



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 09:17 PM GMT

PDB ID : 4U24  
Title : Crystal structure of the E. coli ribosome bound to dalbavancin.  
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

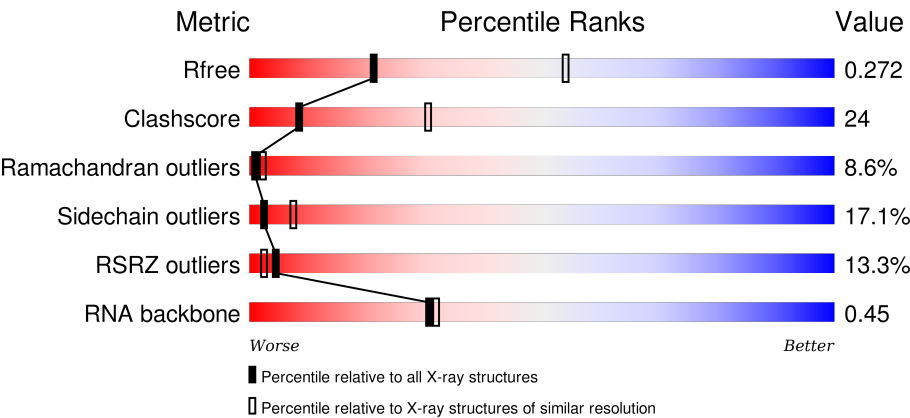
# 1 Overall quality at a glance i

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 <sub>free</sub>	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><div></div><div>30%</div><div>54%</div><div>16%</div></div></div>
1	CA	1539	<div><div>7%</div><div><div></div><div>30%</div><div>55%</div><div>15%</div></div></div>
2	AB	218	<div><div>17%</div><div><div></div><div>23%</div><div>51%</div><div>21%</div><div>5%</div></div></div>
2	CB	218	<div><div>22%</div><div><div></div><div>31%</div><div>49%</div><div>18%</div><div>•</div></div></div>

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

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Mol	Chain	Length	Quality of chain
15	CO	88	
16	AP	82	
16	CP	82	
17	AQ	80	
17	CQ	80	
18	AR	55	
18	CR	55	
19	AS	79	
19	CS	79	
20	AT	85	
20	CT	85	
21	AU	51	
21	CU	51	
22	BA	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	1621	-	-	-	X
54	MG	AA	1622	-	-	-	X
54	MG	AA	1629	-	-	-	X
54	MG	AA	1634	-	-	-	X
54	MG	AA	1653	-	-	-	X
54	MG	AA	1661	-	-	-	X
54	MG	AA	1668	-	-	-	X
54	MG	AA	1669	-	-	-	X
54	MG	BA	3013	-	-	-	X
54	MG	BA	3042	-	-	-	X
54	MG	BA	3049	-	-	-	X
54	MG	BA	3075	-	-	-	X
54	MG	BA	3085	-	-	-	X
54	MG	BA	3107	-	-	-	X
54	MG	BA	3110	-	-	-	X
54	MG	BA	3131	-	-	-	X
54	MG	BA	3137	-	-	-	X
54	MG	BA	3139	-	-	-	X
54	MG	BA	3146	-	-	-	X
54	MG	BA	3158	-	-	-	X
54	MG	BA	3169	-	-	-	X
54	MG	BA	3177	-	-	-	X
54	MG	BA	3178	-	-	-	X
54	MG	BA	3195	-	-	-	X
54	MG	CA	1612	-	-	-	X
54	MG	CA	1617	-	-	-	X
54	MG	CA	1626	-	-	-	X
54	MG	DA	3003	-	-	-	X
54	MG	DA	3027	-	-	-	X
54	MG	DA	3028	-	-	-	X
54	MG	DA	3071	-	-	-	X
54	MG	DA	3072	-	-	-	X
54	MG	DA	3093	-	-	-	X
54	MG	DA	3110	-	-	-	X
54	MG	DA	3113	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
54	MG	DA	3116	-	-	-	X
54	MG	DA	3137	-	-	-	X
54	MG	DA	3161	-	-	-	X
55	DOL	BA	3001	-	-	-	X
55	DOL	DA	3001	-	-	X	X



## 2 Entry composition

There are 57 unique types of molecules in this entry. The entry contains 288276 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			

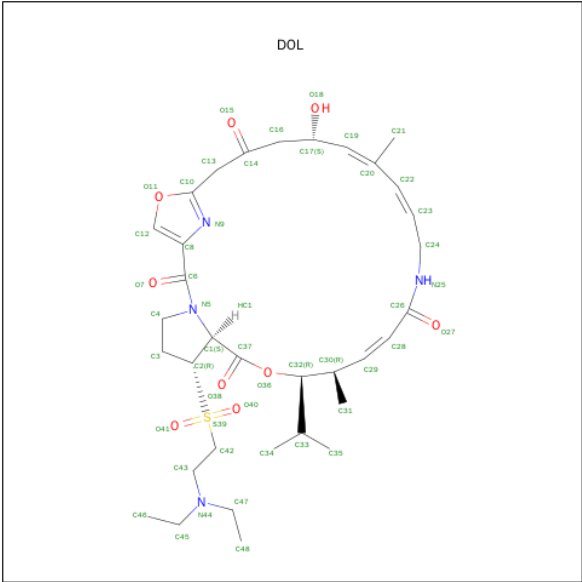
- Molecule 53 is a protein called 50S ribosomal protein L1.

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	CA	56	Total	Mg	0	0
			56	56		
54	DQ	1	Total	Mg	0	0
			1	1		
54	DL	1	Total	Mg	0	0
			1	1		
54	D2	1	Total	Mg	0	0
			1	1		
54	DA	164	Total	Mg	0	0
			164	164		
54	AA	70	Total	Mg	0	0
			70	70		
54	BQ	1	Total	Mg	0	0
			1	1		
54	AN	1	Total	Mg	0	0
			1	1		
54	DB	3	Total	Mg	0	0
			3	3		
54	AM	1	Total	Mg	0	0
			1	1		

- Molecule 55 is 5-(2-DIETHYLAMINO-ETHANESULFONYL)-21-HYDROXY-10-ISOPROPYL-11,19-DIMETHYL-9,26-DIOXA-3,15,28-TRIAZA-TRICYCLO[23.2.1.00,255]OCTACOSA-1(27),12,17,19,25(28)-PENTAENE-2,8,14,23-TETRAONE (three-letter code: DOL) (formula: C<sub>34</sub>H<sub>50</sub>N<sub>4</sub>O<sub>9</sub>S).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
55	BA	1	Total	C	N	O	S	0	0
			48	34	4	9	1		
55	DA	1	Total	C	N	O	S	0	0
			48	34	4	9	1		

- 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	AE	1	Total	O	0	0
			1	1		
57	AL	1	Total	O	0	0
			1	1		
57	AN	3	Total	O	0	0
			3	3		
57	AT	2	Total	O	0	0
			2	2		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	AU	1	Total 1	O 1	0	0
57	BA	615	Total 615	O 615	0	0
57	BB	13	Total 13	O 13	0	0
57	BC	8	Total 8	O 8	0	0
57	BD	3	Total 3	O 3	0	0
57	BE	2	Total 2	O 2	0	0
57	BF	1	Total 1	O 1	0	0
57	BL	7	Total 7	O 7	0	0
57	BN	5	Total 5	O 5	0	0
57	BQ	1	Total 1	O 1	0	0
57	BS	1	Total 1	O 1	0	0
57	BT	1	Total 1	O 1	0	0
57	BU	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	3	Total 3	O 3	0	0
57	B4	2	Total 2	O 2	0	0
57	CA	193	Total 193	O 193	0	0
57	CL	1	Total 1	O 1	0	0
57	CN	1	Total 1	O 1	0	0
57	CT	2	Total 2	O 2	0	0

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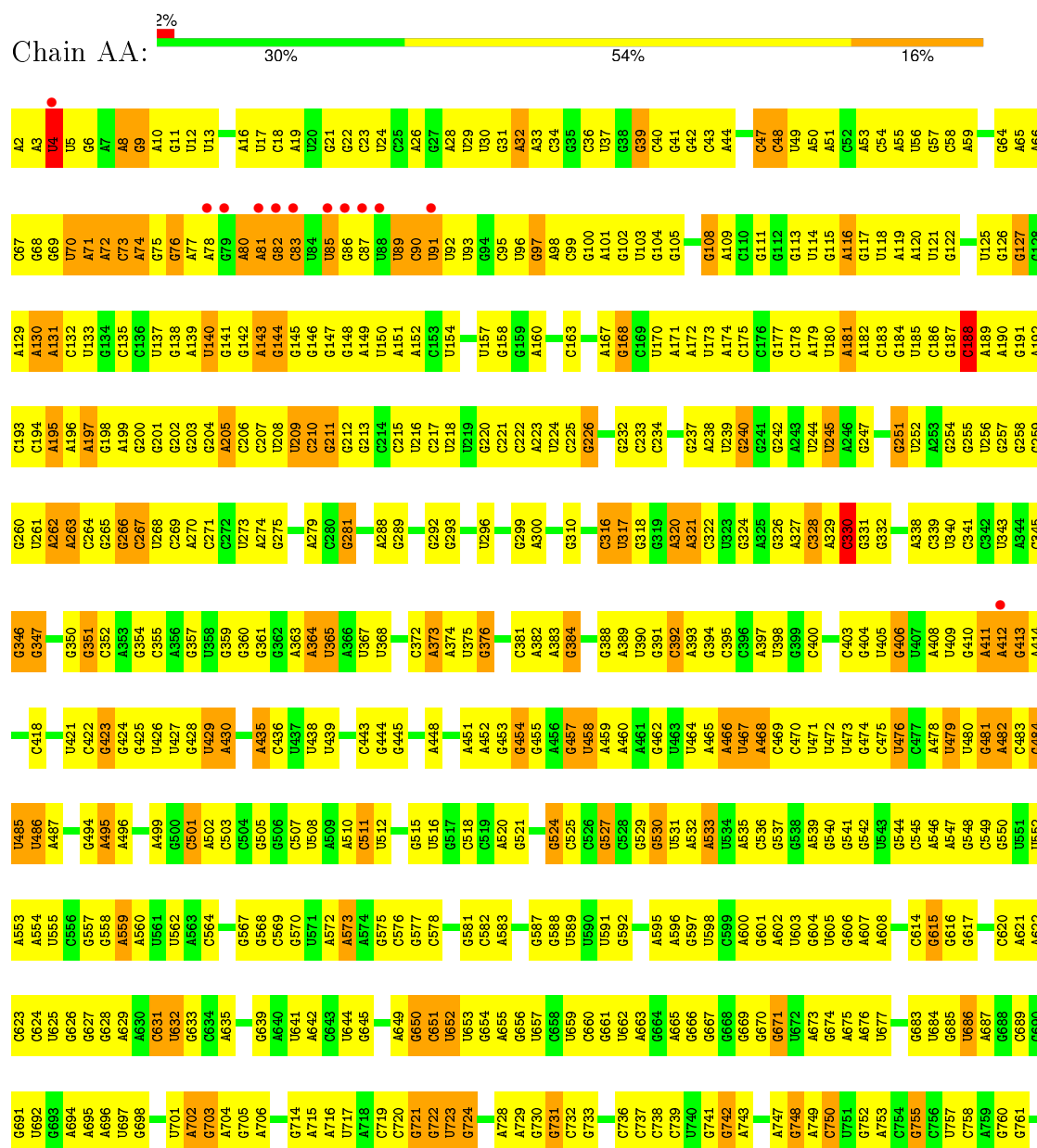
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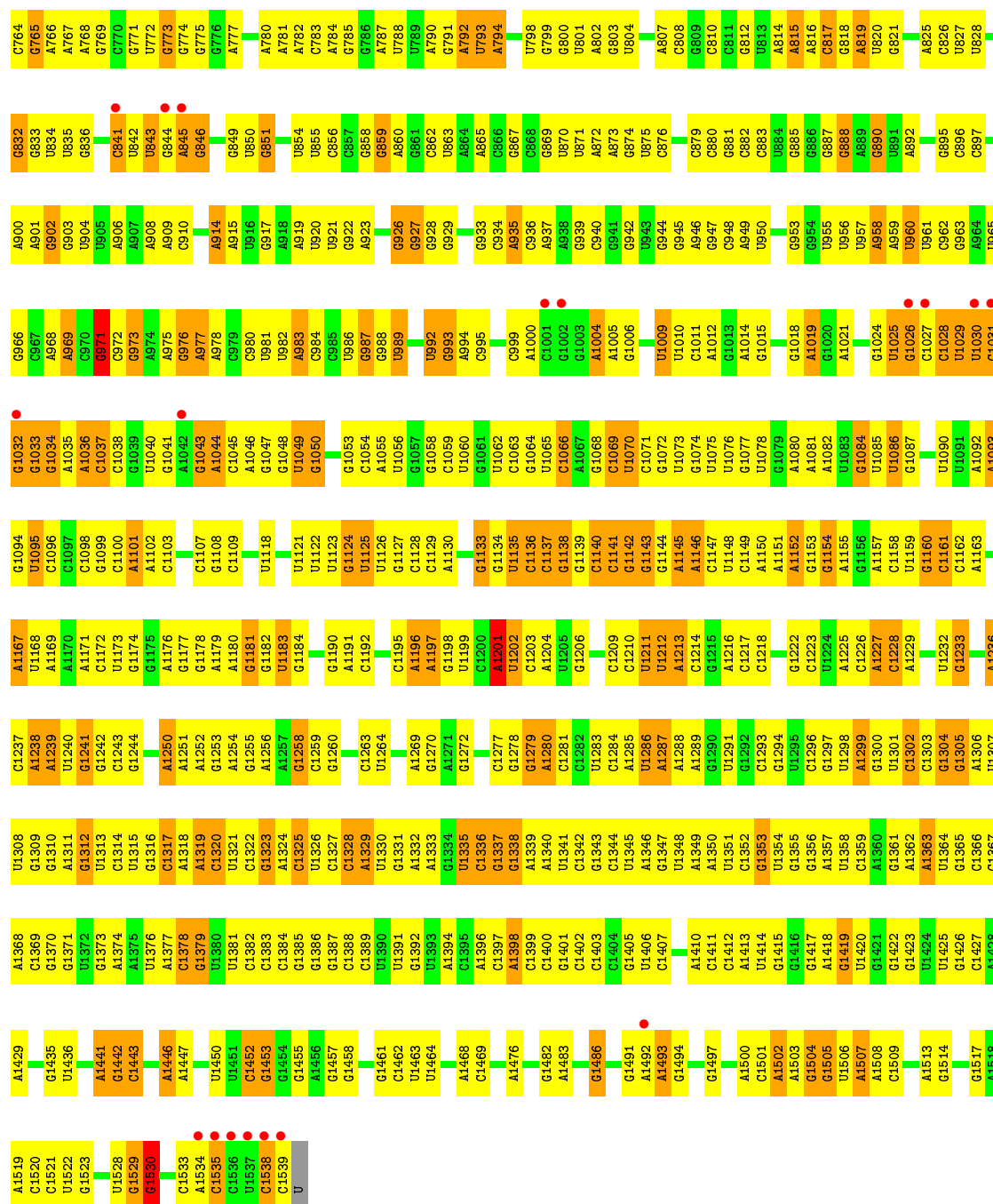
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57	DA	608	Total 608	O 608	0	0
57	DB	13	Total 13	O 13	0	0
57	DC	10	Total 10	O 10	0	0
57	DD	4	Total 4	O 4	0	0
57	DE	4	Total 4	O 4	0	0
57	DJ	1	Total 1	O 1	0	0
57	DL	4	Total 4	O 4	0	0
57	DN	2	Total 2	O 2	0	0
57	DS	2	Total 2	O 2	0	0
57	DT	3	Total 3	O 3	0	0
57	DU	1	Total 1	O 1	0	0
57	DV	1	Total 1	O 1	0	0
57	D2	1	Total 1	O 1	0	0
57	D3	1	Total 1	O 1	0	0
57	D4	1	Total 1	O 1	0	0

### 3 Residue-property plots

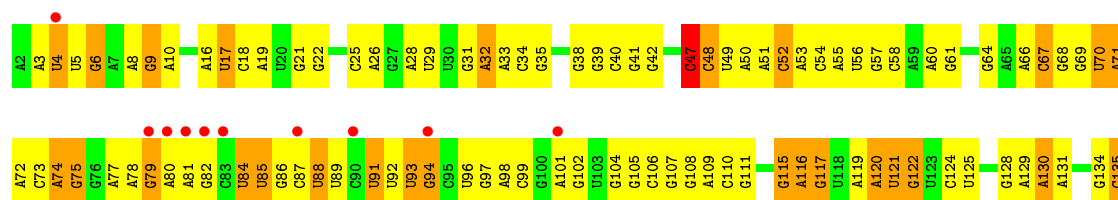
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according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

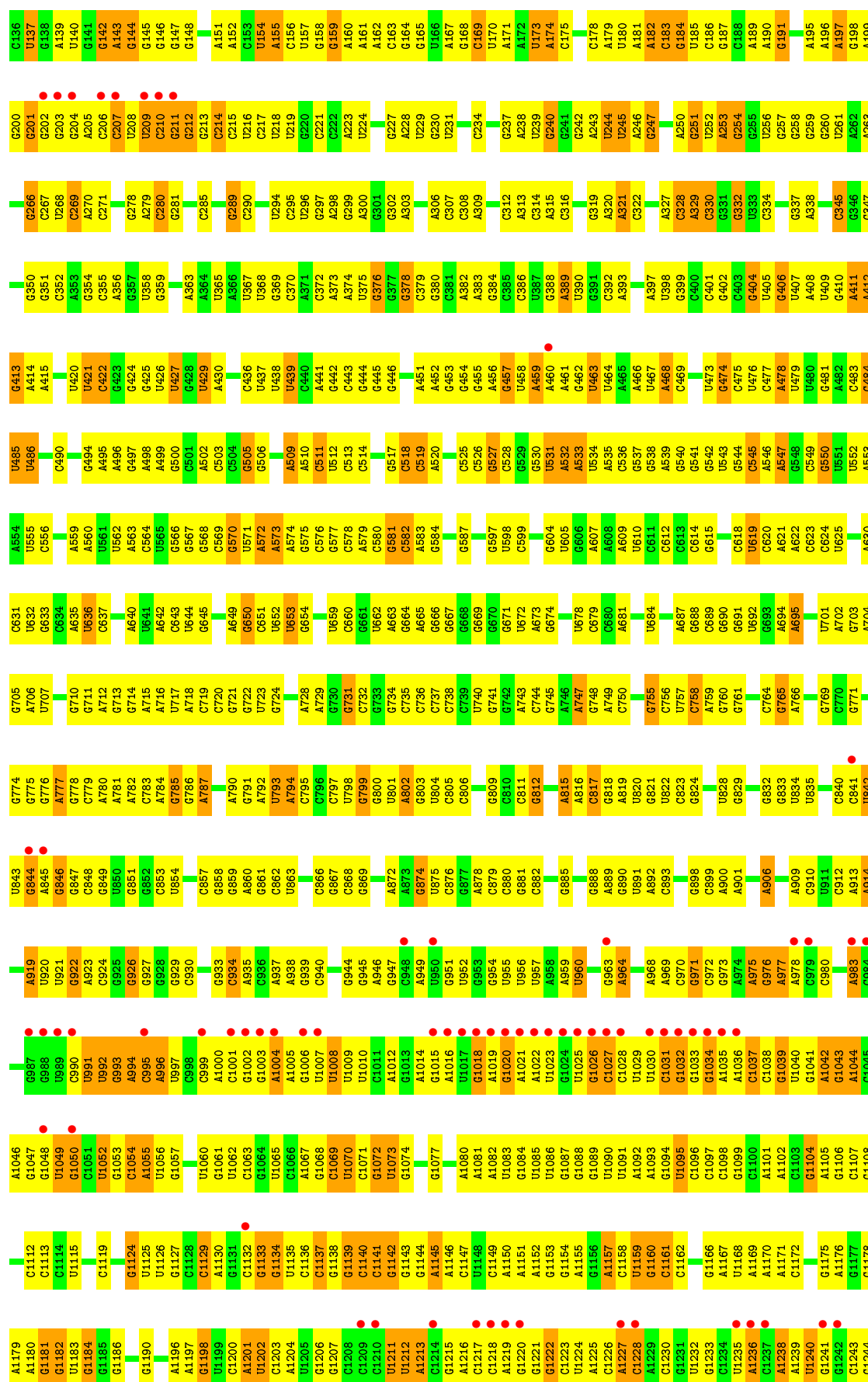


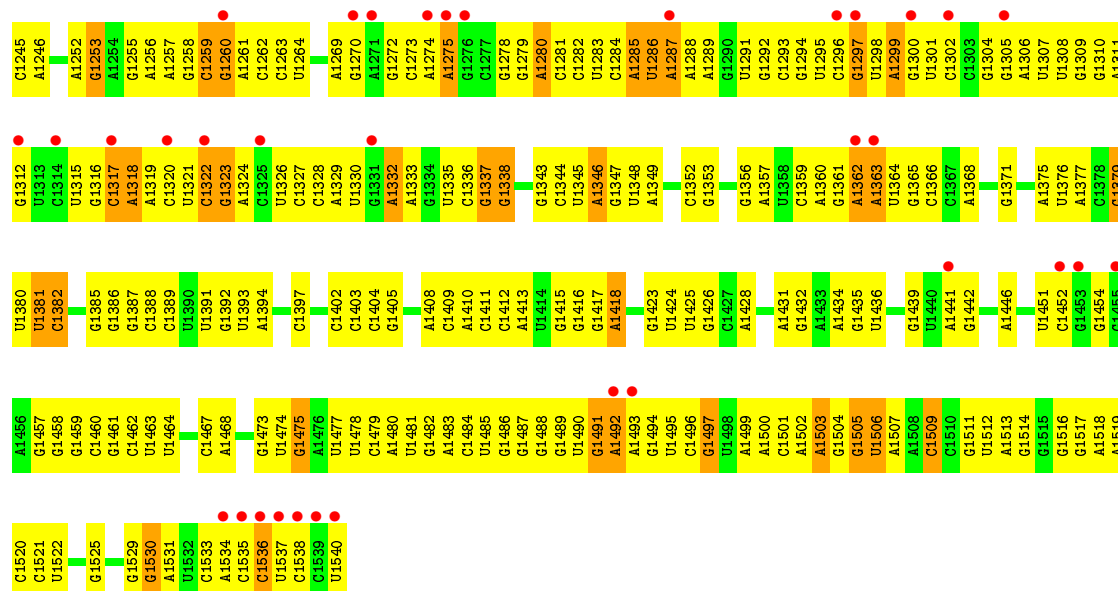


# Molecule 1: 16S rRNA

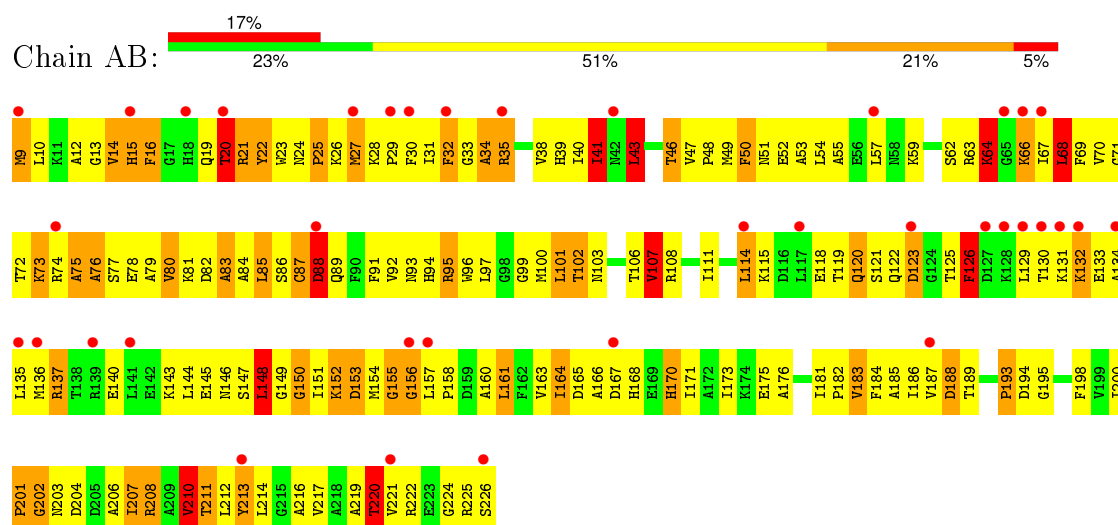




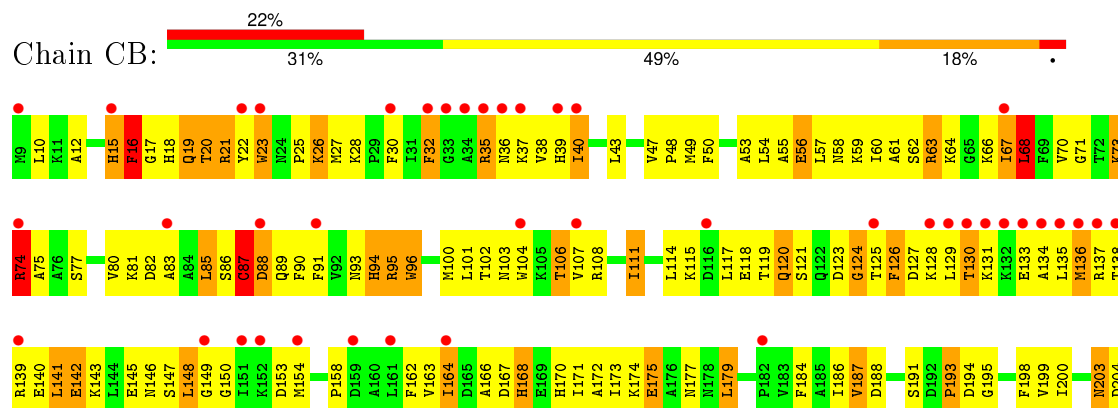


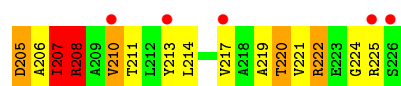


• Molecule 2: 30S ribosomal protein S2

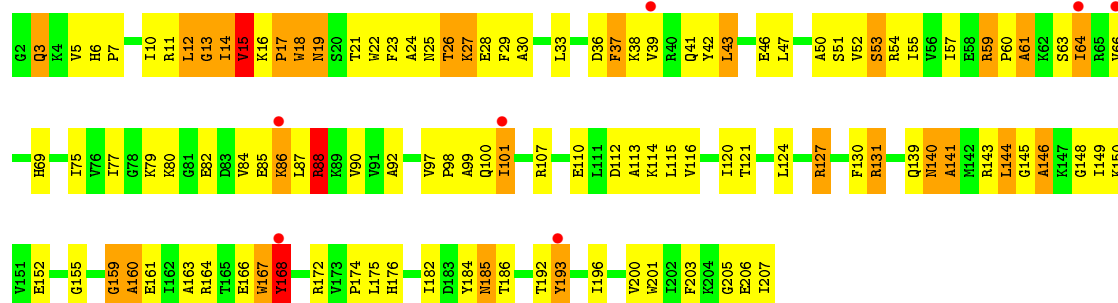


• Molecule 2: 30S ribosomal protein S2

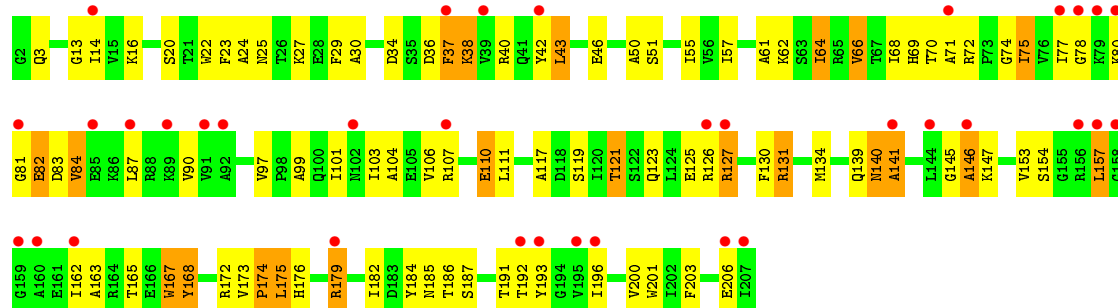




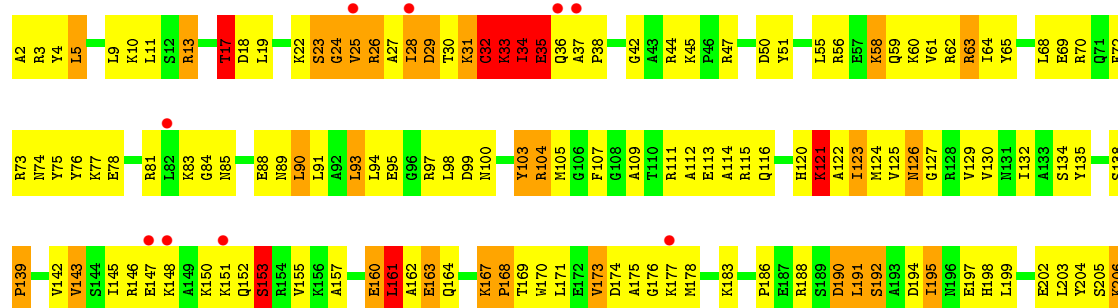
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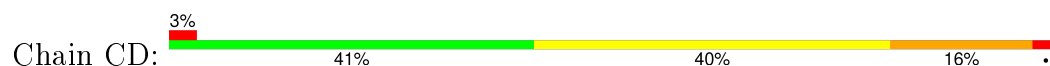
• Molecule 3: 30S ribosomal protein S3

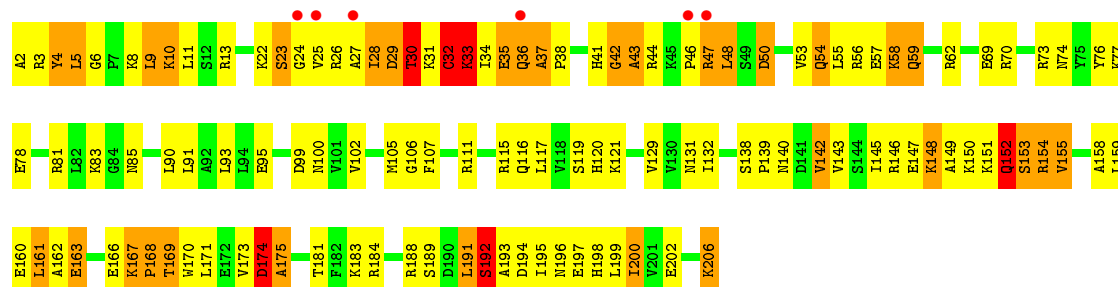


• Molecule 4: 30S ribosomal protein S4

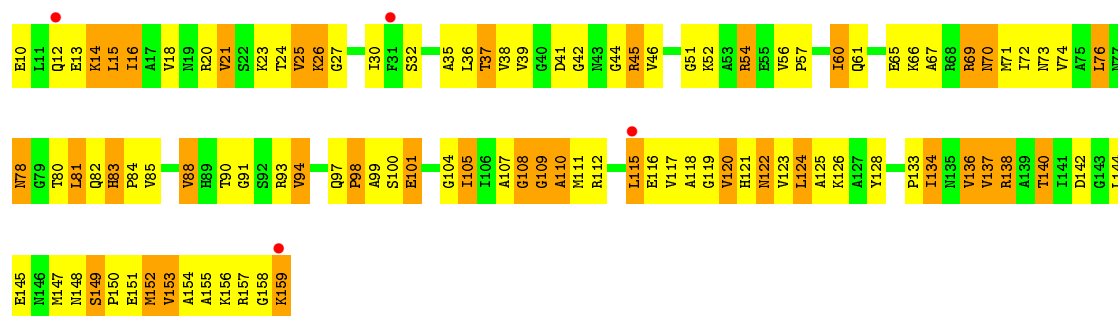


• Molecule 4: 30S ribosomal protein S4

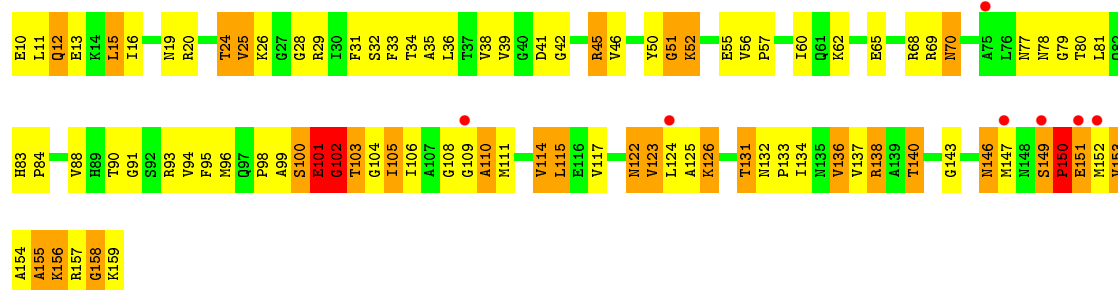




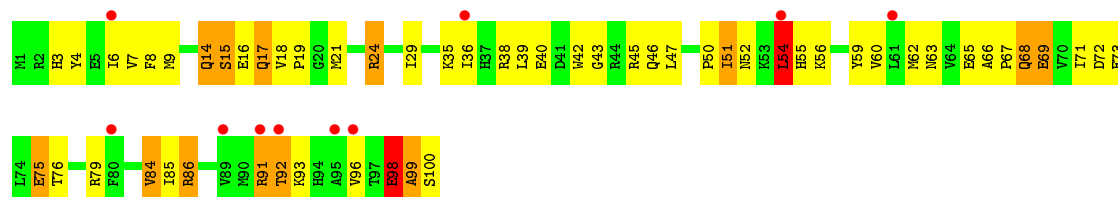
• Molecule 5: 30S ribosomal protein S5



• Molecule 5: 30S ribosomal protein S5

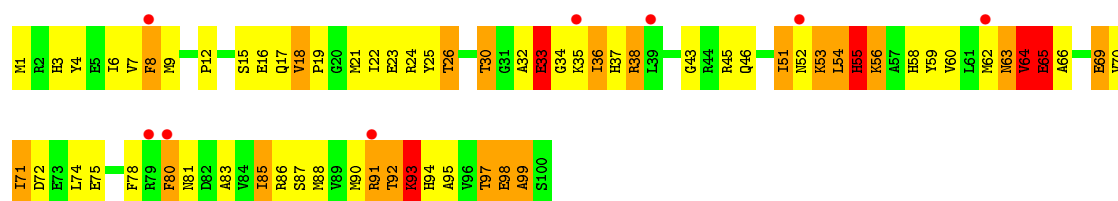


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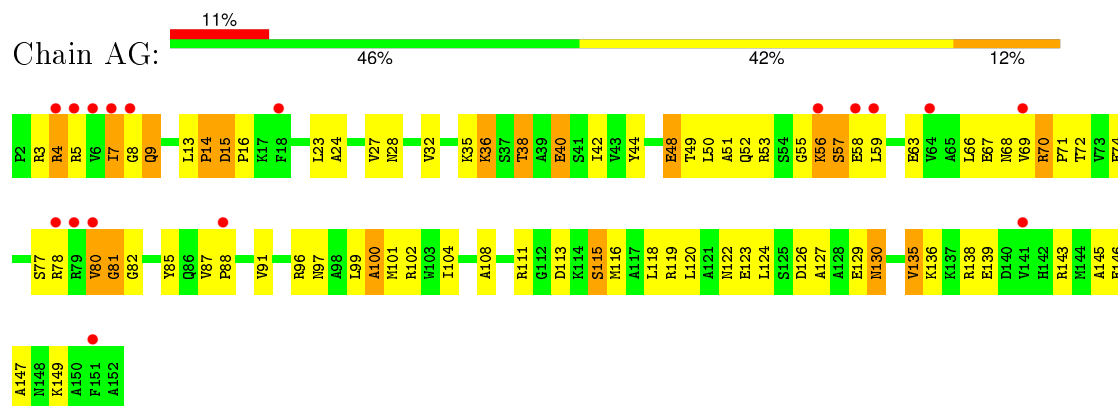


• Molecule 6: 30S ribosomal protein S6

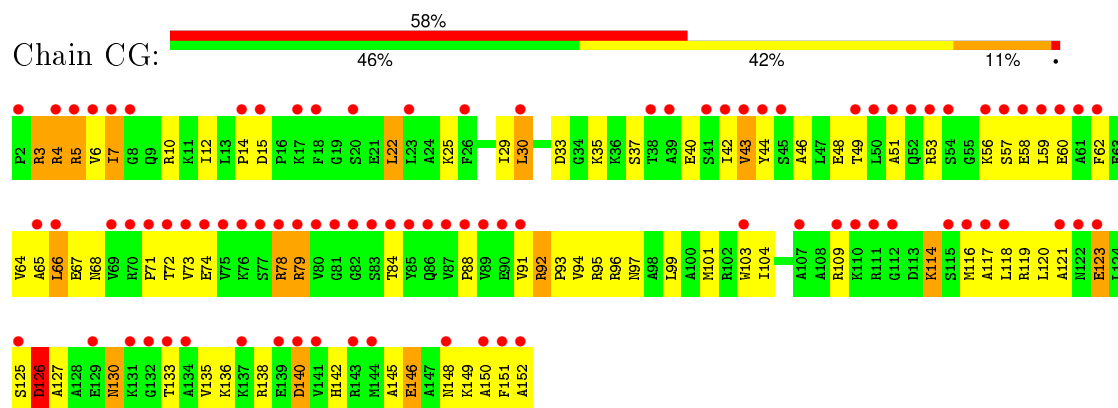




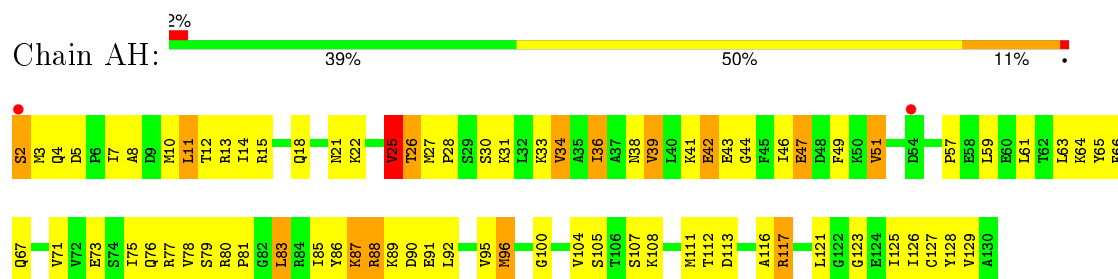
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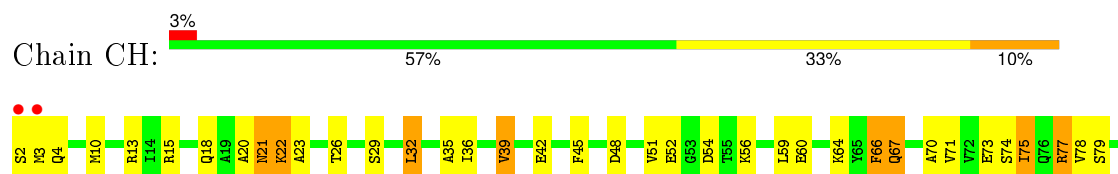
• Molecule 7: 30S ribosomal protein S7

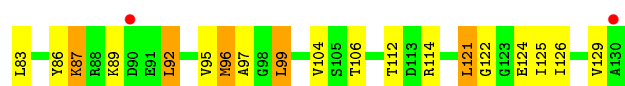


• Molecule 8: 30S ribosomal protein S8

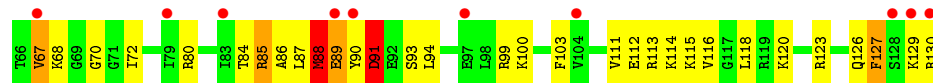
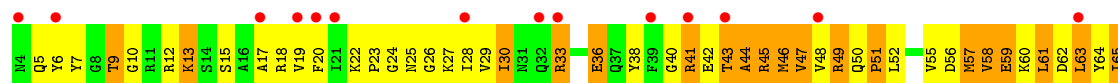


• Molecule 8: 30S ribosomal protein S8

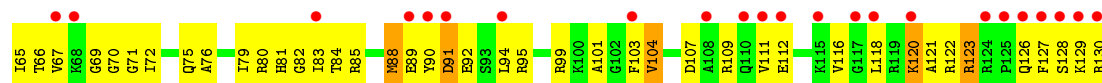
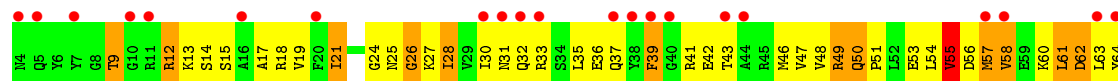




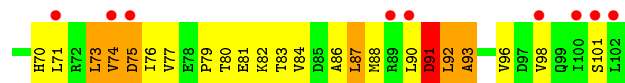
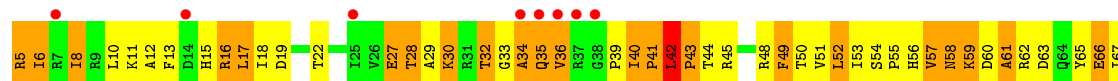
• Molecule 9: 30S ribosomal protein S9



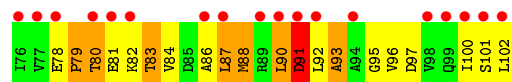
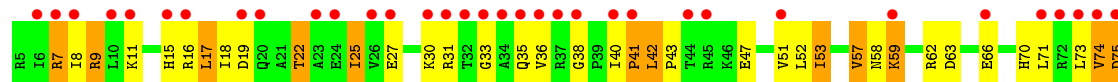
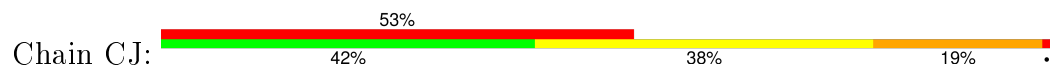
• Molecule 9: 30S ribosomal protein S9



• Molecule 10: 30S ribosomal protein S10

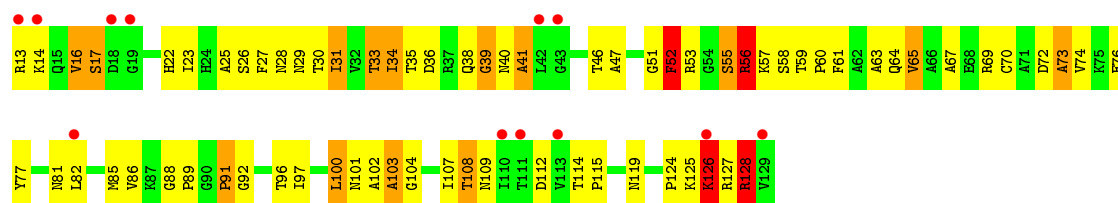


• Molecule 10: 30S ribosomal protein S10

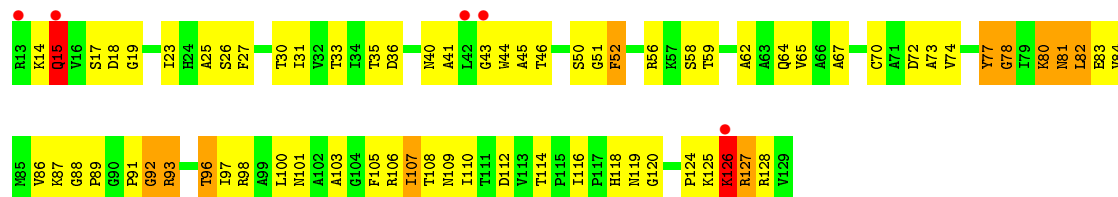


• Molecule 11: 30S ribosomal protein S11

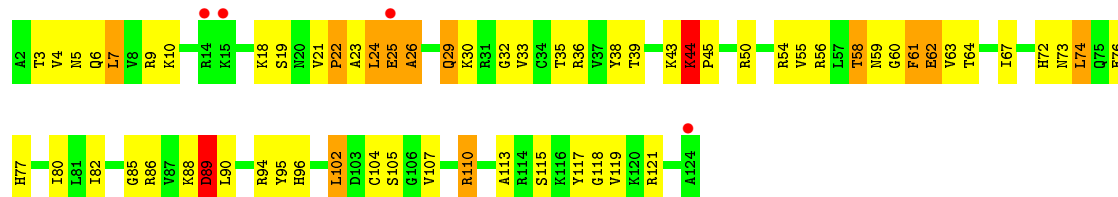




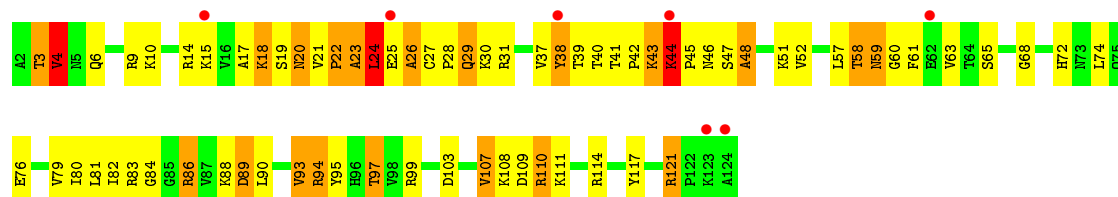
- Molecule 11: 30S ribosomal protein S11



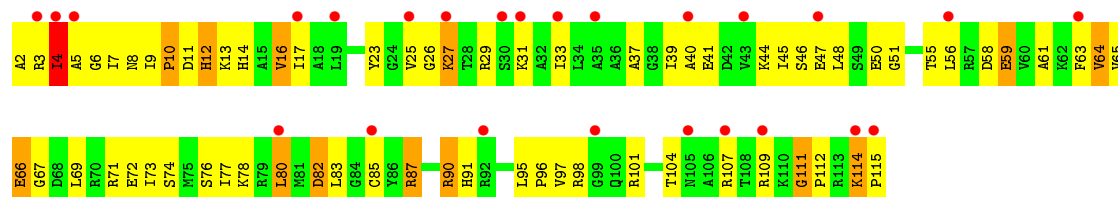
- Molecule 12: 30S ribosomal protein S12



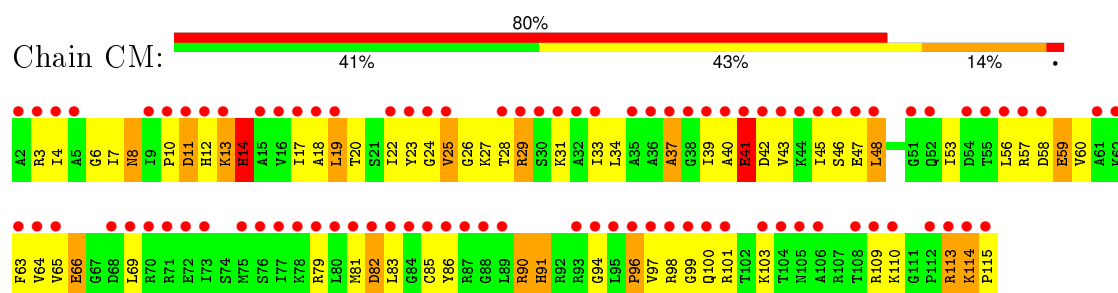
- Molecule 12: 30S ribosomal protein S12



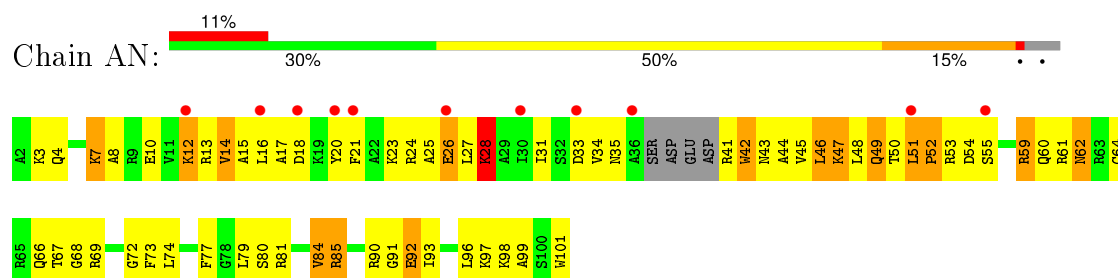
- Molecule 13: 30S ribosomal protein S13



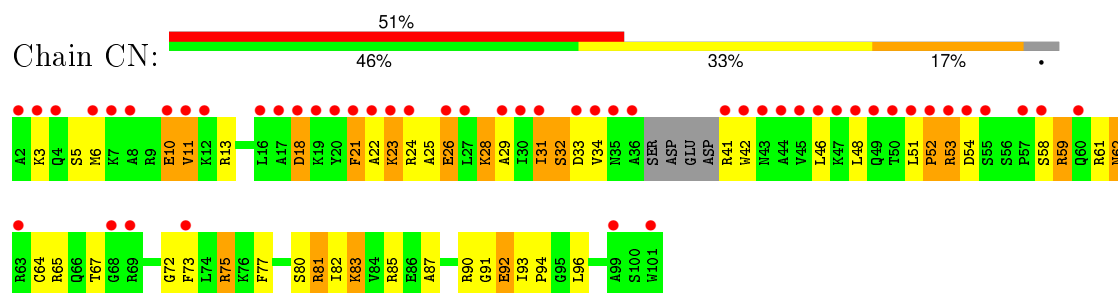
- Molecule 13: 30S ribosomal protein S13



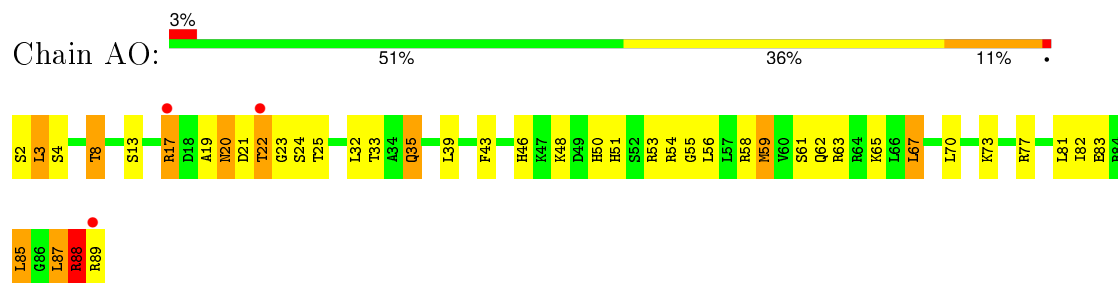
• Molecule 14: 30S ribosomal protein S14



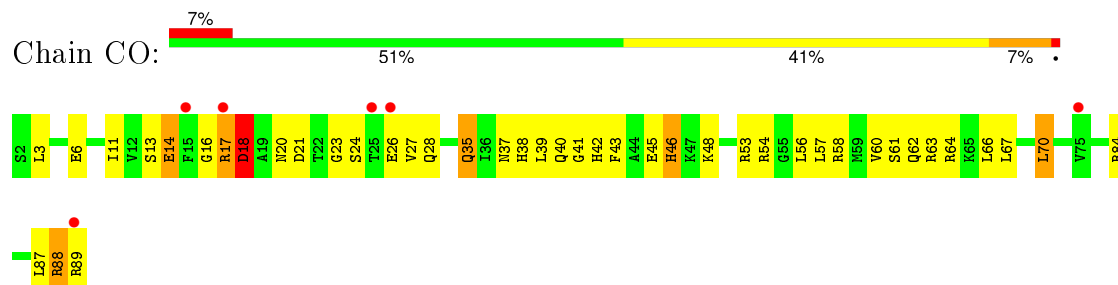
• Molecule 14: 30S ribosomal protein S14



• Molecule 15: 30S ribosomal protein S15

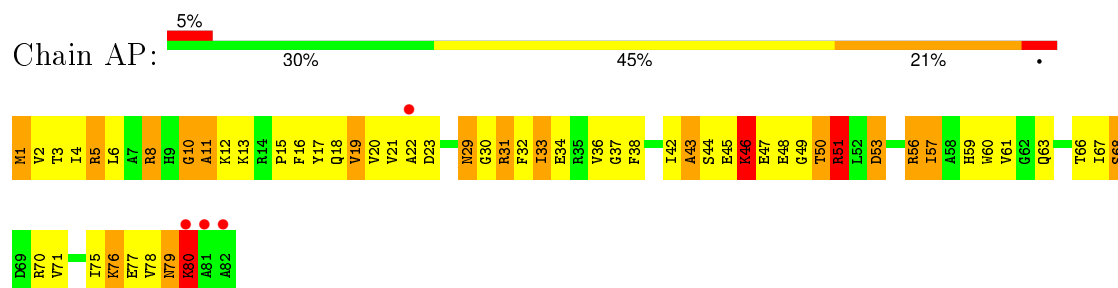


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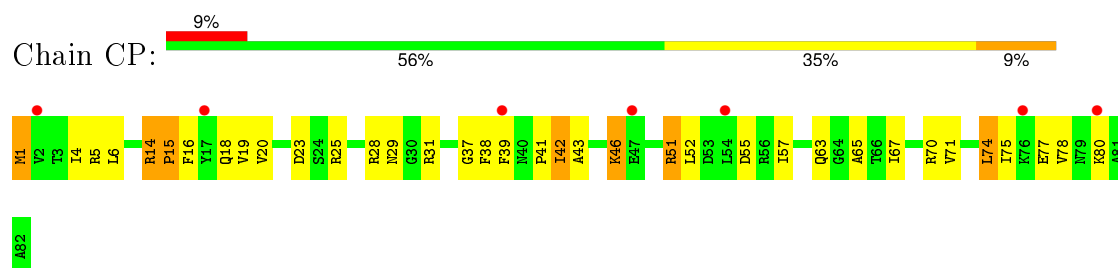




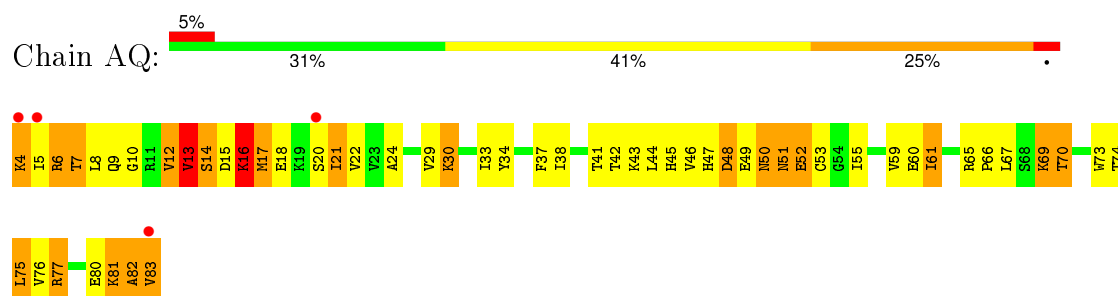
- Molecule 16: 30S ribosomal protein S16



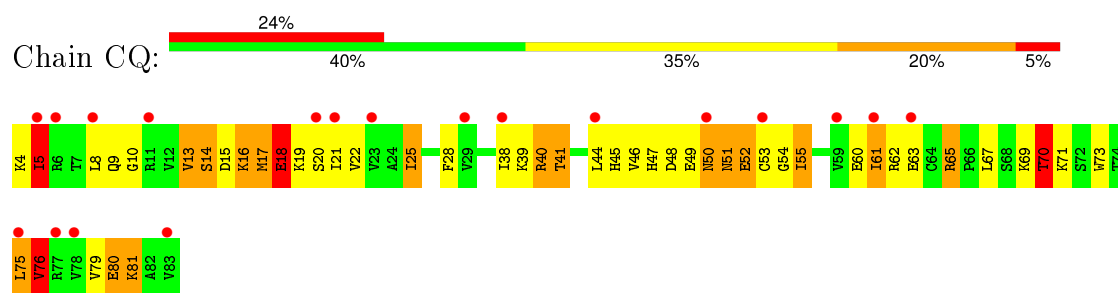
- Molecule 16: 30S ribosomal protein S16



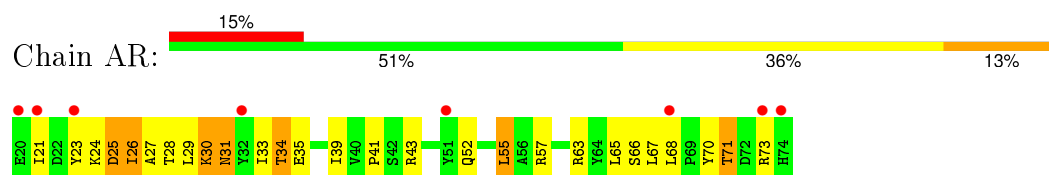
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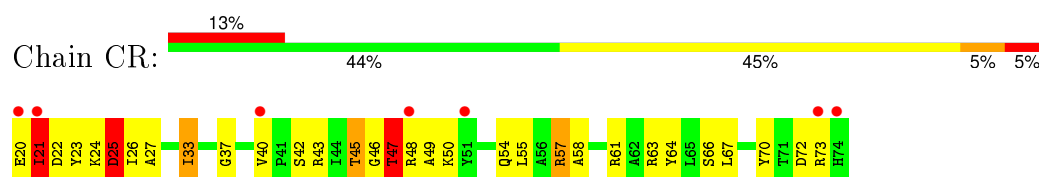
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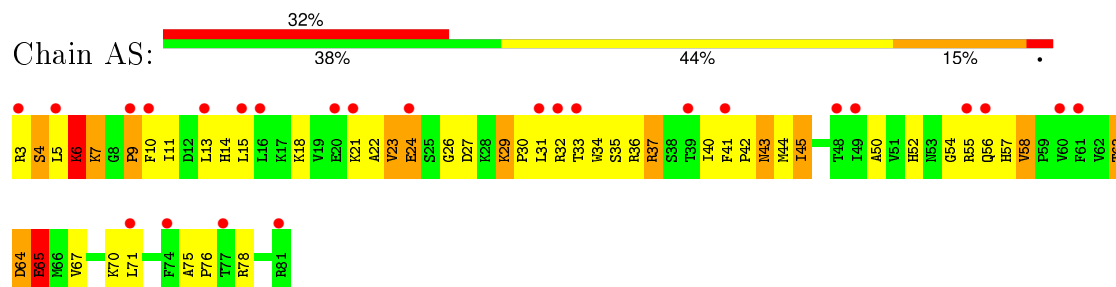
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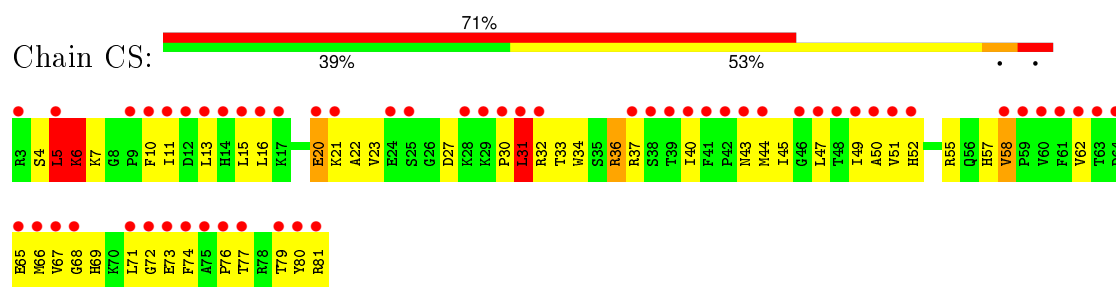
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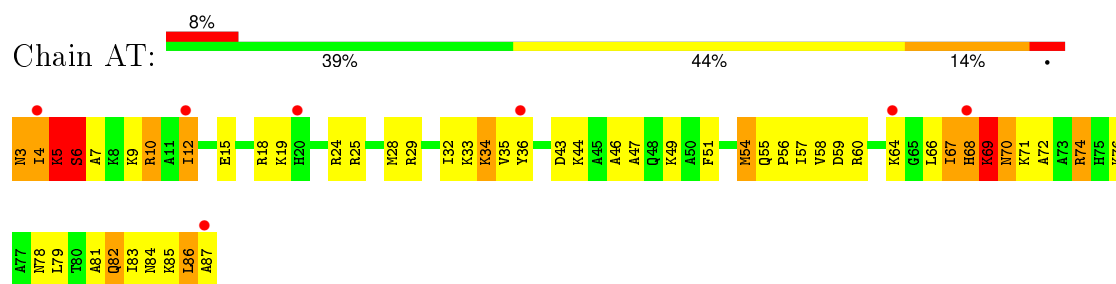
• Molecule 19: 30S ribosomal protein S19



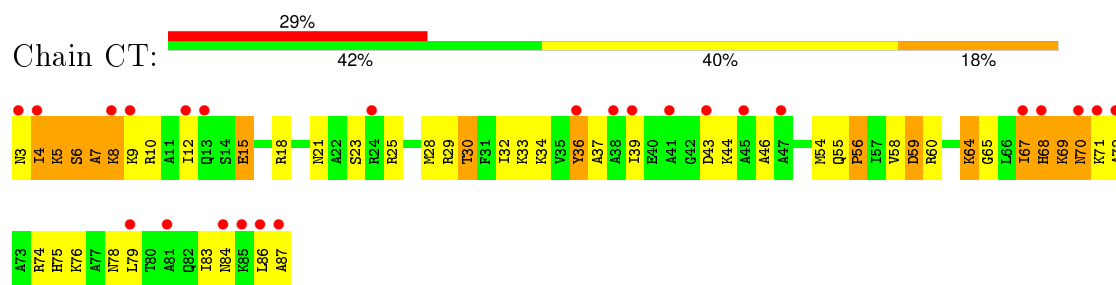
• Molecule 19: 30S ribosomal protein S19



• Molecule 20: 30S ribosomal protein S20

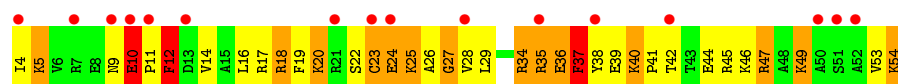


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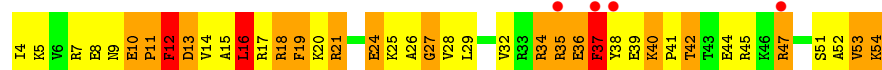
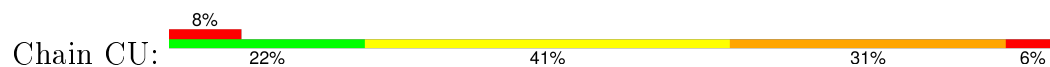


• Molecule 21: 30S ribosomal protein S21

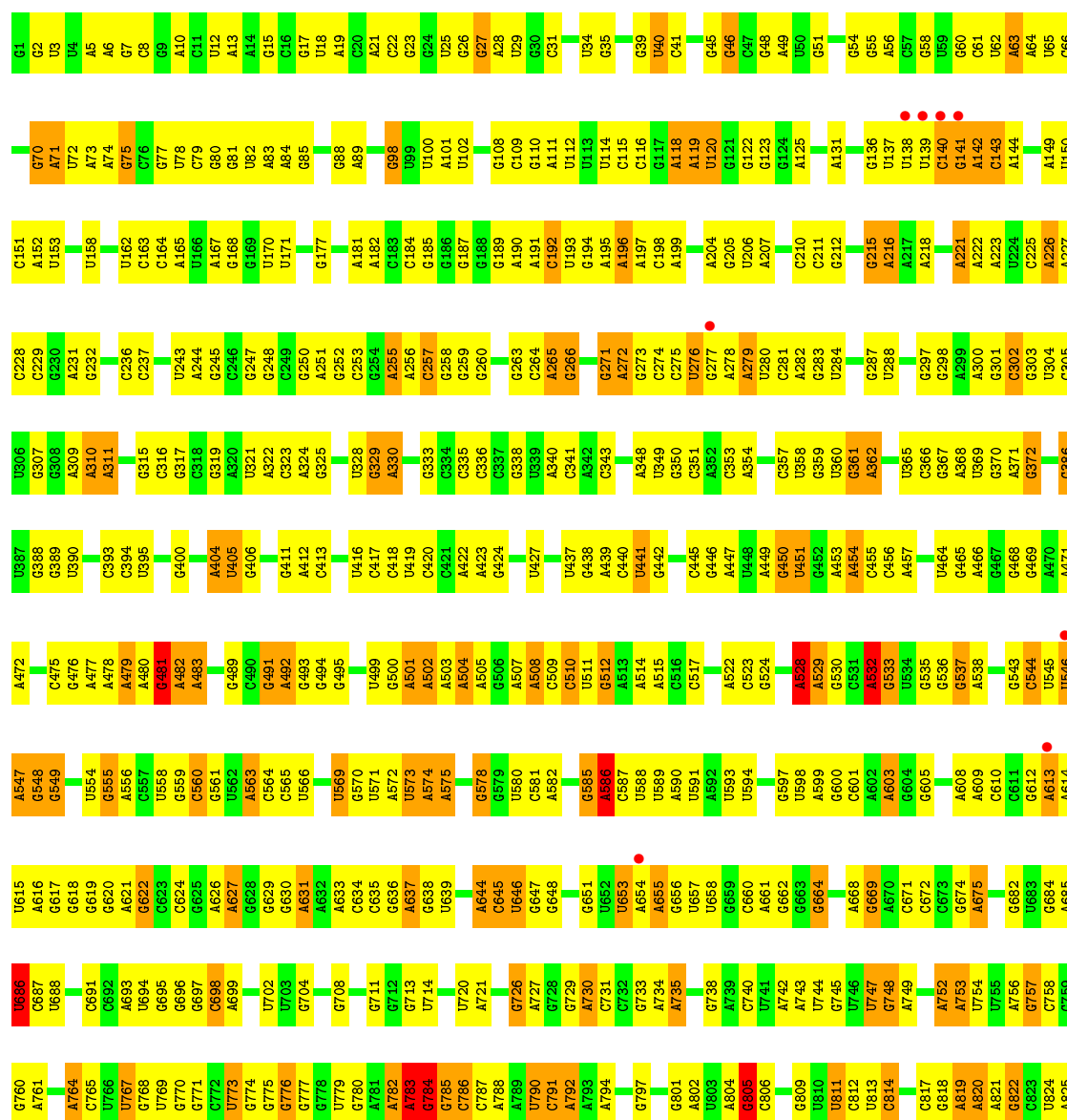




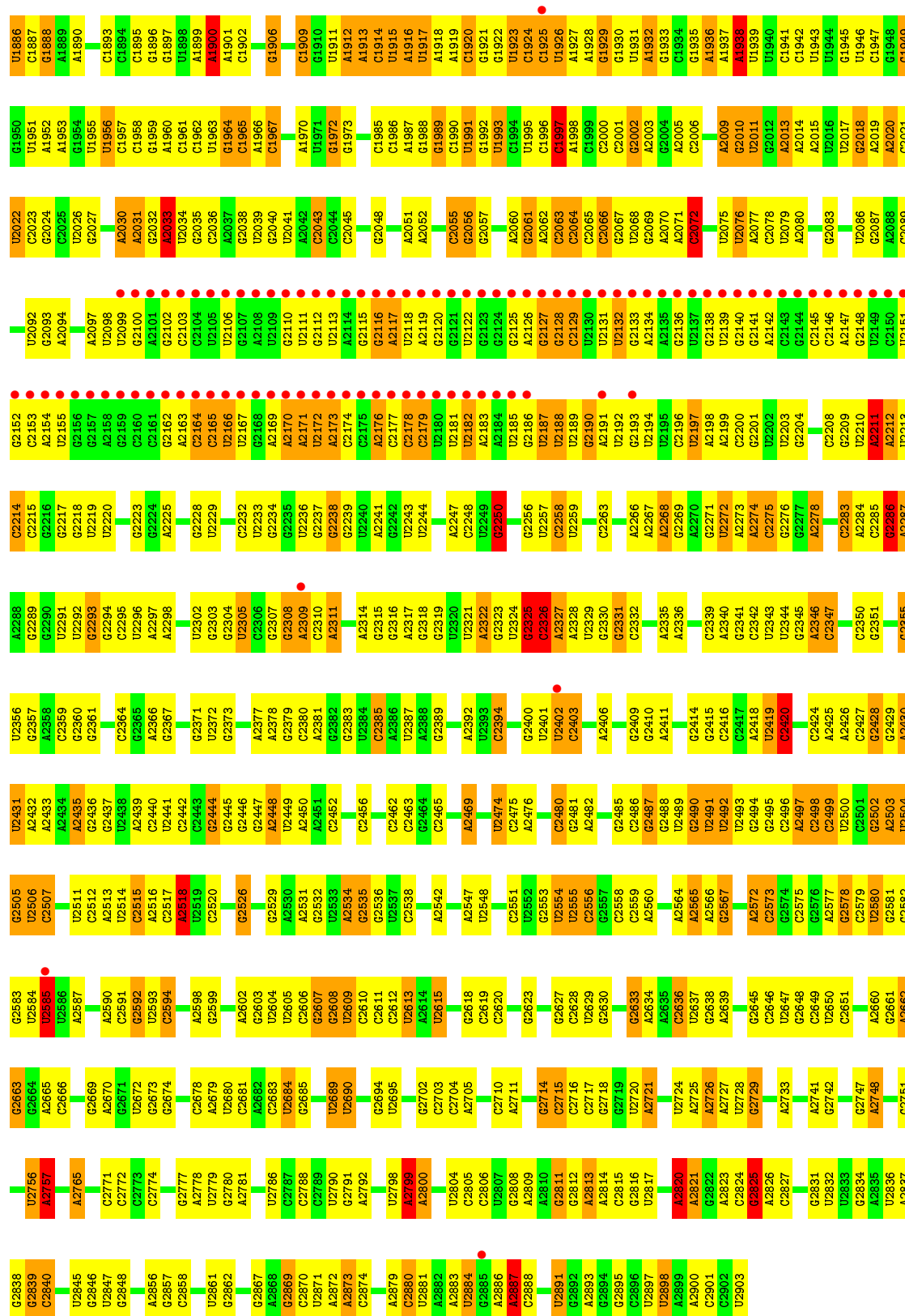
- Molecule 21: 30S ribosomal protein S21



- Molecule 22: 23S rRNA









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U1856	G1792	C1726	G1651	C1577	C1512	G1441	A1373	U1313	A1246	U1183	C1104	G1042	G962
G1857	A1793	C1727	A1652	U1578	U1513	U1442	G1374	C1314	A1247	U1184	U1105	C1043	U963
A1858	A1794	C1728	A1653	U1579	G1514	U1443	U1375	C1315	G1248	G1185	G1106	C1044	C964
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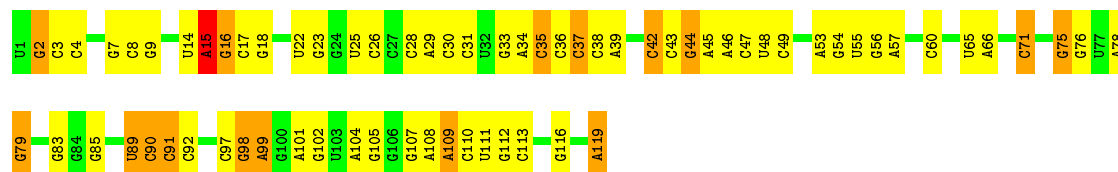
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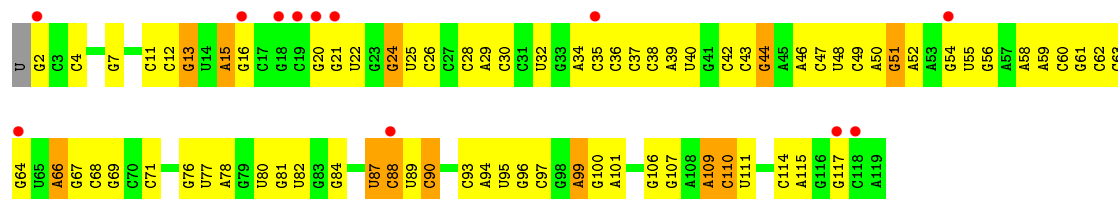
• Molecule 23: 5S rRNA

Chain BB: 42% 44% 13%



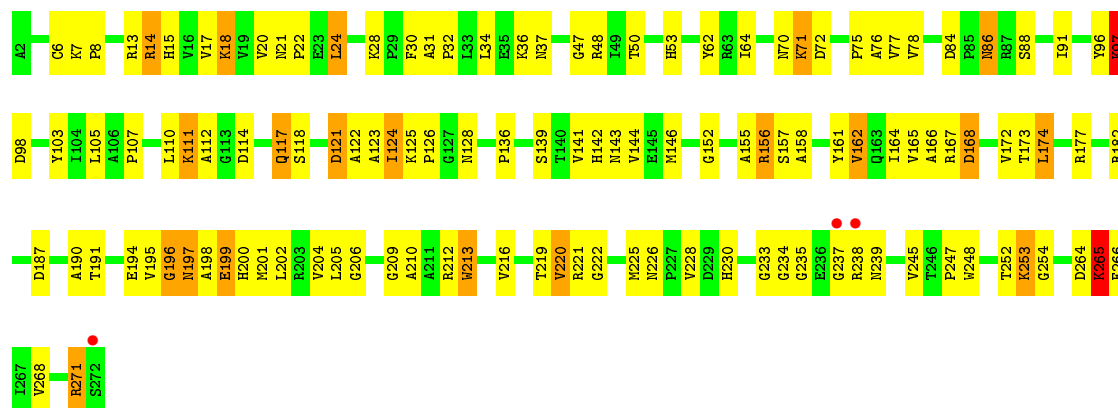
• Molecule 23: 5S rRNA

Chain DB: 10% 34% 55% 10%



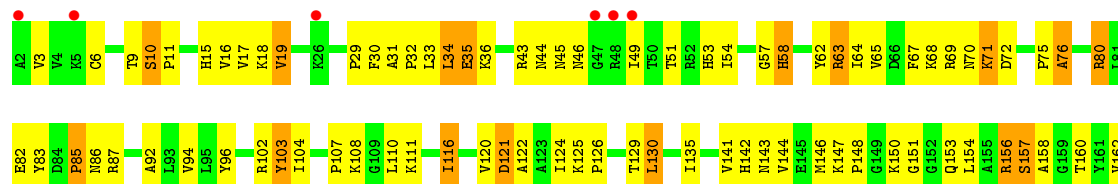
• Molecule 24: 50S ribosomal protein L2

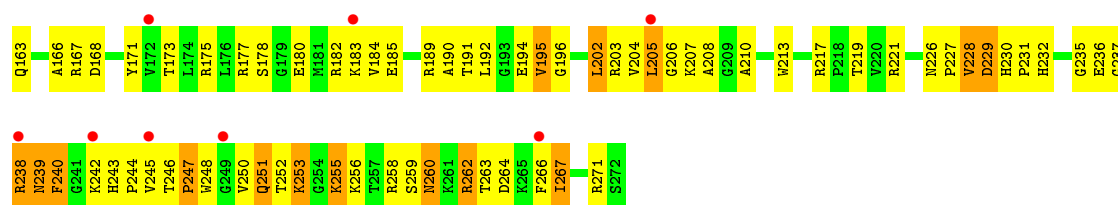
Chain BC: 54% 38% 7%



• Molecule 24: 50S ribosomal protein L2

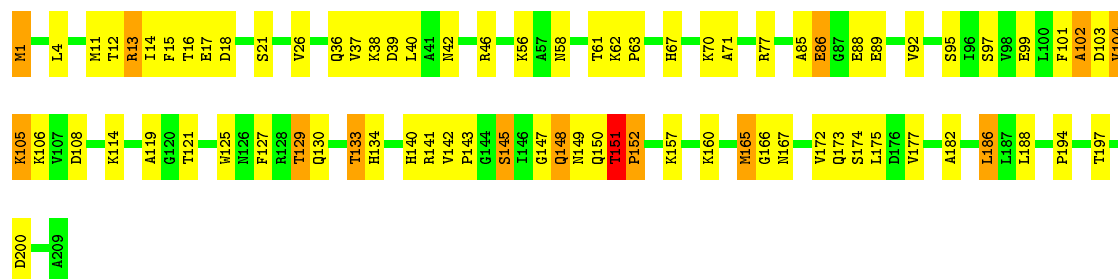
Chain DC: 5% 45% 44% 11%





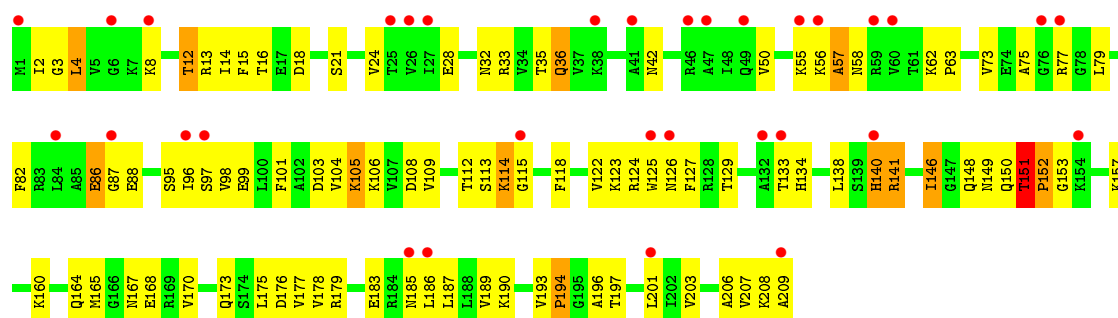
• Molecule 25: 50S ribosomal protein L3

Chain BD: 62% 31% 6%



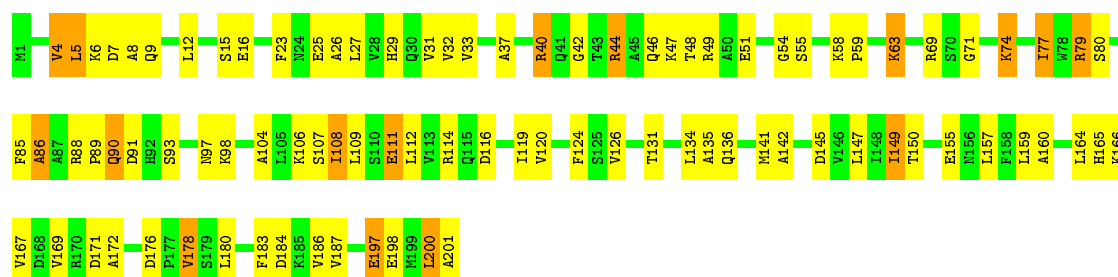
• Molecule 25: 50S ribosomal protein L3

Chain DD: 15% 53% 41% 6%



• Molecule 26: 50S ribosomal protein L4

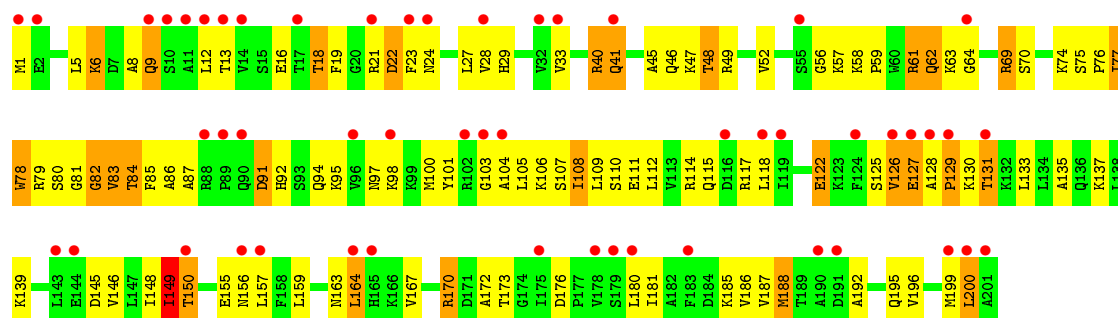
Chain BE: 55% 37% 8%



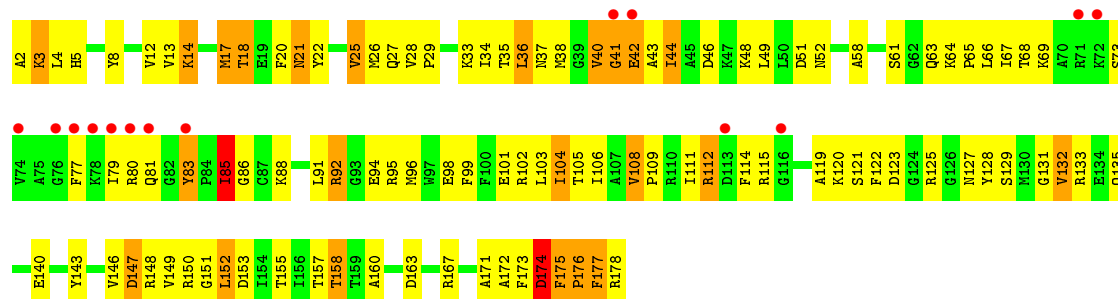
• Molecule 26: 50S ribosomal protein L4

Chain DE: 26% 45% 41% 13%

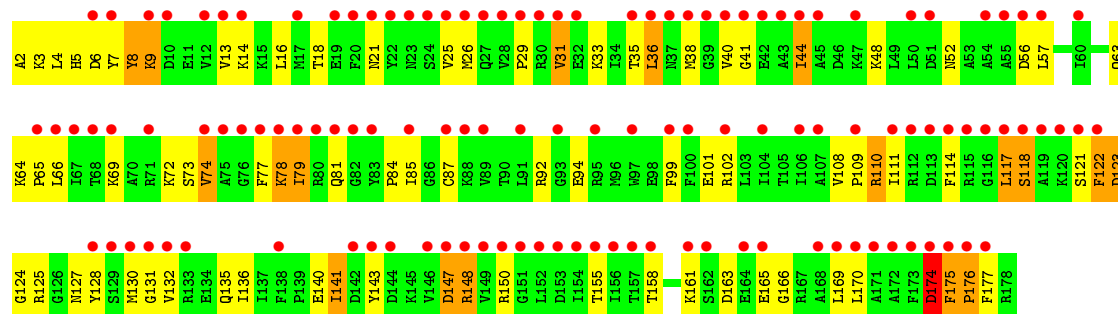




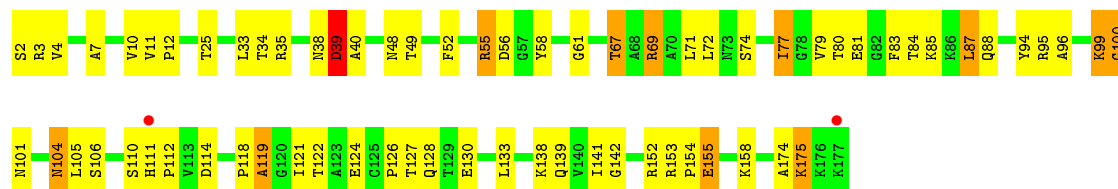
• Molecule 27: 50S ribosomal protein L5



• Molecule 27: 50S ribosomal protein L5

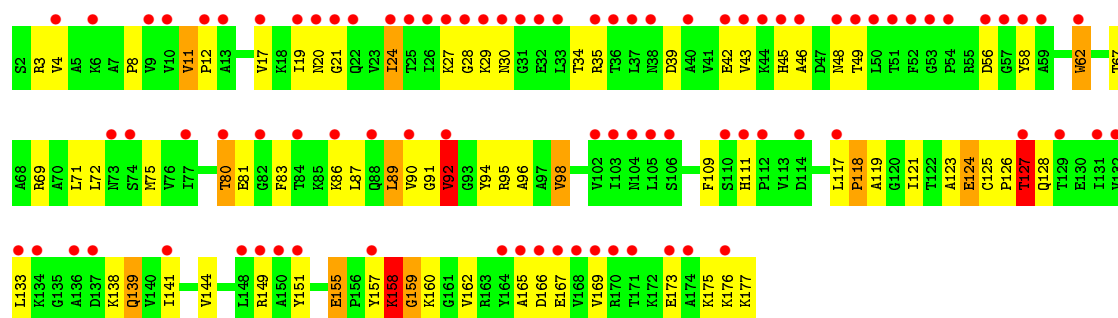


• Molecule 28: 50S ribosomal protein L6

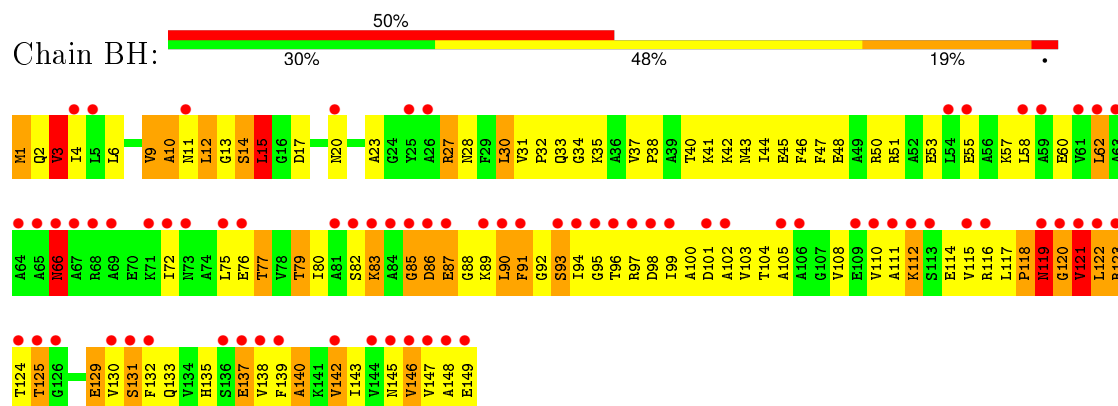


• Molecule 28: 50S ribosomal protein L6

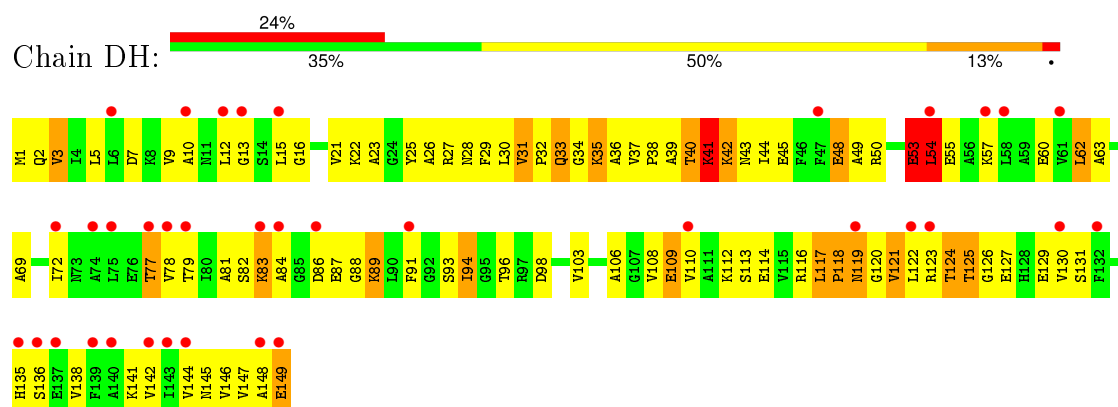




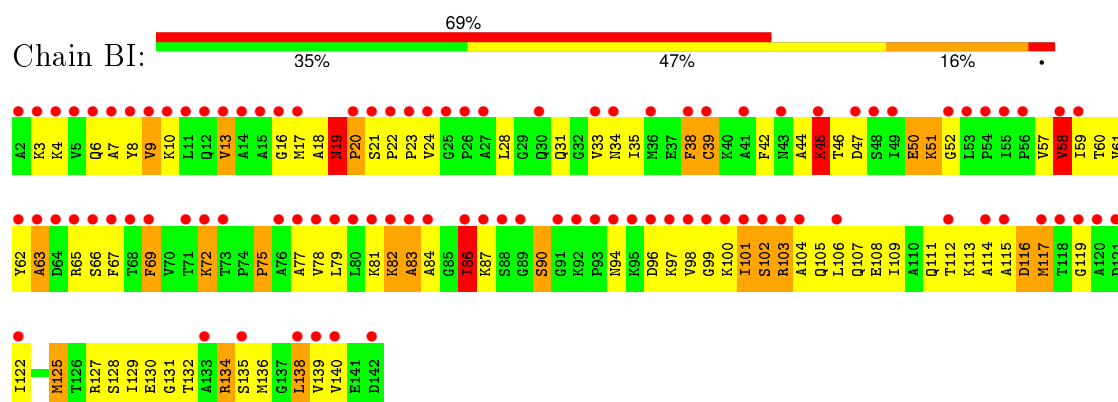
- Molecule 29: 50S ribosomal protein L9



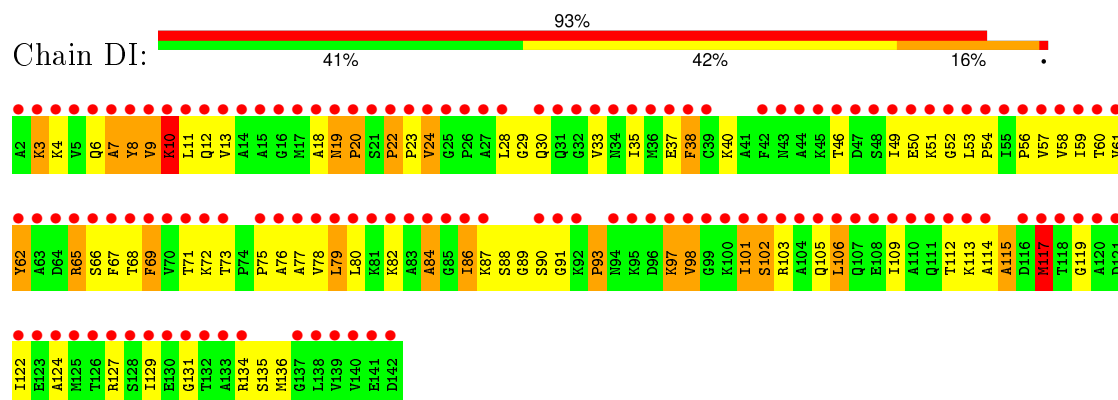
- Molecule 29: 50S ribosomal protein L9



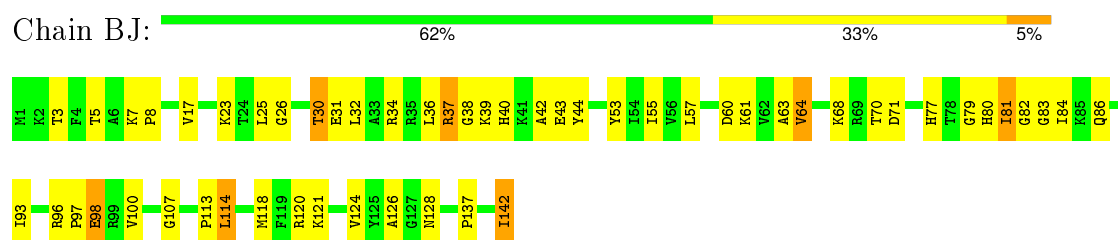
- Molecule 30: 50S ribosomal protein L11



