	51	ASN	2.8
21	AU	9	ASN	2.8
47	DZ	34	HIS	2.8
33	DL	120	VAL	2.8
1	AA	1001	C	2.8

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Mol	Chain	Res	Type	RSRZ
7	CG	110	LYS	2.8
9	CI	100	LYS	2.8
33	DL	77	ILE	2.8
26	DE	158	PHE	2.8
29	BH	64	ALA	2.8
31	DJ	47	HIS	2.8
37	DP	108	ALA	2.8
7	AG	148	ASN	2.8
9	CI	126	GLN	2.8
13	CM	72	GLU	2.8
33	DL	86	GLU	2.8
41	DT	54	GLU	2.8
16	CP	76	LYS	2.8
22	DA	344	A	2.8
26	DE	98	LYS	2.8
2	AB	151	ILE	2.8
13	AM	7	ILE	2.8
25	DD	84	LEU	2.8
1	CA	1296	C	2.8
30	DI	131	GLY	2.8
30	BI	102	SER	2.8
7	AG	150	ALA	2.8
7	CG	123	GLU	2.8
12	CL	76	GLU	2.8
16	CP	82	ALA	2.8
24	DC	106	ALA	2.8
13	CM	31	LYS	2.8
20	CT	16	LYS	2.8
29	BH	8	LYS	2.8
29	BH	145	ASN	2.8
35	DN	56	LYS	2.8
46	DY	58	ASN	2.8
22	DA	2402	U	2.8
20	AT	4	ILE	2.8
22	DA	2163	A	2.8
2	CB	90	PHE	2.8
13	CM	94	GLY	2.8
25	DD	88	GLU	2.8
10	CJ	30	LYS	2.8
22	BA	2192	U	2.8
25	DD	8	LYS	2.8
4	AD	25	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
30	DI	132	THR	2.8
3	CC	130	PHE	2.8
6	CF	8	PHE	2.8
22	DA	1103	A	2.8
22	DA	2309	A	2.8
22	DA	2602	A	2.8
24	DC	64	ILE	2.8
32	DK	37	ASP	2.8
30	BI	137	GLY	2.8
3	CC	62	LYS	2.8
26	DE	2	GLU	2.8
44	DW	75	LYS	2.8
29	BH	133	GLN	2.8
29	DH	93	SER	2.8
36	DO	5	SER	2.8
14	AN	51	LEU	2.8
22	BA	884	U	2.8
52	D4	38	GLY	2.8
20	CT	19	LYS	2.8
25	DD	54	ALA	2.8
36	DO	110	ALA	2.8
11	AK	129	VAL	2.8
22	DA	2797	U	2.8
26	DE	28	VAL	2.8
34	DM	6	ARG	2.8
3	CC	197	GLY	2.8
7	CG	56	LYS	2.8
26	BE	7	ASP	2.8
27	DF	52	ASN	2.8
28	BG	26	ILE	2.8
32	DK	107	LEU	2.8
43	DV	32	GLY	2.8
36	DO	20	GLU	2.8
28	DG	157	TYR	2.8
22	DA	436	C	2.8
31	DJ	123	LYS	2.8
8	CH	60	GLU	2.8
24	DC	127	GLY	2.8
32	DK	110	GLU	2.8
41	DT	42	GLU	2.8
1	CA	1313	U	2.8
22	DA	654	A	2.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
13	CM	36	ALA	2.8
14	CN	69	ARG	2.8
20	CT	25	ARG	2.8
30	DI	104	ALA	2.8
11	CK	16	VAL	2.8
14	CN	6	MET	2.8
26	DE	188	MET	2.8
1	CA	1317	C	2.7
22	DA	1064	C	2.7
33	DL	61	LEU	2.7
2	CB	74	ARG	2.7
7	CG	76	LYS	2.7
20	CT	8	LYS	2.7
27	DF	159	THR	2.7
30	DI	110	ALA	2.7
36	DO	14	ALA	2.7
22	BA	549	G	2.7
22	DA	2116	G	2.7
23	DB	18	G	2.7
45	BX	77	LYS	2.7
26	DE	169	VAL	2.7
15	CO	6	GLU	2.7
22	DA	1044	C	2.7
37	DP	19	SER	2.7
7	CG	78	ARG	2.7
1	CA	1044	A	2.7
34	DM	35	ALA	2.7
7	CG	84	THR	2.7
28	DG	49	THR	2.7
48	D0	26	THR	2.7
27	DF	89	VAL	2.7
40	DS	45	VAL	2.7
41	DT	85	VAL	2.7
2	AB	65	GLY	2.7
13	CM	67	GLY	2.7
22	DA	1530	G	2.7
22	DA	2156	G	2.7
1	AA	88	U	2.7
30	DI	90	SER	2.7
32	DK	14	SER	2.7
33	DL	57	LEU	2.7
48	D0	37	LYS	2.7

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Mol	Chain	Res	Type	RSRZ
2	AB	222	ARG	2.7
7	CG	141	VAL	2.7
17	CQ	11	ARG	2.7
48	D0	54	VAL	2.7
8	CH	49	PHE	2.7
29	BH	4	ILE	2.7
9	CI	31	ASN	2.7
44	DW	61	ALA	2.7
3	CC	126	ARG	2.7
18	CR	51	TYR	2.7
26	DE	196	VAL	2.7
27	BF	83	TYR	2.7
50	D2	35	ARG	2.7
2	AB	136	MET	2.7
28	DG	85	LYS	2.7
40	DS	6	LYS	2.7
24	DC	105	LEU	2.7
26	DE	12	LEU	2.7
22	BA	2137	U	2.7
30	BI	121	ASP	2.7
22	DA	880	G	2.7
10	CJ	47	GLU	2.7
17	CQ	63	GLU	2.7
7	AG	68	ASN	2.7
48	D0	30	VAL	2.7
49	D1	18	GLY	2.7
2	CB	101	LEU	2.7
3	AC	157	LEU	2.7
27	DF	92	ARG	2.7
24	BC	272	SER	2.7
41	DT	70	HIS	2.7
42	DU	98	SER	2.7
1	CA	87	C	2.7
14	CN	2	ALA	2.7
22	BA	1171	G	2.7
22	DA	291	G	2.7
46	DY	62	GLY	2.7
7	CG	144	MET	2.7
41	DT	29	THR	2.7
9	CI	83	ILE	2.7
39	DR	49	ILE	2.7
2	CB	37	LYS	2.7

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Mol	Chain	Res	Type	RSRZ
41	DT	25	GLU	2.7
10	CJ	23	ALA	2.7
28	DG	74	SER	2.7
44	DW	33	ALA	2.7
46	DY	45	GLN	2.7
29	BH	13	GLY	2.7
44	DW	51	VAL	2.7
3	CC	107	ARG	2.7
28	DG	3	ARG	2.7
31	DJ	118	MET	2.7
36	DO	4	LYS	2.7
36	DO	12	THR	2.7
31	DJ	15	TRP	2.7
7	AG	86	GLN	2.7
8	CH	2	SER	2.7
3	CC	91	VAL	2.7
26	DE	178	VAL	2.7
29	DH	147	VAL	2.7
38	DQ	30	ARG	2.7
22	DA	1529	G	2.6
29	BH	1	MET	2.6
30	BI	125	MET	2.6
53	B5	128	LEU	2.6
9	CI	84	THR	2.6
30	BI	64	ASP	2.6
25	DD	209	ALA	2.6
5	AE	102	GLY	2.6
3	CC	106	VAL	2.6
26	DE	156	ASN	2.6
2	AB	154	MET	2.6
3	AC	193	TYR	2.6
23	DB	119	A	2.6
52	D4	31	PRO	2.6
22	DA	75	G	2.6
22	DA	2106	U	2.6
22	DA	2128	G	2.6
19	CS	26	GLY	2.6
20	CT	47	ALA	2.6
28	DG	165	ALA	2.6
29	BH	51	ARG	2.6
31	DJ	94	ALA	2.6
36	DO	114	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
37	DP	95	ALA	2.6
2	CB	110	SER	2.6
17	CQ	73	TRP	2.6
36	DO	84	GLU	2.6
22	BA	1100	C	2.6
27	DF	169	LEU	2.6
3	CC	77	ILE	2.6
9	CI	125	PRO	2.6
19	CS	45	ILE	2.6
28	DG	24	ILE	2.6
28	DG	170	ARG	2.6
46	BY	23	ARG	2.6
22	DA	2119	A	2.6
28	DG	112	PRO	2.6
10	CJ	63	ASP	2.6
13	CM	11	ASP	2.6
40	DS	93	ALA	2.6
14	CN	71	HIS	2.6
22	DA	88	G	2.6
22	DA	1087	G	2.6
27	DF	101	GLU	2.6
46	DY	17	GLU	2.6
7	AG	53	ARG	2.6
9	AI	123	ARG	2.6
50	D2	13	ASN	2.6
9	CI	68	LYS	2.6
38	DQ	15	LYS	2.6
49	D1	27	LYS	2.6
1	AA	1493	A	2.6
27	DF	27	GLN	2.6
33	DL	38	GLN	2.6
13	CM	65	VAL	2.6
22	BA	2885	G	2.6
22	DA	70	G	2.6
2	CB	69	PHE	2.6
29	DH	136	SER	2.6
38	DQ	101	PHE	2.6
34	DM	41	LEU	2.6
44	DW	72	LYS	2.6
46	BY	6	LEU	2.6
22	DA	1094	U	2.6
24	DC	47	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
26	DE	22	ASP	2.6
27	DF	75	ALA	2.6
36	BO	50	ALA	2.6
42	DU	88	GLU	2.6
13	CM	3	ARG	2.6
7	AG	80	VAL	2.6
26	DE	189	THR	2.6
28	DG	99	LYS	2.6
33	DL	67	THR	2.6
36	DO	74	VAL	2.6
40	DS	72	THR	2.6
44	DW	31	VAL	2.6
50	D2	9	VAL	2.6
1	AA	993	G	2.6
10	CJ	17	LEU	2.6
7	AG	144	MET	2.6
10	AJ	8	ILE	2.6
16	CP	33	ILE	2.6
28	DG	101	ASN	2.6
13	CM	54	ASP	2.6
14	AN	22	ALA	2.6
28	DG	59	ALA	2.6
29	BH	25	TYR	2.6
30	DI	103	ARG	2.6
41	DT	79	ASP	2.6
53	B5	163	GLU	2.6
9	AI	104	VAL	2.6
16	AP	20	VAL	2.6
17	CQ	13	VAL	2.6
34	DM	26	VAL	2.6
41	DT	47	VAL	2.6
19	AS	33	THR	2.6
30	DI	73	THR	2.6
44	DW	69	PHE	2.6
13	CM	34	LEU	2.6
8	CH	46	ILE	2.6
2	CB	96	TRP	2.6
7	CG	116	MET	2.6
11	CK	43	GLY	2.6
40	DS	103	ILE	2.6
29	BH	66	ASN	2.6
30	DI	125	MET	2.6