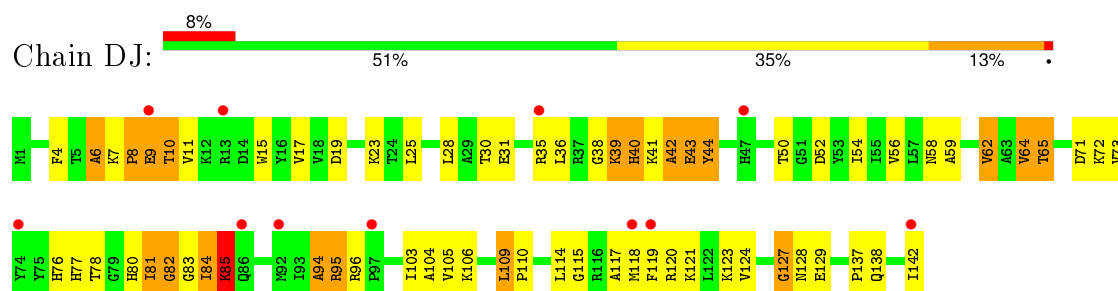
- Molecule 30: 50S ribosomal protein L11



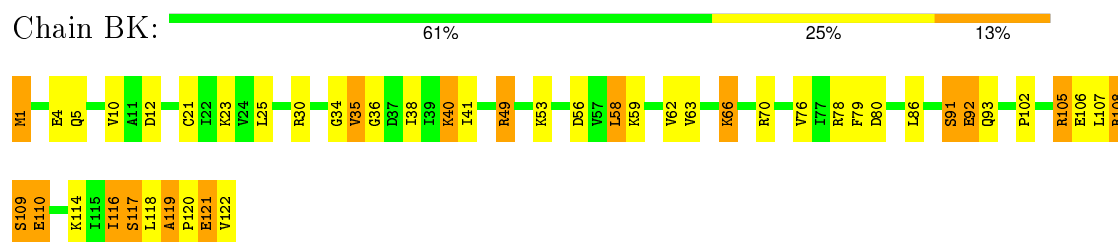
- Molecule 31: 50S ribosomal protein L13



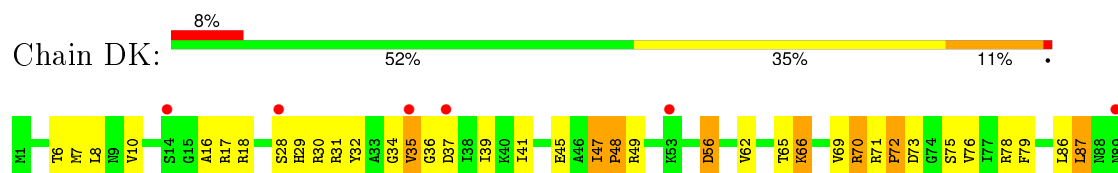
- Molecule 31: 50S ribosomal protein L13

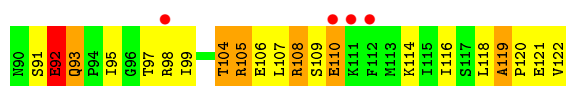


- Molecule 32: 50S ribosomal protein L14



- Molecule 32: 50S ribosomal protein L14





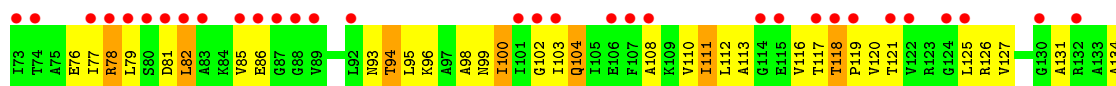
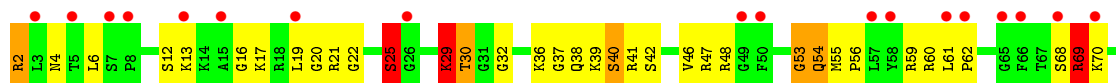
- Molecule 33: 50S ribosomal protein L15

Chain BL: 57% 38%



- Molecule 33: 50S ribosomal protein L15

Chain DL: 38% 49% 41% 8%



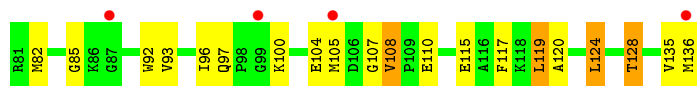
- Molecule 34: 50S ribosomal protein L16

Chain BM: 71% 23% 5%



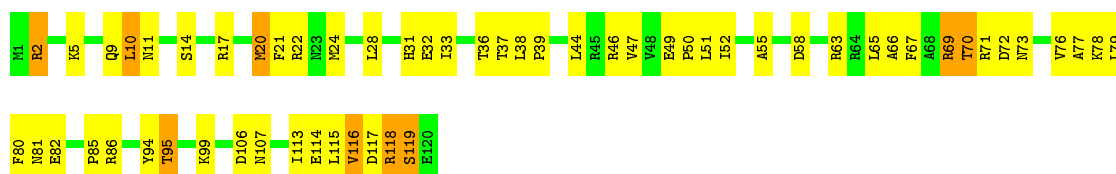
- Molecule 34: 50S ribosomal protein L16

Chain DM: 11% 58% 33% 9%

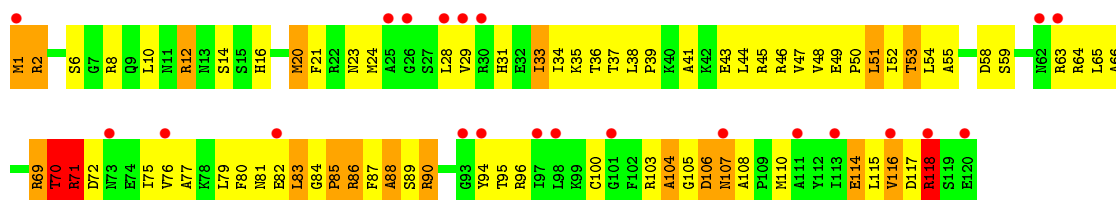


- Molecule 35: 50S ribosomal protein L17

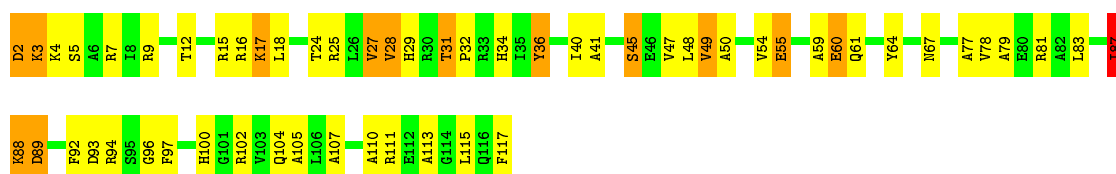
Chain BN: 52% 41% 8%



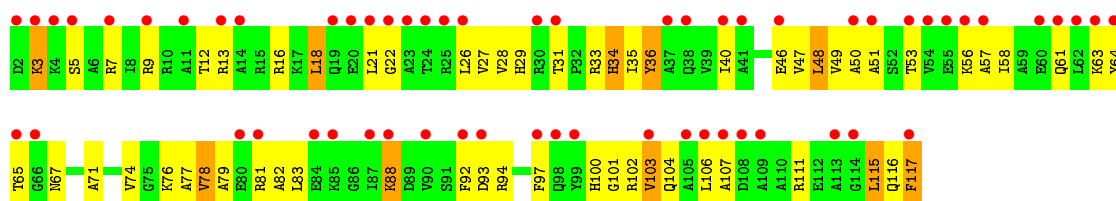
- Molecule 35: 50S ribosomal protein L17



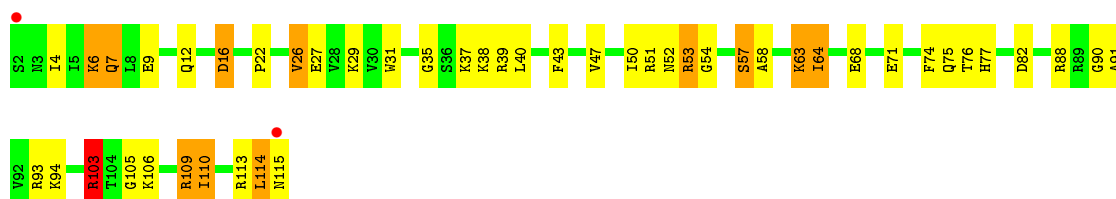
- Molecule 36: 50S ribosomal protein L18



- Molecule 36: 50S ribosomal protein L18

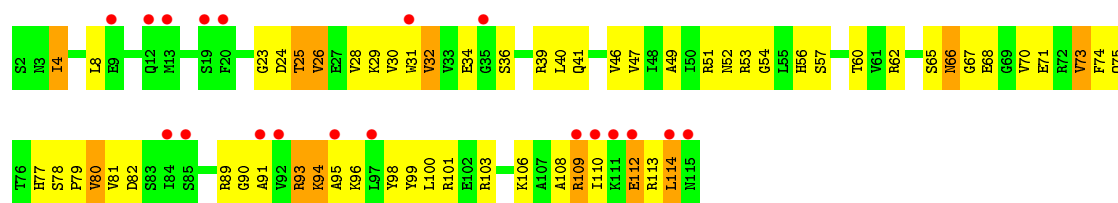


- Molecule 37: 50S ribosomal protein L19



- Molecule 37: 50S ribosomal protein L19





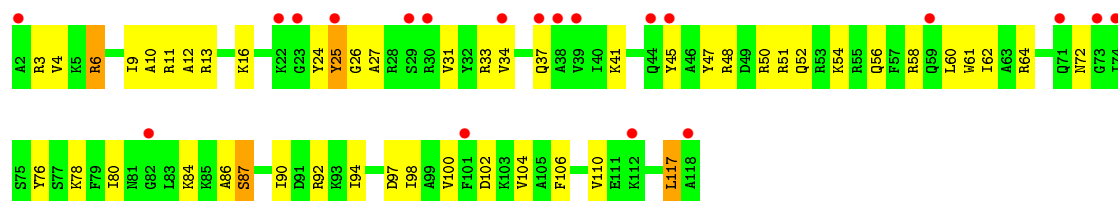
• Molecule 38: 50S ribosomal protein L20

Chain BQ: 55% 38% 8%



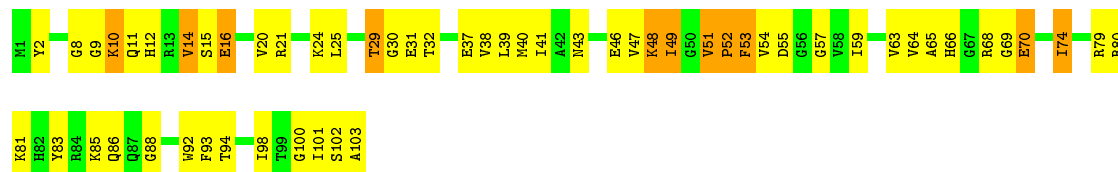
• Molecule 38: 50S ribosomal protein L20

Chain DQ: 17% 58% 38%



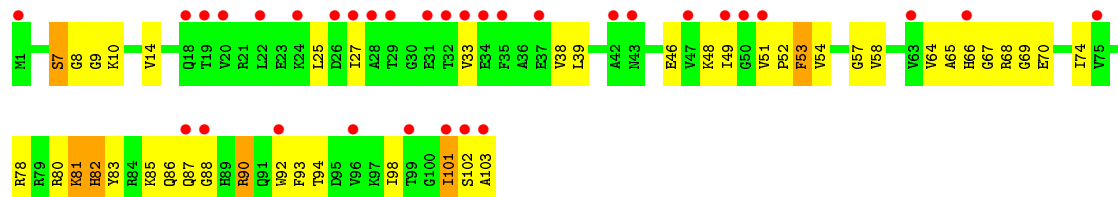
• Molecule 39: 50S ribosomal protein L21

Chain BR: 45% 45% 11%



• Molecule 39: 50S ribosomal protein L21

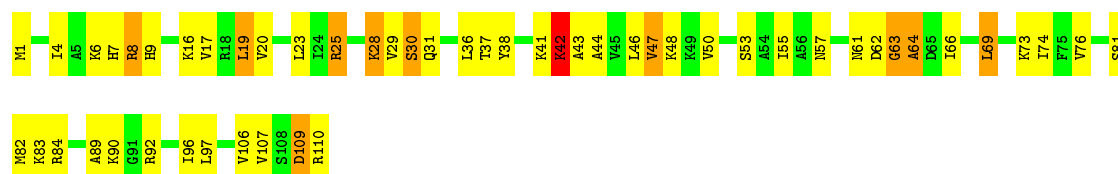
Chain DR: 32% 57% 37%



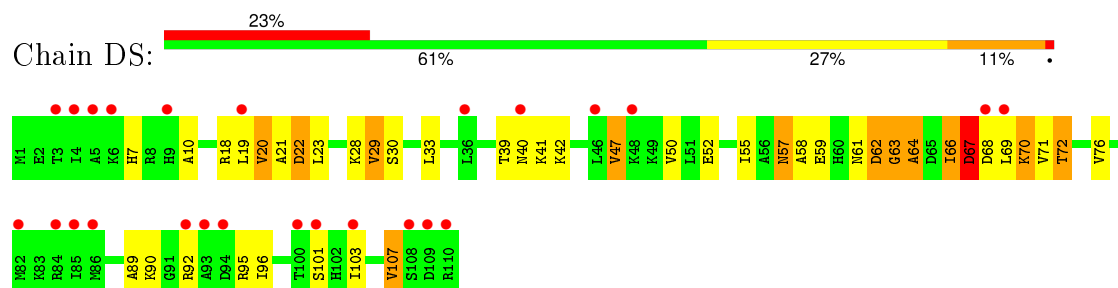
• Molecule 40: 50S ribosomal protein L22

Chain BS: 53% 37% 9%

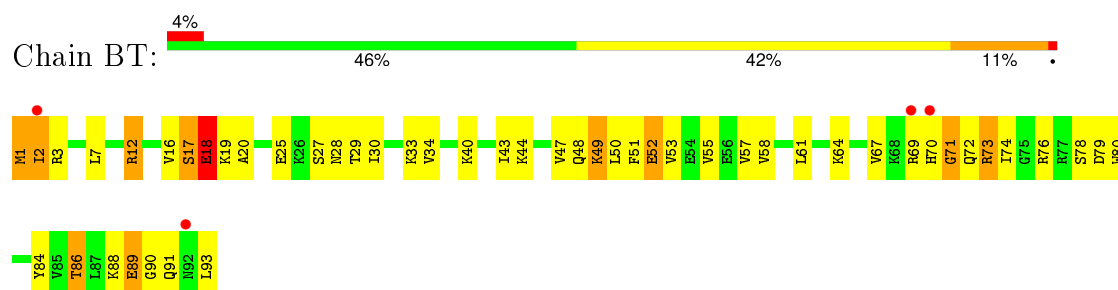




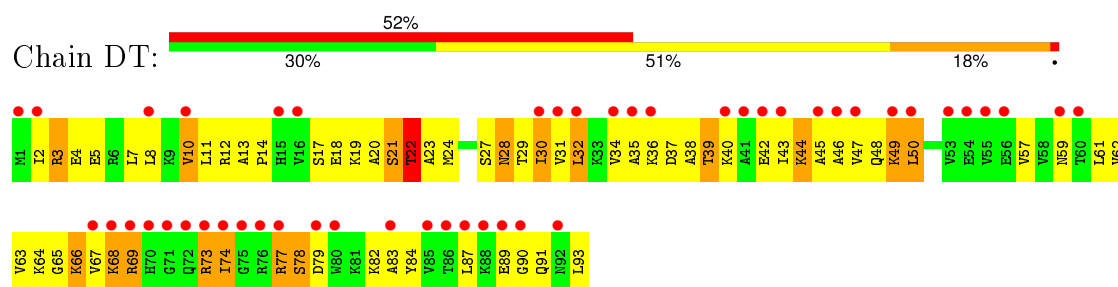
• Molecule 40: 50S ribosomal protein L22



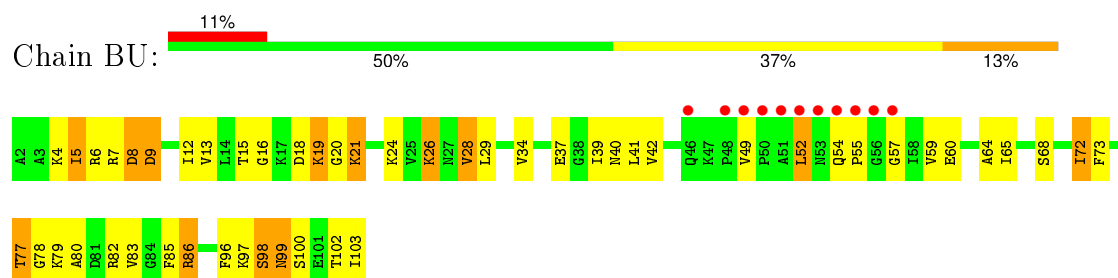
• Molecule 41: 50S ribosomal protein L23



• Molecule 41: 50S ribosomal protein L23

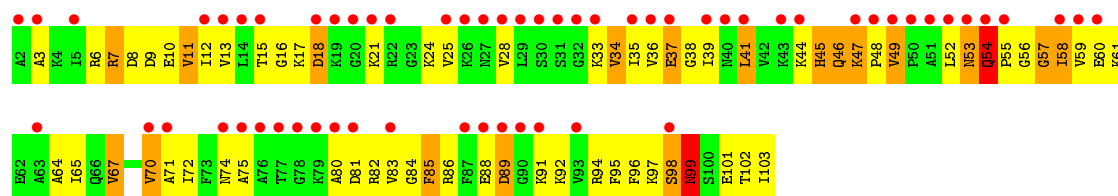


• Molecule 42: 50S ribosomal protein L24



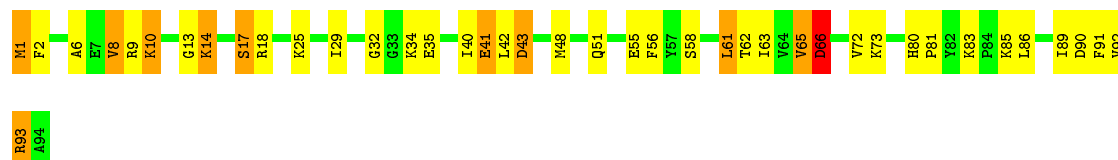
• Molecule 42: 50S ribosomal protein L24





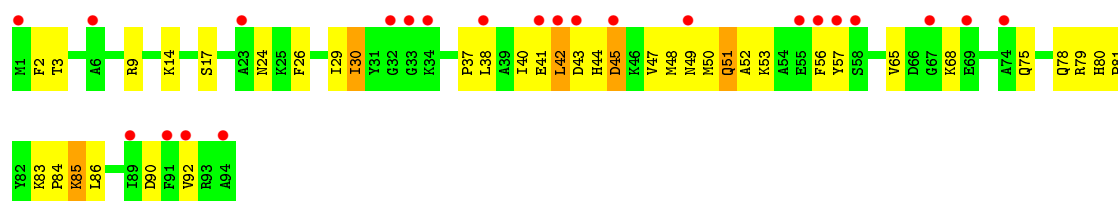
- Molecule 43: 50S ribosomal protein L25

Chain BV: 56% 32% 11%



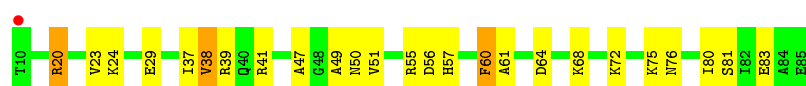
- Molecule 43: 50S ribosomal protein L25

Chain DV: 24% 59% 36% 5%



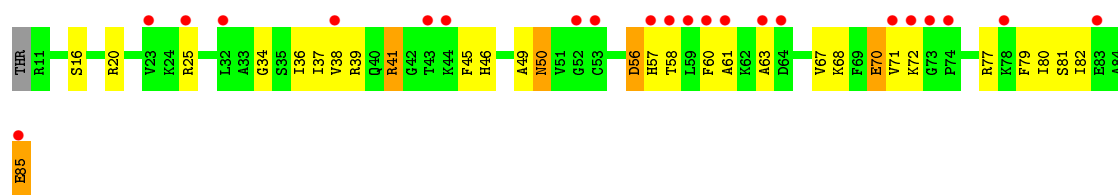
- Molecule 44: 50S ribosomal protein L27

Chain BW: 67% 29%



- Molecule 44: 50S ribosomal protein L27

Chain DW: 29% 59% 33% 7%

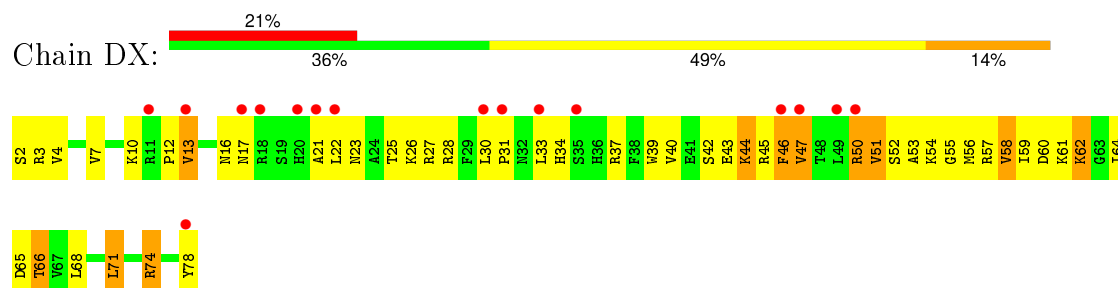


- Molecule 45: 50S ribosomal protein L28

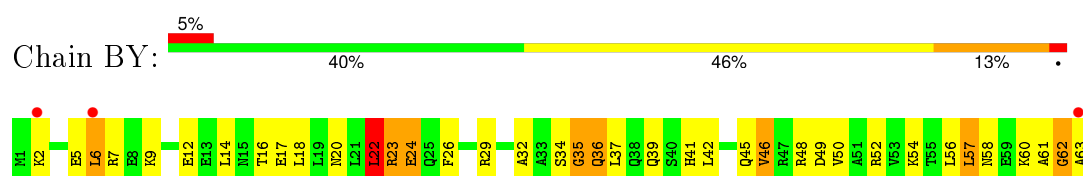
Chain BX: 64% 30% 6%



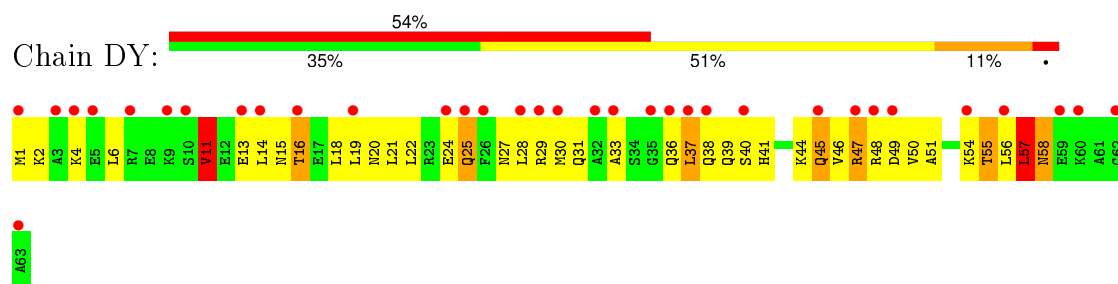
- Molecule 45: 50S ribosomal protein L28



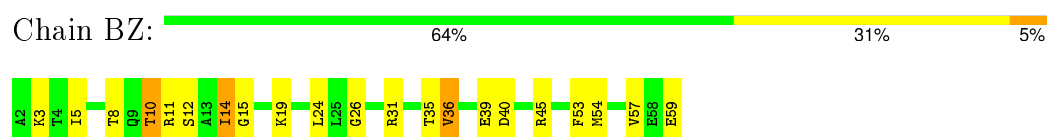
- Molecule 46: 50S ribosomal protein L29



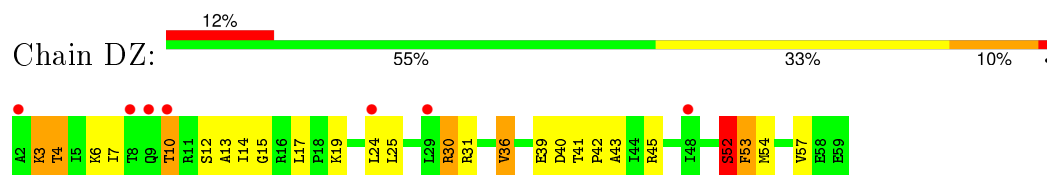
- Molecule 46: 50S ribosomal protein L29



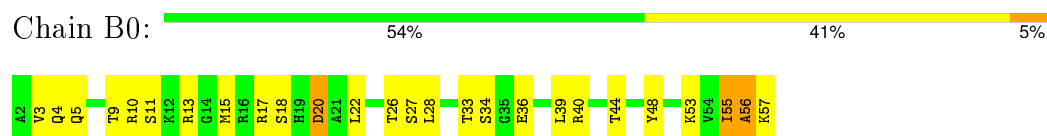
- Molecule 47: 50S ribosomal protein L30



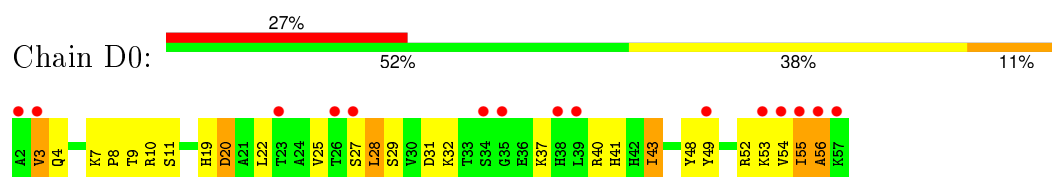
- Molecule 47: 50S ribosomal protein L30



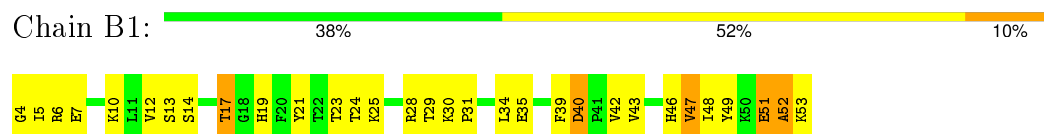
- Molecule 48: 50S ribosomal protein L32



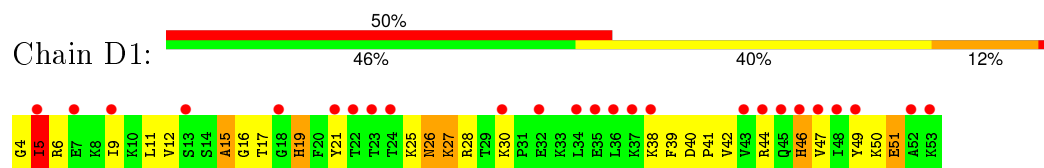
- Molecule 48: 50S ribosomal protein L32



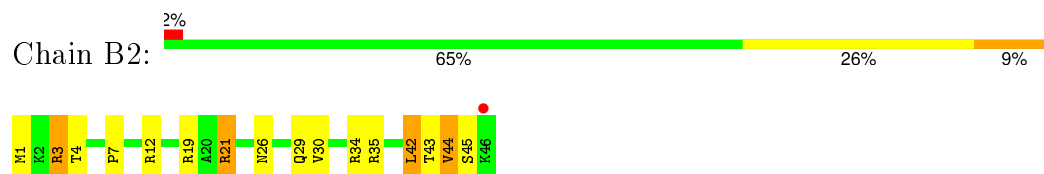
- Molecule 49: 50S ribosomal protein L33



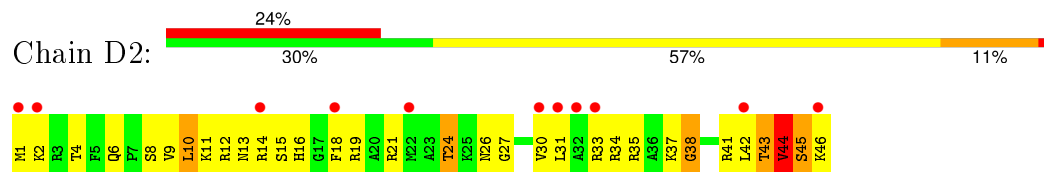
- Molecule 49: 50S ribosomal protein L33



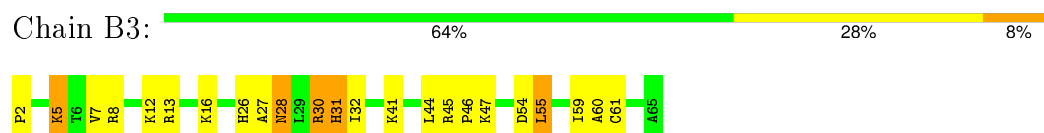
- Molecule 50: 50S ribosomal protein L34



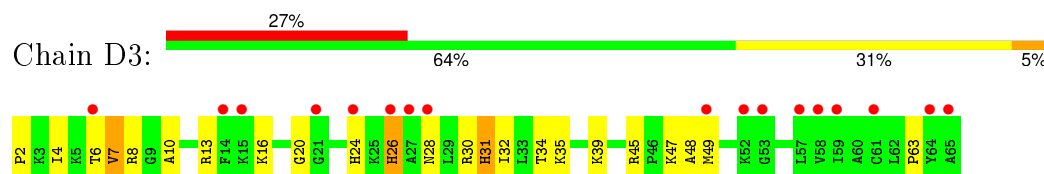
- Molecule 50: 50S ribosomal protein L34



- Molecule 51: 50S ribosomal protein L35



- Molecule 51: 50S ribosomal protein L35

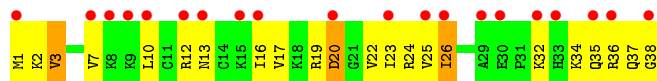
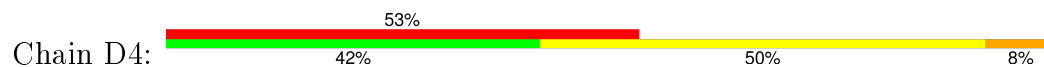


- Molecule 52: 50S ribosomal protein L36

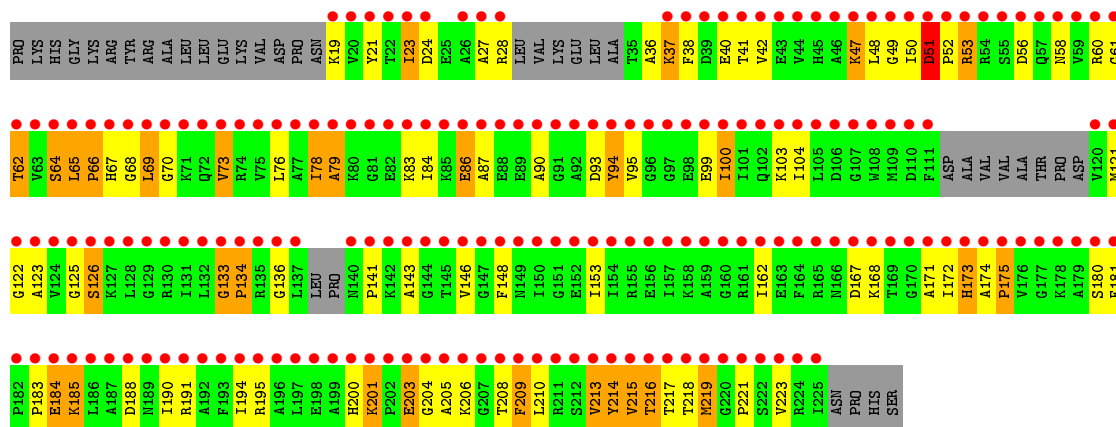
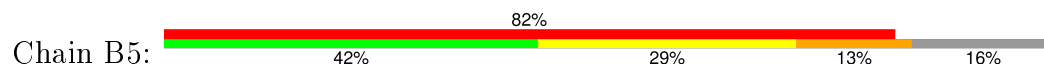




- Molecule 52: 50S ribosomal protein L36



- Molecule 53: 50S ribosomal protein L1



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	210.21Å 433.03Å 619.20Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	39.97 – 2.90 39.97 – 2.90	Depositor EDS
% Data completeness (in resolution range)	94.9 (39.97-2.90) 94.9 (39.97-2.90)	Depositor EDS
$R_{merge}$	0.12	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.40 (at 2.90Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.8.1_1168)	Depositor
R, $R_{free}$	0.220 , 0.264 0.228 , 0.272	Depositor DCC
$R_{free}$ test set	4701 reflections (0.40%)	DCC
Wilson B-factor (Å <sup>2</sup> )	44.0	Xtriage
Anisotropy	0.529	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.27 , 51.6	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	0 of 1169356 reflections	Xtriage
$F_o, F_c$ correlation	0.91	EDS
Total number of atoms	288276	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	62.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.55% of the height of the origin peak. No significant pseudotranslation is detected.*

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

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

## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

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

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	0.46	0/36944	0.92	22/57632 (0.0%)
1	CA	0.39	0/36966	0.86	4/57666 (0.0%)
2	AB	0.36	0/1736	0.58	0/2338
2	CB	0.32	0/1736	0.53	0/2338
3	AC	0.35	0/1652	0.57	0/2225
3	CC	0.31	0/1652	0.51	0/2225
4	AD	0.36	0/1665	0.61	0/2227
4	CD	0.39	0/1665	0.61	0/2227
5	AE	0.38	0/1119	0.66	0/1504
5	CE	0.37	0/1119	0.65	0/1504
6	AF	0.39	0/836	0.60	0/1128
6	CF	0.33	0/836	0.58	0/1128
7	AG	0.34	0/1196	0.52	0/1602
7	CG	0.31	0/1196	0.51	0/1602
8	AH	0.38	0/989	0.57	0/1326
8	CH	0.31	0/989	0.52	0/1326
9	AI	0.33	0/1034	0.58	0/1375
9	CI	0.31	0/1034	0.55	0/1375
10	AJ	0.36	0/797	0.59	0/1077
10	CJ	0.31	0/797	0.52	0/1077
11	AK	0.36	0/893	0.67	1/1205 (0.1%)
11	CK	0.32	0/893	0.55	0/1205
12	AL	0.41	0/969	0.65	0/1300
12	CL	0.37	0/969	0.63	0/1300
13	AM	0.36	0/893	0.59	0/1193
13	CM	0.32	0/893	0.52	0/1193
14	AN	0.36	0/785	0.58	0/1043
14	CN	0.30	0/785	0.50	0/1043
15	AO	0.36	0/718	0.58	0/959
15	CO	0.32	0/718	0.50	0/959
16	AP	0.38	0/659	0.69	1/884 (0.1%)
16	CP	0.32	0/659	0.55	0/884

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
17	AQ	0.41	0/658	0.63	0/881
17	CQ	0.33	0/658	0.54	0/881
18	AR	0.35	0/463	0.57	0/621
18	CR	0.33	0/463	0.52	0/621
19	AS	0.36	0/653	0.53	0/877
19	CS	0.32	0/653	0.56	0/877
20	AT	0.36	0/671	0.58	0/888
20	CT	0.30	0/671	0.54	0/888
21	AU	0.45	0/431	0.63	0/570
21	CU	0.42	0/431	0.62	0/570
22	BA	0.84	18/69659 (0.0%)	1.25	413/108672 (0.4%)
22	DA	0.37	0/69659	0.85	11/108672 (0.0%)
23	BB	0.73	0/2850	1.17	11/4444 (0.2%)
23	DB	0.32	0/2828	0.80	0/4410
24	BC	0.50	0/2122	0.70	0/2852
24	DC	0.33	0/2122	0.56	0/2852
25	BD	0.58	0/1586	0.75	1/2134 (0.0%)
25	DD	0.31	0/1586	0.55	0/2134
26	BE	0.50	0/1571	0.67	0/2113
26	DE	0.31	0/1571	0.53	0/2113
27	BF	0.40	0/1435	0.61	0/1926
27	DF	0.29	0/1435	0.48	0/1926
28	BG	0.40	0/1343	0.60	0/1816
28	DG	0.30	0/1343	0.48	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	0.35	0/1046	0.55	0/1410
30	DI	0.35	0/1046	0.53	0/1410
31	BJ	0.61	0/1152	0.73	0/1551
31	DJ	0.31	0/1152	0.54	0/1551
32	BK	0.61	0/948	0.75	0/1268
32	DK	0.34	0/948	0.55	0/1268
33	BL	0.55	0/1054	0.74	0/1403
33	DL	0.31	0/1054	0.53	0/1403
34	BM	0.58	0/1093	0.73	0/1460
34	DM	0.30	0/1093	0.50	0/1460
35	BN	0.62	0/974	0.79	0/1301
35	DN	0.33	0/974	0.58	1/1301 (0.1%)
36	BO	0.48	0/902	0.64	0/1209
36	DO	0.29	0/902	0.47	0/1209
37	BP	0.55	0/929	0.75	3/1242 (0.2%)
37	DP	0.32	0/929	0.51	0/1242
38	BQ	0.67	0/960	0.78	0/1278



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
38	DQ	0.33	0/960	0.50	0/1278
39	BR	0.64	0/829	0.84	0/1107
39	DR	0.30	0/829	0.53	0/1107
40	BS	0.69	0/864	0.81	0/1156
40	DS	0.32	0/864	0.54	0/1156
41	BT	0.46	0/745	0.69	0/994
41	DT	0.31	0/745	0.51	0/994
42	BU	0.47	0/788	0.66	0/1051
42	DU	0.34	0/788	0.56	0/1051
43	BV	0.51	0/766	0.68	0/1025
43	DV	0.28	0/766	0.44	0/1025
44	BW	0.60	0/587	0.74	0/776
44	DW	0.30	0/576	0.50	0/762
45	BX	0.44	0/635	0.66	0/848
45	DX	0.33	0/635	0.55	0/848
46	BY	0.44	0/510	0.71	0/677
46	DY	0.29	0/510	0.53	0/677
47	BZ	0.55	0/453	0.69	0/605
47	DZ	0.31	0/453	0.51	0/605
48	B0	0.61	0/450	0.77	0/599
48	D0	0.33	0/450	0.54	0/599
49	B1	0.48	0/417	0.62	0/554
49	D1	0.31	0/417	0.50	0/554
50	B2	0.62	0/380	0.81	0/498
50	D2	0.34	0/380	0.55	0/498
51	B3	0.57	0/513	0.69	0/676
51	D3	0.29	0/513	0.49	0/676
52	B4	0.57	0/303	0.70	0/397
52	D4	0.30	0/303	0.54	0/397
53	B5	0.32	0/1145	0.50	0/1556
All	All	0.54	18/310626 (0.0%)	0.92	469/464366 (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
4	CD	0	1
5	AE	0	1
5	CE	0	1
6	CF	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
11	AK	0	1
12	CL	0	1
25	BD	0	1
25	DD	0	1
All	All	0	8

All (18) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	BA	1142	A	N9-C4	-11.42	1.31	1.37
22	BA	984	A	N9-C4	-10.72	1.31	1.37
22	BA	1936	A	N9-C4	-9.94	1.31	1.37
22	BA	528	A	N9-C4	-8.18	1.32	1.37
22	BA	783	A	N9-C4	-6.66	1.33	1.37
22	BA	561	G	N9-C4	-6.57	1.32	1.38
22	BA	984	A	N3-C4	-6.25	1.31	1.34
22	BA	528	A	N3-C4	-6.13	1.31	1.34
22	BA	571	U	N1-C2	-5.70	1.33	1.38
22	BA	528	A	N7-C5	-5.56	1.35	1.39
22	BA	1787	A	N9-C4	-5.50	1.34	1.37
22	BA	528	A	C5-C6	-5.49	1.36	1.41
22	BA	2241	A	N9-C4	-5.44	1.34	1.37
22	BA	675	A	N9-C4	-5.21	1.34	1.37
22	BA	974	G	N9-C8	5.21	1.41	1.37
22	BA	802	A	N7-C5	-5.10	1.36	1.39
22	BA	2623	G	N3-C4	-5.01	1.31	1.35
22	BA	2274	A	N9-C4	-5.01	1.34	1.37

All (469) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	984	A	C2-N3-C4	-12.81	104.20	110.60
22	BA	974	G	C4-C5-N7	12.41	115.76	110.80
22	BA	1142	A	C2-N3-C4	-11.77	104.72	110.60
22	BA	1936	A	C2-N3-C4	-11.57	104.81	110.60
22	BA	974	G	C5-C6-O6	-11.27	121.84	128.60
22	BA	984	A	N3-C4-N9	-10.86	118.71	127.40
25	BD	151	THR	C-N-CD	-10.79	96.87	120.60
22	BA	974	G	C5-N7-C8	-10.53	99.04	104.30
22	BA	528	A	C2-N3-C4	-10.43	105.39	110.60
22	BA	1997	C	C6-N1-C2	10.29	124.42	120.30
22	BA	752	A	C5-N7-C8	-9.95	98.92	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2286	G	N3-C4-C5	9.86	133.53	128.60
22	BA	984	A	N3-C4-C5	9.84	133.69	126.80
22	BA	1936	A	N1-C6-N6	9.82	124.49	118.60
22	BA	1783	A	O5'-P-OP2	-9.21	97.41	105.70
22	BA	752	A	N7-C8-N9	8.88	118.24	113.80
22	BA	783	A	C2-N3-C4	-8.83	106.18	110.60
22	BA	1142	A	N3-C4-C5	8.78	132.94	126.80
22	BA	784	G	O4'-C1'-N9	-8.69	101.25	108.20
22	BA	1779	U	C5-C4-O4	8.68	131.11	125.90
22	BA	528	A	N1-C6-N6	8.60	123.76	118.60
22	BA	586	A	O5'-P-OP1	-8.52	98.03	105.70
22	BA	561	G	N3-C4-C5	8.48	132.84	128.60
22	BA	2263	C	C6-N1-C2	8.34	123.64	120.30
22	BA	1985	C	C6-N1-C2	8.26	123.60	120.30
16	AP	51	ARG	NE-CZ-NH1	8.25	124.42	120.30
22	BA	974	G	N1-C6-O6	8.20	124.82	119.90
22	BA	2030	A	C5-C6-N1	-8.20	113.60	117.70
22	BA	1936	A	N3-C4-C5	8.16	132.51	126.80
22	BA	824	U	O5'-P-OP2	-8.13	98.38	105.70
22	BA	783	A	C5-N7-C8	-8.12	99.84	103.90
22	BA	532	A	O5'-P-OP1	-8.11	98.40	105.70
37	BP	103	ARG	NE-CZ-NH1	8.00	124.30	120.30
22	BA	528	A	C5-C6-N1	-7.97	113.71	117.70
22	BA	691	C	C6-N1-C2	7.96	123.48	120.30
22	BA	555	G	O5'-P-OP1	-7.86	98.62	105.70
22	BA	850	U	O5'-P-OP1	-7.85	98.64	105.70
22	BA	2250	G	C5-N7-C8	-7.79	100.41	104.30
22	BA	1795	C	O5'-P-OP1	-7.74	98.74	105.70
22	BA	752	A	C4-C5-N7	7.72	114.56	110.70
22	BA	1645	G	C4-C5-N7	7.72	113.89	110.80
22	BA	2359	C	O5'-P-OP2	7.72	119.97	110.70
22	BA	1997	C	N3-C4-C5	7.71	124.98	121.90
22	BA	1142	A	N3-C4-N9	-7.68	121.25	127.40
22	BA	2606	C	N3-C4-C5	7.66	124.97	121.90
22	BA	2705	A	N1-C6-N6	7.62	123.17	118.60
22	BA	1779	U	N3-C4-O4	-7.61	114.07	119.40
22	BA	974	G	C6-C5-N7	-7.56	125.86	130.40
22	BA	2286	G	C2-N3-C4	-7.52	108.14	111.90
22	BA	2606	C	C6-N1-C2	7.50	123.30	120.30
22	BA	1658	C	C5-C4-N4	-7.50	114.95	120.20
22	BA	1658	C	C6-N1-C2	7.47	123.29	120.30
22	BA	974	G	N7-C8-N9	7.43	116.82	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	757	G	C8-N9-C4	7.40	109.36	106.40
22	BA	528	A	C5-N7-C8	-7.39	100.20	103.90
22	BA	1663	G	C8-N9-C4	7.37	109.35	106.40
35	DN	71	ARG	NE-CZ-NH2	7.37	123.98	120.30
22	BA	1266	G	O5'-P-OP1	-7.30	99.13	105.70
22	BA	1788	C	C5-C4-N4	-7.29	115.10	120.20
22	BA	2250	G	C4-C5-N7	7.27	113.71	110.80
22	BA	752	A	N1-C6-N6	7.24	122.94	118.60
22	BA	783	A	N1-C6-N6	7.21	122.93	118.60
22	BA	1142	A	C5-N7-C8	-7.21	100.29	103.90
22	BA	783	A	C4-C5-N7	7.20	114.30	110.70
22	BA	1764	C	C6-N1-C2	7.18	123.17	120.30
22	BA	837	C	N1-C2-O2	-7.17	114.60	118.90
22	BA	2585	U	O4'-C1'-N1	7.16	113.93	108.20
22	BA	1617	C	O5'-P-OP2	-7.16	99.26	105.70
22	BA	957	C	C6-N1-C2	7.13	123.15	120.30
22	BA	752	A	C6-C5-N7	-7.13	127.31	132.30
22	BA	1045	C	C6-N1-C2	7.12	123.15	120.30
22	BA	2045	C	C6-N1-C2	7.09	123.14	120.30
22	BA	794	A	N1-C6-N6	7.07	122.84	118.60
22	BA	1663	G	C2-N3-C4	-7.06	108.37	111.90
22	BA	704	G	O4'-C1'-N9	7.05	113.84	108.20
22	BA	2286	G	N3-C4-N9	-7.00	121.80	126.00
22	BA	783	A	N3-C4-C5	6.95	131.66	126.80
22	BA	784	G	P-O3'-C3'	6.93	128.01	119.70
22	BA	1645	G	N3-C2-N2	6.92	124.74	119.90
22	BA	2325	G	O5'-P-OP2	-6.91	99.48	105.70
22	BA	2715	C	N3-C2-O2	-6.91	117.07	121.90
22	BA	528	A	N3-C4-C5	6.89	131.62	126.80
22	BA	574	A	N1-C6-N6	-6.87	114.48	118.60
22	BA	1646	C	C6-N1-C2	6.83	123.03	120.30
22	BA	2009	A	O5'-P-OP2	-6.83	99.56	105.70
22	BA	2035	G	O5'-P-OP2	-6.82	99.56	105.70
22	BA	984	A	C5-C6-N1	-6.81	114.29	117.70
22	BA	1900	A	O5'-P-OP1	-6.81	99.57	105.70
22	BA	672	C	C6-N1-C2	6.80	123.02	120.30
22	BA	2326	C	C6-N1-C2	-6.79	117.59	120.30
22	BA	1157	G	O5'-P-OP2	-6.76	99.62	105.70
22	BA	2639	A	C5-C6-N6	-6.76	118.29	123.70
22	BA	2013	A	O5'-P-OP2	-6.75	99.63	105.70
22	BA	2817	U	C6-N1-C2	6.71	125.03	121.00
22	BA	1649	G	C8-N9-C4	-6.70	103.72	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2874	C	N3-C4-C5	6.69	124.58	121.90
22	BA	1779	U	C5-C6-N1	-6.68	119.36	122.70
22	BA	2814	A	N1-C6-N6	6.67	122.60	118.60
23	BB	79	G	C5-C6-O6	-6.65	124.61	128.60
22	BA	1790	C	N3-C4-C5	6.62	124.55	121.90
22	BA	1478	G	N3-C2-N2	-6.62	115.27	119.90
22	BA	664	G	O5'-P-OP2	-6.58	99.78	105.70
22	BA	2518	A	O4'-C1'-N9	-6.58	102.94	108.20
22	BA	2580	U	OP2-P-O3'	6.56	119.64	105.20
22	BA	395	U	O4'-C1'-N1	6.56	113.45	108.20
22	BA	835	C	C6-N1-C2	6.56	122.92	120.30
22	BA	2033	A	N1-C6-N6	-6.55	114.67	118.60
22	BA	2612	C	N3-C4-C5	6.54	124.52	121.90
22	BA	1606	C	P-O3'-C3'	6.53	127.54	119.70
22	BA	1452	G	C5-N7-C8	-6.53	101.04	104.30
22	BA	2463	C	O5'-P-OP1	-6.51	99.84	105.70
22	BA	1478	G	N1-C6-O6	6.50	123.80	119.90
22	BA	2820	A	N1-C6-N6	6.50	122.50	118.60
22	BA	2607	G	C5-C6-O6	-6.49	124.71	128.60
22	DA	2427	C	C6-N1-C2	-6.49	117.70	120.30
22	BA	1640	A	N1-C6-N6	-6.48	114.71	118.60
22	BA	2716	C	O5'-P-OP2	-6.47	99.87	105.70
1	AA	1530	G	N3-C4-C5	6.46	131.83	128.60
22	BA	1663	G	N3-C4-C5	6.42	131.81	128.60
22	BA	1340	U	C5-C4-O4	6.41	129.75	125.90
22	BA	1134	A	O5'-P-OP1	-6.40	99.94	105.70
22	BA	2715	C	N1-C2-O2	6.39	122.73	118.90
22	BA	1549	A	N1-C6-N6	6.38	122.43	118.60
22	BA	938	G	C4-N9-C1'	-6.38	118.21	126.50
22	BA	2030	A	C5-C6-N6	6.38	128.80	123.70
22	BA	2250	G	N3-C4-C5	6.37	131.79	128.60
22	BA	1645	G	C6-C5-N7	-6.36	126.58	130.40
22	BA	748	G	O4'-C1'-N9	6.35	113.28	108.20
22	BA	2645	G	O4'-C1'-N9	6.35	113.28	108.20
22	BA	1138	G	C8-N9-C4	-6.35	103.86	106.40
11	AK	128	ARG	NE-CZ-NH1	6.34	123.47	120.30
22	BA	2825	G	N3-C4-C5	-6.34	125.43	128.60
22	BA	2499	C	N1-C2-O2	-6.34	115.10	118.90
22	DA	691	C	C6-N1-C2	-6.33	117.77	120.30
22	BA	2250	G	C2-N3-C4	-6.32	108.74	111.90
22	BA	967	U	N3-C4-O4	-6.30	114.99	119.40
22	BA	1762	A	N1-C6-N6	6.30	122.38	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	529	A	C8-N9-C4	6.29	108.32	105.80
22	BA	1779	U	N3-C2-O2	-6.29	117.80	122.20
22	BA	560	C	C6-N1-C2	6.24	122.80	120.30
23	BB	99	A	C2-N3-C4	-6.24	107.48	110.60
22	BA	1652	A	C8-N9-C4	-6.23	103.31	105.80
22	BA	2076	U	C5-C4-O4	6.23	129.64	125.90
22	BA	1147	A	O5'-P-OP2	-6.22	100.10	105.70
1	AA	578	C	O5'-P-OP1	-6.22	100.11	105.70
1	AA	742	G	C8-N9-C4	6.20	108.88	106.40
22	BA	1550	C	N1-C2-O2	-6.19	115.18	118.90
22	BA	1620	G	C2-N3-C4	-6.16	108.82	111.90
22	BA	2010	G	C4-C5-N7	-6.16	108.33	110.80
22	BA	528	A	C4-C5-N7	6.15	113.78	110.70
1	AA	1514	G	C5-C6-O6	-6.14	124.91	128.60
22	BA	1296	G	N3-C2-N2	6.14	124.20	119.90
22	BA	2799	A	N1-C6-N6	6.12	122.27	118.60
22	BA	2874	C	C5-C4-N4	-6.12	115.92	120.20
22	BA	752	A	C8-N9-C4	-6.12	103.35	105.80
22	BA	675	A	C8-N9-C4	6.11	108.24	105.80
22	BA	2011	U	N3-C2-O2	6.11	126.47	122.20
22	BA	1937	A	O4'-C1'-N9	6.11	113.08	108.20
22	BA	2639	A	N1-C6-N6	6.11	122.26	118.60
22	BA	967	U	C5-C4-O4	6.09	129.56	125.90
22	BA	2825	G	C4-N9-C1'	6.09	134.41	126.50
22	BA	1223	G	N1-C6-O6	-6.08	116.25	119.90
22	BA	691	C	N3-C4-C5	6.07	124.33	121.90
22	BA	2490	G	N3-C4-N9	6.07	129.64	126.00
22	BA	1936	A	N3-C4-N9	-6.05	122.56	127.40
1	AA	365	U	C2-N1-C1'	-6.04	110.45	117.70
22	BA	2283	C	N1-C2-O2	-6.04	115.28	118.90
22	BA	2837	A	O5'-P-OP1	-6.04	100.26	105.70
22	DA	1313	U	C2-N1-C1'	6.04	124.95	117.70
22	BA	243	U	C5-C4-O4	-6.03	122.28	125.90
22	BA	2505	G	C8-N9-C4	-6.03	103.99	106.40
22	BA	1645	G	N1-C2-N2	-6.02	110.79	116.20
22	BA	752	A	O4'-C1'-N9	6.01	113.01	108.20
22	BA	1812	U	O5'-P-OP2	-6.01	100.29	105.70
22	BA	2705	A	C5-C6-N6	-5.99	118.91	123.70
22	BA	2355	G	N3-C2-N2	-5.97	115.72	119.90
22	BA	2536	G	C8-N9-C4	5.97	108.79	106.40
22	BA	1936	A	C5-N7-C8	-5.96	100.92	103.90
22	BA	2811	G	O5'-P-OP2	-5.95	100.35	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1997	C	C2-N1-C1'	-5.94	112.26	118.80
22	BA	1229	C	N1-C2-O2	-5.94	115.33	118.90
22	BA	1645	G	N9-C4-C5	-5.94	103.02	105.40
22	BA	1134	A	OP1-P-OP2	5.93	128.50	119.60
22	BA	2827	C	C5-C4-N4	-5.92	116.05	120.20
22	BA	2283	C	C6-N1-C2	5.91	122.67	120.30
22	BA	512	G	O4'-C1'-N9	5.91	112.93	108.20
22	BA	561	G	C5-C6-O6	-5.90	125.06	128.60
22	BA	758	C	C2-N3-C4	-5.89	116.95	119.90
22	BA	554	U	O5'-P-OP1	5.89	117.77	110.70
22	BA	535	G	N3-C2-N2	5.89	124.02	119.90
22	BA	2083	G	N3-C4-C5	5.87	131.54	128.60
22	BA	2480	C	N1-C2-O2	-5.86	115.38	118.90
1	AA	819	A	O5'-P-OP1	-5.86	100.43	105.70
22	BA	2490	G	O5'-P-OP2	-5.85	100.43	105.70
22	BA	1288	G	O4'-C1'-N9	5.85	112.88	108.20
23	BB	75	G	O5'-P-OP2	5.85	117.72	110.70
22	BA	1706	C	C6-N1-C2	5.84	122.64	120.30
22	BA	489	G	C5-C6-O6	-5.84	125.10	128.60
1	AA	4	U	C2-N1-C1'	5.84	124.71	117.70
22	BA	2385	C	C6-N1-C2	5.83	122.63	120.30
22	BA	711	G	C4-N9-C1'	-5.82	118.93	126.50
22	BA	2715	C	O5'-P-OP2	-5.82	100.46	105.70
1	CA	1397	C	C6-N1-C2	-5.81	117.97	120.30
23	BB	83	G	O5'-P-OP2	-5.80	100.48	105.70
22	BA	454	A	O5'-P-OP2	-5.80	100.48	105.70
22	BA	1444	G	O5'-P-OP2	-5.80	100.48	105.70
22	BA	2534	A	N1-C6-N6	5.80	122.08	118.60
22	BA	2083	G	N1-C6-O6	5.80	123.38	119.90
22	BA	2419	U	C2-N1-C1'	-5.79	110.75	117.70
22	BA	1763	G	N3-C4-C5	5.79	131.50	128.60
22	BA	561	G	N3-C4-N9	-5.79	122.53	126.00
22	BA	956	G	N1-C6-O6	5.78	123.37	119.90
22	BA	535	G	OP2-P-O3'	5.77	117.89	105.20
22	BA	1260	A	O5'-P-OP2	-5.76	100.51	105.70
23	BB	26	C	C6-N1-C2	5.75	122.60	120.30
22	BA	2538	C	C6-N1-C2	5.74	122.59	120.30
22	BA	2526	G	N3-C4-N9	-5.73	122.56	126.00
22	BA	711	G	C8-N9-C1'	5.73	134.45	127.00
22	BA	2827	C	N3-C4-N4	5.72	122.01	118.00
22	BA	2283	C	N3-C2-O2	5.72	125.90	121.90
22	BA	824	U	O5'-P-OP1	5.71	117.55	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	984	A	C8-N9-C1'	5.71	137.98	127.70
1	AA	971	G	O4'-C1'-N9	5.70	112.76	108.20
22	BA	528	A	N3-C4-N9	-5.70	122.84	127.40
22	BA	853	C	N1-C2-O2	-5.70	115.48	118.90
22	BA	446	G	N9-C4-C5	-5.69	103.12	105.40
22	BA	1295	C	N1-C2-O2	-5.69	115.48	118.90
22	BA	1616	A	N1-C6-N6	5.69	122.01	118.60
22	BA	2387	U	N3-C2-O2	-5.69	118.22	122.20
22	BA	2840	C	O5'-P-OP2	-5.68	100.59	105.70
22	BA	1989	G	C5-C6-O6	-5.68	125.19	128.60
22	BA	2276	G	O5'-P-OP1	-5.68	100.59	105.70
22	BA	1452	G	C4-C5-N7	5.67	113.07	110.80
22	BA	1997	C	C5-C6-N1	-5.67	118.16	121.00
22	BA	1790	C	C2-N3-C4	-5.67	117.06	119.90
22	BA	1658	C	N3-C4-N4	5.67	121.97	118.00
1	AA	330	C	N3-C4-C5	5.65	124.16	121.90
22	BA	2608	G	N3-C2-N2	-5.64	115.95	119.90
1	AA	188	C	C2-N1-C1'	5.64	125.00	118.80
22	BA	837	C	C2-N1-C1'	-5.64	112.60	118.80
22	BA	528	A	C6-C5-N7	-5.63	128.36	132.30
22	BA	1645	G	N3-C4-N9	5.62	129.37	126.00
22	BA	2295	C	C6-N1-C2	-5.61	118.05	120.30
22	BA	820	A	OP2-P-O3'	5.61	117.53	105.20
22	BA	192	C	N1-C2-O2	-5.60	115.54	118.90
22	BA	2492	U	O5'-P-OP2	-5.60	100.66	105.70
23	BB	15	A	N1-C6-N6	5.59	121.96	118.60
22	BA	698	C	C6-N1-C2	5.59	122.53	120.30
22	BA	2607	G	C6-C5-N7	-5.58	127.05	130.40
22	BA	735	A	N1-C6-N6	5.58	121.95	118.60
22	BA	1692	U	N3-C2-O2	5.58	126.10	122.20
1	CA	4	U	C2-N1-C1'	5.57	124.39	117.70
22	BA	533	G	N9-C4-C5	-5.57	103.17	105.40
22	BA	2444	G	OP2-P-O3'	5.57	117.45	105.20
22	BA	1223	G	C5-C6-O6	5.57	131.94	128.60
22	BA	2618	G	O5'-P-OP1	-5.57	100.69	105.70
22	BA	1653	G	N9-C4-C5	5.56	107.62	105.40
22	BA	1677	A	C6-C5-N7	-5.56	128.41	132.30
22	BA	2494	G	C5-C6-O6	5.56	131.94	128.60
22	BA	2036	C	OP2-P-O3'	5.56	117.43	105.20
22	BA	1472	C	C6-N1-C2	5.55	122.52	120.30
22	BA	2579	C	OP1-P-O3'	5.55	117.42	105.20
22	BA	1681	G	C5-C6-O6	-5.55	125.27	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1799	G	C8-N9-C4	5.55	108.62	106.40
22	BA	2418	A	O5'-P-OP2	-5.55	100.71	105.70
22	BA	1638	C	C6-N1-C2	5.55	122.52	120.30
22	BA	2076	U	N3-C4-O4	-5.55	115.52	119.40
22	BA	2089	C	C2-N3-C4	-5.54	117.13	119.90
22	BA	2462	C	O5'-P-OP1	-5.54	100.71	105.70
22	BA	1817	G	C2-N3-C4	-5.54	109.13	111.90
22	BA	2887	A	N1-C6-N6	5.54	121.92	118.60
22	BA	2490	G	N3-C4-C5	-5.52	125.84	128.60
22	BA	2684	U	OP2-P-O3'	5.51	117.33	105.20
22	BA	40	U	O5'-P-OP1	-5.51	100.74	105.70
22	BA	765	C	O5'-P-OP2	-5.50	100.75	105.70
1	AA	365	U	C5-C4-O4	5.50	129.20	125.90
23	BB	71	C	N3-C4-C5	5.50	124.10	121.90
22	BA	805	G	N3-C4-C5	5.49	131.35	128.60
22	BA	1616	A	C4-C5-N7	5.49	113.44	110.70
22	BA	177	G	O4'-C1'-N9	5.48	112.58	108.20
22	BA	2439	A	N1-C6-N6	5.48	121.89	118.60
22	BA	1138	G	N7-C8-N9	5.47	115.84	113.10
22	BA	1938	A	C8-N9-C4	5.47	107.99	105.80
22	BA	2615	U	C5-C4-O4	-5.46	122.62	125.90
1	AA	400	C	C6-N1-C2	5.46	122.48	120.30
22	BA	1761	C	O5'-P-OP1	-5.46	100.79	105.70
22	BA	2815	C	N1-C2-O2	-5.46	115.63	118.90
22	BA	711	G	N3-C4-N9	-5.45	122.73	126.00
22	BA	2351	G	O5'-P-OP2	-5.45	100.80	105.70
22	BA	456	C	O5'-P-OP2	-5.44	100.81	105.70
22	BA	1804	C	N1-C2-O2	-5.44	115.64	118.90
22	BA	2332	C	N1-C2-O2	-5.44	115.64	118.90
22	BA	2839	G	OP2-P-O3'	5.44	117.16	105.20
22	BA	1799	G	N3-C4-C5	5.43	131.32	128.60
22	BA	2003	A	O5'-P-OP2	5.43	117.22	110.70
22	BA	1936	A	N1-C2-N3	5.43	132.01	129.30
22	BA	1340	U	N3-C4-O4	-5.43	115.60	119.40
22	BA	2072	C	C5-C4-N4	-5.43	116.40	120.20
22	BA	995	C	O4'-C1'-N1	-5.43	103.86	108.20
22	BA	2275	C	C6-N1-C2	-5.43	118.13	120.30
22	DA	793	A	C8-N9-C4	5.43	107.97	105.80
23	BB	55	U	N1-C2-O2	-5.42	119.00	122.80
22	BA	938	G	C8-N9-C1'	5.42	134.04	127.00
22	BA	753	A	OP1-P-OP2	5.41	127.72	119.60
1	AA	330	C	C6-N1-C2	5.41	122.46	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1048	A	N1-C6-N6	5.41	121.84	118.60
22	BA	2276	G	C5-C6-O6	5.41	131.84	128.60
22	DA	1246	A	N1-C6-N6	5.41	121.84	118.60
22	BA	532	A	OP1-P-OP2	5.40	127.71	119.60
22	BA	2045	C	N3-C4-C5	5.40	124.06	121.90
22	BA	2503	A	C2-N3-C4	5.39	113.30	110.60
22	BA	560	C	N3-C4-C5	5.39	124.06	121.90
22	BA	1779	U	O4'-C1'-N1	5.38	112.51	108.20
22	BA	2887	A	C5-C6-N6	-5.38	119.39	123.70
22	BA	502	A	O5'-P-OP1	-5.38	100.86	105.70
22	BA	1326	U	N1-C2-O2	-5.37	119.04	122.80
22	BA	1783	A	N1-C6-N6	5.37	121.82	118.60
22	BA	243	U	N3-C2-O2	5.37	125.96	122.20
1	AA	1504	G	O4'-C1'-N9	5.37	112.49	108.20
22	BA	1786	A	C2-N3-C4	5.36	113.28	110.60
22	BA	998	C	C6-N1-C2	-5.36	118.16	120.30
37	BP	53	ARG	NE-CZ-NH1	5.36	122.98	120.30
22	BA	1651	G	OP1-P-O3'	5.35	116.98	105.20
22	BA	2420	C	N1-C2-O2	-5.35	115.69	118.90
22	BA	836	G	C5-C6-O6	-5.35	125.39	128.60
22	BA	2499	C	N3-C2-O2	5.35	125.64	121.90
22	BA	530	G	O4'-C1'-N9	-5.34	103.92	108.20
22	BA	974	G	O4'-C1'-N9	5.34	112.47	108.20
22	BA	2211	A	P-O3'-C3'	5.34	126.11	119.70
1	AA	1414	U	C2-N1-C1'	-5.34	111.30	117.70
22	BA	1677	A	N1-C6-N6	5.33	121.80	118.60
22	BA	2002	G	C5-C6-O6	-5.33	125.41	128.60
22	BA	2813	A	N3-C4-C5	5.33	130.53	126.80
22	BA	1262	A	C8-N9-C4	-5.32	103.67	105.80
22	BA	822	G	C8-N9-C4	5.32	108.53	106.40
22	BA	2869	G	C5-C6-O6	-5.32	125.41	128.60
22	BA	984	A	C4-N9-C1'	-5.31	116.74	126.30
22	BA	2286	G	C4-N9-C1'	-5.31	119.60	126.50
22	BA	2607	G	N3-C4-N9	5.31	129.19	126.00
22	BA	2572	A	O5'-P-OP2	-5.31	100.92	105.70
22	BA	1640	A	N9-C4-C5	5.30	107.92	105.80
22	DA	2425	A	P-O3'-C3'	5.30	126.06	119.70
22	BA	2565	A	N9-C4-C5	-5.30	103.68	105.80
22	BA	491	G	N3-C4-N9	-5.30	122.82	126.00
22	BA	2825	G	C8-N9-C4	-5.30	104.28	106.40
22	BA	1763	G	C4-N9-C1'	-5.30	119.61	126.50
22	BA	510	C	OP1-P-O3'	5.29	116.83	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	773	U	C5-C4-O4	5.28	129.07	125.90
22	BA	752	A	N9-C1'-C2'	5.27	120.85	114.00
22	BA	561	G	C4-C5-N7	5.26	112.91	110.80
22	BA	561	G	C4-N9-C1'	-5.26	119.66	126.50
22	BA	1567	G	C4-C5-N7	5.26	112.90	110.80
22	BA	1817	G	C8-N9-C4	5.26	108.50	106.40
1	CA	47	C	C6-N1-C2	5.26	122.40	120.30
22	BA	984	A	O4'-C1'-N9	5.25	112.40	108.20
22	BA	2585	U	C5'-C4'-O4'	5.25	115.40	109.10
22	BA	942	G	N1-C6-O6	5.25	123.05	119.90
22	DA	757	G	N3-C4-C5	5.25	131.22	128.60
22	BA	1758	U	N3-C4-O4	-5.25	115.73	119.40
22	BA	2646	C	C6-N1-C2	-5.25	118.20	120.30
22	BA	2869	G	N1-C6-O6	5.24	123.04	119.90
22	DA	2501	C	O4'-C1'-N1	5.23	112.39	108.20
37	BP	103	ARG	NE-CZ-NH2	-5.23	117.69	120.30
22	BA	787	C	C6-N1-C2	5.22	122.39	120.30
22	BA	1961	C	C6-N1-C2	5.22	122.39	120.30
22	BA	806	C	C6-N1-C2	-5.22	118.21	120.30
22	BA	1997	C	C2-N3-C4	-5.22	117.29	119.90
22	BA	794	A	C5-C6-N6	-5.21	119.53	123.70
22	BA	2076	U	N1-C2-N3	5.21	118.03	114.90
22	BA	2813	A	C8-N9-C4	5.21	107.89	105.80
22	BA	1678	A	N1-C6-N6	5.21	121.73	118.60
22	BA	2275	C	O5'-P-OP2	-5.21	101.01	105.70
22	BA	752	A	C4-N9-C1'	5.21	135.68	126.30
22	DA	2447	G	O4'-C1'-N9	5.21	112.37	108.20
22	BA	867	C	N1-C2-O2	-5.21	115.78	118.90
22	BA	919	U	C5-C4-O4	-5.21	122.78	125.90
22	BA	1007	C	O5'-P-OP1	-5.21	101.02	105.70
22	BA	2505	G	N9-C4-C5	5.21	107.48	105.40
22	BA	1956	U	N1-C2-O2	-5.20	119.16	122.80
22	BA	481	G	O4'-C1'-N9	5.20	112.36	108.20
22	BA	1653	G	C8-N9-C4	-5.20	104.32	106.40
22	BA	961	C	O5'-P-OP2	-5.20	101.03	105.70
22	BA	1681	G	N3-C2-N2	-5.20	116.26	119.90
22	BA	1377	G	N3-C4-C5	-5.19	126.00	128.60
22	BA	1389	G	C8-N9-C4	5.19	108.48	106.40
22	BA	2636	C	C5-C4-N4	-5.19	116.56	120.20
22	BA	1262	A	OP1-P-O3'	5.19	116.62	105.20
22	BA	2813	A	C2-N3-C4	-5.19	108.00	110.60
22	BA	1121	C	C2-N3-C4	-5.18	117.31	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	537	G	N1-C6-O6	5.18	123.01	119.90
22	BA	578	G	N1-C6-O6	5.18	123.01	119.90
22	BA	740	C	OP1-P-OP2	-5.17	111.85	119.60
22	BA	914	G	N1-C6-O6	5.17	123.00	119.90
22	BA	708	G	N1-C6-O6	5.16	123.00	119.90
22	BA	2858	C	N3-C4-C5	5.16	123.97	121.90
22	BA	41	C	C6-N1-C2	5.16	122.36	120.30
29	BH	121	VAL	C-N-CA	5.16	134.59	121.70
22	BA	1658	C	N1-C2-O2	-5.16	115.81	118.90
1	AA	1502	A	O5'-P-OP2	-5.16	101.06	105.70
22	BA	1936	A	C4-C5-N7	5.16	113.28	110.70
22	BA	1784	A	C2-N3-C4	-5.15	108.03	110.60
1	AA	330	C	N3-C4-N4	-5.15	114.40	118.00
22	BA	1985	C	C5-C6-N1	-5.15	118.43	121.00
1	AA	1514	G	N1-C6-O6	5.15	122.99	119.90
22	BA	1223	G	N3-C4-N9	-5.15	122.91	126.00
22	BA	2757	A	N1-C6-N6	5.14	121.69	118.60
22	BA	1296	G	N1-C2-N2	-5.14	111.57	116.20
22	BA	708	G	C5-C6-O6	-5.14	125.52	128.60
22	BA	2063	C	N1-C2-O2	5.14	121.98	118.90
23	BB	85	G	C8-N9-C4	5.14	108.45	106.40
22	BA	492	A	C8-N9-C4	5.13	107.85	105.80
22	BA	2036	C	N3-C4-C5	5.13	123.95	121.90
1	AA	365	U	C5-C6-N1	-5.12	120.14	122.70
22	BA	2499	C	C5-C4-N4	-5.12	116.61	120.20
22	DA	1821	A	O5'-P-OP2	-5.12	101.09	105.70
22	BA	1215	G	C5-C6-O6	5.12	131.67	128.60
22	BA	2020	A	N1-C6-N6	-5.12	115.53	118.60
22	BA	2283	C	C2-N1-C1'	-5.11	113.18	118.80
22	BA	2874	C	C2-N3-C4	-5.11	117.34	119.90
22	BA	2814	A	C5-C6-N6	-5.11	119.61	123.70
22	BA	1377	G	C8-N9-C4	-5.11	104.36	106.40
22	BA	528	A	O4'-C1'-N9	-5.11	104.11	108.20
22	BA	1401	G	N1-C6-O6	5.11	122.96	119.90
22	BA	2276	G	N1-C6-O6	-5.10	116.84	119.90
22	BA	569	U	N1-C2-O2	-5.10	119.23	122.80
22	BA	1987	A	N1-C6-N6	-5.10	115.54	118.60
22	BA	1949	G	N3-C4-N9	-5.10	122.94	126.00
22	BA	1291	C	O5'-P-OP2	-5.09	101.11	105.70
22	BA	1311	G	C4-C5-N7	5.09	112.84	110.80
22	BA	805	G	C8-N9-C4	5.09	108.44	106.40
22	BA	2898	U	O5'-P-OP2	-5.09	101.12	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1357	C	N1-C2-O2	-5.09	115.85	118.90
22	BA	2272	U	C5-C4-O4	-5.09	122.85	125.90
1	AA	1279	G	N7-C8-N9	5.08	115.64	113.10
22	BA	1669	A	C5-C6-N1	5.08	120.24	117.70
22	BA	2721	A	C5-C6-N1	5.08	120.24	117.70
22	BA	2633	G	C2-N3-C4	-5.07	109.36	111.90
23	BB	79	G	O5'-P-OP1	5.07	116.79	110.70
1	AA	890	G	O4'-C1'-N9	5.07	112.26	108.20
22	BA	811	U	N3-C4-O4	-5.07	115.85	119.40
22	BA	1616	A	C5-N7-C8	-5.07	101.36	103.90
22	BA	2278	A	C8-N9-C4	5.07	107.83	105.80
22	BA	1787	A	C2-N3-C4	-5.05	108.07	110.60
22	BA	2089	C	N3-C4-C5	5.05	123.92	121.90
22	DA	2245	U	C6-N1-C1'	5.04	128.26	121.20
22	BA	2606	C	C2-N3-C4	-5.04	117.38	119.90
22	BA	1783	A	O5'-P-OP1	5.04	116.75	110.70
22	BA	2066	C	OP1-P-O3'	5.04	116.28	105.20
22	BA	2447	G	O4'-C1'-N9	5.04	112.23	108.20
22	BA	1338	G	C8-N9-C4	-5.04	104.39	106.40
22	BA	1669	A	C2-N3-C4	5.04	113.12	110.60
22	BA	1452	G	N3-C4-C5	5.03	131.12	128.60
22	BA	1324	G	C5-C6-O6	-5.03	125.58	128.60
22	BA	2440	C	N3-C4-C5	5.03	123.91	121.90
22	BA	2607	G	N1-C6-O6	5.03	122.92	119.90
22	BA	767	U	O5'-P-OP2	-5.02	101.18	105.70
22	BA	2774	C	C5-C4-N4	-5.02	116.69	120.20
1	AA	1201	A	P-O3'-C3'	5.02	125.72	119.70
22	BA	686	U	C2-N1-C1'	-5.02	111.68	117.70
22	BA	786	C	C6-N1-C2	5.02	122.31	120.30
22	BA	2293	G	O5'-P-OP2	-5.02	101.18	105.70
22	BA	919	U	N3-C4-O4	5.02	122.91	119.40
22	BA	1786	A	O5'-P-OP2	-5.01	101.19	105.70
22	BA	2592	G	C8-N9-C4	-5.01	104.39	106.40
23	BB	98	G	O5'-P-OP2	-5.01	101.19	105.70
22	BA	1282	U	N3-C2-O2	5.01	125.71	122.20
22	BA	1677	A	C4-C5-N7	5.01	113.20	110.70
22	BA	1774	C	N1-C2-O2	-5.00	115.90	118.90
1	CA	536	C	C6-N1-C2	5.00	122.30	120.30

There are no chirality outliers.