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Mol	Chain	Res	Type	RSRZ
38	DQ	71	GLN	2.6
38	DQ	22	LYS	2.6
39	DR	55	ASP	2.6
16	CP	20	VAL	2.6
1	CA	1017	U	2.6
22	DA	1066	U	2.6
29	DH	104	THR	2.6
47	DZ	24	LEU	2.6
24	DC	104	ILE	2.6
30	BI	91	GLY	2.6
10	AJ	35	GLN	2.6
10	CJ	20	GLN	2.6
30	DI	115	ALA	2.6
10	AJ	77	VAL	2.6
26	DE	126	VAL	2.6
36	DO	27	VAL	2.6
48	D0	3	VAL	2.6
19	CS	81	ARG	2.5
7	CG	129	GLU	2.5
14	CN	30	ILE	2.5
19	AS	48	THR	2.5
19	CS	73	GLU	2.5
44	DW	29	GLU	2.5
53	B5	178	LYS	2.5
17	CQ	82	ALA	2.5
34	DM	105	MET	2.5
43	DV	45	ASP	2.5
43	DV	66	ASP	2.5
5	AE	50	TYR	2.5
7	AG	78	ARG	2.5
7	CG	70	ARG	2.5
9	CI	41	ARG	2.5
17	CQ	23	VAL	2.5
22	DA	547	A	2.5
22	DA	1043	C	2.5
14	AN	12	LYS	2.5
7	CG	19	GLY	2.5
34	DM	78	LEU	2.5
2	AB	67	ILE	2.5
25	DD	95	SER	2.5
30	BI	77	ALA	2.5
2	CB	192	ASP	2.5

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Mol	Chain	Res	Type	RSRZ
14	CN	98	LYS	2.5
22	DA	343	C	2.5
24	DC	248	TRP	2.5
26	DE	180	LEU	2.5
52	D4	21	GLY	2.5
2	AB	209	ALA	2.5
17	AQ	5	ILE	2.5
20	CT	11	ALA	2.5
28	DG	26	ILE	2.5
21	AU	47	ARG	2.5
29	BH	18	GLN	2.5
42	DU	3	ALA	2.5
42	DU	6	ARG	2.5
33	DL	68	SER	2.5
8	CH	110	VAL	2.5
15	AO	29	VAL	2.5
26	DE	122	GLU	2.5
27	DF	139	PRO	2.5
34	DM	117	PHE	2.5
10	CJ	92	LEU	2.5
13	AM	19	LEU	2.5
22	DA	1057	A	2.5
22	DA	2164	C	2.5
25	DD	125	TRP	2.5
43	DV	33	GLY	2.5
2	AB	39	HIS	2.5
22	DA	1450	G	2.5
26	DE	114	ARG	2.5
38	DQ	44	GLN	2.5
19	CS	21	LYS	2.5
30	DI	100	LYS	2.5
41	DT	81	LYS	2.5
27	DF	144	ASP	2.5
28	DG	110	SER	2.5
2	CB	210	VAL	2.5
7	CG	122	ASN	2.5
28	DG	8	PRO	2.5
44	DW	71	VAL	2.5
22	DA	1111	A	2.5
23	DB	19	C	2.5
36	DO	18	LEU	2.5
2	CB	15	HIS	2.5

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Mol	Chain	Res	Type	RSRZ
3	CC	135	LYS	2.5
13	AM	5	ALA	2.5
20	AT	87	ALA	2.5
28	DG	46	ALA	2.5
7	AG	27	VAL	2.5
43	DV	37	PRO	2.5
51	D3	8	ARG	2.5
2	AB	101	LEU	2.5
26	BE	6	LYS	2.5
27	DF	4	LEU	2.5
22	DA	1606	C	2.5
29	DH	128	HIS	2.5
43	DV	89	ILE	2.5
52	D4	26	ILE	2.5
26	DE	21	ARG	2.5
3	AC	39	VAL	2.5
22	DA	2121	G	2.5
34	DM	67	VAL	2.5
37	DP	25	THR	2.5
39	DR	19	THR	2.5
49	D1	37	LYS	2.5
33	DL	27	LEU	2.5
1	AA	998	C	2.5
22	DA	1045	C	2.5
27	DF	137	ILE	2.5
35	DN	52	ILE	2.5
41	DT	13	ALA	2.5
19	AS	32	ARG	2.5
33	DL	91	ASP	2.5
29	DH	9	VAL	2.5
45	DX	47	VAL	2.5
3	CC	165	THR	2.5
5	CE	149	SER	2.5
9	AI	93	SER	2.5
36	DO	95	SER	2.5
22	DA	1168	G	2.5
22	DA	1407	G	2.5
24	DC	81	LEU	2.5
25	DD	188	LEU	2.5
30	DI	19	ASN	2.5
1	CA	1441	A	2.5
20	CT	41	ALA	2.5

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Mol	Chain	Res	Type	RSRZ
22	DA	2749	A	2.5
26	DE	16	GLU	2.5
27	DF	44	ILE	2.5
30	BI	35	ILE	2.5
33	DL	104	GLN	2.5
36	DO	81	ARG	2.5
36	DO	102	ARG	2.5
37	DP	72	ARG	2.5
37	DP	102	GLU	2.5
33	DL	84	LYS	2.5
11	AK	52	PHE	2.5
39	DR	26	ASP	2.5
11	AK	113	VAL	2.5
19	CS	62	VAL	2.5
33	DL	34	GLY	2.5
34	DM	61	GLY	2.5
39	DR	67	GLY	2.5
33	DL	125	LEU	2.4
34	DM	27	SER	2.4
14	CN	70	PRO	2.4
19	AS	55	ARG	2.4
30	BI	75	PRO	2.4
9	CI	92	GLU	2.4
16	AP	45	GLU	2.4
14	CN	99	ALA	2.4
27	DF	63	GLN	2.4
27	BF	79	ILE	2.4
28	DG	86	LYS	2.4
41	DT	74	ILE	2.4
22	DA	1046	A	2.4
22	DA	544	C	2.4
22	DA	2129	C	2.4
36	DO	44	GLY	2.4
39	DR	58	VAL	2.4
16	AP	6	LEU	2.4
21	AU	24	GLU	2.4
8	CH	94	LYS	2.4
10	CJ	28	THR	2.4
11	AK	111	THR	2.4
27	DF	134	GLU	2.4
27	DF	158	THR	2.4
30	BI	93	PRO	2.4

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Mol	Chain	Res	Type	RSRZ
52	D4	6	SER	2.4
13	CM	18	ALA	2.4
33	DL	15	ALA	2.4
1	CA	86	G	2.4
2	AB	50	PHE	2.4
17	CQ	6	ARG	2.4
22	DA	885	C	2.4
25	DD	46	ARG	2.4
33	DL	139	GLY	2.4
29	DH	61	VAL	2.4
9	CI	87	LEU	2.4
13	CM	19	LEU	2.4
14	AN	16	LEU	2.4
27	DF	11	GLU	2.4
31	DJ	32	LEU	2.4
43	BV	69	GLU	2.4
53	B5	71	LYS	2.4
52	D4	35	GLN	2.4
3	CC	54	ARG	2.4
22	BA	2151	U	2.4
24	DC	48	ARG	2.4
9	CI	48	VAL	2.4
22	DA	266	G	2.4
22	DA	2307	G	2.4
51	D3	22	PHE	2.4
32	DK	67	LYS	2.4
32	DK	69	VAL	2.4
40	DS	17	VAL	2.4
27	DF	140	GLU	2.4
53	B5	127	LYS	2.4
2	AB	85	LEU	2.4
9	CI	61	LEU	2.4
13	AM	33	ILE	2.4
20	CT	57	ILE	2.4
2	AB	213	TYR	2.4
50	D2	3	ARG	2.4
29	DH	83	LYS	2.4
25	DD	200	ASP	2.4
40	DS	59	GLU	2.4
30	BI	36	MET	2.4
11	AK	13	ARG	2.4
15	CO	17	ARG	2.4