All (8) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
5	AE	152	MET	Peptide
11	AK	126	LYS	Peptide
25	BD	151	THR	Peptide
4	CD	152	GLN	Peptide
5	CE	102	GLY	Peptide
6	CF	54	LEU	Peptide
12	CL	24	LEU	Peptide
25	DD	151	THR	Peptide

## 5.2 Too-close contacts [i](#)

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	1101	3
1	CA	33015	0	16617	1197	0
2	AB	1705	0	1732	163	0
2	CB	1705	0	1732	125	0
3	AC	1625	0	1696	81	0
3	CC	1625	0	1696	76	0
4	AD	1643	0	1707	138	0
4	CD	1643	0	1707	144	0
5	AE	1106	0	1148	98	0
5	CE	1106	0	1148	111	0
6	AF	818	0	808	52	0
6	CF	818	0	808	62	0
7	AG	1182	0	1238	56	0
7	CG	1182	0	1238	70	0
8	AH	979	0	1031	74	0
8	CH	979	0	1031	49	0
9	AI	1022	0	1070	96	0
9	CI	1022	0	1070	76	0
10	AJ	787	0	828	97	0
10	CJ	787	0	828	49	0
11	AK	877	0	887	70	0
11	CK	877	0	887	62	0
12	AL	955	0	1016	57	0
12	CL	955	0	1016	70	0
13	AM	884	0	941	63	0
13	CM	884	0	941	56	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
14	AN	774	0	824	72	0
14	CN	774	0	824	53	0
15	AO	710	0	728	38	0
15	CO	710	0	728	31	0
16	AP	649	0	666	61	0
16	CP	649	0	666	33	0
17	AQ	649	0	691	71	0
17	CQ	649	0	691	50	0
18	AR	456	0	478	19	0
18	CR	456	0	478	23	0
19	AS	638	0	665	50	0
19	CS	638	0	665	37	0
20	AT	665	0	714	60	0
20	CT	665	0	714	49	0
21	AU	426	0	449	51	0
21	CU	426	0	449	50	0
22	BA	62195	0	31280	1688	0
22	DA	62195	0	31280	2474	0
23	BB	2549	0	1291	64	0
23	DB	2529	0	1281	68	0
24	BC	2083	0	2154	110	0
24	DC	2083	0	2154	136	0
25	BD	1565	0	1616	73	0
25	DD	1565	0	1616	95	0
26	BE	1552	0	1619	73	0
26	DE	1552	0	1619	105	0
27	BF	1411	0	1444	106	0
27	DF	1411	0	1444	58	0
28	BG	1323	0	1371	43	0
28	DG	1323	0	1371	55	0
29	BH	1110	0	1147	145	0
29	DH	1110	0	1148	89	3
30	BI	1032	0	1085	75	0
30	DI	1032	0	1085	85	0
31	BJ	1129	0	1162	44	0
31	DJ	1129	0	1162	54	0
32	BK	939	0	1012	43	0
32	DK	939	0	1012	45	0
33	BL	1045	0	1117	65	0
33	DL	1045	0	1117	79	0
34	BM	1074	0	1157	38	0
34	DM	1074	0	1157	39	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
35	BN	961	0	1000	55	0
35	DN	961	0	1000	77	0
36	BO	892	0	923	51	0
36	DO	892	0	923	44	0
37	BP	917	0	962	42	0
37	DP	917	0	962	60	0
38	BQ	947	0	1019	50	0
38	DQ	947	0	1019	50	0
39	BR	816	0	839	68	0
39	DR	816	0	839	42	0
40	BS	857	0	922	43	0
40	DS	857	0	922	42	0
41	BT	739	0	807	52	0
41	DT	739	0	807	60	0
42	BU	780	0	831	40	0
42	DU	780	0	831	69	0
43	BV	753	0	780	33	0
43	DV	753	0	780	24	0
44	BW	580	0	594	15	0
44	DW	569	0	581	24	0
45	BX	625	0	652	19	0
45	DX	625	0	652	44	0
46	BY	509	0	543	34	0
46	DY	509	0	543	29	0
47	BZ	449	0	488	13	0
47	DZ	449	0	488	22	0
48	B0	444	0	458	24	0
48	D0	444	0	458	26	0
49	B1	410	0	440	30	0
49	D1	410	0	440	21	0
50	B2	377	0	418	13	0
50	D2	377	0	418	33	0
51	B3	504	0	572	25	0
51	D3	504	0	572	24	0
52	B4	302	0	340	12	0
52	D4	302	0	340	15	0
53	B5	1142	0	865	66	0
54	AA	70	0	0	0	0
54	AM	1	0	0	0	0
54	AN	1	0	0	0	0
54	BA	194	0	0	0	0
54	BB	4	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
54	BQ	1	0	0	0	0
54	CA	56	0	0	0	0
54	D2	1	0	0	0	0
54	DA	164	0	0	0	0
54	DB	3	0	0	0	0
54	DL	1	0	0	0	0
54	DQ	1	0	0	0	0
55	BA	48	0	50	11	0
55	DA	48	0	50	27	0
56	B4	1	0	0	0	0
56	D4	1	0	0	0	0
57	AA	195	0	0	19	0
57	AE	1	0	0	0	0
57	AL	1	0	0	0	0
57	AN	3	0	0	0	0
57	AT	2	0	0	0	0
57	AU	1	0	0	0	0
57	B2	1	0	0	0	0
57	B3	3	0	0	0	0
57	B4	2	0	0	0	0
57	BA	615	0	0	86	0
57	BB	13	0	0	1	0
57	BC	8	0	0	4	0
57	BD	3	0	0	2	0
57	BE	2	0	0	0	0
57	BF	1	0	0	1	0
57	BL	7	0	0	0	0
57	BN	5	0	0	0	0
57	BQ	1	0	0	0	0
57	BS	1	0	0	0	0
57	BT	1	0	0	0	0
57	BU	1	0	0	0	0
57	BV	1	0	0	0	0
57	CA	193	0	0	17	0
57	CL	1	0	0	0	0
57	CN	1	0	0	0	0
57	CT	2	0	0	0	0
57	CU	1	0	0	1	0
57	D2	1	0	0	1	0
57	D3	1	0	0	0	0
57	D4	1	0	0	1	0
57	DA	608	0	0	96	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	DB	13	0	0	4	0
57	DC	10	0	0	1	0
57	DD	4	0	0	2	0
57	DE	4	0	0	0	0
57	DJ	1	0	0	0	0
57	DL	4	0	0	1	0
57	DN	2	0	0	0	0
57	DS	2	0	0	0	0
57	DT	3	0	0	1	0
57	DU	1	0	0	0	0
57	DV	1	0	0	0	0
All	All	288276	0	192887	11371	3

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 (11371) 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:117:LEU:O	29:BH:121:VAL:HG23	1.34	1.22
22:DA:2711:A:OP2	57:DA:3546:HOH:O	1.61	1.18
1:AA:111:G:O6	1:AA:330:C:N4	1.78	1.16
22:BA:627:A:OP1	33:BL:78:ARG:NH1	1.79	1.16
22:BA:730:A:OP2	57:BA:3695:HOH:O	1.61	1.16
25:DD:151:THR:O	25:DD:153:GLY:N	1.79	1.14
29:BH:117:LEU:O	29:BH:121:VAL:CG2	1.95	1.14
22:BA:1153:C:OP2	57:BA:3361:HOH:O	1.66	1.12
22:BA:1603:A:OP1	57:BA:3414:HOH:O	1.64	1.11
22:BA:1395:A:OP1	57:BA:3414:HOH:O	1.71	1.09
22:BA:2498:C:OP2	57:BA:3686:HOH:O	1.68	1.09
29:BH:123:ARG:O	29:BH:124:THR:CG2	2.01	1.09
5:CE:101:GLU:O	5:CE:103:THR:N	1.86	1.08
22:BA:1342:A:OP2	57:BA:3714:HOH:O	1.71	1.06
22:BA:2720:U:OP1	37:BP:53:ARG:NH2	1.89	1.06
22:BA:842:U:O4	57:BA:3588:HOH:O	1.73	1.04
1:AA:533:A:OP1	57:AA:1849:HOH:O	1.76	1.04
22:BA:1602:U:O4	57:BA:3714:HOH:O	1.76	1.04
22:DA:621:A:OP2	57:DA:3292:HOH:O	1.74	1.03
55:DA:3001:DOL:H463	55:DA:3001:DOL:H483	1.06	1.03
22:BA:731:C:OP2	57:BA:3695:HOH:O	1.76	1.03
22:DA:789:A:N1	57:DA:3310:HOH:O	1.89	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1062:G:N2	22:BA:1077:A:N1	2.07	1.02
22:DA:602:A:O2'	22:DA:604:G:O2'	1.77	1.01
1:AA:800:G:O6	57:AA:1814:HOH:O	1.79	1.01
36:BO:31:THR:O	36:BO:102:ARG:NH1	1.93	1.01
22:DA:2056:G:OP2	57:DA:3485:HOH:O	1.77	1.00
55:DA:3001:DOL:HC1	55:DA:3001:DOL:H431	1.42	1.00
29:BH:117:LEU:HD21	29:BH:121:VAL:H	1.23	1.00
22:DA:842:U:O4	57:DA:3577:HOH:O	1.77	1.00
1:AA:516:U:O4	57:AA:1849:HOH:O	1.78	0.99
22:DA:2349:G:OP1	51:D3:45:ARG:NH2	1.95	0.99
23:DB:28:C:OP1	36:DO:36:TYR:OH	1.79	0.99
29:BH:123:ARG:O	29:BH:124:THR:HG23	1.61	0.99
55:DA:3001:DOL:C48	55:DA:3001:DOL:H463	1.91	0.99
22:DA:2504:U:C5	55:DA:3001:DOL:H161	1.98	0.98
55:DA:3001:DOL:C46	55:DA:3001:DOL:H483	1.92	0.98
22:BA:1509:A:O2'	22:BA:1510:G:OP2	1.81	0.98
5:CE:157:ARG:O	5:CE:159:LYS:N	1.96	0.98
2:CB:73:LYS:O	2:CB:75:ALA:N	1.95	0.98
22:BA:2428:G:OP1	57:BA:3701:HOH:O	1.80	0.97
13:AM:11:ASP:OD1	13:AM:12:HIS:N	1.96	0.97
4:CD:41:HIS:O	4:CD:43:ALA:N	1.98	0.97
29:DH:40:THR:O	29:DH:42:LYS:N	1.98	0.97
1:CA:912:C:OP1	12:CL:43:LYS:NZ	1.97	0.96
1:CA:858:G:N7	57:CA:1819:HOH:O	1.97	0.96
22:BA:2611:C:OP2	57:BA:3546:HOH:O	1.82	0.96
22:BA:2269:G:OP1	57:BA:3515:HOH:O	1.84	0.95
22:DA:450:G:O6	57:DA:3242:HOH:O	1.83	0.95
22:DA:1464:G:N7	57:DA:3633:HOH:O	1.99	0.95
2:AB:21:ARG:O	2:AB:23:TRP:N	1.99	0.95
29:BH:120:GLY:C	29:BH:122:LEU:HA	1.85	0.95
22:DA:784:G:OP1	57:DA:3314:HOH:O	1.81	0.95
22:DA:1268:A:OP1	57:DA:3378:HOH:O	1.84	0.95
22:DA:1378:A:O2'	22:DA:1380:G:N7	1.98	0.95
4:CD:29:ASP:O	4:CD:31:LYS:N	1.99	0.95
22:DA:1010:A:OP2	57:DA:3778:HOH:O	1.85	0.94
2:AB:193:PRO:O	2:AB:195:GLY:N	2.01	0.94
22:BA:1923:U:H2'	22:BA:1924:C:H5'	1.47	0.94
22:DA:514:A:N3	22:DA:581:C:O2'	2.00	0.94
22:DA:2243:U:OP1	57:DA:3737:HOH:O	1.85	0.93
22:DA:299:A:N3	22:DA:319:G:O2'	2.00	0.93
22:BA:1093:G:N3	22:BA:1098:A:N6	2.16	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:729:G:OP2	24:DC:207:LYS:NZ	2.02	0.93
22:DA:1378:A:O2'	57:DA:3751:HOH:O	1.86	0.93
48:B0:20:ASP:N	48:B0:20:ASP:OD2	2.00	0.93
22:DA:1050:A:N6	22:DA:1109:C:O2	2.01	0.93
22:BA:1909:C:N4	22:BA:1921:G:O6	2.02	0.93
29:BH:27:ARG:NH2	45:BX:60:ASP:OD2	2.02	0.92
6:AF:91:ARG:O	6:AF:92:THR:OG1	1.86	0.92
1:AA:537:G:OP1	12:AL:110:ARG:NH2	2.02	0.92
40:DS:28:LYS:O	40:DS:30:SER:N	2.02	0.92
22:BA:819:A:OP2	22:BA:1187:G:N2	2.02	0.91
1:CA:1500:A:OP2	57:CA:1884:HOH:O	1.87	0.91
1:CA:1198:G:N7	57:CA:1853:HOH:O	2.02	0.91
22:DA:370:G:OP2	57:DA:3556:HOH:O	1.88	0.91
22:BA:517:C:OP2	48:B0:10:ARG:NH2	2.03	0.91
22:BA:1998:A:OP2	25:BD:141:ARG:NH2	2.04	0.91
22:DA:528:A:OP1	57:DA:3246:HOH:O	1.89	0.91
29:DH:83:LYS:HG3	29:DH:149:GLU:CG	2.02	0.90
1:AA:880:C:OP1	12:AL:9:ARG:NH1	2.04	0.90
1:AA:1198:G:N7	57:AA:1788:HOH:O	2.03	0.90
1:AA:1232:U:OP1	9:AI:126:GLN:NE2	2.04	0.90
4:CD:174:ASP:OD1	4:CD:175:ALA:N	2.04	0.90
22:DA:1995:U:OP1	57:DA:3805:HOH:O	1.89	0.90
22:BA:2728:U:O2'	22:BA:2729:G:OP2	1.90	0.90
7:AG:55:GLY:O	7:AG:57:SER:N	2.05	0.90
22:DA:2714:G:OP2	57:DA:3546:HOH:O	1.87	0.90
3:AC:36:ASP:OD1	3:AC:59:ARG:NH1	2.04	0.90
22:BA:1924:C:H2'	22:BA:1925:C:H5''	1.55	0.89
22:BA:2445:G:OP1	26:BE:69:ARG:NH2	2.05	0.89
41:DT:21:SER:O	41:DT:23:ALA:N	2.04	0.89
22:DA:188:G:O2'	22:DA:1365:A:N6	2.06	0.89
40:BS:53:SER:O	40:BS:57:ASN:ND2	2.06	0.89
28:DG:158:LYS:O	28:DG:160:LYS:N	2.06	0.89
55:DA:3001:DOL:HC1	55:DA:3001:DOL:C43	2.00	0.89
5:AE:157:ARG:O	5:AE:159:LYS:N	2.04	0.89
22:DA:300:A:N6	57:DA:3551:HOH:O	2.06	0.89
22:DA:2615:U:OP1	57:DA:3745:HOH:O	1.89	0.89
25:BD:140:HIS:NE2	57:BD:302:HOH:O	2.06	0.88
22:DA:18:U:O4	57:DA:3205:HOH:O	1.92	0.88
1:CA:32:A:C2	1:CA:33:A:C5	2.60	0.88
1:AA:1312:G:N7	19:AS:3:ARG:N	2.21	0.88
22:BA:944:C:OP2	57:BA:3261:HOH:O	1.90	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2627:G:O2'	22:DA:2781:A:N1	2.06	0.88
22:DA:2271:G:O6	57:DA:3508:HOH:O	1.89	0.88
29:BH:123:ARG:O	29:BH:124:THR:HG22	1.74	0.88
39:DR:101:ILE:O	39:DR:103:ALA:N	2.06	0.88
29:BH:117:LEU:C	29:BH:121:VAL:HG23	1.93	0.87
23:DB:43:C:O2	27:DF:92:ARG:NH2	2.07	0.87
24:BC:70:ASN:O	24:BC:72:ASP:N	2.07	0.87
20:CT:5:LYS:O	20:CT:7:ALA:N	2.07	0.87
22:DA:1613:G:O6	57:DA:3638:HOH:O	1.90	0.87
22:DA:2588:G:OP1	57:DA:3314:HOH:O	1.92	0.87
31:DJ:80:HIS:O	31:DJ:82:GLY:N	2.07	0.87
22:DA:1300:G:O6	22:DA:1626:A:O2'	1.91	0.87
1:AA:928:G:O2'	1:AA:1533:C:OP1	1.93	0.87
29:BH:123:ARG:HD3	1:CA:358:U:OP1	1.74	0.87
17:CQ:19:LYS:O	17:CQ:71:LYS:NZ	2.08	0.87
29:DH:83:LYS:HG3	29:DH:149:GLU:HG2	1.56	0.86
22:BA:1073:A:H3'	22:BA:1074:G:C5'	2.05	0.86
22:DA:182:A:HO2'	22:DA:433:C:HO2'	1.11	0.86
22:DA:182:A:O2'	22:DA:433:C:O2'	1.91	0.86
1:AA:452:A:N6	1:AA:480:U:O2	2.08	0.86
22:BA:1001:A:OP2	57:BA:3736:HOH:O	1.93	0.86
1:AA:825:A:O2'	8:AH:13:ARG:NH1	2.07	0.86
1:AA:965:U:OP2	57:AA:1833:HOH:O	1.92	0.86
22:DA:613:A:O2'	22:DA:614:A:OP1	1.91	0.86
1:CA:484:G:H4'	1:CA:485:U:O5'	1.75	0.86
22:DA:310:A:O2'	22:DA:311:A:OP2	1.92	0.86
1:AA:980:C:OP2	57:AA:1837:HOH:O	1.92	0.86
3:AC:85:GLU:OE1	3:AC:88:ARG:NH1	2.07	0.86
22:DA:1359:A:OP1	57:DA:3610:HOH:O	1.92	0.86
9:CI:107:ASP:OD1	9:CI:109:ARG:NH1	2.09	0.86
29:BH:147:VAL:HG12	29:BH:149:GLU:HG3	1.57	0.86
22:DA:370:G:N7	57:DA:3555:HOH:O	2.08	0.86
22:BA:2116:G:O6	22:BA:2171:A:N6	2.09	0.86
22:BA:1916:A:C4	22:BA:1917:U:H1'	2.11	0.86
31:DJ:41:LYS:O	31:DJ:43:GLU:N	2.08	0.86
1:CA:1256:A:O2'	1:CA:1278:G:O6	1.94	0.85
22:DA:1287:A:O4'	35:DN:103:ARG:NH1	2.10	0.85
22:BA:1064:C:N4	22:BA:1070:A:OP2	2.10	0.85
4:CD:28:ILE:O	4:CD:31:LYS:NZ	2.08	0.85
47:DZ:52:SER:O	47:DZ:54:MET:N	2.08	0.85
22:DA:258:G:O2'	33:DL:104:GLN:OE1	1.93	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2834:G:O6	22:DA:2879:A:O2'	1.95	0.85
5:CE:102:GLY:O	5:CE:104:GLY:N	2.10	0.85
22:DA:1439:A:OP2	57:DA:3627:HOH:O	1.94	0.85
26:BE:7:ASP:OD2	26:BE:8:ALA:N	2.10	0.85
28:DG:126:PRO:O	28:DG:127:THR:OG1	1.92	0.85
14:CN:41:ARG:NH1	14:CN:42:TRP:O	2.10	0.84
22:BA:1823:G:N7	57:BA:3659:HOH:O	2.10	0.84
22:DA:83:A:OP2	42:DU:92:LYS:NZ	2.10	0.84
23:DB:22:U:O4	57:DB:302:HOH:O	1.94	0.84
17:AQ:17:MET:N	17:AQ:17:MET:SD	2.51	0.84
34:DM:66:ARG:NH1	34:DM:104:GLU:OE1	2.11	0.84
18:CR:20:GLU:O	18:CR:22:ASP:N	2.10	0.84
22:DA:1508:A:O2'	22:DA:1509:A:O4'	1.95	0.84
29:BH:117:LEU:O	29:BH:119:ASN:N	2.07	0.84
29:BH:117:LEU:HD21	29:BH:121:VAL:N	1.93	0.84
29:DH:82:SER:O	29:DH:84:ALA:N	2.10	0.84
10:CJ:63:ASP:OD1	14:CN:85:ARG:NH1	2.10	0.84
22:BA:560:C:OP2	57:BA:3250:HOH:O	1.93	0.84
22:BA:1779:U:H5	22:BA:1784:A:N7	1.76	0.84
35:DN:87:PHE:O	35:DN:89:SER:N	2.11	0.84
22:DA:2505:G:OP2	55:DA:3001:DOL:HC17	1.77	0.84
14:AN:33:ASP:O	14:AN:35:ASN:N	2.10	0.84
4:AD:27:ALA:O	4:AD:31:LYS:NZ	2.10	0.83
22:DA:1344:U:O2'	22:DA:1345:C:OP2	1.96	0.83
22:BA:797:G:O6	57:BA:3324:HOH:O	1.95	0.83
22:DA:990:A:N1	39:DR:78:ARG:NH1	2.26	0.83
29:DH:94:ILE:HB	29:DH:122:LEU:HD12	1.60	0.83
22:DA:58:G:OP1	41:DT:78:SER:OG	1.95	0.83
1:CA:736:C:OP1	18:CR:61:ARG:NH1	2.10	0.83
22:DA:1667:G:O2'	22:DA:1991:U:O4	1.97	0.83
1:CA:319:G:O6	57:CA:1735:HOH:O	1.95	0.83
22:BA:1179:G:N7	22:BA:1180:U:C6	2.47	0.83
1:CA:201:G:N2	1:CA:469:C:O2	2.11	0.83
9:AI:57:MET:N	9:AI:57:MET:SD	2.52	0.83
22:BA:2757:A:N1	28:BG:67:THR:HG21	1.93	0.82
20:CT:59:ASP:OD2	20:CT:76:LYS:NZ	2.11	0.82
22:DA:581:C:OP2	38:DQ:33:ARG:NH1	2.12	0.82
50:D2:11:LYS:NZ	57:D2:201:HOH:O	2.10	0.82
7:CG:93:PRO:O	7:CG:97:ASN:ND2	2.11	0.82
22:DA:1371:G:N7	57:DA:3399:HOH:O	2.11	0.82
29:BH:120:GLY:C	29:BH:122:LEU:CA	2.47	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:42:GLU:O	9:AI:45:ARG:NH1	2.13	0.82
26:DE:111:GLU:OE2	26:DE:114:ARG:NH1	2.13	0.82
22:BA:2572:A:N7	25:BD:150:GLN:HG3	1.95	0.82
1:CA:1046:A:N6	1:CA:1211:U:O2	2.13	0.82
1:CA:992:U:O4'	1:CA:993:G:N2	2.13	0.82
1:CA:495:A:C2	1:CA:496:A:C6	2.68	0.82
1:CA:409:U:OP1	4:CD:24:GLY:HA3	1.78	0.81
43:BV:80:HIS:CE1	43:BV:83:LYS:HG3	2.15	0.81
1:CA:209:U:H4'	1:CA:210:C:OP2	1.80	0.81
39:DR:8:GLY:O	39:DR:10:LYS:NZ	2.11	0.81
22:BA:1603:A:OP1	57:BA:3412:HOH:O	1.97	0.81
22:DA:1269:A:OP2	57:DA:3385:HOH:O	1.98	0.81
1:CA:1007:U:O4	1:CA:1022:A:N6	2.14	0.81
27:BF:40:VAL:O	27:BF:42:GLU:N	2.13	0.81
23:DB:40:U:N3	23:DB:44:G:OP2	2.13	0.81
22:DA:1817:G:OP1	24:DC:62:TYR:OH	1.99	0.81
41:BT:64:LYS:HA	41:BT:79:ASP:OD1	1.81	0.81
22:DA:443:A:N7	26:DE:40:ARG:HG3	1.96	0.81
22:BA:974:G:H8	22:BA:990:A:H62	1.26	0.81
1:CA:243:A:H4'	1:CA:244:U:C5'	2.10	0.81
1:CA:243:A:H4'	1:CA:244:U:H5'	1.62	0.81
22:BA:198:C:OP2	57:BA:3760:HOH:O	1.99	0.80
1:CA:1308:U:OP1	13:CM:97:VAL:N	2.14	0.80
22:DA:279:A:N6	22:DA:361:G:O2'	2.14	0.80
22:DA:618:G:O6	57:DA:3291:HOH:O	2.00	0.80
1:CA:205:A:N6	1:CA:213:G:O6	2.14	0.80
7:AG:80:VAL:O	7:AG:82:GLY:N	2.14	0.80
1:AA:207:C:O2	1:AA:213:G:N2	2.14	0.80
5:CE:99:ALA:O	5:CE:101:GLU:N	2.14	0.80
22:BA:1061:U:O2'	22:BA:1062:G:O5'	1.98	0.80
1:CA:266:G:H3'	17:CQ:69:LYS:HB2	1.64	0.80
25:BD:77:ARG:NH2	25:BD:200:ASP:OD1	2.14	0.80
6:CF:91:ARG:O	6:CF:92:THR:OG1	1.98	0.80
55:DA:3001:DOL:H432	55:DA:3001:DOL:C6	2.11	0.79
55:DA:3001:DOL:O15	55:DA:3001:DOL:H212	1.82	0.79
22:BA:2005:A:OP1	57:BA:3387:HOH:O	1.98	0.79
11:CK:17:SER:O	11:CK:80:LYS:N	2.15	0.79
22:BA:622:G:OP2	57:BA:3293:HOH:O	2.00	0.79
20:AT:59:ASP:OD1	20:AT:76:LYS:NZ	2.15	0.79
2:CB:103:ASN:ND2	2:CB:106:THR:OG1	2.15	0.79
1:AA:1108:G:O6	57:AA:1862:HOH:O	1.98	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:163:GLU:OE2	4:AD:164:GLN:N	2.16	0.79
22:DA:2261:C:C2	22:DA:2280:G:N2	2.51	0.79
22:DA:374:A:N6	22:DA:400:G:O2'	2.16	0.79
22:BA:58:G:OP1	41:BT:78:SER:CB	2.31	0.79
22:DA:1091:G:O2'	22:DA:1092:C:OP2	2.01	0.79
39:DR:82:HIS:ND1	39:DR:82:HIS:O	2.16	0.79
22:BA:1925:C:H4'	22:BA:1926:U:OP1	1.81	0.79
14:AN:64:CYS:SG	14:AN:67:THR:OG1	2.38	0.79
22:DA:2199:A:OP1	45:DX:37:ARG:NH1	2.15	0.79
22:DA:777:G:C2	22:DA:778:G:C8	2.71	0.79
22:DA:622:G:OP2	57:DA:3292:HOH:O	2.01	0.79
14:AN:90:ARG:NH1	14:AN:92:GLU:OE2	2.16	0.79
23:DB:29:A:O2'	23:DB:58:A:N1	2.16	0.79
22:BA:1379:U:C6	22:BA:1379:U:OP1	2.36	0.79
24:DC:45:ASN:OD1	24:DC:46:ASN:N	2.16	0.79
22:DA:488:G:N2	22:DA:493:G:O6	2.16	0.78
1:AA:8:A:C6	4:AD:206:LYS:HB3	2.18	0.78
16:AP:43:ALA:O	16:AP:44:SER:OG	2.00	0.78
22:BA:1746:A:H2'	22:BA:1747:U:C6	2.18	0.78
22:BA:404:A:O2'	22:BA:405:U:OP2	2.01	0.78
22:DA:1141:U:OP2	31:DJ:65:THR:OG1	1.99	0.78
1:AA:684:U:O2'	11:AK:40:ASN:O	2.01	0.78
35:DN:1:MET:H1	35:DN:1:MET:HE2	1.48	0.78
22:DA:1627:G:C2	22:DA:1628:G:N7	2.52	0.78
50:D2:43:THR:OG1	50:D2:44:VAL:N	2.15	0.78
1:AA:652:U:O4	1:AA:752:G:O2'	2.00	0.78
22:DA:1973:G:OP1	57:DA:3462:HOH:O	2.00	0.78
1:CA:195:A:OP1	20:CT:60:ARG:NH1	2.16	0.78
1:CA:537:G:OP1	12:CL:110:ARG:NH2	2.16	0.78
22:DA:2579:C:OP1	57:DA:3538:HOH:O	2.02	0.78
22:BA:1179:G:C4	22:BA:1180:U:H1'	2.19	0.78
4:AD:125:VAL:O	4:AD:127:GLY:N	2.17	0.78
22:DA:2576:G:O2'	22:DA:2579:C:OP2	2.02	0.77
22:BA:831:G:OP1	57:BA:3263:HOH:O	2.01	0.77
1:AA:650:G:H2'	1:AA:651:C:H5'	1.64	0.77
1:AA:1422:G:O3'	32:BK:49:ARG:NH2	2.17	0.77
4:CD:192:SER:OG	4:CD:193:ALA:N	2.14	0.77
4:AD:22:LYS:O	4:AD:24:GLY:N	2.17	0.77
1:CA:1499:A:OP2	57:CA:1884:HOH:O	2.00	0.77
22:BA:481:G:C4	22:BA:507:A:C2	2.72	0.77
13:CM:40:ALA:O	13:CM:42:ASP:N	2.17	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:99:ALA:O	5:AE:101:GLU:N	2.17	0.77
28:BG:104:ASN:ND2	28:BG:114:ASP:OD1	2.17	0.77
22:DA:856:G:N2	22:DA:922:C:C2	2.53	0.77
22:BA:324:A:N6	22:BA:338:G:O2'	2.16	0.77
22:DA:761:A:OP2	57:DA:3294:HOH:O	2.02	0.77
1:CA:72:A:C6	1:CA:73:C:N4	2.52	0.77
1:CA:890:G:O2'	1:CA:906:A:N6	2.17	0.77
22:BA:2831:G:OP1	25:BD:56:LYS:NZ	2.17	0.77
29:DH:1:MET:SD	29:DH:27:ARG:NH1	2.58	0.77
37:DP:65:SER:O	37:DP:67:GLY:N	2.18	0.77
22:DA:1515:A:O2'	22:DA:1556:C:O2'	2.02	0.76
2:AB:50:PHE:HA	2:AB:213:TYR:OH	1.85	0.76
1:AA:1018:G:C2	1:AA:1019:A:C8	2.73	0.76
22:BA:2287:A:OP1	49:B1:30:LYS:NZ	2.18	0.76
22:DA:2507:C:OP1	57:DA:3708:HOH:O	2.02	0.76
1:AA:1278:G:H4'	1:AA:1279:G:C8	2.21	0.76
7:AG:99:LEU:O	7:AG:102:ARG:N	2.17	0.76
22:BA:1922:G:N2	22:BA:1923:U:H1'	2.00	0.76
1:AA:31:G:O2'	1:AA:48:C:N4	2.18	0.76
29:DH:53:GLU:O	29:DH:55:GLU:N	2.19	0.76
1:AA:993:G:O2'	1:AA:994:A:N7	2.18	0.76
22:DA:332:A:O2'	22:DA:334:C:OP2	2.03	0.76
29:DH:45:GLU:O	29:DH:49:ALA:N	2.19	0.76
1:CA:718:A:C8	1:CA:719:C:C5	2.74	0.76
22:DA:2504:U:C4	55:DA:3001:DOL:H161	2.21	0.76
5:AE:69:ARG:O	5:AE:71:MET:N	2.18	0.76
40:BS:29:VAL:HG13	40:BS:55:ILE:HD11	1.68	0.76
22:DA:1009:A:N3	22:DA:1153:C:O2'	2.18	0.76
24:DC:258:ARG:NH1	24:DC:264:ASP:OD2	2.18	0.76
22:BA:2305:U:C2	27:BF:151:GLY:HA3	2.20	0.76
2:AB:23:TRP:CH2	2:AB:25:PRO:HA	2.21	0.76
22:DA:444:C:OP1	26:DE:40:ARG:NH1	2.19	0.76
22:BA:276:U:O2'	22:BA:278:A:N7	2.19	0.76
49:D1:15:ALA:O	49:D1:17:THR:N	2.19	0.76
22:BA:2271:G:O6	57:BA:3514:HOH:O	2.04	0.76
1:CA:527:G:C2	1:CA:528:C:C6	2.74	0.76
22:DA:1340:U:C5	22:DA:1603:A:C8	2.75	0.76
2:CB:193:PRO:O	2:CB:195:GLY:N	2.18	0.76
1:CA:567:G:O2'	57:CA:1705:HOH:O	2.04	0.76
1:AA:792:A:H4'	1:AA:793:U:O5'	1.85	0.76
22:DA:1677:A:N7	57:DA:3765:HOH:O	2.17	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:111:G:C6	1:AA:330:C:N4	2.53	0.75
13:CM:13:LYS:O	13:CM:14:HIS:ND1	2.19	0.75
2:CB:58:ASN:ND2	2:CB:220:THR:O	2.19	0.75
21:AU:35:ARG:O	21:AU:37:PHE:N	2.18	0.75
22:BA:1474:U:H2'	22:BA:1475:G:H5'	1.68	0.75
29:BH:91:PHE:O	1:CA:55:A:C6	2.40	0.75
21:CU:51:SER:O	21:CU:53:VAL:N	2.19	0.75
17:CQ:69:LYS:O	17:CQ:70:THR:OG1	2.04	0.75
1:AA:208:U:C5	1:AA:210:C:C4	2.75	0.75
1:AA:338:A:N1	1:AA:351:G:O6	2.18	0.75
24:DC:70:ASN:O	24:DC:72:ASP:N	2.20	0.75
22:DA:2286:G:H4'	22:DA:2287:A:O5'	1.86	0.75
1:CA:1124:G:O2'	1:CA:1145:A:N6	2.18	0.75
29:DH:124:THR:OG1	29:DH:125:THR:N	2.17	0.75
22:BA:2448:A:OP2	57:BA:3686:HOH:O	2.03	0.75
2:AB:63:ARG:O	2:AB:64:LYS:HB2	1.87	0.75
6:AF:91:ARG:C	6:AF:92:THR:HG1	1.89	0.75
34:BM:42:THR:HG22	34:BM:93:VAL:HG12	1.67	0.75
1:CA:1181:G:O2'	1:CA:1182:G:N7	2.19	0.75
22:BA:653:U:OP2	22:BA:653:U:C6	2.38	0.75
22:BA:731:C:OP2	57:BA:3697:HOH:O	2.04	0.75
4:AD:11:LEU:HD22	4:AD:63:ARG:HD3	1.69	0.75
5:CE:41:ASP:OD1	5:CE:42:GLY:N	2.20	0.75
46:DY:11:VAL:O	46:DY:15:ASN:ND2	2.18	0.75
22:DA:788:A:OP1	22:DA:791:C:N4	2.19	0.75
22:BA:1464:G:O6	57:BA:3642:HOH:O	2.05	0.75
1:CA:734:G:C2	1:CA:735:C:C6	2.74	0.75
1:CA:684:U:O2'	11:CK:40:ASN:O	2.04	0.75
22:DA:49:A:C8	22:DA:51:G:N2	2.55	0.75
22:BA:1509:A:O2'	22:BA:1510:G:P	2.45	0.75
42:DU:9:ASP:OD2	42:DU:10:GLU:N	2.20	0.75
16:AP:42:ILE:O	16:AP:44:SER:N	2.20	0.75
5:AE:104:GLY:O	5:AE:105:ILE:HG22	1.87	0.75
53:B5:50:ILE:C	53:B5:52:PRO:HD3	2.06	0.75
11:AK:13:ARG:NE	22:BA:2142:A:OP1	2.20	0.75
22:BA:617:G:N7	57:BA:3291:HOH:O	2.19	0.75
22:DA:225:C:N4	22:DA:419:U:O2'	2.18	0.74
22:BA:2711:A:OP2	57:BA:3550:HOH:O	2.05	0.74
1:AA:82:G:N2	1:AA:89:U:OP1	2.19	0.74
22:DA:2407:A:OP1	57:DA:3560:HOH:O	2.04	0.74
22:DA:1266:G:O2'	22:DA:2012:G:O6	2.03	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2127:G:O2'	22:DA:2173:A:N3	2.20	0.74
1:AA:251:G:C6	1:AA:266:G:C6	2.75	0.74
32:BK:78:ARG:NH1	37:BP:71:GLU:OE2	2.20	0.74
1:AA:131:A:H2'	1:AA:132:C:C6	2.23	0.74
2:CB:87:CYS:O	2:CB:89:GLN:N	2.20	0.74
29:BH:117:LEU:HD11	29:BH:122:LEU:HD12	1.69	0.74
22:DA:27:G:O2'	22:DA:28:A:OP2	2.05	0.74
22:BA:1378:A:O2'	22:BA:1380:G:OP2	2.05	0.74
22:DA:2550:G:OP1	57:DA:3720:HOH:O	2.05	0.74
29:BH:88:GLY:O	29:BH:125:THR:OG1	2.04	0.74
1:AA:411:A:OP1	4:AD:26:ARG:NH2	2.20	0.74
22:BA:2125:G:N3	22:BA:2173:A:N6	2.36	0.74
29:BH:123:ARG:C	29:BH:124:THR:HG23	2.06	0.74
22:BA:1921:G:C2	22:BA:1922:G:C8	2.76	0.74
22:DA:306:U:O2	22:DA:312:G:N2	2.21	0.74
22:BA:1179:G:C6	22:BA:1180:U:C2	2.74	0.74
33:BL:87:GLY:O	33:BL:89:VAL:N	2.21	0.74
1:CA:533:A:OP1	57:CA:1763:HOH:O	2.05	0.74
22:DA:2063:C:H4'	55:DA:3001:DOL:H343	1.69	0.74
22:DA:998:C:OP2	38:DQ:58:ARG:NH2	2.20	0.74
11:AK:29:ASN:OD1	11:AK:30:THR:N	2.21	0.74
14:AN:61:ARG:O	14:AN:62:ASN:HB2	1.86	0.74
51:B3:31:HIS:CD2	51:B3:32:ILE:HG13	2.22	0.74
4:CD:95:GLU:OE2	4:CD:100:ASN:ND2	2.20	0.74
1:AA:1225:A:H2'	1:AA:1226:C:C5	2.22	0.74
24:BC:143:ASN:OD1	24:BC:152:GLY:HA3	1.87	0.74
1:AA:568:G:C2	1:AA:569:C:C5	2.76	0.73
1:AA:667:G:H4'	15:AO:51:HIS:ND1	2.03	0.73
13:AM:82:ASP:OD1	27:BF:112:ARG:NH2	2.21	0.73
35:DN:90:ARG:CZ	35:DN:116:VAL:HG11	2.18	0.73
22:BA:1669:A:OP2	57:BA:3723:HOH:O	2.06	0.73
14:CN:21:PHE:O	14:CN:23:LYS:N	2.21	0.73
22:BA:1179:G:C5	22:BA:1180:U:H1'	2.22	0.73
17:AQ:81:LYS:O	17:AQ:83:VAL:N	2.22	0.73
1:CA:1147:C:O2	9:CI:18:ARG:NH2	2.21	0.73
4:AD:95:GLU:OE2	4:AD:104:ARG:NH1	2.20	0.73
22:DA:561:G:HO2'	38:DQ:45:TYR:HH	1.32	0.73
22:BA:997:G:OP1	38:BQ:92:ARG:HG2	1.88	0.73
21:AU:36:GLU:O	21:AU:37:PHE:HB2	1.86	0.73
4:AD:11:LEU:CD2	4:AD:63:ARG:HD3	2.19	0.73
27:BF:158:THR:O	57:BF:201:HOH:O	2.05	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:58:G:OP1	41:BT:78:SER:HB3	1.88	0.73
22:DA:1153:C:OP1	57:DA:3359:HOH:O	2.07	0.73
22:BA:2506:U:C5	55:BA:3001:DOL:H422	2.23	0.73
46:BY:61:ALA:O	46:BY:63:ALA:N	2.21	0.73
22:DA:1715:G:O2'	22:DA:1743:G:O6	2.07	0.73
22:DA:1475:G:O2'	22:DA:1476:U:OP1	2.07	0.73
22:DA:684:G:C2	22:DA:794:A:C2	2.77	0.73
25:DD:56:LYS:O	25:DD:58:ASN:N	2.22	0.73
22:BA:455:C:N3	22:BA:472:A:H2'	2.04	0.73
22:BA:1061:U:HO2'	22:BA:1062:G:P	2.12	0.73
22:DA:1604:C:OP1	57:DA:3403:HOH:O	2.07	0.73
22:DA:503:A:C2	22:DA:506:G:C4	2.77	0.73
1:AA:844:G:C6	1:AA:846:G:O2'	2.42	0.73
22:DA:1342:A:OP2	57:DA:3711:HOH:O	2.05	0.73
22:BA:2189:U:H2'	22:BA:2190:G:C8	2.24	0.73
22:BA:730:A:P	57:BA:3695:HOH:O	2.38	0.72
17:AQ:16:LYS:C	17:AQ:17:MET:SD	2.68	0.72
26:DE:21:ARG:NH1	26:DE:103:GLY:O	2.21	0.72
39:BR:39:LEU:HA	39:BR:49:ILE:CG2	2.19	0.72
14:AN:46:LEU:O	14:AN:48:LEU:N	2.22	0.72
22:BA:84:A:N1	22:BA:98:G:O2'	2.21	0.72
1:AA:1074:G:OP1	5:AE:69:ARG:NH2	2.22	0.72
1:CA:1525:G:O6	57:CA:1892:HOH:O	2.05	0.72
1:CA:679:C:O2	1:CA:712:A:C2	2.42	0.72
10:CJ:87:LEU:HD13	10:CJ:88:MET:N	2.04	0.72
1:AA:984:C:N4	57:AA:1838:HOH:O	2.21	0.72
42:DU:36:VAL:O	42:DU:38:GLY:N	2.22	0.72
1:CA:552:U:C4	1:CA:553:A:N7	2.57	0.72
22:BA:245:G:O6	51:B3:8:ARG:HD3	1.88	0.72
22:BA:1182:G:H2'	22:BA:1183:U:O4'	1.89	0.72
22:DA:1935:G:H1'	22:DA:1964:G:N2	2.03	0.72
1:AA:203:G:N2	1:AA:215:C:C2	2.58	0.72
22:DA:2684:U:O4'	32:DK:70:ARG:NH1	2.22	0.72
23:BB:8:C:O3'	36:BO:25:ARG:NH1	2.21	0.72
14:AN:64:CYS:HG	14:AN:67:THR:HG1	1.34	0.72
22:BA:1916:A:H2'	22:BA:1917:U:C1'	2.20	0.72
35:DN:106:ASP:O	35:DN:108:ALA:N	2.22	0.72
31:BJ:81:ILE:HG23	31:BJ:82:GLY:N	2.04	0.72
22:DA:583:G:C6	22:DA:584:C:C4	2.78	0.72
5:CE:80:THR:OG1	5:CE:122:ASN:ND2	2.22	0.72
22:DA:981:A:OP2	22:DA:982:C:N4	2.22	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:116:C:O2'	22:DA:126:A:O2'	2.05	0.72
1:CA:1385:G:N7	57:CA:1874:HOH:O	2.22	0.72
22:BA:626:A:H2'	33:BL:78:ARG:NH1	2.03	0.72
1:CA:734:G:N3	1:CA:735:C:C6	2.57	0.72
22:BA:193:U:OP2	57:BA:3741:HOH:O	2.08	0.72
41:BT:49:LYS:N	41:BT:49:LYS:HD3	2.05	0.72
22:DA:2057:G:OP2	57:DA:3485:HOH:O	2.07	0.72
22:DA:2355:G:OP1	44:DW:25:ARG:NH2	2.23	0.72
27:BF:36:LEU:HD21	27:BF:99:PHE:CE1	2.25	0.72
19:CS:4:SER:O	19:CS:5:LEU:HB2	1.90	0.72
5:CE:101:GLU:CD	5:CE:101:GLU:O	2.28	0.72
22:BA:495:G:H1'	40:BS:57:ASN:OD1	1.90	0.72
22:DA:79:C:O2'	22:DA:346:A:N3	2.21	0.72
1:AA:178:C:OP2	20:AT:60:ARG:NH2	2.23	0.72
16:AP:22:ALA:HA	16:AP:33:ILE:HG13	1.72	0.72
22:DA:1469:A:H2'	22:DA:1470:A:C8	2.25	0.72
4:CD:100:ASN:OD1	4:CD:111:ARG:NH1	2.21	0.72
1:CA:1219:A:N6	1:CA:1220:G:O6	2.23	0.72
22:DA:616:A:H4'	26:DE:101:TYR:CZ	2.24	0.71
2:AB:82:ASP:O	2:AB:85:LEU:N	2.23	0.71
1:AA:1222:G:O6	57:AA:1837:HOH:O	2.08	0.71
24:BC:230:HIS:CD2	24:BC:247:PRO:HA	2.24	0.71
1:CA:374:A:H5''	1:CA:452:A:N1	2.05	0.71
22:DA:2622:U:O2'	22:DA:2825:G:N7	2.22	0.71
9:AI:49:ARG:NH2	9:AI:52:LEU:O	2.23	0.71
5:CE:132:ASN:O	5:CE:136:VAL:HG12	1.91	0.71
21:AU:34:ARG:CZ	21:AU:35:ARG:HB2	2.20	0.71
22:DA:1335:C:N4	57:DA:3392:HOH:O	2.23	0.71
29:DH:31:VAL:HB	29:DH:32:PRO:CD	2.20	0.71
37:BP:54:GLY:O	37:BP:57:SER:OG	2.07	0.71
16:AP:50:THR:O	16:AP:50:THR:HG22	1.90	0.71
22:BA:1653:G:H3'	35:BN:2:ARG:HG3	1.72	0.71
1:AA:64:G:C8	1:AA:99:C:N4	2.58	0.71
25:BD:103:ASP:O	25:BD:105:LYS:N	2.23	0.71
22:DA:698:C:O2'	22:DA:734:A:N6	2.23	0.71
22:BA:1917:U:C4	22:BA:1918:A:C6	2.78	0.71
22:BA:500:G:N2	22:BA:502:A:H3'	2.06	0.71
1:AA:109:A:H2'	1:AA:326:G:N2	2.06	0.71
49:D1:5:ILE:O	49:D1:28:ARG:NH1	2.23	0.71
22:DA:1259:G:H2'	22:DA:1260:A:C8	2.25	0.71
46:BY:6:LEU:O	46:BY:60:LYS:NZ	2.24	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:910:A:N3	22:DA:2264:C:O2'	2.23	0.71
1:AA:154:U:C2	1:AA:168:G:N2	2.58	0.71
22:DA:2061:G:O6	55:DA:3001:DOL:H162	1.90	0.71
22:DA:1187:G:H5''	39:DR:83:TYR:CE2	2.26	0.71
22:DA:58:G:N3	22:DA:70:G:N2	2.39	0.71
39:BR:49:ILE:HG22	39:BR:53:PHE:CA	2.21	0.71
22:BA:1385:A:H1'	22:BA:1386:C:C6	2.26	0.71
22:DA:300:A:HO2'	22:DA:318:C:HO2'	1.33	0.70
22:BA:1779:U:C5	22:BA:1784:A:N7	2.58	0.70
22:DA:126:A:C2	50:D2:18:PHE:CE2	2.79	0.70
39:BR:48:LYS:HG2	39:BR:48:LYS:O	1.91	0.70
39:BR:49:ILE:HG22	39:BR:53:PHE:N	2.06	0.70
1:CA:1108:G:O6	57:CA:1858:HOH:O	2.05	0.70
22:DA:1251:C:OP2	38:DQ:6:ARG:NH2	2.24	0.70
2:AB:151:ILE:HD12	2:AB:154:MET:SD	2.31	0.70
4:CD:26:ARG:HG3	4:CD:27:ALA:N	2.06	0.70
22:BA:2555:U:C5	22:BA:2556:C:C2	2.78	0.70
55:DA:3001:DOL:C48	55:DA:3001:DOL:C46	2.58	0.70
26:DE:21:ARG:O	26:DE:114:ARG:NH2	2.24	0.70
22:BA:2291:U:H2'	22:BA:2292:U:C6	2.26	0.70
5:AE:82:GLN:NE2	5:AE:150:PRO:HD3	2.06	0.70
4:AD:174:ASP:OD2	4:AD:176:GLY:N	2.24	0.70
22:BA:1604:C:OP2	57:BA:3414:HOH:O	2.08	0.70
1:CA:1302:C:C4	13:CM:17:ILE:HD13	2.26	0.70
1:CA:1124:G:N2	1:CA:1127:G:C2	2.60	0.70
11:AK:76:GLU:C	22:BA:2141:G:OP1	2.29	0.70
22:BA:2189:U:H2'	22:BA:2190:G:C1'	2.21	0.70
22:BA:265:A:N1	22:BA:427:U:O2'	2.24	0.70
12:CL:57:LEU:O	12:CL:60:GLY:N	2.23	0.70
22:DA:134:G:C2	22:DA:146:A:C2	2.79	0.70
42:BU:12:ILE:HG21	42:BU:80:ALA:HB2	1.73	0.70
31:BJ:114:LEU:HG	31:BJ:118:MET:HE3	1.72	0.70
1:AA:1406:U:C5	1:AA:1407:C:C5	2.79	0.70
22:BA:2192:U:H2'	22:BA:2193:G:H5'	1.72	0.70
22:BA:620:G:H4'	22:BA:621:A:O5'	1.91	0.70
22:BA:181:A:H2'	22:BA:182:A:C8	2.26	0.70
22:DA:2004:G:OP1	57:DA:3798:HOH:O	2.09	0.70
27:BF:127:ASN:OD1	27:BF:157:THR:HA	1.92	0.70
22:DA:733:G:OP2	57:DA:3295:HOH:O	2.09	0.70
17:AQ:69:LYS:O	17:AQ:70:THR:CB	2.39	0.70
43:DV:51:GLN:HB3	43:DV:56:PHE:CG	2.27	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:811:C:O2'	1:CA:901:A:N1	2.24	0.70
21:CU:18:ARG:O	21:CU:21:ARG:N	2.24	0.70
41:DT:17:SER:O	41:DT:19:LYS:N	2.24	0.70
29:BH:94:ILE:HG22	29:BH:99:ILE:HG13	1.72	0.70
22:BA:1923:U:C2'	22:BA:1924:C:H5'	2.19	0.70
11:AK:26:SER:O	11:AK:28:ASN:N	2.24	0.70
2:CB:15:HIS:O	2:CB:17:GLY:N	2.25	0.70
22:BA:2258:C:O2'	22:BA:2427:C:OP2	2.10	0.70
1:CA:977:A:N3	1:CA:977:A:H3'	2.07	0.70
22:DA:192:C:OP1	57:DA:3737:HOH:O	2.09	0.70
12:AL:44:LYS:CB	12:AL:45:PRO:CD	2.70	0.70
22:BA:2191:A:C6	22:BA:2192:U:O4	2.45	0.70
39:BR:49:ILE:HB	39:BR:52:PRO:C	2.11	0.70
22:DA:526:A:N6	22:DA:2626:C:H4'	2.06	0.70
22:BA:2308:G:O6	22:BA:2311:A:N7	2.24	0.70
22:DA:1993:U:H4'	25:DD:133:THR:HG22	1.73	0.70
22:DA:2415:G:C6	22:DA:2416:C:C4	2.80	0.70
22:DA:1649:G:C6	22:DA:2009:A:C6	2.80	0.70
22:DA:2816:G:N3	22:DA:2883:A:O2'	2.22	0.70
22:BA:1141:U:H4'	22:BA:1142:A:O4'	1.92	0.70
1:AA:1304:G:OP2	57:AA:1797:HOH:O	2.10	0.69
20:AT:43:ASP:OD1	20:AT:46:ALA:N	2.24	0.69
22:BA:194:G:N7	57:BA:3758:HOH:O	2.25	0.69
39:DR:49:ILE:HG22	39:DR:54:VAL:N	2.07	0.69
32:DK:34:GLY:O	32:DK:36:GLY:N	2.25	0.69
22:BA:528:A:C2	22:BA:2043:C:H5'	2.27	0.69
5:CE:155:ALA:HB1	8:CH:66:PHE:CD2	2.26	0.69
1:CA:496:A:C2	1:CA:497:G:C5	2.80	0.69
11:AK:76:GLU:O	11:AK:77:TYR:CD1	2.45	0.69
1:AA:144:G:C4	1:AA:179:A:C2	2.79	0.69
1:CA:376:G:H5'	16:CP:5:ARG:HB3	1.74	0.69
22:DA:2134:A:OP2	22:DA:2157:G:N2	2.24	0.69
1:CA:582:C:N3	1:CA:760:G:C6	2.60	0.69
35:BN:65:LEU:HD11	35:BN:69:ARG:NH2	2.05	0.69
22:DA:864:G:C6	22:DA:865:C:N4	2.60	0.69
22:BA:1073:A:H3'	22:BA:1074:G:H5'	1.74	0.69
22:DA:118:A:C8	22:DA:119:A:C8	2.80	0.69
4:AD:174:ASP:OD2	4:AD:177:LYS:N	2.25	0.69
22:BA:370:G:OP2	57:BA:3561:HOH:O	2.09	0.69
22:DA:1809:A:H2'	22:DA:1810:A:C8	2.27	0.69
22:DA:1509:A:O2'	22:DA:1510:G:P	2.51	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:495:A:C2	1:CA:496:A:N6	2.60	0.69
11:AK:102:ALA:O	11:AK:104:GLY:N	2.26	0.69
22:BA:125:A:OP2	50:B2:19:ARG:NH2	2.25	0.69
23:BB:91:C:OP2	34:BM:18:ARG:HG2	1.91	0.69
22:DA:1358:G:O2'	22:DA:1359:A:H5'	1.92	0.69
22:DA:1544:A:N1	22:DA:1545:A:C2	2.61	0.69
1:AA:692:U:O2'	1:AA:694:A:N7	2.17	0.69
28:BG:155:GLU:OE2	28:BG:158:LYS:N	2.26	0.69
28:DG:111:HIS:O	28:DG:111:HIS:ND1	2.26	0.69
22:DA:2032:G:H1'	25:DD:150:GLN:NE2	2.06	0.69
22:DA:2821:A:OP2	25:DD:115:GLY:N	2.26	0.69
1:AA:484:G:H4'	1:AA:485:U:OP1	1.92	0.69
22:BA:747:U:C5	22:BA:2613:U:C5	2.81	0.69
22:DA:1088:A:N6	30:DI:135:SER:OG	2.24	0.69
22:DA:46:G:C2	22:DA:47:C:C5	2.79	0.69
25:DD:151:THR:O	25:DD:152:PRO:C	2.30	0.69
2:AB:21:ARG:HA	2:AB:21:ARG:CZ	2.22	0.69
1:CA:1348:U:H4'	9:CI:122:ARG:HG3	1.74	0.69
1:CA:533:A:O2'	1:CA:535:A:OP2	2.11	0.69
4:AD:120:HIS:O	4:AD:122:ALA:N	2.26	0.69
22:DA:1208:C:C4	22:DA:1209:U:C4	2.81	0.69
33:BL:82:LEU:HD23	33:BL:83:ALA:N	2.07	0.69
22:BA:997:G:OP1	38:BQ:92:ARG:CG	2.41	0.69
9:CI:12:ARG:NH1	9:CI:107:ASP:OD2	2.26	0.69
35:DN:1:MET:CE	35:DN:1:MET:H1	2.05	0.69
1:CA:688:G:O2'	1:CA:704:A:N1	2.21	0.69
22:DA:152:A:C2	22:DA:175:G:C2	2.81	0.69
22:DA:39:G:C6	22:DA:40:U:C4	2.81	0.69
22:DA:2115:G:O2'	22:DA:2117:A:N6	2.25	0.69
22:DA:763:G:OP1	57:DA:3691:HOH:O	2.11	0.69
22:DA:740:C:H5'	22:DA:1784:A:H3'	1.75	0.69
22:DA:608:A:H2'	22:DA:609:A:C8	2.27	0.69
22:BA:2191:A:H2'	22:BA:2192:U:C6	2.28	0.69
2:AB:87:CYS:O	2:AB:89:GLN:N	2.26	0.69
1:CA:1095:U:OP2	57:CA:1858:HOH:O	2.09	0.69
22:DA:377:G:C6	22:DA:378:C:C4	2.81	0.69
22:DA:362:A:C5	22:DA:363:G:C8	2.81	0.69
1:CA:66:A:C6	1:CA:67:C:C5	2.81	0.69
1:CA:875:U:O2'	8:CH:15:ARG:NH1	2.26	0.69
37:BP:52:ASN:O	37:BP:53:ARG:HG2	1.93	0.69
22:DA:53:A:N7	22:DA:54:G:C4	2.61	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:414:C:O2	22:DA:2410:G:N2	2.25	0.69
1:AA:858:G:O6	57:AA:1824:HOH:O	2.09	0.69
22:BA:1494:A:C2'	22:BA:1495:A:O5'	2.41	0.69
22:BA:686:U:H2'	22:BA:788:A:N1	2.08	0.69
22:DA:2886:A:C2	22:DA:2887:A:H1'	2.28	0.69
1:CA:8:A:C6	4:CD:206:LYS:HB3	2.28	0.69
1:CA:1004:A:O2'	1:CA:1036:A:N1	2.26	0.68
11:AK:38:GLN:O	11:AK:40:ASN:ND2	2.26	0.68
22:DA:732:C:OP2	57:DA:3297:HOH:O	2.11	0.68
12:AL:24:LEU:O	12:AL:25:GLU:C	2.30	0.68
32:DK:76:VAL:HG12	37:DP:73:VAL:HG22	1.74	0.68
22:DA:1773:A:N7	22:DA:1829:A:H1'	2.08	0.68
13:AM:64:VAL:HG12	13:AM:64:VAL:O	1.93	0.68
29:BH:117:LEU:O	29:BH:121:VAL:HG22	1.93	0.68
22:BA:2448:A:OP2	57:BA:3687:HOH:O	2.10	0.68
24:BC:71:LYS:NZ	24:BC:98:ASP:OD2	2.26	0.68
1:AA:254:G:OP1	17:AQ:70:THR:HB	1.92	0.68
5:AE:137:VAL:O	5:AE:138:ARG:HB2	1.93	0.68
1:CA:511:C:C2	1:CA:512:U:C5	2.82	0.68
22:BA:752:A:C2	22:BA:1781:U:C2	2.82	0.68
22:DA:2297:A:C2	22:DA:2298:A:C8	2.81	0.68
22:DA:2502:G:OP2	57:DA:3491:HOH:O	2.11	0.68
16:AP:46:LYS:HD3	16:AP:47:GLU:N	2.07	0.68
22:BA:1433:A:O2'	22:BA:1434:A:H5'	1.93	0.68
1:AA:1093:A:N3	1:AA:1109:C:O2'	2.20	0.68
22:DA:2199:A:C6	22:DA:2200:C:C2	2.81	0.68
22:DA:1973:G:C6	22:DA:1974:C:C4	2.82	0.68
53:B5:50:ILE:O	53:B5:203:GLU:CB	2.41	0.68
22:DA:1469:A:C2	22:DA:1470:A:C6	2.81	0.68
23:DB:84:G:N2	23:DB:93:C:C2	2.61	0.68
24:DC:204:VAL:O	24:DC:206:GLY:N	2.27	0.68
4:AD:59:GLN:O	4:AD:63:ARG:HG2	1.94	0.68
25:BD:99:GLU:HG2	25:BD:182:ALA:HB2	1.73	0.68
1:CA:801:U:C2	1:CA:802:A:C8	2.81	0.68
35:DN:63:ARG:NH1	35:DN:81:ASN:OD1	2.26	0.68
1:CA:475:C:H2'	1:CA:476:U:C6	2.28	0.68
1:CA:620:C:C2	4:CD:132:ILE:HD13	2.29	0.68
1:AA:1299:A:H2'	1:AA:1299:A:N3	2.09	0.68
22:DA:2788:C:O2'	22:DA:2809:A:N3	2.23	0.68
16:AP:60:TRP:O	16:AP:63:GLN:N	2.27	0.68
22:DA:287:G:C2	22:DA:354:A:C2	2.82	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:20:ASN:N	12:CL:20:ASN:OD1	2.26	0.68
22:DA:2146:C:H5''	22:DA:2147:A:OP1	1.92	0.68
22:DA:1351:C:OP2	57:DA:3397:HOH:O	2.11	0.68
22:BA:2584:U:C5	22:BA:2585:U:C6	2.81	0.68
30:DI:80:LEU:HD13	30:DI:136:MET:SD	2.33	0.68
22:DA:1638:C:H5''	22:DA:2710:C:O2'	1.93	0.68
22:BA:357:C:H2'	22:BA:358:U:C6	2.28	0.68
22:DA:2575:C:OP2	57:DA:3707:HOH:O	2.10	0.68
22:DA:590:A:C6	22:DA:591:U:C4	2.82	0.68
22:DA:2453:A:N7	57:DA:3525:HOH:O	2.25	0.68
22:DA:1411:U:H2'	22:DA:1412:U:O4'	1.94	0.68
35:DN:55:ALA:HA	35:DN:80:PHE:CE1	2.28	0.68
1:CA:1408:A:C2	1:CA:1494:G:C4	2.82	0.68
22:DA:827:U:OP2	57:DA:3696:HOH:O	2.11	0.68
25:BD:62:LYS:HB2	25:BD:63:PRO:HD3	1.76	0.68
22:DA:301:G:O4'	22:DA:317:G:N2	2.27	0.68
1:AA:81:A:H2'	1:AA:82:G:H5''	1.76	0.68
22:DA:826:U:O2'	33:DL:53:GLY:HA3	1.94	0.68
22:BA:2032:G:N7	57:BA:3537:HOH:O	2.25	0.68
4:AD:3:ARG:CZ	4:AD:115:ARG:HD3	2.23	0.68
22:BA:792:A:N3	22:BA:2072:C:O2'	2.22	0.68
22:DA:593:U:H2'	22:DA:594:U:C6	2.29	0.68
22:BA:618:G:N7	57:BA:3287:HOH:O	2.27	0.68
1:AA:1370:G:O5'	9:AI:111:VAL:HG21	1.94	0.68
1:CA:227:G:H2'	1:CA:228:A:O4'	1.93	0.68
27:DF:123:ASP:OD1	27:DF:124:GLY:N	2.27	0.68
22:DA:425:G:C2	22:DA:426:C:C4	2.81	0.68
1:CA:1297:G:O2'	7:CG:114:LYS:NZ	2.21	0.68
1:CA:706:A:C5	1:CA:707:U:C5	2.82	0.68
22:DA:271:G:C2	22:DA:367:G:C2	2.82	0.68
1:CA:1316:G:N1	1:CA:1319:A:OP2	2.27	0.68
22:BA:1435:G:O2'	22:BA:1436:G:H5'	1.93	0.67
1:CA:802:A:C2	1:CA:803:G:H1'	2.28	0.67
22:BA:555:G:O2'	22:BA:556:A:OP2	2.11	0.67
4:CD:105:MET:SD	4:CD:143:VAL:HG13	2.33	0.67
22:DA:2655:G:O2'	22:DA:2656:U:P	2.51	0.67
22:DA:185:G:C6	22:DA:212:G:C2	2.82	0.67
22:DA:1737:G:C6	22:DA:1738:G:N1	2.63	0.67
42:BU:82:ARG:O	42:BU:97:LYS:HG2	1.93	0.67
19:AS:22:ALA:O	19:AS:26:GLY:N	2.27	0.67
29:BH:122:LEU:HD23	29:BH:123:ARG:N	2.10	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2504:U:C5	55:DA:3001:DOL:C16	2.77	0.67
22:DA:1638:C:O2	22:DA:2698:U:O2'	2.11	0.67
25:DD:97:SER:O	25:DD:99:GLU:N	2.27	0.67
32:DK:107:LEU:O	32:DK:109:SER:N	2.27	0.67
1:CA:1490:U:H2'	1:CA:1491:G:O4'	1.93	0.67
25:BD:125:TRP:CD2	25:BD:160:LYS:HD2	2.29	0.67
22:BA:1421:G:C2	22:BA:1422:G:C8	2.83	0.67
22:DA:2874:C:H2'	22:DA:2875:C:C6	2.29	0.67
33:BL:68:SER:O	33:BL:69:ARG:HB2	1.94	0.67
23:BB:116:G:H4'	36:BO:54:VAL:HG13	1.75	0.67
1:CA:718:A:C5	11:CK:118:HIS:CD2	2.83	0.67
25:BD:101:PHE:O	25:BD:103:ASP:N	2.26	0.67
22:DA:2111:U:C5	22:DA:2145:C:H2'	2.29	0.67
9:CI:19:VAL:HG21	9:CI:82:GLY:HA3	1.77	0.67
1:CA:1279:G:H2'	1:CA:1279:G:N3	2.08	0.67
22:DA:2091:C:H3'	22:DA:2092:U:H5''	1.75	0.67
1:CA:499:A:C6	1:CA:547:A:C8	2.82	0.67
23:DB:48:U:H4'	36:DO:100:HIS:CD2	2.30	0.67
22:DA:2171:A:O2'	22:DA:2173:A:OP1	2.12	0.67
12:CL:25:GLU:O	12:CL:27:CYS:N	2.27	0.67
22:BA:1494:A:C2	22:BA:1495:A:C4	2.83	0.67
14:AN:91:GLY:O	14:AN:93:ILE:N	2.27	0.67
25:DD:140:HIS:NE2	57:DD:303:HOH:O	2.28	0.67
4:CD:174:ASP:CG	4:CD:175:ALA:N	2.48	0.67
22:BA:2728:U:O2'	22:BA:2729:G:P	2.53	0.67
1:CA:1151:A:C2	1:CA:1152:A:C5	2.82	0.67
2:CB:96:TRP:CE2	2:CB:172:ALA:HB2	2.29	0.67
2:CB:21:ARG:HA	2:CB:21:ARG:CZ	2.25	0.67
22:BA:682:G:H5'	50:B2:26:ASN:OD1	1.95	0.67
5:CE:146:ASN:OD1	5:CE:146:ASN:N	2.27	0.67
22:DA:453:A:OP1	57:DA:3242:HOH:O	2.12	0.67
22:BA:475:C:C4	22:BA:481:G:O6	2.48	0.67
22:DA:271:G:H4'	22:DA:272:A:OP1	1.94	0.67
22:DA:1223:G:N2	22:DA:1226:A:OP2	2.24	0.67
22:DA:1607:C:N4	22:DA:1622:G:N7	2.43	0.67
22:DA:846:U:O2'	22:DA:847:U:O5'	2.12	0.67
1:AA:1322:C:OP1	19:AS:78:ARG:NH2	2.28	0.67
7:AG:13:LEU:O	7:AG:15:ASP:N	2.27	0.67
22:DA:1138:G:O2'	31:DJ:104:ALA:O	2.12	0.67
1:AA:258:G:O6	57:AA:1811:HOH:O	2.12	0.67
22:BA:726:G:O2'	22:BA:727:A:OP2	2.13	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2707:U:O2	35:DN:71:ARG:NH1	2.28	0.67
15:AO:63:ARG:HG2	15:AO:67:LEU:HD12	1.77	0.67
26:BE:111:GLU:HG2	26:BE:114:ARG:NH1	2.10	0.67
22:BA:1057:A:N6	22:BA:1087:G:OP2	2.28	0.67
22:BA:826:U:O2'	33:BL:53:GLY:HA3	1.94	0.67
22:BA:1924:C:C2'	22:BA:1925:C:H5''	2.24	0.67
42:DU:38:GLY:HA2	42:DU:41:LEU:CD2	2.25	0.67
30:BI:39:CYS:HA	30:BI:42:PHE:CB	2.25	0.67
22:BA:2346:A:H4'	22:BA:2347:C:OP2	1.93	0.67
28:DG:118:PRO:CG	28:DG:144:VAL:HG21	2.25	0.67
22:DA:247:G:H4'	22:DA:386:G:C4	2.30	0.67
29:BH:27:ARG:O	29:BH:28:ASN:HB2	1.95	0.67
22:BA:2063:C:O2'	55:BA:3001:DOL:H343	1.95	0.67
8:AH:111:MET:HE1	8:AH:116:ALA:HA	1.77	0.67
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.28	0.67
1:CA:919:A:C2	1:CA:920:U:C5	2.83	0.67
22:BA:2886:A:C5	22:BA:2887:A:C8	2.83	0.67
1:CA:1381:U:C2'	1:CA:1382:C:O5'	2.43	0.67
40:BS:83:LYS:O	40:BS:84:ARG:HD3	1.95	0.67
2:CB:203:ASN:OD1	2:CB:204:ASP:N	2.27	0.67
30:DI:58:VAL:HG12	30:DI:59:ILE:N	2.10	0.67
22:BA:2499:C:OP2	57:BA:3687:HOH:O	2.13	0.66
22:BA:1922:G:N3	22:BA:1922:G:H2'	2.10	0.66
1:AA:209:U:H4'	1:AA:210:C:OP2	1.94	0.66
22:DA:577:G:O2'	22:DA:1254:A:OP1	2.13	0.66
22:DA:912:C:N4	22:DA:913:U:O4	2.28	0.66
22:BA:1277:G:H5'	35:BN:20:MET:CE	2.25	0.66
55:DA:3001:DOL:C1	55:DA:3001:DOL:C43	2.73	0.66
32:DK:87:LEU:HD22	32:DK:92:GLU:HA	1.76	0.66
22:DA:2603:G:C6	22:DA:2604:U:C4	2.83	0.66
29:BH:94:ILE:CG2	29:BH:99:ILE:HG13	2.26	0.66
22:DA:2453:A:C2	57:DA:3529:HOH:O	2.48	0.66
18:CR:20:GLU:N	18:CR:55:LEU:HD12	2.09	0.66
4:CD:105:MET:SD	4:CD:143:VAL:CG1	2.84	0.66
1:CA:309:A:O2'	1:CA:607:A:N1	2.27	0.66
22:BA:1838:C:C5	22:BA:1899:A:C6	2.83	0.66
22:BA:1584:U:O2	22:BA:1584:U:H2'	1.95	0.66
14:AN:51:LEU:O	14:AN:53:ARG:N	2.28	0.66
22:DA:1131:G:O6	22:DA:2024:G:O2'	2.13	0.66
1:AA:1018:G:N3	1:AA:1018:G:H2'	2.11	0.66
1:CA:1345:U:C2	1:CA:1377:A:C2	2.84	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1525:A:C2	22:DA:1526:C:C2	2.82	0.66
22:DA:2843:G:N2	22:DA:2875:C:C2	2.64	0.66
1:AA:582:C:C2	1:AA:583:A:C8	2.83	0.66
22:DA:2594:C:N4	22:DA:2595:G:O6	2.28	0.66
39:BR:24:LYS:HA	39:BR:94:THR:HG23	1.77	0.66
42:DU:7:ARG:HG3	42:DU:8:ASP:N	2.11	0.66
22:DA:2056:G:O6	22:DA:2612:C:N3	2.28	0.66
1:AA:1204:A:OP1	57:AA:1782:HOH:O	2.13	0.66
1:AA:89:U:O2'	1:AA:90:C:C5'	2.44	0.66
39:BR:66:HIS:ND1	39:BR:94:THR:HG22	2.10	0.66
5:CE:56:VAL:N	5:CE:57:PRO:HD2	2.11	0.66
25:BD:133:THR:CG2	25:BD:134:HIS:CD2	2.78	0.66
2:AB:181:ILE:O	2:AB:183:VAL:HG23	1.95	0.66
22:BA:2325:G:C6	22:BA:2326:C:N4	2.63	0.66
24:BC:15:HIS:O	24:BC:204:VAL:HG21	1.95	0.66
27:BF:21:ASN:O	27:BF:21:ASN:ND2	2.28	0.66
22:BA:1924:C:H2'	22:BA:1925:C:C5'	2.26	0.66
22:DA:1509:A:O2'	22:DA:1510:G:OP2	2.14	0.66
22:BA:528:A:C2	22:BA:2043:C:H4'	2.30	0.66
22:DA:363:G:H2'	22:DA:364:C:C6	2.31	0.66
1:AA:1191:A:OP2	3:AC:3:GLN:NE2	2.29	0.66
11:CK:27:PHE:CZ	11:CK:89:PRO:HG2	2.30	0.66
22:DA:2580:U:OP2	57:DA:3540:HOH:O	2.13	0.66
22:DA:674:G:H1'	26:DE:69:ARG:NE	2.11	0.66
22:DA:2452:C:C4'	55:DA:3001:DOL:H461	2.25	0.66
22:DA:1141:U:H4'	22:DA:1142:A:O4'	1.95	0.66
6:CF:45:ARG:O	6:CF:56:LYS:HA	1.96	0.66
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.30	0.66
20:AT:83:ILE:O	20:AT:87:ALA:HB3	1.95	0.66
26:DE:149:ILE:CD1	26:DE:172:ALA:HA	2.24	0.66
22:DA:226:A:N6	22:DA:227:A:N1	2.44	0.66
18:CR:22:ASP:OD1	18:CR:23:TYR:N	2.28	0.66
22:DA:1475:G:O2'	22:DA:1476:U:P	2.53	0.66
22:BA:2683:C:OP1	37:BP:51:ARG:NH2	2.28	0.66
1:CA:1225:A:H2'	1:CA:1226:C:C5	2.29	0.66
1:AA:859:G:H2'	1:AA:860:A:C8	2.30	0.66
22:DA:1454:C:OP1	35:DN:63:ARG:NH2	2.29	0.66
15:AO:63:ARG:HG2	15:AO:67:LEU:CD1	2.26	0.66
1:CA:70:U:H2'	1:CA:94:G:N7	2.11	0.66
22:BA:817:C:OP1	57:BA:3583:HOH:O	2.12	0.66
22:DA:341:C:H2'	22:DA:342:A:C8	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:2:SER:O	8:CH:4:GLN:N	2.29	0.66
22:DA:2838:G:O2'	35:DN:45:ARG:NH1	2.28	0.66
22:BA:933:A:H5'	22:BA:934:U:OP2	1.95	0.66
24:BC:136:PRO:O	24:BC:139:SER:OG	2.09	0.66
4:CD:99:ASP:OD1	4:CD:100:ASN:N	2.29	0.66
22:DA:1607:C:O2	22:DA:1621:U:C4	2.49	0.66
30:DI:69:PHE:CD1	30:DI:69:PHE:N	2.64	0.66
35:BN:73:ASN:HA	35:BN:76:VAL:HG12	1.78	0.66
6:CF:8:PHE:CZ	6:CF:60:VAL:HB	2.31	0.66
1:AA:1493:A:OP2	1:AA:1493:A:C8	2.49	0.66
30:BI:97:LYS:CG	30:BI:139:VAL:HG22	2.26	0.66
1:CA:485:U:OP2	1:CA:485:U:H4'	1.96	0.65
22:BA:622:G:OP2	57:BA:3294:HOH:O	2.14	0.65
22:BA:2711:A:OP2	57:BA:3552:HOH:O	2.14	0.65
22:DA:2550:G:O6	22:DA:2551:C:N4	2.28	0.65
22:BA:2189:U:H2'	22:BA:2190:G:N9	2.10	0.65
5:CE:133:PRO:O	5:CE:137:VAL:HG12	1.95	0.65
1:CA:604:G:H2'	1:CA:605:U:O4'	1.96	0.65
22:DA:104:A:N7	22:DA:105:C:C4	2.64	0.65
22:DA:1623:G:C5	22:DA:1624:U:C5	2.84	0.65
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.30	0.65
41:BT:2:ILE:CA	41:BT:3:ARG:HB2	2.26	0.65
1:AA:926:G:N2	1:AA:1505:G:H2'	2.12	0.65
22:DA:1444:G:C2	22:DA:1548:A:C2	2.84	0.65
27:BF:132:VAL:HG22	27:BF:152:LEU:HB3	1.78	0.65
16:AP:10:GLY:HA3	16:AP:15:PRO:HA	1.78	0.65
2:CB:206:ALA:O	2:CB:208:ARG:N	2.29	0.65
22:BA:1509:A:HO2'	22:BA:1510:G:P	2.16	0.65
22:DA:618:G:N7	57:DA:3289:HOH:O	2.28	0.65
32:BK:70:ARG:HD3	32:BK:76:VAL:HG22	1.78	0.65
1:CA:1105:A:C2	1:CA:1106:G:N7	2.65	0.65
22:DA:2788:C:H2'	22:DA:2789:C:C6	2.31	0.65
32:DK:73:ASP:OD2	32:DK:75:SER:OG	2.14	0.65
48:B0:55:ILE:O	48:B0:56:ALA:CB	2.44	0.65
29:BH:14:SER:O	29:BH:15:LEU:HB2	1.95	0.65
46:BY:35:GLY:O	46:BY:36:GLN:O	2.14	0.65
22:DA:2061:G:H2'	22:DA:2501:C:O2'	1.96	0.65
22:DA:443:A:N7	26:DE:40:ARG:CG	2.59	0.65
22:BA:447:A:OP2	57:BA:3210:HOH:O	2.14	0.65
22:DA:564:C:O4'	38:DQ:37:GLN:NE2	2.29	0.65
26:BE:108:ILE:HD11	26:BE:180:LEU:HB3	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1688:U:H1'	22:BA:1701:A:C6	2.32	0.65
42:BU:49:VAL:O	42:BU:49:VAL:CG2	2.44	0.65
22:DA:1203:U:H1'	33:DL:4:ASN:HB3	1.79	0.65
29:BH:139:PHE:O	29:BH:140:ALA:CB	2.44	0.65
1:CA:858:G:O6	1:CA:869:G:H3'	1.96	0.65
22:DA:192:C:N4	22:DA:193:U:O2	2.29	0.65
1:CA:1127:G:H5'	1:CA:1280:A:O2'	1.96	0.65
11:AK:13:ARG:N	22:BA:2141:G:H4'	2.11	0.65
30:BI:19:ASN:N	30:BI:20:PRO:CD	2.60	0.65
1:CA:378:G:C2	1:CA:386:C:O2	2.50	0.65
27:BF:2:ALA:O	27:BF:4:LEU:N	2.30	0.65
48:B0:33:THR:O	48:B0:33:THR:HG22	1.97	0.65
26:DE:108:ILE:HD13	26:DE:181:ILE:CG1	2.26	0.65
22:BA:1439:A:C2	22:BA:1553:A:C5	2.85	0.65
22:DA:35:G:C4	22:DA:454:A:C2	2.84	0.65
22:DA:277:G:H3'	22:DA:277:G:N3	2.11	0.65
22:DA:2226:C:H2'	22:DA:2227:A:O4'	1.97	0.65
22:DA:2164:C:H2'	22:DA:2165:C:C6	2.32	0.65
25:BD:104:VAL:O	25:BD:105:LYS:HB2	1.97	0.65
22:BA:2043:C:OP1	22:BA:2777:G:O2'	2.12	0.65
17:AQ:53:CYS:SG	17:AQ:75:LEU:HD23	2.37	0.65
7:AG:111:ARG:NH1	7:AG:123:GLU:OE2	2.29	0.65
1:CA:160:A:H2'	1:CA:161:A:O4'	1.97	0.65
22:BA:636:G:N7	33:BL:109:LYS:NZ	2.39	0.65
22:DA:2467:C:N4	22:DA:2468:A:C6	2.65	0.65
46:DY:56:LEU:O	46:DY:57:LEU:CB	2.45	0.65
29:BH:114:GLU:HB3	29:BH:133:GLN:O	1.97	0.65
11:AK:34:ILE:HB	11:AK:74:VAL:HG11	1.77	0.65
22:DA:866:A:O4'	22:DA:914:G:N2	2.30	0.65
17:AQ:12:VAL:HG12	17:AQ:13:VAL:N	2.10	0.65
22:DA:2306:C:OP2	22:DA:2307:G:O2'	2.07	0.65
22:BA:2269:G:OP1	57:BA:3513:HOH:O	2.14	0.65
35:DN:107:ASN:O	35:DN:107:ASN:ND2	2.30	0.65
22:DA:70:G:N2	22:DA:71:A:N1	2.44	0.65
1:AA:89:U:O2'	1:AA:90:C:H5''	1.96	0.65
22:BA:2063:C:O2	22:BA:2450:A:N1	2.29	0.65
1:CA:801:U:H2'	1:CA:802:A:H8	1.62	0.65
22:DA:2079:U:H2'	22:DA:2080:A:O4'	1.96	0.65
5:AE:90:THR:HG22	5:AE:91:GLY:N	2.11	0.65
1:AA:1320:C:N3	19:AS:36:ARG:NH1	2.43	0.65
48:B0:48:TYR:CE2	48:B0:53:LYS:HB2	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1460:C:N4	1:CA:1461:G:C6	2.65	0.65
22:DA:2599:G:N7	24:DC:236:GLU:HB3	2.12	0.65
22:DA:996:A:C2	22:DA:997:G:C8	2.85	0.65
22:BA:747:U:C4	22:BA:2613:U:C5	2.84	0.65
1:AA:657:U:O2	15:AO:22:THR:CG2	2.45	0.65
22:BA:2800:A:C2	22:BA:2895:G:H1'	2.31	0.65
34:DM:19:GLY:O	34:DM:38:ARG:NH1	2.29	0.65
11:CK:88:GLY:N	11:CK:114:THR:HG22	2.11	0.65
22:DA:1359:A:C8	22:DA:1373:A:N1	2.65	0.65
22:DA:301:G:H1'	22:DA:302:C:C6	2.32	0.65
1:CA:485:U:O2'	1:CA:486:U:OP1	2.14	0.65
39:BR:39:LEU:HA	39:BR:49:ILE:HG23	1.79	0.65
22:BA:1358:G:N7	57:BA:3406:HOH:O	2.30	0.65
22:BA:813:U:H2'	22:BA:814:C:C6	2.32	0.65
1:CA:17:U:H2'	1:CA:18:C:C6	2.31	0.65
22:DA:757:G:N7	57:DA:3303:HOH:O	2.29	0.65
22:DA:2589:A:OP1	57:DA:3311:HOH:O	2.14	0.65
4:CD:174:ASP:O	4:CD:175:ALA:CB	2.44	0.65
22:BA:858:G:H3'	22:BA:859:G:C8	2.32	0.65
22:BA:2711:A:P	57:BA:3550:HOH:O	2.55	0.65
1:CA:64:G:C8	1:CA:99:C:N4	2.65	0.65
22:BA:1078:U:H1'	22:BA:1088:A:C2	2.32	0.65
1:CA:154:U:C2	1:CA:168:G:N2	2.65	0.65
19:CS:66:MET:SD	19:CS:74:PHE:CZ	2.90	0.65
53:B5:121:MET:CB	53:B5:143:ALA:HB1	2.27	0.65
1:AA:597:G:C2	1:AA:644:U:C2	2.84	0.65
14:AN:54:ASP:OD1	14:AN:59:ARG:NH1	2.27	0.65
12:AL:21:VAL:HG23	12:AL:95:TYR:CE1	2.31	0.65
22:DA:1237:A:H4'	22:DA:1238:G:OP1	1.96	0.65
22:DA:54:G:C2	22:DA:55:G:C8	2.85	0.64
5:AE:82:GLN:HG2	5:AE:150:PRO:HB3	1.78	0.64
1:CA:8:A:C5	4:CD:206:LYS:HB3	2.31	0.64
22:DA:290:U:C4	22:DA:291:G:N7	2.65	0.64
7:AG:40:GLU:HB2	7:AG:44:TYR:CE2	2.32	0.64
35:DN:71:ARG:CG	35:DN:71:ARG:HH21	2.10	0.64
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.32	0.64
22:DA:2307:G:OP1	22:DA:2308:G:N2	2.29	0.64
16:AP:79:ASN:O	16:AP:80:LYS:HB2	1.96	0.64
34:DM:2:LEU:O	34:DM:3:GLN:HB3	1.96	0.64
50:D2:35:ARG:O	50:D2:38:GLY:N	2.30	0.64
22:BA:2637:U:C2'	22:BA:2638:G:H5'	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1566:A:C2	24:DC:213:TRP:CD2	2.85	0.64
29:BH:122:LEU:C	29:BH:123:ARG:HG2	2.17	0.64
16:CP:39:PHE:CD1	16:CP:74:LEU:HD11	2.32	0.64
4:CD:59:GLN:OE1	4:CD:59:GLN:HA	1.96	0.64
8:AH:10:MET:HE1	8:AH:33:LYS:HB3	1.79	0.64
22:BA:733:G:OP2	57:BA:3296:HOH:O	2.14	0.64
51:B3:27:ALA:O	51:B3:28:ASN:HB2	1.98	0.64
1:AA:11:G:C5	1:AA:12:U:C5	2.85	0.64
22:BA:1428:C:C5	22:BA:1569:A:H5''	2.32	0.64
4:AD:130:VAL:HG11	4:AD:135:TYR:CD1	2.33	0.64
1:AA:1053:G:O5'	1:AA:1054:C:H3'	1.96	0.64
1:CA:1007:U:H2'	1:CA:1008:U:C5'	2.27	0.64
22:DA:2199:A:C5	22:DA:2225:A:C6	2.85	0.64
22:DA:1603:A:OP1	57:DA:3409:HOH:O	2.14	0.64
22:DA:2824:C:N4	22:DA:2825:G:N7	2.45	0.64
1:AA:1006:G:OP1	1:AA:1037:C:O2'	2.15	0.64
12:CL:57:LEU:O	12:CL:59:ASN:N	2.29	0.64
22:BA:1700:A:H5'	22:BA:1701:A:OP2	1.97	0.64
17:AQ:12:VAL:O	17:AQ:13:VAL:HG12	1.97	0.64
22:DA:694:U:C2'	22:DA:695:G:H5''	2.27	0.64
22:DA:1416:G:C4	22:DA:1417:C:C5	2.86	0.64
22:DA:1802:A:C2	22:DA:1803:A:C4	2.85	0.64
23:BB:30:C:H2'	23:BB:31:C:H5'	1.79	0.64
22:DA:878:A:N6	22:DA:899:A:O2'	2.31	0.64
28:BG:121:ILE:HD12	28:BG:141:ILE:HG22	1.78	0.64
35:BN:33:ILE:HG13	35:BN:114:GLU:HB3	1.79	0.64
22:DA:1438:U:C5	22:DA:1552:A:C2	2.86	0.64
22:DA:1440:U:O4	57:DA:3628:HOH:O	2.14	0.64
17:AQ:16:LYS:N	17:AQ:17:MET:SD	2.71	0.64
22:DA:72:U:O2'	22:DA:73:A:O5'	2.14	0.64
1:CA:1211:U:O2'	1:CA:1212:U:OP2	2.15	0.64
1:AA:683:G:N2	11:AK:39:GLY:O	2.30	0.64
22:BA:747:U:C4	22:BA:2613:U:C4	2.86	0.64
1:CA:1255:G:C6	1:CA:1279:G:C8	2.86	0.64
27:BF:176:PRO:O	27:BF:177:PHE:CG	2.51	0.64
22:BA:2591:C:OP1	24:BC:238:ARG:NH1	2.29	0.64
2:CB:35:ARG:O	2:CB:37:LYS:N	2.31	0.64
1:CA:945:G:C2	1:CA:946:A:C8	2.85	0.64
10:CJ:91:ASP:N	10:CJ:91:ASP:OD1	2.30	0.64
22:BA:1153:C:P	57:BA:3364:HOH:O	2.54	0.64
1:AA:1310:G:OP2	13:AM:87:ARG:NH2	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:41:LYS:NZ	31:DJ:52:ASP:OD2	2.19	0.64
5:AE:81:LEU:HB3	5:AE:147:MET:HE3	1.79	0.64
22:BA:1474:U:C2'	22:BA:1475:G:H5'	2.27	0.64
25:DD:12:THR:OG1	25:DD:13:ARG:N	2.30	0.64
22:DA:2147:A:H2'	22:DA:2148:G:O4'	1.98	0.64
24:BC:252:THR:O	24:BC:253:LYS:C	2.33	0.64
9:CI:33:ARG:NE	9:CI:37:GLN:OE1	2.30	0.64
26:BE:155:GLU:HA	26:BE:155:GLU:OE1	1.97	0.64
33:DL:38:GLN:O	33:DL:40:SER:N	2.29	0.64
14:AN:21:PHE:HA	14:AN:25:ALA:HB3	1.78	0.64
39:BR:68:ARG:HD3	39:BR:92:TRP:CZ2	2.33	0.64
37:DP:103:ARG:HB3	37:DP:108:ALA:HB2	1.80	0.64
2:CB:119:THR:O	2:CB:120:GLN:HB2	1.98	0.64
22:DA:583:G:C5	22:DA:584:C:C5	2.86	0.64
48:B0:15:MET:O	48:B0:18:SER:HB3	1.98	0.64
1:CA:1061:G:O4'	10:CJ:58:ASN:ND2	2.31	0.64
19:CS:55:ARG:NE	19:CS:79:THR:HG22	2.13	0.64
13:AM:114:LYS:CB	13:AM:115:PRO:HD3	2.26	0.64
22:DA:1027:A:C6	22:DA:1126:A:N3	2.66	0.64
1:CA:829:G:C5	1:CA:858:G:N2	2.66	0.64
35:BN:66:ALA:O	35:BN:69:ARG:O	2.15	0.64
23:BB:116:G:H4'	36:BO:54:VAL:O	1.97	0.64
48:B0:55:ILE:O	48:B0:56:ALA:HB3	1.98	0.64
5:CE:65:GLU:OE1	5:CE:69:ARG:NH2	2.31	0.64
9:CI:120:LYS:HG3	9:CI:123:ARG:HB3	1.78	0.64
22:BA:1869:G:H3'	22:BA:1870:C:H5'	1.80	0.64
22:BA:2128:G:H2'	22:BA:2129:C:O4'	1.97	0.64
22:DA:1907:G:C2	22:DA:1924:C:C2	2.85	0.64
10:AJ:35:GLN:CG	10:AJ:77:VAL:HB	2.27	0.64
1:CA:563:A:H2'	1:CA:567:G:C8	2.33	0.64
22:DA:144:A:C2	22:DA:145:C:C2	2.85	0.64
1:CA:706:A:O2'	11:CK:31:ILE:HD11	1.98	0.64
1:AA:1500:A:OP2	57:AA:1872:HOH:O	2.14	0.64
1:AA:49:U:O4	1:AA:365:U:H5	1.81	0.64
1:AA:663:A:C2	1:AA:743:A:C2	2.86	0.64
22:DA:668:A:C2	22:DA:670:A:C5	2.86	0.64
22:BA:2419:U:O2'	22:BA:2420:C:H5'	1.97	0.64
22:DA:388:G:N7	22:DA:390:U:H2'	2.12	0.64
22:DA:192:C:C5	22:DA:193:U:C2	2.86	0.64
40:DS:66:ILE:O	40:DS:68:ASP:N	2.31	0.64
22:DA:422:A:C2	22:DA:423:A:C4	2.86	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:650:G:C2'	1:AA:651:C:H5'	2.28	0.64
1:CA:527:G:C6	1:CA:528:C:C5	2.86	0.64
42:BU:12:ILE:CG2	42:BU:80:ALA:HB2	2.28	0.64
25:DD:208:LYS:O	25:DD:209:ALA:CB	2.46	0.64
22:BA:645:C:O2'	22:BA:646:U:H5''	1.98	0.64
22:BA:2343:U:HO2'	22:BA:2373:G:HO2'	1.43	0.64
3:AC:139:GLN:O	3:AC:141:ALA:N	2.29	0.64
22:BA:1246:A:H2'	22:BA:1247:A:O5'	1.98	0.64
22:DA:1359:A:C8	22:DA:1373:A:C2	2.86	0.64
17:CQ:21:ILE:N	17:CQ:48:ASP:OD1	2.30	0.64
22:BA:1916:A:H2'	22:BA:1917:U:H1'	1.80	0.64
22:BA:2430:A:H5'	22:BA:2431:U:OP2	1.98	0.64
22:BA:265:A:H4'	22:BA:266:G:OP1	1.98	0.64
34:DM:136:MET:O	43:DV:79:ARG:NH2	2.31	0.64
1:AA:841:C:O2'	2:CB:153:ASP:OD1	2.16	0.64
4:AD:32:CYS:O	4:AD:33:LYS:HB2	1.98	0.64
40:BS:73:LYS:HB2	40:BS:106:VAL:HB	1.79	0.64
26:DE:128:ALA:O	26:DE:130:LYS:N	2.31	0.64
20:AT:81:ALA:O	20:AT:85:LYS:HG2	1.96	0.64
22:DA:187:G:C2	22:DA:210:C:C2	2.86	0.64
22:DA:1440:U:O4	57:DA:3627:HOH:O	2.13	0.63
22:DA:1676:A:H2'	22:DA:1677:A:O4'	1.99	0.63
22:DA:2004:G:P	57:DA:3798:HOH:O	2.56	0.63
22:DA:200:U:O4	22:DA:248:G:C2	2.51	0.63
15:CO:18:ASP:OD1	15:CO:20:ASN:N	2.30	0.63
22:BA:1009:A:OP1	31:BJ:39:LYS:NZ	2.31	0.63
22:BA:2048:G:O6	57:BA:3680:HOH:O	2.11	0.63
1:CA:664:G:N2	1:CA:666:G:C8	2.66	0.63
24:BC:8:PRO:HB3	24:BC:14:ARG:HB2	1.80	0.63
43:BV:80:HIS:CE1	43:BV:83:LYS:CG	2.81	0.63
22:DA:1668:A:O4'	22:DA:1669:A:C2	2.51	0.63
22:DA:1097:U:C5	22:DA:1098:A:H1'	2.33	0.63
22:DA:352:A:H2'	22:DA:353:C:O4'	1.99	0.63
8:CH:2:SER:C	8:CH:4:GLN:H	2.01	0.63
1:AA:663:A:N1	1:AA:743:A:C2	2.66	0.63
44:BW:37:ILE:HG21	44:BW:80:ILE:HG21	1.79	0.63
53:B5:65:LEU:HD11	53:B5:191:ARG:CB	2.28	0.63
22:DA:297:G:C8	57:DA:3229:HOH:O	2.49	0.63
38:BQ:79:PHE:CZ	38:BQ:83:LEU:HD11	2.34	0.63
22:BA:2820:A:N1	25:BD:197:THR:HG22	2.13	0.63
29:DH:117:LEU:CD1	29:DH:130:VAL:HG22	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:996:A:C2	22:BA:997:G:C8	2.85	0.63
37:BP:53:ARG:CG	37:BP:53:ARG:HH11	2.11	0.63
22:DA:1363:C:O2	22:DA:1369:G:C2	2.51	0.63
22:BA:58:G:OP1	41:BT:78:SER:HB2	1.98	0.63
21:CU:21:ARG:HD3	21:CU:21:ARG:N	2.12	0.63
22:BA:545:U:H3'	22:BA:546:U:H4'	1.80	0.63
41:BT:1:MET:O	41:BT:2:ILE:HG13	1.97	0.63
22:DA:668:A:N6	22:DA:670:A:O2'	2.32	0.63
24:BC:144:VAL:HG21	24:BC:162:VAL:HG21	1.79	0.63
39:DR:38:VAL:HG11	39:DR:57:GLY:HA3	1.79	0.63
22:DA:727:A:H2'	22:DA:728:G:C8	2.34	0.63
22:DA:276:U:H2'	22:DA:276:U:O2	1.98	0.63
2:AB:123:ASP:OD1	2:AB:123:ASP:N	2.30	0.63
16:CP:14:ARG:N	16:CP:15:PRO:CD	2.61	0.63
25:DD:149:ASN:OD1	25:DD:150:GLN:N	2.31	0.63
35:DN:87:PHE:O	35:DN:90:ARG:N	2.32	0.63
22:DA:682:G:N2	22:DA:683:U:C2	2.66	0.63
39:BR:49:ILE:HB	39:BR:51:VAL:O	1.99	0.63
22:DA:1096:A:H2'	22:DA:1097:U:O4'	1.97	0.63
22:DA:2408:U:O4	57:DA:3559:HOH:O	2.12	0.63
15:CO:17:ARG:O	15:CO:18:ASP:CB	2.46	0.63
29:DH:117:LEU:HG	29:DH:120:GLY:O	1.98	0.63
1:CA:1167:A:N7	1:CA:1169:A:C5	2.67	0.63
22:DA:2636:C:H2'	22:DA:2637:U:C6	2.34	0.63
22:DA:2048:G:OP1	57:DA:3380:HOH:O	2.15	0.63
53:B5:87:ALA:HB2	53:B5:153:ILE:CB	2.28	0.63
22:BA:322:A:C5	22:BA:340:A:C2	2.86	0.63
4:CD:34:ILE:O	4:CD:35:GLU:HB3	1.98	0.63
1:CA:404:G:N7	4:CD:2:ALA:N	2.46	0.63
11:AK:16:VAL:O	11:AK:17:SER:CB	2.46	0.63
22:BA:1087:G:N2	22:BA:1090:A:C8	2.67	0.63
1:AA:373:A:C2	1:AA:374:A:C8	2.86	0.63
1:AA:77:A:N1	1:AA:91:U:O4	2.30	0.63
22:DA:1094:U:H2'	22:DA:1096:A:OP2	1.99	0.63
1:CA:1150:A:N6	1:CA:1151:A:H62	1.96	0.63
22:DA:945:A:C8	22:DA:2448:A:C2	2.86	0.63
40:BS:38:TYR:CD2	48:B0:39:LEU:HD21	2.33	0.63
22:BA:572:A:OP2	39:BR:80:ARG:NH2	2.29	0.63
22:DA:1805:A:C2	22:DA:1813:G:C2	2.86	0.63
22:DA:2563:U:O4'	22:DA:2566:A:N6	2.31	0.63
22:BA:1768:C:C4	22:BA:1769:U:C5	2.87	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:139:GLN:O	3:CC:141:ALA:N	2.31	0.63
36:BO:31:THR:HG22	36:BO:34:HIS:H	1.64	0.63
23:DB:44:G:N2	23:DB:48:U:O2	2.32	0.63
22:DA:1627:G:C2	22:DA:1628:G:C8	2.86	0.63
22:DA:53:A:C8	22:DA:54:G:C8	2.87	0.63
4:AD:120:HIS:O	4:AD:121:LYS:C	2.37	0.63
13:CM:98:ARG:O	13:CM:100:GLN:N	2.31	0.63
33:DL:93:ASN:OD1	33:DL:94:THR:N	2.31	0.63
28:BG:80:THR:HG22	28:BG:81:GLU:N	2.12	0.63
5:AE:65:GLU:OE1	5:AE:66:LYS:N	2.32	0.63
2:AB:219:ALA:O	2:AB:220:THR:HB	1.98	0.63
1:CA:1141:C:O2'	1:CA:1142:G:O5'	2.15	0.63
22:BA:1317:G:C2	22:BA:1336:A:C2	2.86	0.63
22:BA:1917:U:C4	22:BA:1918:A:C5	2.87	0.63
22:BA:1746:A:H2'	22:BA:1747:U:H6	1.62	0.63
25:DD:104:VAL:O	25:DD:105:LYS:CB	2.46	0.63
22:DA:2652:C:C4	22:DA:2653:U:C4	2.86	0.63
22:BA:1939:U:OP1	22:BA:2604:U:O2'	2.17	0.63
11:CK:125:LYS:O	21:CU:34:ARG:NE	2.32	0.63
1:AA:1161:C:H2'	1:AA:1162:C:C6	2.34	0.63
24:DC:33:LEU:O	24:DC:64:ILE:HD12	1.99	0.63
22:DA:333:G:C5	22:DA:334:C:C5	2.87	0.63
31:DJ:41:LYS:O	31:DJ:44:TYR:N	2.32	0.63
22:DA:1258:U:H2'	22:DA:1259:G:C8	2.33	0.63
30:BI:39:CYS:HA	30:BI:42:PHE:HB3	1.80	0.63
22:DA:1390:U:H2'	22:DA:1391:U:H5'	1.81	0.63
22:DA:1805:A:N3	22:DA:1813:G:C2	2.67	0.63
1:AA:1181:G:O2'	1:AA:1182:G:C5	2.51	0.63
24:BC:237:GLY:C	57:BC:407:HOH:O	2.36	0.63
1:CA:1521:C:N3	1:CA:1522:U:C5	2.67	0.63
22:DA:1313:U:H4'	22:DA:1332:G:H4'	1.79	0.63
25:BD:151:THR:HG22	25:BD:152:PRO:CD	2.29	0.63
23:BB:33:G:O2'	23:BB:34:A:H5'	1.99	0.63
22:DA:1447:C:H2'	22:DA:1448:G:C8	2.34	0.63
22:DA:980:A:C4	22:DA:1136:G:O4'	2.51	0.63
22:BA:1917:U:C2'	22:BA:1918:A:H5'	2.28	0.63
22:BA:1695:G:H1'	24:BC:8:PRO:O	1.98	0.63
22:BA:1717:A:C2'	22:BA:1718:G:O5'	2.47	0.63
26:BE:145:ASP:HB3	26:BE:184:ASP:OD2	1.99	0.63
22:DA:2121:G:N2	22:DA:2177:C:O2	2.31	0.63
12:CL:47:SER:O	12:CL:48:ALA:CB	2.47	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:64:ILE:HG22	37:BP:64:ILE:O	1.97	0.63
22:BA:2448:A:P	57:BA:3687:HOH:O	2.57	0.62
14:AN:72:GLY:O	14:AN:80:SER:HA	1.99	0.62
1:AA:71:A:O2'	1:AA:72:A:OP2	2.16	0.62
1:CA:183:C:O2'	1:CA:184:G:O5'	2.16	0.62
24:DC:237:GLY:O	24:DC:239:ASN:N	2.32	0.62
22:BA:64:A:H2'	22:BA:65:U:C6	2.33	0.62
1:AA:807:A:C5	1:AA:808:C:C5	2.86	0.62
6:CF:32:ALA:O	6:CF:34:GLY:N	2.32	0.62
22:BA:731:C:P	57:BA:3695:HOH:O	2.52	0.62
22:DA:2504:U:C6	55:DA:3001:DOL:H161	2.33	0.62
1:CA:495:A:N1	1:CA:496:A:N6	2.46	0.62
22:DA:1993:U:H4'	25:DD:133:THR:CG2	2.29	0.62
22:DA:2531:A:H5'	28:DG:157:TYR:CZ	2.35	0.62
1:AA:1160:G:O6	1:AA:1181:G:C6	2.51	0.62
22:DA:197:A:H62	22:DA:2430:A:H2'	1.64	0.62
1:CA:815:A:N7	1:CA:1509:C:O2'	2.25	0.62
22:DA:1707:G:N2	22:DA:1752:C:C2	2.67	0.62
1:AA:381:C:H2'	1:AA:382:A:O4'	1.97	0.62
11:AK:69:ARG:HD3	22:BA:2146:C:N3	2.14	0.62
2:AB:73:LYS:O	2:AB:75:ALA:N	2.30	0.62
41:BT:33:LYS:HG3	41:BT:80:TRP:CE3	2.34	0.62
22:DA:2262:U:OP2	44:DW:16:SER:HB2	1.99	0.62
22:DA:2339:C:H2'	22:DA:2340:A:C8	2.34	0.62
22:DA:450:G:N1	22:DA:454:A:OP2	2.29	0.62
4:CD:9:LEU:CD2	4:CD:22:LYS:HD2	2.29	0.62
22:DA:223:A:C5	22:DA:422:A:C8	2.87	0.62
22:DA:2550:G:C6	22:DA:2551:C:N4	2.68	0.62
1:AA:1226:C:OP2	13:AM:90:ARG:NH2	2.32	0.62
22:BA:2192:U:C2'	22:BA:2193:G:H5'	2.29	0.62
39:DR:52:PRO:O	39:DR:53:PHE:CG	2.52	0.62
40:BS:84:ARG:HB2	40:BS:96:ILE:CG1	2.29	0.62
22:BA:757:G:N7	57:BA:3304:HOH:O	2.31	0.62
22:DA:2484:G:OP1	34:DM:44:ARG:NH2	2.32	0.62
1:AA:232:G:H2'	1:AA:233:C:O4'	2.00	0.62
30:DI:6:GLN:O	30:DI:7:ALA:CB	2.48	0.62
1:AA:1504:G:OP2	1:AA:1507:A:O2'	2.16	0.62
22:BA:1073:A:H3'	22:BA:1074:G:H5''	1.80	0.62
4:AD:58:LYS:HG3	4:AD:59:GLN:N	2.13	0.62
1:AA:1493:A:O2'	1:AA:1494:G:OP2	2.17	0.62
22:DA:1623:G:C6	22:DA:1624:U:C5	2.88	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1210:G:O6	22:DA:1237:A:O2'	2.11	0.62
22:DA:669:G:N2	22:DA:670:A:C2	2.67	0.62
22:BA:587:C:OP2	33:BL:21:ARG:NH1	2.32	0.62
10:AJ:48:ARG:NH1	10:AJ:66:GLU:OE1	2.31	0.62
1:CA:1364:U:O2	1:CA:1364:U:H2'	1.99	0.62
1:CA:409:U:OP1	4:CD:24:GLY:CA	2.46	0.62
22:DA:511:U:H5''	22:DA:1235:G:H4'	1.81	0.62
18:CR:24:LYS:O	18:CR:26:ILE:N	2.32	0.62
22:DA:2407:A:OP2	57:DA:3558:HOH:O	2.15	0.62
22:BA:2188:U:H2'	22:BA:2189:U:C6	2.35	0.62
22:DA:247:G:H4'	22:DA:386:G:C5	2.34	0.62
22:DA:2800:A:C2	22:DA:2895:G:H1'	2.34	0.62
32:BK:34:GLY:O	32:BK:35:VAL:C	2.37	0.62
2:AB:186:ILE:HA	2:AB:200:ILE:HB	1.81	0.62
3:CC:173:VAL:O	3:CC:175:LEU:N	2.32	0.62
22:DA:2142:A:C2	22:DA:2150:C:N3	2.67	0.62
41:DT:69:ARG:NH1	57:DT:102:HOH:O	2.32	0.62
1:CA:1007:U:H2'	1:CA:1008:U:H5'	1.81	0.62
22:DA:1627:G:N2	22:DA:1628:G:C8	2.68	0.62
25:BD:133:THR:HG23	25:BD:134:HIS:N	2.15	0.62
22:BA:2321:U:H5'	22:BA:2322:A:OP2	2.00	0.62
13:AM:16:VAL:HG23	13:AM:41:GLU:O	2.00	0.62
22:BA:2066:C:OP1	57:BA:3512:HOH:O	2.16	0.62
33:BL:61:LEU:O	51:B3:13:ARG:HD3	1.99	0.62
1:CA:72:A:N6	1:CA:73:C:N4	2.48	0.62
2:AB:49:MET:O	2:AB:53:ALA:CB	2.47	0.62
22:DA:78:U:H2'	22:DA:79:C:O4'	1.99	0.62
1:CA:801:U:H2'	1:CA:802:A:C8	2.35	0.62
22:BA:1246:A:C2'	22:BA:1247:A:O5'	2.48	0.62
1:CA:1217:C:H2'	1:CA:1218:C:C6	2.35	0.62
36:DO:111:ARG:NH2	36:DO:117:PHE:O	2.33	0.62
1:AA:1446:A:H2'	1:AA:1447:A:H5'	1.81	0.62
46:BY:46:VAL:O	46:BY:50:VAL:HG23	2.00	0.62
7:AG:56:LYS:O	7:AG:57:SER:CB	2.48	0.62
1:CA:1089:G:N2	1:CA:1090:U:H1'	2.15	0.62
22:DA:2133:G:H2'	22:DA:2157:G:N2	2.14	0.62
22:BA:1838:C:C5	22:BA:1899:A:C5	2.87	0.62
22:BA:1802:A:N1	22:BA:1822:C:H1'	2.15	0.62
38:BQ:49:ASP:HA	38:BQ:52:GLN:HB2	1.81	0.62
2:AB:41:ILE:HG21	2:AB:202:GLY:HA2	1.82	0.62
15:AO:2:SER:O	15:AO:3:LEU:CB	2.48	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:106:LYS:HG3	26:BE:200:LEU:HG	1.82	0.62
1:AA:411:A:C5	1:AA:429:U:C5	2.88	0.62
25:BD:13:ARG:HD2	25:BD:15:PHE:CZ	2.35	0.62
13:AM:64:VAL:O	13:AM:69:LEU:HB2	2.00	0.62
22:DA:2146:C:C5'	22:DA:2147:A:OP1	2.48	0.62
22:BA:2327:A:H2'	22:BA:2328:A:C8	2.34	0.62
22:BA:1078:U:H1'	22:BA:1088:A:N1	2.15	0.62
15:CO:18:ASP:OD1	15:CO:20:ASN:HB2	1.99	0.62
22:BA:572:A:H5''	22:BA:573:U:OP2	2.00	0.62
1:CA:1521:C:C4	1:CA:1522:U:C5	2.87	0.62
2:AB:75:ALA:O	2:AB:76:ALA:HB2	2.00	0.62
22:DA:237:C:C4	22:DA:238:C:C5	2.87	0.62
53:B5:213:VAL:O	53:B5:214:TYR:CB	2.46	0.62
28:BG:174:ALA:O	28:BG:175:LYS:CB	2.47	0.62
14:AN:14:VAL:HA	14:AN:60:GLN:OE1	1.99	0.62
22:DA:1582:C:O2'	22:DA:1585:C:N3	2.30	0.62
20:AT:58:VAL:HG12	20:AT:59:ASP:N	2.14	0.62
5:AE:101:GLU:HB3	5:AE:122:ASN:CB	2.30	0.62
2:CB:58:ASN:CG	2:CB:220:THR:O	2.37	0.62
22:DA:1544:A:C6	22:DA:1545:A:N1	2.68	0.62
24:DC:80:ARG:NE	24:DC:82:GLU:OE2	2.32	0.62
7:CG:5:ARG:HA	7:CG:5:ARG:NE	2.15	0.62
22:DA:160:A:N3	22:DA:2208:C:O2'	2.32	0.62
22:DA:1827:U:O4'	22:DA:1970:A:O2'	2.17	0.62
9:CI:15:SER:OG	9:CI:69:GLY:O	2.10	0.62
37:BP:103:ARG:CG	37:BP:103:ARG:HH11	2.13	0.62
1:CA:790:A:C6	1:CA:791:G:C6	2.87	0.62
29:BH:93:SER:O	1:CA:368:U:C6	2.53	0.61
1:CA:243:A:H4'	1:CA:244:U:H5''	1.81	0.61
22:DA:129:C:H2'	22:DA:130:C:C6	2.35	0.61
17:AQ:69:LYS:O	17:AQ:70:THR:HB	2.00	0.61
22:BA:2584:U:H2'	22:BA:2585:U:H5'	1.81	0.61
22:DA:1060:U:O4'	22:DA:1062:G:H5'	2.00	0.61
22:DA:46:G:C2	22:DA:47:C:C6	2.87	0.61
1:AA:1366:C:O2'	10:AJ:62:ARG:NH2	2.33	0.61
27:BF:108:VAL:HG11	27:BF:176:PRO:HG2	1.81	0.61
22:BA:2820:A:C6	25:BD:197:THR:HG22	2.35	0.61
22:DA:1805:A:C2	22:DA:1813:G:N1	2.68	0.61
22:DA:2726:A:O2'	22:DA:2727:A:O5'	2.18	0.61
22:DA:1248:G:N7	26:DE:46:GLN:NE2	2.47	0.61
22:BA:253:C:OP2	51:B3:5:LYS:HE3	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:10:LEU:CD1	10:AJ:98:VAL:HG12	2.30	0.61
22:DA:497:A:H2'	22:DA:498:G:O4'	2.00	0.61
1:AA:723:U:H5'	1:AA:724:G:OP1	2.00	0.61
4:CD:29:ASP:C	4:CD:31:LYS:H	2.04	0.61
1:AA:1491:G:H2'	1:AA:1492:A:O4'	2.00	0.61
1:AA:263:A:OP2	20:AT:74:ARG:NH1	2.33	0.61
29:DH:32:PRO:O	29:DH:33:GLN:CB	2.48	0.61
42:BU:18:ASP:O	42:BU:19:LYS:C	2.39	0.61
22:DA:200:U:C4	22:DA:248:G:C2	2.88	0.61
22:DA:196:A:O2'	22:DA:805:G:O6	2.11	0.61
22:BA:2820:A:N1	25:BD:197:THR:CG2	2.63	0.61
43:BV:48:MET:SD	43:BV:86:LEU:HD12	2.40	0.61
22:DA:1790:C:O2'	24:DC:208:ALA:HB2	2.00	0.61
7:CG:101:MET:HA	7:CG:104:ILE:HD12	1.81	0.61
22:DA:2590:A:O3'	24:DC:238:ARG:NH1	2.33	0.61
22:BA:1106:G:N2	22:BA:1107:G:H1'	2.15	0.61
1:CA:1467:C:H2'	1:CA:1468:A:C8	2.35	0.61
20:CT:67:ILE:O	20:CT:67:ILE:CG2	2.49	0.61
1:AA:872:A:C5	1:AA:874:G:C8	2.89	0.61
1:AA:1167:A:N7	1:AA:1169:A:C6	2.68	0.61
22:DA:1855:U:C5	22:DA:1856:U:C5	2.88	0.61
44:BW:68:LYS:HD3	44:BW:83:GLU:OE2	2.00	0.61
1:CA:1417:G:C6	1:CA:1482:G:C6	2.88	0.61
12:CL:25:GLU:O	12:CL:26:ALA:C	2.37	0.61
42:BU:16:GLY:O	42:BU:18:ASP:N	2.33	0.61
2:CB:21:ARG:HA	2:CB:21:ARG:NH1	2.16	0.61
1:CA:1169:A:C2	1:CA:1170:A:C4	2.88	0.61
28:DG:169:VAL:O	28:DG:169:VAL:HG12	2.00	0.61
1:CA:728:A:C8	15:CO:54:ARG:CZ	2.83	0.61
22:BA:1450:G:C6	22:BA:1451:C:N4	2.68	0.61
22:DA:1430:G:H2'	22:DA:1431:A:O4'	1.99	0.61
7:CG:68:ASN:ND2	7:CG:130:ASN:OD1	2.34	0.61
22:BA:319:G:C4	22:BA:333:G:N2	2.67	0.61
22:BA:1585:C:H2'	22:BA:1586:A:O4'	1.99	0.61