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Mol	Chain	Res	Type	RSRZ
35	DN	9	GLN	2.4
28	DG	5	ALA	2.4
41	DT	69	ARG	2.4
24	DC	272	SER	2.4
35	DN	113	ILE	2.4
35	DN	101	GLY	2.4
1	AA	1042	A	2.4
22	BA	546	U	2.4
37	DP	17	VAL	2.4
5	CE	152	MET	2.4
7	CG	99	LEU	2.4
12	AL	14	ARG	2.4
22	DA	1075	C	2.4
25	DD	77	ARG	2.4
34	DM	40	ARG	2.4
2	CB	152	LYS	2.4
22	DA	277	G	2.4
30	DI	107	GLN	2.4
29	DH	105	ALA	2.4
29	DH	80	ILE	2.4
36	DO	42	PRO	2.4
2	CB	102	THR	2.4
31	DJ	89	PHE	2.4
33	DL	50	PHE	2.4
40	DS	38	TYR	2.4
5	CE	112	ARG	2.4
14	CN	14	VAL	2.4
27	DF	150	ARG	2.4
28	DG	69	ARG	2.4
45	DX	13	VAL	2.4
20	AT	66	LEU	2.4
49	D1	34	LEU	2.4
33	DL	96	LYS	2.4
46	DY	54	LYS	2.4
1	CA	1002	G	2.4
4	CD	163	GLU	2.4
27	DF	124	GLY	2.4
28	DG	54	PRO	2.4
51	D3	21	GLY	2.4
3	AC	37	PHE	2.4
41	DT	17	SER	2.4
10	CJ	98	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
25	DD	140	HIS	2.4
45	DX	7	VAL	2.4
34	DM	100	LYS	2.4
40	DS	33	LEU	2.4
20	AT	61	GLN	2.4
52	D4	29	ALA	2.4
3	CC	206	GLU	2.4
28	DG	66	GLY	2.4
38	DQ	98	ILE	2.4
35	DN	30	ARG	2.4
6	CF	80	PHE	2.4
22	BA	2180	U	2.4
27	DF	162	SER	2.4
28	DG	172	LYS	2.4
29	DH	11	ASN	2.4
2	CB	18	HIS	2.4
13	CM	14	HIS	2.4
47	DZ	4	THR	2.4
29	DH	149	GLU	2.3
1	CA	998	C	2.3
10	CJ	40	ILE	2.3
32	DK	49	ARG	2.3
22	BA	2167	U	2.3
43	DV	29	ILE	2.3
27	BF	78	LYS	2.3
32	DK	48	PRO	2.3
2	CB	159	ASP	2.3
2	CB	187	VAL	2.3
38	DQ	100	VAL	2.3
10	CJ	42	LEU	2.3
22	DA	2148	G	2.3
29	BH	135	HIS	2.3
29	DH	135	HIS	2.3
1	CA	1022	A	2.3
7	AG	4	ARG	2.3
22	BA	654	A	2.3
22	DA	1065	U	2.3
7	CG	112	GLY	2.3
26	DE	103	GLY	2.3
27	DF	82	GLY	2.3
33	DL	87	GLY	2.3
42	DU	91	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
39	DR	52	PRO	2.3
1	CA	85	U	2.3
4	AD	67	VAL	2.3
24	DC	44	ASN	2.3
31	DJ	53	TYR	2.3
33	DL	69	ARG	2.3
40	DS	109	ASP	2.3
9	AI	63	LEU	2.3
14	CN	79	LEU	2.3
27	DF	50	LEU	2.3
13	AM	47	GLU	2.3
1	CA	988	G	2.3
1	CA	1024	G	2.3
14	CN	72	GLY	2.3
17	CQ	16	LYS	2.3
46	BY	2	LYS	2.3
32	DK	115	ILE	2.3
12	CL	62	GLU	2.3
27	DF	69	LYS	2.3
29	DH	14	SER	2.3
41	DT	84	TYR	2.3
46	DY	60	LYS	2.3
5	CE	103	THR	2.3
7	CG	51	ALA	2.3
22	DA	1048	A	2.3
22	DA	1085	A	2.3
28	DG	97	ALA	2.3
30	BI	44	ALA	2.3
22	DA	2796	U	2.3
2	AB	60	ILE	2.3
22	BA	1068	G	2.3
29	DH	134	VAL	2.3
34	DM	36	VAL	2.3
41	DT	89	GLU	2.3
14	CN	16	LEU	2.3
15	AO	31	LEU	2.3
2	AB	40	ILE	2.3
5	CE	80	THR	2.3
9	CI	9	THR	2.3
30	BI	117	MET	2.3
50	D2	14	ARG	2.3
1	CA	987	G	2.3

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Mol	Chain	Res	Type	RSRZ
11	CK	126	LYS	2.3
2	AB	135	LEU	2.3
7	CG	47	LEU	2.3
24	DC	154	LEU	2.3
29	BH	90	LEU	2.3
20	CT	45	ALA	2.3
27	DF	80	ARG	2.3
28	DG	7	ALA	2.3
28	DG	68	ALA	2.3
14	CN	50	THR	2.3
25	DD	89	GLU	2.3
21	CU	41	PRO	2.3
23	DB	20	G	2.3
30	DI	138	LEU	2.3
33	DL	21	ARG	2.3
41	DT	11	LEU	2.3
28	DG	48	ASN	2.3
31	DJ	20	ALA	2.3
4	AD	177	LYS	2.3
38	DQ	45	TYR	2.3
13	CM	9	ILE	2.3
1	CA	80	A	2.3
1	CA	1019	A	2.3
2	AB	69	PHE	2.3
7	AG	26	PHE	2.3
22	DA	1596	A	2.3
26	DE	60	TRP	2.3
10	AJ	36	VAL	2.3
33	DL	119	PRO	2.3
9	AI	40	GLY	2.3
1	CA	1013	G	2.3
2	CB	160	ALA	2.3
20	CT	49	LYS	2.3
22	BA	2129	C	2.3
22	DA	882	G	2.3
38	DQ	84	LYS	2.3
52	D4	34	LYS	2.3
47	DZ	12	SER	2.3
21	CU	24	GLU	2.3
29	BH	29	PHE	2.3
4	CD	143	VAL	2.3
7	AG	38	THR	2.3

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Mol	Chain	Res	Type	RSRZ
33	DL	117	THR	2.3
35	DN	17	ARG	2.3
2	AB	123	ASP	2.2
10	AJ	14	ASP	2.2
24	DC	205	LEU	2.3
26	DE	9	GLN	2.3
27	DF	81	GLN	2.3
42	DU	9	ASP	2.2
42	DU	57	GLY	2.3
43	DV	10	LYS	2.3
3	CC	133	ALA	2.2
16	CP	65	ALA	2.2
36	DO	73	ALA	2.2
2	AB	51	ASN	2.2
22	DA	1026	G	2.2
3	CC	172	ARG	2.2
5	CE	147	MET	2.2
9	AI	128	SER	2.2
13	CM	81	MET	2.2
25	DD	14	ILE	2.2
26	DE	125	SER	2.2
34	DM	17	ASN	2.2
1	CA	77	A	2.2
1	CA	205	A	2.2
19	AS	6	LYS	2.2
29	BH	104	THR	2.2
29	DH	3	VAL	2.2
30	BI	72	LYS	2.2
17	AQ	7	THR	2.2
25	DD	153	GLY	2.2
30	BI	85	GLY	2.2
44	BW	10	THR	2.2
44	DW	58	THR	2.2
26	DE	171	ASP	2.2
31	DJ	14	ASP	2.2
33	DL	131	ALA	2.2
9	AI	33	ARG	2.2
13	CM	87	ARG	2.2
47	DZ	39	GLU	2.2
28	DG	121	ILE	2.2
32	DK	77	ILE	2.2
46	DY	26	PHE	2.2

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Mol	Chain	Res	Type	RSRZ
11	AK	50	SER	2.2
12	AL	73	ASN	2.2
24	DC	37	ASN	2.2
13	CM	110	LYS	2.2
46	DY	4	LYS	2.2
22	DA	1532	A	2.2
22	DA	2109	U	2.2
28	DG	17	VAL	2.2
14	CN	60	GLN	2.2
26	DE	138	LEU	2.2
29	DH	88	GLY	2.2
2	CB	84	ALA	2.2
7	CG	63	GLU	2.2
20	CT	22	ALA	2.2
29	DH	39	ALA	2.2
39	DR	46	GLU	2.2
38	DQ	74	ILE	2.2
19	CS	35	SER	2.2
41	DT	92	ASN	2.2
5	AE	123	VAL	2.2
7	AG	23	LEU	2.2
14	AN	27	LEU	2.2
22	BA	1098	A	2.2
22	DA	89	A	2.2
22	DA	2123	G	2.2
35	DN	60	VAL	2.2
36	DO	22	GLY	2.2
46	BY	62	GLY	2.2
41	DT	72	GLN	2.2
30	DI	26	PRO	2.2
32	DK	104	THR	2.2
34	DM	24	THR	2.2
40	DS	2	GLU	2.2
41	DT	86	THR	2.2
43	DV	54	ALA	2.2
36	DO	67	ASN	2.2
29	DH	85	GLY	2.2
30	BI	89	GLY	2.2
1	CA	4	U	2.2
1	CA	1035	A	2.2
15	AO	57	LEU	2.2
22	BA	1918	A	2.2

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Mol	Chain	Res	Type	RSRZ
30	DI	111	GLN	2.2
46	DY	56	LEU	2.2
1	CA	942	G	2.2
29	BH	100	ALA	2.2
33	DL	5	THR	2.2
40	DS	39	THR	2.2
14	CN	31	ILE	2.2
29	DH	72	ILE	2.2
2	CB	35	ARG	2.2
20	CT	20	HIS	2.2
30	DI	134	ARG	2.2
45	DX	18	ARG	2.2
7	CG	135	VAL	2.2
22	DA	318	C	2.2
25	DD	117	GLY	2.2
28	DG	73	ASN	2.2
37	DP	66	ASN	2.2
25	DD	9	VAL	2.2
28	DG	11	VAL	2.2
28	DG	37	LEU	2.2
28	DG	116	GLN	2.2
29	BH	141	LYS	2.2
31	DJ	17	VAL	2.2
39	DR	72	VAL	2.2
42	DU	83	VAL	2.2
5	CE	124	LEU	2.2
17	CQ	75	LEU	2.2
18	CR	55	LEU	2.2
19	AS	50	ALA	2.2
46	DY	3	ALA	2.2
9	CI	80	ARG	2.2
22	DA	1435	G	2.2
25	DD	2	ILE	2.2
26	DE	73	ILE	2.2
2	CB	145	GLU	2.2
27	DF	94	GLU	2.2
30	DI	123	GLU	2.2
1	CA	215	C	2.2
21	AU	28	VAL	2.2
28	DG	128	GLN	2.2
34	DM	102	LEU	2.2
52	D4	37	GLN	2.2

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Mol	Chain	Res	Type	RSRZ
1	CA	1362	A	2.2
1	CA	1493	A	2.2
29	DH	10	ALA	2.2
3	AC	136	ARG	2.2
32	DK	98	ARG	2.2
40	DS	87	PRO	2.2
8	CH	75	ILE	2.2
10	CJ	69	THR	2.2
14	AN	23	LYS	2.2
16	CP	42	ILE	2.2
31	DJ	50	THR	2.2
1	CA	203	G	2.2
2	CB	149	GLY	2.2
10	AJ	78	GLU	2.2
39	DR	45	GLU	2.2
43	DV	67	GLY	2.2
44	DW	73	GLY	2.2
10	CJ	70	HIS	2.2
9	CI	37	GLN	2.2
28	DG	22	GLN	2.2
22	DA	2177	C	2.2
29	DH	68	ARG	2.2
2	CB	16	PHE	2.2
4	AD	22	LYS	2.2
34	DM	118	LYS	2.2
3	CC	207	ILE	2.2
9	CI	72	ILE	2.2
17	CQ	38	ILE	2.2
27	DF	131	GLY	2.2
35	DN	82	GLU	2.2
8	AH	26	THR	2.2
3	CC	129	MET	2.2
22	DA	361	G	2.2
22	DA	1228	G	2.2
3	CC	168	TYR	2.2
14	CN	42	TRP	2.2
34	DM	60	GLN	2.2
43	DV	1	MET	2.2
48	D0	5	GLN	2.2
26	DE	123	LYS	2.1
22	DA	146	A	2.1
22	DA	1205	A	2.1