37:BP:26:VAL:HG13	37:BP:47:VAL:HG23	1.81	0.61
5:AE:45:ARG:HG2	5:AE:73:ASN:HB3	1.82	0.61
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.33	0.61
22:DA:771:G:C2	22:DA:772:C:C6	2.89	0.61
22:DA:425:G:N2	22:DA:426:C:C2	2.68	0.61
4:AD:26:ARG:HD2	4:AD:31:LYS:HE3	1.82	0.61
23:DB:29:A:H2'	23:DB:30:C:C6	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1674:G:N2	22:DA:1677:A:H61	1.98	0.61
1:CA:1345:U:N3	1:CA:1377:A:C2	2.68	0.61
22:DA:1951:U:H2'	22:DA:1953:A:OP2	2.01	0.61
39:BR:49:ILE:HB	39:BR:52:PRO:O	1.99	0.61
22:BA:528:A:C8	22:BA:528:A:H3'	2.35	0.61
22:DA:740:C:H5'	22:DA:1784:A:C3'	2.30	0.61
4:CD:58:LYS:NZ	4:CD:59:GLN:OE1	2.30	0.61
22:BA:1251:C:OP2	38:BQ:6:ARG:HD2	2.00	0.61
19:AS:64:ASP:O	19:AS:65:GLU:HB3	2.00	0.61
22:DA:242:G:O2'	22:DA:254:G:O6	2.15	0.61
20:AT:3:ASN:OD1	20:AT:3:ASN:C	2.39	0.61
22:BA:566:U:OP1	33:BL:29:LYS:HD2	2.00	0.61
22:BA:1028:A:N6	22:BA:1125:G:H2'	2.15	0.61
22:BA:1590:A:H2'	22:BA:1591:A:C8	2.35	0.61
39:BR:14:VAL:CG1	39:BR:98:ILE:HG13	2.30	0.61
40:DS:67:ASP:OD1	40:DS:67:ASP:N	2.32	0.61
22:BA:983:A:N6	22:BA:984:A:N1	2.49	0.61
22:BA:877:A:N6	22:BA:899:A:C6	2.69	0.61
27:BF:52:ASN:CB	27:BF:147:ASP:OD1	2.49	0.61
16:CP:28:ARG:HG3	16:CP:29:ASN:OD1	2.01	0.61
22:DA:2056:G:C2	22:DA:2057:G:C8	2.88	0.61
6:AF:3:HIS:N	6:AF:92:THR:HG23	2.15	0.61
1:CA:511:C:C2	1:CA:512:U:C6	2.88	0.61
1:CA:1151:A:N3	1:CA:1152:A:C5	2.68	0.61
40:BS:37:THR:HG22	40:BS:38:TYR:CD1	2.35	0.61
12:CL:47:SER:O	12:CL:48:ALA:HB2	2.01	0.61
41:BT:67:VAL:HG22	41:BT:76:ARG:HG2	1.82	0.61
40:BS:63:GLY:O	40:BS:64:ALA:CB	2.48	0.61
6:CF:98:GLU:O	6:CF:99:ALA:HB3	2.00	0.61
22:DA:749:A:C5	22:DA:750:A:N7	2.69	0.61
22:BA:1936:A:H2	22:BA:1943:U:H3	1.48	0.61
38:BQ:24:TYR:O	38:BQ:25:TYR:HB2	2.00	0.61
22:BA:1132:U:H3'	22:BA:1133:A:H5''	1.81	0.61
1:AA:64:G:C8	1:AA:99:C:C4	2.89	0.61
22:DA:136:G:N2	22:DA:144:A:N7	2.48	0.61
17:AQ:14:SER:HB3	17:AQ:22:VAL:CG1	2.30	0.61
11:AK:69:ARG:CD	22:BA:2146:C:N3	2.64	0.61
22:BA:18:U:OP1	38:BQ:30:ARG:NH2	2.33	0.61
1:AA:119:A:OP2	1:AA:288:A:N6	2.30	0.61
9:AI:120:LYS:HG3	9:AI:123:ARG:CB	2.31	0.61
13:AM:74:SER:O	13:AM:78:LYS:HG3	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:57:GLU:OE2	4:CD:196:ASN:N	2.34	0.61
1:AA:1151:A:C4	1:AA:1152:A:N7	2.69	0.61
53:B5:184:GLU:O	53:B5:185:LYS:CB	2.49	0.61
38:BQ:76:TYR:OH	38:BQ:92:ARG:NH1	2.33	0.61
29:DH:83:LYS:H	29:DH:149:GLU:HG2	1.64	0.61
4:AD:26:ARG:HD2	4:AD:31:LYS:HD2	1.82	0.61
9:AI:43:THR:O	9:AI:44:ALA:HB3	1.99	0.61
17:AQ:45:HIS:CD2	17:AQ:70:THR:HG23	2.36	0.61
22:DA:2550:G:C6	22:DA:2551:C:C4	2.88	0.61
22:DA:1779:U:H5	22:DA:1784:A:N7	1.99	0.61
4:AD:3:ARG:NE	4:AD:115:ARG:HD3	2.14	0.61
1:AA:1062:U:H2'	1:AA:1063:C:C5	2.36	0.61
35:BN:73:ASN:HA	35:BN:76:VAL:CG1	2.30	0.61
10:AJ:80:THR:O	10:AJ:82:LYS:N	2.33	0.61
22:DA:1868:C:N4	22:DA:1869:G:O6	2.34	0.61
22:BA:1563:U:H2'	22:BA:1564:C:C6	2.36	0.61
22:DA:2742:G:O6	57:DA:3787:HOH:O	2.12	0.61
22:DA:724:U:H2'	22:DA:725:G:O4'	2.00	0.61
9:AI:91:ASP:OD2	9:AI:93:SER:N	2.34	0.61
41:BT:48:GLN:O	41:BT:52:GLU:HA	2.01	0.61
1:CA:955:U:O2'	1:CA:1227:A:N6	2.33	0.61
22:BA:980:A:C6	22:BA:981:A:N1	2.68	0.61
33:DL:56:PRO:O	33:DL:60:ARG:HB2	2.00	0.61
5:AE:105:ILE:O	5:AE:112:ARG:NH1	2.33	0.61
29:BH:97:ARG:HH11	1:CA:370:C:H5'	1.66	0.61
29:BH:97:ARG:NH1	1:CA:369:G:O2'	2.33	0.61
35:DN:69:ARG:O	35:DN:71:ARG:N	2.34	0.61
24:DC:210:ALA:HA	24:DC:213:TRP:CE2	2.36	0.61
1:AA:923:A:O4'	1:AA:1398:A:C2	2.54	0.61
18:CR:33:ILE:HA	18:CR:40:VAL:HG23	1.82	0.61
1:CA:570:G:H5''	1:CA:571:U:OP2	2.01	0.61
13:AM:46:SER:O	13:AM:47:GLU:HB3	2.00	0.61
22:DA:2058:A:N6	22:DA:2059:A:N6	2.49	0.61
22:BA:1187:G:H5''	39:BR:83:TYR:CE2	2.35	0.61
11:AK:125:LYS:O	11:AK:126:LYS:O	2.19	0.61
22:BA:1674:G:N2	22:BA:1677:A:N1	2.47	0.61
22:BA:1131:G:OP1	31:BJ:82:GLY:HA2	2.00	0.61
1:CA:811:C:N4	1:CA:812:G:C6	2.69	0.61
22:DA:38:A:H2'	22:DA:39:G:O4'	2.00	0.61
24:DC:16:VAL:HG22	24:DC:206:GLY:HA3	1.82	0.61
6:CF:9:MET:SD	6:CF:59:TYR:CE1	2.94	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:154:U:C2'	1:CA:155:A:H5'	2.31	0.61
10:AJ:33:GLY:O	10:AJ:34:ALA:CB	2.49	0.61
1:CA:518:C:H4'	1:CA:519:C:O5'	2.00	0.61
1:AA:448:A:C4	1:AA:487:A:C2	2.88	0.61
22:DA:2001:C:H4'	22:DA:2689:U:H2'	1.82	0.61
32:DK:18:ARG:HB2	32:DK:45:GLU:HB3	1.82	0.61
32:BK:107:LEU:O	32:BK:109:SER:N	2.33	0.61
22:DA:467:G:OP1	50:D2:33:ARG:NH1	2.34	0.61
49:B1:28:ARG:HG2	49:B1:28:ARG:O	2.01	0.61
25:DD:35:THR:O	25:DD:36:GLN:CB	2.49	0.61
22:DA:1360:G:C2	22:DA:1361:G:H1'	2.36	0.61
5:AE:83:HIS:HB2	5:AE:84:PRO:HD2	1.83	0.61
22:BA:301:G:OP2	42:BU:82:ARG:NH1	2.34	0.61
22:BA:142:A:C5	22:BA:143:C:C4	2.89	0.61
46:BY:45:GLN:O	46:BY:46:VAL:HB	2.01	0.61
1:CA:791:G:C6	1:CA:792:A:N7	2.68	0.61
1:AA:1539:C:H5''	21:AU:18:ARG:CG	2.31	0.61
22:DA:636:G:N1	33:DL:76:GLU:OE2	2.33	0.61
22:DA:893:C:H2'	22:DA:894:U:O4'	2.01	0.61
6:CF:69:GLU:O	6:CF:72:ASP:HB3	2.00	0.61
1:CA:577:G:C8	1:CA:816:A:C6	2.89	0.61
2:CB:167:ASP:O	2:CB:168:HIS:CB	2.48	0.61
22:DA:2293:G:OP1	22:DA:2377:A:N6	2.34	0.61
44:DW:45:PHE:CD2	44:DW:80:ILE:HD11	2.35	0.61
2:AB:118:GLU:O	2:AB:121:SER:N	2.32	0.61
43:BV:10:LYS:N	43:BV:10:LYS:HE2	2.15	0.61
22:BA:1014:A:C5	22:BA:1015:U:C5	2.88	0.61
5:CE:25:VAL:N	5:CE:28:GLY:O	2.34	0.61
1:CA:829:G:C6	1:CA:858:G:N2	2.69	0.60
22:DA:56:A:C2	22:DA:57:C:C2	2.89	0.60
1:CA:718:A:N7	1:CA:719:C:C5	2.69	0.60
14:AN:43:ASN:OD1	14:AN:47:LYS:NZ	2.34	0.60
22:DA:353:C:H2'	22:DA:354:A:C8	2.35	0.60
22:DA:200:U:C4	22:DA:248:G:N2	2.69	0.60
37:DP:103:ARG:CB	37:DP:108:ALA:HB2	2.31	0.60
22:BA:1206:G:C5	22:BA:1207:C:C5	2.89	0.60
22:DA:1914:C:H3'	22:DA:1915:U:C6	2.36	0.60
22:BA:2243:U:OP1	57:BA:3740:HOH:O	2.16	0.60
22:DA:834:G:H1'	22:DA:2358:A:N3	2.16	0.60
22:DA:182:A:H2'	22:DA:183:C:C6	2.36	0.60
22:BA:1917:U:H2'	22:BA:1918:A:H5'	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:101:GLU:CB	5:AE:122:ASN:HB2	2.31	0.60
1:AA:792:A:N3	1:AA:794:A:C5	2.69	0.60
15:CO:17:ARG:O	15:CO:18:ASP:HB3	2.01	0.60
1:AA:151:A:H2'	1:AA:152:A:O4'	2.01	0.60
2:AB:33:GLY:HA3	2:AB:40:ILE:N	2.16	0.60
22:DA:2720:U:OP1	37:DP:53:ARG:NH2	2.35	0.60
22:BA:1798:U:OP2	24:BC:271:ARG:NH2	2.34	0.60
21:CU:12:PHE:O	21:CU:13:ASP:HB2	2.01	0.60
37:DP:54:GLY:O	37:DP:77:HIS:NE2	2.34	0.60
22:DA:43:G:N2	22:DA:437:U:C6	2.70	0.60
21:CU:14:VAL:HG12	21:CU:16:LEU:HG	1.83	0.60
22:BA:608:A:N1	22:BA:609:A:C2	2.68	0.60
22:DA:2790:U:H5'	22:DA:2893:A:N7	2.15	0.60
29:BH:121:VAL:N	29:BH:122:LEU:HB2	2.16	0.60
22:DA:1361:G:C2	22:DA:1362:C:C6	2.88	0.60
22:BA:1923:U:O2'	22:BA:1924:C:C5'	2.49	0.60
1:CA:717:U:O2'	1:CA:734:G:O4'	2.13	0.60
22:DA:362:A:C4	22:DA:363:G:C8	2.90	0.60
14:CN:52:PRO:O	14:CN:53:ARG:CB	2.49	0.60
27:BF:2:ALA:O	27:BF:3:LYS:C	2.38	0.60
53:B5:99:GLU:O	53:B5:103:LYS:CB	2.50	0.60
8:CH:10:MET:HE1	8:CH:36:ILE:HB	1.83	0.60
22:BA:1360:G:C6	22:BA:1372:U:C2	2.89	0.60
37:DP:29:LYS:HB3	37:DP:40:LEU:HD21	1.83	0.60
49:B1:29:THR:C	49:B1:31:PRO:HD3	2.22	0.60
22:BA:756:A:N7	57:BA:3301:HOH:O	2.31	0.60
29:BH:100:ALA:HB1	29:BH:112:LYS:HA	1.83	0.60
22:DA:528:A:N1	22:DA:2043:C:O5'	2.34	0.60
22:BA:1065:U:O4	22:BA:1074:G:O2'	2.17	0.60
4:AD:26:ARG:CD	4:AD:31:LYS:HD2	2.32	0.60
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.37	0.60
22:BA:2318:G:C6	22:BA:2319:G:N1	2.70	0.60
39:BR:29:THR:O	39:BR:63:VAL:HB	2.01	0.60
1:CA:1240:U:OP2	7:CG:116:MET:N	2.34	0.60
22:DA:2645:G:H3'	22:DA:2646:C:H5'	1.83	0.60
1:AA:587:G:N2	1:AA:755:G:C5	2.69	0.60
22:DA:1427:A:N6	22:DA:1571:A:OP2	2.35	0.60
29:DH:126:GLY:O	29:DH:146:VAL:HG23	2.00	0.60
22:DA:1973:G:C5	22:DA:1974:C:C4	2.89	0.60
1:CA:73:C:O2'	1:CA:74:A:O5'	2.18	0.60
33:BL:68:SER:O	33:BL:69:ARG:CB	2.50	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1717:A:H2'	22:BA:1718:G:O5'	2.01	0.60
22:BA:695:G:C2	22:BA:696:G:C8	2.89	0.60
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.37	0.60
15:CO:53:ARG:O	15:CO:56:LEU:N	2.35	0.60
22:DA:1753:G:C2	22:DA:1756:G:N2	2.70	0.60
38:DQ:25:TYR:CD2	38:DQ:26:GLY:N	2.69	0.60
22:BA:1485:U:H2'	22:BA:1486:U:C6	2.36	0.60
31:DJ:35:ARG:HG2	31:DJ:40:HIS:CD2	2.37	0.60
6:CF:36:ILE:HG12	6:CF:36:ILE:O	2.01	0.60
1:AA:1528:U:O3'	1:AA:1529:G:H3'	2.02	0.60
5:CE:157:ARG:HD3	5:CE:158:GLY:N	2.16	0.60
22:DA:2162:G:C4'	22:DA:2163:A:OP1	2.50	0.60
1:AA:1304:G:N1	1:AA:1305:G:N2	2.49	0.60
22:DA:1317:G:C2	22:DA:1336:A:C2	2.89	0.60
2:AB:154:MET:O	2:AB:156:GLY:N	2.34	0.60
27:DF:122:PHE:O	27:DF:124:GLY:N	2.34	0.60
13:AM:114:LYS:HB2	13:AM:115:PRO:HD3	1.82	0.60
22:BA:1585:C:C2'	22:BA:1586:A:H5'	2.31	0.60
22:BA:608:A:C6	22:BA:609:A:C6	2.90	0.60
1:AA:265:G:H4'	17:AQ:67:LEU:O	2.01	0.60
1:AA:67:C:O2'	1:AA:171:A:N3	2.26	0.60
22:DA:1055:G:O2'	22:DA:1085:A:N1	2.34	0.60
22:DA:2820:A:C8	25:DD:196:ALA:HB1	2.35	0.60
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.36	0.60
1:CA:1285:A:H4'	1:CA:1286:U:C5	2.37	0.60
1:AA:781:A:C5	1:AA:802:A:C2	2.90	0.60
1:AA:719:C:O2'	18:AR:39:ILE:O	2.16	0.60
20:CT:44:LYS:NZ	20:CT:86:LEU:O	2.31	0.60
45:BX:2:SER:O	45:BX:4:VAL:N	2.34	0.60
29:BH:117:LEU:CD2	29:BH:121:VAL:HA	2.31	0.60
5:CE:106:ILE:HD11	5:CE:124:LEU:HD23	1.84	0.60
1:AA:1269:A:C2	1:AA:1313:U:O4'	2.54	0.60
39:DR:78:ARG:HB3	39:DR:83:TYR:CD1	2.37	0.60
1:CA:716:A:N3	11:CK:119:ASN:O	2.35	0.60
42:BU:49:VAL:O	42:BU:49:VAL:HG22	2.01	0.60
9:AI:120:LYS:HG3	9:AI:123:ARG:HB3	1.84	0.60
22:DA:1197:G:H2'	22:DA:1198:U:C6	2.37	0.60
28:DG:96:ALA:N	28:DG:128:GLN:O	2.34	0.60
13:AM:29:ARG:CZ	13:AM:63:PHE:HB2	2.32	0.60
22:BA:2380:C:OP1	36:BO:17:LYS:NZ	2.34	0.60
5:CE:101:GLU:O	5:CE:103:THR:CA	2.50	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:280:U:O4	22:DA:361:G:N2	2.35	0.60
22:BA:136:G:N2	22:BA:144:A:C5	2.70	0.60
22:DA:2563:U:H1'	22:DA:2566:A:C6	2.37	0.60
24:BC:117:GLN:N	24:BC:128:ASN:OD1	2.33	0.60
50:D2:10:LEU:O	50:D2:14:ARG:HG3	2.02	0.60
1:AA:702:A:N6	22:BA:1846:G:O2'	2.35	0.60
14:CN:31:ILE:O	14:CN:33:ASP:N	2.35	0.60
5:CE:83:HIS:CD2	8:CH:96:MET:CE	2.84	0.60
52:D4:19:ARG:O	52:D4:20:ASP:HB2	2.01	0.60
22:BA:1224:U:H4'	39:BR:88:GLY:O	2.00	0.60
52:B4:24:ARG:NH1	52:B4:36:ARG:HD2	2.17	0.60
1:AA:1202:U:C2	1:AA:1203:C:C6	2.90	0.60
1:AA:1074:G:O2'	1:AA:1101:A:N1	2.29	0.60
22:BA:278:A:C2	22:BA:362:A:C8	2.88	0.60
29:BH:97:ARG:NH1	1:CA:370:C:H5'	2.16	0.60
5:CE:137:VAL:O	5:CE:138:ARG:HG2	2.01	0.60
22:BA:686:U:H2'	22:BA:788:A:C2	2.36	0.60
1:CA:779:C:C2'	1:CA:780:A:H5'	2.32	0.60
22:BA:2799:A:O2'	22:BA:2800:A:O5'	2.20	0.60
4:CD:34:ILE:O	4:CD:35:GLU:CB	2.49	0.60
22:BA:2297:A:N1	22:BA:2321:U:C5	2.69	0.60
6:CF:36:ILE:CG1	6:CF:36:ILE:O	2.49	0.60
22:BA:273:G:N2	22:BA:365:U:C2	2.69	0.60
4:AD:17:THR:CG2	4:AD:18:ASP:N	2.64	0.60
1:CA:268:U:H2'	1:CA:269:C:C6	2.36	0.60
22:BA:2211:A:H1'	22:BA:2212:A:OP1	2.02	0.60
22:BA:927:A:H2'	22:BA:928:A:C8	2.37	0.60
22:DA:537:G:N1	22:DA:555:G:C2	2.70	0.60
1:AA:1123:U:O2'	10:AJ:39:PRO:O	2.17	0.60
4:AD:2:ALA:O	4:AD:68:LEU:HD21	2.02	0.60
22:DA:2854:G:C2	22:DA:2864:G:C2	2.89	0.60
1:CA:375:U:C2	1:CA:376:G:C8	2.90	0.60
1:CA:388:G:O2'	1:CA:389:A:OP1	2.18	0.60
12:CL:21:VAL:O	12:CL:23:ALA:N	2.35	0.60
10:AJ:53:ILE:HG22	10:AJ:61:ALA:HB1	1.84	0.60
1:CA:1151:A:C2	1:CA:1152:A:C6	2.90	0.60
22:BA:1439:A:C2	22:BA:1553:A:C4	2.90	0.60
1:CA:154:U:H2'	1:CA:155:A:H5'	1.84	0.60
10:AJ:33:GLY:O	10:AJ:34:ALA:HB3	2.02	0.60
22:BA:2318:G:C6	22:BA:2319:G:C6	2.89	0.60
1:AA:890:G:O2'	1:AA:906:A:N6	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:57:MET:HB3	9:CI:61:LEU:CD2	2.32	0.60
42:DU:18:ASP:OD2	42:DU:18:ASP:N	2.35	0.60
22:DA:1006:C:OP2	57:DA:3779:HOH:O	2.17	0.60
4:CD:4:TYR:O	4:CD:5:LEU:HB2	2.01	0.60
1:CA:692:U:O2'	1:CA:694:A:N7	2.29	0.60
22:BA:1997:C:OP2	25:BD:129:THR:HG22	2.02	0.60
29:BH:93:SER:O	1:CA:368:U:C5	2.55	0.59
22:BA:1075:C:H2'	22:BA:1076:C:C2	2.37	0.59
47:DZ:52:SER:OG	47:DZ:53:PHE:N	2.33	0.59
22:DA:118:A:N7	22:DA:119:A:C8	2.70	0.59
1:CA:527:G:N1	1:CA:528:C:C5	2.70	0.59
22:DA:395:U:H4'	22:DA:396:G:OP1	2.02	0.59
1:CA:511:C:O2	1:CA:512:U:C6	2.55	0.59
22:BA:1322:A:O3'	40:BS:84:ARG:NH1	2.35	0.59
22:DA:1127:A:C2'	22:DA:1128:G:H5''	2.32	0.59
22:DA:1875:G:C2'	22:DA:1876:A:OP2	2.50	0.59
30:DI:114:ALA:O	30:DI:115:ALA:CB	2.49	0.59
22:BA:1736:U:H2'	22:BA:1737:G:O4'	2.02	0.59
1:AA:591:U:P	8:AH:31:LYS:HD2	2.42	0.59
32:BK:4:GLU:O	32:BK:5:GLN:HB2	2.02	0.59
9:AI:113:ARG:NH2	14:AN:101:TRP:CZ2	2.69	0.59
42:DU:53:ASN:O	42:DU:53:ASN:ND2	2.35	0.59
31:DJ:77:HIS:HA	31:DJ:83:GLY:O	2.00	0.59
22:BA:2444:G:P	26:BE:63:LYS:HD3	2.41	0.59
29:BH:99:ILE:HB	29:BH:115:VAL:HG11	1.84	0.59
22:DA:1109:C:H5''	22:DA:1110:G:OP2	2.01	0.59
22:DA:1436:G:C2	22:DA:1437:C:H1'	2.37	0.59
4:AD:25:VAL:HG12	4:AD:26:ARG:N	2.18	0.59
22:DA:2551:C:OP2	57:DA:3719:HOH:O	2.16	0.59
27:BF:83:TYR:O	27:BF:85:ILE:HG22	2.03	0.59
22:DA:1226:A:OP1	38:DQ:16:LYS:NZ	2.35	0.59
24:BC:6:CYS:SG	24:BC:18:LYS:HD2	2.43	0.59
1:CA:577:G:C8	1:CA:816:A:N1	2.70	0.59
35:BN:49:GLU:OE2	35:BN:95:THR:HG22	2.01	0.59
22:DA:2840:C:H2'	22:DA:2841:C:C6	2.37	0.59
6:AF:63:ASN:OD1	6:AF:96:VAL:CG2	2.50	0.59
4:AD:191:LEU:O	4:AD:192:SER:HB3	2.02	0.59
29:BH:94:ILE:HG22	29:BH:99:ILE:CG1	2.32	0.59
22:DA:82:U:C2	22:DA:83:A:C8	2.90	0.59
50:D2:44:VAL:HG13	50:D2:45:SER:N	2.17	0.59
1:AA:131:A:O2'	1:AA:262:A:N3	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:468:A:C2	1:AA:469:C:C4	2.90	0.59
1:CA:1072:G:C6	1:CA:1073:U:C4	2.90	0.59
39:DR:39:LEU:HA	39:DR:49:ILE:HG21	1.83	0.59
33:BL:77:ILE:HG23	33:BL:100:ILE:HD11	1.84	0.59
10:AJ:35:GLN:HG2	10:AJ:77:VAL:HB	1.84	0.59
22:DA:2159:G:H2'	22:DA:2160:C:C6	2.36	0.59
28:DG:176:LYS:O	28:DG:177:LYS:HB2	2.02	0.59
22:DA:230:G:C2	22:DA:231:A:C8	2.90	0.59
23:DB:37:C:C5	23:DB:38:C:C5	2.90	0.59
30:DI:76:ALA:CB	30:DI:129:ILE:HG23	2.33	0.59
22:DA:2681:C:C2	22:DA:2724:U:O4	2.55	0.59
33:BL:57:LEU:CD2	51:B3:54:ASP:HB3	2.33	0.59
22:DA:2234:G:C6	22:DA:2235:G:N7	2.70	0.59
1:CA:992:U:C4	1:CA:1043:G:C8	2.90	0.59
1:CA:1005:A:O3'	1:CA:1037:C:O2'	2.15	0.59
22:BA:361:G:O2'	22:BA:362:A:O5'	2.17	0.59
22:BA:2187:U:H2'	22:BA:2188:U:C1'	2.33	0.59
22:DA:2432:A:N1	45:DX:21:ALA:HA	2.17	0.59
22:BA:983:A:C6	22:BA:984:A:C2	2.90	0.59
22:BA:877:A:C6	22:BA:899:A:C6	2.90	0.59
14:CN:61:ARG:O	14:CN:62:ASN:HB2	2.02	0.59
22:DA:2811:G:H2'	22:DA:2812:G:O4'	2.02	0.59
1:CA:1259:C:H3'	1:CA:1260:G:H5''	1.85	0.59
1:AA:135:C:N3	16:AP:1:MET:N	2.41	0.59
22:BA:1794:A:H2'	22:BA:1795:C:H6	1.65	0.59
1:AA:16:A:O2'	1:AA:17:U:H5'	2.03	0.59
22:DA:1688:U:C4	22:DA:1698:A:C2	2.90	0.59
23:DB:4:C:C2	23:DB:117:G:N2	2.70	0.59
22:DA:2452:C:O4'	55:DA:3001:DOL:H461	2.03	0.59
22:BA:1190:G:OP1	33:BL:32:GLY:HA2	2.01	0.59
22:DA:1343:G:H1'	22:DA:1597:A:C4	2.37	0.59
22:BA:1178:C:H2'	22:BA:1179:G:N7	2.17	0.59
22:DA:2199:A:O4'	29:DH:28:ASN:ND2	2.36	0.59
22:DA:396:G:C5'	45:DX:13:VAL:HG21	2.31	0.59
30:DI:58:VAL:CG1	30:DI:59:ILE:N	2.65	0.59
22:DA:484:C:N4	22:DA:497:A:C2	2.70	0.59
22:DA:1869:G:H3'	22:DA:1870:C:H5'	1.84	0.59
1:AA:601:G:H2'	1:AA:602:A:C8	2.37	0.59
22:BA:1827:U:O4	57:BA:3786:HOH:O	2.16	0.59
22:BA:1731:G:C2	22:BA:1733:G:C4	2.91	0.59
1:AA:1055:A:C6	1:AA:1206:G:C5	2.90	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2017:U:H4'	48:B0:5:GLN:O	2.02	0.59
1:AA:205:A:OP1	1:AA:205:A:H4'	2.01	0.59
6:CF:26:THR:O	6:CF:30:THR:OG1	2.20	0.59
52:D4:22:VAL:O	52:D4:24:ARG:N	2.35	0.59
22:DA:424:G:C2	22:DA:425:G:C8	2.90	0.59
24:BC:204:VAL:O	24:BC:205:LEU:HB2	2.02	0.59
22:BA:947:A:HO2'	22:BA:984:A:H2	1.42	0.59
1:AA:587:G:C2	1:AA:755:G:C5	2.90	0.59
29:DH:126:GLY:O	29:DH:146:VAL:N	2.35	0.59
18:AR:67:LEU:O	18:AR:68:LEU:HG	2.02	0.59
22:BA:1359:A:C8	22:BA:1373:A:C2	2.91	0.59
1:AA:1378:C:C5	1:AA:1379:G:C8	2.91	0.59
22:BA:2714:G:C2'	22:BA:2715:C:H5'	2.32	0.59
36:DO:64:TYR:O	36:DO:67:ASN:ND2	2.33	0.59
22:DA:1315:C:OP2	57:DA:3760:HOH:O	2.16	0.59
18:CR:63:ARG:HB3	18:CR:70:TYR:CE1	2.37	0.59
20:AT:70:ASN:N	20:AT:70:ASN:OD1	2.28	0.59
9:AI:63:LEU:HD23	9:AI:63:LEU:N	2.17	0.59
22:BA:1045:C:C3'	22:BA:1046:A:H5'	2.32	0.59
22:DA:861:A:H2'	22:DA:862:G:O4'	2.02	0.59
22:DA:1364:G:H2'	22:DA:1365:A:H5'	1.84	0.59
40:BS:29:VAL:CG1	40:BS:55:ILE:HD11	2.32	0.59
14:AN:41:ARG:O	14:AN:43:ASN:N	2.36	0.59
1:CA:518:C:H5''	1:CA:519:C:C6	2.37	0.59
52:B4:36:ARG:HG2	52:B4:37:GLN:N	2.16	0.59
22:BA:1735:A:C2	22:BA:1736:U:C1'	2.86	0.59
1:AA:1157:A:N6	1:AA:1180:A:N7	2.51	0.59
29:BH:1:MET:O	29:BH:20:ASN:ND2	2.35	0.59
42:DU:72:ILE:HD13	42:DU:83:VAL:CG2	2.32	0.59
22:BA:1867:G:O2'	22:BA:1868:C:H5'	2.02	0.59
1:AA:345:C:O2'	32:BK:116:ILE:HD11	2.02	0.59
12:CL:18:LYS:HD2	12:CL:18:LYS:C	2.23	0.59
22:DA:9:G:C6	22:DA:2629:U:C6	2.91	0.59
1:CA:1309:G:C6	1:CA:1329:A:C2	2.90	0.59
1:CA:411:A:C5	1:CA:429:U:C5	2.91	0.59
1:CA:33:A:H2'	1:CA:34:C:H6	1.67	0.59
1:CA:1211:U:C2'	1:CA:1212:U:OP2	2.51	0.59
22:BA:2191:A:C2	22:BA:2192:U:C4	2.91	0.59
22:DA:1773:A:N3	22:DA:1978:A:C2	2.71	0.59
30:DI:58:VAL:O	30:DI:69:PHE:HB3	2.03	0.59
22:BA:1768:C:C2	22:BA:1769:U:C6	2.90	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:17:LEU:HD23	10:AJ:17:LEU:C	2.22	0.59
15:AO:87:LEU:O	15:AO:88:ARG:CB	2.50	0.59
22:BA:1199:U:H2'	22:BA:1200:C:C6	2.38	0.59
22:DA:2343:U:O2'	22:DA:2373:G:O2'	2.19	0.59
1:AA:1134:G:C2	1:AA:1135:U:C2	2.90	0.59
34:BM:24:THR:O	34:BM:24:THR:HG23	2.01	0.59
48:D0:55:ILE:O	48:D0:56:ALA:HB3	2.03	0.59
1:CA:254:G:O2'	17:CQ:18:GLU:O	2.20	0.59
22:DA:53:A:N7	22:DA:54:G:C5	2.71	0.59
1:CA:55:A:C6	1:CA:56:U:C2	2.91	0.59
39:BR:49:ILE:CG2	39:BR:53:PHE:N	2.65	0.59
22:BA:142:A:H2'	22:BA:143:C:C6	2.38	0.59
21:CU:8:GLU:HB3	21:CU:12:PHE:CD2	2.38	0.59
22:DA:1753:G:C2	22:DA:1756:G:C2	2.90	0.59
32:BK:121:GLU:O	32:BK:122:VAL:O	2.21	0.59
20:AT:6:SER:OG	20:AT:7:ALA:N	2.36	0.59
1:AA:760:G:N7	1:AA:761:G:C8	2.71	0.59
30:BI:117:MET:HE3	30:BI:129:ILE:HD11	1.84	0.59
22:DA:532:A:N1	22:DA:2020:A:H1'	2.18	0.59
22:BA:1406:U:C2	22:BA:1407:G:C8	2.91	0.59
1:AA:328:C:O2	1:AA:328:C:H2'	2.01	0.59
12:CL:68:GLY:O	12:CL:99:ARG:NH1	2.36	0.59
1:CA:214:C:H2'	1:CA:215:C:C6	2.37	0.59
16:AP:42:ILE:O	16:AP:43:ALA:C	2.41	0.59
22:DA:2297:A:N1	22:DA:2321:U:C5	2.71	0.59
40:BS:84:ARG:HB2	40:BS:96:ILE:HG13	1.85	0.59
22:BA:142:A:N7	22:BA:143:C:N4	2.51	0.59
27:BF:106:ILE:C	27:BF:109:PRO:HD2	2.22	0.59
22:BA:2495:G:C2'	22:BA:2496:C:H5'	2.33	0.59
31:DJ:9:GLU:O	31:DJ:10:THR:HG23	2.03	0.59
26:DE:47:LYS:O	26:DE:83:VAL:HB	2.03	0.59
5:AE:46:VAL:CG2	5:AE:118:ALA:HA	2.33	0.59
1:AA:340:U:H2'	1:AA:341:C:H6	1.67	0.59
1:AA:340:U:C2	1:AA:341:C:C5	2.91	0.59
22:DA:1121:C:C2	22:DA:1122:G:C8	2.91	0.59
22:DA:454:A:H4'	22:DA:455:C:OP2	2.01	0.58
22:BA:1167:C:H2'	22:BA:1168:G:H5''	1.85	0.58
1:CA:1006:G:H2'	1:CA:1007:U:C6	2.38	0.58
22:DA:777:G:N7	22:DA:793:A:H2	2.00	0.58
5:AE:101:GLU:HB3	5:AE:122:ASN:HB2	1.84	0.58
22:DA:856:G:C2	22:DA:922:C:N3	2.71	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2111:U:C4	22:DA:2145:C:H2'	2.39	0.58
10:AJ:53:ILE:HG22	10:AJ:61:ALA:CB	2.33	0.58
22:DA:1304:A:N1	22:DA:1305:C:C4	2.72	0.58
1:CA:152:A:N6	1:CA:170:U:C2	2.71	0.58
22:BA:644:A:H2'	22:BA:645:C:O4'	2.03	0.58
11:AK:16:VAL:HG22	11:AK:17:SER:N	2.18	0.58
21:CU:14:VAL:O	21:CU:16:LEU:HG	2.03	0.58
21:CU:15:ALA:O	21:CU:17:ARG:N	2.36	0.58
9:CI:57:MET:SD	9:CI:58:VAL:N	2.76	0.58
22:BA:783:A:C8	22:BA:784:G:H4'	2.38	0.58
22:BA:784:G:OP2	57:BA:3313:HOH:O	2.16	0.58
22:BA:1084:A:H2'	22:BA:1085:A:C8	2.38	0.58
23:DB:87:U:O2'	23:DB:88:C:H5'	2.02	0.58
22:DA:20:C:H2'	22:DA:21:A:C8	2.38	0.58
2:CB:47:VAL:HB	2:CB:48:PRO:HD3	1.84	0.58
1:AA:68:G:C5	1:AA:69:G:H1'	2.38	0.58
2:CB:134:ALA:O	2:CB:138:THR:OG1	2.08	0.58
22:DA:1380:G:OP2	57:DA:3751:HOH:O	2.17	0.58
22:DA:307:G:N2	22:DA:310:A:C8	2.71	0.58
22:DA:319:G:O6	22:DA:323:C:N4	2.35	0.58
1:CA:1499:A:H3'	57:CA:1884:HOH:O	2.02	0.58
22:BA:481:G:N3	22:BA:507:A:C2	2.71	0.58
49:B1:4:GLY:O	49:B1:6:ARG:N	2.37	0.58
1:AA:792:A:H1'	1:AA:794:A:N7	2.18	0.58
1:CA:920:U:H2'	1:CA:921:U:C6	2.36	0.58
5:CE:56:VAL:O	5:CE:60:ILE:HG23	2.03	0.58
10:AJ:15:HIS:O	10:AJ:17:LEU:N	2.32	0.58
1:CA:570:G:H1'	1:CA:820:U:C4	2.38	0.58
1:AA:152:A:N6	1:AA:170:U:C2	2.70	0.58
1:CA:994:A:N3	1:CA:994:A:H2'	2.17	0.58
22:DA:2074:U:H2'	22:DA:2075:U:C6	2.38	0.58
21:AU:4:ILE:N	21:AU:20:LYS:HZ1	2.01	0.58
24:BC:167:ARG:O	24:BC:168:ASP:HB2	2.03	0.58
22:DA:2746:U:H1'	28:DG:139:GLN:HG3	1.85	0.58
17:CQ:47:HIS:HB2	17:CQ:67:LEU:HD12	1.85	0.58
36:BO:15:ARG:NE	36:BO:93:ASP:OD1	2.36	0.58
20:CT:55:GLN:N	20:CT:56:PRO:CD	2.65	0.58
22:DA:308:G:N1	22:DA:309:A:C2	2.70	0.58
2:CB:133:GLU:O	2:CB:137:ARG:HB3	2.03	0.58
22:BA:973:A:O4'	22:BA:1188:U:C6	2.56	0.58
22:DA:120:U:H1'	22:DA:149:A:C8	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1108:G:H5''	3:CC:176:HIS:CD2	2.37	0.58
2:AB:147:SER:O	2:AB:148:LEU:CB	2.51	0.58
27:DF:122:PHE:CE1	27:DF:166:GLY:HA3	2.38	0.58
22:DA:847:U:O2	22:DA:847:U:H2'	2.03	0.58
25:BD:133:THR:HG23	25:BD:134:HIS:CD2	2.38	0.58
46:DY:56:LEU:O	46:DY:57:LEU:HB2	2.04	0.58
14:AN:21:PHE:HA	14:AN:25:ALA:CB	2.33	0.58
4:CD:35:GLU:O	4:CD:38:PRO:HD3	2.02	0.58
11:CK:126:LYS:O	11:CK:127:ARG:HB2	2.03	0.58
25:BD:151:THR:HG22	25:BD:152:PRO:HD2	1.84	0.58
4:AD:68:LEU:HD22	4:AD:68:LEU:N	2.18	0.58
1:CA:692:U:H1'	1:CA:695:A:N7	2.19	0.58
32:BK:116:ILE:O	32:BK:118:LEU:O	2.21	0.58
1:CA:994:A:C8	1:CA:1216:A:H4'	2.39	0.58
17:CQ:46:VAL:HG21	17:CQ:61:ILE:CD1	2.34	0.58
2:CB:90:PHE:CZ	2:CB:154:MET:HA	2.38	0.58
22:BA:2578:G:N7	25:BD:145:SER:HB2	2.18	0.58
4:AD:78:GLU:OE1	4:AD:81:ARG:NH1	2.37	0.58
27:BF:143:TYR:O	27:BF:146:VAL:HG22	2.03	0.58
22:DA:2104:C:H2'	22:DA:2105:U:O4'	2.04	0.58
22:DA:2182:U:H2'	22:DA:2183:A:C8	2.38	0.58
1:CA:755:G:C2	1:CA:756:C:C5	2.91	0.58
22:DA:2857:G:N2	22:DA:2860:A:OP2	2.34	0.58
22:DA:2334:U:C4	36:DO:16:ARG:HD3	2.38	0.58
22:BA:257:C:H5''	22:BA:258:G:OP2	2.03	0.58
5:CE:122:ASN:O	5:CE:123:VAL:O	2.22	0.58
4:CD:30:THR:C	4:CD:31:LYS:HD3	2.23	0.58
1:CA:257:G:C2	1:CA:270:A:N1	2.71	0.58
1:AA:1107:C:C4	1:AA:1108:G:N7	2.72	0.58
22:DA:1091:G:N3	22:DA:1092:C:C5	2.71	0.58
27:BF:123:ASP:OD2	27:BF:127:ASN:HB2	2.02	0.58
1:CA:765:G:C6	1:CA:812:G:C4	2.92	0.58
1:CA:960:U:C5	1:CA:1225:A:C8	2.91	0.58
5:AE:137:VAL:O	5:AE:138:ARG:CB	2.51	0.58
22:DA:1606:C:O2'	22:DA:1607:C:OP2	2.19	0.58
21:AU:4:ILE:N	21:AU:19:PHE:CD1	2.71	0.58
22:BA:1696:G:C6	22:BA:1697:G:C4	2.91	0.58
23:DB:78:A:C6	23:DB:99:A:C8	2.90	0.58
8:AH:113:ASP:OD2	8:AH:117:ARG:NH2	2.36	0.58
22:BA:1361:G:N7	57:BA:3618:HOH:O	2.32	0.58
1:CA:681:A:C2	1:CA:710:G:C2	2.92	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2744:G:C6	22:DA:2761:A:N6	2.72	0.58
1:CA:190:A:C8	1:CA:191:G:H1'	2.38	0.58
22:DA:546:U:O2'	22:DA:547:A:O4'	2.21	0.58
2:AB:133:GLU:O	2:AB:137:ARG:HB2	2.03	0.58
23:DB:7:G:H5'	36:DO:29:HIS:CE1	2.38	0.58
1:AA:1171:A:C2	1:AA:1172:C:C2	2.92	0.58
22:BA:999:U:C5	22:BA:1154:G:C5	2.91	0.58
1:AA:1211:U:HO2'	1:AA:1212:U:P	2.26	0.58
24:BC:70:ASN:O	24:BC:71:LYS:C	2.41	0.58
22:BA:1915:U:C2'	22:BA:1916:A:H5'	2.33	0.58
22:DA:1154:G:OP2	38:DQ:58:ARG:NH1	2.36	0.58
22:DA:2128:G:N3	22:DA:2173:A:O2'	2.36	0.58
1:CA:373:A:C2	1:CA:374:A:C8	2.91	0.58
2:AB:151:ILE:HG23	2:AB:152:LYS:N	2.18	0.58
2:CB:120:GLN:HG2	2:CB:125:THR:O	2.03	0.58
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.39	0.58
1:CA:728:A:H2'	1:CA:729:A:C8	2.38	0.58
22:BA:1095:A:C6	22:BA:1096:A:N6	2.71	0.58
37:BP:90:GLY:O	37:BP:113:ARG:NH1	2.37	0.58
1:AA:596:A:C6	1:AA:645:G:C2	2.92	0.58
3:AC:206:GLU:O	3:AC:207:ILE:HG22	2.03	0.58
22:BA:871:U:H2'	22:BA:872:U:C6	2.38	0.58
14:AN:49:GLN:OE1	14:AN:49:GLN:HA	2.03	0.58
1:AA:524:G:H5''	1:AA:525:C:OP2	2.02	0.58
22:DA:1363:C:H2'	22:DA:1364:G:H8	1.69	0.58
22:DA:607:U:N3	22:DA:620:G:O4'	2.36	0.58
22:BA:1916:A:H2'	22:BA:1917:U:O2'	2.04	0.58
1:AA:1492:A:O2'	22:BA:1913:A:N1	2.27	0.58
1:AA:212:G:C2	1:AA:213:G:C4	2.91	0.58
22:DA:2883:A:OP2	48:D0:49:TYR:OH	2.18	0.58
12:AL:24:LEU:HB2	12:AL:59:ASN:ND2	2.18	0.58
15:AO:63:ARG:CG	15:AO:67:LEU:HD12	2.33	0.58
27:BF:171:ALA:O	27:BF:174:ASP:N	2.36	0.58
2:CB:119:THR:O	2:CB:120:GLN:CB	2.52	0.58
22:DA:2314:A:C2	22:DA:2315:G:C4	2.91	0.58
22:BA:2564:A:C2	22:BA:2647:U:H4'	2.38	0.58
11:AK:31:ILE:HB	11:AK:46:THR:HG22	1.85	0.58
22:BA:123:G:N7	57:BA:3213:HOH:O	2.32	0.58
31:DJ:19:ASP:O	31:DJ:23:LYS:HE3	2.03	0.58
34:BM:12:MET:HE3	34:BM:71:LYS:HG3	1.86	0.58
31:DJ:110:PRO:O	31:DJ:115:GLY:HA3	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:30:THR:HG22	31:DJ:31:GLU:N	2.18	0.58
22:DA:1640:A:H2'	22:DA:1641:A:C8	2.39	0.58
1:CA:938:A:N6	1:CA:939:G:C6	2.71	0.58
1:AA:4:U:O2	1:AA:4:U:H2'	2.04	0.58
47:BZ:11:ARG:NH1	47:BZ:53:PHE:O	2.37	0.58
1:AA:108:G:N3	1:AA:108:G:H5'	2.19	0.58
29:BH:31:VAL:N	29:BH:32:PRO:HD2	2.19	0.58
12:CL:44:LYS:O	12:CL:46:ASN:N	2.37	0.58
22:DA:453:A:H4'	22:DA:472:A:N6	2.17	0.58
4:CD:29:ASP:C	4:CD:31:LYS:N	2.56	0.58
22:BA:1916:A:P	22:BA:1917:U:OP2	2.62	0.58
22:DA:150:U:H2'	22:DA:151:C:C6	2.38	0.58
22:DA:699:A:H2'	22:DA:700:G:O4'	2.04	0.58
22:DA:699:A:N6	22:DA:733:G:O2'	2.36	0.58
22:DA:1062:G:C5	22:DA:1088:A:H2'	2.39	0.58
22:DA:1075:C:H2'	22:DA:1076:C:C6	2.39	0.58
22:BA:1423:G:O6	57:BA:3628:HOH:O	2.17	0.58
1:CA:1381:U:H2'	1:CA:1382:C:O5'	2.04	0.58
1:CA:17:U:C2	1:CA:18:C:C5	2.92	0.58
22:DA:2563:U:C1'	22:DA:2566:A:N6	2.65	0.58
22:BA:1405:U:H2'	22:BA:1406:U:C6	2.39	0.58
1:AA:1362:A:H5''	1:AA:1363:A:OP2	2.03	0.58
1:AA:757:U:O2'	1:AA:879:C:O2	2.21	0.58
1:AA:572:A:H5'	1:AA:573:A:OP2	2.02	0.58
29:DH:34:GLY:O	29:DH:35:LYS:CB	2.51	0.58
30:BI:62:TYR:O	30:BI:63:ALA:CB	2.51	0.58
22:DA:30:G:O2'	22:DA:1214:A:N3	2.36	0.58
1:AA:577:G:C8	1:AA:816:A:C6	2.91	0.58
22:BA:674:G:O2'	26:BE:69:ARG:HB3	2.03	0.58
31:DJ:78:THR:OG1	31:DJ:80:HIS:HB2	2.04	0.58
1:CA:1027:C:N4	1:CA:1034:G:C6	2.72	0.58
22:DA:126:A:N7	22:DA:127:A:C2	2.72	0.58
22:DA:53:A:N3	22:DA:179:C:H4'	2.18	0.58
17:AQ:45:HIS:CD2	17:AQ:70:THR:CG2	2.87	0.58
22:BA:1206:G:C6	22:BA:1207:C:C4	2.92	0.58
39:DR:14:VAL:HG21	39:DR:98:ILE:HG13	1.84	0.58
5:CE:109:GLY:O	5:CE:110:ALA:HB3	2.04	0.58
22:BA:1624:U:N3	22:BA:1625:C:C5	2.72	0.58
41:DT:82:LYS:HG2	41:DT:83:ALA:N	2.18	0.58
39:BR:9:GLY:C	39:BR:10:LYS:HG2	2.24	0.58
34:DM:76:LYS:NZ	34:DM:85:GLY:O	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:31:LEU:O	19:CS:33:THR:N	2.36	0.58
22:DA:2330:G:N2	22:DA:2386:A:C2	2.71	0.58
1:CA:649:A:H2'	1:CA:650:G:O4'	2.04	0.58
22:BA:580:U:O3'	38:BQ:31:VAL:HG13	2.04	0.58
22:BA:1593:A:H2'	22:BA:1594:U:O4'	2.03	0.58
25:DD:123:LYS:HG2	25:DD:165:MET:SD	2.44	0.58
28:DG:27:LYS:O	28:DG:27:LYS:HG3	2.03	0.58
24:DC:108:LYS:N	24:DC:194:GLU:O	2.36	0.58
22:BA:1253:A:N7	57:BA:3337:HOH:O	2.32	0.58
4:CD:9:LEU:HD12	4:CD:32:CYS:SG	2.43	0.58
1:AA:684:U:HO2'	11:AK:40:ASN:C	2.05	0.58
1:AA:1306:A:C4	1:AA:1307:U:C6	2.92	0.58
1:AA:568:G:C4	1:AA:569:C:C5	2.92	0.58
48:B0:55:ILE:HG22	48:B0:56:ALA:N	2.18	0.58
1:CA:1167:A:N7	1:CA:1169:A:C6	2.71	0.58
22:DA:2328:A:H2'	22:DA:2329:U:C6	2.38	0.58
20:CT:67:ILE:HG22	20:CT:67:ILE:O	2.03	0.58
6:CF:97:THR:O	6:CF:98:GLU:HB3	2.04	0.58
42:DU:13:VAL:HG21	42:DU:39:ILE:CG2	2.33	0.58
1:AA:760:G:C5	1:AA:761:G:C8	2.92	0.58
31:BJ:17:VAL:HG23	31:BJ:137:PRO:HB2	1.85	0.58
1:CA:624:C:H2'	1:CA:625:U:O4'	2.04	0.58
22:DA:2552:U:C2	22:DA:2554:U:H5'	2.39	0.58
20:CT:15:GLU:OE2	20:CT:18:ARG:NH2	2.35	0.58
30:BI:79:LEU:HD22	30:BI:109:ILE:CG2	2.34	0.58
5:AE:25:VAL:O	5:AE:27:GLY:N	2.37	0.58
1:CA:115:G:H4'	1:CA:116:A:O5'	2.04	0.58
30:BI:81:LYS:HA	30:BI:86:ILE:O	2.03	0.58
22:DA:647:G:C5	22:DA:648:G:N7	2.71	0.58
46:BY:23:ARG:O	46:BY:24:GLU:C	2.42	0.58
36:BO:100:HIS:O	36:BO:104:GLN:CB	2.52	0.58
22:DA:2061:G:C5	55:DA:3001:DOL:HC19	2.38	0.58
22:DA:1551:A:N6	57:DA:3628:HOH:O	2.35	0.58
22:DA:1817:G:H2'	22:DA:1818:U:H5'	1.86	0.58
22:BA:481:G:H1'	22:BA:507:A:N1	2.19	0.58
21:AU:37:PHE:HB3	21:AU:41:PRO:CG	2.34	0.58
22:BA:2584:U:O2'	55:BA:3001:DOL:H482	2.03	0.58
22:BA:2192:U:C4	22:BA:2193:G:C8	2.92	0.58
39:BR:51:VAL:O	39:BR:52:PRO:O	2.22	0.58
10:CJ:84:VAL:O	10:CJ:88:MET:HB2	2.04	0.58
42:DU:41:LEU:HD12	42:DU:60:GLU:HG2	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:21:VAL:N	12:CL:22:PRO:HD3	2.19	0.58
22:BA:1022:G:N2	22:BA:1142:A:C2	2.71	0.58
27:BF:108:VAL:N	27:BF:109:PRO:CD	2.66	0.58
22:BA:65:U:H2'	22:BA:66:C:H6	1.68	0.58
1:AA:721:G:H4'	1:AA:722:G:O4'	2.03	0.58
22:BA:1563:U:H2'	22:BA:1564:C:H6	1.69	0.58
22:DA:2478:A:C8	22:DA:2529:G:C5	2.92	0.58
6:CF:43:GLY:HA2	6:CF:58:HIS:NE2	2.19	0.58
1:AA:475:C:H2'	1:AA:476:U:O4'	2.04	0.58
22:BA:1248:G:C6	26:BE:46:GLN:NE2	2.72	0.58
8:AH:125:ILE:O	8:AH:125:ILE:HG13	2.04	0.58
36:DO:7:ARG:HD2	36:DO:97:PHE:CE1	2.38	0.58
41:BT:34:VAL:HG21	41:BT:43:ILE:HD11	1.85	0.58
22:BA:603:A:C8	22:BA:655:A:C6	2.92	0.58
22:DA:1806:C:C5	22:DA:1807:G:N7	2.72	0.58
22:BA:846:U:O2'	22:BA:847:U:P	2.62	0.58
29:DH:108:VAL:O	29:DH:110:VAL:N	2.36	0.58
3:CC:72:ARG:HB3	3:CC:75:ILE:HG23	1.85	0.58
22:BA:1922:G:H22	22:BA:1923:U:H1'	1.67	0.57
1:CA:992:U:N3	1:CA:1043:G:N7	2.52	0.57
1:CA:1003:G:C2	1:CA:1038:C:C4	2.92	0.57
22:DA:776:G:O2'	22:DA:2241:A:OP1	2.19	0.57
5:AE:109:GLY:O	5:AE:110:ALA:HB2	2.04	0.57
1:AA:251:G:C6	1:AA:266:G:O6	2.56	0.57
22:BA:2190:G:C6	22:BA:2191:A:C5	2.91	0.57
22:DA:1544:A:N6	22:DA:1545:A:N1	2.52	0.57
22:DA:2571:U:C4	22:DA:2574:G:C8	2.92	0.57
9:CI:30:ILE:HA	9:CI:65:ILE:O	2.03	0.57
22:BA:2531:A:OP2	28:BG:174:ALA:O	2.22	0.57
30:DI:79:LEU:HD13	30:DI:109:ILE:CG2	2.33	0.57
22:DA:696:G:C2	22:DA:767:U:O2	2.57	0.57
22:BA:2474:U:H5''	22:BA:2475:C:OP2	2.04	0.57
35:DN:49:GLU:N	35:DN:50:PRO:CD	2.67	0.57
22:DA:13:A:N1	22:DA:525:U:H2'	2.19	0.57
1:AA:673:A:H2'	1:AA:674:G:C8	2.39	0.57
4:CD:166:GLU:O	4:CD:167:LYS:HB2	2.04	0.57
30:BI:82:LYS:O	30:BI:83:ALA:HB2	2.04	0.57
22:BA:2520:C:C6	22:BA:2567:G:H1'	2.38	0.57
22:BA:372:G:O2'	22:BA:400:G:O6	2.16	0.57
22:DA:1774:C:O2	24:DC:11:PRO:HB2	2.04	0.57
22:BA:1061:U:O2'	22:BA:1062:G:C5'	2.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1668:A:C4	22:DA:1674:G:N7	2.72	0.57
29:BH:91:PHE:O	1:CA:55:A:C5	2.56	0.57
22:DA:2114:A:N6	22:DA:2119:A:N7	2.52	0.57
1:CA:1093:A:C5	1:CA:1095:U:O4'	2.56	0.57
1:CA:1224:U:C4	1:CA:1322:C:O2	2.56	0.57
2:CB:21:ARG:O	2:CB:23:TRP:N	2.37	0.57
22:DA:247:G:C8	22:DA:249:C:C6	2.91	0.57
22:DA:2293:G:H2'	22:DA:2294:G:O4'	2.04	0.57
24:BC:125:LYS:HG2	24:BC:128:ASN:ND2	2.19	0.57
42:DU:13:VAL:HG21	42:DU:39:ILE:HD12	1.86	0.57
1:AA:1157:A:N7	1:AA:1180:A:N6	2.51	0.57
22:DA:2387:U:H1'	44:DW:41:ARG:CD	2.34	0.57
14:CN:54:ASP:HA	14:CN:59:ARG:HD3	1.86	0.57
22:DA:1965:C:OP1	22:DA:1966:A:H2'	2.03	0.57
22:DA:2469:A:H4'	34:DM:55:ARG:HD3	1.84	0.57
1:CA:1245:C:C4	1:CA:1246:A:N7	2.72	0.57
33:DL:77:ILE:O	33:DL:110:VAL:O	2.21	0.57
22:BA:2009:A:OP1	40:BS:41:LYS:HE2	2.04	0.57
17:CQ:50:ASN:O	17:CQ:52:GLU:N	2.37	0.57
22:BA:742:A:H2'	22:BA:743:A:C8	2.39	0.57
14:CN:91:GLY:O	14:CN:93:ILE:N	2.37	0.57
29:DH:62:LEU:HD13	29:DH:62:LEU:C	2.25	0.57
12:CL:38:TYR:CB	12:CL:52:VAL:HG13	2.34	0.57
10:AJ:92:LEU:O	10:AJ:93:ALA:CB	2.52	0.57
22:DA:746:U:HO2'	22:DA:2611:C:HO2'	1.50	0.57
22:BA:1008:A:N6	22:BA:1136:G:C6	2.71	0.57
53:B5:40:GLU:HA	53:B5:181:PHE:HA	1.85	0.57
1:AA:208:U:C5	1:AA:210:C:N3	2.72	0.57
22:DA:55:G:C2	22:DA:56:A:C8	2.92	0.57
22:DA:740:C:C5'	22:DA:1784:A:H3'	2.34	0.57
1:CA:927:G:O2'	1:CA:1503:A:N7	2.31	0.57
22:DA:1125:G:C6	22:DA:1126:A:N6	2.72	0.57
29:DH:117:LEU:HB3	29:DH:120:GLY:O	2.04	0.57
22:DA:2110:G:O2'	22:DA:2120:G:OP2	2.17	0.57
22:DA:1827:U:C2'	22:DA:1828:G:O5'	2.52	0.57
22:BA:1414:C:C4	22:BA:1415:U:C5	2.91	0.57
4:AD:78:GLU:HG3	4:AD:93:LEU:HD21	1.86	0.57
22:DA:2537:U:H2'	22:DA:2538:C:C6	2.39	0.57
22:DA:2267:A:H5''	22:DA:2268:A:H5'	1.85	0.57
22:DA:1838:C:H4'	22:DA:1839:G:C8	2.39	0.57
1:CA:1092:A:C6	1:CA:1183:U:O2	2.57	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:36:LYS:O	24:BC:37:ASN:CB	2.52	0.57
22:DA:2499:C:N4	22:DA:2500:U:O4	2.37	0.57
23:DB:32:U:C2	23:DB:51:G:N2	2.72	0.57
35:BN:58:ASP:OD1	35:BN:63:ARG:NH2	2.37	0.57
4:CD:32:CYS:O	4:CD:33:LYS:CB	2.53	0.57
22:DA:223:A:C4	22:DA:408:G:H1'	2.39	0.57
1:CA:33:A:H2'	1:CA:34:C:C6	2.39	0.57
22:DA:1344:U:O2'	22:DA:1345:C:P	2.63	0.57
22:BA:1179:G:C5	22:BA:1180:U:C1'	2.86	0.57
39:DR:81:LYS:O	39:DR:82:HIS:C	2.42	0.57
4:AD:58:LYS:NZ	4:AD:69:GLU:OE2	2.33	0.57
1:AA:90:C:C2	1:AA:91:U:C6	2.92	0.57
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.39	0.57
16:AP:75:ILE:HG22	16:AP:80:LYS:HE2	1.86	0.57
23:DB:81:G:C5	23:DB:82:U:C5	2.92	0.57
11:AK:52:PHE:CB	11:AK:56:ARG:HB3	2.35	0.57
22:DA:76:C:HO2'	46:DY:55:THR:HG1	1.51	0.57
23:BB:48:U:H2'	23:BB:49:C:C6	2.39	0.57
1:CA:1478:U:H2'	1:CA:1479:C:C6	2.39	0.57
8:CH:89:LYS:HA	8:CH:92:LEU:CD1	2.34	0.57
1:CA:206:C:H2'	1:CA:207:C:H5'	1.87	0.57
2:AB:222:ARG:HB3	2:AB:222:ARG:CZ	2.34	0.57
24:DC:9:THR:O	24:DC:10:SER:CB	2.52	0.57
22:DA:1651:G:C2	22:DA:2007:U:O2	2.57	0.57
22:DA:2612:C:H5''	22:DA:2613:U:OP1	2.05	0.57
22:DA:616:A:C2	22:DA:617:G:O4'	2.57	0.57
22:DA:411:G:OP1	57:DA:3558:HOH:O	2.17	0.57
1:AA:262:A:C6	1:AA:263:A:C6	2.93	0.57
1:AA:144:G:C2	1:AA:179:A:N3	2.72	0.57
22:DA:634:C:H2'	22:DA:635:C:C6	2.40	0.57
1:CA:455:G:N2	1:CA:478:A:C2	2.72	0.57
22:DA:247:G:OP2	22:DA:249:C:N4	2.37	0.57
22:DA:674:G:H1'	26:DE:69:ARG:HE	1.69	0.57
2:CB:210:VAL:O	2:CB:214:LEU:HB2	2.04	0.57
22:BA:1079:C:C5	22:BA:1088:A:C2	2.93	0.57
1:CA:577:G:C4	1:CA:816:A:C2	2.92	0.57
22:BA:1795:C:C4	22:BA:1796:U:C4	2.92	0.57
22:BA:784:G:O2'	22:BA:785:G:H5''	2.04	0.57
11:AK:51:GLY:O	11:AK:52:PHE:O	2.23	0.57
22:BA:588:U:H2'	22:BA:589:U:C6	2.39	0.57
24:DC:31:ALA:N	24:DC:32:PRO:HD2	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:34:LEU:O	24:DC:35:GLU:HB3	2.03	0.57
9:CI:116:VAL:CG2	10:CJ:62:ARG:HD3	2.35	0.57
1:AA:299:G:H2'	1:AA:300:A:C8	2.40	0.57
7:CG:125:SER:O	7:CG:127:ALA:N	2.37	0.57
22:BA:2615:U:C2	48:B0:4:GLN:HA	2.40	0.57
5:AE:13:GLU:CB	5:AE:39:VAL:HG12	2.34	0.57
22:BA:1958:C:O2'	22:BA:1959:G:H5'	2.04	0.57
22:DA:2586:U:C5	22:DA:2587:A:C8	2.92	0.57
22:DA:1355:G:H2'	22:DA:1356:G:H5'	1.86	0.57
9:AI:57:MET:O	9:AI:59:GLU:N	2.38	0.57
2:AB:147:SER:O	2:AB:148:LEU:HB2	2.04	0.57
1:CA:543:U:O2'	1:CA:544:G:H5'	2.03	0.57
22:DA:1446:C:H2'	22:DA:1447:C:O4'	2.04	0.57
22:BA:1712:U:OP2	22:BA:1713:A:O2'	2.20	0.57
22:DA:197:A:N6	22:DA:2430:A:H2'	2.18	0.57
1:AA:1349:A:C2	1:AA:1374:A:C4	2.92	0.57
21:AU:10:GLU:CG	21:AU:11:PRO:HD3	2.35	0.57
48:D0:55:ILE:O	48:D0:56:ALA:CB	2.53	0.57
1:AA:32:A:C2	1:AA:33:A:C5	2.92	0.57
24:BC:141:VAL:HG11	24:BC:190:ALA:HB1	1.87	0.57
1:AA:316:C:C2	1:AA:317:U:C5	2.92	0.57
22:DA:1917:U:H2'	22:DA:1918:A:H5'	1.87	0.57
24:BC:91:ILE:HD12	24:BC:103:TYR:CD1	2.40	0.57
43:BV:56:PHE:O	43:BV:61:LEU:HD11	2.04	0.57
22:BA:2182:U:O4	22:BA:2183:A:N6	2.38	0.57
1:AA:620:C:H2'	1:AA:621:A:O4'	2.04	0.57
22:BA:1066:U:O2	22:BA:1069:A:N7	2.37	0.57
1:CA:145:G:C2	1:CA:146:G:C8	2.92	0.57
22:DA:2504:U:C4	55:DA:3001:DOL:C16	2.88	0.57
22:DA:841:G:N2	22:DA:937:C:O2	2.33	0.57
1:AA:1492:A:OP1	12:AL:44:LYS:N	2.37	0.57
35:DN:1:MET:CE	35:DN:1:MET:N	2.67	0.57
29:DH:21:VAL:HG22	29:DH:22:LYS:N	2.19	0.57
1:CA:1302:C:C5	13:CM:17:ILE:HD13	2.40	0.57
1:CA:1178:G:N2	1:CA:1181:G:OP2	2.38	0.57
1:AA:81:A:C2'	1:AA:82:G:H5''	2.35	0.57
22:BA:686:U:O4	50:B2:12:ARG:HB2	2.04	0.57
1:CA:1365:G:H2'	1:CA:1366:C:O4'	2.05	0.57
10:AJ:52:LEU:HB2	14:AN:81:ARG:NE	2.20	0.57
1:AA:65:A:C4	1:AA:381:C:C5	2.92	0.57
22:DA:498:G:C2	22:DA:499:U:C6	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2360:G:H1'	33:DL:60:ARG:HD3	1.86	0.57
21:CU:10:GLU:HB2	21:CU:11:PRO:HD3	1.87	0.57
5:AE:46:VAL:HG21	5:AE:118:ALA:HB2	1.87	0.57
17:AQ:48:ASP:C	17:AQ:48:ASP:OD2	2.43	0.57
2:CB:100:MET:HA	2:CB:107:VAL:HG21	1.87	0.57
1:AA:1154:G:C2	1:AA:1155:A:C5	2.92	0.57
2:AB:184:PHE:CZ	2:AB:198:PHE:CD2	2.92	0.57
32:BK:21:CYS:HA	32:BK:41:ILE:HG22	1.86	0.57
22:BA:558:U:OP1	31:BJ:113:PRO:HD2	2.04	0.57
22:BA:482:A:H5'	22:BA:483:A:OP1	2.04	0.57
22:BA:1853:A:N1	22:BA:2087:G:H1'	2.19	0.57
22:DA:2888:C:H2'	22:DA:2889:C:C6	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:2697:G:C2	22:DA:2711:A:C2	2.92	0.57
22:DA:747:U:O4'	40:DS:92:ARG:NH1	2.37	0.57
5:CE:154:ALA:HA	5:CE:157:ARG:HB3	1.86	0.57
4:CD:32:CYS:O	4:CD:33:LYS:HB3	2.05	0.57
19:AS:5:LEU:HD23	19:AS:9:PRO:HA	1.87	0.57
22:DA:2266:A:C2	22:DA:2272:U:C5	2.92	0.57
3:AC:64:ILE:HG23	3:AC:99:ALA:HB2	1.86	0.57
1:AA:1107:C:N3	1:AA:1108:G:C8	2.73	0.57
31:BJ:81:ILE:HG23	31:BJ:82:GLY:H	1.69	0.57
10:AJ:53:ILE:CG2	10:AJ:61:ALA:HB1	2.35	0.57
22:DA:2176:A:H2'	22:DA:2177:C:C6	2.39	0.57
8:CH:96:MET:HB2	8:CH:99:LEU:O	2.03	0.57
1:AA:19:A:N3	1:AA:917:G:C2	2.73	0.57
1:AA:345:C:N3	32:BK:117:SER:OG	2.37	0.57
5:AE:46:VAL:HG21	5:AE:118:ALA:CB	2.35	0.57
46:BY:18:LEU:O	46:BY:22:LEU:HB2	2.05	0.57
14:CN:80:SER:O	14:CN:82:ILE:N	2.37	0.57
41:BT:17:SER:O	41:BT:20:ALA:N	2.37	0.57
2:AB:187:VAL:O	2:AB:187:VAL:HG23	2.04	0.57
22:DA:324:A:N6	22:DA:338:G:O2'	2.37	0.57
53:B5:125:GLY:O	53:B5:126:SER:CB	2.53	0.57
53:B5:174:ALA:O	53:B5:175:PRO:CB	2.52	0.57
1:AA:903:G:H2'	1:AA:904:U:H6	1.68	0.57
22:BA:2897:U:H2'	22:BA:2898:U:C6	2.38	0.57
20:CT:28:MET:HE3	20:CT:58:VAL:HG22	1.87	0.57
6:CF:86:ARG:HH11	6:CF:86:ARG:CG	2.17	0.57
22:DA:67:U:C2	22:DA:68:G:C8	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:117:LEU:HD21	29:BH:121:VAL:CA	2.35	0.57
29:BH:117:LEU:CD2	29:BH:121:VAL:H	2.08	0.57
5:CE:104:GLY:O	5:CE:105:ILE:CG2	2.53	0.57
1:AA:1313:U:P	19:AS:6:LYS:HB3	2.45	0.57
1:CA:992:U:C4	1:CA:1043:G:N7	2.73	0.57
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.04	0.57
22:BA:1378:A:C4	22:BA:1380:G:N7	2.73	0.57
38:BQ:87:SER:HB3	39:BR:51:VAL:HA	1.87	0.57
1:AA:154:U:O2	1:AA:168:G:N2	2.37	0.57
30:DI:10:LYS:HB2	30:DI:56:PRO:CB	2.34	0.57
22:DA:2148:G:C2	22:DA:2149:U:C5	2.93	0.57
22:DA:249:C:P	22:DA:2394:C:HO2'	2.27	0.57
14:AN:51:LEU:CB	14:AN:52:PRO:HD2	2.34	0.57
14:AN:52:PRO:O	14:AN:53:ARG:HB3	2.04	0.57
24:BC:15:HIS:O	24:BC:204:VAL:CG2	2.52	0.57
2:CB:210:VAL:HG22	2:CB:211:THR:N	2.18	0.57
22:DA:2308:G:C5'	22:DA:2309:A:OP2	2.51	0.57
22:DA:1826:G:C6	22:DA:1827:U:C4	2.92	0.57
16:CP:38:PHE:CE2	16:CP:51:ARG:HD2	2.40	0.57
16:CP:51:ARG:C	16:CP:51:ARG:HD3	2.25	0.57
36:DO:33:ARG:O	36:DO:34:HIS:CB	2.52	0.57
12:CL:80:ILE:HD12	12:CL:97:THR:HG21	1.87	0.57
22:BA:2582:G:C2	22:BA:2583:G:C8	2.92	0.57
22:DA:2019:A:H4'	38:DQ:34:VAL:CG2	2.35	0.57
1:CA:636:U:H2'	1:CA:637:C:C6	2.39	0.57
20:CT:25:ARG:HD2	20:CT:29:ARG:NH1	2.19	0.57
22:BA:304:U:H2'	22:BA:305:C:C6	2.40	0.57
1:CA:60:A:N3	1:CA:61:G:H1'	2.20	0.57
28:BG:87:LEU:HD12	28:BG:87:LEU:N	2.20	0.57
5:CE:24:THR:HA	5:CE:29:ARG:HA	1.86	0.57
22:DA:445:C:O2'	22:DA:449:A:N3	2.37	0.57
4:CD:173:VAL:O	4:CD:174:ASP:HB3	2.05	0.57
7:CG:92:ARG:HB3	7:CG:93:PRO:HD2	1.86	0.57
22:BA:70:G:H4'	22:BA:71:A:OP1	2.04	0.57
53:B5:51:ASP:N	53:B5:52:PRO:HD3	2.20	0.57
22:DA:2707:U:H2'	22:DA:2708:G:C8	2.39	0.57
22:DA:807:U:OP2	33:DL:41:ARG:NH1	2.37	0.57
19:CS:55:ARG:CZ	19:CS:79:THR:HG22	2.34	0.57
53:B5:180:SER:CB	53:B5:188:ASP:CB	2.83	0.57
22:DA:1313:U:H2'	22:DA:1313:U:O2	2.05	0.57
22:DA:235:U:C4	22:DA:236:C:C5	2.92	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:253:C:OP2	51:B3:5:LYS:CE	2.53	0.57
22:BA:877:A:N6	22:BA:899:A:N6	2.53	0.57
5:AE:25:VAL:O	5:AE:26:LYS:C	2.43	0.57
22:DA:1651:G:N2	22:DA:2007:U:O2	2.38	0.57
22:BA:2485:G:OP1	34:BM:45:GLN:NE2	2.37	0.57
22:DA:106:C:HO2'	22:DA:294:A:HO2'	0.58	0.57
22:DA:1570:A:H5'	24:DC:36:LYS:HB3	1.85	0.57
22:BA:2153:C:H2'	22:BA:2154:A:O4'	2.05	0.57
1:AA:502:A:H2'	1:AA:503:C:O4'	2.05	0.57
5:CE:98:PRO:O	5:CE:122:ASN:ND2	2.33	0.56
40:DS:29:VAL:CG1	40:DS:55:ILE:HD11	2.35	0.56
9:AI:47:VAL:HA	9:AI:50:GLN:HB2	1.87	0.56
1:AA:582:C:C4	1:AA:583:A:N7	2.73	0.56
6:CF:45:ARG:HD2	6:CF:59:TYR:CE2	2.40	0.56
22:DA:2429:G:N7	33:DL:55:MET:HE3	2.19	0.56
1:CA:575:G:C6	1:CA:821:G:N7	2.73	0.56
22:DA:88:G:C2	22:DA:89:A:C8	2.93	0.56
42:DU:34:VAL:HG23	42:DU:65:ILE:O	2.04	0.56
15:CO:62:GLN:O	15:CO:66:LEU:HD23	2.05	0.56
2:CB:184:PHE:CE1	2:CB:198:PHE:CD2	2.93	0.56
8:CH:126:ILE:HD12	8:CH:126:ILE:N	2.20	0.56
9:CI:32:GLN:NE2	9:CI:64:TYR:OH	2.38	0.56
32:DK:104:THR:O	32:DK:106:GLU:N	2.38	0.56
31:DJ:41:LYS:O	31:DJ:42:ALA:C	2.44	0.56
12:CL:107:VAL:CG2	12:CL:117:TYR:HB3	2.35	0.56
20:AT:71:LYS:HD2	20:AT:74:ARG:NH2	2.20	0.56
2:CB:83:ALA:O	2:CB:86:SER:OG	2.22	0.56
22:BA:2394:C:OP2	51:B3:30:ARG:HD3	2.04	0.56
2:AB:88:ASP:C	2:AB:89:GLN:HG3	2.25	0.56
2:AB:67:ILE:HG21	2:AB:69:PHE:CE2	2.40	0.56
22:DA:1068:G:N3	22:DA:1068:G:H2'	2.19	0.56
22:BA:1436:G:N2	22:BA:1557:C:C2	2.73	0.56
33:DL:94:THR:O	33:DL:98:ALA:N	2.37	0.56
22:DA:1826:G:C5	22:DA:1827:U:C5	2.93	0.56
40:BS:62:ASP:O	40:BS:63:GLY:O	2.23	0.56
1:AA:1520:C:C2	1:AA:1521:C:C5	2.93	0.56
1:AA:832:G:C2	1:AA:833:G:C8	2.93	0.56
22:DA:1530:G:C2	22:DA:1542:U:O2	2.58	0.56
22:BA:578:G:OP1	22:BA:1255:U:O2'	2.22	0.56
25:DD:176:ASP:HB2	25:DD:190:LYS:HB3	1.87	0.56
22:DA:1683:U:O5'	22:DA:1683:U:H6	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:44:LYS:CB	12:CL:45:PRO:CD	2.83	0.56
22:DA:1353:A:C8	22:DA:1378:A:N6	2.73	0.56
1:CA:411:A:C6	1:CA:429:U:C5	2.93	0.56
22:BA:1922:G:N2	22:BA:1923:U:C1'	2.68	0.56
22:BA:1926:U:O2	22:BA:1928:A:N7	2.38	0.56
1:CA:1394:A:C5	1:CA:1501:C:H4'	2.40	0.56
41:DT:21:SER:O	41:DT:22:THR:C	2.43	0.56
5:AE:157:ARG:C	5:AE:159:LYS:N	2.58	0.56
1:AA:429:U:H1'	1:AA:430:A:H5''	1.88	0.56
13:CM:91:HIS:CD2	13:CM:97:VAL:HG21	2.40	0.56
22:DA:971:G:H2'	22:DA:972:A:O4'	2.04	0.56
22:DA:2093:G:O2'	22:DA:2094:A:H5'	2.04	0.56
22:DA:491:G:C6	22:DA:492:A:C6	2.93	0.56
7:AG:99:LEU:O	7:AG:101:MET:N	2.38	0.56
21:AU:44:GLU:OE2	21:AU:45:ARG:NH1	2.38	0.56
22:BA:1352:U:O2'	22:BA:1353:A:H5'	2.05	0.56
27:BF:123:ASP:CG	27:BF:127:ASN:HB2	2.26	0.56
22:DA:783:A:O2'	22:DA:1779:U:O2	2.14	0.56
22:DA:1410:G:C2	22:DA:1411:U:C4	2.93	0.56
20:AT:44:LYS:CD	20:AT:87:ALA:HA	2.36	0.56
30:BI:18:ALA:C	30:BI:20:PRO:HD3	2.26	0.56
22:BA:1901:A:OP2	24:BC:253:LYS:NZ	2.33	0.56
48:B0:15:MET:O	48:B0:18:SER:CB	2.53	0.56
10:AJ:34:ALA:O	10:AJ:35:GLN:CB	2.52	0.56
1:AA:1367:C:OP2	9:AI:114:LYS:NZ	2.37	0.56
15:CO:37:ASN:O	15:CO:40:GLN:CB	2.52	0.56
3:AC:12:LEU:O	3:AC:13:GLY:C	2.44	0.56
52:D4:36:ARG:HG2	52:D4:37:GLN:N	2.20	0.56
22:BA:45:G:H5''	22:BA:46:G:H5'	1.87	0.56
1:CA:562:U:OP2	12:CL:14:ARG:NE	2.38	0.56
5:CE:96:MET:HE3	5:CE:111:MET:CE	2.34	0.56
22:DA:2757:A:N1	28:DG:67:THR:HG21	2.20	0.56
23:BB:110:C:C4	23:BB:111:U:C5	2.94	0.56
28:DG:86:LYS:HB3	28:DG:165:ALA:HB2	1.87	0.56
22:BA:1808:A:N1	45:BX:28:ARG:HD2	2.21	0.56
22:BA:1324:G:C4	22:BA:1328:A:N6	2.73	0.56
22:BA:967:U:H2'	22:BA:968:C:C6	2.40	0.56
34:BM:51:ARG:O	34:BM:55:ARG:HG3	2.05	0.56
3:CC:77:ILE:HA	3:CC:84:VAL:CG2	2.35	0.56
41:DT:89:GLU:O	41:DT:91:GLN:N	2.38	0.56
22:DA:2379:G:H4'	36:DO:21:LEU:HD11	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:604:G:C2	1:AA:635:A:C2	2.93	0.56
22:DA:2310:C:C4	27:DF:77:PHE:CZ	2.94	0.56
37:DP:93:ARG:O	37:DP:94:LYS:CB	2.54	0.56
22:DA:1844:C:O3'	24:DC:256:LYS:NZ	2.38	0.56
1:CA:1330:U:H4'	13:CM:23:TYR:CE1	2.39	0.56
22:DA:457:A:N1	22:DA:470:A:H5''	2.20	0.56
22:DA:64:A:H2'	22:DA:65:U:O4'	2.05	0.56
22:BA:894:U:H2'	22:BA:895:U:C6	2.39	0.56
29:DH:83:LYS:N	29:DH:149:GLU:HG2	2.20	0.56
22:BA:1073:A:C3'	22:BA:1074:G:H5''	2.35	0.56
1:CA:991:U:C4	1:CA:1212:U:O4'	2.58	0.56
22:DA:1817:G:C2'	22:DA:1818:U:H5'	2.36	0.56
22:DA:1973:G:C6	22:DA:1974:C:N4	2.73	0.56
39:BR:51:VAL:HG23	39:BR:52:PRO:HD2	1.87	0.56
1:AA:1068:G:O2'	1:AA:1191:A:N1	2.24	0.56
21:CU:35:ARG:NH2	57:CU:101:HOH:O	2.38	0.56
23:BB:34:A:O2'	23:BB:35:C:H5''	2.05	0.56
2:AB:186:ILE:HA	2:AB:200:ILE:O	2.06	0.56
22:BA:878:A:N6	22:BA:899:A:O2'	2.36	0.56
22:DA:749:A:C4	22:DA:750:A:C8	2.94	0.56
1:CA:922:G:H4'	5:CE:25:VAL:HA	1.88	0.56
1:AA:1135:U:C2'	1:AA:1136:C:O5'	2.54	0.56
22:DA:2341:G:C6	22:DA:2342:C:C4	2.94	0.56
22:DA:2189:U:H2'	22:DA:2190:G:H5'	1.87	0.56
22:DA:1181:U:H2'	22:DA:1182:G:C8	2.40	0.56
37:BP:31:TRP:CE2	37:BP:40:LEU:CD1	2.88	0.56
1:CA:972:C:H4'	10:CJ:59:LYS:HG2	1.88	0.56
8:CH:64:LYS:HB3	8:CH:71:VAL:HG21	1.87	0.56
1:AA:880:C:O2'	1:AA:881:G:H5'	2.06	0.56
40:BS:57:ASN:O	40:BS:61:ASN:HB2	2.04	0.56
1:CA:32:A:H2'	1:CA:32:A:N3	2.20	0.56
9:AI:57:MET:CG	9:AI:58:VAL:H	2.18	0.56
20:AT:54:MET:HE1	20:AT:58:VAL:HG21	1.87	0.56
22:DA:983:A:N6	22:DA:984:A:C2	2.73	0.56
13:AM:95:LEU:HB3	13:AM:96:PRO:HD2	1.87	0.56
22:BA:2191:A:N1	22:BA:2192:U:O4	2.39	0.56
1:CA:1224:U:N3	1:CA:1322:C:O2	2.38	0.56
1:CA:169:C:H2'	1:CA:170:U:C6	2.40	0.56
48:B0:55:ILE:HG22	48:B0:57:LYS:H	1.70	0.56
30:BI:82:LYS:O	30:BI:83:ALA:CB	2.53	0.56
22:DA:858:G:C4	22:DA:2268:A:C2	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1289:A:O3'	7:AG:35:LYS:NZ	2.37	0.56
22:DA:1986:C:OP1	57:DA:3429:HOH:O	2.18	0.56
22:DA:2845:U:H2'	22:DA:2846:G:O4'	2.05	0.56
1:CA:106:C:C2'	1:CA:107:G:H5'	2.35	0.56
18:AR:34:THR:OG1	18:AR:35:GLU:N	2.38	0.56
1:AA:631:C:C5'	1:AA:632:U:O5'	2.54	0.56
5:CE:98:PRO:O	5:CE:99:ALA:HB3	2.05	0.56
22:DA:936:A:C2	22:DA:937:C:C2	2.94	0.56
1:AA:375:U:C4	1:AA:376:G:N7	2.74	0.56
22:DA:571:U:C4	22:DA:575:A:C5	2.94	0.56
16:CP:70:ARG:O	16:CP:74:LEU:HD23	2.05	0.56
1:AA:71:A:O2'	1:AA:72:A:P	2.62	0.56
1:CA:802:A:N3	1:CA:802:A:H2'	2.21	0.56
28:DG:118:PRO:HG3	28:DG:144:VAL:HG21	1.87	0.56
11:CK:25:ALA:HB3	11:CK:87:LYS:O	2.05	0.56
22:DA:2325:G:C6	22:DA:2326:C:N4	2.73	0.56
22:DA:1581:G:C5	22:DA:1582:C:C4	2.94	0.56
10:AJ:43:PRO:O	10:AJ:71:LEU:HD23	2.06	0.56
22:DA:696:G:N1	22:DA:767:U:C2	2.73	0.56
8:CH:21:ASN:O	8:CH:22:LYS:C	2.42	0.56
2:CB:143:LYS:O	2:CB:147:SER:OG	2.19	0.56
4:CD:70:ARG:O	4:CD:74:ASN:ND2	2.39	0.56
3:CC:61:ALA:O	3:CC:62:LYS:HB2	2.05	0.56
1:CA:1262:C:C4	1:CA:1263:C:C4	2.94	0.56
4:CD:62:ARG:NH1	4:CD:69:GLU:OE1	2.38	0.56
9:CI:55:VAL:O	9:CI:55:VAL:CG2	2.53	0.56
22:BA:2502:G:C5'	22:BA:2503:A:H5''	2.36	0.56
38:DQ:50:ARG:O	38:DQ:54:LYS:NZ	2.36	0.56
24:DC:18:LYS:O	24:DC:19:VAL:HB	2.04	0.56
22:DA:295:G:H2'	22:DA:295:G:N3	2.20	0.56
22:DA:12:U:O2	22:DA:12:U:H2'	2.06	0.56
22:BA:2680:U:O2'	22:BA:2681:C:H5'	2.05	0.56
34:BM:70:ASP:OD2	34:BM:70:ASP:C	2.44	0.56
5:CE:34:THR:HB	5:CE:50:TYR:CZ	2.41	0.56
22:BA:1073:A:C3'	22:BA:1074:G:C5'	2.80	0.56
22:BA:1180:U:C2'	22:BA:1181:U:H5'	2.36	0.56
5:AE:109:GLY:O	5:AE:110:ALA:CB	2.52	0.56
22:DA:686:U:H2'	22:DA:788:A:N1	2.21	0.56
1:CA:1069:C:C2'	1:CA:1070:U:O5'	2.54	0.56
22:DA:629:G:N3	22:DA:639:U:O2'	2.37	0.56
39:DR:52:PRO:O	39:DR:53:PHE:CB	2.53	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:4:ILE:O	13:AM:6:GLY:N	2.39	0.56
22:DA:1310:G:C2'	22:DA:1311:G:H5'	2.35	0.56
22:BA:2888:C:O2	22:BA:2888:C:H2'	2.06	0.56
26:DE:149:ILE:HG12	26:DE:188:MET:SD	2.45	0.56
26:DE:196:VAL:O	26:DE:196:VAL:HG12	2.04	0.56
22:BA:137:U:H2'	22:BA:140:C:C2	2.41	0.56
46:BY:34:SER:O	46:BY:36:GLN:N	2.39	0.56
29:BH:40:THR:OG1	29:BH:43:ASN:OD1	2.24	0.56
3:CC:130:PHE:CZ	3:CC:131:ARG:HD2	2.41	0.56
12:CL:90:LEU:HB3	12:CL:93:VAL:CG2	2.36	0.56
34:DM:72:PRO:HB3	34:DM:92:TRP:CZ3	2.40	0.56
22:BA:563:A:C2	22:BA:564:C:C2	2.94	0.56
40:BS:8:ARG:O	40:BS:9:HIS:HB2	2.06	0.56
22:BA:77:G:N2	22:BA:110:G:H1'	2.21	0.56
22:BA:1680:U:H2'	22:BA:1681:G:O4'	2.06	0.56
43:BV:6:ALA:HB1	43:BV:40:ILE:HG23	1.88	0.56
22:DA:2216:G:H2'	22:DA:2217:G:C8	2.40	0.56
30:DI:101:ILE:O	30:DI:102:SER:HB3	2.05	0.56
21:CU:47:ARG:HE	21:CU:47:ARG:HA	1.70	0.56
36:BO:41:ALA:HB2	36:BO:48:LEU:HD21	1.88	0.56
22:BA:523:C:O2'	22:BA:524:G:H5'	2.06	0.56
1:CA:1394:A:N1	1:CA:1500:A:O2'	2.36	0.56
5:AE:157:ARG:HD2	8:AH:43:GLU:O	2.05	0.56
22:DA:491:G:C6	22:DA:492:A:C5	2.93	0.56
22:DA:126:A:N7	22:DA:127:A:N1	2.53	0.56
17:AQ:45:HIS:CG	17:AQ:70:THR:CG2	2.88	0.56
1:CA:1069:C:H2'	1:CA:1070:U:O5'	2.06	0.56
1:CA:1190:G:H5'	3:CC:176:HIS:CE1	2.41	0.56
22:DA:1638:C:H4'	22:DA:2710:C:O2	2.05	0.56
23:BB:30:C:OP1	36:BO:3:LYS:NZ	2.39	0.56
22:BA:2820:A:C6	25:BD:197:THR:CG2	2.88	0.56
1:CA:426:U:H5''	4:CD:37:ALA:HB1	1.87	0.56
1:CA:182:A:C5	1:CA:184:G:N7	2.74	0.56
1:CA:577:G:N9	1:CA:816:A:C2	2.74	0.56
22:DA:1315:C:O2'	22:DA:1392:A:N3	2.36	0.56
16:CP:16:PHE:CE1	16:CP:38:PHE:HB2	2.41	0.56
1:CA:635:A:C6	1:CA:636:U:C4	2.93	0.56
22:DA:1843:C:H4'	24:DC:251:GLN:CD	2.25	0.56
1:AA:542:G:OP1	4:AD:10:LYS:CE	2.54	0.56
11:CK:84:VAL:HG11	11:CK:97:ILE:HG22	1.88	0.56
1:AA:821:G:H4'	57:AA:1741:HOH:O	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:54:LEU:HD21	35:DN:66:ALA:HB2	1.87	0.56
22:BA:2120:G:N2	22:BA:2179:C:O2	2.39	0.56
8:AH:95:VAL:HG12	8:AH:96:MET:N	2.20	0.56
22:BA:936:A:H2'	22:BA:937:C:C6	2.41	0.56
4:CD:168:PRO:CB	4:CD:171:LEU:HD12	2.36	0.56
32:DK:31:ARG:HB3	32:DK:32:TYR:CE2	2.41	0.56
2:CB:54:LEU:HA	2:CB:57:LEU:HB3	1.86	0.56
43:BV:58:SER:O	43:BV:73:LYS:HE2	2.06	0.56
10:AJ:27:GLU:C	10:AJ:29:ALA:H	2.10	0.56
22:DA:1351:C:H2'	22:DA:1352:U:O4'	2.06	0.56
6:AF:91:ARG:HG3	6:AF:92:THR:N	2.19	0.56
1:CA:496:A:C2	1:CA:497:G:C6	2.93	0.56
1:AA:1109:C:OP2	3:AC:176:HIS:ND1	2.32	0.56
22:DA:1973:G:C5	22:DA:1974:C:C5	2.94	0.56
22:DA:1153:C:H5'	38:DQ:62:ILE:HD13	1.87	0.56
25:BD:103:ASP:O	25:BD:104:VAL:HG22	2.06	0.56
2:CB:15:HIS:O	2:CB:15:HIS:CG	2.58	0.56
1:AA:858:G:O6	1:AA:869:G:C8	2.58	0.56
22:BA:1838:C:C6	22:BA:1899:A:C6	2.94	0.56
1:AA:11:G:C6	1:AA:12:U:C4	2.94	0.56
22:BA:572:A:C2	22:BA:2033:A:C2	2.94	0.56
22:DA:2262:U:H1'	22:DA:2328:A:H1'	1.87	0.56
32:BK:106:GLU:OE2	32:BK:106:GLU:N	2.38	0.56
22:BA:1565:C:OP1	24:BC:18:LYS:NZ	2.39	0.56
1:AA:205:A:H2'	1:AA:205:A:N3	2.21	0.56
31:DJ:105:VAL:HG12	31:DJ:109:LEU:HD12	1.88	0.56
3:CC:75:ILE:HG13	3:CC:75:ILE:O	2.05	0.56
2:CB:162:PHE:HA	2:CB:184:PHE:O	2.06	0.56
1:AA:57:G:H2'	1:AA:58:C:C6	2.41	0.56
2:CB:10:LEU:CD2	2:CB:12:ALA:O	2.54	0.56
47:DZ:40:ASP:OD2	47:DZ:45:ARG:NH1	2.38	0.56
5:CE:125:ALA:O	5:CE:126:LYS:HB3	2.05	0.56
49:D1:21:TYR:CD1	49:D1:38:LYS:HD2	2.41	0.56
46:BY:9:LYS:O	46:BY:12:GLU:N	2.38	0.56
24:BC:86:ASN:OD1	24:BC:86:ASN:N	2.37	0.56
1:AA:527:G:O2'	1:AA:535:A:N1	2.36	0.56
1:CA:502:A:H2'	1:CA:503:C:O4'	2.06	0.56
4:AD:37:ALA:HA	4:AD:42:GLY:HA3	1.87	0.56
22:DA:1355:G:C2'	22:DA:1356:G:H5'	2.36	0.56
1:AA:452:A:H2'	1:AA:453:G:C5'	2.36	0.56
22:DA:1440:U:H2'	22:DA:1441:G:O4'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2286:G:O6	49:B1:23:THR:OG1	2.10	0.56
2:CB:219:ALA:O	2:CB:220:THR:HB	2.05	0.56
1:CA:898:G:N2	1:CA:901:A:OP2	2.36	0.56
45:DX:31:PRO:HB2	45:DX:33:LEU:CD1	2.36	0.56
4:AD:32:CYS:O	4:AD:33:LYS:CB	2.54	0.56
37:BP:40:LEU:HD21	37:BP:82:ASP:OD2	2.06	0.56
46:BY:9:LYS:HB3	46:BY:12:GLU:HG3	1.87	0.56
12:CL:82:ILE:HD11	12:CL:95:TYR:HB2	1.88	0.56
15:AO:19:ALA:O	15:AO:20:ASN:HB2	2.06	0.56
22:BA:1115:G:N3	22:BA:1116:G:C8	2.73	0.56
22:DA:927:A:O2'	47:DZ:39:GLU:OE1	2.23	0.56
36:BO:31:THR:HG22	36:BO:34:HIS:N	2.20	0.55
17:AQ:16:LYS:C	17:AQ:17:MET:HE3	2.26	0.55
22:BA:1179:G:C5	22:BA:1180:U:N1	2.74	0.55
22:DA:948:C:O2	22:DA:984:A:O2'	2.21	0.55
49:B1:7:GLU:OE1	49:B1:53:LYS:O	2.24	0.55
36:BO:25:ARG:HG3	36:BO:27:VAL:HG12	1.88	0.55
22:BA:1422:G:C4	22:BA:1423:G:C8	2.94	0.55
1:CA:1255:G:N1	1:CA:1279:G:C8	2.74	0.55
51:B3:27:ALA:O	51:B3:28:ASN:CB	2.53	0.55
20:CT:67:ILE:HD12	20:CT:71:LYS:HE3	1.87	0.55
1:AA:764:C:H5''	15:AO:50:HIS:CD2	2.40	0.55
44:DW:49:ALA:O	44:DW:50:ASN:HB2	2.06	0.55
22:BA:2492:U:C2	22:BA:2493:U:C5	2.93	0.55
4:CD:107:PHE:CG	4:CD:145:ILE:HD11	2.41	0.55
21:CU:37:PHE:HA	21:CU:40:LYS:HE3	1.87	0.55
38:BQ:9:ILE:O	38:BQ:13:ARG:HG3	2.07	0.55
3:CC:74:GLY:O	3:CC:78:GLY:N	2.39	0.55
25:DD:151:THR:HG22	25:DD:152:PRO:N	2.22	0.55
55:DA:3001:DOL:N9	55:DA:3001:DOL:HC41	2.21	0.55
22:DA:842:U:N3	22:DA:843:G:N7	2.54	0.55
22:DA:770:G:H1'	22:DA:1379:U:C4	2.41	0.55
22:DA:319:G:C4	22:DA:333:G:N2	2.75	0.55
6:AF:3:HIS:H	6:AF:92:THR:HG23	1.71	0.55
5:AE:151:GLU:O	5:AE:153:VAL:N	2.38	0.55
22:BA:1181:U:H2'	22:BA:1182:G:C8	2.41	0.55
1:CA:1041:G:H2'	1:CA:1042:A:C8	2.40	0.55
36:DO:100:HIS:CD2	36:DO:101:GLY:N	2.75	0.55
1:CA:1296:C:H4'	1:CA:1302:C:N4	2.21	0.55
22:BA:84:A:H4'	22:BA:85:G:O5'	2.06	0.55
22:BA:1385:A:C4	22:BA:1386:C:C5	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:108:VAL:HG13	27:BF:114:PHE:CE2	2.42	0.55
1:CA:1439:G:C2	1:CA:1463:U:O2	2.59	0.55
22:DA:694:U:H2'	22:DA:695:G:H5''	1.87	0.55
3:AC:145:GLY:O	3:AC:146:ALA:C	2.44	0.55
22:BA:574:A:OP2	57:BA:3267:HOH:O	2.18	0.55
22:DA:2725:A:C4	22:DA:2727:A:C8	2.93	0.55
32:BK:109:SER:O	32:BK:110:GLU:C	2.44	0.55
1:AA:108:G:C5'	1:AA:108:G:N3	2.70	0.55
22:BA:588:U:H1'	26:BE:85:PHE:CD1	2.41	0.55
22:DA:1179:G:C5	22:DA:1180:U:H1'	2.41	0.55
22:BA:1327:A:N6	22:BA:1328:A:C2	2.74	0.55
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.41	0.55
9:AI:9:THR:HG22	9:AI:10:GLY:N	2.21	0.55
1:AA:554:A:H2'	1:AA:555:U:C6	2.41	0.55
22:BA:511:U:C5	22:BA:512:G:C5	2.95	0.55
43:BV:32:GLY:O	43:BV:93:ARG:NH1	2.38	0.55
40:BS:30:SER:OG	40:BS:31:GLN:N	2.36	0.55
22:BA:1832:C:C4	22:BA:1833:C:C5	2.94	0.55
22:DA:1754:A:C6	22:DA:1755:A:C6	2.94	0.55
4:CD:160:GLU:O	4:CD:163:GLU:HB2	2.06	0.55
22:BA:1857:G:N2	22:BA:1884:G:H1'	2.20	0.55
22:DA:2202:U:H5''	22:DA:2203:U:OP1	2.06	0.55
1:AA:782:A:C2	1:AA:801:U:C2	2.95	0.55
22:DA:269:C:O2	22:DA:269:C:H2'	2.06	0.55
2:AB:93:ASN:OD1	2:AB:94:HIS:ND1	2.38	0.55
22:DA:1034:G:C6	22:DA:1035:U:N3	2.74	0.55
1:CA:109:A:C6	1:CA:327:A:C6	2.94	0.55
22:BA:2845:U:H5''	37:BP:52:ASN:O	2.04	0.55
2:AB:24:ASN:O	2:AB:26:LYS:N	2.40	0.55
22:BA:1916:A:C2	22:BA:1917:U:O2	2.59	0.55
22:DA:2815:C:H2'	22:DA:2816:G:C8	2.42	0.55
1:AA:1064:G:O2'	1:AA:1190:G:N2	2.39	0.55
52:D4:36:ARG:CG	52:D4:37:GLN:N	2.68	0.55
22:DA:2805:C:H2'	22:DA:2806:C:C6	2.40	0.55
23:BB:15:A:O2'	23:BB:16:G:H5'	2.06	0.55
6:AF:98:GLU:CG	6:AF:99:ALA:N	2.69	0.55
1:CA:466:A:C2	1:CA:468:A:C8	2.95	0.55
22:DA:2112:G:N3	22:DA:2112:G:H2'	2.22	0.55
53:B5:19:LYS:HG3	53:B5:23:ILE:CG1	2.37	0.55
22:DA:1562:U:H2'	22:DA:1563:U:O4'	2.07	0.55
22:BA:422:A:N1	22:BA:423:A:C2	2.74	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:97:GLN:HB3	5:AE:124:LEU:HD12	1.87	0.55
31:DJ:36:LEU:O	31:DJ:121:LYS:NZ	2.39	0.55
8:CH:18:GLN:NE2	8:CH:70:ALA:HB1	2.21	0.55
1:CA:798:U:H2'	1:CA:799:G:O5'	2.07	0.55
22:DA:449:A:C5	22:DA:450:G:C8	2.94	0.55
22:DA:1360:G:O6	22:DA:1372:U:C2	2.60	0.55
4:CD:161:LEU:HD23	4:CD:162:ALA:N	2.21	0.55
23:DB:39:A:H2'	23:DB:40:U:C6	2.41	0.55
2:AB:49:MET:O	2:AB:53:ALA:HB2	2.05	0.55
1:CA:734:G:C4	1:CA:735:C:C5	2.94	0.55
11:AK:25:ALA:HA	11:AK:30:THR:HG22	1.87	0.55
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.40	0.55
22:DA:584:C:N4	22:DA:585:G:C6	2.75	0.55
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.71	0.55
22:DA:526:A:C6	22:DA:2626:C:H4'	2.41	0.55
22:BA:528:A:H3'	22:BA:528:A:H8	1.71	0.55
30:DI:80:LEU:HA	30:DI:84:ALA:CB	2.35	0.55
22:BA:142:A:C5	22:BA:143:C:N4	2.75	0.55
41:BT:2:ILE:HA	41:BT:3:ARG:HB2	1.88	0.55
22:BA:1688:U:N3	22:BA:1698:A:C2	2.75	0.55
22:DA:1826:G:O2'	22:DA:1971:U:OP2	2.23	0.55
1:AA:872:A:C8	1:AA:874:G:C8	2.95	0.55
22:BA:1731:G:C6	22:BA:1733:G:C5	2.94	0.55
22:BA:1199:U:H1'	38:BQ:4:VAL:HG22	1.89	0.55
22:BA:580:U:H2'	22:BA:581:C:C6	2.41	0.55
22:DA:1767:G:O6	22:DA:1986:C:N4	2.39	0.55
22:DA:406:G:H2'	22:DA:407:G:O4'	2.06	0.55
25:BD:71:ALA:HB1	25:BD:92:VAL:HG13	1.87	0.55
9:CI:25:ASN:O	9:CI:27:LYS:N	2.39	0.55
1:AA:1387:G:H2'	1:AA:1388:C:C6	2.41	0.55
41:DT:12:ARG:O	41:DT:13:ALA:HB2	2.05	0.55
22:DA:1532:A:C2	22:DA:1540:G:C6	2.93	0.55
31:BJ:60:ASP:HA	31:BJ:97:PRO:HB3	1.89	0.55
22:DA:2718:G:C6	22:DA:2719:G:C4	2.94	0.55
1:CA:1012:A:C2	1:CA:1018:G:C2	2.94	0.55
22:DA:1360:G:N1	22:DA:1361:G:H1'	2.22	0.55
22:BA:973:A:H5'	22:BA:1188:U:H1'	1.88	0.55
22:BA:1176:U:C4	22:BA:1177:G:O6	2.60	0.55
2:AB:53:ALA:O	2:AB:57:LEU:HB2	2.06	0.55
29:BH:91:PHE:CD1	1:CA:55:A:C8	2.94	0.55
22:DA:1810:A:H5''	22:DA:1811:G:OP2	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1494:A:O2'	22:BA:1495:A:O5'	2.24	0.55
9:CI:19:VAL:HG21	9:CI:82:GLY:CA	2.36	0.55
1:CA:427:U:O2'	1:CA:541:G:OP1	2.17	0.55
27:BF:175:PHE:HD1	27:BF:177:PHE:CE1	2.25	0.55
1:AA:781:A:H4'	1:AA:1522:U:O2'	2.06	0.55
1:AA:340:U:H2'	1:AA:341:C:C6	2.42	0.55
1:AA:1441:A:H2'	1:AA:1442:G:O5'	2.05	0.55
36:DO:33:ARG:O	36:DO:34:HIS:HB2	2.06	0.55
4:CD:107:PHE:O	4:CD:117:LEU:HD11	2.07	0.55
53:B5:56:ASP:OD2	53:B5:58:ASN:ND2	2.40	0.55
22:DA:1801:A:C5	24:DC:262:ARG:NH2	2.75	0.55
36:BO:29:HIS:CD2	36:BO:29:HIS:C	2.79	0.55
1:AA:403:C:OP1	4:AD:134:SER:OG	2.18	0.55
44:BW:23:VAL:HA	44:BW:38:VAL:HG12	1.89	0.55
3:CC:134:MET:SD	3:CC:153:VAL:CG1	2.95	0.55
25:DD:16:THR:OG1	25:DD:18:ASP:OD2	2.12	0.55
4:AD:103:TYR:HB2	4:AD:114:ALA:CB	2.36	0.55
31:DJ:39:LYS:HZ3	31:DJ:39:LYS:HB2	1.72	0.55
22:DA:483:A:C2	42:DU:58:ILE:HD11	2.41	0.55
22:DA:2420:C:OP1	51:D3:34:THR:HB	2.06	0.55
1:CA:328:C:O2	1:CA:328:C:C2'	2.54	0.55
29:BH:98:ASP:O	29:BH:102:ALA:HB3	2.07	0.55
22:BA:1915:U:C2	22:BA:1916:A:C8	2.94	0.55
1:CA:1000:A:C2	1:CA:1041:G:N2	2.74	0.55
22:BA:2286:G:H5''	22:BA:2287:A:O4'	2.06	0.55
42:BU:13:VAL:HG12	42:BU:19:LYS:HA	1.88	0.55
27:BF:85:ILE:CG1	27:BF:85:ILE:O	2.55	0.55
22:BA:528:A:N1	22:BA:2043:C:H5'	2.22	0.55
1:CA:137:U:H1'	1:CA:227:G:N2	2.21	0.55
1:CA:1255:G:C6	1:CA:1279:G:N7	2.74	0.55
26:DE:108:ILE:HD11	26:DE:180:LEU:HB2	1.87	0.55
22:BA:2820:A:C2'	22:BA:2821:A:OP1	2.55	0.55
22:BA:2318:G:C5	22:BA:2319:G:C6	2.95	0.55
22:DA:484:C:OP1	42:DU:48:PRO:HG3	2.07	0.55
22:DA:749:A:C5	22:DA:1618:A:C2	2.95	0.55
9:AI:114:LYS:HG2	9:AI:120:LYS:HA	1.86	0.55
33:DL:55:MET:SD	33:DL:59:ARG:NH2	2.80	0.55
4:AD:91:LEU:HD11	4:AD:195:ILE:HD11	1.89	0.55
28:DG:176:LYS:O	28:DG:177:LYS:CB	2.54	0.55
33:DL:81:ASP:O	33:DL:82:LEU:HB3	2.05	0.55
4:AD:152:GLN:O	4:AD:153:SER:C	2.44	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2353:G:H2'	22:DA:2354:C:O4'	2.06	0.55
46:DY:27:ASN:HA	46:DY:30:MET:HB2	1.89	0.55
7:AG:120:LEU:HD13	7:AG:124:LEU:HD23	1.88	0.55
22:BA:1268:A:C2	22:BA:2013:A:C4	2.94	0.55
22:DA:95:A:O2'	46:DY:40:SER:N	2.39	0.55
5:CE:90:THR:HG22	5:CE:91:GLY:N	2.21	0.55
6:AF:17:GLN:OE1	6:AF:24:ARG:NH2	2.39	0.55
9:AI:6:TYR:HB3	9:AI:89:GLU:HG2	1.87	0.55
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.21	0.55
12:AL:56:ARG:NH1	12:AL:62:GLU:HG3	2.21	0.55
29:BH:86:ASP:O	29:BH:87:GLU:CB	2.53	0.55
22:DA:1645:G:OP1	22:DA:1646:C:H5'	2.06	0.55
22:DA:1323:C:C4	22:DA:1324:G:N7	2.74	0.55
1:AA:320:A:H2'	1:AA:321:A:C1'	2.36	0.55
1:AA:1419:G:C5	1:AA:1420:U:C5	2.95	0.55
18:AR:25:ASP:O	18:AR:27:ALA:N	2.39	0.55
9:CI:12:ARG:CZ	9:CI:107:ASP:OD2	2.53	0.55