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Mol	Chain	Res	Type	RSRZ
22	DA	2149	U	2.1
6	CF	12	PRO	2.1
39	DR	30	GLY	2.1
28	DG	34	THR	2.1
27	DF	31	VAL	2.1
28	DG	113	VAL	2.1
29	BH	78	VAL	2.1
22	BA	2402	U	2.1
30	BI	138	LEU	2.1
2	AB	36	ASN	2.1
10	CJ	12	ALA	2.1
29	BH	81	ALA	2.1
39	DR	48	LYS	2.1
3	CC	46	GLU	2.1
9	CI	89	GLU	2.1
10	CJ	13	PHE	2.1
22	DA	2103	C	2.1
22	DA	2175	C	2.1
2	CB	182	PRO	2.1
2	CB	201	PRO	2.1
9	AI	102	GLY	2.1
9	CI	28	ILE	2.1
11	CK	19	GLY	2.1
14	CN	78	GLY	2.1
19	CS	54	GLY	2.1
29	BH	99	ILE	2.1
50	D2	21	ARG	2.1
1	CA	208	U	2.1
22	DA	653	U	2.1
26	DE	185	LYS	2.1
3	AC	175	LEU	2.1
3	CC	128	VAL	2.1
4	CD	130	VAL	2.1
10	AJ	73	LEU	2.1
27	DF	105	THR	2.1
29	BH	9	VAL	2.1
30	DI	92	LYS	2.1
34	DM	54	THR	2.1
2	AB	32	PHE	2.1
4	AD	182	PHE	2.1
11	AK	94	GLU	2.1
33	DL	4	ASN	2.1

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Mol	Chain	Res	Type	RSRZ
43	DV	69	GLU	2.1
1	CA	1134	G	2.1
3	CC	136	ARG	2.1
10	AJ	31	ARG	2.1
15	AO	17	ARG	2.1
22	DA	1074	G	2.1
10	AJ	100	ILE	2.1
32	DK	47	ILE	2.1
39	BR	50	GLY	2.1
27	DF	14	LYS	2.1
34	DM	72	PRO	2.1
10	AJ	98	VAL	2.1
29	DH	122	LEU	2.1
38	DQ	60	LEU	2.1
30	DI	108	GLU	2.1
48	D0	2	ALA	2.1
3	CC	29	PHE	2.1
22	DA	2181	U	2.1
20	AT	59	ASP	2.1
9	CI	40	GLY	2.1
27	DF	61	SER	2.1
1	CA	76	G	2.1
22	DA	1084	A	2.1
18	AR	68	LEU	2.1
22	DA	846	U	2.1
25	DD	60	VAL	2.1
27	BF	74	VAL	2.1
40	DS	69	LEU	2.1
28	DG	136	ALA	2.1
29	DH	111	ALA	2.1
50	D2	12	ARG	2.1
2	CB	91	PHE	2.1
7	CG	132	GLY	2.1
25	DD	56	LYS	2.1
26	DE	184	ASP	2.1
26	DE	194	LYS	2.1
28	BG	177	LYS	2.1
32	DK	81	GLY	2.1
47	DZ	3	LYS	2.1
14	AN	32	SER	2.1
27	BF	73	SER	2.1
1	AA	999	C	2.1

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Mol	Chain	Res	Type	RSRZ
22	DA	1077	A	2.1
27	DF	29	PRO	2.1
1	CA	1242	G	2.1
7	CG	75	VAL	2.1
13	CM	93	ARG	2.1
16	CP	48	GLU	2.1
22	BA	883	G	2.1
22	DA	1071	G	2.1
27	DF	178	ARG	2.1
39	DR	64	VAL	2.1
3	CC	117	ALA	2.1
4	AD	37	ALA	2.1
20	CT	63	ALA	2.1
24	DC	122	ALA	2.1
29	DH	1	MET	2.1
40	DS	90	LYS	2.1
4	AD	72	PHE	2.1
29	DH	139	PHE	2.1
7	CG	55	GLY	2.1
13	CM	82	ASP	2.1
42	DU	23	GLY	2.1
7	CG	77	SER	2.1
45	DX	74	ARG	2.1
1	CA	1167	A	2.1
7	AG	2	PRO	2.1
9	CI	5	GLN	2.1
10	CJ	35	GLN	2.1
22	DA	1600	C	2.1
2	CB	26	LYS	2.1
19	AS	13	LEU	2.1
27	DF	161	LYS	2.1
51	D3	55	LEU	2.1
1	CA	1034	G	2.1
14	AN	25	ALA	2.1
50	D2	22	MET	2.1
5	AE	148	ASN	2.1
28	DG	19	ILE	2.1
7	AG	9	GLN	2.1
17	AQ	9	GLN	2.1
27	DF	19	GLU	2.1
27	DF	135	GLN	2.1
41	DT	26	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
3	AC	12	LEU	2.1
6	AF	61	LEU	2.1
9	CI	111	VAL	2.1
22	DA	2179	C	2.1
29	DH	54	LEU	2.1
34	DM	92	TRP	2.1
5	CE	110	ALA	2.1
11	CK	99	ALA	2.1
40	DS	32	ALA	2.1
46	DY	61	ALA	2.1
2	CB	33	GLY	2.1
29	DH	91	PHE	2.1
1	AA	988	G	2.1
22	DA	879	G	2.1
49	D1	19	HIS	2.1
2	AB	164	ILE	2.1
7	AG	85	TYR	2.1
22	BA	2187	U	2.1
33	DL	58	TYR	2.1
47	DZ	37	GLU	2.1
47	DZ	44	ILE	2.1
51	D3	6	THR	2.1
2	CB	51	ASN	2.1
7	CG	50	LEU	2.1
16	AP	19	VAL	2.1
19	AS	31	LEU	2.1
21	AU	11	PRO	2.1
22	DA	892	A	2.1
17	AQ	11	ARG	2.1
31	DJ	35	ARG	2.1
37	DP	101	ARG	2.1
22	DA	1176	U	2.0
25	DD	19	GLY	2.0
24	DC	5	LYS	2.0
28	DG	134	LYS	2.0
44	DW	44	LYS	2.0
1	AA	1026	G	2.0
22	DA	1179	G	2.0
22	DA	2107	G	2.0
33	DL	30	THR	2.0
37	DP	12	GLN	2.0
39	DR	6	GLN	2.0

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Mol	Chain	Res	Type	RSRZ
26	DE	67	ARG	2.0
29	DH	121	VAL	2.0
37	DP	73	VAL	2.0
46	DY	7	ARG	2.0
1	AA	1036	A	2.0
1	CA	1275	A	2.0
32	DK	60	ALA	2.0
2	CB	65	GLY	2.0
22	DA	1278	C	2.0
22	DA	2000	C	2.0
29	DH	89	LYS	2.0
52	D4	20	ASP	2.0
12	CL	82	ILE	2.0
33	DL	103	ILE	2.0
20	CT	82	GLN	2.0
34	DM	129	THR	2.0
37	DP	109	ARG	2.0
9	CI	94	LEU	2.0
12	CL	93	VAL	2.0
22	DA	1063	G	2.0
37	DP	115	ASN	2.0
27	DF	53	ALA	2.0
1	CA	71	A	2.0
9	CI	120	LYS	2.0
27	DF	145	LYS	2.0
30	BI	56	PRO	2.0
33	DL	62	PRO	2.0
36	DO	79	ALA	2.0
22	DA	1614	A	2.0
24	DC	266	PHE	2.0
22	DA	1592	C	2.0
39	DR	66	HIS	2.0
3	CC	87	LEU	2.0
4	AD	19	LEU	2.0
7	AG	89	VAL	2.0
10	AJ	10	LEU	2.0
13	AM	97	VAL	2.0
17	CQ	44	LEU	2.0
21	AU	29	LEU	2.0
25	DD	201	LEU	2.0
28	DG	129	THR	2.0
1	AA	1033	G	2.0

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Mol	Chain	Res	Type	RSRZ
3	AC	141	ALA	2.0
26	DE	15	SER	2.0
41	DT	51	PHE	2.0
9	CI	53	GLU	2.0
1	CA	1112	C	2.0
39	DR	1	MET	2.0
52	D4	36	ARG	2.0
2	AB	15	HIS	2.0
3	CC	93	ASP	2.0
41	DT	30	ILE	2.0
13	CM	100	GLN	2.0
26	DE	115	GLN	2.0
51	D3	41	LYS	2.0
16	CP	2	VAL	2.0
7	CG	108	ALA	2.0
36	DO	71	ALA	2.0
28	DG	42	GLU	2.0
32	DK	106	GLU	2.0
2	AB	226	SER	2.0

## 6.2 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

## 6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
54	MG	BA	3171	1/1	0.75	0.32	25.86	34,34,34,34	0
54	MG	DA	3059	1/1	0.82	0.48	16.92	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	BA	3133	1/1	0.93	0.30	15.99	48,48,48,48	0
54	MG	BA	3145	1/1	0.82	0.37	15.65	37,37,37,37	0
54	MG	BA	3042	1/1	0.90	0.35	12.45	7,7,7,7	0
54	MG	DA	3003	1/1	0.81	0.40	11.03	65,65,65,65	0
54	MG	DA	3073	1/1	0.61	0.45	11.00	76,76,76,76	0
54	MG	DA	3154	1/1	0.77	0.58	10.23	63,63,63,63	0
54	MG	BA	3187	1/1	0.93	0.27	8.62	16,16,16,16	0
54	MG	BA	3176	1/1	0.96	0.30	8.20	15,15,15,15	0
54	MG	DA	3070	1/1	0.79	0.27	6.58	69,69,69,69	0
54	MG	DA	3061	1/1	0.85	0.35	5.75	69,69,69,69	0
54	MG	BA	3110	1/1	0.91	0.24	5.49	4,4,4,4	0
54	MG	DA	3140	1/1	0.98	0.30	5.07	36,36,36,36	0
54	MG	AA	1622	1/1	0.97	0.22	4.92	17,17,17,17	0
54	MG	AA	1644	1/1	0.94	0.30	4.91	41,41,41,41	0
54	MG	AA	1655	1/1	0.90	0.22	4.89	50,50,50,50	0
54	MG	DA	3029	1/1	0.39	0.32	3.48	63,63,63,63	0
54	MG	BA	3162	1/1	0.94	0.23	3.43	17,17,17,17	0
55	VIF	BA	3001	38/38	0.96	0.21	3.27	3,9,14,18	0
54	MG	DA	3125	1/1	0.58	0.43	3.24	76,76,76,76	0
54	MG	DA	3065	1/1	0.91	0.23	3.10	46,46,46,46	0
54	MG	BA	3029	1/1	0.90	0.26	3.04	38,38,38,38	0
54	MG	DA	3049	1/1	0.56	0.35	3.03	84,84,84,84	0
54	MG	CA	1615	1/1	0.72	0.19	3.00	38,38,38,38	0
54	MG	BA	3051	1/1	0.97	0.22	2.78	11,11,11,11	0
54	MG	DA	3111	1/1	0.89	0.23	2.66	45,45,45,45	0
54	MG	DA	3042	1/1	0.59	0.27	2.21	67,67,67,67	0
54	MG	BA	3179	1/1	0.98	0.21	2.10	7,7,7,7	0
54	MG	DA	3152	1/1	0.82	0.35	1.99	54,54,54,54	0
54	MG	DA	3155	1/1	0.92	0.17	1.68	43,43,43,43	0
54	MG	DA	3106	1/1	0.79	0.22	1.65	61,61,61,61	0
54	MG	BA	3085	1/1	0.85	0.17	1.29	29,29,29,29	0
54	MG	BA	3160	1/1	0.98	0.18	1.22	16,16,16,16	0
54	MG	DA	3072	1/1	0.61	0.23	1.20	63,63,63,63	0
55	VIF	DA	3001	38/38	0.92	0.26	1.09	40,51,59,60	0
54	MG	CM	201	1/1	0.93	0.29	0.91	50,50,50,50	0
54	MG	BA	3065	1/1	0.90	0.19	0.90	2,2,2,2	0
54	MG	DA	3112	1/1	0.93	0.18	0.83	67,67,67,67	0
54	MG	CA	1640	1/1	0.92	0.17	0.78	22,22,22,22	0
54	MG	CA	1612	1/1	0.94	0.12	0.71	43,43,43,43	0
54	MG	DA	3051	1/1	0.95	0.19	0.66	43,43,43,43	0
54	MG	BA	3118	1/1	0.96	0.19	0.64	7,7,7,7	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
54	MG	DA	3130	1/1	0.96	0.18	0.59	35,35,35,35	0
54	MG	CA	1630	1/1	0.75	0.36	0.53	81,81,81,81	0
54	MG	DA	3158	1/1	0.94	0.22	0.51	46,46,46,46	0
54	MG	DA	3110	1/1	0.98	0.19	0.20	36,36,36,36	0
54	MG	BA	3075	1/1	0.83	0.19	-0.01	3,3,3,3	0
54	MG	DA	3009	1/1	0.83	0.19	-0.04	62,62,62,62	0
54	MG	BA	3014	1/1	0.94	0.18	-0.13	0,0,0,0	0
54	MG	DA	3146	1/1	0.85	0.17	-0.17	54,54,54,54	0
54	MG	BA	3132	1/1	0.95	0.18	-0.26	2,2,2,2	0
54	MG	AA	1617	1/1	0.79	0.18	-0.28	55,55,55,55	0
54	MG	DA	3019	1/1	0.76	0.20	-0.30	66,66,66,66	0
54	MG	DA	3013	1/1	0.95	0.20	-0.44	40,40,40,40	0
54	MG	DA	3116	1/1	0.87	0.24	-0.49	64,64,64,64	0
54	MG	AA	1663	1/1	0.84	0.15	-0.63	51,51,51,51	0
54	MG	BA	3064	1/1	0.93	0.17	-0.70	0,0,0,0	0
54	MG	BA	3116	1/1	0.84	0.17	-0.70	29,29,29,29	0
54	MG	DA	3014	1/1	0.58	0.16	-0.74	59,59,59,59	0
54	MG	DA	3117	1/1	0.95	0.14	-0.75	54,54,54,54	0
54	MG	BA	3164	1/1	0.95	0.14	-0.90	27,27,27,27	0
54	MG	AA	1636	1/1	0.93	0.12	-0.91	31,31,31,31	0
54	MG	DA	3079	1/1	0.78	0.12	-0.92	74,74,74,74	0
54	MG	DA	3133	1/1	0.89	0.13	-0.93	51,51,51,51	0
54	MG	DA	3048	1/1	0.69	0.17	-0.99	59,59,59,59	0
54	MG	CA	1614	1/1	0.85	0.08	-1.02	45,45,45,45	0
54	MG	BA	3006	1/1	0.96	0.13	-1.03	46,46,46,46	0
54	MG	BA	3081	1/1	0.94	0.14	-1.05	28,28,28,28	0
54	MG	DA	3137	1/1	0.34	0.14	-1.15	69,69,69,69	0
54	MG	DA	3040	1/1	0.92	0.16	-1.15	39,39,39,39	0
56	ZN	B4	101	1/1	0.98	0.14	-1.17	102,102,102,102	0
54	MG	DA	3064	1/1	0.96	0.15	-1.23	43,43,43,43	0
54	MG	BA	3134	1/1	0.85	0.11	-1.29	32,32,32,32	0
54	MG	CA	1632	1/1	0.93	0.14	-1.31	66,66,66,66	0
54	MG	DB	201	1/1	0.84	0.12	-1.32	83,83,83,83	0
56	ZN	D4	101	1/1	0.98	0.10	-1.35	78,78,78,78	0
54	MG	AA	1607	1/1	0.94	0.10	-1.37	47,47,47,47	0
54	MG	BA	3152	1/1	0.93	0.15	-1.46	27,27,27,27	0
54	MG	BA	3098	1/1	0.97	0.15	-1.49	5,5,5,5	0
54	MG	DA	3129	1/1	0.70	0.10	-1.52	65,65,65,65	0
54	MG	BA	3013	1/1	0.97	0.16	-1.67	3,3,3,3	0
54	MG	DA	3033	1/1	0.83	0.15	-1.80	53,53,53,53	0
54	MG	DA	3023	1/1	0.95	0.13	-2.00	36,36,36,36	0
54	MG	DA	3099	1/1	0.93	0.09	-2.10	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	BA	3070	1/1	0.97	0.16	-2.10	0,0,0,0	0
54	MG	BA	3099	1/1	0.97	0.14	-2.15	5,5,5,5	0
54	MG	BA	3073	1/1	0.88	0.16	-2.17	30,30,30,30	0
54	MG	DA	3135	1/1	0.68	0.12	-2.22	41,41,41,41	0
54	MG	CA	1621	1/1	0.81	0.12	-2.22	63,63,63,63	0
54	MG	BB	201	1/1	0.96	0.09	-2.23	20,20,20,20	0
54	MG	AA	1629	1/1	0.93	0.12	-2.34	42,42,42,42	0
54	MG	BA	3049	1/1	0.82	0.10	-2.34	37,37,37,37	0
54	MG	AA	1616	1/1	0.86	0.10	-2.39	57,57,57,57	0
54	MG	BA	3185	1/1	0.96	0.14	-2.41	16,16,16,16	0
54	MG	DA	3098	1/1	0.96	0.08	-2.61	46,46,46,46	0
54	MG	DA	3024	1/1	0.89	0.08	-2.63	63,63,63,63	0
54	MG	DA	3044	1/1	0.90	0.10	-2.70	54,54,54,54	0
54	MG	CA	1616	1/1	0.86	0.12	-2.82	31,31,31,31	0
54	MG	BA	3055	1/1	0.98	0.14	-2.83	5,5,5,5	0
54	MG	DA	3026	1/1	0.90	0.09	-2.88	43,43,43,43	0
54	MG	CA	1635	1/1	0.23	0.15	-2.90	91,91,91,91	0
54	MG	CA	1603	1/1	0.95	0.12	-2.97	43,43,43,43	0
54	MG	BA	3137	1/1	0.87	0.14	-3.02	44,44,44,44	0
54	MG	BA	3111	1/1	0.96	0.13	-3.03	0,0,0,0	0
54	MG	BA	3018	1/1	0.87	0.15	-3.08	4,4,4,4	0
54	MG	BA	3038	1/1	0.90	0.13	-3.11	30,30,30,30	0
54	MG	BA	3009	1/1	0.90	0.16	-3.11	10,10,10,10	0
54	MG	DA	3018	1/1	0.93	0.14	-3.15	53,53,53,53	0
54	MG	BA	3026	1/1	0.96	0.11	-3.22	9,9,9,9	0
54	MG	BA	3136	1/1	0.96	0.14	-3.27	1,1,1,1	0
54	MG	BA	3024	1/1	0.98	0.13	-3.30	5,5,5,5	0
54	MG	BA	3025	1/1	0.89	0.11	-3.33	4,4,4,4	0
54	MG	AA	1641	1/1	0.90	0.11	-3.36	16,16,16,16	0
54	MG	DA	3060	1/1	0.94	0.10	-3.36	43,43,43,43	0
54	MG	DA	3081	1/1	0.93	0.09	-3.41	67,67,67,67	0
54	MG	BA	3103	1/1	0.96	0.15	-3.41	0,0,0,0	0
54	MG	AA	1630	1/1	0.87	0.11	-3.41	53,53,53,53	0