22:DA:1510:G:H2'	22:DA:1511:G:O4'	2.06	0.55
1:CA:1007:U:C4	1:CA:1008:U:C5	2.95	0.55
5:AE:81:LEU:HA	5:AE:147:MET:HE1	1.88	0.55
50:D2:18:PHE:O	50:D2:21:ARG:N	2.40	0.55
1:CA:718:A:H5'	11:CK:119:ASN:CG	2.27	0.55
11:AK:30:THR:HG21	11:AK:91:PRO:O	2.06	0.55
1:AA:957:U:H1'	1:AA:960:U:N3	2.22	0.55
1:CA:1107:C:C4	1:CA:1108:G:N7	2.75	0.55
1:CA:1363:A:O2'	1:CA:1365:G:N7	2.36	0.55
1:CA:1491:G:C6	1:CA:1492:A:N1	2.75	0.55
22:DA:1606:C:C2'	22:DA:1607:C:OP2	2.55	0.55
22:DA:669:G:C2	22:DA:801:G:N1	2.74	0.55
22:DA:1917:U:C2'	22:DA:1918:A:H5'	2.37	0.55
3:AC:11:ARG:NH1	3:AC:182:ILE:HB	2.22	0.55
3:AC:155:GLY:HA2	3:AC:163:ALA:HB1	1.88	0.55
1:AA:1418:A:C2	1:AA:1483:A:C2	2.94	0.55
22:DA:2395:C:H2'	22:DA:2396:G:O4'	2.06	0.55
1:AA:1144:G:H5''	1:AA:1145:A:OP2	2.07	0.55
19:CS:80:TYR:O	19:CS:81:ARG:CB	2.54	0.55
22:BA:1789:A:OP2	24:BC:221:ARG:NH1	2.40	0.55
29:BH:121:VAL:N	29:BH:122:LEU:CA	2.69	0.55
29:BH:120:GLY:CA	29:BH:122:LEU:HA	2.37	0.55
25:DD:151:THR:HG22	25:DD:152:PRO:CD	2.37	0.55
22:DA:320:A:H4'	22:DA:322:A:C8	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1020:A:C2	22:DA:1141:U:C2	2.95	0.55
1:AA:92:U:H2'	1:AA:93:U:C6	2.41	0.55
39:BR:49:ILE:C	39:BR:51:VAL:O	2.45	0.55
29:DH:31:VAL:HB	29:DH:32:PRO:HD3	1.89	0.55
22:DA:1395:A:O2'	22:DA:1397:U:C6	2.59	0.55
22:DA:667:U:C4	22:DA:668:A:N7	2.75	0.55
22:DA:187:G:N2	22:DA:210:C:H1'	2.22	0.55
1:CA:1521:C:C2	1:CA:1522:U:C6	2.94	0.55
22:BA:1949:G:N2	22:BA:1958:C:O2	2.40	0.55
22:BA:1959:G:H2'	22:BA:1960:A:O5'	2.07	0.55
46:DY:31:GLN:HG2	46:DY:36:GLN:HB2	1.89	0.55
22:BA:350:G:H2'	22:BA:351:C:O4'	2.06	0.55
22:BA:2580:U:C5	22:BA:2581:G:C6	2.94	0.55
22:DA:753:A:C2	22:DA:754:U:C2	2.94	0.55
1:CA:909:A:H2'	1:CA:910:C:O4'	2.07	0.55
1:CA:840:C:N3	1:CA:842:U:H4'	2.22	0.55
1:CA:786:G:N2	1:CA:787:A:H1'	2.22	0.55
29:BH:121:VAL:N	29:BH:122:LEU:CB	2.70	0.55
22:BA:2846:G:OP2	37:BP:52:ASN:HB2	2.07	0.55
1:AA:995:C:N3	1:AA:1046:A:O2'	2.36	0.55
1:AA:451:A:H61	1:AA:481:G:H5'	1.72	0.55
22:DA:419:U:C4	22:DA:420:C:C5	2.95	0.55
1:AA:89:U:O2'	1:AA:90:C:H5'	2.07	0.55
22:DA:411:G:OP2	22:DA:2406:A:O2'	2.20	0.55
22:BA:1668:A:H4'	22:BA:1669:A:O5'	2.07	0.55
22:DA:672:C:C2	22:DA:809:G:N2	2.75	0.55
22:DA:1060:U:H4'	22:DA:1061:U:H5'	1.89	0.55
22:BA:1494:A:H2'	22:BA:1495:A:O5'	2.06	0.55
8:CH:2:SER:C	8:CH:4:GLN:N	2.60	0.55
22:DA:2307:G:N2	22:DA:2312:U:N3	2.55	0.55
12:AL:94:ARG:HB2	12:AL:95:TYR:CE2	2.42	0.55
22:DA:1127:A:H2'	22:DA:1128:G:H5''	1.89	0.55
6:CF:97:THR:O	6:CF:98:GLU:CB	2.55	0.55
1:AA:66:A:C6	1:AA:67:C:C5	2.95	0.55
4:AD:195:ILE:HG13	4:AD:195:ILE:O	2.04	0.55
22:BA:1080:A:H2'	22:BA:1080:A:N3	2.22	0.55
2:CB:141:LEU:O	2:CB:145:GLU:N	2.37	0.55
12:CL:90:LEU:CB	12:CL:93:VAL:HG21	2.37	0.55
22:BA:1355:G:O2'	22:BA:1356:G:H5'	2.07	0.55
6:CF:18:VAL:HG12	6:CF:19:PRO:N	2.22	0.55
1:AA:1462:C:H2'	1:AA:1463:U:O4'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1464:U:OP2	37:BP:109:ARG:NH1	2.40	0.55
22:BA:2480:C:C2'	22:BA:2481:G:H5'	2.37	0.55
20:AT:28:MET:O	20:AT:32:ILE:HG13	2.06	0.55
45:DX:43:GLU:O	45:DX:44:LYS:C	2.44	0.55
22:DA:1992:G:N2	22:DA:1996:C:O2'	2.39	0.55
22:BA:78:U:H2'	22:BA:79:C:C6	2.42	0.55
13:AM:37:ALA:CB	13:AM:56:LEU:HD23	2.37	0.55
1:AA:1138:G:C2	1:AA:1140:C:C5	2.94	0.55
22:BA:2765:A:N3	22:BA:2765:A:H2'	2.22	0.55
22:BA:1309:G:H4'	50:B2:7:PRO:HB2	1.88	0.55
22:DA:1808:A:N1	45:DX:28:ARG:HD2	2.21	0.55
22:DA:315:G:H2'	22:DA:316:C:O4'	2.06	0.55
22:DA:420:C:H2'	22:DA:421:C:C6	2.42	0.55
1:CA:280:C:N3	17:CQ:40:ARG:HA	2.22	0.55
22:DA:2261:C:C2	22:DA:2280:G:C2	2.95	0.55
1:AA:144:G:C5	1:AA:179:A:C2	2.95	0.55
22:DA:1318:U:H2'	22:DA:1319:C:C6	2.42	0.55
13:AM:16:VAL:HG22	13:AM:41:GLU:HB2	1.88	0.55
21:CU:8:GLU:HB3	21:CU:12:PHE:CE2	2.42	0.55
1:AA:66:A:H4'	1:AA:173:U:C5	2.42	0.55
22:DA:2107:G:C2	22:DA:2183:A:C2	2.95	0.55
23:DB:52:A:C4	36:DO:33:ARG:NH2	2.75	0.55
1:CA:106:C:H2'	1:CA:107:G:H5'	1.89	0.55
22:BA:26:G:H1'	22:BA:514:A:N6	2.22	0.55
4:AD:152:GLN:O	4:AD:155:VAL:HG12	2.06	0.55
51:D3:4:ILE:HG21	51:D3:63:PRO:HG3	1.89	0.55
1:CA:31:G:O4'	1:CA:306:A:C2	2.60	0.55
3:CC:172:ARG:HG3	3:CC:174:PRO:HD3	1.89	0.55
25:DD:125:TRP:CE3	25:DD:160:LYS:HD3	2.42	0.55
24:DC:141:VAL:HG11	24:DC:190:ALA:HB1	1.88	0.55
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.88	0.55
35:BN:79:LEU:O	35:BN:80:PHE:HB2	2.06	0.55
22:DA:1352:U:C5	22:DA:1377:G:C6	2.95	0.54
22:DA:581:C:OP2	38:DQ:33:ARG:CZ	2.54	0.54
5:AE:149:SER:CB	5:AE:152:MET:HB2	2.37	0.54
22:DA:565:C:H4'	22:DA:1253:A:N6	2.23	0.54
5:AE:81:LEU:HB3	5:AE:147:MET:CE	2.36	0.54
22:BA:2506:U:C4	55:BA:3001:DOL:H422	2.41	0.54
5:CE:36:LEU:HD21	5:CE:137:VAL:HG11	1.89	0.54
1:CA:1072:G:C5	1:CA:1073:U:C5	2.95	0.54
22:DA:732:C:H2'	22:DA:733:G:O4'	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:630:G:H3'	22:DA:631:A:C5'	2.37	0.54
22:DA:1027:A:N7	22:DA:1126:A:C2	2.74	0.54
1:CA:1240:U:C5	7:CG:109:ARG:NH1	2.76	0.54
1:CA:939:G:C6	1:CA:940:C:N4	2.75	0.54
1:CA:466:A:N1	1:CA:468:A:N7	2.55	0.54
12:CL:83:ARG:CG	12:CL:84:GLY:N	2.70	0.54
12:CL:88:LYS:HG3	12:CL:88:LYS:O	2.07	0.54
12:AL:72:HIS:O	12:AL:72:HIS:ND1	2.40	0.54
1:CA:53:A:C2	1:CA:359:G:C6	2.95	0.54
30:BI:16:GLY:HA2	30:BI:51:LYS:HB3	1.89	0.54
38:BQ:110:VAL:O	38:BQ:114:LYS:HG3	2.07	0.54
42:DU:96:PHE:CZ	42:DU:103:ILE:HG13	2.41	0.54
22:BA:55:G:C2	22:BA:56:A:C8	2.95	0.54
22:BA:1965:C:OP1	22:BA:1966:A:O2'	2.07	0.54
22:BA:2694:G:H2'	22:BA:2695:U:C6	2.42	0.54
22:BA:2415:G:H2'	22:BA:2416:C:C6	2.42	0.54
12:CL:3:THR:HB	12:CL:6:GLN:HG3	1.89	0.54
29:BH:10:ALA:O	29:BH:12:LEU:N	2.40	0.54
15:CO:27:VAL:HG12	15:CO:28:GLN:N	2.21	0.54
1:CA:97:G:C5	1:CA:98:A:H1'	2.42	0.54
42:DU:54:GLN:N	42:DU:55:PRO:CD	2.70	0.54
22:BA:2196:C:C2'	22:BA:2197:U:H5'	2.36	0.54
29:BH:90:LEU:CD2	29:BH:93:SER:HA	2.37	0.54
4:CD:22:LYS:O	4:CD:23:SER:C	2.45	0.54
22:DA:1131:G:OP1	31:DJ:82:GLY:HA2	2.07	0.54
22:DA:277:G:C2'	22:DA:361:G:O6	2.55	0.54
22:DA:569:U:H5''	22:DA:821:A:C2	2.43	0.54
1:AA:91:U:H2'	1:AA:92:U:O4'	2.08	0.54
1:AA:266:G:H4'	1:AA:267:C:OP1	2.06	0.54
39:BR:49:ILE:CG2	39:BR:52:PRO:C	2.76	0.54
22:DA:1096:A:C5	22:DA:1097:U:C5	2.95	0.54
1:CA:801:U:C2	1:CA:802:A:N7	2.75	0.54
26:DE:108:ILE:HD11	26:DE:180:LEU:CB	2.37	0.54
1:CA:577:G:H1'	1:CA:816:A:N3	2.23	0.54
23:DB:78:A:C5	23:DB:99:A:C8	2.96	0.54
22:DA:919:U:H2'	22:DA:920:A:O4'	2.07	0.54
9:CI:54:LEU:O	9:CI:55:VAL:HG22	2.08	0.54
2:CB:53:ALA:O	2:CB:57:LEU:HB2	2.07	0.54
1:CA:614:C:OP1	4:CD:83:LYS:NZ	2.39	0.54
24:DC:92:ALA:HB3	24:DC:104:ILE:CD1	2.37	0.54
22:BA:2517:C:C6	22:BA:2542:A:N7	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:79:THR:HA	29:DH:145:ASN:HB2	1.89	0.54
6:AF:84:VAL:O	6:AF:84:VAL:HG22	2.07	0.54
47:BZ:14:ILE:HG22	47:BZ:15:GLY:N	2.21	0.54
42:DU:44:LYS:HE3	42:DU:46:GLN:HB2	1.89	0.54
29:BH:90:LEU:HA	29:BH:125:THR:HG23	1.89	0.54
22:BA:627:A:C6	22:BA:637:A:C8	2.95	0.54
13:AM:10:PRO:O	13:AM:11:ASP:HB3	2.07	0.54
2:AB:27:MET:HG2	2:AB:189:THR:HA	1.89	0.54
22:DA:1343:G:C6	22:DA:1344:U:O4	2.60	0.54
1:CA:736:C:H2'	1:CA:737:C:C6	2.42	0.54
1:CA:1181:G:O2'	1:CA:1182:G:C8	2.56	0.54
53:B5:50:ILE:HB	53:B5:52:PRO:HD3	1.89	0.54
22:DA:1316:U:C2	22:DA:1337:G:N2	2.76	0.54
22:BA:2308:G:C5	27:BF:77:PHE:CE2	2.95	0.54
22:DA:867:C:C5	22:DA:868:U:C5	2.96	0.54
4:AD:123:ILE:N	4:AD:123:ILE:HD13	2.22	0.54
1:CA:66:A:H4'	1:CA:173:U:C5	2.42	0.54
1:AA:1152:A:OP1	10:AJ:70:HIS:ND1	2.40	0.54
21:CU:12:PHE:O	21:CU:13:ASP:CB	2.54	0.54
22:BA:2511:U:O4	22:BA:2575:C:N3	2.40	0.54
22:DA:2267:A:H5''	22:DA:2268:A:C5'	2.38	0.54
41:BT:17:SER:O	41:BT:18:GLU:C	2.45	0.54
22:DA:1428:C:O2'	22:DA:1569:A:OP2	2.20	0.54
42:DU:34:VAL:HG22	42:DU:67:VAL:HG23	1.88	0.54
1:AA:1417:G:C6	1:AA:1482:G:C6	2.95	0.54
22:BA:1441:G:H2'	22:BA:1442:U:C6	2.42	0.54
22:DA:792:A:H1'	22:DA:2072:C:O2'	2.07	0.54
4:AD:151:LYS:HB3	4:AD:178:MET:HE3	1.90	0.54
22:DA:1011:G:O2'	22:DA:1013:C:H5''	2.07	0.54
22:DA:1847:A:C2'	22:DA:1848:A:OP2	2.55	0.54
10:AJ:73:LEU:O	10:AJ:74:VAL:HB	2.08	0.54
24:DC:121:ASP:N	24:DC:121:ASP:OD1	2.41	0.54
1:AA:616:G:C2	1:AA:617:G:C8	2.95	0.54
22:BA:1071:G:C8	22:BA:1089:A:N6	2.76	0.54
22:DA:303:G:C6	22:DA:304:U:N3	2.76	0.54
19:AS:5:LEU:O	19:AS:7:LYS:N	2.40	0.54
17:CQ:69:LYS:HG2	17:CQ:69:LYS:O	2.07	0.54
1:CA:1027:C:N4	1:CA:1034:G:N1	2.56	0.54
1:CA:203:G:N2	1:CA:215:C:N3	2.56	0.54
22:DA:118:A:O4'	22:DA:178:G:O2'	2.24	0.54
1:CA:1296:C:C5'	1:CA:1297:G:OP2	2.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:258:G:C4	1:AA:259:G:C8	2.95	0.54
45:DX:33:LEU:HD23	45:DX:50:ARG:CZ	2.38	0.54
22:BA:1583:A:O2'	22:BA:1584:U:O5'	2.25	0.54
22:DA:104:A:H2'	22:DA:105:C:O4'	2.07	0.54
4:CD:35:GLU:HG3	4:CD:36:GLN:N	2.22	0.54
22:DA:1581:G:C5	22:DA:1582:C:N4	2.76	0.54
22:DA:1856:U:O4	22:DA:1857:G:N1	2.41	0.54
39:BR:14:VAL:HG11	39:BR:98:ILE:HG13	1.89	0.54
2:CB:167:ASP:O	2:CB:168:HIS:HB3	2.07	0.54
21:CU:12:PHE:N	21:CU:12:PHE:CD1	2.74	0.54
22:DA:2019:A:H4'	38:DQ:34:VAL:HG21	1.90	0.54
15:AO:19:ALA:O	15:AO:20:ASN:CB	2.54	0.54
34:BM:20:LEU:HD12	43:BV:81:PRO:HG2	1.88	0.54
1:AA:100:G:N7	1:AA:101:A:N7	2.55	0.54
22:DA:2365:G:H4'	44:DW:60:PHE:CE2	2.42	0.54
14:AN:20:TYR:O	14:AN:24:ARG:N	2.40	0.54
24:DC:246:THR:C	24:DC:248:TRP:H	2.10	0.54
1:CA:748:G:H2'	1:CA:749:A:H8	1.71	0.54
1:AA:876:C:OP1	8:AH:76:GLN:NE2	2.40	0.54
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.89	0.54
3:CC:42:TYR:CE1	3:CC:90:VAL:HG21	2.42	0.54
22:DA:2412:A:H3'	22:DA:2413:G:C8	2.43	0.54
22:BA:1319:C:C2'	22:BA:1320:C:H5'	2.37	0.54
22:BA:1242:U:O2	33:BL:4:ASN:ND2	2.40	0.54
44:BW:47:ALA:HB1	44:BW:51:VAL:O	2.07	0.54
22:BA:1098:A:C8	22:BA:1099:G:N7	2.76	0.54
22:DA:1343:G:N2	22:DA:1405:U:C2	2.76	0.54
20:CT:60:ARG:O	20:CT:64:LYS:N	2.38	0.54
22:BA:2831:G:P	25:BD:56:LYS:NZ	2.80	0.54
1:CA:369:G:OP2	1:CA:388:G:N1	2.39	0.54
1:CA:374:A:H5''	1:CA:452:A:C2	2.43	0.54
4:AD:174:ASP:O	4:AD:175:ALA:HB3	2.07	0.54
29:BH:14:SER:OG	29:BH:17:ASP:CG	2.46	0.54
19:CS:73:GLU:HB2	19:CS:74:PHE:CD1	2.42	0.54
1:CA:1235:U:H2'	1:CA:1236:A:O4'	2.07	0.54
22:DA:1027:A:C6	22:DA:1126:A:C4	2.95	0.54
33:DL:100:ILE:HG13	33:DL:100:ILE:O	2.07	0.54
22:DA:2326:C:H1'	22:DA:2327:A:OP1	2.08	0.54
1:AA:173:U:C2	1:AA:197:A:N1	2.76	0.54
1:AA:701:U:H4'	1:AA:702:A:H5''	1.89	0.54
1:CA:1202:U:N3	14:CN:82:ILE:HG21	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:471:A:OP1	26:DE:79:ARG:NH1	2.41	0.54
1:AA:971:G:C8	1:AA:1365:G:H4'	2.43	0.54
22:DA:1693:U:OP2	22:DA:1694:C:N4	2.37	0.54
1:CA:632:U:O2	1:CA:632:U:C2'	2.56	0.54
14:CN:87:ALA:O	14:CN:90:ARG:N	2.41	0.54
22:BA:538:A:H5''	31:BJ:7:LYS:HE3	1.89	0.54
51:D3:31:HIS:ND1	51:D3:32:ILE:HG13	2.22	0.54
22:DA:479:A:H4'	22:DA:480:A:OP1	2.08	0.54
23:BB:54:G:H21	27:BF:26:MET:HE2	1.72	0.54
1:CA:743:A:C6	1:CA:744:C:C4	2.96	0.54
22:DA:2849:U:H4'	22:DA:2868:A:C2	2.43	0.54
38:DQ:72:ASN:HB3	38:DQ:110:VAL:HG11	1.89	0.54
27:DF:5:HIS:O	27:DF:9:LYS:HG3	2.07	0.54
29:BH:103:VAL:HG21	29:BH:132:PHE:CE1	2.42	0.54
22:BA:998:C:H2'	22:BA:999:U:O5'	2.07	0.54
22:DA:1364:G:C6	22:DA:1368:G:C6	2.95	0.54
22:DA:192:C:P	57:DA:3739:HOH:O	2.65	0.54
22:DA:425:G:N2	22:DA:426:C:N3	2.56	0.54
22:DA:528:A:H2'	22:DA:529:A:H5''	1.89	0.54
22:DA:125:A:OP2	50:D2:19:ARG:NH2	2.41	0.54
22:BA:360:U:H3'	22:BA:361:G:C8	2.42	0.54
51:B3:31:HIS:CD2	51:B3:31:HIS:C	2.80	0.54
22:DA:2297:A:H2'	22:DA:2297:A:N3	2.23	0.54
7:AG:15:ASP:OD2	7:AG:44:TYR:OH	2.26	0.54
22:BA:1993:U:H4'	25:BD:133:THR:HG21	1.90	0.54
22:BA:2328:A:H2'	22:BA:2329:U:C6	2.43	0.54
22:DA:2308:G:H5'	22:DA:2309:A:OP2	2.08	0.54
22:BA:813:U:H2'	22:BA:814:C:H6	1.72	0.54
22:DA:2448:A:HO2'	22:DA:2449:U:H5	1.50	0.54
1:CA:818:G:O2'	1:CA:819:A:H5'	2.07	0.54
22:DA:1054:A:H2'	22:DA:1055:G:C8	2.43	0.54
1:AA:1118:U:H1'	1:AA:1179:A:C4	2.42	0.54
30:BI:116:ASP:O	30:BI:117:MET:CB	2.56	0.54
46:BY:18:LEU:O	46:BY:22:LEU:N	2.38	0.54
4:CD:147:GLU:O	4:CD:150:LYS:HB3	2.07	0.54
22:BA:1355:G:C2'	22:BA:1356:G:H5'	2.38	0.54
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.43	0.54
7:AG:74:GLU:HG2	7:AG:91:VAL:HB	1.90	0.54
22:BA:2869:G:H2'	22:BA:2870:C:O4'	2.08	0.54
10:AJ:6:ILE:HD12	10:AJ:76:ILE:HB	1.90	0.54
1:CA:1386:G:C2	1:CA:1387:G:C8	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:77:THR:CG2	29:BH:77:THR:O	2.56	0.54
3:AC:79:LYS:O	3:AC:82:GLU:HG3	2.06	0.54
22:DA:2038:G:H2'	22:DA:2039:U:O4'	2.07	0.54
9:CI:118:LEU:HD23	9:CI:121:ALA:O	2.08	0.54
10:AJ:28:THR:O	10:AJ:28:THR:HG22	2.07	0.54
7:AG:49:THR:O	7:AG:53:ARG:CB	2.56	0.54
16:AP:51:ARG:HH11	16:AP:51:ARG:HG2	1.71	0.54
41:DT:61:LEU:HD12	41:DT:62:VAL:N	2.23	0.54
1:CA:237:G:C6	1:CA:238:A:C5	2.95	0.54
22:DA:370:G:O2'	22:DA:423:A:H3'	2.06	0.54
22:DA:2615:U:C2	48:D0:4:GLN:HA	2.43	0.54
1:AA:259:G:N2	1:AA:260:G:H1'	2.22	0.54
10:AJ:51:VAL:HB	14:AN:81:ARG:HB2	1.90	0.54
22:DA:2563:U:H1'	22:DA:2566:A:N6	2.23	0.54
22:DA:2688:G:N1	22:DA:2720:U:OP2	2.31	0.54
22:BA:1737:G:C6	22:BA:1738:G:N1	2.75	0.54
1:AA:1452:C:O4'	1:AA:1453:G:C2	2.61	0.54
1:CA:252:U:O4	1:CA:253:A:N6	2.40	0.54
6:CF:81:ASN:OD1	6:CF:81:ASN:C	2.45	0.54
19:CS:22:ALA:CB	19:CS:47:LEU:HD13	2.37	0.54
22:DA:1529:G:O6	22:DA:1543:G:C2	2.60	0.54
27:BF:25:VAL:O	27:BF:28:VAL:HG12	2.07	0.54
11:CK:107:ILE:O	11:CK:107:ILE:HG23	2.06	0.54
35:DN:12:ARG:HG2	35:DN:16:HIS:HB3	1.89	0.54
55:DA:3001:DOL:H432	55:DA:3001:DOL:N5	2.22	0.54
22:DA:1782:U:O4	22:DA:2586:U:H5	1.89	0.54
17:CQ:70:THR:O	17:CQ:71:LYS:C	2.46	0.54
22:DA:1345:C:H5'	22:DA:1396:U:O4	2.06	0.54
1:CA:1000:A:H2'	1:CA:1001:C:O4'	2.08	0.54
1:CA:890:G:N2	1:CA:906:A:H2'	2.23	0.54
39:DR:80:ARG:C	39:DR:82:HIS:H	2.11	0.54
1:CA:528:C:O2	1:CA:528:C:H2'	2.08	0.54
22:DA:2814:A:C6	22:DA:2815:C:C4	2.95	0.54
1:CA:779:C:H2'	1:CA:780:A:H5'	1.88	0.54
22:BA:63:A:C2	22:BA:64:A:C5	2.96	0.54
10:AJ:66:GLU:HB3	14:AN:99:ALA:CB	2.38	0.54
4:CD:196:ASN:HB3	4:CD:198:HIS:CE1	2.42	0.54
5:CE:150:PRO:C	5:CE:152:MET:H	2.10	0.54
20:CT:55:GLN:N	20:CT:56:PRO:HD2	2.23	0.54
24:DC:108:LYS:HA	24:DC:196:GLY:HA3	1.89	0.54
21:CU:36:GLU:HG3	21:CU:37:PHE:H	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:749:A:O2'	1:CA:750:C:H5'	2.08	0.54
53:B5:100:ILE:HG22	53:B5:104:ILE:CB	2.38	0.54
22:DA:1230:A:H2'	22:DA:1231:U:C6	2.43	0.54
22:DA:19:A:C2	22:DA:522:A:C2	2.96	0.54
22:BA:2014:A:H2'	22:BA:2015:A:C8	2.43	0.54
32:BK:36:GLY:HA2	32:BK:62:VAL:O	2.08	0.54
3:CC:43:LEU:HD21	3:CC:68:ILE:HD11	1.88	0.54
1:CA:853:C:C4	1:CA:854:U:C5	2.95	0.54
24:DC:267:ILE:HG22	24:DC:267:ILE:O	2.06	0.54
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.42	0.54
24:DC:43:ARG:NH2	24:DC:49:ILE:HD11	2.23	0.54
2:CB:85:LEU:O	2:CB:85:LEU:HG	2.08	0.54
11:CK:18:ASP:HB3	11:CK:81:ASN:OD1	2.07	0.54
22:DA:1245:G:H4'	26:DE:33:VAL:HG11	1.88	0.54
47:DZ:13:ALA:HB2	47:DZ:24:LEU:CD1	2.38	0.54
22:BA:560:C:O2	38:BQ:48:ARG:NH1	2.39	0.54
22:DA:1476:U:H1'	22:DA:1732:C:C2	2.43	0.54
22:DA:586:A:H1'	22:DA:672:C:H1'	1.89	0.54
1:CA:780:A:C2	1:CA:803:G:N1	2.76	0.54
22:DA:289:G:N2	22:DA:352:A:C2	2.76	0.54
27:BF:173:PHE:O	27:BF:175:PHE:N	2.40	0.54
10:CJ:92:LEU:O	10:CJ:93:ALA:HB2	2.08	0.54
25:DD:187:LEU:CD2	25:DD:203:VAL:HG11	2.38	0.54
1:AA:723:U:H2'	1:AA:855:U:H4'	1.90	0.54
1:AA:66:A:O4'	1:AA:173:U:C4	2.61	0.54
22:BA:1794:A:H2'	22:BA:1795:C:C6	2.42	0.54
22:DA:2552:U:C2	22:DA:2554:U:C5'	2.91	0.54
22:DA:2214:C:H2'	22:DA:2215:C:O5'	2.08	0.54
23:BB:42:C:C6	27:BF:66:LEU:HD13	2.42	0.54
1:CA:142:G:C2	1:CA:143:A:H1'	2.42	0.54
22:BA:283:G:N7	22:BA:284:U:C5	2.76	0.54
13:AM:73:ILE:O	13:AM:76:SER:OG	2.25	0.54
26:DE:77:ILE:O	26:DE:77:ILE:HG13	2.08	0.54
1:AA:705:G:C5	1:AA:706:A:C8	2.96	0.54
22:DA:588:U:H1'	26:DE:85:PHE:CD1	2.43	0.54
26:BE:119:ILE:HB	26:BE:187:VAL:HG22	1.88	0.54
30:BI:21:SER:N	30:BI:22:PRO:CD	2.71	0.54
22:DA:2751:G:OP1	28:DG:3:ARG:NH1	2.41	0.54
1:AA:826:C:H5'	8:AH:13:ARG:NH1	2.22	0.54
22:DA:607:U:H5	22:DA:619:G:C5	2.26	0.54
18:CR:22:ASP:OD2	18:CR:24:LYS:NZ	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:29:ASP:C	4:AD:30:THR:O	2.43	0.54
22:DA:71:A:H5'	22:DA:73:A:C4	2.43	0.54
9:AI:58:VAL:O	9:AI:59:GLU:HG2	2.08	0.54
1:CA:1041:G:C6	1:CA:1042:A:N6	2.75	0.54
5:AE:108:GLY:O	5:AE:109:GLY:C	2.47	0.54
22:BA:1474:U:C3'	22:BA:1475:G:H5''	2.38	0.54
16:CP:19:VAL:HG13	16:CP:37:GLY:N	2.22	0.54
5:CE:137:VAL:O	5:CE:138:ARG:CB	2.56	0.54
35:DN:69:ARG:O	35:DN:70:THR:HG23	2.08	0.54
20:AT:83:ILE:HD12	20:AT:84:ASN:N	2.22	0.54
22:DA:1566:A:C2	24:DC:213:TRP:CE3	2.95	0.54
22:DA:694:U:C3'	22:DA:695:G:H5''	2.38	0.54
22:BA:1413:A:H2'	22:BA:1414:C:O4'	2.08	0.54
17:CQ:8:LEU:HD13	17:CQ:73:TRP:CZ3	2.43	0.54
36:BO:100:HIS:O	36:BO:104:GLN:HB3	2.08	0.54
23:DB:80:U:H2'	23:DB:81:G:C8	2.43	0.54
22:DA:1182:G:H2'	22:DA:1183:U:O4'	2.08	0.54
4:CD:168:PRO:HB2	4:CD:171:LEU:HD12	1.90	0.54
22:BA:2532:G:N2	22:BA:2663:G:O2'	2.41	0.54
22:BA:388:G:N7	22:BA:390:U:H2'	2.22	0.54
22:DA:2480:C:N4	22:DA:2481:G:C6	2.76	0.54
22:DA:1445:G:C2	22:DA:1547:C:N3	2.76	0.54
12:AL:76:GLU:O	12:AL:77:HIS:HB2	2.07	0.54
5:AE:119:GLY:O	5:AE:121:HIS:ND1	2.41	0.54
22:BA:1782:U:OP1	57:BA:3693:HOH:O	2.19	0.54
22:BA:1607:C:N4	22:BA:1622:G:N7	2.57	0.54
22:DA:2058:A:C6	22:DA:2059:A:N6	2.76	0.53
7:CG:92:ARG:NE	7:CG:93:PRO:CD	2.71	0.53
22:BA:974:G:H8	22:BA:990:A:N6	2.01	0.53
2:AB:51:ASN:O	2:AB:52:GLU:HB2	2.09	0.53
1:AA:90:C:C2	1:AA:91:U:C5	2.96	0.53
1:AA:260:G:H2'	1:AA:261:U:C6	2.42	0.53
22:DA:1715:G:O2'	22:DA:1716:U:OP2	2.25	0.53
25:DD:133:THR:HG23	25:DD:134:HIS:N	2.24	0.53
22:DA:630:G:C3'	22:DA:631:A:H5''	2.38	0.53
22:BA:528:A:H2'	22:BA:529:A:H5''	1.90	0.53
1:AA:858:G:C2'	1:AA:859:G:H5'	2.38	0.53
1:CA:425:G:H2'	1:CA:426:U:O4'	2.08	0.53
1:AA:1182:G:H4'	1:AA:1183:U:H5'	1.90	0.53
1:AA:874:G:C6	1:AA:875:U:C4	2.96	0.53
22:DA:2742:G:H5''	52:D4:1:MET:HE1	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1997:C:OP2	25:BD:129:THR:CG2	2.57	0.53
1:CA:562:U:H2'	12:CL:14:ARG:HD3	1.89	0.53
46:BY:9:LYS:HB3	46:BY:12:GLU:CG	2.38	0.53
37:BP:22:PRO:HD3	37:BP:50:ILE:HD12	1.90	0.53
5:AE:155:ALA:HB1	8:AH:66:PHE:CZ	2.43	0.53
9:CI:21:ILE:HG12	9:CI:62:ASP:O	2.07	0.53
38:BQ:105:ALA:O	38:BQ:108:ALA:HB3	2.07	0.53
12:AL:39:THR:OG1	12:AL:39:THR:O	2.20	0.53
22:DA:813:U:H2'	22:DA:814:C:C6	2.42	0.53
22:DA:359:G:H2'	22:DA:360:U:O4'	2.08	0.53
22:BA:1315:C:C2	22:BA:1338:G:N2	2.76	0.53
22:DA:1378:A:C2'	22:DA:1380:G:N7	2.71	0.53
1:AA:211:G:N2	1:AA:212:G:C8	2.76	0.53
1:AA:266:G:H3'	17:AQ:69:LYS:HB3	1.91	0.53
12:CL:25:GLU:C	12:CL:27:CYS:N	2.59	0.53
22:DA:291:G:N2	22:DA:350:G:C5	2.77	0.53
22:DA:2146:C:H4'	22:DA:2147:A:OP1	2.07	0.53
6:CF:8:PHE:CE2	6:CF:60:VAL:HB	2.42	0.53
6:CF:98:GLU:O	6:CF:99:ALA:CB	2.56	0.53
1:AA:1157:A:C5	1:AA:1180:A:C6	2.95	0.53
34:BM:12:MET:CE	34:BM:71:LYS:HG3	2.38	0.53
22:BA:589:U:H2'	22:BA:590:A:C8	2.43	0.53
22:DA:2747:G:O2'	28:DG:67:THR:HG22	2.08	0.53
24:DC:251:GLN:NE2	24:DC:253:LYS:O	2.41	0.53
22:DA:2214:C:C2'	22:DA:2215:C:O5'	2.56	0.53
1:AA:58:C:O2'	1:AA:59:A:H5'	2.06	0.53
38:BQ:36:PHE:CZ	38:BQ:40:ILE:HD11	2.43	0.53
1:CA:805:C:C2	1:CA:806:C:C5	2.96	0.53
1:CA:121:U:H3'	1:CA:122:G:H5'	1.91	0.53
19:CS:6:LYS:CB	19:CS:7:LYS:HE2	2.37	0.53
41:DT:10:VAL:HG12	41:DT:11:LEU:N	2.23	0.53
23:DB:62:C:H2'	23:DB:63:C:C6	2.42	0.53
22:DA:600:G:C5'	26:DE:27:LEU:HD22	2.37	0.53
22:BA:1916:A:C6	22:BA:1917:U:C2	2.96	0.53
22:DA:1435:G:C2'	22:DA:1436:G:H5'	2.38	0.53
22:DA:1441:G:H2'	22:DA:1442:U:C6	2.43	0.53
22:BA:2748:A:H1'	28:BG:67:THR:HG22	1.90	0.53
22:DA:1246:A:OP2	33:DL:13:LYS:NZ	2.41	0.53
22:BA:198:C:P	57:BA:3760:HOH:O	2.64	0.53
22:DA:776:G:C8	22:DA:793:A:C4	2.95	0.53
49:B1:52:ALA:O	49:B1:53:LYS:OXT	2.27	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:126:LYS:CA	21:AU:34:ARG:HH21	2.21	0.53
22:BA:2683:C:H4'	25:BD:13:ARG:NH1	2.23	0.53
22:DA:2815:C:O2'	48:D0:41:HIS:ND1	2.40	0.53
13:AM:3:ARG:O	13:AM:4:ILE:HG12	2.08	0.53
22:DA:185:G:N1	22:DA:212:G:C2	2.76	0.53
22:DA:1605:C:H2'	22:DA:1606:C:H5'	1.89	0.53
22:BA:2329:U:H2'	22:BA:2330:G:C8	2.43	0.53
20:AT:44:LYS:CB	20:AT:87:ALA:HB1	2.39	0.53
1:AA:1160:G:O2'	1:AA:1161:C:P	2.67	0.53
22:BA:585:G:N7	38:BQ:6:ARG:NH1	2.56	0.53
22:DA:704:G:H1'	22:DA:726:G:H22	1.73	0.53
1:AA:195:A:H1'	1:AA:222:C:O2'	2.08	0.53
22:DA:548:G:H4'	22:DA:549:G:C2	2.43	0.53
1:CA:1201:A:H4'	1:CA:1202:U:O5'	2.08	0.53
25:DD:32:ASN:HB3	25:DD:50:VAL:HB	1.90	0.53
1:CA:242:G:N2	1:CA:285:C:C2	2.77	0.53
36:DO:49:VAL:HG21	36:DO:82:ALA:HA	1.91	0.53
7:CG:78:ARG:O	7:CG:79:ARG:HB2	2.08	0.53
30:DI:62:TYR:HB2	30:DI:66:SER:O	2.08	0.53
3:AC:7:PRO:HG2	3:AC:184:TYR:CG	2.43	0.53
22:DA:1814:G:C6	22:DA:1815:A:C6	2.96	0.53
47:DZ:7:ILE:N	47:DZ:36:VAL:O	2.40	0.53
26:BE:149:ILE:C	26:BE:149:ILE:HD12	2.29	0.53
22:BA:1417:C:H2'	22:BA:1418:G:O4'	2.08	0.53
3:CC:162:ILE:O	3:CC:162:ILE:HD12	2.08	0.53
22:BA:228:C:H4'	22:BA:229:C:H5''	1.90	0.53
22:DA:852:U:H2'	22:DA:853:C:O4'	2.09	0.53
22:DA:747:U:O2	22:DA:2014:A:H1'	2.07	0.53
22:DA:2882:A:H5'	35:DN:96:ARG:HB2	1.90	0.53
17:AQ:16:LYS:HG3	17:AQ:16:LYS:O	2.07	0.53
22:DA:981:A:H5''	57:DA:3588:HOH:O	2.08	0.53
1:AA:203:G:O2'	1:AA:465:A:N1	2.36	0.53
38:DQ:10:ALA:O	38:DQ:13:ARG:HG3	2.08	0.53
1:AA:1064:G:O4'	1:AA:1066:C:C6	2.61	0.53
26:BE:108:ILE:HD11	26:BE:180:LEU:HD13	1.90	0.53
4:CD:35:GLU:HG3	4:CD:36:GLN:HG3	1.90	0.53
7:CG:5:ARG:HE	7:CG:5:ARG:HA	1.72	0.53
22:BA:948:C:O2	22:BA:984:A:O2'	2.26	0.53
22:DA:30:G:H2'	22:DA:31:C:O4'	2.09	0.53
22:DA:2209:G:C5	22:DA:2210:U:C4	2.97	0.53
1:CA:748:G:H2'	1:CA:749:A:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:D3:32:ILE:O	51:D3:32:ILE:HG22	2.07	0.53
23:BB:14:U:O2	23:BB:107:G:H4'	2.09	0.53
1:AA:659:U:C2	1:AA:660:C:C6	2.96	0.53
22:DA:392:U:H2'	22:DA:393:C:C6	2.43	0.53
1:CA:572:A:H5'	1:CA:573:A:OP2	2.08	0.53
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.44	0.53
6:AF:92:THR:O	6:AF:93:LYS:HG2	2.07	0.53
22:DA:1343:G:C5	22:DA:1344:U:C4	2.96	0.53
6:AF:15:SER:O	6:AF:18:VAL:HG23	2.09	0.53
22:DA:1154:G:OP1	38:DQ:58:ARG:HD3	2.08	0.53
22:BA:1464:G:H2'	22:BA:1465:G:C8	2.43	0.53
22:DA:2831:G:OP1	25:DD:56:LYS:NZ	2.36	0.53
1:CA:374:A:C2	1:CA:375:U:C6	2.96	0.53
35:BN:2:ARG:HA	35:BN:5:LYS:HD2	1.91	0.53
22:DA:1077:A:C2	22:DA:1088:A:C2	2.97	0.53
1:CA:1491:G:H3'	1:CA:1492:A:C8	2.44	0.53
7:AG:13:LEU:HD22	7:AG:13:LEU:N	2.24	0.53
22:DA:693:A:C5	22:DA:694:U:C4	2.97	0.53
38:BQ:24:TYR:O	38:BQ:25:TYR:CB	2.57	0.53
22:BA:1735:A:C2	22:BA:1736:U:H1'	2.43	0.53
22:DA:2103:C:H2'	22:DA:2104:C:C6	2.43	0.53
22:BA:1288:G:C4	22:BA:1327:A:C2	2.96	0.53
6:AF:16:GLU:HB3	4:CD:189:SER:HA	1.91	0.53
22:DA:1645:G:H5''	22:DA:1646:C:O5'	2.09	0.53
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.43	0.53
26:BE:149:ILE:HD12	26:BE:150:THR:N	2.23	0.53
13:CM:114:LYS:HB2	13:CM:115:PRO:HD3	1.90	0.53
9:CI:88:MET:HG2	9:CI:88:MET:O	2.08	0.53
22:BA:630:G:N2	22:BA:633:A:OP2	2.40	0.53
26:DE:8:ALA:HB2	26:DE:122:GLU:HG3	1.91	0.53
1:AA:9:G:OP2	5:AE:126:LYS:HG3	2.09	0.53
13:AM:27:LYS:O	13:AM:31:LYS:HG3	2.08	0.53
22:DA:720:U:H2'	22:DA:721:A:C8	2.43	0.53
24:DC:147:LYS:HB2	24:DC:150:LYS:HB2	1.91	0.53
1:AA:1031:C:H4'	1:AA:1032:G:O5'	2.08	0.53
35:BN:28:LEU:O	35:BN:32:GLU:N	2.42	0.53
30:BI:69:PHE:CD1	30:BI:69:PHE:O	2.62	0.53
5:CE:38:VAL:HG12	5:CE:117:VAL:HG21	1.91	0.53
11:CK:45:ALA:HB3	11:CK:70:CYS:HB2	1.90	0.53
4:AD:138:SER:HB2	4:AD:139:PRO:HD2	1.89	0.53
9:AI:30:ILE:O	9:AI:33:ARG:HB2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:4:TYR:CD2	6:AF:71:ILE:HD13	2.44	0.53
22:DA:1362:C:C2'	22:DA:1363:C:H5'	2.38	0.53
1:CA:256:U:H2'	1:CA:257:G:O4'	2.08	0.53
1:AA:390:U:H2'	1:AA:391:G:C8	2.44	0.53
12:AL:44:LYS:HB2	12:AL:45:PRO:CD	2.38	0.53
20:AT:67:ILE:HG13	20:AT:71:LYS:HG2	1.89	0.53
10:CJ:83:THR:O	10:CJ:87:LEU:HD12	2.08	0.53
29:DH:32:PRO:O	29:DH:33:GLN:HB2	2.09	0.53
2:CB:102:THR:HB	2:CB:175:GLU:HG3	1.91	0.53
22:DA:1223:G:N2	22:DA:1225:G:H3'	2.23	0.53
22:BA:1584:U:O2	22:BA:1584:U:C2'	2.56	0.53
22:DA:1566:A:C2	24:DC:213:TRP:CG	2.97	0.53
1:CA:664:G:H2'	1:CA:666:G:OP1	2.08	0.53
22:DA:1330:C:C2'	22:DA:1331:G:O5'	2.57	0.53
1:AA:872:A:C4	1:AA:874:G:N7	2.77	0.53
22:BA:1936:A:C2	22:BA:1945:G:C8	2.97	0.53
22:DA:2720:U:C6	22:DA:2872:A:N1	2.77	0.53
22:BA:1224:U:C4	22:BA:1225:G:C6	2.96	0.53
22:DA:2840:C:H5''	35:DN:53:THR:OG1	2.08	0.53
22:DA:626:A:C2	33:DL:78:ARG:HD3	2.43	0.53
44:DW:50:ASN:OD1	44:DW:63:ALA:HB2	2.09	0.53
18:AR:26:ILE:O	18:AR:30:LYS:HG3	2.08	0.53
1:CA:632:U:H3'	1:CA:633:G:H5'	1.90	0.53
51:D3:31:HIS:CE1	51:D3:32:ILE:CD1	2.92	0.53
35:DN:20:MET:HG3	35:DN:21:PHE:CD1	2.43	0.53
39:BR:21:ARG:CZ	39:BR:93:PHE:CE1	2.91	0.53
1:CA:892:A:C5	1:CA:893:C:C5	2.96	0.53
38:BQ:50:ARG:O	38:BQ:54:LYS:HE3	2.08	0.53
1:CA:1126:U:O4	10:CJ:73:LEU:HD12	2.09	0.53
1:CA:355:C:C4	1:CA:356:A:N7	2.77	0.53
1:AA:771:G:O2'	1:AA:772:U:H5'	2.08	0.53
29:DH:2:GLN:O	29:DH:3:VAL:HG22	2.09	0.53
22:BA:2070:A:C2	22:BA:2442:C:C2	2.97	0.53
35:DN:28:LEU:HG	35:DN:28:LEU:O	2.07	0.53
22:DA:1301:A:N3	22:DA:1301:A:H2'	2.24	0.53
49:D1:50:LYS:O	49:D1:51:GLU:HB3	2.07	0.53
31:DJ:58:ASN:OD1	31:DJ:127:GLY:O	2.26	0.53
1:AA:322:C:O2'	20:AT:18:ARG:HG3	2.08	0.53
29:BH:147:VAL:CG1	29:BH:149:GLU:HG3	2.37	0.53
38:BQ:58:ARG:O	38:BQ:62:ILE:HG13	2.09	0.53
22:DA:511:U:O4	22:DA:512:G:N1	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2044:C:N3	22:DA:2045:C:C5	2.77	0.53
22:DA:613:A:O2'	22:DA:614:A:P	2.66	0.53
1:CA:991:U:N3	1:CA:1212:U:O4'	2.42	0.53
20:AT:58:VAL:CG1	20:AT:72:ALA:HB1	2.38	0.53
22:BA:480:A:H2'	22:BA:481:G:OP1	2.08	0.53
1:CA:1302:C:C4	13:CM:17:ILE:CD1	2.92	0.53
22:DA:2119:A:C6	22:DA:2170:A:C5	2.96	0.53
1:CA:451:A:H4'	1:CA:452:A:O4'	2.08	0.53
22:DA:864:G:O6	22:DA:865:C:N4	2.42	0.53
22:BA:1432:G:O2'	22:BA:1433:A:H5'	2.09	0.53
22:BA:544:C:H5'	22:BA:545:U:OP2	2.08	0.53
22:DA:2146:C:C4'	22:DA:2147:A:OP1	2.55	0.53
22:DA:2307:G:H4'	22:DA:2308:G:O5'	2.08	0.53
40:BS:4:ILE:HG12	40:BS:106:VAL:HG22	1.90	0.53
1:AA:1446:A:C2'	1:AA:1447:A:H5'	2.39	0.53
13:AM:83:LEU:HD21	19:AS:65:GLU:HG2	1.89	0.53
33:DL:56:PRO:HD2	33:DL:59:ARG:HB2	1.91	0.53
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.07	0.53
1:CA:31:G:C5	1:CA:306:A:H1'	2.44	0.53
1:CA:1388:C:C2	1:CA:1389:C:C5	2.97	0.53
53:B5:204:GLY:O	53:B5:205:ALA:HB3	2.08	0.53
1:AA:1296:C:H4'	1:AA:1302:C:C4	2.43	0.53
27:BF:121:SER:HB2	27:BF:128:TYR:CE1	2.44	0.53
29:DH:37:VAL:CG2	29:DH:38:PRO:HD2	2.39	0.53
23:DB:11:C:C5	23:DB:12:C:C5	2.97	0.53
24:DC:240:PHE:CE1	24:DC:242:LYS:O	2.62	0.53
29:DH:103:VAL:HA	29:DH:106:ALA:HB3	1.89	0.53
23:DB:25:U:C4	23:DB:26:C:C4	2.96	0.53
5:AE:41:ASP:OD1	5:AE:42:GLY:N	2.42	0.53
22:BA:1923:U:C2'	22:BA:1924:C:C5'	2.86	0.53
22:DA:513:A:C2	22:DA:514:A:C5	2.96	0.53
9:AI:58:VAL:HG12	9:AI:58:VAL:O	2.08	0.53
9:AI:80:ARG:NH1	9:AI:103:PHE:CD1	2.77	0.53
4:AD:203:LEU:HD23	4:AD:204:TYR:CE2	2.44	0.53
38:BQ:89:GLU:H	39:BR:49:ILE:CD1	2.22	0.53
22:BA:1713:A:C2	22:BA:1716:U:C6	2.96	0.53
22:DA:1938:A:C6	22:DA:2590:A:H1'	2.43	0.53
22:DA:1874:C:H3'	22:DA:1875:G:C8	2.44	0.53
22:BA:1734:G:C4	22:BA:1735:A:C8	2.95	0.53
7:CG:65:ALA:O	7:CG:127:ALA:HB1	2.09	0.53
41:BT:16:VAL:O	41:BT:17:SER:HB3	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:149:ILE:HD11	26:BE:172:ALA:HA	1.89	0.53
35:BN:32:GLU:HA	35:BN:115:LEU:HD12	1.91	0.53
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.09	0.53
6:AF:85:ILE:O	6:AF:86:ARG:HG2	2.09	0.53
1:AA:39:G:C2	1:AA:40:C:C6	2.97	0.53
1:CA:350:G:C6	1:CA:351:G:C6	2.96	0.53
39:BR:59:ILE:HG12	39:BR:101:ILE:HD12	1.90	0.53
32:DK:66:LYS:NZ	32:DK:79:PHE:O	2.34	0.53
40:BS:1:MET:N	40:BS:109:ASP:OD1	2.41	0.53
9:CI:84:THR:HG21	9:CI:103:PHE:HB3	1.91	0.53
12:CL:28:PRO:HB2	12:CL:29:GLN:OE1	2.08	0.53
1:AA:1373:G:H5''	7:AG:36:LYS:HB2	1.91	0.53
22:DA:1695:G:H3'	22:DA:1695:G:N3	2.24	0.53
22:DA:563:A:C4	22:DA:2018:G:C2	2.97	0.53
1:AA:1076:U:O2	1:AA:1082:A:C2	2.62	0.53
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.09	0.53
1:AA:1355:G:O2'	1:AA:1356:G:H5'	2.09	0.53
1:AA:901:A:N7	1:AA:902:G:H1'	2.24	0.53
3:AC:92:ALA:HB2	3:AC:99:ALA:HB3	1.91	0.53
36:DO:100:HIS:CG	36:DO:101:GLY:N	2.77	0.53
1:CA:891:U:C5	1:CA:906:A:C2	2.97	0.53
22:DA:176:A:N7	22:DA:177:G:C6	2.77	0.53
22:DA:2162:G:H4'	22:DA:2163:A:OP1	2.08	0.53
22:BA:2685:G:OP1	32:BK:78:ARG:NH2	2.39	0.53
22:DA:1544:A:C6	22:DA:1545:A:C6	2.97	0.53
1:AA:858:G:O2'	1:AA:859:G:H5'	2.08	0.53
22:DA:2656:U:OP2	22:DA:2664:G:N1	2.42	0.53
1:CA:1151:A:H1'	1:CA:1152:A:C8	2.43	0.53
1:CA:1461:G:H2'	1:CA:1462:C:O4'	2.08	0.53
8:AH:10:MET:O	8:AH:12:THR:N	2.42	0.53
22:DA:1027:A:N6	22:DA:1126:A:N3	2.57	0.53
22:DA:1907:G:C2	22:DA:1924:C:O2	2.61	0.53
2:AB:219:ALA:O	2:AB:220:THR:CB	2.56	0.53
1:CA:1417:G:N2	1:CA:1484:C:C4	2.76	0.53
22:DA:2820:A:C8	25:DD:196:ALA:CB	2.92	0.53
22:DA:1120:G:C6	22:DA:1121:C:C4	2.97	0.53
22:DA:640:C:C4	22:DA:641:U:C5	2.97	0.53
22:BA:846:U:O2'	22:BA:847:U:OP2	2.27	0.53
22:DA:294:A:C6	22:DA:345:A:C4	2.97	0.53
28:DG:67:THR:O	28:DG:71:LEU:N	2.42	0.53
22:BA:1319:C:H2'	22:BA:1320:C:H5'	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:30:ILE:HD11	9:AI:38:TYR:CD2	2.43	0.53
1:CA:1228:C:H5'	13:CM:113:ARG:HB2	1.91	0.53
22:DA:2520:C:HO2'	22:DA:2565:A:HO2'	1.57	0.53
22:BA:2673:G:C2	22:BA:2674:G:C8	2.97	0.53
22:BA:280:U:H2'	22:BA:281:C:O4'	2.08	0.53
39:BR:16:GLU:OE1	39:BR:100:GLY:HA2	2.09	0.53
30:DI:18:ALA:O	30:DI:19:ASN:CB	2.56	0.53
42:DU:98:SER:O	42:DU:99:ASN:HB3	2.07	0.53
22:DA:848:C:H2'	22:DA:849:A:C8	2.44	0.53
22:DA:1099:G:N7	22:DA:1100:C:N4	2.57	0.53
2:AB:126:PHE:HD2	2:AB:126:PHE:N	2.07	0.53
22:BA:2514:U:H2'	22:BA:2515:C:C6	2.44	0.53
30:BI:127:ARG:HA	30:BI:130:GLU:CG	2.38	0.53
13:CM:20:THR:O	13:CM:20:THR:HG22	2.09	0.53
1:AA:1425:U:O2'	1:AA:1426:G:H5'	2.08	0.53
8:AH:25:VAL:HG12	8:AH:61:LEU:HB2	1.90	0.53
1:AA:269:C:H2'	1:AA:270:A:C8	2.44	0.53
1:CA:1483:A:N1	22:DA:1959:G:O2'	2.41	0.53
1:CA:1053:G:O5'	1:CA:1054:C:H3'	2.08	0.53
22:BA:1667:G:O2'	22:BA:1991:U:O4	2.17	0.53
22:DA:600:G:H1'	26:DE:100:MET:CG	2.39	0.53
29:BH:27:ARG:NH2	45:BX:60:ASP:CG	2.62	0.53
22:DA:370:G:O2'	22:DA:424:G:OP1	2.22	0.53
27:DF:33:LYS:HD3	27:DF:92:ARG:NH1	2.24	0.53
22:DA:1438:U:C5	22:DA:1552:A:N1	2.76	0.53
9:AI:58:VAL:O	9:AI:59:GLU:CB	2.57	0.53
24:DC:62:TYR:CE1	24:DC:63:ARG:O	2.62	0.53
22:BA:1747:U:H2'	22:BA:1748:C:C6	2.44	0.53
22:BA:475:C:C5	22:BA:481:G:O6	2.61	0.53
1:CA:1161:C:O2	1:CA:1176:A:C2	2.62	0.53
17:AQ:82:ALA:O	17:AQ:83:VAL:O	2.27	0.53
39:BR:51:VAL:HB	39:BR:52:PRO:CD	2.39	0.53
22:DA:1779:U:C5	22:DA:1784:A:N7	2.76	0.53
30:DI:8:TYR:HA	30:DI:59:ILE:HB	1.91	0.53
22:BA:1587:G:C4	22:BA:1588:G:C8	2.97	0.53
22:DA:858:G:O2'	22:DA:2268:A:N3	2.23	0.53
1:AA:33:A:H2'	1:AA:34:C:C6	2.44	0.53
22:DA:324:A:C2	22:DA:325:G:H1'	2.44	0.53
1:AA:834:U:C4	1:AA:835:U:C4	2.97	0.53
3:AC:12:LEU:O	3:AC:14:ILE:N	2.42	0.53
1:CA:106:C:O2	1:CA:379:C:H4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:106:LYS:O	37:BP:109:ARG:HD3	2.09	0.53
8:AH:25:VAL:CG1	8:AH:25:VAL:O	2.57	0.53
28:DG:11:VAL:O	28:DG:48:ASN:ND2	2.42	0.53
1:CA:619:U:H3	4:CD:131:ASN:HB3	1.74	0.53
30:DI:33:VAL:HG13	30:DI:67:PHE:CZ	2.44	0.53
22:BA:1289:C:O2'	22:BA:1330:C:H4'	2.09	0.53
22:BA:2314:A:O2'	22:BA:2315:G:H5'	2.09	0.53
37:DP:91:ALA:HB2	37:DP:113:ARG:HG3	1.91	0.53
15:AO:35:GLN:HB3	15:AO:59:MET:CE	2.39	0.53
1:CA:223:A:H2'	1:CA:224:U:C6	2.45	0.53
1:AA:1508:A:H2'	1:AA:1509:C:O4'	2.09	0.53
5:CE:153:VAL:O	5:CE:157:ARG:N	2.42	0.52
22:DA:450:G:H2'	22:DA:451:U:H5''	1.90	0.52
1:AA:374:A:H5''	1:AA:452:A:C2	2.43	0.52
22:BA:1916:A:OP2	22:BA:1917:U:OP2	2.27	0.52
22:DA:1288:G:C4	22:DA:1327:A:C2	2.98	0.52
22:BA:1179:G:O6	22:BA:1180:U:N3	2.43	0.52
1:AA:1010:U:H2'	1:AA:1011:C:C6	2.44	0.52
22:BA:2061:G:C2	55:BA:3001:DOL:HC22	2.44	0.52
1:AA:109:A:C6	1:AA:326:G:C6	2.96	0.52
22:DA:2575:C:H2'	22:DA:2578:G:O6	2.09	0.52
22:DA:1410:G:N1	22:DA:1411:U:O4	2.42	0.52
10:AJ:80:THR:O	10:AJ:83:THR:N	2.41	0.52
25:DD:208:LYS:O	25:DD:209:ALA:HB2	2.08	0.52
53:B5:83:LYS:HB3	53:B5:87:ALA:HB3	1.90	0.52
13:AM:16:VAL:CG2	13:AM:41:GLU:HB2	2.38	0.52
7:CG:68:ASN:O	7:CG:138:ARG:NH2	2.42	0.52
20:CT:83:ILE:O	20:CT:87:ALA:HB3	2.09	0.52
1:AA:1157:A:C6	1:AA:1180:A:C5	2.98	0.52
22:DA:9:G:C6	22:DA:2629:U:C5	2.98	0.52
22:BA:580:U:H2'	22:BA:581:C:H6	1.73	0.52
5:CE:96:MET:HE3	5:CE:111:MET:HE3	1.91	0.52
37:BP:31:TRP:CZ2	37:BP:40:LEU:CD1	2.92	0.52
12:CL:90:LEU:CB	12:CL:93:VAL:CG2	2.87	0.52
1:AA:57:G:C5	1:AA:58:C:C4	2.96	0.52
46:DY:36:GLN:O	46:DY:37:LEU:C	2.48	0.52
13:CM:20:THR:HG23	13:CM:26:GLY:O	2.09	0.52
22:BA:2000:C:O2'	22:BA:2001:C:H5'	2.09	0.52
22:BA:287:G:C2	22:BA:354:A:C2	2.97	0.52
22:BA:1467:U:C4	22:BA:1546:G:C2	2.98	0.52
27:DF:108:VAL:HG11	27:DF:176:PRO:CG	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2593:U:C2'	22:BA:2594:C:O5'	2.57	0.52
35:BN:14:SER:HA	35:BN:17:ARG:NH1	2.24	0.52
49:B1:14:SER:HB3	49:B1:48:ILE:O	2.09	0.52
22:DA:2031:A:C6	22:DA:2498:C:H1'	2.44	0.52
12:AL:117:TYR:O	12:AL:119:VAL:HG23	2.09	0.52
5:AE:56:VAL:N	5:AE:57:PRO:HD2	2.24	0.52
1:CA:119:A:H4'	1:CA:120:A:O5'	2.09	0.52
22:BA:244:A:C2	22:BA:255:A:C4	2.97	0.52
22:BA:929:U:H1'	47:BZ:26:GLY:O	2.10	0.52
22:DA:1308:A:H2'	22:DA:1309:G:O4'	2.09	0.52
22:BA:1346:G:O2'	22:BA:1347:A:H5'	2.10	0.52
29:DH:40:THR:O	29:DH:41:LYS:C	2.48	0.52
1:AA:373:A:N3	1:AA:374:A:C8	2.78	0.52
22:DA:971:G:O2'	22:DA:983:A:N3	2.41	0.52
1:AA:1277:C:HO2'	1:AA:1279:G:H8	1.54	0.52
1:CA:718:A:C8	1:CA:719:C:C6	2.97	0.52
22:DA:1009:A:O2'	22:DA:1153:C:H4'	2.09	0.52
1:AA:568:G:N3	1:AA:569:C:C5	2.78	0.52
39:BR:52:PRO:O	39:BR:53:PHE:O	2.27	0.52
29:DH:31:VAL:CB	29:DH:32:PRO:CD	2.86	0.52
1:CA:1068:G:C2'	1:CA:1069:C:H5'	2.38	0.52
35:DN:58:ASP:HA	35:DN:80:PHE:CD1	2.44	0.52
8:AH:111:MET:HE2	8:AH:116:ALA:N	2.23	0.52
22:DA:1127:A:C3'	22:DA:1128:G:H5''	2.38	0.52
43:BV:48:MET:O	43:BV:51:GLN:HG3	2.09	0.52
1:AA:173:U:C6	1:AA:197:A:C2	2.97	0.52
22:BA:1384:A:H1'	22:BA:1405:U:H1'	1.91	0.52
4:CD:148:LYS:O	4:CD:149:ALA:HB3	2.07	0.52
22:BA:1857:G:C2	22:BA:1884:G:N3	2.77	0.52
1:AA:1130:A:C1'	1:AA:1146:A:C2	2.92	0.52
1:AA:1145:A:HO2'	1:AA:1146:A:P	2.32	0.52
29:BH:77:THR:HA	29:BH:143:ILE:O	2.09	0.52
22:BA:2314:A:OP1	27:BF:88:LYS:NZ	2.42	0.52
7:CG:46:ALA:HA	7:CG:121:ALA:HB2	1.92	0.52
43:BV:8:VAL:HG23	43:BV:9:ARG:N	2.24	0.52
41:BT:88:LYS:O	41:BT:89:GLU:HG2	2.09	0.52
4:AD:76:TYR:C	4:AD:76:TYR:CD1	2.83	0.52
22:DA:1071:G:O2'	22:DA:1072:C:O4'	2.21	0.52
22:BA:744:U:P	57:BA:3655:HOH:O	2.67	0.52
22:BA:1754:A:C6	22:BA:1755:A:C6	2.97	0.52
1:AA:1028:C:O2	1:AA:1034:G:C6	2.62	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:768:G:C5	22:BA:769:U:C5	2.97	0.52
4:AD:84:GLY:O	4:AD:89:ASN:ND2	2.42	0.52
22:BA:1508:A:O2'	22:BA:1509:A:O4'	2.25	0.52
22:DA:2586:U:C6	22:DA:2587:A:C8	2.98	0.52
22:DA:27:G:N2	22:DA:512:G:H1'	2.23	0.52
1:AA:1342:C:O2'	9:AI:126:GLN:HG3	2.09	0.52
9:AI:45:ARG:HG2	9:AI:46:MET:SD	2.49	0.52
6:CF:93:LYS:HG2	6:CF:93:LYS:O	2.09	0.52
1:AA:1108:G:H5'	3:AC:176:HIS:ND1	2.24	0.52
1:AA:683:G:N2	11:AK:40:ASN:HA	2.24	0.52
22:BA:479:A:N3	22:BA:481:G:H5''	2.25	0.52
1:CA:718:A:C5'	11:CK:119:ASN:ND2	2.73	0.52
22:BA:362:A:C8	22:BA:362:A:OP2	2.62	0.52
22:DA:2111:U:C4	22:DA:2147:A:C2	2.97	0.52
1:CA:978:A:O2'	1:CA:1322:C:C5	2.63	0.52
14:CN:52:PRO:O	14:CN:53:ARG:HB3	2.09	0.52
9:CI:120:LYS:CG	9:CI:123:ARG:HB3	2.38	0.52
22:DA:2562:U:C2'	22:DA:2563:U:H5'	2.40	0.52
22:DA:237:C:N3	22:DA:238:C:C5	2.77	0.52
1:AA:855:U:N3	1:AA:856:C:C5	2.78	0.52
22:DA:1786:A:H1'	22:DA:1938:A:N6	2.24	0.52
4:CD:3:ARG:HD2	4:CD:115:ARG:NE	2.25	0.52
22:BA:1083:U:O2	22:BA:1085:A:C8	2.62	0.52
3:CC:130:PHE:CZ	3:CC:131:ARG:CD	2.92	0.52
10:AJ:36:VAL:HA	10:AJ:76:ILE:HA	1.90	0.52
2:AB:126:PHE:CD2	2:AB:126:PHE:N	2.76	0.52
23:BB:37:C:C5	23:BB:38:C:C4	2.98	0.52
1:CA:669:G:N2	1:CA:738:C:C2	2.77	0.52
45:BX:3:ARG:CD	45:BX:30:LEU:HD13	2.39	0.52
36:DO:79:ALA:O	36:DO:83:LEU:HG	2.08	0.52
22:BA:2590:A:C2	22:BA:2605:U:C2	2.98	0.52
22:DA:32:C:H5''	22:DA:33:C:OP2	2.10	0.52
25:DD:183:GLU:OE1	25:DD:183:GLU:N	2.42	0.52
26:BE:91:ASP:OD1	26:BE:91:ASP:C	2.48	0.52
1:AA:76:G:H2'	1:AA:76:G:N3	2.23	0.52
29:DH:72:ILE:O	29:DH:72:ILE:HG22	2.09	0.52
22:DA:307:G:N1	22:DA:310:A:OP2	2.43	0.52
40:DS:28:LYS:O	40:DS:29:VAL:C	2.48	0.52
1:AA:1311:A:C2	1:AA:1327:C:N3	2.77	0.52
11:AK:126:LYS:O	21:AU:34:ARG:NE	2.42	0.52
30:DI:80:LEU:HD23	30:DI:84:ALA:HB2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:686:U:H4'	22:BA:687:C:OP2	2.09	0.52
42:BU:86:ARG:NH1	42:BU:100:SER:O	2.41	0.52
22:DA:1390:U:C2'	22:DA:1391:U:H5'	2.40	0.52
22:DA:830:G:C2	22:DA:2448:A:N7	2.77	0.52
22:DA:498:G:C2	22:DA:499:U:C5	2.97	0.52
16:CP:28:ARG:CG	16:CP:29:ASN:OD1	2.56	0.52
2:CB:167:ASP:OD2	2:CB:191:SER:HA	2.10	0.52
1:AA:602:A:C2	1:AA:603:U:O2	2.62	0.52
22:DA:2372:U:O4'	49:D1:46:HIS:ND1	2.42	0.52
36:DO:33:ARG:O	36:DO:34:HIS:CD2	2.62	0.52
1:AA:832:G:N3	1:AA:833:G:C8	2.78	0.52
53:B5:19:LYS:HG3	53:B5:23:ILE:HG12	1.92	0.52
1:CA:747:A:C6	1:CA:748:G:C6	2.97	0.52
1:CA:632:U:H2'	1:CA:632:U:O2	2.08	0.52
1:AA:1337:G:C5'	1:AA:1338:G:OP1	2.56	0.52
28:DG:19:ILE:O	28:DG:21:GLY:N	2.43	0.52
15:AO:4:SER:O	15:AO:8:THR:OG1	2.26	0.52
34:DM:31:PHE:CZ	34:DM:110:GLU:HA	2.45	0.52
33:BL:48:ARG:HD2	51:B3:60:ALA:O	2.10	0.52
1:CA:1055:A:C6	1:CA:1206:G:C5	2.98	0.52
22:BA:998:C:C2'	22:BA:999:U:O5'	2.58	0.52
22:DA:1783:A:C6	22:DA:2587:A:C2	2.97	0.52
6:AF:3:HIS:O	6:AF:92:THR:HG23	2.09	0.52
22:DA:2615:U:C4	48:D0:3:VAL:O	2.62	0.52
22:DA:2016:U:O2	48:D0:4:GLN:NE2	2.43	0.52
1:CA:32:A:H2'	1:CA:33:A:C8	2.44	0.52
17:CQ:48:ASP:N	17:CQ:48:ASP:OD2	2.41	0.52
9:AI:52:LEU:HD13	9:AI:57:MET:HG3	1.91	0.52
22:BA:2747:G:O2'	28:BG:67:THR:HB	2.09	0.52
1:CA:73:C:C2	1:CA:74:A:C8	2.98	0.52
22:DA:1800:C:OP1	24:DC:258:ARG:NH2	2.42	0.52
22:DA:1678:A:C5	22:DA:1679:A:C8	2.97	0.52
1:AA:262:A:H2'	1:AA:263:A:C8	2.43	0.52
39:BR:49:ILE:CB	39:BR:52:PRO:O	2.57	0.52
22:BA:2308:G:O6	22:BA:2311:A:C8	2.62	0.52
22:DA:2060:A:O4'	22:DA:2502:G:H1'	2.10	0.52
22:DA:2842:G:C2	22:DA:2843:G:H1'	2.45	0.52
10:AJ:63:ASP:HB3	10:AJ:65:TYR:CE2	2.45	0.52
1:AA:1260:G:OP1	1:AA:1284:C:O2'	2.27	0.52
28:BG:121:ILE:CD1	28:BG:141:ILE:HG22	2.40	0.52
22:BA:573:U:O2'	22:BA:574:A:H3'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1167:A:N7	1:AA:1169:A:C5	2.78	0.52
1:CA:519:C:H2'	1:CA:520:A:O4'	2.10	0.52
5:AE:46:VAL:HG22	5:AE:118:ALA:HA	1.91	0.52
29:DH:34:GLY:O	29:DH:35:LYS:HD2	2.10	0.52
22:DA:2341:G:C5	22:DA:2342:C:C4	2.98	0.52
37:BP:31:TRP:CE2	37:BP:40:LEU:HD11	2.45	0.52
1:AA:542:G:OP1	4:AD:10:LYS:HE2	2.10	0.52
22:DA:1645:G:H4'	22:DA:1646:C:C6	2.44	0.52
1:AA:1076:U:C2	1:AA:1082:A:C2	2.97	0.52
1:AA:268:U:H2'	1:AA:269:C:C6	2.44	0.52
40:DS:63:GLY:O	40:DS:64:ALA:HB3	2.10	0.52
20:AT:25:ARG:HG2	20:AT:29:ARG:NH1	2.23	0.52
20:AT:29:ARG:O	20:AT:33:LYS:HG2	2.10	0.52
26:BE:15:SER:N	26:BE:197:GLU:OE2	2.42	0.52
29:BH:51:ARG:NH1	29:BH:55:GLU:OE1	2.43	0.52
22:BA:2771:C:H2'	22:BA:2772:C:C6	2.45	0.52
1:CA:644:U:H2'	1:CA:645:G:O4'	2.10	0.52
39:BR:74:ILE:CD1	39:BR:74:ILE:N	2.71	0.52
22:BA:2055:C:H5'	22:BA:2056:G:O5'	2.10	0.52
22:DA:1799:G:N1	22:DA:1819:A:OP2	2.40	0.52
4:AD:51:TYR:CE2	4:AD:55:LEU:HD12	2.45	0.52
22:DA:2772:C:H5'	25:DD:173:GLN:NE2	2.25	0.52
33:DL:29:LYS:HG3	33:DL:30:THR:HG23	1.91	0.52
22:DA:1567:G:C8	24:DC:83:TYR:CE1	2.98	0.52
34:DM:119:LEU:O	34:DM:119:LEU:HD13	2.10	0.52
6:AF:36:ILE:HG23	6:AF:36:ILE:O	2.09	0.52
1:CA:1232:U:OP1	9:CI:126:GLN:HG2	2.10	0.52
2:AB:20:THR:HA	2:AB:38:VAL:HA	1.90	0.52
4:CD:22:LYS:O	4:CD:24:GLY:N	2.43	0.52
5:AE:104:GLY:HA3	5:AE:122:ASN:HA	1.91	0.52
32:DK:121:GLU:O	32:DK:122:VAL:O	2.28	0.52
5:AE:94:VAL:CG2	5:AE:111:MET:SD	2.98	0.52
22:DA:2870:C:H5''	35:DN:65:LEU:HD21	1.90	0.52
1:CA:542:G:C2	1:CA:543:U:C5	2.98	0.52
1:CA:151:A:H2'	1:CA:152:A:O4'	2.09	0.52
1:AA:1014:A:H4'	19:AS:14:HIS:CE1	2.45	0.52
22:DA:2599:G:N7	24:DC:236:GLU:CB	2.73	0.52
4:AD:130:VAL:HG11	4:AD:135:TYR:CG	2.45	0.52
22:DA:1101:U:C5	22:DA:1102:C:C5	2.97	0.52
37:DP:39:ARG:HA	37:DP:39:ARG:HE	1.73	0.52
15:CO:53:ARG:O	15:CO:56:LEU:HB3	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:114:ALA:O	30:DI:115:ALA:HB2	2.10	0.52
2:CB:91:PHE:CD2	2:CB:150:GLY:HA3	2.44	0.52
19:CS:15:LEU:HD13	19:CS:33:THR:HG21	1.92	0.52
20:CT:32:ILE:HG12	20:CT:54:MET:HE3	1.90	0.52
22:DA:2747:G:O6	22:DA:2755:C:H5''	2.09	0.52
22:DA:481:G:C4	22:DA:507:A:C2	2.98	0.52
20:AT:33:LYS:O	20:AT:34:LYS:C	2.48	0.52
22:DA:2258:C:H4'	22:DA:2259:U:OP2	2.10	0.52
1:AA:189:A:H2'	1:AA:190:A:O4'	2.10	0.52
22:DA:881:G:N1	22:DA:895:U:O2	2.42	0.52
22:DA:1980:G:O2'	22:DA:1982:U:OP2	2.26	0.52
10:AJ:57:VAL:O	10:AJ:58:ASN:HB2	2.09	0.52
34:DM:124:LEU:N	34:DM:124:LEU:CD2	2.72	0.52
22:DA:1087:G:C2	22:DA:1089:A:C2	2.98	0.52
7:CG:74:GLU:O	7:CG:88:PRO:HA	2.10	0.52
22:BA:852:U:H2'	22:BA:853:C:C6	2.44	0.52
1:CA:1298:U:O2	1:CA:1298:U:C2'	2.57	0.52
25:DD:15:PHE:CD2	37:DP:78:SER:HA	2.45	0.52
2:AB:81:LYS:HG3	2:AB:91:PHE:CZ	2.45	0.52
29:BH:94:ILE:HD12	29:BH:98:ASP:HB3	1.92	0.52
22:DA:621:A:C5	22:DA:622:G:H1'	2.44	0.52
22:BA:1923:U:HO2'	22:BA:1924:C:C5'	2.22	0.52
22:DA:305:C:H1'	22:DA:313:G:N2	2.24	0.52
1:CA:484:G:N7	1:CA:486:U:H1'	2.24	0.52
22:DA:1327:A:H2'	22:DA:1328:A:O4'	2.10	0.52
22:DA:574:A:H4'	22:DA:575:A:C5'	2.39	0.52
1:CA:71:A:C2	1:CA:72:A:C8	2.98	0.52
1:CA:1296:C:H5''	1:CA:1297:G:OP2	2.09	0.52
11:CK:40:ASN:O	11:CK:41:ALA:HB3	2.10	0.52
1:CA:553:A:O2'	12:CL:26:ALA:O	2.27	0.52
27:BF:36:LEU:HD22	27:BF:91:LEU:HD11	1.91	0.52
46:BY:14:LEU:HA	46:BY:17:GLU:HB3	1.92	0.52
2:AB:67:ILE:O	2:AB:68:LEU:CB	2.57	0.52
2:CB:15:HIS:ND1	2:CB:15:HIS:C	2.63	0.52
53:B5:65:LEU:HD21	53:B5:191:ARG:CB	2.39	0.52
19:AS:64:ASP:HB3	27:BF:115:ARG:NH2	2.24	0.52
22:DA:1869:G:C2	22:DA:1873:G:N1	2.78	0.52
33:DL:56:PRO:O	33:DL:60:ARG:CB	2.57	0.52
1:CA:518:C:OP2	1:CA:530:G:H1'	2.08	0.52
24:BC:123:ALA:O	24:BC:125:LYS:N	2.43	0.52
22:DA:1875:G:O2'	22:DA:1876:A:OP2	2.28	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2234:G:C5	22:DA:2235:G:C8	2.98	0.52
22:DA:2810:A:C8	22:DA:2811:G:C8	2.98	0.52
21:AU:17:ARG:NH1	21:AU:20:LYS:CG	2.73	0.52
29:DH:34:GLY:O	29:DH:35:LYS:HB2	2.08	0.52
22:BA:1288:G:C5	22:BA:1327:A:C2	2.98	0.52
22:DA:2546:U:O4'	22:DA:2565:A:C2	2.62	0.52
37:DP:91:ALA:HB2	37:DP:113:ARG:HA	1.90	0.52
1:CA:421:U:O5'	1:CA:422:C:C5	2.62	0.52
1:CA:1306:A:H1'	1:CA:1332:A:C5	2.45	0.52
38:BQ:41:LYS:HG3	38:BQ:45:TYR:CE1	2.44	0.52
35:BN:21:PHE:HB3	35:BN:47:VAL:HG21	1.92	0.52
20:AT:68:HIS:HB3	20:AT:69:LYS:NZ	2.25	0.52
22:DA:1726:C:H2'	22:DA:1727:C:C6	2.45	0.52
20:CT:36:TYR:CD1	20:CT:36:TYR:C	2.83	0.52
4:AD:107:PHE:CD1	4:AD:145:ILE:CD1	2.93	0.52
22:DA:2301:C:C2	22:DA:2316:G:N2	2.77	0.52
1:AA:887:G:H2'	1:AA:888:G:H5'	1.91	0.52
4:CD:46:PRO:O	4:CD:48:LEU:N	2.42	0.52
34:BM:78:LEU:N	34:BM:78:LEU:HD12	2.24	0.52
22:BA:790:U:O2'	22:BA:791:C:O5'	2.26	0.52
1:AA:1070:U:C2	1:AA:1071:C:C5	2.98	0.52
22:DA:1957:C:H5'	22:DA:1984:G:O2'	2.09	0.52
16:CP:23:ASP:OD2	16:CP:25:ARG:CG	2.58	0.52
22:DA:1782:U:O4	22:DA:2586:U:C5	2.62	0.52
1:AA:980:C:C5	1:AA:981:U:C5	2.97	0.52
49:B1:6:ARG:HG2	49:B1:24:THR:HB	1.92	0.52
22:DA:1340:U:H4'	22:DA:1341:G:OP2	2.10	0.52
1:AA:80:A:C2	1:AA:90:C:N3	2.77	0.52
42:DU:41:LEU:HD12	42:DU:60:GLU:CG	2.40	0.52
22:BA:264:C:O2'	22:BA:265:A:H2'	2.10	0.52
22:BA:1142:A:C2	22:BA:1144:A:C1'	2.92	0.52
2:AB:75:ALA:O	2:AB:76:ALA:CB	2.58	0.52
21:CU:14:VAL:C	21:CU:16:LEU:HG	2.29	0.52
24:BC:141:VAL:HG13	24:BC:191:THR:O	2.10	0.52
32:BK:58:LEU:HD23	32:BK:59:LYS:O	2.10	0.52
22:DA:389:G:O4'	22:DA:2413:G:H5'	2.10	0.52
1:AA:9:G:C6	1:AA:26:A:N6	2.78	0.52
1:AA:1425:U:O2	1:AA:1476:A:C2	2.62	0.52
37:DP:113:ARG:O	37:DP:114:LEU:C	2.48	0.52
40:DS:7:HIS:HB2	40:DS:50:VAL:HG21	1.92	0.52
22:BA:624:C:O2'	22:BA:657:U:H5''	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:2:GLN:O	29:BH:3:VAL:HG22	2.10	0.52
29:DH:25:TYR:CZ	29:DH:30:LEU:HD21	2.45	0.52
40:BS:36:LEU:HD13	40:BS:48:LYS:CA	2.40	0.52
25:DD:86:GLU:HG3	25:DD:87:GLY:N	2.24	0.52
1:CA:643:C:H5'	8:CH:32:LEU:HD22	1.92	0.52
1:AA:968:A:H4'	1:AA:969:A:OP2	2.10	0.52
1:CA:1416:G:N2	1:CA:1485:U:H1'	2.24	0.52
22:BA:591:U:HO2'	51:B3:2:PRO:N	2.07	0.52
22:BA:226:A:C6	22:BA:227:A:C6	2.97	0.52
22:BA:1424:G:H2'	22:BA:1425:G:O4'	2.10	0.52
1:AA:622:A:C8	1:AA:623:C:C6	2.98	0.52
2:CB:62:SER:HA	2:CB:224:GLY:HA3	1.91	0.52
22:BA:2199:A:C8	22:BA:2200:C:C5	2.97	0.52
36:DO:36:TYR:CD1	36:DO:36:TYR:N	2.77	0.52
1:AA:1327:C:C2'	1:AA:1328:C:H5'	2.40	0.52
22:DA:228:C:N3	22:DA:418:C:O4'	2.43	0.52
22:BA:1179:G:O6	22:BA:1180:U:C2	2.63	0.52
9:AI:50:GLN:C	9:AI:52:LEU:H	2.12	0.52
1:AA:1410:A:C4	1:AA:1491:G:N2	2.78	0.52
29:DH:23:ALA:O	29:DH:27:ARG:N	2.38	0.52
49:B1:34:LEU:H	49:B1:52:ALA:CB	2.23	0.52
1:AA:1004:A:H2'	1:AA:1005:A:O4'	2.10	0.52
2:AB:68:LEU:HD21	2:AB:92:VAL:HG23	1.92	0.52
22:BA:2554:U:C4	22:BA:2555:U:O4	2.63	0.52
22:BA:1020:A:C2	22:BA:1141:U:C2	2.98	0.52
22:BA:528:A:C8	22:BA:528:A:C3'	2.93	0.52
27:DF:121:SER:O	27:DF:123:ASP:N	2.43	0.52
25:DD:140:HIS:CE1	57:DD:303:HOH:O	2.63	0.52
1:CA:154:U:O2	1:CA:168:G:N2	2.43	0.52
34:DM:135:VAL:O	34:DM:136:MET:CB	2.57	0.52
1:AA:1080:A:O3'	5:AE:21:VAL:HG21	2.09	0.52
1:CA:517:G:H5'	1:CA:519:C:O2	2.10	0.52
26:DE:77:ILE:CG1	26:DE:77:ILE:O	2.57	0.52
40:BS:17:VAL:HG12	40:BS:76:VAL:HG21	1.92	0.52
1:CA:609:A:N7	1:CA:610:U:C5	2.78	0.52
39:BR:47:VAL:HG12	39:BR:54:VAL:HG21	1.92	0.52
13:CM:10:PRO:O	13:CM:11:ASP:HB2	2.10	0.52
22:BA:1820:U:O4	24:BC:198:ALA:HB1	2.09	0.52
22:BA:2355:G:O3'	44:BW:24:LYS:NZ	2.43	0.52
7:AG:42:ILE:HG21	7:AG:116:MET:HB3	1.92	0.52
28:DG:87:LEU:HD12	28:DG:87:LEU:N	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1858:A:C2	22:DA:1859:U:C2	2.98	0.52
47:BZ:8:THR:OG1	47:BZ:35:THR:OG1	2.28	0.52
5:CE:105:ILE:H	5:CE:122:ASN:C	2.13	0.52
22:DA:621:A:C6	22:DA:622:G:H1'	2.45	0.52
22:DA:2061:G:C6	55:DA:3001:DOL:HC19	2.44	0.52
40:DS:20:VAL:CG2	40:DS:39:THR:HG21	2.40	0.52
5:CE:153:VAL:HG23	5:CE:157:ARG:HB2	1.90	0.52
22:DA:582:A:N7	57:DA:3286:HOH:O	2.34	0.52
1:CA:34:C:H2'	1:CA:35:G:C8	2.45	0.52
17:CQ:15:ASP:OD1	17:CQ:54:GLY:HA2	2.10	0.52
39:DR:82:HIS:CG	39:DR:82:HIS:O	2.63	0.52
1:AA:1018:G:N2	1:AA:1019:A:C8	2.77	0.52
22:BA:2684:U:C4	22:BA:2685:G:N7	2.78	0.52
22:DA:2819:G:H2'	22:DA:2821:A:N7	2.25	0.52
33:BL:95:LEU:HD22	33:BL:100:ILE:CD1	2.39	0.52
22:DA:396:G:OP2	45:DX:10:LYS:HG2	2.09	0.52
22:DA:2502:G:H5'	22:DA:2503:A:H5''	1.92	0.52
22:DA:2091:C:C3'	22:DA:2092:U:H5''	2.38	0.52
39:BR:66:HIS:CE1	39:BR:94:THR:CG2	2.92	0.52
1:CA:885:G:O2'	1:CA:914:A:N1	2.32	0.52
27:BF:108:VAL:HG12	27:BF:109:PRO:HD3	1.91	0.52
3:CC:111:LEU:CD1	3:CC:146:ALA:HB2	2.40	0.52
22:BA:1132:U:C3'	22:BA:1133:A:H5''	2.39	0.52
22:BA:1721:G:O2'	22:BA:1739:A:N6	2.43	0.52
1:AA:1135:U:H2'	1:AA:1136:C:O5'	2.10	0.52
3:CC:77:ILE:HA	3:CC:84:VAL:HG23	1.92	0.52
42:DU:54:GLN:N	42:DU:55:PRO:HD3	2.25	0.52
23:BB:54:G:H21	27:BF:26:MET:CE	2.23	0.52
22:DA:1293:C:H2'	22:DA:1294:U:O4'	2.10	0.52
1:AA:1356:G:N2	1:AA:1357:A:C2	2.78	0.52
49:B1:47:VAL:HG13	49:B1:48:ILE:N	2.24	0.52
17:AQ:6:ARG:O	17:AQ:7:THR:HG23	2.09	0.52
45:BX:68:LEU:HD13	45:BX:78:TYR:CE1	2.45	0.52
22:BA:760:G:H2'	22:BA:761:A:O4'	2.09	0.52
37:BP:75:GLN:O	37:BP:77:HIS:N	2.43	0.52
22:BA:2534:A:H2'	22:BA:2535:G:O5'	2.10	0.52
1:AA:188:C:O2	1:AA:188:C:H2'	2.09	0.52
31:DJ:117:ALA:HA	31:DJ:120:ARG:HD2	1.91	0.52
22:DA:600:G:H1'	26:DE:100:MET:HG2	1.92	0.51
5:CE:157:ARG:HD3	5:CE:158:GLY:H	1.75	0.51
22:DA:1362:C:H2'	22:DA:1363:C:H5'	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1050:A:C2	22:DA:2751:G:C4	2.98	0.51
1:AA:1201:A:H1'	1:AA:1202:U:OP2	2.10	0.51
1:AA:1202:U:C4	1:AA:1203:C:C5	2.98	0.51
22:DA:607:U:O4	22:DA:619:G:H2'	2.08	0.51
1:CA:1060:U:C5'	10:CJ:53:ILE:HG23	2.41	0.51
9:AI:43:THR:O	9:AI:44:ALA:CB	2.57	0.51
1:AA:208:U:C6	1:AA:210:C:C4	2.99	0.51
22:DA:2283:C:C2	22:DA:2389:G:C2	2.98	0.51
4:CD:192:SER:O	4:CD:193:ALA:HB3	2.10	0.51
1:AA:1010:U:O2	1:AA:1019:A:N1	2.43	0.51
22:DA:686:U:H6	22:DA:788:A:N1	2.08	0.51
22:BA:2553:G:N1	22:BA:2554:U:O2	2.43	0.51
22:DA:1649:G:O6	22:DA:2009:A:N6	2.43	0.51
39:DR:49:ILE:HD12	39:DR:52:PRO:HA	1.92	0.51
22:DA:2156:G:C6	22:DA:2157:G:C2	2.97	0.51
12:AL:25:GLU:O	12:AL:26:ALA:C	2.48	0.51
15:AO:63:ARG:CG	15:AO:67:LEU:CD1	2.88	0.51
26:DE:149:ILE:HD12	26:DE:172:ALA:HA	1.92	0.51
1:CA:957:U:O2	1:CA:959:A:C8	2.62	0.51
3:AC:140:ASN:O	3:AC:141:ALA:HB2	2.11	0.51
1:AA:685:G:N1	1:AA:686:U:O4	2.43	0.51
22:DA:1874:C:C4	22:DA:1875:G:C6	2.99	0.51
30:BI:75:PRO:O	30:BI:79:LEU:HD12	2.10	0.51
22:DA:294:A:N6	22:DA:345:A:C4	2.78	0.51
15:AO:89:ARG:NH1	22:BA:714:U:C5	2.78	0.51
1:CA:179:A:H2'	1:CA:180:U:C6	2.45	0.51
1:AA:560:A:C6	5:AE:128:TYR:CE1	2.98	0.51
10:AJ:56:HIS:ND1	10:AJ:57:VAL:HG12	2.25	0.51
22:BA:1627:G:C2	22:BA:1628:G:C8	2.98	0.51
42:DU:88:GLU:O	42:DU:89:ASP:CB	2.59	0.51
42:DU:82:ARG:O	42:DU:97:LYS:HB2	2.10	0.51
4:AD:60:LYS:NZ	4:AD:194:ASP:O	2.43	0.51
11:CK:92:GLY:O	11:CK:93:ARG:C	2.49	0.51
22:DA:1906:G:OP1	22:DA:1930:G:C8	2.62	0.51
1:CA:949:A:C2	1:CA:1233:G:N3	2.78	0.51
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.45	0.51
44:BW:56:ASP:OD1	44:BW:56:ASP:N	2.39	0.51
11:CK:77:TYR:N	11:CK:77:TYR:CD1	2.78	0.51
22:BA:988:A:OP2	47:BZ:12:SER:HB3	2.10	0.51
25:BD:140:HIS:CE1	57:BD:302:HOH:O	2.57	0.51
35:DN:90:ARG:NH2	35:DN:116:VAL:HG11	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1407:G:N2	22:DA:1596:A:N3	2.58	0.51
22:DA:777:G:N7	22:DA:793:A:C2	2.79	0.51
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.10	0.51
20:AT:55:GLN:N	20:AT:56:PRO:HD2	2.25	0.51
22:DA:2824:C:N4	22:DA:2825:G:C5	2.78	0.51
1:CA:1105:A:N3	1:CA:1106:G:C8	2.78	0.51
5:AE:136:VAL:O	5:AE:140:THR:HG23	2.10	0.51
29:BH:110:VAL:HG22	29:BH:114:GLU:HB2	1.90	0.51
19:CS:73:GLU:HB2	19:CS:74:PHE:CE1	2.45	0.51
53:B5:191:ARG:O	53:B5:195:ARG:CB	2.57	0.51
22:DA:2651:C:O2'	22:DA:2652:C:H5'	2.10	0.51
46:BY:45:GLN:O	46:BY:46:VAL:CB	2.58	0.51
22:BA:1028:A:H61	22:BA:1125:G:H2'	1.76	0.51
22:BA:1731:G:C6	22:BA:1733:G:C6	2.98	0.51
1:CA:575:G:C6	1:CA:821:G:C5	2.98	0.51
37:BP:91:ALA:HB2	37:BP:113:ARG:HA	1.93	0.51
8:AH:125:ILE:O	8:AH:125:ILE:CG1	2.59	0.51
22:DA:483:A:H4'	42:DU:47:LYS:HA	1.92	0.51
44:BW:56:ASP:O	44:BW:57:HIS:HB2	2.10	0.51
47:DZ:14:ILE:HG22	47:DZ:15:GLY:N	2.26	0.51
1:AA:29:U:O2'	1:AA:30:U:H5'	2.10	0.51
4:AD:34:ILE:O	4:AD:34:ILE:HD13	2.11	0.51
22:BA:1935:G:C6	22:BA:1962:C:C6	2.98	0.51
22:BA:1138:G:H5''	22:BA:1139:G:OP2	2.10	0.51
1:AA:142:G:H3'	1:AA:143:A:C8	2.46	0.51
46:BY:26:PHE:C	46:BY:26:PHE:CD1	2.83	0.51
22:BA:2547:A:H2'	22:BA:2548:U:C6	2.45	0.51
30:DI:86:ILE:HD13	30:DI:89:GLY:N	2.26	0.51
1:CA:1238:A:N3	1:CA:1241:G:O2'	2.35	0.51
22:BA:1429:G:O2'	22:BA:1430:G:H5'	2.10	0.51
22:BA:1394:U:P	57:BA:3410:HOH:O	2.68	0.51
22:DA:193:U:C5	22:DA:194:G:N7	2.79	0.51
22:DA:2024:G:C4	22:DA:2040:G:N2	2.79	0.51
3:AC:87:LEU:O	3:AC:88:ARG:C	2.48	0.51
22:DA:1344:U:HO2'	22:DA:1345:C:P	2.30	0.51
29:DH:121:VAL:O	29:DH:122:LEU:HB2	2.11	0.51
22:DA:2507:C:C4	22:DA:2508:G:C5	2.99	0.51
22:DA:122:G:H2'	22:DA:123:G:O4'	2.10	0.51
1:CA:583:A:C2	1:CA:759:A:C5	2.98	0.51
22:DA:1068:G:H2'	22:DA:1096:A:C5'	2.40	0.51
33:BL:100:ILE:HG13	33:BL:100:ILE:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1370:G:C5'	9:AI:111:VAL:HG21	2.40	0.51
22:DA:2531:A:C5'	28:DG:157:TYR:CZ	2.92	0.51
22:DA:186:G:N2	22:DA:211:C:C2	2.78	0.51
22:BA:136:G:H2'	22:BA:137:U:C6	2.46	0.51
22:DA:1798:U:O2'	22:DA:1802:A:N3	2.41	0.51
22:BA:981:A:H5''	57:BA:3596:HOH:O	2.09	0.51
21:AU:12:PHE:CD2	21:AU:12:PHE:N	2.75	0.51
37:DP:40:LEU:HD23	37:DP:41:GLN:N	2.25	0.51
22:DA:1853:A:N3	22:DA:2233:U:O2'	2.36	0.51
11:AK:112:ASP:CB	21:AU:20:LYS:HD2	2.41	0.51
24:DC:34:LEU:O	24:DC:35:GLU:CB	2.58	0.51
42:DU:34:VAL:O	42:DU:64:ALA:HA	2.10	0.51
42:DU:67:VAL:HA	42:DU:70:VAL:CG2	2.41	0.51
10:CJ:7:ARG:HD3	10:CJ:75:ASP:OD1	2.11	0.51
22:BA:1820:U:H4'	22:BA:1821:A:OP2	2.10	0.51
22:DA:1789:A:H5''	24:DC:219:THR:O	2.10	0.51
1:CA:1337:G:C5'	1:CA:1338:G:OP1	2.59	0.51
1:CA:1537:U:C5	1:CA:1538:C:C4	2.98	0.51
22:DA:2739:U:C5	22:DA:2763:G:C5	2.98	0.51
46:DY:48:ARG:O	46:DY:51:ALA:HB3	2.11	0.51
22:DA:2624:G:H1'	48:D0:19:HIS:HE1	1.75	0.51
22:DA:1740:G:C2	22:DA:1741:C:C2	2.99	0.51
27:DF:147:ASP:O	27:DF:148:ARG:HB2	2.10	0.51
16:AP:29:ASN:N	16:AP:29:ASN:OD1	2.43	0.51
1:AA:1253:G:N1	1:AA:1285:A:N6	2.58	0.51
2:CB:128:LYS:O	2:CB:129:LEU:HB2	2.09	0.51
7:CG:25:LYS:O	7:CG:29:ILE:HG12	2.10	0.51
22:BA:1313:U:H2'	22:BA:1610:A:C2	2.45	0.51
29:BH:99:ILE:O	29:BH:103:VAL:CG2	2.58	0.51
4:CD:29:ASP:O	4:CD:30:THR:C	2.49	0.51
29:BH:85:GLY:HA2	29:BH:91:PHE:CE2	2.46	0.51
1:AA:545:C:H5'	4:AD:69:GLU:CG	2.41	0.51
1:AA:1238:A:C2	1:AA:1303:C:H4'	2.45	0.51
1:AA:957:U:C2	1:AA:959:A:OP2	2.63	0.51
1:CA:474:G:H2'	1:CA:475:C:O4'	2.11	0.51
20:AT:44:LYS:HG2	20:AT:87:ALA:CB	2.40	0.51
22:DA:1213:A:N3	22:DA:1238:G:O2'	2.40	0.51
22:DA:669:G:N2	22:DA:670:A:N1	2.58	0.51
22:BA:2033:A:H4'	22:BA:2034:U:OP1	2.10	0.51
32:DK:28:SER:O	32:DK:29:HIS:HB2	2.09	0.51
22:DA:1330:C:O2'	22:DA:1331:G:H5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1586:A:N7	22:BA:1587:G:C8	2.78	0.51
1:AA:701:U:H4'	1:AA:702:A:C5'	2.40	0.51
22:BA:1996:C:H4'	22:BA:1997:C:OP1	2.10	0.51
21:AU:20:LYS:CE	21:AU:20:LYS:HA	2.40	0.51
12:CL:38:TYR:HB2	12:CL:52:VAL:HG13	1.92	0.51
10:CJ:52:LEU:HB2	14:CN:81:ARG:HD2	1.92	0.51
14:CN:80:SER:O	14:CN:83:LYS:N	2.43	0.51
22:DA:1178:C:C2	22:DA:1179:G:N7	2.79	0.51
1:AA:1419:G:C6	1:AA:1420:U:C4	2.98	0.51
22:DA:1528:A:N6	22:DA:1543:G:O2'	2.44	0.51
29:DH:26:ALA:HA	29:DH:30:LEU:HB2	1.92	0.51
3:AC:25:ASN:O	3:AC:27:LYS:N	2.42	0.51
22:DA:2461:A:C2	22:DA:2490:G:N2	2.78	0.51
1:AA:393:A:C2	1:AA:394:G:C8	2.99	0.51
1:CA:1014:A:O4'	19:CS:34:TRP:CZ3	2.63	0.51
22:BA:1850:G:C6	22:BA:1851:U:C4	2.98	0.51
22:BA:2703:C:H2'	22:BA:2704:C:H6	1.75	0.51
12:CL:40:THR:HG22	12:CL:41:THR:N	2.26	0.51
42:BU:72:ILE:HD12	42:BU:72:ILE:O	2.09	0.51
22:BA:1880:U:H2'	22:BA:1881:C:C6	2.46	0.51
22:BA:2140:G:N3	22:BA:2140:G:H2'	2.25	0.51
1:CA:597:G:H2'	1:CA:598:U:H5'	1.92	0.51
22:BA:2558:C:C2'	22:BA:2559:C:H5'	2.41	0.51
29:BH:117:LEU:CD2	29:BH:121:VAL:N	2.70	0.51
29:BH:132:PHE:O	29:BH:139:PHE:HB3	2.11	0.51
29:BH:94:ILE:CG2	29:BH:99:ILE:CG1	2.88	0.51
1:CA:409:U:H2'	1:CA:410:G:O4'	2.10	0.51
22:DA:310:A:O2'	22:DA:311:A:P	2.67	0.51
16:AP:70:ARG:O	16:AP:70:ARG:HG3	2.09	0.51
12:AL:44:LYS:HB3	12:AL:45:PRO:CD	2.40	0.51
45:DX:54:LYS:O	45:DX:57:ARG:N	2.42	0.51
22:DA:125:A:H3'	50:D2:19:ARG:HG3	1.93	0.51
29:DH:53:GLU:O	29:DH:54:LEU:C	2.49	0.51
22:BA:2267:A:H2	57:BA:3514:HOH:O	1.93	0.51
22:BA:2266:A:H4'	22:BA:2267:A:O5'	2.11	0.51
17:AQ:45:HIS:CB	17:AQ:70:THR:HG22	2.41	0.51
39:BR:37:GLU:OE2	39:BR:53:PHE:CE2	2.64	0.51
1:CA:1067:A:N1	1:CA:1108:G:O2'	2.28	0.51
1:CA:1068:G:H2'	1:CA:1069:C:H5'	1.92	0.51
12:CL:24:LEU:HD22	12:CL:59:ASN:OD1	2.11	0.51
22:DA:85:G:OP2	42:DU:28:VAL:HG12	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:141:G:H5'	22:BA:142:A:C6	2.45	0.51
26:DE:108:ILE:HD13	26:DE:181:ILE:HG12	1.91	0.51
22:DA:914:G:H5'	22:DA:915:C:OP2	2.10	0.51
16:AP:79:ASN:O	16:AP:80:LYS:HE3	2.10	0.51
22:DA:1827:U:H2'	22:DA:1828:G:O5'	2.10	0.51
1:AA:1350:A:OP1	9:AI:123:ARG:NE	2.44	0.51
37:DP:39:ARG:HG3	37:DP:40:LEU:N	2.26	0.51
25:DD:114:LYS:HE2	25:DD:196:ALA:CB	2.41	0.51
30:BI:86:ILE:N	30:BI:86:ILE:HD12	2.26	0.51
24:DC:9:THR:O	24:DC:10:SER:HB3	2.10	0.51
3:CC:62:LYS:O	3:CC:97:VAL:HB	2.10	0.51
16:AP:51:ARG:CG	16:AP:51:ARG:HH11	2.24	0.51
1:AA:392:C:C2	1:AA:393:A:C8	2.99	0.51
33:DL:135:ILE:O	33:DL:140:GLY:HA3	2.09	0.51
22:DA:1519:G:C6	22:DA:1520:U:C2	2.99	0.51
1:CA:1291:U:OP1	7:CG:37:SER:HB3	2.10	0.51
20:CT:3:ASN:N	20:CT:8:LYS:HD3	2.26	0.51
12:CL:61:PHE:CD1	12:CL:61:PHE:N	2.75	0.51
22:BA:2177:C:O2'	53:B5:47:LYS:NZ	2.39	0.51
1:CA:1133:G:H2'	1:CA:1133:G:N3	2.26	0.51
22:DA:207:A:H2'	22:DA:207:A:N3	2.25	0.51
4:CD:173:VAL:HG13	4:CD:174:ASP:N	2.26	0.51
22:DA:681:G:C2	22:DA:797:G:C2	2.98	0.51
2:AB:50:PHE:CA	2:AB:213:TYR:OH	2.58	0.51
22:DA:2164:C:H2'	22:DA:2165:C:C5	2.45	0.51
16:AP:50:THR:O	16:AP:50:THR:CG2	2.57	0.51
1:CA:1089:G:C4	1:CA:1090:U:C6	2.99	0.51
33:BL:91:ASP:O	33:BL:94:THR:HB	2.11	0.51
22:DA:37:C:H2'	22:DA:38:A:O4'	2.11	0.51
22:DA:38:A:C2	22:DA:442:G:C6	2.99	0.51
1:CA:402:G:H4'	1:CA:620:C:O2	2.11	0.51
22:DA:1737:G:O6	22:DA:1738:G:N1	2.42	0.51
16:CP:14:ARG:N	16:CP:15:PRO:HD2	2.25	0.51
1:AA:130:A:N7	17:AQ:65:ARG:HB2	2.25	0.51
22:DA:762:U:N3	22:DA:1431:A:OP1	2.44	0.51
22:BA:1415:U:O2	22:BA:1415:U:H2'	2.11	0.51
10:AJ:15:HIS:CG	10:AJ:16:ARG:N	2.79	0.51
22:DA:2645:G:H3'	22:DA:2646:C:C5'	2.38	0.51
22:DA:647:G:N7	22:DA:648:G:N7	2.59	0.51
22:BA:1949:G:C2	22:BA:1958:C:O2	2.64	0.51
1:AA:1154:G:H2'	1:AA:1155:A:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:155:GLY:N	3:AC:164:ARG:O	2.43	0.51
3:CC:87:LEU:HA	3:CC:90:VAL:HG22	1.93	0.51
1:AA:887:G:C2'	1:AA:888:G:H5'	2.40	0.51
22:BA:693:A:O2'	22:BA:694:U:H5'	2.11	0.51
33:DL:117:THR:HG22	33:DL:118:THR:N	2.25	0.51
22:BA:2019:A:H4'	38:BQ:34:VAL:HG21	1.93	0.51
22:BA:1274:A:N1	22:BA:1644:C:O2'	2.29	0.51
10:CJ:17:LEU:HD23	10:CJ:18:ILE:N	2.25	0.51
1:CA:1084:G:C5	1:CA:1085:U:C4	2.98	0.51
53:B5:122:GLY:HA3	53:B5:146:VAL:CB	2.41	0.51
30:DI:51:LYS:N	30:DI:51:LYS:HD3	2.25	0.51
11:AK:88:GLY:H	11:AK:114:THR:HG22	1.76	0.51
22:DA:531:C:C5	22:DA:2035:G:C2	2.98	0.51
22:DA:121:G:H1'	22:DA:131:A:C2	2.45	0.51
5:CE:19:ASN:O	5:CE:33:PHE:HA	2.10	0.51
29:BH:100:ALA:CB	29:BH:112:LYS:HA	2.41	0.51
31:DJ:42:ALA:O	38:DQ:64:ARG:HD3	2.10	0.51
1:CA:1004:A:C6	1:CA:1005:A:C6	2.98	0.51
20:AT:58:VAL:CG1	20:AT:72:ALA:CB	2.89	0.51
22:BA:71:A:H5''	22:BA:72:U:H3'	1.93	0.51
5:AE:101:GLU:CB	5:AE:122:ASN:CB	2.87	0.51
11:CK:35:THR:OG1	11:CK:40:ASN:N	2.44	0.51
53:B5:52:PRO:O	53:B5:53:ARG:CB	2.59	0.51
2:CB:102:THR:HB	2:CB:175:GLU:CG	2.41	0.51
22:BA:2310:C:C4	27:BF:77:PHE:CZ	2.99	0.51
22:DA:1671:U:H1'	25:DD:134:HIS:CE1	2.46	0.51
22:DA:635:C:O2'	22:DA:639:U:H5''	2.10	0.51
30:DI:54:PRO:HG2	30:DI:78:VAL:HB	1.92	0.51
22:BA:752:A:H3'	50:B2:1:MET:SD	2.51	0.51
22:BA:1559:U:H4'	22:BA:1560:G:OP2	2.10	0.51
22:DA:2145:C:H5''	22:DA:2146:C:P	2.51	0.51
22:DA:2531:A:H5'	28:DG:157:TYR:CE2	2.46	0.51
22:DA:1734:G:H2'	22:DA:1735:A:C8	2.46	0.51
22:DA:1222:U:H1'	22:DA:1228:G:N2	2.26	0.51
22:BA:2326:C:H1'	22:BA:2327:A:OP1	2.11	0.51
22:BA:947:A:O2'	22:BA:984:A:C2	2.61	0.51
41:BT:51:PHE:O	41:BT:52:GLU:C	2.48	0.51
1:AA:702:A:H3'	1:AA:703:G:C5'	2.40	0.51
22:BA:2526:G:C2'	52:B4:1:MET:H1	2.23	0.51
32:BK:116:ILE:HG13	32:BK:117:SER:N	2.26	0.51
30:BI:62:TYR:O	30:BI:63:ALA:HB2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2324:U:O2	22:DA:2385:C:C5	2.64	0.51
22:DA:1567:G:C8	24:DC:83:TYR:CD1	2.98	0.51
40:BS:20:VAL:HA	40:BS:23:LEU:HD12	1.92	0.51
5:CE:78:ASN:OD1	5:CE:79:GLY:N	2.44	0.51
27:DF:2:ALA:N	27:DF:94:GLU:OE2	2.43	0.51
36:BO:94:ARG:O	36:BO:96:GLY:N	2.43	0.51
4:AD:170:TRP:O	4:AD:183:LYS:HB3	2.10	0.51
1:AA:495:A:C2	1:AA:496:A:N6	2.79	0.51
1:AA:961:U:C4	1:AA:962:C:C5	2.98	0.51
22:DA:2740:A:N6	22:DA:2764:A:C8	2.79	0.51
8:CH:86:TYR:CD2	8:CH:124:GLU:HB2	2.45	0.51
38:DQ:86:ALA:O	38:DQ:87:SER:CB	2.59	0.51
22:BA:2341:G:H2'	22:BA:2342:C:C6	2.46	0.51
45:BX:43:GLU:OE2	45:BX:45:ARG:NH2	2.43	0.51
29:BH:117:LEU:CD2	29:BH:121:VAL:CA	2.89	0.51
22:DA:1109:C:C4	22:DA:1110:G:C6	2.99	0.51
1:CA:32:A:C2	1:CA:33:A:C4	2.98	0.51
26:DE:23:PHE:CG	26:DE:111:GLU:HG3	2.46	0.51
1:CA:211:G:N3	1:CA:211:G:H2'	2.25	0.51
1:CA:72:A:C6	1:CA:73:C:C4	2.99	0.51
21:CU:53:VAL:HG13	21:CU:54:LYS:N	2.26	0.51
22:BA:2555:U:C5	22:BA:2556:C:N1	2.79	0.51
1:AA:858:G:O2'	1:AA:859:G:C5'	2.59	0.51
35:DN:84:GLY:N	35:DN:85:PRO:CD	2.73	0.51
16:AP:75:ILE:HG22	16:AP:80:LYS:CE	2.40	0.51
1:CA:728:A:C8	15:CO:54:ARG:NH1	2.78	0.51
52:B4:37:GLN:HG2	52:B4:37:GLN:O	2.10	0.51
22:BA:1735:A:N3	22:BA:1735:A:H2'	2.25	0.51
20:AT:5:LYS:O	20:AT:6:SER:C	2.49	0.51
22:BA:869:G:H2'	22:BA:870:U:O4'	2.11	0.51
22:DA:1651:G:H4'	35:DN:39:PRO:HG2	1.93	0.51
4:CD:168:PRO:HB2	4:CD:171:LEU:CD1	2.41	0.51
1:CA:840:C:C4	1:CA:842:U:H4'	2.46	0.51
1:CA:121:U:H3'	1:CA:122:G:C5'	2.41	0.51
30:DI:28:LEU:C	30:DI:28:LEU:HD12	2.31	0.51
1:CA:618:C:H5''	1:CA:619:U:H5''	1.92	0.51
22:BA:1138:G:O2'	31:BJ:107:GLY:HA3	2.11	0.51
2:CB:94:HIS:CD2	2:CB:146:ASN:HB2	2.45	0.51
19:AS:11:ILE:HG13	19:AS:15:LEU:HD23	1.91	0.51
1:AA:737:C:H2'	1:AA:738:C:H6	1.75	0.51
29:DH:5:LEU:HA	29:DH:36:ALA:HA	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1601:G:C5	22:DA:1602:U:C4	2.99	0.51
22:DA:1850:G:O6	22:DA:1892:C:N3	2.44	0.51
5:AE:14:LYS:CE	5:AE:116:GLU:OE2	2.59	0.51
22:BA:662:G:O3'	33:BL:16:GLY:HA2	2.11	0.51
1:CA:861:G:C5	1:CA:862:C:C5	2.98	0.51
1:AA:1040:U:H2'	1:AA:1041:G:C8	2.46	0.51
2:AB:22:TYR:CD1	2:AB:22:TYR:N	2.78	0.51
4:CD:11:LEU:HD23	4:CD:11:LEU:N	2.25	0.51
22:DA:677:A:O2'	22:DA:2071:A:H5'	2.11	0.51
22:DA:1413:A:C2	22:DA:1590:A:C2	2.98	0.51
38:BQ:76:TYR:CZ	38:BQ:80:ILE:HG13	2.46	0.51
4:AD:26:ARG:HD2	4:AD:31:LYS:CD	2.41	0.51
22:BA:404:A:H1'	22:BA:405:U:OP2	2.10	0.51
6:AF:18:VAL:N	6:AF:19:PRO:HD2	2.26	0.51
22:BA:480:A:C2'	22:BA:481:G:OP1	2.59	0.51
38:DQ:61:TRP:HB3	38:DQ:92:ARG:O	2.11	0.51
2:AB:79:ALA:O	2:AB:214:LEU:CD2	2.59	0.51
1:CA:1105:A:C2	1:CA:1106:G:C8	2.99	0.51
2:AB:68:LEU:HD22	2:AB:70:VAL:HG23	1.93	0.51
22:BA:2291:U:H2'	22:BA:2292:U:C5	2.45	0.51
22:DA:2843:G:N2	22:DA:2875:C:N3	2.59	0.51
22:DA:1304:A:C6	22:DA:1305:C:C4	2.99	0.51
1:CA:913:A:H4'	1:CA:914:A:OP1	2.11	0.51
27:DF:44:ILE:CG2	27:DF:79:ILE:HG22	2.41	0.51
19:AS:14:HIS:O	19:AS:18:LYS:HB2	2.11	0.51
22:BA:1824:G:N3	24:BC:252:THR:HG21	2.26	0.51
22:BA:1411:U:H2'	22:BA:1412:U:O4'	2.10	0.51
22:DA:17:G:H4'	38:DQ:25:TYR:CE1	2.46	0.51
5:CE:83:HIS:NE2	8:CH:96:MET:HE3	2.26	0.51
22:DA:1876:A:C8	22:DA:1877:A:N7	2.79	0.51
6:CF:22:ILE:O	6:CF:26:THR:OG1	2.27	0.51
1:AA:760:G:N7	1:AA:761:G:N7	2.58	0.51
22:DA:532:A:N3	22:DA:532:A:H2'	2.26	0.51
36:DO:7:ARG:CD	36:DO:97:PHE:CE1	2.93	0.51
1:AA:575:G:C6	1:AA:821:G:N7	2.78	0.51
2:CB:85:LEU:O	2:CB:85:LEU:CG	2.59	0.51
1:CA:1053:G:N7	1:CA:1200:C:H5'	2.26	0.51
9:AI:40:GLY:O	9:AI:41:ARG:CB	2.59	0.51
22:BA:2669:G:O2'	22:BA:2670:A:H5'	2.11	0.51
32:DK:47:ILE:HB	32:DK:48:PRO:HD2	1.92	0.51
22:DA:2621:G:OP1	25:DD:124:ARG:NH2	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:86:ALA:C	9:AI:88:MET:N	2.63	0.51
29:BH:83:LYS:HA	29:BH:148:ALA:HA	1.93	0.51
22:BA:2507:C:H5''	22:BA:2573:C:N4	2.26	0.51
27:BF:122:PHE:HB3	27:BF:163:ASP:OD2	2.09	0.51
35:DN:51:LEU:N	35:DN:51:LEU:HD23	2.25	0.51
8:AH:18:GLN:O	8:AH:21:ASN:N	2.44	0.51
22:DA:622:G:H2'	22:DA:623:C:C6	2.46	0.51
22:DA:1351:C:H2'	22:DA:1352:U:C1'	2.41	0.51
1:CA:332:G:OP2	20:CT:5:LYS:HB3	2.11	0.51
22:DA:1343:G:C5	22:DA:1344:U:O4	2.64	0.51
1:AA:1093:A:OP2	7:AG:4:ARG:NH2	2.44	0.51
7:AG:99:LEU:O	7:AG:100:ALA:C	2.49	0.51
2:AB:64:LYS:HD3	2:AB:64:LYS:C	2.31	0.51
14:AN:61:ARG:O	14:AN:62:ASN:CB	2.58	0.51
38:BQ:88:VAL:HG13	39:BR:49:ILE:HD11	1.93	0.51
22:DA:1257:C:N4	22:DA:1258:U:O4	2.43	0.51
1:AA:71:A:H3'	1:AA:71:A:OP2	2.10	0.51
22:BA:1495:A:C6	22:BA:1496:A:C6	2.99	0.51
11:CK:31:ILE:HB	11:CK:46:THR:HG22	1.93	0.51
22:BA:636:G:C6	33:BL:111:ILE:HD11	2.45	0.51
1:CA:1463:U:H2'	1:CA:1464:U:C6	2.46	0.51
22:BA:1088:A:H5''	22:BA:1088:A:N3	2.25	0.51
36:BO:2:ASP:OD1	36:BO:3:LYS:N	2.44	0.51
22:DA:2326:C:C1'	22:DA:2327:A:OP1	2.59	0.51
22:DA:1866:A:N3	22:DA:1876:A:C6	2.79	0.51
1:CA:756:C:O2'	1:CA:757:U:H5'	2.11	0.51
1:CA:115:G:C2	1:CA:289:G:N7	2.78	0.51
1:AA:903:G:H2'	1:AA:904:U:C6	2.45	0.51
3:AC:11:ARG:O	3:AC:12:LEU:C	2.48	0.51
36:BO:88:LYS:HA	36:BO:115:LEU:HD12	1.93	0.51
43:BV:72:VAL:HG12	43:BV:93:ARG:HA	1.93	0.51
1:CA:747:A:N6	1:CA:748:G:C6	2.79	0.51
32:DK:41:ILE:HD11	32:DK:86:LEU:CD2	2.40	0.51
22:DA:2186:G:C5	22:DA:2187:U:C5	2.99	0.51
16:CP:75:ILE:HA	16:CP:78:VAL:HG12	1.92	0.51
8:AH:89:LYS:HG3	8:AH:90:ASP:N	2.26	0.51
22:BA:1651:G:O6	57:BA:3798:HOH:O	2.20	0.51
43:DV:80:HIS:CE1	43:DV:83:LYS:HB2	2.46	0.51
14:AN:31:ILE:CG2	14:AN:31:ILE:O	2.58	0.51
1:AA:949:A:C5	1:AA:950:U:C5	2.99	0.51
1:AA:862:C:C2'	1:AA:863:U:H5'	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:559:G:N3	38:DQ:56:GLN:NE2	2.59	0.51
24:BC:195:VAL:CG1	24:BC:196:GLY:N	2.73	0.51
22:DA:836:G:C5	22:DA:837:C:C4	2.99	0.51
21:CU:44:GLU:OE1	21:CU:45:ARG:NH1	2.44	0.51
1:CA:4:U:H2'	1:CA:4:U:O2	2.10	0.51
22:DA:675:A:H4'	26:DE:62:GLN:OE1	2.11	0.51
1:CA:1505:G:H4'	1:CA:1506:U:H5''	1.93	0.51
22:BA:1098:A:N7	22:BA:1099:G:O6	2.44	0.50
22:BA:1924:C:OP2	22:BA:1924:C:H3'	2.11	0.50
24:BC:72:ASP:HA	24:BC:118:SER:O	2.11	0.50
22:BA:1073:A:OP1	22:BA:1073:A:C8	2.64	0.50
22:DA:410:G:H2'	22:DA:2407:A:C8	2.46	0.50
1:AA:947:G:C5	1:AA:948:C:C4	2.99	0.50
22:DA:1317:G:C6	22:DA:1318:U:N3	2.79	0.50
22:DA:142:A:C5	22:DA:143:C:N4	2.79	0.50
22:DA:1076:C:H2'	22:DA:1077:A:O4'	2.12	0.50
22:BA:543:G:C2	22:BA:544:C:H1'	2.47	0.50
22:DA:1607:C:O2	22:DA:1621:U:C5	2.64	0.50
22:DA:250:G:OP2	51:D3:13:ARG:NH1	2.44	0.50
22:BA:1439:A:C8	22:BA:1440:U:C6	2.98	0.50
22:BA:1870:C:H4'	22:BA:1871:A:OP2	2.10	0.50
10:AJ:30:LYS:HA	10:AJ:34:ALA:HA	1.92	0.50
23:BB:35:C:H2'	23:BB:36:C:H5'	1.93	0.50
30:DI:6:GLN:O	30:DI:7:ALA:HB3	2.10	0.50
46:BY:42:LEU:O	46:BY:45:GLN:O	2.29	0.50
44:DW:45:PHE:CD2	44:DW:80:ILE:CD1	2.94	0.50
37:DP:51:ARG:HG3	37:DP:51:ARG:O	2.11	0.50
30:BI:116:ASP:O	30:BI:117:MET:HB2	2.11	0.50
17:CQ:61:ILE:HG23	17:CQ:73:TRP:CE3	2.45	0.50
22:BA:2086:U:H2'	22:BA:2087:G:C8	2.46	0.50
8:CH:20:ALA:O	8:CH:22:LYS:N	2.44	0.50
2:CB:135:LEU:O	2:CB:139:ARG:HG3	2.11	0.50
4:CD:148:LYS:H	4:CD:148:LYS:CD	2.24	0.50
22:DA:1616:A:H2	22:DA:1647:U:C5	2.28	0.50
22:BA:1606:C:HO2'	22:BA:1607:C:P	2.34	0.50
7:CG:46:ALA:HB2	7:CG:117:ALA:HA	1.92	0.50
1:CA:653:U:C2	8:CH:56:LYS:HG2	2.46	0.50
25:BD:36:GLN:OE1	25:BD:67:HIS:HE1	1.94	0.50
22:DA:658:U:N3	22:DA:659:G:N7	2.59	0.50
23:BB:78:A:H2'	23:BB:79:G:O4'	2.10	0.50
1:AA:1535:C:C6	1:AA:1535:C:OP2	2.64	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DW:36:ILE:HG23	44:DW:58:THR:CG2	2.40	0.50
2:AB:21:ARG:NE	2:AB:21:ARG:HA	2.26	0.50
17:CQ:45:HIS:O	17:CQ:71:LYS:HA	2.11	0.50
22:BA:1916:A:OP2	22:BA:1916:A:H3'	2.11	0.50
22:BA:1917:U:H2'	22:BA:1917:U:O2	2.10	0.50
35:DN:106:ASP:O	35:DN:107:ASN:C	2.49	0.50
22:DA:1596:A:N6	22:DA:1597:A:C6	2.80	0.50
2:CB:26:LYS:HB2	2:CB:193:PRO:HD2	1.94	0.50
21:AU:35:ARG:O	21:AU:36:GLU:C	2.48	0.50
2:AB:59:LYS:O	2:AB:63:ARG:HG3	2.12	0.50
39:BR:49:ILE:O	39:BR:51:VAL:O	2.30	0.50
22:DA:2824:C:C4	22:DA:2825:G:C5	3.00	0.50
1:AA:1037:C:H2'	1:AA:1038:C:C6	2.46	0.50
30:DI:80:LEU:HD23	30:DI:84:ALA:CB	2.41	0.50
22:DA:2297:A:N1	22:DA:2321:U:H5	2.09	0.50
22:DA:590:A:C5	22:DA:591:U:C5	2.99	0.50
22:DA:1736:U:H2'	22:DA:1737:G:O4'	2.11	0.50
22:DA:1605:C:H4'	22:DA:1610:A:C6	2.46	0.50
16:AP:10:GLY:O	16:AP:11:ALA:HB2	2.11	0.50
22:DA:1314:C:OP1	22:DA:1332:G:OP1	2.29	0.50
41:DT:69:ARG:HB2	41:DT:74:ILE:HG22	1.92	0.50
22:BA:1586:A:C8	22:BA:1587:G:C8	2.98	0.50
1:AA:1397:C:O2'	1:AA:1398:A:OP1	2.27	0.50
1:CA:518:C:H2'	1:CA:530:G:C8	2.46	0.50
21:AU:18:ARG:HD2	21:AU:18:ARG:N	2.26	0.50
37:BP:114:LEU:O	37:BP:115:ASN:HB3	2.11	0.50
1:AA:764:C:H2'	1:AA:765:G:O4'	2.12	0.50
22:DA:66:C:C4	22:DA:67:U:C5	2.99	0.50
2:CB:56:GLU:HG2	2:CB:198:PHE:CZ	2.47	0.50
1:CA:1010:U:C2	1:CA:1020:G:C2	3.00	0.50
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.46	0.50
22:DA:1788:C:H2'	22:DA:1789:A:O4'	2.11	0.50
53:B5:68:GLY:O	53:B5:70:GLY:N	2.44	0.50
7:CG:51:ALA:CB	7:CG:58:GLU:HA	2.41	0.50
22:DA:933:A:C5'	22:DA:934:U:OP2	2.59	0.50
45:DX:52:SER:OG	45:DX:55:GLY:N	2.40	0.50
22:BA:2217:G:O2'	22:BA:2218:G:H5'	2.11	0.50
22:DA:158:U:H2'	22:DA:159:G:H5'	1.93	0.50
22:BA:1845:G:C6	22:BA:1896:G:C6	2.99	0.50
1:CA:667:G:C2	1:CA:740:U:O2	2.64	0.50
34:BM:28:PHE:HB2	34:BM:104:GLU:OE2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:4:ILE:HA	13:CM:57:ARG:CZ	2.41	0.50
24:DC:51:THR:CG2	24:DC:54:ILE:HD11	2.41	0.50
22:BA:1056:G:H5''	22:BA:1057:A:O4'	2.11	0.50
22:DA:1363:C:H2'	22:DA:1364:G:C8	2.46	0.50
1:CA:412:A:HO2'	1:CA:413:G:P	2.33	0.50
22:BA:492:A:H2'	22:BA:493:G:O4'	2.10	0.50
18:CR:58:ALA:O	18:CR:61:ARG:N	2.45	0.50
53:B5:50:ILE:HG22	53:B5:51:ASP:N	2.26	0.50
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.92	0.50
29:DH:32:PRO:HB3	45:DX:39:TRP:HB3	1.93	0.50
12:AL:22:PRO:C	12:AL:24:LEU:H	2.14	0.50
22:DA:2091:C:H1'	45:DX:34:HIS:CD2	2.46	0.50
30:DI:57:VAL:CG2	30:DI:69:PHE:HB2	2.42	0.50
1:AA:625:U:H5''	16:AP:16:PHE:CD1	2.47	0.50
12:AL:88:LYS:HG3	12:AL:88:LYS:O	2.11	0.50
26:BE:145:ASP:CB	26:BE:184:ASP:OD2	2.60	0.50
1:AA:118:U:O4	1:AA:288:A:H2'	2.12	0.50
22:BA:2243:U:P	57:BA:3740:HOH:O	2.70	0.50
22:DA:833:A:H2'	22:DA:834:G:C8	2.46	0.50
32:BK:4:GLU:O	32:BK:5:GLN:CB	2.57	0.50
32:BK:118:LEU:O	32:BK:119:ALA:HB3	2.11	0.50
22:BA:2649:C:H2'	22:BA:2650:U:C6	2.45	0.50
39:DR:14:VAL:CG2	39:DR:98:ILE:HG13	2.42	0.50
53:B5:40:GLU:O	53:B5:42:VAL:N	2.42	0.50
22:BA:1068:G:H2'	22:BA:1069:A:H5'	1.94	0.50
17:AQ:52:GLU:N	17:AQ:52:GLU:CD	2.64	0.50
49:D1:21:TYR:CE1	49:D1:38:LYS:HD2	2.46	0.50
22:DA:1754:A:N6	22:DA:1755:A:C6	2.79	0.50
12:AL:56:ARG:CZ	12:AL:62:GLU:HG3	2.41	0.50
22:BA:2196:C:O2'	22:BA:2197:U:H5'	2.10	0.50
7:CG:88:PRO:HD2	7:CG:152:ALA:HA	1.92	0.50
4:CD:46:PRO:O	4:CD:47:ARG:C	2.49	0.50
1:AA:1069:C:H4'	1:AA:1192:C:O2	2.11	0.50
35:BN:24:MET:HE3	35:BN:44:LEU:HD22	1.94	0.50
22:DA:2733:A:C2	22:DA:2734:A:C4	2.98	0.50
22:DA:1453:A:C2	35:DN:77:ALA:CB	2.95	0.50
49:B1:17:THR:HG21	49:B1:43:VAL:HG13	1.94	0.50
1:AA:405:U:OP1	1:AA:406:G:O2'	2.21	0.50
27:BF:14:LYS:O	27:BF:18:THR:HG23	2.12	0.50
42:BU:99:ASN:C	42:BU:99:ASN:OD1	2.50	0.50
32:DK:6:THR:O	32:DK:8:LEU:HD12	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:72:ASP:OD1	11:CK:73:ALA:N	2.44	0.50
1:CA:580:C:H2'	1:CA:581:G:O4'	2.12	0.50
1:CA:134:G:H2'	1:CA:135:C:O4'	2.11	0.50
30:DI:53:LEU:HG	30:DI:82:LYS:HE2	1.92	0.50
22:BA:1613:G:O2'	50:B2:3:ARG:HD3	2.11	0.50
29:BH:80:ILE:O	29:BH:147:VAL:N	2.44	0.50
26:DE:27:LEU:HG	26:DE:104:ALA:HB2	1.94	0.50
22:DA:2013:A:N6	22:DA:2014:A:C6	2.79	0.50
29:DH:44:ILE:O	29:DH:48:GLU:HB2	2.12	0.50
22:DA:204:A:O4'	22:DA:206:U:C6	2.64	0.50
6:AF:91:ARG:CG	6:AF:92:THR:N	2.75	0.50
24:BC:71:LYS:HB3	24:BC:96:TYR:CE2	2.46	0.50
22:DA:1439:A:N7	22:DA:1552:A:C2	2.79	0.50
1:CA:1007:U:H2'	1:CA:1008:U:H5''	1.92	0.50
22:DA:2195:U:O2'	22:DA:2196:C:H5'	2.12	0.50
22:BA:2449:U:H4'	22:BA:2450:A:OP1	2.11	0.50
1:CA:369:G:OP2	1:CA:388:G:N2	2.43	0.50
1:CA:1072:G:C5	1:CA:1073:U:C4	3.00	0.50
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.76	0.50
22:DA:1203:U:OP2	22:DA:1204:A:H2'	2.11	0.50
1:CA:945:G:N3	1:CA:945:G:H2'	2.25	0.50
22:BA:321:U:C1'	26:BE:159:LEU:HD12	2.41	0.50
1:CA:1167:A:C8	1:CA:1169:A:C5	2.98	0.50
3:CC:145:GLY:O	3:CC:146:ALA:O	2.29	0.50
22:DA:1791:A:H2'	22:DA:1792:G:H5'	1.94	0.50
22:DA:498:G:C4	22:DA:499:U:C5	2.99	0.50
30:BI:117:MET:SD	30:BI:129:ILE:HD11	2.51	0.50
22:DA:1838:C:C5	22:DA:1899:A:C5	3.00	0.50
35:DN:38:LEU:HB3	35:DN:39:PRO:HD3	1.92	0.50
2:CB:139:ARG:HD2	2:CB:139:ARG:C	2.32	0.50
22:BA:1356:G:C6	22:BA:1357:C:C4	3.00	0.50
22:DA:1529:G:O6	22:DA:1543:G:N2	2.44	0.50
20:AT:25:ARG:O	20:AT:29:ARG:HG2	2.11	0.50
29:DH:5:LEU:HD11	29:DH:13:GLY:HA2	1.93	0.50
24:BC:107:PRO:HB3	24:BC:142:HIS:CE1	2.47	0.50
17:CQ:25:ILE:O	17:CQ:41:THR:HA	2.11	0.50
22:DA:1881:C:H2'	22:DA:1882:U:O4'	2.11	0.50
11:AK:89:PRO:HG3	21:AU:29:LEU:HD21	1.93	0.50
29:BH:66:ASN:OD1	29:BH:138:VAL:HG21	2.11	0.50
18:AR:63:ARG:HB3	18:AR:70:TYR:CZ	2.46	0.50
1:CA:1098:C:H2'	1:CA:1099:G:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2131:U:OP2	22:BA:2132:U:C6	2.64	0.50
5:AE:15:LEU:HB3	5:AE:37:THR:CG2	2.42	0.50
1:CA:218:U:H2'	1:CA:219:U:O4'	2.12	0.50
11:CK:51:GLY:O	11:CK:52:PHE:O	2.28	0.50
36:BO:36:TYR:N	36:BO:36:TYR:CD2	2.79	0.50
11:AK:128:ARG:CG	11:AK:128:ARG:HH11	2.24	0.50
38:BQ:76:TYR:C	38:BQ:76:TYR:CD2	2.85	0.50
22:BA:1091:G:H2'	22:BA:1092:C:C5	2.45	0.50
22:DA:1364:G:C4	22:DA:1368:G:C2	2.99	0.50
1:CA:1068:G:C6	1:CA:1069:C:C4	3.00	0.50
2:AB:154:MET:O	2:AB:155:GLY:C	2.49	0.50
42:BU:18:ASP:O	42:BU:20:GLY:N	2.45	0.50
27:BF:41:GLY:HA2	27:BF:85:ILE:HG13	1.94	0.50
22:DA:1196:C:H1'	22:DA:1226:A:C4	2.47	0.50
22:BA:136:G:C2	22:BA:144:A:C6	2.99	0.50
1:AA:662:U:H2'	1:AA:663:A:C8	2.46	0.50
53:B5:83:LYS:HB3	53:B5:87:ALA:CB	2.41	0.50
22:BA:585:G:H5''	22:BA:586:A:P	2.52	0.50
33:BL:63:LYS:HA	51:B3:13:ARG:HG3	1.93	0.50
22:BA:876:C:H2'	22:BA:877:A:O4'	2.10	0.50
27:BF:52:ASN:HB3	27:BF:147:ASP:OD1	2.11	0.50
22:DA:2720:U:C5	22:DA:2872:A:N1	2.79	0.50
1:AA:197:A:N3	1:AA:198:G:H1'	2.26	0.50
22:DA:1806:C:O2	24:DC:44:ASN:ND2	2.44	0.50
12:CL:38:TYR:N	12:CL:52:VAL:O	2.44	0.50
43:BV:61:LEU:HD13	43:BV:61:LEU:N	2.26	0.50
36:DO:33:ARG:O	36:DO:34:HIS:CG	2.64	0.50
22:DA:1176:U:H2'	22:DA:1177:G:C8	2.47	0.50
1:CA:546:A:P	4:CD:69:GLU:HB3	2.51	0.50
22:DA:2201:G:C6	22:DA:2202:U:C4	3.00	0.50
22:DA:2718:G:C2	22:DA:2719:G:H1'	2.47	0.50
1:CA:846:G:OP2	18:CR:48:ARG:NH2	2.44	0.50
22:DA:329:G:O4'	22:DA:477:A:H1'	2.12	0.50
7:AG:71:PRO:HD2	7:AG:96:ARG:O	2.12	0.50
1:CA:81:A:C2	1:CA:89:U:C2	2.99	0.50
26:BE:149:ILE:HD12	26:BE:150:THR:O	2.10	0.50
22:DA:1262:A:N1	22:DA:1263:U:C2	2.79	0.50
30:DI:28:LEU:HD13	30:DI:38:PHE:CD2	2.46	0.50
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.47	0.50
1:AA:737:C:H2'	1:AA:738:C:C6	2.46	0.50
22:DA:404:A:H1'	22:DA:405:U:OP2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:182:ARG:NH2	24:BC:266:PHE:HB3	2.26	0.50
2:AB:119:THR:O	2:AB:120:GLN:CB	2.58	0.50
20:CT:43:ASP:HB3	20:CT:46:ALA:HB3	1.92	0.50
22:DA:1831:G:C6	22:DA:1832:C:C4	3.00	0.50
31:BJ:84:ILE:HG23	31:BJ:84:ILE:O	2.11	0.50
3:CC:69:HIS:HA	3:CC:104:ALA:HB3	1.93	0.50
22:DA:2513:A:C5	22:DA:2514:U:C4	2.99	0.50
22:BA:1071:G:O2'	22:BA:1072:C:O4'	2.30	0.50
22:DA:301:G:N3	22:DA:302:C:C2	2.80	0.50
22:BA:1168:G:C2	22:BA:1182:G:C4	2.99	0.50
22:DA:54:G:N1	22:DA:55:G:N7	2.60	0.50
22:BA:276:U:O2	22:BA:276:U:H2'	2.11	0.50
1:AA:90:C:O2'	1:AA:91:U:P	2.70	0.50
14:AN:10:GLU:OE2	14:AN:61:ARG:HB3	2.11	0.50
27:BF:158:THR:CG2	27:BF:160:ALA:H	2.25	0.50
2:AB:140:GLU:O	2:AB:144:LEU:HG	2.11	0.50
22:DA:629:G:O6	22:DA:630:G:C6	2.65	0.50
1:CA:298:A:H2'	1:CA:299:G:O4'	2.11	0.50
1:CA:1490:U:C2'	1:CA:1491:G:O4'	2.60	0.50
1:AA:1161:C:H2'	1:AA:1162:C:H6	1.76	0.50
22:DA:2122:U:H2'	22:DA:2123:G:O4'	2.12	0.50
1:AA:130:A:C8	17:AQ:65:ARG:HB2	2.46	0.50
22:BA:586:A:N1	22:BA:809:G:O2'	2.35	0.50
38:BQ:21:ALA:HA	38:BQ:24:TYR:CE1	2.46	0.50
22:BA:1794:A:C2'	22:BA:1795:C:O5'	2.59	0.50
22:DA:547:A:H3'	22:DA:548:G:H5'	1.94	0.50
12:CL:65:SER:OG	12:CL:97:THR:HG23	2.12	0.50
36:BO:79:ALA:HB2	36:BO:110:ALA:HA	1.93	0.50
22:BA:1883:U:O4	22:BA:1884:G:C6	2.65	0.50
37:DP:75:GLN:O	37:DP:78:SER:HB3	2.11	0.50
32:DK:71:ARG:HB3	32:DK:72:PRO:HD2	1.93	0.50
15:CO:42:HIS:O	15:CO:45:GLU:O	2.30	0.50
1:AA:642:A:C5	8:AH:107:SER:HA	2.47	0.50
1:CA:247:G:C6	1:CA:278:G:N1	2.78	0.50
13:CM:79:ARG:HD2	19:CS:65:GLU:HG2	1.93	0.50
22:DA:2083:G:N7	22:DA:2084:C:C5	2.80	0.50
22:DA:2250:G:C2	34:DM:82:MET:HB2	2.47	0.50
26:DE:75:SER:O	26:DE:78:TRP:HB2	2.12	0.50
22:DA:24:G:C5	22:DA:25:U:C5	2.99	0.50
22:BA:1786:A:C4	22:BA:1938:A:C6	3.00	0.50
22:BA:1389:G:H2'	22:BA:1390:U:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DF:128:TYR:CG	27:DF:170:LEU:CD1	2.95	0.50
1:CA:1474:U:H2'	1:CA:1475:G:H5''	1.93	0.50
37:DP:89:ARG:O	37:DP:112:GLU:HA	2.12	0.50
22:BA:675:A:OP1	26:BE:58:LYS:CE	2.60	0.50
22:BA:2512:C:H2'	22:BA:2513:A:O4'	2.11	0.50
22:BA:2075:U:C4	22:BA:2238:G:C6	2.99	0.50
22:BA:1963:U:H6	22:BA:1963:U:O5'	1.95	0.50
22:BA:2812:G:H2'	22:BA:2813:A:O4'	2.11	0.50
22:DA:219:A:N6	22:DA:220:G:C6	2.80	0.50
22:BA:1070:A:H2'	22:BA:1097:U:OP1	2.12	0.50
13:AM:11:ASP:OD1	13:AM:45:ILE:HB	2.11	0.50
9:CI:12:ARG:CD	9:CI:107:ASP:HB3	2.42	0.50
50:D2:43:THR:O	50:D2:44:VAL:HB	2.11	0.50
22:DA:583:G:C5	22:DA:584:C:C4	3.00	0.50
49:D1:5:ILE:HG22	49:D1:28:ARG:NH1	2.27	0.50
2:AB:151:ILE:O	2:AB:152:LYS:C	2.50	0.50
31:BJ:114:LEU:O	31:BJ:114:LEU:HD12	2.12	0.50
22:DA:1524:G:H2'	22:DA:1524:G:N3	2.26	0.50
1:AA:484:G:C5	1:AA:486:U:H1'	2.47	0.50
30:DI:77:ALA:HA	30:DI:80:LEU:HD12	1.93	0.50
22:DA:396:G:H5''	45:DX:13:VAL:HG21	1.93	0.50
22:DA:915:C:C4	22:DA:916:G:C5	3.00	0.50
22:BA:2297:A:N1	22:BA:2321:U:H5	2.07	0.50
1:AA:1123:U:H4'	10:AJ:39:PRO:HD2	1.93	0.50
1:CA:821:G:H2'	1:CA:822:U:H6	1.76	0.50
1:AA:596:A:N6	1:AA:645:G:C6	2.80	0.50
1:CA:206:C:C2'	1:CA:207:C:H5'	2.40	0.50
1:CA:786:G:N3	1:CA:786:G:H2'	2.26	0.50
45:DX:17:ASN:HB2	45:DX:25:THR:HB	1.94	0.50
22:BA:769:U:C2	22:BA:770:G:C8	3.00	0.50
7:AG:42:ILE:HG21	7:AG:116:MET:CG	2.42	0.50
22:BA:2018:G:O2'	22:BA:2019:A:H5'	2.11	0.50
1:AA:738:C:H2'	1:AA:739:C:H6	1.77	0.50
22:BA:1800:C:H3'	24:BC:146:MET:HE1	1.94	0.50
33:DL:68:SER:O	33:DL:69:ARG:HB2	2.12	0.50
11:CK:23:ILE:HG21	11:CK:96:THR:HG21	1.94	0.50
1:AA:149:A:C2	1:AA:150:U:C2	2.99	0.50
36:BO:117:PHE:O	36:BO:117:PHE:CD1	2.65	0.50
31:BJ:30:THR:HG22	31:BJ:31:GLU:N	2.26	0.50
10:CJ:22:THR:HA	10:CJ:25:ILE:HG22	1.93	0.50
30:BI:101:ILE:O	30:BI:102:SER:HB2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:230:HIS:ND1	24:DC:231:PRO:HD2	2.27	0.50
22:DA:2583:G:H2'	22:DA:2584:U:O4'	2.11	0.50
3:CC:40:ARG:HG2	3:CC:55:ILE:HD11	1.94	0.50
22:BA:1714:U:H2'	22:BA:1714:U:O2	2.11	0.50
14:CN:18:ASP:N	14:CN:18:ASP:OD2	2.45	0.50
41:DT:3:ARG:CZ	41:DT:5:GLU:OE1	2.60	0.50
22:BA:2273:A:H2'	22:BA:2274:A:C8	2.46	0.50
32:DK:118:LEU:O	32:DK:119:ALA:HB3	2.12	0.50
22:DA:36:G:N1	22:DA:445:C:C4	2.79	0.50
22:DA:1378:A:C4'	22:DA:1379:U:OP1	2.59	0.50
1:CA:1197:A:H2'	1:CA:1198:G:H5'	1.92	0.50
1:CA:32:A:C2	1:CA:33:A:C6	2.99	0.50
22:DA:1288:G:C5	22:DA:1327:A:C2	3.00	0.50
17:AQ:16:LYS:O	17:AQ:17:MET:HE3	2.11	0.50
9:AI:57:MET:C	9:AI:59:GLU:H	2.15	0.50
22:BA:274:C:C4	22:BA:275:C:C4	3.00	0.50
1:CA:1376:U:O4	7:CG:10:ARG:NH1	2.45	0.50
22:DA:1257:C:C4	22:DA:1258:U:C4	2.99	0.50
20:AT:56:PRO:O	20:AT:60:ARG:HB2	2.12	0.50
22:DA:289:G:H2'	22:DA:290:U:O4'	2.12	0.50
1:AA:1060:U:H4'	10:AJ:53:ILE:HG23	1.94	0.50
22:DA:247:G:N7	22:DA:249:C:C2	2.80	0.50
22:BA:1829:A:O2'	24:BC:15:HIS:CD2	2.65	0.50
29:BH:14:SER:HG	29:BH:17:ASP:CG	2.13	0.50
19:CS:40:ILE:HA	19:CS:44:MET:SD	2.52	0.50
22:DA:694:U:C3'	22:DA:695:G:C5'	2.89	0.50
22:DA:945:A:C5	22:DA:2448:A:C2	2.99	0.50
22:BA:2024:G:OP2	22:BA:2034:U:H4'	2.11	0.50
22:BA:1717:A:H2'	22:BA:1718:G:O4'	2.12	0.50
1:CA:1364:U:O2	1:CA:1364:U:C2'	2.60	0.50
20:CT:68:HIS:C	20:CT:69:LYS:HG3	2.32	0.50
22:BA:1452:G:H2'	22:BA:1457:U:O4	2.12	0.50
48:D0:54:VAL:O	48:D0:55:ILE:HB	2.12	0.50
33:DL:78:ARG:HB3	33:DL:113:ALA:CB	2.42	0.50
24:BC:141:VAL:CG1	24:BC:190:ALA:HB1	2.42	0.50
22:BA:1832:C:N4	22:BA:1833:C:C5	2.80	0.50
22:BA:2414:G:C2'	22:BA:2415:G:H5'	2.42	0.50
25:DD:15:PHE:CE2	37:DP:78:SER:HA	2.47	0.50
1:AA:988:G:C6	1:AA:989:U:C4	3.00	0.50
20:CT:74:ARG:O	20:CT:78:ASN:ND2	2.44	0.50
22:DA:1662:U:O2	22:DA:2687:U:H5''	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2064:C:H2'	22:BA:2065:C:C6	2.47	0.50
43:BV:1:MET:SD	43:BV:1:MET:C	2.91	0.50
8:AH:51:VAL:CG2	8:AH:51:VAL:O	2.59	0.50
25:BD:177:VAL:CG2	25:BD:177:VAL:O	2.60	0.50
39:DR:68:ARG:HB3	39:DR:90:ARG:HG2	1.93	0.50
3:CC:64:ILE:HG12	3:CC:66:VAL:HG23	1.94	0.50
38:DQ:98:ILE:HG22	38:DQ:106:PHE:HB2	1.94	0.50
13:AM:11:ASP:O	13:AM:12:HIS:HB2	2.11	0.50
22:DA:1352:U:C5	22:DA:1377:G:C5	2.99	0.50
17:CQ:69:LYS:C	17:CQ:70:THR:OG1	2.49	0.50
1:AA:374:A:N1	1:AA:390:U:O2'	2.43	0.50
22:DA:419:U:N3	22:DA:420:C:C5	2.80	0.50
17:AQ:16:LYS:CG	17:AQ:16:LYS:O	2.59	0.50
22:DA:1627:G:N2	22:DA:1628:G:C5	2.80	0.50
20:CT:60:ARG:O	20:CT:64:LYS:HB2	2.12	0.50
1:CA:1347:G:O2'	1:CA:1348:U:P	2.70	0.50
22:DA:1731:G:C6	22:DA:1733:G:C5	3.00	0.50
1:CA:1072:G:OP1	5:CE:62:LYS:NZ	2.44	0.50
1:CA:1089:G:C5	1:CA:1090:U:C5	3.00	0.50
42:BU:20:GLY:O	42:BU:21:LYS:O	2.29	0.50
22:DA:634:C:P	33:DL:70:LYS:HE2	2.52	0.50
1:CA:1279:G:OP2	10:CJ:11:LYS:NZ	2.42	0.50
27:BF:21:ASN:O	27:BF:21:ASN:CG	2.50	0.50
41:BT:1:MET:O	41:BT:2:ILE:CG1	2.60	0.50
11:AK:16:VAL:O	11:AK:17:SER:OG	2.25	0.50
1:AA:233:C:H2'	1:AA:234:C:H6	1.77	0.50
22:BA:586:A:C2	22:BA:1254:A:C2	3.00	0.50
22:BA:2243:U:H2'	22:BA:2244:U:C6	2.47	0.50
11:CK:110:ILE:HG22	21:CU:17:ARG:NH1	2.27	0.50
23:DB:37:C:C5	23:DB:38:C:C4	3.00	0.50
21:AU:20:LYS:N	21:AU:20:LYS:HE2	2.27	0.50
30:BI:105:GLN:O	30:BI:106:LEU:HB2	2.12	0.50
1:CA:147:G:N2	1:CA:148:G:C6	2.80	0.50
22:DA:89:A:C2	22:DA:90:U:C2	3.00	0.50
24:DC:18:LYS:O	24:DC:19:VAL:CB	2.59	0.50
29:BH:43:ASN:O	29:BH:46:PHE:HB3	2.12	0.50
22:DA:1754:A:N6	22:DA:1755:A:N6	2.60	0.50
12:CL:3:THR:CB	12:CL:6:GLN:HG3	2.42	0.50
33:DL:68:SER:O	33:DL:69:ARG:CB	2.58	0.50
22:DA:1998:A:OP2	25:DD:141:ARG:NH2	2.45	0.50
22:DA:2223:G:H2'	22:DA:2224:G:H5'	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:533:G:H5'	38:DQ:24:TYR:CE2	2.47	0.50
22:DA:270:A:C2	22:DA:369:U:H4'	2.46	0.50
1:CA:380:G:N2	1:CA:383:A:OP2	2.37	0.50
1:AA:1399:C:C4	1:AA:1502:A:N1	2.80	0.50
31:DJ:142:ILE:OXT	31:DJ:142:ILE:HG23	2.11	0.50
22:DA:1026:G:H1'	22:DA:1134:A:C2	2.46	0.50
25:DD:106:LYS:HA	25:DD:175:LEU:O	2.12	0.50
27:BF:8:TYR:HA	27:BF:12:VAL:CG2	2.41	0.50
43:DV:9:ARG:HG2	43:DV:41:GLU:HB3	1.94	0.50
1:CA:963:G:C2'	1:CA:964:A:H5'	2.42	0.50
22:BA:437:U:H2'	22:BA:438:G:C8	2.46	0.50
29:BH:99:ILE:O	29:BH:99:ILE:HG22	2.12	0.49
22:BA:1926:U:H2'	22:BA:1926:U:O2	2.12	0.49
1:AA:453:G:H2'	1:AA:454:G:C8	2.47	0.49
22:DA:1667:G:N3	22:DA:1991:U:C5	2.80	0.49
22:DA:681:G:C4	22:DA:682:G:C8	3.00	0.49
1:CA:74:A:C2	1:CA:75:G:C5	3.00	0.49
2:CB:219:ALA:O	2:CB:220:THR:CB	2.60	0.49
21:AU:40:LYS:N	21:AU:41:PRO:CD	2.75	0.49
53:B5:50:ILE:HG22	53:B5:51:ASP:H	1.77	0.49
1:AA:844:G:N3	1:AA:845:A:N7	2.60	0.49
10:CJ:33:GLY:HA3	10:CJ:83:THR:HB	1.93	0.49
24:BC:247:PRO:HD2	24:BC:248:TRP:CZ3	2.47	0.49
9:CI:30:ILE:HA	9:CI:65:ILE:HG13	1.94	0.49
22:BA:1439:A:N3	22:BA:1553:A:C6	2.80	0.49
22:BA:2636:C:H2'	22:BA:2637:U:C6	2.47	0.49
22:DA:695:G:C5	22:DA:768:G:C6	3.00	0.49
37:DP:99:TYR:CE2	37:DP:100:LEU:CD2	2.95	0.49
10:AJ:35:GLN:HG3	10:AJ:77:VAL:HB	1.93	0.49
3:AC:145:GLY:O	3:AC:146:ALA:O	2.30	0.49
22:BA:2298:A:C4	22:BA:2321:U:C5	2.99	0.49
1:AA:723:U:O5'	21:AU:49:LYS:HG2	2.11	0.49
52:D4:20:ASP:OD2	57:D4:201:HOH:O	2.20	0.49
22:DA:532:A:N7	22:DA:2021:C:H2'	2.26	0.49
1:AA:645:G:N7	57:AA:1749:HOH:O	2.35	0.49
22:DA:2478:A:N7	22:DA:2529:G:C6	2.80	0.49
1:CA:109:A:C6	1:CA:327:A:C5	3.00	0.49
29:DH:127:GLU:HG3	29:DH:145:ASN:HA	1.93	0.49
16:AP:38:PHE:CZ	16:AP:51:ARG:HB2	2.47	0.49
9:AI:30:ILE:HA	9:AI:65:ILE:O	2.12	0.49
12:AL:107:VAL:HG23	12:AL:117:TYR:HB3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:56:VAL:O	5:AE:60:ILE:HG23	2.11	0.49
22:BA:2771:C:H2'	22:BA:2772:C:H6	1.77	0.49
22:DA:158:U:C4	22:DA:159:G:C5	2.99	0.49
34:BM:66:ARG:NH1	34:BM:104:GLU:OE1	2.45	0.49
3:CC:57:ILE:HG13	3:CC:66:VAL:HG22	1.93	0.49
4:CD:116:GLN:HG3	4:CD:120:HIS:CE1	2.47	0.49
22:DA:132:G:N2	22:DA:148:U:C2	2.80	0.49
34:DM:53:MET:HG3	34:DM:54:THR:N	2.27	0.49
25:BD:12:THR:CG2	37:BP:9:GLU:OE2	2.59	0.49
37:DP:24:ASP:O	37:DP:25:THR:OG1	2.28	0.49
6:AF:9:MET:HE2	18:AR:65:LEU:HD22	1.93	0.49
22:BA:1297:C:OP1	22:BA:2710:C:H4'	2.12	0.49
27:BF:63:GLN:OE1	27:BF:95:ARG:HD2	2.12	0.49
22:DA:1082:U:H5'	30:DI:119:GLY:HA2	1.94	0.49
22:BA:2057:G:OP2	57:BA:3492:HOH:O	2.18	0.49
1:AA:1315:U:C4	1:AA:1316:G:C6	3.00	0.49
1:AA:223:A:C6	1:AA:224:U:C4	2.99	0.49
22:BA:684:G:OP1	50:B2:21:ARG:NH1	2.45	0.49
24:DC:178:SER:O	24:DC:271:ARG:HB2	2.12	0.49
22:BA:1316:U:C2	22:BA:1337:G:N2	2.80	0.49
30:DI:97:LYS:HD2	30:DI:97:LYS:N	2.27	0.49
24:DC:87:ARG:HB3	24:DC:87:ARG:NH1	2.27	0.49
1:CA:844:G:N3	1:CA:844:G:H2'	2.27	0.49
48:D0:31:ASP:OD1	48:D0:48:TYR:HB3	2.12	0.49
23:DB:109:A:C6	23:DB:110:C:C4	2.99	0.49
25:DD:148:GLN:N	25:DD:148:GLN:OE1	2.45	0.49
2:AB:24:ASN:O	2:AB:27:MET:N	2.42	0.49
22:DA:1355:G:C2	22:DA:1356:G:C8	3.00	0.49
4:CD:22:LYS:C	4:CD:24:GLY:N	2.64	0.49
22:DA:1299:G:H5''	22:DA:1300:G:H5''	1.93	0.49
1:AA:451:A:H4'	1:AA:452:A:O4'	2.12	0.49
50:D2:15:SER:OG	50:D2:16:HIS:CE1	2.65	0.49
1:CA:216:U:H5''	1:CA:464:U:H4'	1.93	0.49
22:DA:776:G:N7	22:DA:793:A:C4	2.81	0.49
22:DA:1654:A:OP1	35:DN:1:MET:HA	2.11	0.49
1:CA:1179:A:OP2	9:CI:99:ARG:NH2	2.45	0.49
22:DA:2127:G:N3	22:DA:2162:G:C8	2.80	0.49
1:AA:261:U:C5	20:AT:74:ARG:NH1	2.79	0.49
22:DA:1476:U:H1'	22:DA:1732:C:O2	2.12	0.49
38:BQ:89:GLU:H	39:BR:49:ILE:HD12	1.76	0.49
14:AN:43:ASN:C	14:AN:45:VAL:N	2.65	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1076:C:O2'	30:DI:93:PRO:HD2	2.12	0.49
22:DA:591:U:H1'	51:D3:2:PRO:HD2	1.94	0.49
6:CF:59:TYR:HE2	18:CR:67:LEU:CD2	2.25	0.49
22:DA:86:G:O2'	22:DA:104:A:H4'	2.12	0.49
1:CA:1134:G:C6	1:CA:1135:U:C2	2.99	0.49
1:CA:183:C:O2'	1:CA:184:G:C5'	2.61	0.49
6:CF:32:ALA:O	6:CF:33:GLU:C	2.51	0.49
22:BA:1734:G:H2'	22:BA:1735:A:C8	2.48	0.49
46:BY:20:ASN:O	46:BY:24:GLU:HB2	2.11	0.49
6:CF:86:ARG:HH11	6:CF:86:ARG:HG2	1.77	0.49
22:BA:510:C:OP1	22:BA:512:G:O6	2.30	0.49
1:AA:1144:G:N1	1:AA:1145:A:C2	2.80	0.49
22:BA:2415:G:H2'	22:BA:2416:C:H6	1.75	0.49
24:DC:246:THR:O	24:DC:248:TRP:N	2.45	0.49
1:AA:1296:C:H4'	1:AA:1302:C:C5	2.47	0.49
13:AM:14:HIS:HB2	13:AM:17:ILE:HD13	1.94	0.49
34:BM:57:VAL:HG12	34:BM:112:LEU:HD23	1.94	0.49
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.12	0.49
1:CA:29:U:H4'	1:CA:295:C:O3'	2.12	0.49
46:DY:50:VAL:O	46:DY:54:LYS:HG3	2.12	0.49
21:CU:4:ILE:HG22	21:CU:4:ILE:O	2.13	0.49
8:CH:75:ILE:HD13	8:CH:129:VAL:HG22	1.94	0.49
45:BX:11:ARG:HB2	45:BX:12:PRO:CD	2.41	0.49
22:BA:2619:C:OP1	25:BD:157:LYS:HE2	2.12	0.49
31:BJ:77:HIS:HA	31:BJ:83:GLY:O	2.12	0.49
48:D0:20:ASP:N	48:D0:20:ASP:OD2	2.44	0.49
9:CI:63:LEU:O	9:CI:63:LEU:HG	2.12	0.49
22:BA:1783:A:N1	22:BA:2587:A:H2'	2.27	0.49
27:DF:16:LEU:HD11	27:DF:169:LEU:CD1	2.43	0.49
1:AA:22:G:H2'	1:AA:23:C:H6	1.77	0.49
22:BA:348:A:H2'	22:BA:349:U:O4'	2.11	0.49
22:DA:1356:G:C2	22:DA:1357:C:H1'	2.47	0.49
22:BA:674:G:H1'	26:BE:69:ARG:HD3	1.94	0.49
1:CA:1002:G:C2	1:CA:1003:G:H1'	2.47	0.49
1:CA:1000:A:C2	1:CA:1041:G:C2	3.00	0.49
1:CA:213:G:C8	1:CA:214:C:C5	3.00	0.49
22:DA:971:G:C2	22:DA:972:A:H1'	2.47	0.49
1:AA:651:C:C2'	1:AA:652:U:O5'	2.60	0.49
22:BA:478:A:C6	22:BA:480:A:C6	3.01	0.49
5:AE:74:VAL:HG11	5:AE:144:LEU:HB3	1.93	0.49
1:AA:1277:C:O2'	1:AA:1279:G:C8	2.63	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:411:G:OP1	22:DA:2407:A:OP2	2.29	0.49
1:CA:1315:U:O2'	1:CA:1360:A:N3	2.34	0.49
26:BE:23:PHE:HB2	26:BE:111:GLU:HG3	1.94	0.49
40:BS:84:ARG:HB2	40:BS:96:ILE:HD11	1.94	0.49
42:DU:7:ARG:CG	42:DU:8:ASP:N	2.75	0.49
24:DC:57:GLY:HA3	24:DC:213:TRP:HA	1.94	0.49
1:AA:49:U:C2	1:AA:361:G:N2	2.81	0.49
53:B5:65:LEU:O	53:B5:67:HIS:N	2.44	0.49
37:BP:26:VAL:CG1	37:BP:47:VAL:HG23	2.43	0.49
1:CA:1409:C:H4'	22:DA:1915:U:O4	2.12	0.49
5:CE:150:PRO:HA	8:CH:99:LEU:CD2	2.41	0.49
22:DA:547:A:H3'	22:DA:548:G:C5'	2.42	0.49
22:DA:1530:G:N2	22:DA:1542:U:O2	2.45	0.49
22:BA:2469:A:H4'	34:BM:55:ARG:HH12	1.76	0.49
1:CA:321:A:C8	1:CA:328:C:C2	3.00	0.49
29:BH:86:ASP:O	29:BH:87:GLU:HB2	2.11	0.49
22:BA:2662:A:H5''	22:BA:2663:G:OP2	2.12	0.49
9:CI:88:MET:HA	9:CI:92:GLU:OE2	2.12	0.49
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.27	0.49
22:DA:579:G:N2	22:DA:1262:A:C4	2.80	0.49
1:AA:142:G:H2'	1:AA:142:G:N3	2.27	0.49
31:BJ:23:LYS:O	31:BJ:63:ALA:HB3	2.12	0.49
33:DL:108:ALA:HB3	33:DL:125:LEU:HG	1.94	0.49
22:DA:2454:G:H1'	57:DA:3531:HOH:O	2.12	0.49
41:DT:14:PRO:HD2	46:DY:33:ALA:HB1	1.93	0.49
1:CA:771:G:C4	1:CA:809:G:N2	2.80	0.49
19:AS:58:VAL:HG11	19:AS:75:ALA:HA	1.95	0.49
30:DI:22:PRO:HB2	30:DI:23:PRO:HD3	1.95	0.49
22:BA:393:C:H2'	22:BA:394:C:H6	1.77	0.49
47:DZ:3:LYS:O	47:DZ:4:THR:HG22	2.12	0.49
22:BA:1209:U:O2'	22:BA:1237:A:N1	2.42	0.49
22:BA:1026:G:H2'	22:BA:1027:A:C8	2.46	0.49
22:DA:655:A:H4'	22:DA:656:G:OP1	2.11	0.49
3:AC:193:TYR:CD2	3:AC:193:TYR:N	2.79	0.49
1:AA:255:G:C6	1:AA:256:U:C4	3.01	0.49
1:AA:1255:G:O2'	1:AA:1258:G:N3	2.43	0.49
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.47	0.49
35:DN:36:THR:HG23	35:DN:41:ALA:HB2	1.95	0.49
22:BA:825:A:H4'	22:BA:2428:G:C5	2.47	0.49
22:DA:1464:G:C2	22:DA:1465:G:C4	3.01	0.49
4:CD:9:LEU:HD11	4:CD:29:ASP:OD1	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:81:ALA:C	29:DH:149:GLU:HB3	2.33	0.49
22:DA:1187:G:N7	57:DA:3574:HOH:O	2.35	0.49
39:DR:78:ARG:CB	39:DR:83:TYR:CD1	2.94	0.49
9:AI:26:GLY:CA	9:AI:59:GLU:HA	2.42	0.49
1:CA:1004:A:C2	1:CA:1026:G:N3	2.80	0.49
23:DB:40:U:C2	23:DB:44:G:OP2	2.65	0.49
22:DA:1627:G:N2	22:DA:1628:G:N7	2.60	0.49
1:CA:1124:G:N2	1:CA:1127:G:N2	2.59	0.49
1:CA:1162:C:C2	1:CA:1175:G:N2	2.80	0.49
1:AA:254:G:OP1	17:AQ:69:LYS:O	2.30	0.49
22:BA:1377:G:H5''	22:BA:1378:A:OP2	2.12	0.49
22:DA:1317:G:H2'	22:DA:1318:U:O4'	2.12	0.49
37:BP:51:ARG:O	37:BP:57:SER:HA	2.12	0.49
22:DA:1097:U:H1'	30:DI:9:VAL:HG11	1.94	0.49
1:CA:927:G:N2	1:CA:1391:U:H1'	2.28	0.49
19:AS:34:TRP:O	19:AS:36:ARG:HG3	2.13	0.49
1:CA:666:G:C6	1:CA:741:G:C6	3.01	0.49
13:AM:29:ARG:O	13:AM:33:ILE:HG12	2.12	0.49
4:AD:190:ASP:O	4:AD:191:LEU:O	2.30	0.49
22:BA:783:A:H8	22:BA:784:G:H4'	1.76	0.49
22:DA:2331:G:N2	22:DA:2385:C:C2	2.80	0.49
30:BI:106:LEU:HA	30:BI:109:ILE:HB	1.94	0.49
1:CA:145:G:N2	1:CA:146:G:C4	2.81	0.49
22:BA:1340:U:OP1	41:BT:19:LYS:NZ	2.45	0.49
22:BA:2582:G:OP2	22:BA:2583:G:OP2	2.31	0.49
22:DA:1231:U:H2'	22:DA:1232:G:H8	1.76	0.49
22:DA:810:U:C4	33:DL:30:THR:HA	2.47	0.49
19:AS:10:PHE:CG	19:AS:11:ILE:N	2.80	0.49
9:AI:40:GLY:O	9:AI:41:ARG:HB2	2.10	0.49
1:AA:406:G:O5'	4:AD:5:LEU:HD11	2.13	0.49
22:BA:2077:A:O2'	22:BA:2078:C:H5'	2.12	0.49
22:DA:2223:G:C2'	22:DA:2224:G:H5'	2.41	0.49
22:BA:2665:A:C2	22:BA:2666:C:C6	3.00	0.49
22:BA:1791:A:O2'	24:BC:206:GLY:HA2	2.13	0.49
45:DX:40:VAL:HG22	45:DX:45:ARG:O	2.13	0.49
23:DB:76:G:O2'	43:DV:78:GLN:OE1	2.16	0.49
22:BA:2808:G:N2	22:BA:2891:U:C6	2.80	0.49
9:CI:50:GLN:N	9:CI:51:PRO:HD2	2.28	0.49
12:AL:50:ARG:NH1	12:AL:89:ASP:OD1	2.35	0.49
22:DA:931:U:OP1	47:DZ:30:ARG:NH1	2.46	0.49
22:BA:1487:U:C2	22:BA:1503:A:C2	2.99	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:101:A:C4	1:CA:102:G:C8	3.01	0.49
22:BA:1952:A:C6	22:BA:1953:A:N1	2.80	0.49
23:BB:2:G:C2	23:BB:119:A:C2	3.00	0.49
22:DA:2518:A:H2'	22:DA:2518:A:N3	2.26	0.49
22:BA:236:C:O2'	22:BA:237:C:H5'	2.13	0.49
26:DE:170:ARG:CZ	26:DE:176:ASP:OD1	2.61	0.49
22:BA:601:C:O2	22:BA:605:G:H4'	2.13	0.49
22:BA:1239:G:H2'	22:BA:1240:U:O4'	2.12	0.49
4:AD:65:TYR:CG	4:AD:94:LEU:HD22	2.48	0.49
23:DB:42:C:O2'	27:DF:63:GLN:NE2	2.45	0.49
22:BA:1153:C:H2'	22:BA:1154:G:O4'	2.13	0.49
22:BA:1061:U:H3'	22:BA:1062:G:H5'	1.94	0.49
22:DA:747:U:C5	22:DA:2613:U:C5	3.00	0.49
22:DA:1366:A:OP1	45:DX:2:SER:OG	2.25	0.49
22:DA:1360:G:C6	22:DA:1372:U:C2	3.00	0.49
17:CQ:16:LYS:C	17:CQ:17:MET:SD	2.91	0.49
22:DA:1343:G:C6	22:DA:1344:U:C4	3.01	0.49
22:BA:1168:G:H2'	22:BA:1169:A:O4'	2.13	0.49
22:BA:1747:U:O2'	22:BA:1748:C:H5'	2.13	0.49
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.48	0.49
27:BF:158:THR:HG22	27:BF:160:ALA:HB3	1.94	0.49
22:DA:503:A:C2	22:DA:506:G:C5	3.01	0.49
22:DA:1648:U:H2'	22:DA:1649:G:O4'	2.12	0.49
22:DA:1097:U:C4	22:DA:1098:A:H1'	2.48	0.49
22:BA:2032:G:C8	57:BA:3537:HOH:O	2.64	0.49
4:AD:99:ASP:OD2	4:AD:115:ARG:NH2	2.45	0.49
1:CA:1363:A:N3	1:CA:1363:A:H2'	2.27	0.49
42:BU:96:PHE:O	42:BU:100:SER:HA	2.12	0.49
30:DI:58:VAL:CG1	30:DI:59:ILE:H	2.26	0.49
22:DA:2602:A:H4'	22:DA:2603:G:H5'	1.94	0.49
26:BE:104:ALA:O	26:BE:108:ILE:HG23	2.13	0.49
33:DL:93:ASN:O	33:DL:95:LEU:N	2.42	0.49
22:DA:1330:C:H2'	22:DA:1331:G:O5'	2.11	0.49
22:DA:2796:U:C4	22:DA:2798:U:O4	2.66	0.49
1:AA:119:A:C2	1:AA:240:G:C8	3.01	0.49
22:DA:536:G:C2'	22:DA:537:G:H5'	2.42	0.49
22:DA:2854:G:N2	22:DA:2864:G:C2	2.81	0.49
22:DA:646:U:H3'	22:DA:647:G:C4'	2.43	0.49
1:CA:1201:A:H1'	1:CA:1202:U:OP2	2.13	0.49
1:AA:32:A:H2'	1:AA:32:A:N3	2.27	0.49
4:CD:168:PRO:O	4:CD:170:TRP:N	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1847:A:HO2'	22:DA:1848:A:P	2.35	0.49
22:DA:1262:A:C6	22:DA:1263:U:N3	2.80	0.49
41:BT:28:ASN:HD21	41:BT:91:GLN:HB2	1.78	0.49
4:AD:34:ILE:O	4:AD:35:GLU:CB	2.60	0.49
4:AD:35:GLU:O	4:AD:38:PRO:HD3	2.13	0.49
1:AA:1457:G:H2'	1:AA:1458:G:O4'	2.12	0.49
1:AA:383:A:C5	1:AA:384:G:H1'	2.48	0.49
1:CA:1171:A:C2	1:CA:1172:C:C2	3.00	0.49
9:AI:112:GLU:OE2	9:AI:115:LYS:NZ	2.45	0.49
1:AA:104:G:C2	1:AA:105:G:C5	3.01	0.49
6:CF:4:TYR:CD2	6:CF:71:ILE:HG21	2.48	0.49
22:BA:2302:U:O2'	22:BA:2303:G:H5'	2.12	0.49
24:DC:146:MET:HE3	24:DC:182:ARG:NH2	2.27	0.49
22:BA:108:G:C6	22:BA:109:C:C4	3.01	0.49
36:DO:78:VAL:HA	36:DO:81:ARG:HB2	1.94	0.49
1:CA:307:C:H5''	1:CA:308:C:OP2	2.12	0.49
22:DA:737:C:C2	22:DA:738:G:C8	3.00	0.49
22:DA:2300:C:C4	22:DA:2317:A:C2	3.00	0.49
29:DH:112:LYS:CG	29:DH:113:SER:N	2.76	0.49
27:BF:135:GLN:OE1	27:BF:135:GLN:N	2.43	0.49
6:CF:78:PHE:CD2	6:CF:78:PHE:N	2.80	0.49
22:DA:654:A:N3	22:DA:654:A:H3'	2.26	0.49
22:DA:189:G:C4	22:DA:205:G:N2	2.80	0.49
10:AJ:49:PHE:CD1	10:AJ:49:PHE:N	2.81	0.49
40:DS:70:LYS:O	40:DS:107:VAL:HG23	2.11	0.49
22:DA:2335:A:C6	22:DA:2337:G:H1'	2.47	0.49
22:DA:2066:C:H5''	57:DA:3504:HOH:O	2.12	0.49
1:CA:1502:A:H5'	1:CA:1504:G:N7	2.27	0.49
22:BA:1087:G:O2'	22:BA:1089:A:O4'	2.27	0.49
22:DA:320:A:H4'	22:DA:322:A:N7	2.28	0.49
22:DA:613:A:HO2'	22:DA:614:A:P	2.31	0.49
50:D2:12:ARG:NH2	50:D2:44:VAL:CG1	2.75	0.49
5:AE:109:GLY:HA2	5:AE:112:ARG:HB3	1.94	0.49
2:AB:213:TYR:O	2:AB:217:VAL:HG23	2.12	0.49
14:AN:46:LEU:HD12	14:AN:46:LEU:C	2.33	0.49
2:AB:82:ASP:O	2:AB:84:ALA:N	2.46	0.49
22:BA:528:A:H2	22:BA:2043:C:H5'	1.74	0.49
30:DI:9:VAL:HG23	30:DI:10:LYS:N	2.28	0.49
22:DA:39:G:C6	22:DA:40:U:O4	2.64	0.49
22:DA:2322:A:H2'	22:DA:2323:G:O4'	2.12	0.49
22:DA:1454:C:H5'	35:DN:63:ARG:HD3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1014:A:H2'	1:AA:1015:G:O4'	2.12	0.49
19:AS:18:LYS:O	19:AS:31:LEU:HD21	2.12	0.49
1:CA:815:A:H4'	1:CA:817:C:C4	2.47	0.49
33:DL:55:MET:SD	33:DL:59:ARG:CZ	3.01	0.49
22:BA:1403:A:H2'	22:BA:1404:C:C6	2.48	0.49
1:AA:474:G:C2	1:AA:475:C:C6	3.00	0.49
22:DA:1965:C:OP1	22:DA:1966:A:C2'	2.61	0.49
17:CQ:50:ASN:O	17:CQ:51:ASN:C	2.51	0.49
17:CQ:51:ASN:ND2	17:CQ:51:ASN:O	2.46	0.49
32:DK:31:ARG:CB	32:DK:32:TYR:CD2	2.96	0.49
6:AF:98:GLU:HG3	6:AF:99:ALA:N	2.28	0.49
24:DC:141:VAL:CG1	24:DC:190:ALA:HB1	2.42	0.49
1:CA:1386:G:N3	1:CA:1387:G:C8	2.80	0.49
27:DF:108:VAL:N	27:DF:109:PRO:CD	2.76	0.49
22:DA:2461:A:H1'	22:DA:2492:U:C2	2.48	0.49
33:DL:116:VAL:O	33:DL:116:VAL:HG13	2.12	0.49
8:CH:86:TYR:CE2	8:CH:124:GLU:HB2	2.47	0.49
43:BV:89:ILE:HG21	43:BV:91:PHE:CZ	2.47	0.49
22:DA:508:A:H3'	22:DA:509:C:H5'	1.94	0.49
1:AA:157:U:O2'	1:AA:158:G:H5'	2.12	0.49
4:AD:70:ARG:O	4:AD:74:ASN:ND2	2.45	0.49
22:BA:570:G:H2'	22:BA:2030:A:C8	2.48	0.49
22:BA:570:G:H2'	22:BA:2030:A:N7	2.28	0.49
22:BA:1489:C:C2	22:BA:1501:G:C2	3.00	0.49
22:DA:273:G:H2'	22:DA:274:C:O4'	2.12	0.49
1:AA:346:G:P	32:BK:105:ARG:NH1	2.85	0.49
26:DE:146:VAL:O	26:DE:167:VAL:HA	2.12	0.49
26:BE:29:HIS:CE1	26:BE:33:VAL:HG21	2.47	0.49
6:AF:51:ILE:O	6:AF:52:ASN:HB2	2.11	0.49
22:BA:1408:G:C6	22:BA:1409:U:C4	3.01	0.49
22:BA:1886:U:C2'	22:BA:1887:C:H5'	2.43	0.49
1:AA:720:C:H5''	18:AR:41:PRO:HA	1.95	0.49
22:DA:1465:G:C5	22:DA:1466:U:C4	3.00	0.49
22:DA:1357:C:N4	22:DA:1358:G:N1	2.61	0.49
22:DA:301:G:C2	22:DA:302:C:N3	2.81	0.49
6:AF:93:LYS:CG	6:AF:93:LYS:O	2.60	0.49
22:DA:1403:A:C2	22:DA:1404:C:C2	3.00	0.49
9:AI:84:THR:HG21	9:AI:103:PHE:CB	2.42	0.49
27:BF:42:GLU:O	27:BF:42:GLU:HG2	2.13	0.49
1:CA:246:A:C4	1:CA:279:A:C6	3.01	0.49
22:DA:1394:U:H4'	22:DA:1603:A:H4'	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:114:LYS:HB2	7:CG:118:LEU:HD12	1.95	0.49
1:AA:259:G:C2	1:AA:260:G:H1'	2.47	0.49
39:BR:49:ILE:CB	39:BR:52:PRO:C	2.78	0.49
22:DA:1097:U:O2	30:DI:9:VAL:CG1	2.61	0.49
1:CA:1321:U:C4	1:CA:1322:C:C5	3.00	0.49
1:CA:1152:A:C4	1:CA:1153:G:C8	3.00	0.49
22:DA:804:A:H5''	22:DA:805:G:OP1	2.13	0.49
22:BA:2127:G:H4'	22:BA:2128:G:OP1	2.12	0.49
53:B5:67:HIS:CD2	53:B5:69:LEU:HD23	2.47	0.49
53:B5:215:VAL:O	53:B5:216:THR:CB	2.60	0.49
1:CA:728:A:H2'	1:CA:729:A:H8	1.77	0.49
22:BA:1412:U:H2'	22:BA:1413:A:C8	2.48	0.49
22:DA:2428:G:H5''	22:DA:2429:G:OP1	2.13	0.49
2:AB:40:ILE:HD13	2:AB:40:ILE:N	2.27	0.49
22:DA:2234:G:C6	22:DA:2235:G:C5	3.01	0.49
1:AA:937:A:N6	1:AA:1345:U:O4	2.46	0.49
1:AA:1442:G:H2'	1:AA:1443:C:H6	1.77	0.49
22:DA:1178:C:N4	22:DA:1180:U:N3	2.61	0.49
34:BM:69:PRO:O	34:BM:70:ASP:CG	2.51	0.49
12:CL:90:LEU:HB3	12:CL:93:VAL:HG21	1.95	0.49
22:DA:1230:A:C2	22:DA:1231:U:C2	2.99	0.49
35:DN:28:LEU:CG	35:DN:28:LEU:O	2.61	0.49
30:BI:130:GLU:HB3	30:BI:134:ARG:NH2	2.27	0.49
12:CL:61:PHE:N	12:CL:61:PHE:HD1	2.11	0.49
31:DJ:94:ALA:O	31:DJ:95:ARG:C	2.51	0.49
1:AA:929:G:N2	1:AA:1389:C:C2	2.81	0.49
9:AI:17:ALA:CB	9:AI:67:VAL:HB	2.43	0.49
11:AK:67:ALA:HB1	11:AK:100:LEU:HD22	1.94	0.49
45:DX:68:LEU:HD22	45:DX:78:TYR:CZ	2.47	0.49
24:DC:232:HIS:NE2	24:DC:244:PRO:HA	2.28	0.49
22:BA:2409:G:H2'	22:BA:2410:G:O4'	2.12	0.49
1:CA:1380:U:C5	7:CG:3:ARG:HA	2.46	0.49
42:BU:37:GLU:O	42:BU:39:ILE:HG12	2.12	0.49
25:BD:38:LYS:O	25:BD:46:ARG:HA	2.13	0.49
22:DA:1488:C:N3	22:DA:1489:C:C5	2.81	0.49
41:DT:28:ASN:HB3	41:DT:87:LEU:HB2	1.94	0.49
22:BA:866:A:C8	22:BA:914:G:C6	3.00	0.49
6:AF:35:LYS:HD3	6:AF:35:LYS:N	2.27	0.49
17:CQ:81:LYS:N	17:CQ:81:LYS:CD	2.75	0.49
35:BN:51:LEU:O	35:BN:52:ILE:C	2.49	0.49
41:DT:44:LYS:O	41:DT:48:GLN:HG2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1048:G:P	57:CA:1849:HOH:O	2.70	0.49
22:DA:1029:A:N7	22:DA:1030:C:C2	2.81	0.49
22:DA:2693:G:N2	22:DA:2717:C:C2	2.81	0.49
22:BA:998:C:P	38:BQ:92:ARG:HH21	2.36	0.49
22:DA:1357:C:H2'	22:DA:1358:G:C5'	2.42	0.49
22:DA:1361:G:C5	22:DA:1371:G:N2	2.80	0.49
22:DA:581:C:OP2	38:DQ:33:ARG:NE	2.45	0.49
22:DA:301:G:C2	22:DA:302:C:C2	3.01	0.49
40:DS:61:ASN:O	40:DS:62:ASP:HB3	2.13	0.49
3:AC:59:ARG:HA	3:AC:63:SER:O	2.12	0.49
22:BA:1074:G:H2'	22:BA:1075:C:C6	2.47	0.49
22:DA:1287:A:C2'	22:DA:1288:G:H5'	2.42	0.49
22:DA:1439:A:N7	22:DA:1552:A:H2	2.10	0.49
17:AQ:15:ASP:OD1	17:AQ:16:LYS:N	2.45	0.49
22:BA:197:A:C6	22:BA:198:C:C2	3.01	0.49
1:CA:216:U:H2'	1:CA:217:C:C6	2.47	0.49
23:DB:30:C:OP1	36:DO:3:LYS:NZ	2.45	0.49
22:DA:2507:C:N4	22:DA:2508:G:C6	2.81	0.49
1:CA:718:A:H5''	11:CK:119:ASN:ND2	2.28	0.49
1:CA:1296:C:H4'	1:CA:1302:C:C4	2.47	0.49
21:AU:37:PHE:HB3	21:AU:41:PRO:HG3	1.94	0.49
1:AA:257:G:C2	1:AA:258:G:C5	3.00	0.49
1:AA:568:G:C2	1:AA:569:C:C6	3.01	0.49
22:DA:79:C:C2'	22:DA:346:A:N3	2.76	0.49
22:BA:2307:G:H4'	22:BA:2308:G:O5'	2.13	0.49
22:DA:631:A:N3	22:DA:2415:G:O2'	2.45	0.49
22:DA:1096:A:C8	22:DA:1096:A:OP2	2.65	0.49
12:AL:23:ALA:O	12:AL:24:LEU:O	2.30	0.49
22:DA:846:U:O2'	22:DA:847:U:P	2.70	0.49
22:BA:1583:A:HO2'	22:BA:1584:U:P	2.36	0.49
34:DM:69:PRO:O	34:DM:70:ASP:HB3	2.11	0.49
22:DA:801:G:C8	26:DE:49:ARG:HG3	2.48	0.49
22:BA:574:A:H4'	22:BA:575:A:O5'	2.13	0.49
1:AA:1160:G:O2'	1:AA:1161:C:O5'	2.27	0.49
22:BA:65:U:H2'	22:BA:66:C:C6	2.47	0.49
22:DA:749:A:C6	22:DA:1618:A:C2	3.01	0.49
22:DA:2098:U:H2'	22:DA:2099:U:C6	2.48	0.49
1:AA:631:C:H5'	1:AA:632:U:O5'	2.13	0.49
3:CC:130:PHE:CE1	3:CC:157:LEU:HB3	2.48	0.49
21:CU:37:PHE:CD2	21:CU:41:PRO:HG3	2.48	0.49
22:BA:26:G:C6	22:BA:27:G:N1	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1124:G:H3'	1:AA:1145:A:N6	2.28	0.49
22:BA:2517:C:C5	22:BA:2542:A:C5	3.00	0.49
14:CN:87:ALA:HB1	14:CN:92:GLU:HB2	1.95	0.49
1:AA:1452:C:O4'	1:AA:1453:G:N2	2.46	0.49
30:DI:28:LEU:HD13	30:DI:38:PHE:CE2	2.48	0.49
22:DA:2497:A:N3	22:DA:2498:C:N4	2.61	0.49
29:DH:72:ILE:O	29:DH:141:LYS:O	2.30	0.49
22:DA:1819:A:H4'	22:DA:1820:U:H5''	1.93	0.49
22:BA:2751:G:C4	28:BG:3:ARG:HD2	2.47	0.49
22:DA:969:G:H2'	22:DA:970:U:C6	2.48	0.49
42:DU:86:ARG:NH2	42:DU:95:PHE:HB3	2.28	0.49
1:CA:198:G:O2'	1:CA:199:A:H5'	2.12	0.49
45:DX:71:LEU:HA	45:DX:74:ARG:HG2	1.94	0.49
42:BU:42:VAL:O	42:BU:60:GLU:HA	2.13	0.49
2:AB:96:TRP:HZ2	2:AB:101:LEU:CD2	2.25	0.49
1:CA:881:G:C6	1:CA:882:C:C4	3.01	0.49
22:DA:1267:U:N3	22:DA:2013:A:N7	2.60	0.49
40:DS:39:THR:O	40:DS:41:LYS:N	2.46	0.49
22:DA:192:C:O2'	22:DA:802:A:N3	2.45	0.49
22:BA:1914:C:C2	22:BA:1915:U:C6	3.00	0.49
17:AQ:17:MET:HG2	17:AQ:20:SER:HB3	1.95	0.49
22:DA:680:C:H2'	22:DA:681:G:C8	2.48	0.49
12:AL:44:LYS:CB	12:AL:45:PRO:HD3	2.43	0.49
22:DA:443:A:C8	26:DE:40:ARG:CG	2.96	0.49
22:BA:477:A:H2'	22:BA:478:A:C8	2.47	0.49
22:DA:123:G:N2	22:DA:129:C:C2	2.80	0.49
22:DA:1312:U:H3'	57:DA:3387:HOH:O	2.13	0.49
17:AQ:81:LYS:O	17:AQ:82:ALA:C	2.50	0.49
22:DA:2111:U:O4	22:DA:2147:A:C2	2.66	0.49
25:BD:62:LYS:N	25:BD:63:PRO:CD	2.75	0.49
22:DA:846:U:HO2'	22:DA:847:U:P	2.36	0.49
30:BI:24:VAL:CG2	30:BI:28:LEU:HD23	2.43	0.49
1:CA:161:A:H2'	1:CA:162:A:C8	2.48	0.49
33:BL:109:LYS:HG2	33:BL:126:ARG:CB	2.43	0.49
1:CA:16:A:C2'	1:CA:17:U:H5'	2.43	0.49
22:DA:1566:A:N3	24:DC:213:TRP:CG	2.80	0.49
24:DC:80:ARG:NH1	24:DC:82:GLU:OE2	2.46	0.49
12:CL:42:PRO:HD3	12:CL:48:ALA:O	2.13	0.49
22:BA:876:C:N3	22:BA:901:C:N4	2.61	0.49
53:B5:24:ASP:HB3	53:B5:185:LYS:O	2.13	0.49
1:AA:404:G:N7	4:AD:2:ALA:CB	2.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:308:G:C8	22:DA:501:A:H1'	2.48	0.49
2:CB:67:ILE:HG22	2:CB:68:LEU:N	2.28	0.49
22:DA:858:G:N2	22:DA:919:U:O4	2.43	0.49
5:AE:13:GLU:HB3	5:AE:39:VAL:HG12	1.94	0.49
12:CL:94:ARG:O	12:CL:95:TYR:CD1	2.66	0.49
4:CD:146:ARG:O	4:CD:148:LYS:O	2.30	0.49
1:AA:782:A:C8	1:AA:783:C:C5	3.01	0.49
1:AA:771:G:C2'	1:AA:772:U:H5'	2.43	0.49
1:CA:1337:G:H5''	1:CA:1338:G:OP1	2.13	0.49
32:DK:17:ARG:HG2	32:DK:47:ILE:CG2	2.43	0.49
7:AG:115:SER:OG	7:AG:118:LEU:HG	2.12	0.49
26:DE:18:THR:HG22	26:DE:19:PHE:CD2	2.47	0.49
1:CA:630:A:H2'	1:CA:631:C:O4'	2.13	0.49
22:BA:2356:U:O3'	44:BW:20:ARG:HD3	2.13	0.49
41:DT:30:ILE:HD13	41:DT:32:LEU:HG	1.93	0.49
32:DK:30:ARG:NH2	32:DK:37:ASP:OD1	2.46	0.49
22:BA:88:G:C6	22:BA:89:A:N7	2.80	0.49
6:AF:54:LEU:HD13	6:AF:54:LEU:O	2.12	0.49
14:CN:46:LEU:O	14:CN:46:LEU:HG	2.13	0.49
1:AA:976:G:OP2	1:AA:1358:U:O2'	2.30	0.49
34:BM:77:PRO:HD2	34:BM:80:VAL:HG21	1.94	0.49
22:DA:1863:G:H2'	22:DA:1864:U:O4'	2.12	0.49
22:BA:996:A:N6	22:BA:1160:G:C6	2.81	0.49
22:DA:1378:A:N3	22:DA:1379:U:H2'	2.28	0.49
22:DA:204:A:H5'	22:DA:206:U:O4'	2.12	0.49
22:DA:1049:C:H2'	22:DA:1050:A:H5'	1.95	0.49
22:DA:2024:G:N2	22:DA:2040:G:H1'	2.28	0.49
1:AA:478:A:H2'	1:AA:479:U:C5'	2.42	0.49
16:AP:70:ARG:O	16:AP:70:ARG:CG	2.61	0.49
22:BA:1915:U:H2'	22:BA:1916:A:H5'	1.94	0.49
41:DT:77:ARG:O	41:DT:78:SER:CB	2.60	0.49
1:CA:215:C:H2'	1:CA:216:U:O4'	2.13	0.49
1:AA:649:A:H2'	1:AA:650:G:O4'	2.13	0.49
4:AD:125:VAL:O	4:AD:126:ASN:C	2.52	0.49
22:BA:475:C:N4	22:BA:476:G:C6	2.80	0.49
1:AA:202:G:N2	1:AA:216:U:O2	2.46	0.49
22:DA:1317:G:N7	22:DA:1318:U:C4	2.81	0.49
22:DA:1319:C:H2'	22:DA:1320:C:H5'	1.94	0.49
25:BD:103:ASP:O	25:BD:104:VAL:CG2	2.61	0.49
1:CA:1074:G:H4'	2:CB:102:THR:O	2.12	0.49
31:BJ:64:VAL:CG1	31:BJ:68:LYS:HB2	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:38:A:H5'	26:DE:45:ALA:HB3	1.93	0.49
22:DA:362:A:N7	22:DA:363:G:N7	2.61	0.49
13:AM:2:ALA:O	13:AM:9:ILE:HG23	2.13	0.49
22:BA:545:U:H2'	22:BA:546:U:O3'	2.13	0.49
1:CA:620:C:H2'	1:CA:621:A:O4'	2.13	0.49
1:CA:1361:G:C4	1:CA:1362:A:N7	2.81	0.49
1:CA:157:U:O2'	1:CA:158:G:H5'	2.12	0.49
22:DA:1826:G:C4	22:DA:1827:U:C5	3.01	0.49
22:BA:319:G:C5	22:BA:333:G:C2	3.01	0.49
17:AQ:47:HIS:HB2	17:AQ:67:LEU:HD23	1.95	0.49
25:BD:129:THR:HG23	25:BD:130:GLN:O	2.12	0.49
22:DA:7:G:H4'	31:DJ:15:TRP:CH2	2.47	0.49
24:BC:167:ARG:O	24:BC:168:ASP:CB	2.60	0.49
1:CA:757:U:OP1	1:CA:822:U:O2'	2.17	0.49
36:BO:100:HIS:O	36:BO:104:GLN:HB2	2.13	0.49
3:CC:81:GLY:O	3:CC:83:ASP:N	2.46	0.49
4:CD:168:PRO:CB	4:CD:171:LEU:CD1	2.91	0.49
21:CU:37:PHE:CD1	21:CU:40:LYS:HE3	2.47	0.49
21:CU:40:LYS:N	21:CU:41:PRO:CD	2.76	0.49
22:DA:2791:G:O6	22:DA:2805:C:N3	2.45	0.49
1:CA:786:G:C2	1:CA:787:A:H1'	2.47	0.49
22:BA:2480:C:H2'	22:BA:2481:G:H5'	1.95	0.49
22:DA:475:C:N3	22:DA:481:G:C6	2.81	0.49
41:DT:61:LEU:C	41:DT:61:LEU:HD12	2.32	0.49
23:BB:42:C:OP1	27:BF:64:LYS:HE2	2.13	0.49
5:CE:13:GLU:HB2	5:CE:39:VAL:HG12	1.95	0.49
9:AI:30:ILE:HD11	9:AI:38:TYR:HB3	1.94	0.49
36:DO:76:LYS:O	36:DO:79:ALA:HB3	2.12	0.49
22:DA:2734:A:C8	22:DA:2735:G:C8	3.01	0.49
1:AA:548:G:O2'	1:AA:549:C:H5'	2.13	0.49
34:BM:132:THR:CG2	34:BM:133:LYS:N	2.76	0.49
24:DC:148:PRO:HD3	24:DC:185:GLU:OE2	2.13	0.49
3:AC:23:PHE:CD2	3:AC:24:ALA:N	2.81	0.49
49:B1:19:HIS:HE1	49:B1:21:TYR:CE2	2.31	0.49
22:BA:861:A:C2	22:BA:917:A:C4	3.01	0.49
1:CA:1082:A:C6	1:CA:1083:U:N3	2.81	0.49
43:DV:75:GLN:HB3	43:DV:90:ASP:O	2.12	0.49
22:DA:2873:A:H4'	57:DA:3802:HOH:O	2.11	0.49
1:AA:581:G:C5	1:AA:758:C:C5	3.01	0.49
25:DD:2:ILE:HG23	25:DD:88:GLU:OE2	2.12	0.49
8:CH:106:THR:HG21	8:CH:121:LEU:HD13	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2780:G:OP2	31:BJ:120:ARG:HD3	2.13	0.49
22:DA:1574:C:N4	57:DA:3620:HOH:O	2.46	0.49
1:CA:834:U:N3	1:CA:835:U:C4	2.81	0.49
22:BA:205:G:O2'	22:BA:206:U:P	2.71	0.49
22:BA:1686:C:H2'	22:BA:1687:G:O4'	2.13	0.49
22:BA:1513:U:H2'	22:BA:1514:G:O4'	2.13	0.49
22:DA:1958:C:P	57:DA:3730:HOH:O	2.71	0.49
29:BH:139:PHE:O	29:BH:140:ALA:HB2	2.13	0.48
22:DA:2446:G:C6	22:DA:2501:C:H2'	2.48	0.48
13:AM:11:ASP:CG	13:AM:12:HIS:N	2.64	0.48
22:DA:1352:U:H5	22:DA:1377:G:C5	2.31	0.48
22:DA:323:C:O4'	22:DA:323:C:O2	2.31	0.48
22:DA:310:A:H5''	42:DU:15:THR:HB	1.95	0.48
22:DA:2272:U:H5''	22:DA:2273:A:OP1	2.12	0.48
1:AA:452:A:H2'	1:AA:453:G:H5'	1.95	0.48
1:CA:1211:U:O2'	1:CA:1212:U:P	2.70	0.48
24:DC:62:TYR:CD1	24:DC:63:ARG:N	2.80	0.48
22:DA:279:A:N6	22:DA:361:G:C2'	2.75	0.48
50:D2:18:PHE:O	50:D2:19:ARG:C	2.51	0.48
22:DA:1338:G:H5''	41:DT:17:SER:HB2	1.94	0.48
2:AB:72:THR:O	2:AB:73:LYS:CB	2.60	0.48
22:DA:1792:G:C5	22:DA:1793:C:C5	3.01	0.48
1:AA:723:U:H4'	1:AA:723:U:OP2	2.11	0.48
1:CA:1240:U:OP2	7:CG:116:MET:HB3	2.12	0.48
7:CG:42:ILE:HG21	7:CG:116:MET:HG3	1.95	0.48
22:DA:230:G:C2	22:DA:231:A:N7	2.81	0.48
22:BA:1624:U:C2	22:BA:1625:C:C6	3.01	0.48
22:BA:580:U:O3'	38:BQ:31:VAL:CG1	2.61	0.48
8:AH:78:VAL:HG11	8:AH:125:ILE:CD1	2.43	0.48
22:DA:920:A:C6	22:DA:921:C:C4	3.01	0.48
22:DA:1916:A:H2'	22:DA:1917:U:O4'	2.13	0.48
41:BT:19:LYS:NZ	41:BT:84:TYR:OH	2.46	0.48
3:CC:83:ASP:O	3:CC:84:VAL:C	2.52	0.48
5:CE:35:ALA:O	5:CE:50:TYR:O	2.31	0.48
5:CE:50:TYR:O	5:CE:51:GLY:O	2.31	0.48
1:CA:9:G:OP2	5:CE:126:LYS:NZ	2.44	0.48
42:DU:96:PHE:CZ	42:DU:103:ILE:CG1	2.96	0.48
22:DA:711:G:C2	22:DA:721:A:N3	2.81	0.48
1:AA:1029:U:O2'	1:AA:1032:G:O6	2.31	0.48
1:AA:1426:G:H2'	1:AA:1427:C:O4'	2.13	0.48
22:DA:2512:C:H2'	22:DA:2513:A:O4'	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:914:A:C4	1:AA:915:A:C8	3.01	0.48
31:DJ:84:ILE:CG1	31:DJ:84:ILE:O	2.61	0.48
22:DA:1400:U:H2'	22:DA:1401:G:O4'	2.12	0.48
24:BC:235:GLY:HA3	24:BC:239:ASN:HB2	1.94	0.48
22:BA:2832:U:C2	22:BA:2834:G:C2	3.01	0.48
9:CI:13:LYS:O	9:CI:14:SER:HB3	2.12	0.48
15:AO:81:LEU:CD1	15:AO:85:LEU:CD2	2.91	0.48
12:AL:85:GLY:O	12:AL:96:HIS:ND1	2.45	0.48
22:DA:245:G:O6	51:D3:8:ARG:HD2	2.12	0.48
22:BA:2488:G:O2'	22:BA:2489:U:H5'	2.12	0.48
22:BA:753:A:H2'	22:BA:754:U:H6	1.78	0.48
22:DA:649:G:H2'	22:DA:650:C:C6	2.48	0.48
13:CM:29:ARG:NH1	13:CM:59:GLU:O	2.46	0.48
14:CN:10:GLU:O	14:CN:11:VAL:C	2.50	0.48
25:DD:186:LEU:CD1	37:DP:8:LEU:HD12	2.43	0.48
34:DM:1:MET:HE3	34:DM:43:ALA:HB3	1.95	0.48
1:AA:1195:C:H5''	1:AA:1196:A:OP2	2.13	0.48
22:DA:2025:C:H2'	22:DA:2026:U:C6	2.48	0.48
47:DZ:10:THR:HG23	47:DZ:54:MET:C	2.32	0.48
22:BA:1176:U:H2'	22:BA:1177:G:C4	2.49	0.48
12:AL:43:LYS:O	12:AL:44:LYS:C	2.51	0.48
1:AA:1107:C:C4	1:AA:1108:G:C8	3.01	0.48
5:AE:16:ILE:CG2	5:AE:110:ALA:HA	2.43	0.48
22:BA:2271:G:H2'	22:BA:2272:U:O4'	2.13	0.48
1:CA:734:G:C4	1:CA:735:C:C6	3.01	0.48
22:DA:1731:G:N1	22:DA:1733:G:C4	2.81	0.48
22:BA:2188:U:C4	22:BA:2189:U:C4	3.02	0.48
1:CA:8:A:N6	4:CD:54:GLN:OE1	2.46	0.48
22:BA:2371:G:C2	22:BA:2372:U:C6	3.01	0.48
37:DP:99:TYR:CE2	37:DP:100:LEU:HD21	2.48	0.48
22:DA:1751:U:H2'	22:DA:1752:C:C6	2.48	0.48
1:AA:233:C:H2'	1:AA:234:C:C6	2.48	0.48
22:DA:1856:U:C4	22:DA:1857:G:C6	3.01	0.48
1:AA:1349:A:C2	1:AA:1374:A:C5	3.01	0.48
21:AU:12:PHE:CD1	21:AU:16:LEU:CD1	2.96	0.48
5:CE:149:SER:OG	5:CE:152:MET:HB2	2.13	0.48
22:BA:273:G:N2	22:BA:365:U:O2	2.46	0.48
14:CN:62:ASN:HB3	14:CN:73:PHE:CD1	2.48	0.48
11:AK:112:ASP:OD1	21:AU:24:GLU:OE2	2.31	0.48
2:CB:71:GLY:CA	2:CB:164:ILE:CG2	2.91	0.48
2:AB:133:GLU:OE2	2:AB:137:ARG:NH1	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:43:GLY:HA2	6:CF:58:HIS:CD2	2.48	0.48
5:CE:96:MET:CE	5:CE:111:MET:CE	2.90	0.48
10:CJ:73:LEU:CD2	10:CJ:75:ASP:HB2	2.42	0.48
5:AE:60:ILE:HD13	5:AE:61:GLN:N	2.28	0.48
22:DA:1981:A:H5''	22:DA:1982:U:OP2	2.13	0.48
5:CE:33:PHE:O	5:CE:52:LYS:HB2	2.13	0.48
19:AS:58:VAL:CG1	19:AS:75:ALA:HB1	2.43	0.48
6:CF:66:ALA:HB3	6:CF:71:ILE:HD11	1.93	0.48
44:DW:46:HIS:CD2	44:DW:77:ARG:HD3	2.48	0.48
22:DA:2174:C:H2'	22:DA:2175:C:O4'	2.12	0.48
26:BE:42:GLY:HA3	26:BE:90:GLN:O	2.13	0.48
1:AA:747:A:C5'	1:AA:748:G:OP2	2.61	0.48
22:BA:31:C:O3'	22:BA:1238:G:H5''	2.13	0.48
22:BA:2861:U:C2	22:BA:2862:G:C8	3.01	0.48
37:DP:106:LYS:O	37:DP:109:ARG:HD2	2.14	0.48
12:AL:35:THR:HG21	12:AL:54:ARG:NH2	2.28	0.48
22:DA:1577:C:H2'	22:DA:1578:U:O4'	2.13	0.48
22:DA:2543:G:N3	22:DA:2765:A:H2'	2.28	0.48
6:AF:42:TRP:HB2	6:AF:59:TYR:HB2	1.95	0.48
26:BE:77:ILE:O	26:BE:77:ILE:CG1	2.61	0.48
22:BA:2250:G:O5'	22:BA:2250:G:H8	1.96	0.48
10:CJ:82:LYS:O	10:CJ:86:ALA:HB3	2.13	0.48
18:AR:28:THR:O	18:AR:31:ASN:ND2	2.45	0.48
51:D3:16:LYS:HE3	51:D3:20:GLY:O	2.13	0.48
22:BA:150:U:H2'	22:BA:151:C:C6	2.48	0.48
22:BA:2377:A:O2'	22:BA:2378:A:H5'	2.14	0.48
22:DA:2032:G:H1'	25:DD:150:GLN:HE22	1.76	0.48
22:DA:2056:G:C6	22:DA:2057:G:N7	2.82	0.48
9:AI:80:ARG:HD2	9:AI:80:ARG:O	2.13	0.48
5:AE:74:VAL:HG23	5:AE:76:LEU:CD1	2.43	0.48
29:DH:21:VAL:CG2	29:DH:22:LYS:N	2.76	0.48
2:AB:49:MET:O	2:AB:51:ASN:O	2.31	0.48
5:AE:69:ARG:O	5:AE:70:ASN:C	2.50	0.48
22:DA:1153:C:H2'	22:DA:1154:G:O4'	2.14	0.48
29:BH:91:PHE:O	1:CA:55:A:N1	2.47	0.48
1:CA:1181:G:O2'	1:CA:1182:G:C5	2.64	0.48
42:DU:10:GLU:HG2	42:DU:11:VAL:N	2.28	0.48
22:DA:410:G:C2	22:DA:2407:A:C5	3.01	0.48
22:DA:78:U:OP2	46:DY:2:LYS:HD2	2.12	0.48
12:CL:21:VAL:N	12:CL:22:PRO:CD	2.76	0.48
22:DA:135:U:H2'	22:DA:136:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2310:C:H2'	22:BA:2311:A:C5'	2.42	0.48
39:DR:49:ILE:HG22	39:DR:53:PHE:C	2.33	0.48
22:DA:1524:G:C2	22:DA:1525:A:C8	3.01	0.48
22:DA:441:U:O2'	26:DE:41:GLN:OE1	2.27	0.48
22:DA:2321:U:H5'	22:DA:2322:A:OP2	2.13	0.48
22:DA:2146:C:H4'	22:DA:2147:A:C8	2.47	0.48
2:CB:20:THR:OG1	2:CB:21:ARG:N	2.46	0.48
39:BR:25:LEU:O	39:BR:94:THR:HG21	2.13	0.48
30:BI:97:LYS:HG2	30:BI:139:VAL:HG22	1.94	0.48
1:AA:926:G:C6	1:AA:1505:G:C5	3.01	0.48
26:BE:31:VAL:HG21	26:BE:104:ALA:HB2	1.95	0.48
1:CA:158:G:C5	1:CA:164:G:C6	3.01	0.48
32:BK:35:VAL:CG1	32:BK:106:GLU:HG2	2.44	0.48
22:DA:1791:A:O3'	24:DC:205:LEU:HB2	2.13	0.48
1:CA:728:A:C2	1:CA:729:A:C5	3.01	0.48
39:BR:14:VAL:HG13	39:BR:98:ILE:HG13	1.95	0.48
1:AA:1349:A:OP1	9:AI:120:LYS:O	2.31	0.48
1:AA:1149:C:O2'	1:AA:1150:A:H5'	2.14	0.48
1:AA:781:A:C4	1:AA:802:A:C2	3.01	0.48
42:DU:13:VAL:HG21	42:DU:39:ILE:HG23	1.93	0.48
9:CI:116:VAL:HG23	10:CJ:62:ARG:HD3	1.96	0.48
22:BA:1832:C:N4	22:BA:1833:C:C4	2.80	0.48
1:CA:1019:A:H2'	1:CA:1020:G:O4'	2.14	0.48
29:DH:127:GLU:HG3	29:DH:144:VAL:O	2.13	0.48
27:BF:122:PHE:HB3	27:BF:163:ASP:CG	2.33	0.48
22:DA:158:U:O2	22:DA:169:G:C2	2.66	0.48
22:DA:169:G:C2	22:DA:170:U:C6	3.01	0.48
2:AB:120:GLN:O	2:AB:120:GLN:HG2	2.13	0.48
30:DI:20:PRO:HB2	30:DI:23:PRO:HD2	1.95	0.48
22:DA:371:A:N6	22:DA:402:A:OP2	2.46	0.48
1:AA:43:C:H2'	1:AA:44:A:O4'	2.13	0.48
44:DW:34:GLY:N	44:DW:61:ALA:O	2.38	0.48
24:DC:162:VAL:HG12	24:DC:163:GLN:N	2.27	0.48
1:CA:3:A:O2'	1:CA:612:C:O2'	2.26	0.48
10:AJ:59:LYS:N	10:AJ:59:LYS:HD2	2.27	0.48
22:BA:2435:A:C2'	22:BA:2436:G:O5'	2.61	0.48
38:DQ:78:LYS:HE2	38:DQ:117:LEU:HD21	1.95	0.48
32:BK:86:LEU:N	32:BK:86:LEU:HD23	2.28	0.48
33:DL:2:ARG:N	33:DL:2:ARG:HD3	2.29	0.48
31:DJ:71:ASP:O	31:DJ:73:VAL:HG23	2.14	0.48
22:DA:1211:C:H3'	22:DA:1212:G:H5'	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:70:THR:OG1	35:BN:71:ARG:N	2.46	0.48
22:BA:1528:A:H2'	22:BA:1529:G:O4'	2.13	0.48
29:BH:121:VAL:H	29:BH:122:LEU:HB2	1.77	0.48
22:DA:2011:U:H2'	22:DA:2012:G:O4'	2.12	0.48
22:DA:265:A:H4'	22:DA:266:G:OP1	2.13	0.48
22:BA:1075:C:H2'	22:BA:1076:C:C6	2.48	0.48
23:DB:58:A:H2'	23:DB:59:A:O4'	2.13	0.48
22:DA:2127:G:N3	22:DA:2162:G:N7	2.61	0.48
51:B3:30:ARG:O	51:B3:31:HIS:HB3	2.13	0.48
22:BA:2026:U:H2'	22:BA:2027:G:O4'	2.12	0.48
2:AB:82:ASP:C	2:AB:84:ALA:N	2.64	0.48
24:BC:222:GLY:HA3	24:BC:230:HIS:CE1	2.48	0.48
30:DI:80:LEU:HA	30:DI:84:ALA:HB2	1.94	0.48
22:DA:2603:G:C5	22:DA:2604:U:C5	3.02	0.48
22:DA:693:A:C6	22:DA:694:U:C4	3.02	0.48
25:DD:101:PHE:HA	25:DD:104:VAL:HG13	1.95	0.48
22:DA:2327:A:H2'	22:DA:2328:A:C8	2.48	0.48
22:BA:2298:A:C6	22:BA:2321:U:O4	2.66	0.48
22:DA:1581:G:C6	22:DA:1582:C:C4	3.01	0.48
19:AS:45:ILE:HG23	19:AS:63:THR:HA	1.94	0.48
1:CA:577:G:C2	1:CA:578:C:C6	3.02	0.48
7:CG:30:LEU:HD11	7:CG:116:MET:HE2	1.96	0.48
22:BA:271:G:C4	22:BA:367:G:N2	2.82	0.48
1:AA:69:G:O6	1:AA:98:A:N6	2.47	0.48
2:CB:186:ILE:HA	2:CB:200:ILE:HB	1.93	0.48
31:DJ:109:LEU:HD23	31:DJ:110:PRO:HD2	1.95	0.48
22:DA:2330:G:N2	22:DA:2386:A:C4	2.81	0.48
14:CN:54:ASP:HA	14:CN:59:ARG:CD	2.43	0.48
33:DL:82:LEU:HA	33:DL:85:VAL:HG13	1.94	0.48
1:AA:903:G:C5	1:AA:904:U:C5	3.01	0.48
4:CD:73:ARG:O	4:CD:76:TYR:N	2.46	0.48
22:BA:2502:G:H5'	22:BA:2503:A:H5''	1.94	0.48
22:DA:12:U:O2	22:DA:12:U:C2'	2.61	0.48
22:BA:1789:A:P	24:BC:221:ARG:HH11	2.37	0.48
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.13	0.48
1:CA:1513:A:H2'	1:CA:1514:G:H8	1.78	0.48
16:AP:19:VAL:HG13	16:AP:37:GLY:C	2.34	0.48
24:DC:267:ILE:CG2	24:DC:267:ILE:O	2.61	0.48
22:DA:1262:A:C6	22:DA:1263:U:C2	3.01	0.48
22:DA:2624:G:H1'	48:D0:19:HIS:CE1	2.48	0.48
1:CA:862:C:C4	1:CA:863:U:C5	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2250:G:OP1	22:DA:2275:C:O2'	2.16	0.48
22:DA:931:U:H4'	22:DA:932:U:OP2	2.14	0.48
31:DJ:84:ILE:HG13	31:DJ:84:ILE:O	2.13	0.48
1:AA:359:G:H2'	1:AA:360:G:O4'	2.13	0.48
24:DC:144:VAL:HB	24:DC:154:LEU:HB2	1.96	0.48
27:BF:102:ARG:HD2	27:BF:140:GLU:OE2	2.14	0.48
22:BA:1839:G:H2'	22:BA:1840:G:O5'	2.13	0.48
22:BA:1682:G:C8	22:BA:1757:A:C2	3.00	0.48
22:BA:660:C:H2'	22:BA:661:A:C8	2.48	0.48
22:BA:1031:G:H4'	52:B4:6:SER:HB2	1.94	0.48
42:BU:4:LYS:O	42:BU:5:ILE:HD12	2.13	0.48
1:AA:882:C:O2'	1:AA:883:C:H5'	2.12	0.48
7:CG:146:GLU:OE1	7:CG:149:LYS:CE	2.61	0.48
22:BA:2339:C:H2'	22:BA:2340:A:C8	2.48	0.48
7:AG:139:GLU:HA	7:AG:139:GLU:OE1	2.13	0.48
46:DY:46:VAL:O	46:DY:46:VAL:HG12	2.13	0.48
1:AA:942:G:H2'	1:AA:942:G:N3	2.27	0.48
22:BA:1306:C:O2	22:BA:1306:C:H2'	2.13	0.48
1:AA:292:G:N7	1:AA:293:G:H1'	2.29	0.48
1:AA:803:G:C6	1:AA:804:U:N3	2.82	0.48
22:DA:1215:G:H2'	22:DA:1216:G:O4'	2.14	0.48
25:DD:148:GLN:CD	25:DD:148:GLN:N	2.67	0.48
22:DA:2452:C:N4	22:DA:2453:A:C6	2.82	0.48
22:DA:1369:G:C2	22:DA:1370:C:C6	3.01	0.48
1:AA:455:G:C2	1:AA:478:A:C2	3.01	0.48
22:DA:83:A:C2	22:DA:103:A:N7	2.82	0.48
22:BA:1169:A:H2'	22:BA:1170:C:O4'	2.13	0.48
7:CG:92:ARG:NE	7:CG:93:PRO:HD2	2.28	0.48
22:DA:487:C:N4	22:DA:488:G:C6	2.82	0.48
22:DA:126:A:C8	22:DA:127:A:C2	3.01	0.48
14:AN:4:GLN:O	14:AN:7:LYS:N	2.47	0.48
22:DA:1475:G:H4'	22:DA:1732:C:C5	2.49	0.48
14:AN:46:LEU:HG	14:AN:47:LYS:N	2.29	0.48
22:DA:2683:C:C5	22:DA:2684:U:C5	3.01	0.48
1:CA:582:C:C4	1:CA:760:G:C6	3.01	0.48
30:DI:90:SER:HB3	30:DI:93:PRO:HG3	1.94	0.48
33:BL:77:ILE:HD11	33:BL:101:ILE:CG2	2.43	0.48
25:BD:133:THR:HG23	25:BD:134:HIS:CG	2.49	0.48
33:BL:109:LYS:HG2	33:BL:126:ARG:HB2	1.94	0.48
10:CJ:57:VAL:HG13	10:CJ:58:ASN:N	2.28	0.48
22:BA:2322:A:H2'	22:BA:2323:G:O4'	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:578:C:C2	1:CA:579:A:C8	3.01	0.48
44:DW:45:PHE:CG	44:DW:80:ILE:HD11	2.48	0.48
1:AA:220:G:C5	1:AA:221:C:C5	3.01	0.48
22:BA:1359:A:N7	22:BA:1373:A:C2	2.81	0.48
22:DA:2345:G:C6	22:DA:2347:C:N4	2.81	0.48
22:BA:1402:U:H2'	22:BA:1403:A:O5'	2.14	0.48
1:AA:524:G:C6	1:AA:525:C:N4	2.81	0.48
22:DA:2478:A:C8	22:DA:2529:G:C6	3.01	0.48
24:DC:252:THR:HG22	24:DC:253:LYS:N	2.27	0.48
22:DA:2845:U:H5''	37:DP:52:ASN:O	2.14	0.48
1:AA:1129:C:O2	1:AA:1130:A:N6	2.47	0.48
1:CA:238:A:O2'	1:CA:239:U:H5'	2.13	0.48
27:BF:28:VAL:O	27:BF:28:VAL:HG13	2.13	0.48
26:DE:84:THR:O	26:DE:85:PHE:CG	2.67	0.48