54	MG	DA	3107	1/1	0.81	0.12	-3.50	47,47,47,47	0
54	MG	BA	3189	1/1	0.95	0.09	-3.58	25,25,25,25	0
54	MG	CA	1610	1/1	0.89	0.10	-3.58	57,57,57,57	0
54	MG	AA	1642	1/1	0.94	0.10	-3.59	21,21,21,21	0
54	MG	DA	3025	1/1	0.64	0.10	-3.72	40,40,40,40	0
54	MG	AA	1633	1/1	0.97	0.14	-3.78	29,29,29,29	0
54	MG	BA	3115	1/1	0.95	0.16	-3.85	11,11,11,11	0
54	MG	BA	3010	1/1	0.97	0.12	-3.93	3,3,3,3	0
54	MG	BA	3068	1/1	0.90	0.14	-3.94	8,8,8,8	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	DA	3006	1/1	0.57	0.12	-3.96	76,76,76,76	0
54	MG	DA	3097	1/1	0.93	0.06	-4.00	49,49,49,49	0
54	MG	BA	3107	1/1	0.82	0.15	-4.02	1,1,1,1	0
54	MG	CA	1607	1/1	0.94	0.10	-4.33	46,46,46,46	0
54	MG	BA	3037	1/1	0.98	0.14	-4.36	1,1,1,1	0
54	MG	BA	3109	1/1	0.99	0.12	-4.37	20,20,20,20	0
54	MG	CA	1626	1/1	0.76	0.08	-4.37	48,48,48,48	0
54	MG	DA	3052	1/1	0.95	0.08	-4.51	32,32,32,32	0
54	MG	DA	3055	1/1	0.97	0.10	-4.56	48,48,48,48	0
54	MG	AA	1606	1/1	0.93	0.08	-4.62	36,36,36,36	0
54	MG	CA	1601	1/1	0.95	0.09	-4.66	34,34,34,34	0
54	MG	BA	3156	1/1	0.96	0.10	-4.69	17,17,17,17	0
54	MG	AA	1612	1/1	0.84	0.13	-4.81	33,33,33,33	0
54	MG	DA	3028	1/1	0.76	0.08	-4.96	62,62,62,62	0
54	MG	BA	3030	1/1	0.94	0.11	-5.09	4,4,4,4	0
54	MG	BA	3153	1/1	0.97	0.13	-5.09	15,15,15,15	0
54	MG	DA	3121	1/1	0.93	0.07	-5.21	54,54,54,54	0
54	MG	DA	3067	1/1	0.89	0.08	-5.38	48,48,48,48	0
54	MG	AA	1618	1/1	0.89	0.08	-5.38	41,41,41,41	0
54	MG	BA	3040	1/1	0.95	0.14	-5.40	3,3,3,3	0
54	MG	CA	1617	1/1	0.81	0.08	-5.47	33,33,33,33	0
54	MG	BA	3114	1/1	0.99	0.06	-5.64	18,18,18,18	0
54	MG	BA	3166	1/1	0.94	0.09	-5.73	6,6,6,6	0
54	MG	BA	3052	1/1	0.96	0.07	-5.96	8,8,8,8	0
54	MG	BA	3122	1/1	0.95	0.11	-6.41	10,10,10,10	0
54	MG	AA	1613	1/1	0.95	0.08	-6.44	25,25,25,25	0
54	MG	BA	3060	1/1	0.97	0.06	-6.50	16,16,16,16	0
54	MG	BA	3067	1/1	0.92	0.11	-6.64	4,4,4,4	0
54	MG	CA	1622	1/1	0.86	0.06	-6.69	53,53,53,53	0
54	MG	CA	1619	1/1	0.92	0.07	-7.36	30,30,30,30	0
54	MG	BA	3131	1/1	0.97	0.14	-7.70	0,0,0,0	0
54	MG	DA	3075	1/1	0.90	0.05	-8.35	47,47,47,47	0
54	MG	AA	1609	1/1	0.96	0.06	-8.51	28,28,28,28	0
54	MG	AA	1604	1/1	0.82	0.07	-9.60	43,43,43,43	0
54	MG	BA	3072	1/1	0.92	0.08	-11.63	6,6,6,6	0
54	MG	BA	3112	1/1	0.95	0.08	-11.99	16,16,16,16	0
54	MG	AA	1625	1/1	0.90	0.06	-12.61	35,35,35,35	0
54	MG	BA	3003	1/1	0.98	0.04	-21.02	19,19,19,19	0
54	MG	DA	3036	1/1	0.89	0.18	-	65,65,65,65	0
54	MG	AA	1648	1/1	0.98	0.16	-	54,54,54,54	0
54	MG	BA	3170	1/1	0.89	0.15	-	29,29,29,29	0
54	MG	DA	3016	1/1	0.88	0.76	-	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	BA	3015	1/1	0.72	0.15	-	22,22,22,22	0
54	MG	BA	3090	1/1	0.97	0.12	-	28,28,28,28	0
54	MG	BA	3084	1/1	0.96	0.06	-	10,10,10,10	0
54	MG	BA	3108	1/1	0.97	0.16	-	0,0,0,0	0
54	MG	DA	3087	1/1	0.94	0.12	-	48,48,48,48	0
54	MG	DA	3094	1/1	0.48	0.40	-	78,78,78,78	0
54	MG	CA	1644	1/1	0.83	0.17	-	38,38,38,38	0
54	MG	AA	1602	1/1	0.85	0.15	-	40,40,40,40	0
54	MG	BA	3086	1/1	0.96	0.10	-	10,10,10,10	0
54	MG	DA	3131	1/1	0.93	0.12	-	58,58,58,58	0
54	MG	BA	3088	1/1	0.93	0.21	-	8,8,8,8	0
54	MG	CA	1638	1/1	0.78	0.10	-	54,54,54,54	0
54	MG	BA	3007	1/1	0.92	0.15	-	17,17,17,17	0
54	MG	BA	3039	1/1	0.96	0.20	-	2,2,2,2	0
54	MG	DA	3054	1/1	0.95	0.16	-	40,40,40,40	0
54	MG	AA	1623	1/1	0.79	0.06	-	42,42,42,42	0
54	MG	BA	3172	1/1	0.91	0.14	-	22,22,22,22	0
54	MG	DA	3120	1/1	0.66	0.56	-	80,80,80,80	0
54	MG	BA	3139	1/1	0.92	0.34	-	0,0,0,0	0
54	MG	BA	3101	1/1	0.86	0.10	-	8,8,8,8	0
54	MG	CA	1642	1/1	0.91	0.19	-	31,31,31,31	0
54	MG	AA	1672	1/1	0.76	0.33	-	40,40,40,40	0
54	MG	CA	1631	1/1	0.70	0.17	-	76,76,76,76	0
54	MG	BA	3161	1/1	0.91	0.18	-	19,19,19,19	0
54	MG	DA	3050	1/1	0.86	0.23	-	58,58,58,58	0
54	MG	BA	3149	1/1	0.97	0.15	-	26,26,26,26	0
54	MG	BA	3168	1/1	0.93	0.17	-	32,32,32,32	0
54	MG	BA	3091	1/1	0.97	0.10	-	4,4,4,4	0
54	MG	CA	1655	1/1	0.86	0.30	-	53,53,53,53	0
54	MG	BA	3180	1/1	0.92	0.17	-	10,10,10,10	0
54	MG	CA	1636	1/1	0.74	0.27	-	92,92,92,92	0
54	MG	BA	3063	1/1	0.96	0.20	-	41,41,41,41	0
54	MG	CA	1648	1/1	0.92	0.20	-	45,45,45,45	0
54	MG	BA	3020	1/1	0.95	0.09	-	24,24,24,24	0
54	MG	DA	3022	1/1	0.83	0.18	-	50,50,50,50	0
54	MG	CA	1628	1/1	0.72	0.29	-	70,70,70,70	0
54	MG	AA	1615	1/1	0.94	0.07	-	43,43,43,43	0
54	MG	BA	3117	1/1	0.94	0.28	-	40,40,40,40	0
54	MG	AA	1626	1/1	0.88	0.11	-	24,24,24,24	0
54	MG	AA	1634	1/1	0.94	0.11	-	40,40,40,40	0
54	MG	BA	3102	1/1	0.92	0.12	-	10,10,10,10	0
54	MG	BA	3048	1/1	0.92	0.09	-	25,25,25,25	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	BA	3008	1/1	0.94	0.09	-	29,29,29,29	0
54	MG	AA	1646	1/1	0.99	0.10	-	39,39,39,39	0
54	MG	DA	3012	1/1	0.82	0.24	-	54,54,54,54	0
54	MG	DA	3062	1/1	0.86	1.26	-	73,73,73,73	0
54	MG	BA	3050	1/1	0.78	0.08	-	15,15,15,15	0
54	MG	DA	3167	1/1	0.92	0.12	-	39,39,39,39	0
54	MG	DA	3091	1/1	0.88	0.07	-	55,55,55,55	0
54	MG	BA	3096	1/1	0.99	0.06	-	17,17,17,17	0
54	MG	DA	3030	1/1	0.80	0.26	-	61,61,61,61	0
54	MG	DA	3126	1/1	0.91	0.17	-	51,51,51,51	0
54	MG	DB	203	1/1	0.86	0.05	-	70,70,70,70	0
54	MG	AA	1654	1/1	0.96	0.21	-	25,25,25,25	0
54	MG	CA	1606	1/1	0.94	0.08	-	49,49,49,49	0
54	MG	BA	3059	1/1	0.90	0.30	-	23,23,23,23	0
54	MG	DA	3165	1/1	0.97	0.05	-	46,46,46,46	0
54	MG	BA	3150	1/1	0.98	0.26	-	0,0,0,0	0
54	MG	DA	3166	1/1	0.95	0.31	-	41,41,41,41	0
54	MG	DA	3143	1/1	0.96	0.18	-	28,28,28,28	0
54	MG	CA	1641	1/1	0.78	0.49	-	59,59,59,59	0
54	MG	DA	3088	1/1	0.78	0.07	-	53,53,53,53	0
54	MG	DA	3104	1/1	0.79	0.34	-	59,59,59,59	0
54	MG	BA	3167	1/1	0.85	0.27	-	35,35,35,35	0
54	MG	DA	3100	1/1	0.77	0.53	-	68,68,68,68	0
54	MG	DA	3043	1/1	0.64	0.34	-	68,68,68,68	0
54	MG	CA	1618	1/1	0.82	0.16	-	38,38,38,38	0
54	MG	DA	3102	1/1	0.75	0.08	-	49,49,49,49	0
54	MG	BA	3017	1/1	0.94	0.10	-	9,9,9,9	0
54	MG	AA	1621	1/1	0.93	0.06	-	30,30,30,30	0
54	MG	BA	3045	1/1	0.99	0.07	-	14,14,14,14	0
54	MG	DA	3149	1/1	0.85	0.22	-	53,53,53,53	0
54	MG	BA	3142	1/1	0.97	0.30	-	1,1,1,1	0
54	MG	DA	3082	1/1	0.93	0.09	-	42,42,42,42	0
54	MG	AA	1639	1/1	0.94	0.06	-	56,56,56,56	0
54	MG	AA	1631	1/1	0.80	0.08	-	39,39,39,39	0
54	MG	DA	3056	1/1	0.86	0.10	-	52,52,52,52	0
54	MG	BA	3074	1/1	0.90	0.14	-	3,3,3,3	0
54	MG	BA	3036	1/1	0.94	0.18	-	9,9,9,9	0
54	MG	BA	3016	1/1	0.79	0.38	-	67,67,67,67	0
54	MG	DA	3034	1/1	0.93	0.06	-	54,54,54,54	0
54	MG	DA	3045	1/1	0.71	0.19	-	68,68,68,68	0
54	MG	DA	3004	1/1	0.88	0.08	-	58,58,58,58	0
54	MG	BA	3177	1/1	0.92	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
54	MG	BA	3163	1/1	0.88	0.18	-	31,31,31,31	0
54	MG	BA	3158	1/1	0.98	0.25	-	17,17,17,17	0
54	MG	BA	3165	1/1	0.97	0.23	-	9,9,9,9	0
54	MG	DA	3151	1/1	0.90	0.33	-	53,53,53,53	0
54	MG	DA	3103	1/1	0.90	0.09	-	45,45,45,45	0
54	MG	AA	1624	1/1	0.92	0.05	-	30,30,30,30	0
54	MG	BA	3129	1/1	0.90	0.09	-	7,7,7,7	0
54	MG	AA	1643	1/1	0.98	0.13	-	12,12,12,12	0
54	MG	DA	3138	1/1	0.91	0.28	-	42,42,42,42	0
54	MG	BA	3077	1/1	0.96	0.18	-	11,11,11,11	0
54	MG	BA	3069	1/1	0.94	0.17	-	2,2,2,2	0
54	MG	DA	3039	1/1	0.81	0.13	-	54,54,54,54	0
54	MG	BA	3105	1/1	0.96	0.11	-	9,9,9,9	0
54	MG	DA	3108	1/1	0.93	0.07	-	60,60,60,60	0
54	MG	BB	203	1/1	0.88	0.07	-	6,6,6,6	0
54	MG	DA	3153	1/1	0.86	0.11	-	56,56,56,56	0
54	MG	CA	1627	1/1	0.80	0.29	-	69,69,69,69	0
54	MG	AA	1649	1/1	0.95	0.11	-	34,34,34,34	0
54	MG	DA	3142	1/1	0.91	0.19	-	30,30,30,30	0
54	MG	DA	3096	1/1	0.94	0.22	-	62,62,62,62	0
54	MG	BA	3066	1/1	0.94	0.12	-	6,6,6,6	0
54	MG	DA	3010	1/1	0.94	0.13	-	57,57,57,57	0
54	MG	AA	1637	1/1	0.98	0.10	-	17,17,17,17	0
54	MG	BA	3071	1/1	0.98	0.11	-	45,45,45,45	0
54	MG	DA	3163	1/1	0.77	0.35	-	49,49,49,49	0
54	MG	BA	3147	1/1	0.96	0.23	-	25,25,25,25	0
54	MG	BA	3094	1/1	0.96	0.23	-	23,23,23,23	0
54	MG	BA	3157	1/1	0.96	0.14	-	7,7,7,7	0
54	MG	AA	1614	1/1	0.80	0.18	-	52,52,52,52	0
54	MG	DA	3063	1/1	0.96	0.46	-	52,52,52,52	0
54	MG	BA	3044	1/1	0.95	0.14	-	4,4,4,4	0
54	MG	BA	3054	1/1	0.95	0.15	-	6,6,6,6	0
54	MG	BA	3113	1/1	0.91	0.14	-	30,30,30,30	0
54	MG	BA	3138	1/1	0.96	0.39	-	8,8,8,8	0
54	MG	BA	3021	1/1	0.92	0.21	-	0,0,0,0	0
54	MG	BA	3046	1/1	0.89	0.13	-	13,13,13,13	0
54	MG	AA	1666	1/1	0.98	0.37	-	25,25,25,25	0
54	MG	DA	3144	1/1	0.76	1.42	-	57,57,57,57	0
54	MG	BA	3192	1/1	0.94	0.17	-	22,22,22,22	0
54	MG	DQ	201	1/1	0.96	0.34	-	36,36,36,36	0
54	MG	CA	1646	1/1	0.87	0.17	-	40,40,40,40	0
54	MG	DA	3160	1/1	0.95	0.15	-	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
54	MG	DA	3084	1/1	0.95	0.06	-	50,50,50,50	0
54	MG	DA	3105	1/1	0.63	0.09	-	57,57,57,57	0
54	MG	BA	3127	1/1	0.85	0.17	-	7,7,7,7	0
54	MG	DA	3134	1/1	0.12	0.63	-	75,75,75,75	0
54	MG	AA	1670	1/1	0.86	0.31	-	50,50,50,50	0
54	MG	DA	3027	1/1	0.70	0.44	-	60,60,60,60	0
54	MG	AA	1668	1/1	0.88	0.21	-	41,41,41,41	0
54	MG	CA	1629	1/1	0.95	0.07	-	67,67,67,67	0
54	MG	BA	3082	1/1	0.86	0.10	-	12,12,12,12	0
54	MG	AA	1669	1/1	0.92	0.15	-	28,28,28,28	0
54	MG	DA	3058	1/1	0.73	0.30	-	65,65,65,65	0
54	MG	BA	3093	1/1	0.90	0.06	-	43,43,43,43	0
54	MG	CA	1651	1/1	0.95	0.05	-	54,54,54,54	0
54	MG	DA	3090	1/1	0.85	0.41	-	66,66,66,66	0
54	MG	BA	3047	1/1	0.81	0.15	-	19,19,19,19	0
54	MG	DA	3124	1/1	0.93	0.12	-	52,52,52,52	0
54	MG	CA	1609	1/1	0.96	0.04	-	57,57,57,57	0
54	MG	BA	3141	1/1	0.94	0.17	-	8,8,8,8	0
54	MG	BA	3011	1/1	0.99	0.11	-	3,3,3,3	0
54	MG	BA	3005	1/1	0.96	0.05	-	32,32,32,32	0
54	MG	DA	3101	1/1	0.90	0.18	-	54,54,54,54	0
54	MG	BA	3169	1/1	0.71	0.34	-	25,25,25,25	0
54	MG	DA	3089	1/1	0.66	0.10	-	57,57,57,57	0
54	MG	BA	3135	1/1	0.85	0.21	-	46,46,46,46	0
54	MG	BA	3155	1/1	0.91	0.18	-	37,37,37,37	0
54	MG	BA	3148	1/1	0.96	0.23	-	0,0,0,0	0
54	MG	AA	1601	1/1	0.84	0.15	-	53,53,53,53	0
54	MG	DA	3127	1/1	0.83	0.13	-	59,59,59,59	0
54	MG	DA	3068	1/1	0.94	0.10	-	43,43,43,43	0
54	MG	AA	1608	1/1	0.91	0.15	-	20,20,20,20	0
54	MG	CA	1652	1/1	0.87	0.10	-	45,45,45,45	0
54	MG	DA	3066	1/1	0.91	0.11	-	40,40,40,40	0
54	MG	BA	3106	1/1	0.96	0.18	-	3,3,3,3	0
54	MG	BA	3053	1/1	0.97	0.15	-	6,6,6,6	0
54	MG	DA	3122	1/1	0.94	0.07	-	42,42,42,42	0
54	MG	BA	3195	1/1	0.81	0.16	-	31,31,31,31	0
54	MG	BA	3190	1/1	0.93	0.20	-	19,19,19,19	0
54	MG	CA	1649	1/1	0.79	0.28	-	48,48,48,48	0
54	MG	DA	3015	1/1	0.65	0.12	-	57,57,57,57	0
54	MG	DA	3053	1/1	0.94	0.07	-	44,44,44,44	0
54	MG	BA	3056	1/1	0.97	0.12	-	7,7,7,7	0
54	MG	CA	1637	1/1	0.93	0.26	-	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	CA	1602	1/1	0.74	0.10	-	69,69,69,69	0
54	MG	DA	3035	1/1	0.58	0.20	-	52,52,52,52	0
54	MG	CA	1611	1/1	0.20	0.21	-	68,68,68,68	0
54	MG	AA	1653	1/1	0.90	0.15	-	40,40,40,40	0
54	MG	BA	3182	1/1	0.94	0.12	-	26,26,26,26	0
54	MG	CA	1650	1/1	0.80	0.31	-	45,45,45,45	0
54	MG	AA	1645	1/1	0.72	0.48	-	41,41,41,41	0
54	MG	AA	1652	1/1	0.96	0.24	-	28,28,28,28	0
54	MG	AA	1658	1/1	0.70	0.50	-	47,47,47,47	0
54	MG	AA	1620	1/1	0.92	0.04	-	51,51,51,51	0
54	MG	DA	3047	1/1	0.65	0.12	-	60,60,60,60	0
54	MG	CA	1645	1/1	0.94	0.12	-	50,50,50,50	0
54	MG	DA	3041	1/1	0.75	0.13	-	62,62,62,62	0
54	MG	BA	3123	1/1	0.97	0.10	-	17,17,17,17	0
54	MG	BA	3062	1/1	0.90	0.43	-	36,36,36,36	0
54	MG	BA	3174	1/1	0.82	0.22	-	24,24,24,24	0
54	MG	CA	1654	1/1	0.85	0.23	-	40,40,40,40	0
54	MG	CA	1633	1/1	0.83	0.48	-	61,61,61,61	0
54	MG	DA	3038	1/1	0.80	0.17	-	74,74,74,74	0
54	MG	BA	3043	1/1	0.97	0.14	-	11,11,11,11	0
54	MG	DA	3161	1/1	0.88	0.22	-	39,39,39,39	0
54	MG	DA	3007	1/1	0.36	0.19	-	84,84,84,84	0
54	MG	BA	3027	1/1	0.83	0.15	-	47,47,47,47	0
54	MG	BA	3089	1/1	0.95	0.07	-	13,13,13,13	0
54	MG	AA	1667	1/1	0.86	0.27	-	47,47,47,47	0
54	MG	AA	1671	1/1	0.94	0.32	-	37,37,37,37	0
54	MG	AA	1619	1/1	0.97	0.19	-	44,44,44,44	0
54	MG	BA	3019	1/1	0.98	0.10	-	17,17,17,17	0
54	MG	DA	3113	1/1	0.91	0.27	-	56,56,56,56	0
54	MG	AA	1651	1/1	0.96	0.44	-	36,36,36,36	0
54	MG	CA	1647	1/1	0.95	0.20	-	19,19,19,19	0
54	MG	AA	1665	1/1	0.93	0.15	-	48,48,48,48	0
54	MG	CA	1608	1/1	0.93	0.26	-	56,56,56,56	0
54	MG	AA	1640	1/1	0.93	0.08	-	41,41,41,41	0
54	MG	AA	1662	1/1	0.94	0.14	-	25,25,25,25	0
54	MG	BB	204	1/1	0.88	0.35	-	15,15,15,15	0
54	MG	DA	3114	1/1	0.83	0.14	-	57,57,57,57	0
54	MG	CA	1634	1/1	0.93	0.12	-	55,55,55,55	0
54	MG	AA	1647	1/1	0.79	0.30	-	40,40,40,40	0
54	MG	DA	3159	1/1	0.92	0.14	-	57,57,57,57	0
54	MG	DA	3086	1/1	0.88	0.12	-	61,61,61,61	0
54	MG	BA	3146	1/1	0.91	0.23	-	12,12,12,12	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	DA	3128	1/1	0.92	0.10	-	61,61,61,61	0
54	MG	BA	3022	1/1	0.97	0.12	-	3,3,3,3	0
54	MG	CA	1613	1/1	0.90	0.14	-	16,16,16,16	0
54	MG	BA	3058	1/1	0.95	0.11	-	11,11,11,11	0
54	MG	BA	3032	1/1	0.98	0.25	-	6,6,6,6	0
54	MG	BA	3144	1/1	0.94	0.27	-	14,14,14,14	0
54	MG	BA	3092	1/1	0.84	0.11	-	20,20,20,20	0
54	MG	AA	1656	1/1	0.85	0.26	-	43,43,43,43	0
54	MG	AA	1610	1/1	0.96	0.18	-	53,53,53,53	0
54	MG	DA	3069	1/1	0.98	0.08	-	56,56,56,56	0
54	MG	BA	3100	1/1	0.83	0.18	-	52,52,52,52	0
54	MG	DA	3109	1/1	0.88	0.11	-	54,54,54,54	0
54	MG	BA	3012	1/1	0.94	0.06	-	17,17,17,17	0
54	MG	BA	3078	1/1	0.92	0.21	-	26,26,26,26	0
54	MG	AA	1603	1/1	0.90	0.18	-	48,48,48,48	0
54	MG	BA	3083	1/1	0.98	0.15	-	0,0,0,0	0
54	MG	DA	3017	1/1	0.65	0.36	-	65,65,65,65	0
54	MG	DA	3147	1/1	0.83	0.17	-	45,45,45,45	0
54	MG	DA	3078	1/1	0.81	0.17	-	64,64,64,64	0
54	MG	DA	3145	1/1	0.81	0.07	-	60,60,60,60	0
54	MG	BA	3181	1/1	0.87	0.25	-	8,8,8,8	0
54	MG	BA	3004	1/1	0.92	0.11	-	24,24,24,24	0
54	MG	CA	1605	1/1	0.77	0.16	-	57,57,57,57	0
54	MG	BB	202	1/1	0.95	0.09	-	12,12,12,12	0
54	MG	BA	3061	1/1	0.94	0.20	-	22,22,22,22	0
54	MG	BA	3057	1/1	0.84	0.40	-	37,37,37,37	0
54	MG	DA	3083	1/1	0.89	0.11	-	52,52,52,52	0
54	MG	DA	3141	1/1	0.95	0.40	-	39,39,39,39	0
54	MG	AA	1661	1/1	0.90	0.16	-	49,49,49,49	0
54	MG	BA	3193	1/1	0.74	0.50	-	10,10,10,10	0
54	MG	CA	1625	1/1	0.91	0.15	-	26,26,26,26	0
54	MG	BA	3031	1/1	0.77	0.13	-	10,10,10,10	0
54	MG	BA	3095	1/1	0.96	0.07	-	26,26,26,26	0
54	MG	BA	3194	1/1	0.96	0.15	-	4,4,4,4	0
54	MG	DA	3132	1/1	0.34	0.92	-	83,83,83,83	0
54	MG	DA	3032	1/1	0.92	0.12	-	46,46,46,46	0
54	MG	CA	1639	1/1	0.89	0.12	-	32,32,32,32	0
54	MG	BA	3140	1/1	0.96	0.27	-	0,0,0,0	0
54	MG	BA	3028	1/1	0.97	0.11	-	4,4,4,4	0
54	MG	BA	3151	1/1	0.91	0.32	-	44,44,44,44	0
54	MG	DA	3071	1/1	0.94	0.13	-	75,75,75,75	0
54	MG	DA	3164	1/1	0.90	0.22	-	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	DA	3076	1/1	0.88	0.10	-	55,55,55,55	0
54	MG	BA	3034	1/1	0.94	0.14	-	20,20,20,20	0
54	MG	CA	1604	1/1	0.62	0.22	-	80,80,80,80	0
54	MG	AA	1638	1/1	0.71	0.13	-	57,57,57,57	0
54	MG	DA	3031	1/1	0.91	0.26	-	49,49,49,49	0
54	MG	DA	3119	1/1	0.85	0.09	-	52,52,52,52	0
54	MG	DA	3005	1/1	0.76	0.43	-	76,76,76,76	0
54	MG	DA	3011	1/1	0.79	0.08	-	65,65,65,65	0
54	MG	DA	3118	1/1	0.91	0.06	-	56,56,56,56	0
54	MG	BA	3079	1/1	0.87	0.06	-	30,30,30,30	0
54	MG	CA	1620	1/1	0.94	0.07	-	49,49,49,49	0
54	MG	DA	3046	1/1	0.78	0.12	-	72,72,72,72	0
54	MG	BA	3173	1/1	0.86	0.27	-	24,24,24,24	0
54	MG	BA	3124	1/1	0.95	0.22	-	0,0,0,0	0
54	MG	DA	3162	1/1	0.96	0.09	-	56,56,56,56	0
54	MG	BA	3184	1/1	0.94	0.20	-	21,21,21,21	0
54	MG	DA	3008	1/1	0.79	0.46	-	70,70,70,70	0
54	MG	AA	1664	1/1	0.91	0.19	-	30,30,30,30	0
54	MG	DA	3021	1/1	0.92	0.16	-	50,50,50,50	0
54	MG	BA	3125	1/1	0.97	0.21	-	6,6,6,6	0
54	MG	DA	3093	1/1	0.48	0.46	-	79,79,79,79	0
54	MG	DA	3157	1/1	0.83	0.21	-	42,42,42,42	0
54	MG	CA	1623	1/1	0.97	0.15	-	42,42,42,42	0
54	MG	DA	3095	1/1	0.74	0.13	-	75,75,75,75	0
54	MG	BA	3002	1/1	0.93	0.08	-	15,15,15,15	0
54	MG	DA	3148	1/1	0.75	0.20	-	47,47,47,47	0
54	MG	DA	3150	1/1	0.89	0.27	-	41,41,41,41	0
54	MG	BA	3104	1/1	0.82	0.14	-	16,16,16,16	0
54	MG	DA	3085	1/1	0.71	0.20	-	72,72,72,72	0
54	MG	AA	1611	1/1	0.96	0.09	-	25,25,25,25	0
54	MG	AA	1605	1/1	0.91	0.19	-	36,36,36,36	0
54	MG	BA	3023	1/1	0.97	0.15	-	0,0,0,0	0
54	MG	DA	3139	1/1	0.94	0.46	-	35,35,35,35	0
54	MG	DA	3020	1/1	0.83	0.24	-	75,75,75,75	0
54	MG	DA	3057	1/1	0.97	0.31	-	62,62,62,62	0
54	MG	DA	3115	1/1	0.87	0.14	-	45,45,45,45	0
54	MG	BA	3033	1/1	0.96	0.10	-	15,15,15,15	0
54	MG	BA	3076	1/1	0.93	0.06	-	29,29,29,29	0
54	MG	BA	3087	1/1	0.93	0.14	-	0,0,0,0	0
54	MG	BA	3143	1/1	0.93	0.20	-	7,7,7,7	0
54	MG	DA	3156	1/1	0.88	0.30	-	44,44,44,44	0
54	MG	BA	3128	1/1	0.97	0.15	-	5,5,5,5	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	BA	3154	1/1	0.76	0.28	-	11,11,11,11	0
54	MG	DA	3037	1/1	0.95	0.12	-	46,46,46,46	0
54	MG	BA	3178	1/1	0.95	0.09	-	27,27,27,27	0
54	MG	AA	1635	1/1	0.92	0.14	-	49,49,49,49	0
54	MG	AA	1659	1/1	0.93	0.15	-	43,43,43,43	0
54	MG	BA	3159	1/1	0.97	0.15	-	25,25,25,25	0
54	MG	BA	3130	1/1	0.97	0.20	-	4,4,4,4	0
54	MG	AA	1657	1/1	0.99	0.07	-	28,28,28,28	0
54	MG	DA	3092	1/1	0.80	0.09	-	60,60,60,60	0
54	MG	BA	3041	1/1	0.98	0.15	-	7,7,7,7	0
54	MG	BA	3097	1/1	0.94	0.06	-	18,18,18,18	0
54	MG	BA	3186	1/1	0.93	0.15	-	10,10,10,10	0
54	MG	CA	1624	1/1	0.88	0.11	-	33,33,33,33	0
54	MG	AA	1650	1/1	0.91	0.15	-	31,31,31,31	0
54	MG	D2	101	1/1	0.70	0.16	-	63,63,63,63	0
54	MG	BA	3120	1/1	0.88	0.08	-	24,24,24,24	0
54	MG	AA	1628	1/1	0.85	0.10	-	45,45,45,45	0
54	MG	DA	3077	1/1	0.98	0.13	-	56,56,56,56	0
54	MG	DA	3136	1/1	0.30	0.25	-	67,67,67,67	0
54	MG	BA	3191	1/1	0.78	0.23	-	43,43,43,43	0
54	MG	AA	1632	1/1	0.94	0.11	-	41,41,41,41	0
54	MG	BA	3121	1/1	0.91	0.23	-	50,50,50,50	0
54	MG	BA	3126	1/1	0.86	0.26	-	25,25,25,25	0
54	MG	BN	201	1/1	0.97	0.06	-	6,6,6,6	0
54	MG	CA	1653	1/1	0.80	0.25	-	48,48,48,48	0
54	MG	DA	3002	1/1	0.83	0.09	-	52,52,52,52	0
54	MG	BA	3035	1/1	0.83	0.14	-	4,4,4,4	0
54	MG	DA	3074	1/1	0.85	0.11	-	49,49,49,49	0
54	MG	DA	3080	1/1	0.78	0.11	-	79,79,79,79	0
54	MG	AA	1660	1/1	0.87	0.54	-	38,38,38,38	0
54	MG	BA	3188	1/1	0.92	0.21	-	19,19,19,19	0
54	MG	BA	3183	1/1	0.97	0.13	-	20,20,20,20	0
54	MG	CA	1643	1/1	0.92	0.39	-	54,54,54,54	0
54	MG	BA	3119	1/1	0.95	0.07	-	9,9,9,9	0
54	MG	AA	1627	1/1	0.49	0.22	-	50,50,50,50	0
54	MG	BA	3080	1/1	0.83	0.06	-	50,50,50,50	0
54	MG	BA	3175	1/1	0.96	0.11	-	11,11,11,11	0
54	MG	DB	202	1/1	0.94	0.08	-	49,49,49,49	0
54	MG	DA	3123	1/1	0.98	0.16	-	35,35,35,35	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.