5:CE:16:ILE:HD11	5:CE:38:VAL:HG23	1.95	0.48
34:DM:120:ALA:O	34:DM:124:LEU:HD23	2.14	0.48
19:CS:34:TRP:HA	19:CS:52:HIS:HB2	1.96	0.48
8:CH:86:TYR:O	8:CH:87:LYS:HD2	2.13	0.48
1:AA:999:C:H2'	1:AA:1000:A:C8	2.48	0.48
1:AA:1523:G:OP1	11:AK:128:ARG:NH2	2.46	0.48
1:AA:104:G:C2	1:AA:105:G:C8	3.01	0.48
1:AA:1095:U:H2'	1:AA:1096:C:O4'	2.13	0.48
25:BD:108:ASP:OD1	25:BD:173:GLN:HG2	2.13	0.48
10:CJ:47:GLU:O	10:CJ:66:GLU:HA	2.13	0.48
1:CA:1328:C:H5''	13:CM:28:THR:HG21	1.94	0.48
50:B2:43:THR:O	50:B2:44:VAL:HB	2.13	0.48
1:CA:1029:U:O2	1:CA:1029:U:H2'	2.14	0.48
22:DA:1936:A:C8	22:DA:1945:G:C6	3.01	0.48
22:DA:449:A:H2'	22:DA:450:G:H5'	1.96	0.48
22:DA:1373:A:N6	22:DA:1374:G:C2	2.82	0.48
22:DA:771:G:C6	22:DA:772:C:C5	3.02	0.48
22:BA:2727:A:C2'	22:BA:2728:U:H5'	2.44	0.48
22:BA:1916:A:N9	22:BA:1917:U:H1'	2.27	0.48
7:CG:92:ARG:NE	7:CG:93:PRO:HD3	2.28	0.48
1:CA:211:G:O2'	1:CA:212:G:C4'	2.62	0.48
23:DB:39:A:N6	23:DB:44:G:C6	2.81	0.48
39:DR:80:ARG:O	39:DR:82:HIS:N	2.42	0.48
5:AE:81:LEU:N	5:AE:81:LEU:HD13	2.29	0.48
29:DH:27:ARG:HE	45:DX:60:ASP:CG	2.16	0.48
22:BA:2187:U:H2'	22:BA:2188:U:H1'	1.95	0.48
22:BA:499:U:C4	22:BA:500:G:C6	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:133:THR:HG23	25:DD:134:HIS:H	1.79	0.48
22:DA:1076:C:H1'	30:DI:93:PRO:HG2	1.96	0.48
27:DF:122:PHE:CE1	27:DF:166:GLY:C	2.87	0.48
22:DA:250:G:H2'	22:DA:251:A:C8	2.49	0.48
2:AB:173:ILE:HG23	2:AB:183:VAL:HG11	1.95	0.48
1:CA:158:G:C6	1:CA:159:G:C5	3.02	0.48
12:AL:86:ARG:HA	12:AL:94:ARG:HA	1.95	0.48
57:BA:3778:HOH:O	31:BJ:39:LYS:HE3	2.14	0.48
1:AA:1181:G:C2	1:AA:1182:G:N2	2.82	0.48
22:BA:1413:A:O2'	22:BA:1414:C:H5'	2.14	0.48
1:AA:1350:A:C5	1:AA:1351:U:C4	3.02	0.48
32:BK:107:LEU:O	32:BK:108:ARG:C	2.52	0.48
22:BA:2742:G:OP1	52:B4:36:ARG:HD3	2.13	0.48
2:CB:81:LYS:HG3	2:CB:91:PHE:CZ	2.48	0.48
1:CA:189:A:N6	1:CA:190:A:N1	2.61	0.48
22:DA:1682:G:H2'	22:DA:1683:U:C6	2.48	0.48
22:DA:2209:G:C6	22:DA:2210:U:O4	2.67	0.48
4:CD:107:PHE:O	4:CD:117:LEU:CD1	2.60	0.48
22:BA:102:U:C2	46:BY:2:LYS:HE3	2.49	0.48
22:DA:1277:G:N3	35:DN:23:ASN:HB3	2.29	0.48
24:DC:147:LYS:O	24:DC:150:LYS:HB3	2.13	0.48
22:BA:287:G:H2'	22:BA:288:U:C6	2.49	0.48
1:CA:120:A:OP2	1:CA:120:A:H2'	2.13	0.48
22:BA:657:U:H2'	22:BA:658:U:C6	2.48	0.48
1:AA:736:C:H2'	1:AA:737:C:C6	2.49	0.48
22:BA:2669:G:C2'	22:BA:2670:A:H5'	2.44	0.48
34:BM:77:PRO:HG2	34:BM:80:VAL:CG2	2.44	0.48
1:CA:833:G:N2	1:CA:834:U:H1'	2.29	0.48
22:DA:1936:A:H3'	22:DA:1937:A:H5'	1.96	0.48
3:CC:121:THR:O	3:CC:125:GLU:OE2	2.31	0.48
2:AB:28:LYS:N	2:AB:29:PRO:CD	2.76	0.48
24:DC:69:ARG:NH2	24:DC:116:ILE:CD1	2.76	0.48
23:BB:17:C:H2'	23:BB:18:G:O4'	2.14	0.48
26:DE:52:VAL:HG21	26:DE:81:GLY:HA2	1.95	0.48
17:CQ:38:ILE:CG2	17:CQ:39:LYS:N	2.77	0.48
22:BA:2678:C:H2'	22:BA:2679:A:O4'	2.13	0.48
43:BV:13:GLY:O	43:BV:17:SER:OG	2.32	0.48
3:AC:60:PRO:O	3:AC:61:ALA:C	2.52	0.48
1:AA:418:C:N4	57:AA:1718:HOH:O	2.46	0.48
1:AA:1250:A:H4'	9:AI:70:GLY:N	2.28	0.48
17:AQ:30:LYS:HG2	17:AQ:37:PHE:CZ	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:102:GLY:N	57:DL:301:HOH:O	2.47	0.48
4:CD:202:GLU:OE1	5:CE:105:ILE:HG23	2.13	0.48
40:DS:61:ASN:O	40:DS:62:ASP:CB	2.61	0.48
1:CA:32:A:N1	1:CA:33:A:C6	2.82	0.48
1:AA:451:A:C5'	16:AP:70:ARG:HH22	2.27	0.48
22:BA:1180:U:H2'	22:BA:1181:U:H5'	1.95	0.48
1:AA:1492:A:OP1	12:AL:44:LYS:HA	2.14	0.48
22:DA:2093:G:C6	22:DA:2225:A:C8	3.02	0.48
22:DA:2094:A:C2	22:DA:2196:C:C2	3.01	0.48
22:BA:404:A:C2'	22:BA:405:U:OP2	2.62	0.48
22:BA:2287:A:C5	22:BA:2289:G:C8	3.02	0.48
22:BA:277:G:C2'	22:BA:361:G:O6	2.61	0.48
1:CA:1160:G:O2'	1:CA:1161:C:P	2.72	0.48
22:BA:1352:U:C2'	22:BA:1353:A:H5'	2.44	0.48
22:BA:2173:A:C8	22:BA:2174:C:C5	3.02	0.48
39:BR:48:LYS:O	39:BR:49:ILE:C	2.51	0.48
1:CA:811:C:H4'	1:CA:900:A:N6	2.29	0.48
22:DA:1523:U:H3'	22:DA:1524:G:H8	1.78	0.48
22:DA:1095:A:C2	30:DI:30:GLN:HB3	2.49	0.48
4:AD:75:TYR:OH	4:AD:97:ARG:NH1	2.46	0.48
22:BA:2887:A:H3'	22:BA:2888:C:H6	1.77	0.48
22:BA:1079:C:C5	22:BA:1088:A:N1	2.82	0.48
12:AL:86:ARG:CZ	12:AL:88:LYS:HB3	2.44	0.48
28:BG:141:ILE:C	28:BG:141:ILE:HD12	2.33	0.48
38:BQ:21:ALA:HB1	38:BQ:28:ARG:O	2.13	0.48
22:BA:1796:U:H2'	22:BA:1797:G:H8	1.79	0.48
1:AA:457:G:C5	1:AA:458:U:C5	3.02	0.48
22:BA:1248:G:OP1	38:BQ:2:ALA:HB3	2.13	0.48
22:BA:655:A:H4'	22:BA:656:G:OP1	2.12	0.48
22:DA:67:U:H2'	22:DA:68:G:O4'	2.14	0.48
7:AG:49:THR:O	7:AG:53:ARG:HB3	2.13	0.48
22:DA:1262:A:N3	22:DA:1262:A:H2'	2.27	0.48
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.49	0.48
24:DC:157:SER:HB2	24:DC:160:THR:HG21	1.95	0.48
11:AK:88:GLY:N	11:AK:114:THR:HG22	2.29	0.48
22:DA:1831:G:C5	22:DA:1832:C:C4	3.02	0.48
22:BA:2665:A:C2	22:BA:2666:C:N1	2.81	0.48
22:DA:1401:G:C6	22:DA:1402:U:C4	3.01	0.48
22:BA:2435:A:H2'	22:BA:2436:G:O5'	2.14	0.48
27:BF:68:THR:N	27:BF:86:GLY:O	2.45	0.48
28:BG:69:ARG:HD3	28:BG:69:ARG:C	2.33	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:139:PRO:O	4:CD:140:ASN:HB2	2.14	0.48
35:DN:114:GLU:OE2	35:DN:118:ARG:HD2	2.13	0.48
25:DD:146:ILE:O	25:DD:146:ILE:HG13	2.13	0.48
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.48	0.48
6:AF:66:ALA:HB1	6:AF:67:PRO:HD2	1.96	0.48
33:BL:132:ARG:HG3	33:BL:142:ILE:HD12	1.96	0.48
11:CK:82:LEU:HD22	11:CK:105:PHE:HB3	1.95	0.48
29:BH:103:VAL:HG21	29:BH:132:PHE:CZ	2.49	0.48
12:CL:44:LYS:HD3	12:CL:44:LYS:N	2.27	0.48
1:CA:829:G:C6	1:CA:858:G:C2	3.01	0.48
22:BA:1187:G:P	57:BA:3372:HOH:O	2.71	0.48
28:DG:158:LYS:C	28:DG:160:LYS:N	2.67	0.48
22:DA:228:C:N4	22:DA:417:C:O2	2.47	0.48
9:AI:50:GLN:O	9:AI:52:LEU:N	2.46	0.48
1:CA:1001:C:H2'	1:CA:1002:G:C8	2.49	0.48
1:CA:1377:A:C6	7:CG:7:ILE:HD12	2.49	0.48
22:BA:613:A:C8	22:BA:616:A:C2	3.02	0.48
39:BR:49:ILE:HG22	39:BR:52:PRO:C	2.33	0.48
1:CA:1104:G:C6	1:CA:1105:A:C5	3.02	0.48
1:AA:1406:U:H2'	1:AA:1407:C:C5'	2.44	0.48
22:BA:2308:G:H5''	22:BA:2309:A:OP2	2.14	0.48
1:CA:582:C:C2	1:CA:760:G:N1	2.81	0.48
4:CD:53:VAL:HG23	4:CD:54:GLN:N	2.29	0.48
1:CA:1408:A:C2	1:CA:1494:G:N3	2.82	0.48
14:CN:24:ARG:CZ	14:CN:51:LEU:HD11	2.44	0.48
22:BA:2344:U:H4'	22:BA:2345:G:OP1	2.13	0.48
26:DE:150:THR:O	26:DE:172:ALA:HB2	2.13	0.48
27:BF:174:ASP:O	27:BF:175:PHE:O	2.31	0.48
1:CA:17:U:H2'	1:CA:18:C:H6	1.76	0.48
12:AL:63:VAL:HG21	12:AL:95:TYR:CE2	2.49	0.48
8:AH:10:MET:CE	8:AH:33:LYS:HD3	2.44	0.48
1:AA:47:C:O2	1:AA:49:U:C5	2.66	0.48
22:DA:2562:U:H2'	22:DA:2563:U:H5'	1.95	0.48
22:BA:64:A:C5	22:BA:65:U:C4	3.02	0.48
22:DA:197:A:N3	22:DA:197:A:H2'	2.29	0.48
1:AA:119:A:C4	1:AA:240:G:N7	2.81	0.48
1:AA:702:A:H3'	1:AA:703:G:H5'	1.94	0.48
1:AA:404:G:H4'	1:AA:439:U:O2	2.14	0.48
22:BA:1045:C:C4'	22:BA:1046:A:H5'	2.44	0.48
1:CA:756:C:C2	1:CA:757:U:C6	3.01	0.48
1:CA:756:C:H2'	1:CA:757:U:C5'	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:108:LYS:HA	24:DC:196:GLY:CA	2.44	0.48
17:CQ:52:GLU:HG2	17:CQ:53:CYS:N	2.29	0.48
22:DA:920:A:OP1	47:DZ:19:LYS:HE3	2.14	0.48
22:BA:1672:A:C2	22:BA:2582:G:H5'	2.49	0.48
1:AA:126:G:H2'	1:AA:127:G:O4'	2.14	0.48
4:CD:151:LYS:C	4:CD:152:GLN:OE1	2.52	0.48
22:DA:477:A:H2'	22:DA:478:A:O5'	2.14	0.48
1:CA:1298:U:O2	1:CA:1298:U:H2'	2.13	0.48
1:AA:1000:A:C2	1:AA:1041:G:C2	3.01	0.48
45:DX:51:VAL:HG23	45:DX:52:SER:N	2.29	0.48
22:DA:2736:A:C4	22:DA:2737:G:C8	3.01	0.48
1:CA:29:U:H5'	1:CA:296:U:OP1	2.14	0.48
22:DA:2519:U:C6	22:DA:2542:A:N6	2.82	0.48
1:AA:2:A:N6	1:AA:3:A:N1	2.61	0.48
22:BA:1912:A:C2	22:BA:1919:A:C5	3.01	0.48
14:AN:16:LEU:N	14:AN:16:LEU:HD23	2.29	0.48
29:BH:135:HIS:CD2	29:BH:137:GLU:HG3	2.48	0.48
22:BA:2052:A:H4'	25:BD:148:GLN:O	2.13	0.48
48:D0:28:LEU:HD23	48:D0:37:LYS:HB3	1.96	0.48
24:DC:124:ILE:HG22	24:DC:124:ILE:O	2.14	0.48
8:AH:83:LEU:HD22	8:AH:83:LEU:C	2.34	0.48
1:CA:722:G:N3	1:CA:722:G:H3'	2.29	0.48
13:CM:27:LYS:O	13:CM:27:LYS:CD	2.62	0.48
22:BA:1876:A:C2	22:BA:1877:A:C4	3.02	0.48
26:DE:97:ASN:HB2	26:DE:100:MET:SD	2.54	0.48
17:CQ:19:LYS:CD	17:CQ:49:GLU:HA	2.44	0.48
22:DA:228:C:N3	22:DA:418:C:C4'	2.77	0.48
22:DA:1403:A:H2'	22:DA:1404:C:C6	2.48	0.48
1:CA:202:G:H2'	1:CA:203:G:O4'	2.14	0.48
1:CA:203:G:N2	1:CA:215:C:C2	2.82	0.48
22:DA:2283:C:C4	22:DA:2389:G:C4	3.02	0.48
22:DA:570:G:H2'	22:DA:571:U:H5'	1.94	0.48
5:AE:144:LEU:O	5:AE:147:MET:HB3	2.13	0.48
22:DA:856:G:C2	22:DA:922:C:C2	3.01	0.48
22:BA:1378:A:O2'	57:BA:3753:HOH:O	2.20	0.48
22:DA:1255:U:H2'	22:DA:1256:G:OP1	2.14	0.48
25:BD:101:PHE:O	25:BD:102:ALA:C	2.52	0.48
22:BA:2553:G:H5''	22:BA:2554:U:OP2	2.14	0.48
22:DA:134:G:N2	22:DA:146:A:C2	2.82	0.48
33:DL:61:LEU:O	51:D3:13:ARG:NH2	2.44	0.48
22:DA:2308:G:O6	22:DA:2311:A:N7	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1009:A:H8	22:BA:1009:A:O5'	1.96	0.48
25:DD:104:VAL:O	25:DD:105:LYS:HB2	2.13	0.48
22:DA:1869:G:C3'	22:DA:1870:C:H5'	2.44	0.48
32:BK:63:VAL:HG12	32:BK:107:LEU:HD11	1.96	0.48
21:AU:10:GLU:HG3	21:AU:11:PRO:HD3	1.96	0.48
22:DA:1198:U:O2	38:DQ:4:VAL:HG11	2.13	0.48
35:BN:49:GLU:N	35:BN:50:PRO:CD	2.77	0.48
1:AA:17:U:H2'	1:AA:18:C:C6	2.49	0.48
22:DA:696:G:C6	22:DA:767:U:C2	3.02	0.48
42:DU:83:VAL:CG1	42:DU:84:GLY:N	2.77	0.48
30:BI:108:GLU:OE2	30:BI:109:ILE:HG13	2.13	0.48
1:CA:1478:U:H2'	1:CA:1479:C:H6	1.79	0.48
7:AG:72:THR:HA	7:AG:96:ARG:NH1	2.29	0.48
3:AC:7:PRO:HD2	3:AC:184:TYR:CD2	2.48	0.48
22:DA:33:C:O2	22:DA:447:A:N6	2.46	0.48
45:BX:78:TYR:OXT	45:BX:78:TYR:CG	2.67	0.48
22:DA:1931:U:C2	22:DA:1932:A:C8	3.02	0.48
21:AU:25:LYS:O	21:AU:29:LEU:HB3	2.14	0.48
34:BM:77:PRO:HG2	34:BM:80:VAL:HG21	1.96	0.48
51:D3:26:HIS:CE1	51:D3:48:ALA:HB2	2.48	0.48
5:CE:20:ARG:O	5:CE:20:ARG:HG2	2.14	0.48
22:DA:2694:G:C5	22:DA:2695:U:C5	3.01	0.48
22:DA:2699:C:H2'	22:DA:2700:A:O4'	2.14	0.48
1:CA:555:U:H2'	1:CA:556:C:C6	2.49	0.48
45:BX:33:LEU:O	45:BX:34:HIS:CG	2.66	0.48
22:DA:1280:G:C6	22:DA:1281:G:C5	3.02	0.48
22:DA:284:U:H2'	22:DA:284:U:O2	2.12	0.48
1:CA:671:G:N1	1:CA:672:U:C2	2.81	0.48
22:BA:998:C:OP1	57:BA:3363:HOH:O	2.20	0.48
13:AM:11:ASP:O	13:AM:12:HIS:CB	2.62	0.48
22:DA:1356:G:N2	22:DA:1357:C:H1'	2.29	0.48
22:DA:301:G:H5'	22:DA:334:C:O2	2.13	0.48
22:DA:426:C:H2'	22:DA:427:U:O4'	2.13	0.48
7:AG:55:GLY:C	7:AG:57:SER:N	2.66	0.48
1:AA:1314:C:H41	19:AS:4:SER:HA	1.79	0.48
22:BA:1916:A:H2'	22:BA:1917:U:C2'	2.44	0.48
22:DA:1555:G:N2	22:DA:1556:C:H1'	2.29	0.48
27:BF:40:VAL:CG1	27:BF:43:ALA:HB3	2.43	0.48
22:DA:777:G:N2	22:DA:778:G:C8	2.82	0.48
22:DA:585:G:C2	22:DA:1256:G:C6	3.01	0.48
22:DA:1250:G:C5'	38:DQ:6:ARG:HD2	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:909:A:C6	22:DA:912:C:C2	3.02	0.48
4:AD:116:GLN:HG3	4:AD:120:HIS:CE1	2.48	0.48
12:AL:22:PRO:C	12:AL:24:LEU:N	2.68	0.48
22:DA:2842:G:H2'	22:DA:2843:G:O4'	2.13	0.48
10:AJ:52:LEU:HB2	14:AN:81:ARG:CD	2.44	0.48
26:BE:111:GLU:CG	26:BE:114:ARG:NH1	2.77	0.48
1:AA:1190:G:P	3:AC:5:VAL:HG12	2.54	0.48
22:BA:141:G:N1	41:BT:1:MET:HE1	2.28	0.48
27:BF:103:LEU:O	27:BF:108:VAL:HB	2.13	0.48
22:DA:915:C:N4	22:DA:916:G:C6	2.82	0.48
24:BC:162:VAL:HG11	24:BC:174:LEU:HB3	1.95	0.48
1:AA:1163:A:C2	1:AA:1174:G:C2	3.02	0.48
2:AB:164:ILE:HG12	2:AB:165:ASP:N	2.28	0.48
2:AB:206:ALA:O	2:AB:208:ARG:N	2.47	0.48
13:AM:83:LEU:HD21	19:AS:65:GLU:CG	2.44	0.48
22:BA:877:A:O2'	22:BA:900:A:N6	2.46	0.48
22:DA:749:A:C5	22:DA:750:A:C8	3.02	0.48
1:AA:1346:A:N1	1:AA:1374:A:H5''	2.28	0.48
1:CA:577:G:C2	1:CA:578:C:C5	3.02	0.48
5:CE:83:HIS:NE2	8:CH:96:MET:CE	2.77	0.48
1:AA:601:G:C6	1:AA:602:A:C6	3.02	0.48
22:DA:2345:G:H4'	22:DA:2346:A:H5''	1.96	0.48
22:DA:2373:G:C2	22:DA:2374:C:C2	3.01	0.48
31:BJ:17:VAL:HG22	31:BJ:55:ILE:HB	1.96	0.48
37:BP:31:TRP:CD2	37:BP:40:LEU:HD12	2.48	0.48
8:CH:21:ASN:O	8:CH:23:ALA:N	2.47	0.48
4:CD:107:PHE:CD1	4:CD:107:PHE:N	2.80	0.48
18:AR:25:ASP:C	18:AR:27:ALA:N	2.67	0.48
22:DA:389:G:C2	22:DA:2413:G:H1'	2.49	0.48
23:BB:14:U:OP2	23:BB:71:C:H5'	2.14	0.48
22:DA:1665:A:H5''	32:DK:66:LYS:HG3	1.96	0.48
1:CA:643:C:C5'	8:CH:32:LEU:HD22	2.44	0.48
3:CC:36:ASP:O	3:CC:40:ARG:HG3	2.13	0.48
22:BA:1501:G:O2'	22:BA:1502:A:H5'	2.14	0.48
22:DA:2333:A:OP2	44:DW:77:ARG:NH2	2.39	0.48
22:BA:2339:C:H2'	22:BA:2340:A:H8	1.78	0.48
1:CA:1511:G:C5	1:CA:1512:U:C5	3.01	0.48
22:BA:1805:A:H1'	24:BC:50:THR:O	2.14	0.48
27:BF:73:SER:HB2	27:BF:81:GLN:N	2.29	0.48
1:AA:102:G:C2	1:AA:103:U:C5	3.01	0.48
22:DA:241:A:C6	22:DA:255:A:H5''	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:59:PRO:HB2	26:DE:70:SER:OG	2.13	0.48
38:DQ:76:TYR:CZ	38:DQ:80:ILE:HG13	2.49	0.48
42:DU:16:GLY:O	42:DU:17:LYS:HB2	2.14	0.48
22:DA:382:A:N1	22:DA:383:C:C2	2.82	0.48
36:BO:83:LEU:HD23	36:BO:83:LEU:N	2.28	0.48
1:CA:690:G:H2'	1:CA:691:G:O4'	2.14	0.48
1:AA:626:G:C6	1:AA:627:G:C5	3.02	0.48
22:DA:2808:G:N2	22:DA:2891:U:C6	2.82	0.48
52:D4:16:ILE:HD13	52:D4:25:VAL:HG22	1.96	0.48
1:AA:728:A:C6	1:AA:729:A:C6	3.02	0.48
13:AM:11:ASP:O	13:AM:12:HIS:ND1	2.47	0.47
1:CA:407:U:H2'	1:CA:408:A:C8	2.49	0.47
22:DA:302:C:C2	22:DA:303:G:C8	3.01	0.47
22:DA:2024:G:OP2	22:DA:2034:U:H4'	2.14	0.47
22:DA:183:C:C5	22:DA:184:C:C5	3.01	0.47
22:DA:228:C:H4'	22:DA:229:C:H5''	1.96	0.47
22:DA:228:C:O2	22:DA:418:C:H4'	2.14	0.47
1:AA:430:A:OP1	4:AD:9:LEU:HB2	2.13	0.47
1:CA:1040:U:H2'	1:CA:1041:G:C8	2.49	0.47
22:BA:197:A:N6	22:BA:2430:A:H2'	2.29	0.47
1:CA:1307:U:C4	1:CA:1308:U:C5	3.02	0.47
1:AA:259:G:H2'	1:AA:260:G:O4'	2.15	0.47
1:AA:72:A:H2'	1:AA:73:C:H5'	1.95	0.47
1:AA:74:A:H1'	1:AA:97:G:N2	2.28	0.47
22:DA:1809:A:C6	22:DA:1810:A:C6	3.02	0.47
22:DA:1208:C:C4	22:DA:1209:U:C5	3.02	0.47
22:BA:1494:A:C2	22:BA:1495:A:N9	2.83	0.47
1:CA:457:G:C6	1:CA:458:U:N3	2.82	0.47
1:CA:477:C:H2'	1:CA:478:A:C8	2.50	0.47
1:CA:1255:G:N1	1:CA:1279:G:N7	2.62	0.47
26:DE:149:ILE:HG21	26:DE:188:MET:SD	2.54	0.47
30:BI:28:LEU:HG	30:BI:35:ILE:HD12	1.95	0.47
17:AQ:12:VAL:O	17:AQ:13:VAL:CB	2.61	0.47
10:CJ:91:ASP:O	10:CJ:92:LEU:HB2	2.14	0.47
1:AA:65:A:C5	1:AA:381:C:C4	3.01	0.47
39:BR:14:VAL:HG13	39:BR:15:SER:N	2.29	0.47
4:AD:17:THR:HG23	4:AD:18:ASP:N	2.28	0.47
23:DB:81:G:C6	23:DB:82:U:C4	3.02	0.47
1:CA:673:A:H2'	1:CA:674:G:C8	2.48	0.47
22:DA:1682:G:C2	22:DA:1757:A:O4'	2.67	0.47
30:DI:101:ILE:O	30:DI:102:SER:CB	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:553:A:O2'	1:AA:554:A:H5'	2.13	0.47
22:DA:1324:G:O4'	22:DA:1616:A:N6	2.46	0.47
6:CF:81:ASN:OD1	6:CF:83:ALA:N	2.45	0.47
11:CK:107:ILE:C	11:CK:107:ILE:HD13	2.33	0.47
22:DA:1819:A:H5''	24:DC:157:SER:HB2	1.96	0.47
10:AJ:57:VAL:O	10:AJ:58:ASN:CB	2.63	0.47
42:DU:82:ARG:CZ	42:DU:82:ARG:HB2	2.43	0.47
22:BA:1850:G:C5	22:BA:1851:U:C4	3.02	0.47
22:BA:2131:U:OP2	22:BA:2132:U:C5	2.67	0.47
10:AJ:59:LYS:HD2	10:AJ:60:ASP:N	2.29	0.47
51:D3:24:HIS:CE1	51:D3:48:ALA:HB3	2.49	0.47
41:DT:64:LYS:HA	41:DT:79:ASP:OD1	2.14	0.47
1:CA:1423:G:H2'	1:CA:1424:U:O4'	2.14	0.47
24:DC:3:VAL:HG11	24:DC:202:LEU:HD23	1.95	0.47
35:BN:82:GLU:O	35:BN:85:PRO:HG2	2.13	0.47
53:B5:218:THR:O	53:B5:219:MET:CB	2.60	0.47
22:DA:2464:G:H2'	22:DA:2465:C:O4'	2.13	0.47
1:CA:1273:C:H2'	1:CA:1274:A:O4'	2.13	0.47
1:AA:116:A:C4	1:AA:117:G:C8	3.02	0.47
1:AA:676:A:H5''	11:AK:115:PRO:HB3	1.96	0.47
23:BB:39:A:C2	23:BB:44:G:C4	3.02	0.47
22:DA:1339:G:O4'	22:DA:1393:A:C2	2.67	0.47
26:BE:176:ASP:OD1	26:BE:178:VAL:HG13	2.14	0.47
22:DA:45:G:H2'	22:DA:215:G:N7	2.29	0.47
31:BJ:57:LEU:HD22	31:BJ:128:ASN:HA	1.96	0.47
41:DT:35:ALA:O	41:DT:36:LYS:C	2.52	0.47
11:CK:58:SER:O	11:CK:91:PRO:HG3	2.14	0.47
2:CB:123:ASP:O	2:CB:124:GLY:C	2.51	0.47
29:BH:116:ARG:O	29:BH:118:PRO:HD3	2.14	0.47
22:DA:1365:A:H2'	22:DA:1365:A:N3	2.27	0.47
1:AA:411:A:C6	1:AA:429:U:C4	3.02	0.47
9:AI:26:GLY:N	9:AI:59:GLU:HA	2.29	0.47
9:AI:58:VAL:O	9:AI:59:GLU:CG	2.63	0.47
22:DA:681:G:C2	22:DA:682:G:C8	3.02	0.47
7:CG:92:ARG:CZ	7:CG:93:PRO:HD3	2.45	0.47
1:CA:992:U:C2	1:CA:1043:G:N7	2.83	0.47
22:DA:2282:G:C5	22:DA:2425:A:N1	2.82	0.47
22:DA:400:G:N7	45:DX:57:ARG:NH1	2.62	0.47
22:DA:1138:G:H2'	22:DA:1139:G:O4'	2.14	0.47
1:AA:791:G:C5	1:AA:792:A:N7	2.82	0.47
22:DA:1668:A:C4	22:DA:1674:G:C8	3.01	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:13:ARG:CZ	22:BA:2142:A:OP1	2.61	0.47
11:AK:76:GLU:N	11:AK:76:GLU:OE2	2.47	0.47
1:AA:1306:A:C5	1:AA:1307:U:C5	3.02	0.47
1:CA:374:A:N3	1:CA:375:U:C6	2.83	0.47
1:AA:1406:U:H2'	1:AA:1407:C:H5'	1.96	0.47
2:CB:15:HIS:O	2:CB:16:PHE:C	2.52	0.47
1:CA:704:A:C6	1:CA:705:G:C4	3.03	0.47
22:DA:415:A:C2	22:DA:2409:G:C6	3.02	0.47
1:CA:476:U:O2'	1:CA:477:C:H5'	2.13	0.47
22:DA:1735:A:N1	22:DA:1736:U:C2	2.82	0.47
30:DI:59:ILE:HG22	30:DI:60:THR:N	2.29	0.47
22:DA:85:G:OP2	42:DU:7:ARG:HB2	2.15	0.47
22:DA:2305:U:C4	22:DA:2306:C:C4	3.02	0.47
1:CA:1460:C:C4	1:CA:1461:G:C5	3.02	0.47
2:CB:35:ARG:O	2:CB:38:VAL:N	2.45	0.47
22:DA:2123:G:C2	22:DA:2176:A:C2	3.02	0.47
22:DA:430:A:H2'	22:DA:431:U:H5'	1.96	0.47
22:BA:609:A:H2'	22:BA:610:C:O4'	2.14	0.47
1:AA:1157:A:N7	1:AA:1180:A:C6	2.82	0.47
1:CA:1216:A:OP1	14:CN:5:SER:CB	2.63	0.47
1:CA:755:G:C2	1:CA:756:C:C6	3.02	0.47
22:DA:1692:U:O2'	22:DA:1693:U:H2'	2.14	0.47
1:CA:1388:C:N3	1:CA:1389:C:C5	2.83	0.47
1:CA:143:A:H5'	1:CA:144:G:C5'	2.44	0.47
42:DU:98:SER:O	42:DU:99:ASN:CB	2.62	0.47
1:CA:609:A:H2'	1:CA:610:U:H5'	1.96	0.47
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.14	0.47
4:AD:170:TRP:CD2	4:AD:186:PRO:HG3	2.49	0.47
22:DA:2513:A:C6	22:DA:2514:U:C4	3.02	0.47
27:DF:128:TYR:CG	27:DF:170:LEU:HD13	2.49	0.47
22:DA:218:A:C2	22:DA:219:A:C4	3.02	0.47
22:DA:508:A:C3'	22:DA:509:C:H5'	2.43	0.47
1:CA:933:G:OP2	7:CG:3:ARG:HB3	2.14	0.47
22:DA:748:G:C8	40:DS:89:ALA:HB1	2.49	0.47
17:AQ:60:GLU:OE1	17:AQ:77:ARG:HD3	2.14	0.47
9:CI:81:HIS:O	9:CI:85:ARG:HB2	2.13	0.47
47:BZ:45:ARG:NH1	47:BZ:59:GLU:OE1	2.46	0.47
26:DE:61:ARG:HD2	26:DE:63:LYS:O	2.13	0.47
36:DO:71:ALA:HB2	36:DO:102:ARG:HB2	1.96	0.47
1:CA:38:G:C2	1:CA:397:A:C2	3.02	0.47
28:BG:126:PRO:HG2	28:BG:130:GLU:HB3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2228:G:H2'	22:BA:2229:U:C6	2.50	0.47
24:BC:31:ALA:HB3	24:BC:32:PRO:HD3	1.96	0.47
22:BA:1932:A:H5''	22:BA:1933:G:OP2	2.14	0.47
24:DC:243:HIS:O	24:DC:245:VAL:HG13	2.14	0.47
28:DG:98:VAL:HG22	28:DG:125:CYS:SG	2.54	0.47
22:BA:416:U:C4	22:BA:417:C:C4	3.02	0.47
1:CA:983:A:N3	1:CA:983:A:C2'	2.78	0.47
1:AA:518:C:H5	1:AA:530:G:OP2	1.97	0.47
22:DA:1514:G:H5''	22:DA:1515:A:P	2.55	0.47
22:BA:1171:G:N3	22:BA:1179:G:N1	2.61	0.47
22:BA:1177:G:C2'	22:BA:1178:C:O5'	2.62	0.47
22:DA:790:U:OP2	57:DA:3755:HOH:O	2.20	0.47
1:CA:1001:C:H2'	1:CA:1002:G:N7	2.29	0.47
1:CA:1004:A:O2'	1:CA:1036:A:C2	2.66	0.47
1:AA:212:G:N2	1:AA:213:G:C4	2.82	0.47
1:AA:1108:G:H2'	1:AA:1108:G:N3	2.30	0.47
22:DA:2093:G:N7	22:DA:2225:A:H2'	2.29	0.47
22:BA:481:G:C2	22:BA:507:A:C4	3.02	0.47
41:DT:59:ASN:O	41:DT:84:TYR:N	2.47	0.47
53:B5:50:ILE:CB	53:B5:52:PRO:HD3	2.45	0.47
14:CN:23:LYS:O	14:CN:26:GLU:HG3	2.15	0.47
1:CA:811:C:C5	1:CA:812:G:C6	3.02	0.47
22:DA:1063:G:C4'	30:DI:77:ALA:HB1	2.44	0.47
22:DA:397:U:OP1	45:DX:31:PRO:HA	2.15	0.47
26:DE:149:ILE:HG23	26:DE:188:MET:HA	1.95	0.47
1:CA:824:G:H1'	8:CH:2:SER:N	2.29	0.47
22:DA:1027:A:C5	22:DA:1126:A:C2	3.02	0.47
29:DH:117:LEU:HD11	29:DH:130:VAL:HG22	1.95	0.47
22:DA:2120:G:C2	22:DA:2121:G:C8	3.02	0.47
22:BA:1045:C:H3'	22:BA:1046:A:H5'	1.96	0.47
29:DH:62:LEU:HD22	29:DH:62:LEU:O	2.14	0.47
12:CL:38:TYR:HB3	12:CL:52:VAL:HG13	1.95	0.47
10:AJ:91:ASP:OD2	10:AJ:91:ASP:N	2.47	0.47
1:CA:1479:C:C2	1:CA:1480:A:C8	3.02	0.47
1:AA:1154:G:N3	1:AA:1154:G:H2'	2.28	0.47
1:CA:106:C:O2	1:CA:379:C:C5'	2.62	0.47
1:CA:1262:C:C2'	1:CA:1263:C:H5'	2.45	0.47
22:BA:2502:G:OP2	57:BA:3497:HOH:O	2.20	0.47
3:CC:42:TYR:CZ	3:CC:46:GLU:HG3	2.49	0.47
22:BA:1416:G:O2'	22:BA:1417:C:OP2	2.26	0.47
5:CE:13:GLU:OE1	5:CE:68:ARG:NH1	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:91:PHE:CD2	2:AB:150:GLY:HA3	2.49	0.47
38:DQ:84:LYS:O	38:DQ:87:SER:N	2.39	0.47
1:CA:859:G:H2'	1:CA:860:A:C8	2.49	0.47
22:DA:2186:G:C6	22:DA:2187:U:C4	3.02	0.47
22:DA:170:U:C2	22:DA:171:U:C5	3.02	0.47
32:DK:99:ILE:CG2	32:DK:119:ALA:HB2	2.44	0.47
22:BA:1866:A:N1	22:BA:1876:A:C8	2.82	0.47
1:AA:115:G:H1'	1:AA:116:A:N7	2.30	0.47
22:DA:1043:C:C4	22:DA:1044:C:C4	3.03	0.47
15:CO:13:SER:O	15:CO:14:GLU:HG3	2.14	0.47
9:CI:17:ALA:HA	9:CI:67:VAL:HA	1.95	0.47
16:AP:61:VAL:HG22	16:AP:67:ILE:HD11	1.94	0.47
1:AA:939:G:H2'	1:AA:940:C:C6	2.49	0.47
22:DA:1274:A:N3	22:DA:1297:C:H1'	2.30	0.47
43:BV:65:VAL:O	43:BV:66:ASP:C	2.53	0.47
22:BA:335:C:O2'	22:BA:336:C:H5'	2.14	0.47
16:AP:5:ARG:HA	16:AP:68:SER:OG	2.15	0.47
22:DA:2244:U:H2'	22:DA:2245:U:O4'	2.15	0.47
1:AA:172:A:N7	1:AA:174:A:N7	2.62	0.47
1:CA:414:A:H2'	1:CA:415:A:O4'	2.14	0.47
43:DV:38:LEU:HD23	43:DV:40:ILE:HD11	1.96	0.47
22:BA:1064:C:H4'	30:BI:90:SER:HB2	1.95	0.47
1:CA:485:U:HO2'	1:CA:486:U:P	2.38	0.47
1:AA:977:A:H1'	1:AA:982:U:O4	2.14	0.47
22:DA:228:C:C2	22:DA:418:C:H4'	2.50	0.47
24:DC:67:PHE:CE2	24:DC:156:ARG:NH2	2.82	0.47
22:DA:575:A:C2	22:DA:576:U:C6	3.02	0.47
22:DA:979:A:C8	22:DA:982:C:N4	2.83	0.47
22:DA:1139:G:O2'	22:DA:1140:C:H5'	2.14	0.47
7:AG:97:ASN:HA	7:AG:100:ALA:HB3	1.96	0.47
11:AK:76:GLU:HA	22:BA:2141:G:P	2.55	0.47
22:BA:85:G:P	42:BU:28:VAL:HG11	2.54	0.47
2:AB:82:ASP:OD1	2:AB:84:ALA:HB3	2.13	0.47
1:CA:1107:C:C2	1:CA:1108:G:C8	3.03	0.47
1:CA:951:G:N3	1:CA:970:C:O2'	2.34	0.47
33:BL:77:ILE:HD11	33:BL:101:ILE:HG21	1.97	0.47
1:AA:624:C:H4'	16:AP:11:ALA:HB2	1.97	0.47
26:BE:108:ILE:CD1	26:BE:180:LEU:HB3	2.44	0.47
22:DA:1204:A:C2	22:DA:1240:U:N3	2.82	0.47
34:DM:69:PRO:O	34:DM:93:VAL:O	2.33	0.47
24:DC:57:GLY:O	24:DC:58:HIS:O	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:130:LYS:HB2	26:DE:133:LEU:CB	2.45	0.47
2:AB:54:LEU:HD12	2:AB:220:THR:HG21	1.96	0.47
22:BA:2297:A:C2	22:BA:2298:A:C8	3.02	0.47
43:BV:48:MET:SD	43:BV:86:LEU:CD1	3.02	0.47
19:AS:42:PRO:HD3	19:AS:67:VAL:CG1	2.45	0.47
10:AJ:11:LYS:HA	10:AJ:70:HIS:O	2.14	0.47
21:AU:16:LEU:HA	21:AU:18:ARG:CZ	2.43	0.47
49:D1:39:PHE:CD2	49:D1:40:ASP:N	2.82	0.47
20:AT:5:LYS:O	20:AT:7:ALA:N	2.47	0.47
22:DA:2499:C:C4	22:DA:2500:U:C4	3.02	0.47
14:CN:67:THR:HG23	14:CN:83:LYS:CE	2.45	0.47
22:DA:1178:C:H2'	22:DA:1179:G:C8	2.49	0.47
22:BA:2502:G:H5''	22:BA:2503:A:H5''	1.94	0.47
45:DX:25:THR:O	45:DX:25:THR:HG22	2.13	0.47
22:DA:478:A:C2	22:DA:480:A:C4	3.02	0.47
23:BB:53:A:C2	23:BB:54:G:C8	3.01	0.47
1:AA:771:G:H2'	1:AA:772:U:H6	1.78	0.47
39:BR:74:ILE:O	39:BR:86:GLN:HA	2.15	0.47
22:DA:218:A:N7	57:DA:3226:HOH:O	2.36	0.47
31:BJ:23:LYS:HE2	31:BJ:142:ILE:OXT	2.14	0.47
11:CK:112:ASP:HB3	21:CU:4:ILE:CG2	2.44	0.47
22:DA:2221:G:C2'	22:DA:2222:C:H5'	2.45	0.47
1:AA:1371:G:OP1	9:AI:13:LYS:HD3	2.15	0.47
24:BC:24:LEU:HA	24:BC:24:LEU:HD12	1.78	0.47
47:DZ:41:THR:HB	47:DZ:42:PRO:HD2	1.95	0.47
32:BK:53:LYS:NZ	32:BK:56:ASP:OD2	2.40	0.47
22:DA:1462:C:N3	22:DA:1463:C:C5	2.83	0.47
3:AC:53:SER:HB2	3:AC:115:LEU:HG	1.95	0.47
1:CA:775:G:C2'	1:CA:776:G:H5'	2.44	0.47
4:AD:109:ALA:N	4:AD:113:GLU:OE2	2.44	0.47
22:DA:1115:G:O2'	22:DA:1116:G:OP2	2.25	0.47
29:BH:117:LEU:HD23	29:BH:121:VAL:HA	1.95	0.47
22:BA:1072:C:C2	22:BA:1093:G:O6	2.68	0.47
22:DA:2586:U:H2'	22:DA:2587:A:O4'	2.14	0.47
1:AA:880:C:C2'	1:AA:881:G:H5'	2.44	0.47
1:AA:1203:C:C2	1:AA:1204:A:C8	3.02	0.47
1:AA:1216:A:OP1	14:AN:3:LYS:HE2	2.15	0.47
22:BA:1171:G:C6	22:BA:1172:C:N3	2.82	0.47
9:AI:44:ALA:H	9:AI:46:MET:HE1	1.80	0.47
2:AB:64:LYS:HA	2:AB:64:LYS:HE2	1.95	0.47
1:AA:667:G:H4'	15:AO:51:HIS:CE1	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:375:U:N3	1:CA:376:G:N7	2.63	0.47
22:DA:1649:G:C6	22:DA:2009:A:N6	2.82	0.47
23:BB:91:C:OP2	34:BM:18:ARG:NH2	2.46	0.47
22:DA:288:U:H2'	22:DA:289:G:O4'	2.14	0.47
22:DA:591:U:C2	22:DA:592:A:C8	3.03	0.47
22:DA:1409:U:H2'	22:DA:1410:G:O4'	2.14	0.47
1:CA:976:G:H1'	1:CA:1363:A:N6	2.30	0.47
42:BU:98:SER:C	42:BU:100:SER:H	2.18	0.47
29:BH:111:ALA:O	29:BH:114:GLU:HB2	2.13	0.47
4:AD:130:VAL:CG1	4:AD:135:TYR:CD1	2.98	0.47
1:CA:1343:G:O2'	9:CI:123:ARG:HD2	2.15	0.47
22:DA:945:A:N7	22:DA:2448:A:C2	2.83	0.47
20:CT:67:ILE:CD1	20:CT:71:LYS:HE3	2.44	0.47
22:DA:1855:U:C4	22:DA:1856:U:C4	3.03	0.47
22:DA:537:G:C6	22:DA:555:G:C2	3.02	0.47
22:BA:2495:G:H2'	22:BA:2496:C:H5'	1.96	0.47
2:CB:186:ILE:HG13	2:CB:200:ILE:O	2.15	0.47
2:CB:71:GLY:HA2	2:CB:164:ILE:CG2	2.45	0.47
2:AB:166:ALA:HB2	2:AB:187:VAL:HG12	1.96	0.47
1:AA:1130:A:N3	1:AA:1146:A:C4	2.82	0.47
22:BA:1789:A:H5''	24:BC:219:THR:O	2.14	0.47
12:CL:3:THR:O	12:CL:4:VAL:C	2.53	0.47
22:DA:1245:G:H4'	26:DE:33:VAL:CG1	2.44	0.47
5:CE:16:ILE:CD1	5:CE:38:VAL:HG23	2.44	0.47
10:CJ:7:ARG:HD2	10:CJ:73:LEU:HD21	1.97	0.47
1:CA:350:G:C6	1:CA:351:G:O6	2.67	0.47
9:CI:101:ALA:HB1	9:CI:103:PHE:CZ	2.50	0.47
33:DL:116:VAL:HG21	33:DL:134:ALA:C	2.35	0.47
22:DA:658:U:C2	22:DA:659:G:C8	3.02	0.47
22:BA:684:G:C6	22:BA:774:G:C4	3.03	0.47
23:DB:109:A:C5	23:DB:110:C:C4	3.02	0.47
1:CA:771:G:C2	1:CA:809:G:C2	3.03	0.47
1:CA:302:G:O2'	1:CA:556:C:H5''	2.15	0.47
22:DA:241:A:N1	22:DA:255:A:H5''	2.29	0.47
1:AA:408:A:C2	1:AA:435:A:C2	3.03	0.47
3:CC:168:TYR:OH	5:CE:55:GLU:OE1	2.31	0.47
1:AA:741:G:H2'	1:AA:742:G:O4'	2.15	0.47
22:BA:368:A:N6	22:BA:369:U:O4	2.48	0.47
1:AA:654:G:C2'	1:AA:655:A:H5'	2.45	0.47
17:AQ:61:ILE:HG22	17:AQ:73:TRP:CE3	2.50	0.47
9:AI:23:PRO:HA	9:AI:61:LEU:HA	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:145:ALA:O	7:AG:146:GLU:HB3	2.15	0.47
39:BR:102:SER:O	39:BR:103:ALA:O	2.33	0.47
22:BA:2038:G:H2'	22:BA:2039:U:O4'	2.13	0.47
28:BG:83:PHE:CE2	28:BG:138:LYS:HB2	2.49	0.47
22:BA:1392:A:C6	22:BA:1393:A:C6	3.02	0.47
49:B1:39:PHE:HB2	49:B1:46:HIS:CE1	2.49	0.47
1:CA:651:C:N4	1:CA:652:U:O4	2.47	0.47
1:CA:330:C:O2	1:CA:330:C:H2'	2.13	0.47
28:BG:101:ASN:CG	28:BG:101:ASN:O	2.53	0.47
36:DO:58:ILE:O	36:DO:58:ILE:HG22	2.14	0.47
22:BA:997:G:O2'	22:BA:998:C:H5'	2.15	0.47
5:CE:105:ILE:HG13	5:CE:105:ILE:O	2.14	0.47
28:DG:158:LYS:O	28:DG:159:GLY:C	2.52	0.47
1:AA:1269:A:N1	1:AA:1313:U:O4'	2.48	0.47
1:CA:484:G:C5	1:CA:486:U:H1'	2.49	0.47
22:BA:1914:C:H2'	22:BA:1914:C:O2	2.14	0.47
1:CA:211:G:O2'	1:CA:212:G:H4'	2.15	0.47
22:DA:2199:A:N7	22:DA:2225:A:C6	2.83	0.47
22:DA:2199:A:N7	22:DA:2225:A:N6	2.63	0.47
5:AE:98:PRO:O	5:AE:99:ALA:HB3	2.14	0.47
22:DA:2822:G:H2'	22:DA:2823:A:H5''	1.97	0.47
22:BA:1386:C:H2'	22:BA:1387:A:C8	2.49	0.47
12:CL:59:ASN:HD22	12:CL:59:ASN:N	2.13	0.47
22:DA:46:G:N1	22:DA:47:C:C4	2.83	0.47
33:BL:94:THR:HG22	33:BL:95:LEU:N	2.29	0.47
22:DA:39:G:C5	22:DA:40:U:C5	3.01	0.47
22:DA:396:G:H2'	22:DA:397:U:O5'	2.15	0.47
1:CA:455:G:C6	1:CA:456:A:C6	3.03	0.47
22:BA:618:G:C6	22:BA:619:G:C4	3.03	0.47
22:DA:2531:A:C4	22:DA:2532:G:C8	3.02	0.47
10:CJ:15:HIS:HB3	10:CJ:70:HIS:CD2	2.50	0.47
10:CJ:15:HIS:HB3	10:CJ:70:HIS:NE2	2.29	0.47
22:DA:1310:G:H2'	22:DA:1311:G:H5'	1.95	0.47
27:DF:72:LYS:HG3	27:DF:74:VAL:HG13	1.96	0.47
2:AB:216:ALA:O	2:AB:219:ALA:O	2.33	0.47
22:BA:811:U:C2	22:BA:1251:C:C5	3.02	0.47
22:DA:1248:G:C5	26:DE:46:GLN:NE2	2.83	0.47
22:BA:1106:G:H2'	22:BA:1106:G:N3	2.29	0.47
22:BA:1107:G:C4	22:BA:1108:U:C6	3.03	0.47
20:CT:67:ILE:O	20:CT:68:HIS:C	2.52	0.47
19:AS:63:THR:O	19:AS:65:GLU:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:11:PRO:O	21:AU:12:PHE:CB	2.63	0.47
7:CG:42:ILE:CG2	7:CG:42:ILE:O	2.63	0.47
5:CE:83:HIS:CD2	8:CH:96:MET:HE2	2.50	0.47
22:BA:1059:G:O2'	30:BI:129:ILE:HA	2.14	0.47
2:CB:68:LEU:HD22	2:CB:70:VAL:HG23	1.94	0.47
22:DA:2385:C:H2'	22:DA:2386:A:C8	2.49	0.47
30:BI:108:GLU:HA	30:BI:111:GLN:HB3	1.96	0.47
33:DL:82:LEU:O	33:DL:82:LEU:HG	2.15	0.47
41:BT:18:GLU:CD	41:BT:18:GLU:N	2.68	0.47
22:DA:1428:C:C5	22:DA:1569:A:H5''	2.50	0.47
1:AA:820:U:H4'	1:AA:821:G:OP2	2.14	0.47
26:DE:8:ALA:O	26:DE:9:GLN:HB2	2.15	0.47
11:AK:128:ARG:HH11	11:AK:128:ARG:HG2	1.79	0.47
27:BF:5:HIS:O	27:BF:8:TYR:HB3	2.15	0.47
43:DV:9:ARG:NH2	43:DV:17:SER:OG	2.48	0.47
23:DB:109:A:C6	23:DB:110:C:N3	2.82	0.47
15:AO:81:LEU:HD12	15:AO:85:LEU:CD2	2.44	0.47
22:DA:1577:C:H2'	22:DA:1578:U:C1'	2.45	0.47
22:DA:371:A:N3	45:DX:61:LYS:NZ	2.62	0.47
1:CA:1272:G:H2'	1:CA:1273:C:O4'	2.15	0.47
14:CN:3:LYS:HD3	14:CN:6:MET:HG2	1.97	0.47
22:BA:801:G:C4	26:BE:49:ARG:HD3	2.50	0.47
22:BA:547:A:H3'	22:BA:548:G:C5'	2.44	0.47
7:AG:129:GLU:O	7:AG:130:ASN:C	2.53	0.47
7:AG:68:ASN:O	7:AG:138:ARG:HD3	2.15	0.47
22:BA:2213:U:H4'	22:BA:2214:C:OP2	2.15	0.47
39:BR:64:VAL:HG23	39:BR:65:ALA:N	2.29	0.47
22:DA:260:G:C6	22:DA:261:G:N7	2.82	0.47
2:CB:187:VAL:HG23	2:CB:188:ASP:O	2.14	0.47
1:AA:507:C:C4	1:AA:508:U:C4	3.03	0.47
11:CK:50:SER:HB3	11:CK:65:VAL:CG2	2.45	0.47
24:DC:125:LYS:O	24:DC:192:LEU:HB2	2.15	0.47
32:BK:91:SER:O	32:BK:92:GLU:C	2.53	0.47
1:CA:784:A:H2'	1:CA:785:G:C8	2.50	0.47
1:AA:520:A:N1	1:AA:536:C:H1'	2.30	0.47
43:DV:48:MET:SD	43:DV:86:LEU:HG	2.54	0.47
22:DA:453:A:H4'	22:DA:472:A:H62	1.78	0.47
22:DA:1357:C:N4	22:DA:1358:G:C6	2.83	0.47
6:AF:3:HIS:CE1	6:AF:65:GLU:OE2	2.67	0.47
6:AF:91:ARG:HG2	6:AF:93:LYS:CE	2.44	0.47
40:DS:55:ILE:CG2	40:DS:66:ILE:CD1	2.93	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:55:ILE:HG21	40:DS:66:ILE:CD1	2.44	0.47
22:BA:819:A:C4	22:BA:1189:A:C2	3.03	0.47
22:DA:408:G:C6	22:DA:409:G:C5	3.03	0.47
4:CD:174:ASP:O	4:CD:175:ALA:HB2	2.14	0.47
41:DT:27:SER:O	41:DT:29:THR:N	2.48	0.47
22:DA:965:C:H4'	22:DA:2273:A:H1'	1.96	0.47
22:DA:1596:A:C6	22:DA:1597:A:C6	3.03	0.47
22:DA:1343:G:H4'	22:DA:1598:A:OP2	2.15	0.47
22:BA:2756:U:H1'	22:BA:2757:A:H5''	1.97	0.47
1:CA:991:U:H4'	1:CA:992:U:H5''	1.96	0.47
22:BA:975:A:C2	22:BA:990:A:C8	3.03	0.47
45:DX:56:MET:O	45:DX:60:ASP:N	2.44	0.47
22:BA:279:A:N6	22:BA:361:G:O2'	2.46	0.47
1:AA:261:U:P	20:AT:71:LYS:HE2	2.55	0.47
1:CA:505:G:C6	1:CA:535:A:C2	3.03	0.47
1:AA:667:G:OP1	1:AA:732:C:O2'	2.26	0.47
1:AA:568:G:C4	1:AA:569:C:H5	2.31	0.47
22:DA:1730:C:O2'	22:DA:1731:G:C2	2.67	0.47
1:AA:469:C:C5	1:AA:470:C:C4	3.03	0.47
25:DD:13:ARG:HD3	25:DD:21:SER:OG	2.14	0.47
29:BH:97:ARG:HH11	1:CA:370:C:C5'	2.28	0.47
22:DA:143:C:H2'	22:DA:144:A:H5'	1.96	0.47
22:BA:181:A:C2	22:BA:182:A:C4	3.02	0.47
22:DA:526:A:P	57:DA:3247:HOH:O	2.72	0.47
22:DA:2415:G:C2	22:DA:2416:C:C2	3.03	0.47
30:DI:56:PRO:HD2	30:DI:75:PRO:HD3	1.97	0.47
22:DA:2115:G:H2'	22:DA:2117:A:N7	2.30	0.47
22:DA:1724:G:O6	22:DA:1736:U:C2	2.68	0.47
1:CA:1152:A:H4'	10:CJ:15:HIS:CD2	2.50	0.47
30:BI:39:CYS:HA	30:BI:42:PHE:HB2	1.96	0.47
22:DA:248:G:H5'	22:DA:250:G:N7	2.28	0.47
22:DA:2603:G:C6	22:DA:2604:U:C5	3.02	0.47
1:AA:1493:A:O2'	1:AA:1494:G:P	2.73	0.47
29:BH:14:SER:O	29:BH:15:LEU:CB	2.61	0.47
10:CJ:57:VAL:HG22	10:CJ:58:ASN:H	1.79	0.47
4:AD:32:CYS:SG	4:AD:33:LYS:N	2.88	0.47
22:DA:2449:U:H4'	22:DA:2450:A:OP1	2.15	0.47
1:CA:1129:C:C6	1:CA:1139:G:C8	3.02	0.47
22:DA:2121:G:C2	22:DA:2177:C:O2	2.68	0.47
22:DA:2796:U:N3	22:DA:2798:U:C4	2.83	0.47
36:DO:117:PHE:CD1	36:DO:117:PHE:C	2.88	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1791:A:C2'	22:DA:1792:G:H5'	2.45	0.47
1:AA:872:A:C4	1:AA:874:G:C8	3.03	0.47
22:BA:569:U:H1'	22:BA:947:A:O4'	2.14	0.47
10:AJ:17:LEU:HD21	10:AJ:96:VAL:HG22	1.97	0.47
25:DD:35:THR:O	25:DD:36:GLN:HB2	2.14	0.47
21:AU:10:GLU:CB	21:AU:11:PRO:HD3	2.45	0.47
9:CI:26:GLY:N	9:CI:61:LEU:O	2.47	0.47
22:BA:2839:G:H4'	35:BN:49:GLU:OE1	2.15	0.47
22:BA:1696:G:O6	22:BA:1697:G:C2	2.68	0.47
22:BA:120:U:H5'	22:BA:122:G:OP2	2.14	0.47
1:CA:939:G:C6	1:CA:940:C:C4	3.03	0.47
31:DJ:19:ASP:O	31:DJ:23:LYS:CE	2.63	0.47
22:DA:2387:U:H1'	44:DW:41:ARG:HD2	1.97	0.47
31:BJ:17:VAL:HG23	31:BJ:137:PRO:CB	2.45	0.47
22:DA:1652:A:C2	22:DA:2006:C:N3	2.82	0.47
5:CE:111:MET:HG3	5:CE:140:THR:HG21	1.96	0.47
22:BA:2469:A:C2	22:BA:2482:A:C4	3.01	0.47
22:DA:1797:G:O3'	24:DC:256:LYS:HA	2.15	0.47
2:CB:57:LEU:HD11	2:CB:221:VAL:CG2	2.45	0.47
22:BA:2492:U:H2'	22:BA:2493:U:H6	1.80	0.47
2:AB:94:HIS:O	2:AB:95:ARG:C	2.52	0.47
22:DA:1563:U:H2'	22:DA:1564:C:C6	2.49	0.47
45:DX:12:PRO:HB3	45:DX:28:ARG:NH2	2.29	0.47
10:AJ:36:VAL:HG22	10:AJ:76:ILE:HG12	1.97	0.47
19:CS:6:LYS:HB2	19:CS:7:LYS:HE2	1.95	0.47
26:BE:149:ILE:CD1	26:BE:172:ALA:HA	2.45	0.47
27:BF:121:SER:HB3	27:BF:129:SER:O	2.15	0.47
22:BA:2593:U:H2'	22:BA:2594:C:O5'	2.14	0.47
1:CA:1299:A:N3	1:CA:1299:A:H2'	2.30	0.47
1:CA:421:U:O5'	1:CA:422:C:H5	1.96	0.47
1:CA:642:A:H2'	1:CA:643:C:C6	2.50	0.47
22:DA:1776:G:N2	22:DA:1789:A:H1'	2.30	0.47
1:CA:1014:A:N7	1:CA:1015:G:C6	2.82	0.47
29:DH:5:LEU:HD13	29:DH:13:GLY:HA3	1.96	0.47
9:AI:36:GLU:HA	9:AI:40:GLY:HA3	1.96	0.47
22:DA:2511:U:C5	22:DA:2512:C:C5	3.03	0.47
41:DT:7:LEU:HD22	41:DT:46:ALA:CA	2.45	0.47
22:BA:204:A:O4'	22:BA:206:U:C6	2.67	0.47
1:AA:803:G:C5	1:AA:804:U:C4	3.02	0.47
6:AF:29:ILE:HG23	6:AF:66:ALA:HB2	1.97	0.47
1:AA:200:G:N2	1:AA:218:U:C2	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BZ:24:LEU:HD11	47:BZ:54:MET:HE1	1.97	0.47
22:DA:2829:A:H2'	22:DA:2830:C:H5'	1.96	0.47
26:DE:106:LYS:HG3	26:DE:200:LEU:HD23	1.95	0.47
8:AH:80:ARG:HB2	8:AH:81:PRO:HD2	1.96	0.47
36:DO:104:GLN:O	36:DO:107:ALA:N	2.47	0.47
22:BA:211:C:O2'	22:BA:212:G:H5'	2.14	0.47
22:DA:1835:G:C4	22:DA:1836:C:C6	3.02	0.47
22:DA:892:A:N3	22:DA:892:A:H3'	2.30	0.47
3:CC:71:ALA:HA	3:CC:106:VAL:HB	1.96	0.47
22:DA:2054:A:OP1	22:DA:2055:C:O2'	2.29	0.47
14:AN:73:PHE:CD1	14:AN:74:LEU:N	2.83	0.47
37:BP:37:LYS:HD3	37:BP:39:ARG:NH1	2.30	0.47
1:AA:443:C:O2'	1:AA:444:G:H5'	2.15	0.47
32:DK:108:ARG:HB2	32:DK:116:ILE:HD13	1.95	0.47
25:BD:85:ALA:O	25:BD:86:GLU:C	2.53	0.47
25:DD:3:GLY:O	25:DD:82:PHE:CE1	2.68	0.47
26:BE:37:ALA:O	26:BE:40:ARG:HB2	2.14	0.47
1:AA:1126:U:O2	1:AA:1280:A:H5'	2.15	0.47
52:B4:25:VAL:HB	52:B4:35:GLN:HB2	1.96	0.47
30:BI:6:GLN:O	30:BI:7:ALA:HB3	2.15	0.47
40:BS:46:LEU:O	40:BS:50:VAL:HG23	2.15	0.47
22:DA:2752:C:C5	22:DA:2753:A:N7	2.82	0.47
3:AC:112:ASP:O	3:AC:116:VAL:HG23	2.14	0.47
22:DA:195:A:C6	22:DA:198:C:C5	3.03	0.47
28:DG:83:PHE:CD2	28:DG:138:LYS:HB2	2.50	0.47
22:BA:748:G:C8	40:BS:89:ALA:HB1	2.49	0.47
22:BA:2076:U:O4'	22:BA:2076:U:O2	2.30	0.47
53:B5:28:ARG:CG	53:B5:28:ARG:O	2.63	0.47
7:CG:66:LEU:O	7:CG:66:LEU:HG	2.15	0.47
1:AA:1330:U:C4	1:AA:1331:G:C6	3.03	0.47
13:AM:91:HIS:CE1	13:AM:97:VAL:HG21	2.49	0.47
2:AB:12:ALA:HB1	2:AB:15:HIS:HB3	1.97	0.47
17:CQ:14:SER:CB	17:CQ:22:VAL:HG12	2.45	0.47
51:B3:26:HIS:HB2	51:B3:44:LEU:O	2.15	0.47
15:AO:70:LEU:HD21	15:AO:77:ARG:HB2	1.97	0.47
40:DS:41:LYS:O	40:DS:42:LYS:C	2.51	0.47
22:DA:1357:C:O2'	22:DA:1358:G:H5'	2.15	0.47
1:AA:1049:U:O4'	1:AA:1201:A:C8	2.67	0.47
3:AC:174:PRO:C	3:AC:176:HIS:H	2.18	0.47
22:DA:2282:G:N3	22:DA:2425:A:N6	2.63	0.47
23:DB:60:C:N4	57:DB:303:HOH:O	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:178:G:C5	22:DA:179:C:C5	3.03	0.47
53:B5:52:PRO:O	53:B5:53:ARG:HB2	2.15	0.47
1:AA:263:A:P	20:AT:74:ARG:NH1	2.88	0.47
14:AN:43:ASN:C	14:AN:45:VAL:H	2.17	0.47
29:BH:97:ARG:NH1	1:CA:370:C:C5'	2.77	0.47
16:CP:19:VAL:CG1	16:CP:37:GLY:N	2.78	0.47
30:DI:10:LYS:HB2	30:DI:56:PRO:HB3	1.96	0.47
30:DI:54:PRO:HB2	30:DI:78:VAL:HG21	1.97	0.47
22:DA:2111:U:O2	22:DA:2111:U:O4'	2.32	0.47
25:BD:125:TRP:CE3	25:BD:160:LYS:HD2	2.49	0.47
5:CE:56:VAL:N	5:CE:57:PRO:CD	2.77	0.47
22:DA:104:A:C5	22:DA:105:C:N3	2.83	0.47
41:BT:2:ILE:HG12	41:BT:7:LEU:HD11	1.97	0.47
22:BA:1107:G:C5	22:BA:1108:U:C5	3.03	0.47
1:CA:570:G:H2'	1:CA:570:G:N3	2.28	0.47
1:AA:192:A:C6	1:AA:193:C:C4	3.03	0.47
6:AF:63:ASN:OD1	6:AF:96:VAL:HG21	2.13	0.47
22:BA:1730:C:O2'	22:BA:1731:G:C4	2.60	0.47
26:DE:47:LYS:O	26:DE:83:VAL:CB	2.63	0.47
22:DA:1965:C:H3'	22:DA:1966:A:H8	1.80	0.47
22:BA:2681:C:C2	22:BA:2724:U:O4	2.68	0.47
22:BA:26:G:C2'	22:BA:27:G:O5'	2.63	0.47
42:DU:74:ASN:ND2	42:DU:96:PHE:CD1	2.82	0.47
10:AJ:6:ILE:CD1	10:AJ:76:ILE:HB	2.45	0.47
1:AA:689:C:O2'	1:AA:705:G:O2'	2.24	0.47
22:BA:2304:G:H4'	27:BF:129:SER:O	2.14	0.47
1:AA:901:A:C5	1:AA:902:G:H1'	2.50	0.47
22:DA:1308:A:N6	22:DA:1309:G:C2	2.83	0.47
22:BA:1006:C:P	57:BA:3780:HOH:O	2.72	0.47
1:AA:642:A:N7	8:AH:107:SER:HA	2.29	0.47
1:CA:1410:A:H2'	1:CA:1411:C:C6	2.50	0.47
22:BA:1503:A:N6	22:BA:1504:A:N6	2.63	0.47
22:DA:504:A:C2	22:DA:1234:U:H4'	2.50	0.47
13:CM:86:TYR:O	13:CM:90:ARG:CG	2.63	0.47
2:AB:106:THR:O	2:AB:107:VAL:HG23	2.14	0.47
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.14	0.47
21:CU:32:VAL:HG12	21:CU:32:VAL:O	2.15	0.47
36:BO:49:VAL:HG13	36:BO:50:ALA:N	2.30	0.47
22:DA:1588:G:C5	22:DA:1589:U:C4	3.02	0.47
55:DA:3001:DOL:O7	55:DA:3001:DOL:H432	2.13	0.47
36:BO:31:THR:HG23	36:BO:32:PRO:N	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1264:A:C8	22:DA:1265:A:C8	3.03	0.47
1:AA:1053:G:N2	1:AA:1056:U:C5	2.83	0.47
41:DT:23:ALA:O	41:DT:27:SER:N	2.48	0.47
22:DA:619:G:O6	26:DE:98:LYS:HE3	2.15	0.47
22:BA:1178:C:H2'	22:BA:1179:G:C8	2.50	0.47
1:CA:1034:G:H5'	1:CA:1035:A:OP2	2.15	0.47
22:DA:116:C:O2'	22:DA:126:A:C2'	2.62	0.47
53:B5:50:ILE:C	53:B5:52:PRO:CD	2.82	0.47
31:BJ:81:ILE:HG12	31:BJ:82:GLY:H	1.80	0.47
22:DA:152:A:C2	22:DA:175:G:N3	2.82	0.47
22:DA:40:U:C4	22:DA:41:C:N4	2.83	0.47
1:CA:459:A:C8	1:CA:459:A:OP2	2.68	0.47
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.15	0.47
1:CA:1381:U:O2'	1:CA:1382:C:O5'	2.33	0.47
27:BF:152:LEU:HD12	27:BF:153:ASP:N	2.29	0.47
1:CA:162:A:H2'	1:CA:163:C:O4'	2.15	0.47
22:DA:668:A:H3'	22:DA:669:G:H5''	1.96	0.47
22:DA:187:G:N1	22:DA:210:C:C2	2.82	0.47
24:BC:162:VAL:CG1	24:BC:174:LEU:HB3	2.45	0.47
22:BA:322:A:C6	22:BA:340:A:N1	2.83	0.47
22:DA:1805:A:C2	22:DA:1813:G:C6	3.03	0.47
22:BA:1250:G:C5'	38:BQ:6:ARG:HD3	2.45	0.47
22:BA:2297:A:C2	22:BA:2321:U:H5	2.33	0.47
22:DA:160:A:N6	22:DA:161:A:N6	2.63	0.47
22:DA:1431:A:C6	22:DA:1432:G:C5	3.03	0.47
19:AS:42:PRO:O	19:AS:45:ILE:HG13	2.15	0.47
33:DL:77:ILE:CG2	33:DL:81:ASP:OD2	2.63	0.47
1:CA:1092:A:N1	1:CA:1183:U:O2	2.48	0.47
32:DK:31:ARG:HB3	32:DK:32:TYR:CD2	2.49	0.47
1:CA:846:G:C2	1:CA:847:G:C8	3.03	0.47
44:BW:51:VAL:HG13	44:BW:60:PHE:O	2.15	0.47
1:AA:704:A:C6	1:AA:705:G:C5	3.02	0.47
35:BN:32:GLU:OE1	35:BN:86:ARG:NH2	2.41	0.47
39:BR:21:ARG:NE	39:BR:93:PHE:CD1	2.83	0.47
5:AE:35:ALA:CB	5:AE:60:ILE:HA	2.45	0.47
22:BA:744:U:OP1	57:BA:3655:HOH:O	2.20	0.47
9:AI:36:GLU:HA	9:AI:40:GLY:CA	2.45	0.47
10:CJ:19:ASP:HA	10:CJ:22:THR:HB	1.97	0.47
45:DX:40:VAL:CG2	45:DX:45:ARG:O	2.63	0.47
1:AA:104:G:N2	1:AA:105:G:C4	2.82	0.47
28:DG:98:VAL:HG11	28:DG:124:GLU:HA	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:29:LYS:HB3	19:AS:30:PRO:HD2	1.97	0.47
28:BG:111:HIS:CD2	28:BG:112:PRO:O	2.68	0.47
22:DA:1896:G:H2'	22:DA:1897:G:O4'	2.15	0.47
22:BA:954:G:C5	22:BA:955:U:C5	3.02	0.47
25:BD:172:VAL:HG21	25:BD:194:PRO:HD3	1.96	0.47
10:CJ:41:PRO:O	10:CJ:42:LEU:HB2	2.14	0.47
23:BB:104:A:H2'	23:BB:105:G:O4'	2.14	0.47
3:CC:30:ALA:HB1	14:CN:65:ARG:NH2	2.30	0.47
22:BA:508:A:H4'	22:BA:509:C:OP2	2.15	0.47
1:AA:237:G:OP1	17:AQ:42:THR:OG1	2.33	0.47
13:CM:37:ALA:CB	13:CM:56:LEU:HG	2.44	0.47
22:DA:2403:C:H2'	22:DA:2403:C:O2	2.15	0.47
35:BN:106:ASP:OD1	35:BN:106:ASP:C	2.52	0.47
35:DN:24:MET:HE3	35:DN:44:LEU:HD22	1.97	0.47
22:DA:35:G:C5	22:DA:454:A:C2	3.03	0.47
22:DA:2043:C:O2	22:DA:2043:C:H2'	2.14	0.47
35:DN:104:ALA:O	35:DN:106:ASP:N	2.48	0.47
35:DN:106:ASP:O	35:DN:106:ASP:CG	2.51	0.47
22:DA:1434:A:H2'	22:DA:1435:G:C8	2.50	0.47
1:CA:991:U:H4'	1:CA:992:U:OP1	2.15	0.47
1:AA:186:C:H4'	20:AT:76:LYS:HB2	1.96	0.47
1:CA:1348:U:H4'	9:CI:122:ARG:CG	2.45	0.47
1:AA:1305:G:HO2'	1:AA:1306:A:H8	1.60	0.47
22:BA:1668:A:O2'	22:BA:1674:G:N7	2.36	0.47
16:AP:22:ALA:HA	16:AP:33:ILE:CG1	2.43	0.47
22:DA:1335:C:H2'	22:DA:1336:A:C8	2.50	0.47
46:BY:6:LEU:HD22	46:BY:56:LEU:HD21	1.97	0.47
22:BA:309:A:C5	22:BA:330:A:C6	3.03	0.47
22:DA:2148:G:C2	22:DA:2149:U:C4	3.03	0.47
22:DA:200:U:C5	22:DA:201:C:C4	3.02	0.47
1:CA:427:U:P	4:CD:13:ARG:HH22	2.38	0.47
48:B0:44:THR:HG23	48:B0:48:TYR:O	2.15	0.47
1:CA:16:A:C6	1:CA:17:U:C5	3.02	0.47
28:BG:85:LYS:CG	28:BG:141:ILE:HD13	2.45	0.47
22:DA:2652:C:N4	22:DA:2653:U:O4	2.48	0.47
1:AA:65:A:C2	1:AA:381:C:C6	3.03	0.47
2:AB:206:ALA:O	2:AB:210:VAL:HG22	2.14	0.47
22:DA:1855:U:C5	22:DA:1856:U:C4	3.03	0.47
33:DL:55:MET:SD	33:DL:59:ARG:HB3	2.55	0.47
22:BA:1384:A:H1'	22:BA:1405:U:C1'	2.45	0.47
17:CQ:8:LEU:HD12	17:CQ:8:LEU:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1959:G:C2'	22:BA:1960:A:O5'	2.62	0.47
2:AB:94:HIS:ND1	2:AB:146:ASN:HB2	2.30	0.47
23:BB:7:G:H5''	36:BO:29:HIS:CE1	2.50	0.47
1:CA:1386:G:H2'	1:CA:1387:G:H8	1.80	0.47
5:CE:38:VAL:HG11	5:CE:114:VAL:HA	1.96	0.47
1:CA:1052:U:H5''	1:CA:1053:G:OP2	2.15	0.47
1:AA:1027:C:C5	1:AA:1028:C:N4	2.82	0.47
22:DA:1726:C:H2'	22:DA:1727:C:H6	1.79	0.47
33:DL:116:VAL:HG21	33:DL:134:ALA:O	2.15	0.47
53:B5:122:GLY:CA	53:B5:146:VAL:CB	2.93	0.47
22:DA:1891:G:H2'	22:DA:1892:C:O4'	2.14	0.47
22:DA:2732:G:O2'	22:DA:2733:A:H5'	2.15	0.47
1:CA:581:G:N2	1:CA:761:G:C6	2.83	0.47
25:DD:175:LEU:HD11	25:DD:193:VAL:HG12	1.97	0.47
17:CQ:81:LYS:N	17:CQ:81:LYS:HD2	2.30	0.47
22:BA:205:G:O2'	22:BA:206:U:OP2	2.33	0.47
1:CA:1311:A:C2	1:CA:1327:C:N3	2.83	0.47
50:B2:43:THR:O	50:B2:44:VAL:CB	2.62	0.47
7:AG:127:ALA:O	7:AG:130:ASN:N	2.46	0.47
34:BM:2:LEU:O	34:BM:3:GLN:HB3	2.15	0.47
1:AA:1381:U:C5	1:AA:1382:C:C5	3.03	0.47
22:DA:5:A:C2	22:DA:2899:A:C2	3.03	0.47
2:AB:160:ALA:O	2:AB:161:LEU:HB2	2.15	0.47
25:DD:150:GLN:C	25:DD:151:THR:O	2.52	0.46
22:BA:2847:U:H2'	22:BA:2848:G:H5'	1.96	0.46
1:AA:1203:C:H4'	14:AN:67:THR:HG22	1.97	0.46
12:AL:44:LYS:HB3	12:AL:45:PRO:HD3	1.96	0.46
22:DA:1200:C:O2	22:DA:1246:A:C2	2.68	0.46
22:DA:487:C:C2	22:DA:494:G:N2	2.83	0.46
50:D2:44:VAL:O	50:D2:45:SER:OG	2.21	0.46
1:AA:1009:U:H2'	1:AA:1010:U:C6	2.50	0.46
29:BH:91:PHE:O	1:CA:55:A:C2	2.68	0.46
2:AB:63:ARG:O	2:AB:64:LYS:CB	2.60	0.46
22:DA:1207:C:N3	22:DA:1208:C:C5	2.83	0.46
22:DA:42:A:C2	22:DA:438:G:C2	3.03	0.46
22:DA:740:C:H5'	22:DA:1784:A:C2'	2.44	0.46
22:DA:362:A:C8	22:DA:363:G:C8	3.04	0.46
22:DA:2322:A:C6	22:DA:2323:G:C4	3.03	0.46
16:AP:4:ILE:HG13	16:AP:21:VAL:HG22	1.97	0.46
25:BD:61:THR:CB	25:BD:63:PRO:HD2	2.45	0.46
22:DA:249:C:O5'	22:DA:2394:C:O2'	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:157:U:O2	1:CA:165:G:C2	2.68	0.46
22:DA:877:A:H2'	22:DA:878:A:OP2	2.14	0.46
22:DA:727:A:C6	22:DA:728:G:C6	3.03	0.46
53:B5:79:ALA:HB1	53:B5:83:LYS:HB2	1.97	0.46
1:AA:1163:A:C2	1:AA:1174:G:N1	2.82	0.46
23:BB:35:C:C2'	23:BB:36:C:H5'	2.44	0.46
2:AB:164:ILE:O	2:AB:186:ILE:HG12	2.15	0.46
52:B4:1:MET:SD	52:B4:36:ARG:HB2	2.55	0.46
22:BA:784:G:C5'	24:BC:226:ASN:OD1	2.63	0.46
22:BA:1084:A:C5	22:BA:1085:A:C6	3.03	0.46
22:DA:1682:G:N3	22:DA:1757:A:H1'	2.30	0.46
1:AA:819:A:H4'	1:AA:820:U:OP2	2.15	0.46
22:BA:1855:U:C5	22:BA:1856:U:C5	3.04	0.46
23:BB:53:A:N3	23:BB:53:A:H2'	2.31	0.46
2:CB:85:LEU:O	2:CB:85:LEU:HD12	2.15	0.46
5:AE:155:ALA:HB1	8:AH:66:PHE:CE2	2.50	0.46
11:CK:44:TRP:HA	11:CK:70:CYS:SG	2.55	0.46
10:AJ:57:VAL:HG22	10:AJ:58:ASN:N	2.30	0.46
4:AD:107:PHE:CD1	4:AD:145:ILE:HD11	2.49	0.46
50:B2:43:THR:C	50:B2:44:VAL:HG12	2.35	0.46
43:DV:38:LEU:HD23	43:DV:40:ILE:CD1	2.45	0.46
17:AQ:46:VAL:HG13	17:AQ:73:TRP:C	2.35	0.46
34:DM:56:ALA:C	34:DM:58:LYS:H	2.18	0.46
1:AA:1377:A:C4	7:AG:7:ILE:HD11	2.49	0.46
22:BA:39:G:H2'	22:BA:40:U:C6	2.49	0.46
10:AJ:54:SER:OG	10:AJ:55:PRO:HD2	2.14	0.46
22:BA:465:G:H2'	22:BA:466:A:C8	2.50	0.46
22:BA:190:A:C4	22:BA:207:A:C2	3.03	0.46
22:DA:708:G:H2'	22:DA:709:U:C6	2.50	0.46
22:BA:2804:U:H2'	22:BA:2805:C:H6	1.80	0.46
22:DA:1350:C:C2	22:DA:1382:G:C2	3.03	0.46
19:AS:40:ILE:CG1	19:AS:71:LEU:HD22	2.45	0.46
22:BA:2786:U:OP1	25:BD:70:LYS:NZ	2.36	0.46
26:DE:1:MET:HB2	26:DE:16:GLU:HA	1.96	0.46
22:BA:827:U:H2'	22:BA:2068:U:C2	2.50	0.46
22:DA:1833:C:N3	22:DA:1834:U:C4	2.83	0.46
50:D2:46:LYS:HD3	50:D2:46:LYS:C	2.36	0.46
2:AB:66:LYS:N	2:AB:66:LYS:HD3	2.30	0.46
3:AC:143:ARG:CG	3:AC:144:LEU:HD13	2.44	0.46
1:CA:872:A:C4	1:CA:874:G:C8	3.02	0.46
38:BQ:62:ILE:HG23	38:BQ:76:TYR:CE1	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:77:ASN:O	5:CE:80:THR:HG22	2.15	0.46
8:CH:66:PHE:CE2	8:CH:67:GLN:OE1	2.67	0.46
22:DA:1364:G:H2'	22:DA:1365:A:C5'	2.46	0.46
22:DA:618:G:C2	22:DA:619:G:H1'	2.50	0.46
22:BA:1911:U:C4	22:BA:1918:A:C5	3.02	0.46
1:CA:1060:U:H5'	10:CJ:53:ILE:HG23	1.98	0.46
20:AT:54:MET:HA	20:AT:57:ILE:HG22	1.96	0.46
1:AA:8:A:N6	4:AD:202:GLU:O	2.46	0.46
22:BA:477:A:C6	22:BA:478:A:C6	3.03	0.46
32:DK:105:ARG:N	32:DK:122:VAL:OXT	2.48	0.46
22:DA:54:G:C6	22:DA:55:G:N7	2.83	0.46
25:DD:56:LYS:O	25:DD:57:ALA:C	2.53	0.46
14:AN:46:LEU:O	14:AN:47:LYS:C	2.54	0.46
1:AA:145:G:N2	1:AA:178:C:C2	2.82	0.46
1:CA:731:G:H5'	1:CA:766:A:H4'	1.97	0.46
22:DA:609:A:C6	22:DA:610:C:O2	2.68	0.46
10:AJ:52:LEU:HD23	10:AJ:62:ARG:HG2	1.96	0.46
10:AJ:53:ILE:HD11	14:AN:85:ARG:NH1	2.31	0.46
22:DA:2079:U:C2'	22:DA:2080:A:O4'	2.62	0.46
13:CM:85:CYS:HB3	19:CS:74:PHE:CZ	2.50	0.46
10:AJ:32:THR:OG1	10:AJ:33:GLY:N	2.46	0.46
34:DM:136:MET:HE2	43:DV:57:TYR:CD2	2.49	0.46
22:DA:276:U:O2'	22:DA:278:A:N7	2.49	0.46
22:DA:2566:A:N1	32:DK:28:SER:OG	2.35	0.46
22:DA:2799:A:C2	22:DA:2801:G:H1'	2.50	0.46
6:CF:62:MET:O	6:CF:63:ASN:HB2	2.15	0.46
33:DL:54:GLN:HG2	33:DL:55:MET:N	2.30	0.46
7:CG:116:MET:HA	7:CG:119:ARG:HD3	1.97	0.46
22:BA:271:G:H4'	22:BA:272:A:OP1	2.16	0.46
1:AA:404:G:N7	4:AD:2:ALA:HB3	2.30	0.46
22:BA:1734:G:H2'	22:BA:1735:A:H8	1.80	0.46
1:CA:681:A:C2	1:CA:710:G:N3	2.83	0.46
1:AA:572:A:H5'	1:AA:573:A:P	2.56	0.46
22:DA:2331:G:N2	22:DA:2385:C:N1	2.64	0.46
1:CA:1202:U:H2'	1:CA:1203:C:O4'	2.15	0.46
1:AA:1145:A:O2'	1:AA:1146:A:O5'	2.31	0.46
1:AA:1133:G:N2	1:AA:1142:G:C4	2.83	0.46
42:DU:96:PHE:CE1	42:DU:103:ILE:HG13	2.51	0.46
27:BF:17:MET:SD	27:BF:25:VAL:HA	2.55	0.46
3:AC:7:PRO:HG2	3:AC:184:TYR:CD1	2.50	0.46
27:DF:117:LEU:HB3	27:DF:130:MET:SD	2.56	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1006:C:C2	22:BA:1138:G:N2	2.83	0.46
22:BA:2558:C:O2'	22:BA:2559:C:H5'	2.15	0.46
45:BX:37:ARG:NH1	45:BX:46:PHE:CE1	2.83	0.46
15:CO:3:LEU:HD13	15:CO:35:GLN:HG2	1.96	0.46
41:DT:7:LEU:HD21	41:DT:45:ALA:HB3	1.98	0.46
1:AA:2:A:C6	1:AA:3:A:N1	2.84	0.46
1:CA:774:G:C6	1:CA:775:G:C5	3.03	0.46
7:AG:130:ASN:HA	7:AG:135:VAL:HG11	1.96	0.46
22:DA:2064:C:H2'	22:DA:2065:C:C6	2.50	0.46
22:BA:697:G:H2'	22:BA:698:C:C6	2.50	0.46
22:BA:1635:A:C6	22:BA:1636:U:C2	3.02	0.46
24:BC:209:GLY:O	24:BC:210:ALA:C	2.53	0.46
8:AH:87:LYS:HG2	8:AH:91:GLU:O	2.16	0.46
22:BA:2790:U:H5'	22:BA:2893:A:N7	2.30	0.46
4:AD:62:ARG:HG3	4:AD:72:PHE:CD2	2.50	0.46
13:CM:3:ARG:HA	13:CM:8:ASN:O	2.15	0.46
31:DJ:4:PHE:CD2	38:DQ:100:VAL:HG11	2.50	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:DA:2063:C:C4'	55:DA:3001:DOL:H343	2.43	0.46
22:BA:826:U:O2'	33:BL:53:GLY:CA	2.60	0.46
22:DA:784:G:H5''	24:DC:226:ASN:OD1	2.14	0.46
22:DA:1362:C:H2'	22:DA:1363:C:C5'	2.46	0.46
22:BA:973:A:H5''	39:BR:81:LYS:HE3	1.97	0.46
22:DA:223:A:H2'	22:DA:408:G:N3	2.31	0.46
22:DA:224:U:OP2	22:DA:408:G:N2	2.48	0.46
1:AA:983:A:H5''	1:AA:984:C:OP2	2.14	0.46
26:BE:7:ASP:O	26:BE:9:GLN:N	2.48	0.46
1:CA:999:C:H2'	1:CA:1000:A:C8	2.50	0.46
22:BA:974:G:C8	22:BA:990:A:N6	2.81	0.46
1:AA:652:U:C4	1:AA:752:G:N3	2.83	0.46
22:DA:52:A:C2	22:DA:178:G:N3	2.83	0.46
21:AU:34:ARG:NE	21:AU:35:ARG:HB2	2.30	0.46
17:AQ:69:LYS:O	17:AQ:70:THR:OG1	2.33	0.46
20:AT:67:ILE:HG13	20:AT:71:LYS:CG	2.46	0.46
22:BA:2584:U:C2'	22:BA:2585:U:H5'	2.43	0.46
22:BA:2310:C:C5	27:BF:77:PHE:CZ	3.03	0.46
22:DA:864:G:N2	22:DA:913:U:C2	2.83	0.46
22:DA:1544:A:N6	22:DA:1545:A:C6	2.83	0.46
4:AD:122:ALA:O	4:AD:123:ILE:CG2	2.62	0.46
22:DA:593:U:C2	22:DA:594:U:C5	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1361:G:C4	1:CA:1362:A:C8	3.03	0.46
1:CA:1489:G:C5	1:CA:1490:U:C5	3.04	0.46
14:AN:93:ILE:HD12	14:AN:96:LEU:HD23	1.96	0.46
8:AH:105:SER:O	8:AH:123:GLY:HA3	2.15	0.46
8:AH:11:LEU:HD11	8:AH:127:CYS:CB	2.45	0.46
19:CS:55:ARG:NE	19:CS:79:THR:CG2	2.79	0.46
3:CC:110:GLU:C	3:CC:111:LEU:HD22	2.35	0.46
2:AB:200:ILE:O	2:AB:201:PRO:O	2.33	0.46
2:AB:34:ALA:O	2:AB:35:ARG:C	2.53	0.46
37:DP:53:ARG:N	37:DP:57:SER:OG	2.48	0.46
22:DA:2892:G:H5''	22:DA:2894:G:N2	2.31	0.46
22:BA:927:A:O2'	47:BZ:39:GLU:OE2	2.25	0.46
49:D1:39:PHE:CG	49:D1:40:ASP:N	2.84	0.46
22:DA:2370:G:O2'	49:D1:44:ARG:NH1	2.49	0.46
5:CE:109:GLY:O	5:CE:110:ALA:CB	2.63	0.46
22:BA:1958:C:C2'	22:BA:1959:G:H5'	2.45	0.46
22:BA:2154:A:H2'	22:BA:2155:U:C5	2.51	0.46
1:AA:553:A:C2'	1:AA:554:A:H5'	2.45	0.46
4:AD:107:PHE:CD1	4:AD:145:ILE:HD13	2.51	0.46
5:AE:116:GLU:HG2	5:AE:117:VAL:N	2.31	0.46
22:BA:1886:U:O2'	22:BA:1887:C:H5'	2.15	0.46
35:DN:31:HIS:O	35:DN:33:ILE:HG22	2.16	0.46
22:BA:2076:U:C4'	22:BA:2076:U:O2	2.63	0.46
53:B5:28:ARG:O	53:B5:28:ARG:HG3	2.15	0.46
3:CC:126:ARG:O	3:CC:127:ARG:CB	2.63	0.46
24:DC:76:ALA:HB2	24:DC:96:TYR:CD2	2.49	0.46
22:BA:720:U:H2'	22:BA:721:A:C8	2.51	0.46
1:AA:896:C:O2'	1:AA:897:C:H5'	2.15	0.46
53:B5:78:ILE:HG22	53:B5:123:ALA:HA	1.96	0.46
22:BA:1192:G:O2'	22:BA:1193:G:H5'	2.16	0.46
46:DY:45:GLN:O	46:DY:47:ARG:N	2.48	0.46
44:DW:70:GLU:O	44:DW:79:PHE:N	2.46	0.46
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.98	0.46
3:AC:113:ALA:HA	3:AC:200:VAL:HG21	1.98	0.46
53:B5:73:VAL:CG2	53:B5:162:ILE:CB	2.93	0.46
2:AB:132:LYS:O	2:AB:136:MET:HB2	2.15	0.46
23:BB:75:G:H2'	23:BB:76:G:O4'	2.15	0.46
15:AO:56:LEU:HD12	15:AO:56:LEU:O	2.15	0.46
1:AA:559:A:H2'	1:AA:559:A:N3	2.29	0.46
6:CF:80:PHE:O	6:CF:80:PHE:CG	2.68	0.46
7:CG:14:PRO:O	7:CG:15:ASP:C	2.54	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1087:G:C2'	22:BA:1089:A:H1'	2.45	0.46
22:DA:2056:G:N3	22:DA:2056:G:H2'	2.30	0.46
29:DH:41:LYS:O	29:DH:44:ILE:HG12	2.15	0.46
22:DA:1351:C:C2	22:DA:1381:G:C2	3.04	0.46
22:DA:311:A:OP1	22:DA:332:A:C2	2.69	0.46
22:DA:528:A:N1	22:DA:2042:A:H2'	2.30	0.46
8:AH:47:GLU:N	8:AH:64:LYS:HG3	2.31	0.46
13:CM:91:HIS:O	13:CM:109:ARG:NH2	2.49	0.46
13:CM:40:ALA:O	13:CM:41:GLU:C	2.54	0.46
37:DP:65:SER:O	37:DP:66:ASN:C	2.53	0.46
1:AA:994:A:N1	1:AA:1047:G:H4'	2.30	0.46
22:DA:1678:A:C4	22:DA:1679:A:C8	3.03	0.46
24:DC:72:ASP:OD1	24:DC:189:ARG:NH1	2.48	0.46
1:AA:73:C:HO2'	1:AA:74:A:C5'	2.28	0.46
22:BA:307:G:N2	22:BA:309:A:H3'	2.30	0.46
22:DA:630:G:H3'	22:DA:631:A:H5"	1.97	0.46
22:DA:1208:C:C5	22:DA:1209:U:C5	3.03	0.46
22:DA:349:U:C2'	22:DA:350:G:H5'	2.45	0.46
25:BD:61:THR:HB	25:BD:63:PRO:HD2	1.97	0.46
1:CA:1279:G:H5"	10:CJ:9:ARG:NH2	2.30	0.46
10:AJ:52:LEU:CB	14:AN:81:ARG:HE	2.28	0.46
1:AA:582:C:N3	1:AA:583:A:C8	2.84	0.46
26:BE:108:ILE:HG13	26:BE:109:LEU:N	2.29	0.46
27:BF:4:LEU:HD22	27:BF:173:PHE:CD2	2.51	0.46
1:CA:155:A:C2	1:CA:167:A:C5	3.03	0.46
1:CA:957:U:O3'	19:CS:79:THR:OG1	2.33	0.46
22:BA:1871:A:C8	22:BA:1872:A:C6	3.03	0.46
33:DL:95:LEU:O	33:DL:100:ILE:HG23	2.16	0.46
1:CA:1521:C:C2	1:CA:1522:U:C5	3.03	0.46
22:DA:1248:G:C4	38:DQ:3:ARG:HG3	2.50	0.46
10:AJ:41:PRO:O	10:AJ:71:LEU:O	2.33	0.46
22:DA:2741:A:H2'	22:DA:2742:G:H5'	1.98	0.46
1:CA:955:U:H2'	1:CA:956:U:O4'	2.14	0.46
22:DA:883:G:N2	22:DA:894:U:O2	2.49	0.46
2:CB:167:ASP:HA	2:CB:170:HIS:HB3	1.97	0.46
22:DA:1753:G:N1	22:DA:1756:G:C2	2.84	0.46
33:BL:57:LEU:HD22	51:B3:54:ASP:HB3	1.98	0.46
11:AK:112:ASP:HB2	21:AU:20:LYS:HD2	1.97	0.46
20:CT:21:ASN:O	20:CT:25:ARG:HB3	2.15	0.46
1:AA:501:C:H2'	1:AA:502:A:C8	2.49	0.46
22:DA:2748:A:C2	22:DA:2757:A:C5	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:713:G:C6	22:BA:714:U:C4	3.03	0.46
22:DA:2209:G:C2	22:DA:2216:G:C2	3.04	0.46
22:BA:25:U:H2'	22:BA:26:G:H5'	1.97	0.46
22:BA:27:G:N2	22:BA:512:G:H1'	2.29	0.46
24:DC:246:THR:C	24:DC:248:TRP:N	2.69	0.46
22:BA:1606:C:O2'	22:BA:1607:C:O5'	2.31	0.46
1:AA:1026:G:N1	1:AA:1035:A:C2	2.84	0.46
20:AT:68:HIS:C	20:AT:69:LYS:HG3	2.34	0.46
24:BC:195:VAL:HG12	24:BC:196:GLY:N	2.29	0.46
15:CO:39:LEU:O	15:CO:42:HIS:HB3	2.16	0.46
22:BA:2410:G:C2	22:BA:2411:A:H1'	2.50	0.46
42:BU:4:LYS:O	42:BU:83:VAL:HG21	2.16	0.46
1:AA:199:A:C2	1:AA:200:G:C4	3.04	0.46
27:BF:58:ALA:O	27:BF:61:SER:O	2.34	0.46
22:BA:1533:C:H5'	22:BA:1534:U:OP2	2.15	0.46
46:DY:18:LEU:O	46:DY:22:LEU:HB3	2.15	0.46
22:DA:1347:A:C5	22:DA:1348:C:C5	3.03	0.46
22:BA:1293:C:H2'	22:BA:1294:U:O4'	2.15	0.46
22:BA:2233:U:H2'	22:BA:2234:G:C8	2.50	0.46
30:DI:49:ILE:O	30:DI:50:GLU:HB2	2.16	0.46
22:BA:118:A:C8	22:BA:119:A:C8	3.03	0.46
1:AA:867:G:O2'	1:AA:873:A:N1	2.38	0.46
22:BA:776:G:H4'	22:BA:777:G:O5'	2.15	0.46
11:AK:23:ILE:HD11	11:AK:86:VAL:HG13	1.97	0.46
22:DA:398:C:OP2	45:DX:53:ALA:HB3	2.16	0.46
4:CD:142:VAL:HG12	4:CD:181:THR:OG1	2.16	0.46
42:BU:73:PHE:CZ	42:BU:78:GLY:HA2	2.50	0.46
35:DN:29:VAL:HG13	35:DN:83:LEU:HD11	1.96	0.46
22:DA:1268:A:H2'	22:DA:1269:A:O4'	2.16	0.46
22:BA:1190:G:OP1	33:BL:32:GLY:CA	2.62	0.46
22:DA:1438:U:C4	22:DA:1552:A:C2	3.04	0.46
17:AQ:17:MET:CG	17:AQ:20:SER:HB3	2.46	0.46
22:BA:198:C:O5'	22:BA:198:C:H6	1.98	0.46
22:BA:197:A:H62	22:BA:2430:A:H2'	1.81	0.46
22:DA:2199:A:C5	22:DA:2225:A:N1	2.84	0.46
22:DA:777:G:N3	22:DA:778:G:C8	2.83	0.46
11:AK:35:THR:OG1	11:AK:41:ALA:N	2.48	0.46
32:DK:121:GLU:HG2	32:DK:122:VAL:HG23	1.97	0.46
2:AB:50:PHE:CD2	2:AB:51:ASN:OD1	2.69	0.46
1:CA:1157:A:H5'	1:CA:1158:C:C6	2.50	0.46
42:DU:9:ASP:OD2	42:DU:10:GLU:O	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:616:A:H2'	22:BA:617:G:O4'	2.16	0.46
22:DA:476:G:O4'	22:DA:505:A:C2	2.69	0.46
22:DA:585:G:H2'	22:DA:586:A:N7	2.31	0.46
1:CA:373:A:O2'	1:CA:374:A:H5'	2.16	0.46
25:BD:103:ASP:OD2	25:BD:104:VAL:N	2.49	0.46
2:AB:163:VAL:HG22	2:AB:185:ALA:HB1	1.98	0.46
1:AA:859:G:H2'	1:AA:860:A:H8	1.76	0.46
5:AE:136:VAL:HG22	5:AE:137:VAL:N	2.30	0.46
23:BB:116:G:H4'	36:BO:54:VAL:CG1	2.44	0.46
27:BF:104:ILE:HG22	27:BF:176:PRO:CD	2.46	0.46
22:DA:1289:C:O2'	22:DA:1330:C:H4'	2.15	0.46
33:DL:59:ARG:CZ	33:DL:59:ARG:HB3	2.44	0.46
1:AA:67:C:O2'	1:AA:171:A:H1'	2.15	0.46
9:CI:56:ASP:C	9:CI:57:MET:HG3	2.36	0.46
22:BA:780:G:H2'	22:BA:782:A:N7	2.31	0.46
1:CA:756:C:H2'	1:CA:757:U:O5'	2.16	0.46
1:CA:674:G:OP1	6:CF:86:ARG:NH2	2.44	0.46
1:AA:832:G:C4	1:AA:833:G:C8	3.03	0.46
22:DA:2201:G:H2'	22:DA:2202:U:C6	2.51	0.46
22:BA:422:A:C2	22:BA:423:A:C4	3.04	0.46
25:DD:18:ASP:OD2	25:DD:18:ASP:N	2.49	0.46
7:AG:71:PRO:O	7:AG:96:ARG:HG3	2.16	0.46
22:DA:1799:G:O2'	24:DC:180:GLU:OE2	2.26	0.46
1:CA:421:U:C4'	1:CA:421:U:OP1	2.63	0.46
22:BA:1820:U:O2	24:BC:200:HIS:HB3	2.15	0.46
1:AA:1253:G:C4	1:AA:1254:A:C8	3.03	0.46
3:CC:36:ASP:C	3:CC:38:LYS:H	2.19	0.46
1:CA:295:C:C4	1:CA:296:U:C5	3.03	0.46
1:CA:414:A:C2	1:CA:415:A:C4	3.03	0.46
22:BA:548:G:O2'	22:BA:549:G:C2	2.67	0.46
22:DA:1833:C:C4	22:DA:1834:U:C4	3.04	0.46
36:DO:27:VAL:HG21	36:DO:40:ILE:HD12	1.98	0.46
48:B0:13:ARG:O	48:B0:17:ARG:HG3	2.15	0.46
1:AA:36:C:H2'	1:AA:37:U:O4'	2.15	0.46
3:AC:84:VAL:HG13	3:AC:101:ILE:HG21	1.98	0.46
1:AA:919:A:O2'	1:AA:920:U:H5'	2.15	0.46
46:DY:21:LEU:HA	46:DY:25:GLN:HB3	1.98	0.46
12:AL:29:GLN:HB2	12:AL:82:ILE:O	2.15	0.46
36:DO:51:ALA:HB1	36:DO:77:ALA:CB	2.45	0.46
46:DY:1:MET:HA	46:DY:4:LYS:HB2	1.97	0.46
24:DC:68:LYS:HG2	24:DC:151:GLY:HA2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:130:PHE:CZ	3:AC:131:ARG:HD3	2.51	0.46
6:AF:45:ARG:HG2	6:AF:46:GLN:N	2.30	0.46
24:DC:260:ASN:OD1	24:DC:263:THR:N	2.45	0.46
4:AD:124:MET:HG3	4:AD:146:ARG:HG2	1.97	0.46
27:DF:163:ASP:N	27:DF:163:ASP:OD1	2.49	0.46
23:DB:100:G:H2'	23:DB:101:A:O4'	2.15	0.46
49:D1:4:GLY:O	49:D1:6:ARG:N	2.48	0.46
22:BA:2551:C:OP1	57:BA:3434:HOH:O	2.21	0.46
29:BH:37:VAL:CG2	29:BH:38:PRO:HD2	2.45	0.46
1:AA:529:G:H4'	1:AA:533:A:C2	2.50	0.46
22:BA:1062:G:OP1	22:BA:1070:A:H4'	2.16	0.46
22:BA:1925:C:C4'	22:BA:1926:U:OP1	2.55	0.46
40:DS:29:VAL:HG11	40:DS:55:ILE:HD11	1.97	0.46
22:BA:1916:A:O3'	22:BA:1917:U:H4'	2.16	0.46
10:CJ:53:ILE:HD11	14:CN:85:ARG:NH1	2.31	0.46
22:DA:1593:A:O2'	22:DA:1594:U:H5'	2.15	0.46
1:AA:1107:C:C2	1:AA:1108:G:C8	3.04	0.46
22:DA:2170:A:C2	22:DA:2171:A:C6	3.03	0.46
22:BA:2190:G:N1	22:BA:2191:A:C4	2.84	0.46
22:BA:528:A:H2	22:BA:2043:C:C5'	2.28	0.46
22:DA:40:U:C5	22:DA:41:C:N4	2.83	0.46
22:DA:2503:A:H5'	22:DA:2503:A:N3	2.31	0.46
35:DN:85:PRO:O	35:DN:86:ARG:C	2.52	0.46
22:BA:140:C:O2	22:BA:140:C:O4'	2.34	0.46
22:BA:2637:U:H2'	22:BA:2638:G:H5'	1.97	0.46
53:B5:36:ALA:O	53:B5:37:LYS:HB2	2.15	0.46
1:CA:577:G:C8	1:CA:816:A:C2	3.03	0.46
22:DA:2852:G:H2'	22:DA:2853:C:O4'	2.15	0.46
14:CN:61:ARG:O	14:CN:62:ASN:CB	2.64	0.46
9:AI:20:PHE:O	9:AI:63:LEU:HA	2.15	0.46
1:AA:345:C:O2'	32:BK:116:ILE:CD1	2.63	0.46
22:BA:445:C:OP1	38:BQ:2:ALA:N	2.48	0.46
1:CA:146:G:N2	1:CA:147:G:H1'	2.30	0.46
22:DA:927:A:H2'	22:DA:928:A:C8	2.51	0.46
22:DA:1231:U:H2'	22:DA:1232:G:C8	2.51	0.46
40:BS:36:LEU:CD1	40:BS:47:VAL:HG12	2.46	0.46
24:BC:88:SER:HB2	24:BC:200:HIS:CD2	2.51	0.46
22:DA:1926:U:H1'	22:DA:1929:G:C6	2.51	0.46
5:AE:14:LYS:NZ	5:AE:116:GLU:OE2	2.48	0.46
22:DA:2511:U:C4	22:DA:2512:C:C5	3.04	0.46
31:BJ:31:GLU:HG3	31:BJ:142:ILE:HD11	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1662:U:O2	22:DA:2687:U:C5'	2.64	0.46
24:DC:87:ARG:HB3	24:DC:87:ARG:CZ	2.44	0.46
22:DA:1281:G:C2'	22:DA:1282:U:H5'	2.45	0.46
26:BE:134:LEU:O	26:BE:135:ALA:C	2.53	0.46
37:BP:58:ALA:HB1	37:BP:74:PHE:O	2.15	0.46
27:DF:4:LEU:O	27:DF:8:TYR:HB3	2.15	0.46
30:BI:57:VAL:HG22	30:BI:58:VAL:N	2.30	0.46
24:DC:107:PRO:HB3	24:DC:142:HIS:CE1	2.49	0.46
22:DA:1709:U:H2'	22:DA:1710:G:C8	2.51	0.46
22:DA:2477:U:O4	52:D4:10:LEU:HD21	2.16	0.46
11:CK:100:LEU:O	11:CK:103:ALA:N	2.48	0.46
22:DA:2848:G:OP2	37:DP:95:ALA:N	2.48	0.46
16:AP:20:VAL:HG21	16:AP:32:PHE:CG	2.51	0.46
22:DA:744:U:H4'	22:DA:1658:C:H4'	1.98	0.46
22:BA:2080:A:H5'	45:BX:19:SER:HB2	1.97	0.46
9:AI:127:PHE:CD2	9:AI:127:PHE:O	2.69	0.46
7:CG:123:GLU:OE1	7:CG:123:GLU:HA	2.16	0.46
22:BA:2518:A:H2'	22:BA:2518:A:N3	2.30	0.46
9:CI:90:TYR:O	9:CI:91:ASP:O	2.34	0.46
49:D1:19:HIS:C	49:D1:19:HIS:CD2	2.89	0.46
1:AA:515:G:O6	57:AA:1847:HOH:O	2.21	0.46
22:DA:1306:C:C2	22:DA:1307:A:C8	3.03	0.46
1:AA:1084:G:C5	1:AA:1085:U:C4	3.02	0.46
22:BA:2284:A:C5	22:BA:2285:C:C5	3.03	0.46
29:BH:94:ILE:HG23	29:BH:98:ASP:HB2	1.98	0.46
22:BA:637:A:H4'	22:BA:638:G:O5'	2.15	0.46
22:DA:600:G:C5	22:DA:601:C:C4	3.04	0.46
22:DA:2010:G:C6	22:DA:2011:U:N3	2.84	0.46
22:DA:1361:G:C6	22:DA:1362:C:C5	3.04	0.46
22:DA:27:G:HO2'	22:DA:28:A:P	2.34	0.46
22:BA:1188:U:C2'	22:BA:1189:A:H5'	2.46	0.46
1:AA:1311:A:H2'	1:AA:1312:G:O5'	2.16	0.46
22:DA:58:G:C4	22:DA:70:G:N2	2.83	0.46
6:CF:93:LYS:HD3	6:CF:93:LYS:N	2.31	0.46
22:BA:481:G:C2	22:BA:507:A:N3	2.83	0.46
1:CA:718:A:C4	11:CK:118:HIS:CD2	3.03	0.46
1:AA:1075:U:OP1	2:AB:102:THR:HG21	2.15	0.46
22:DA:1677:A:N6	22:DA:1678:A:C6	2.83	0.46
1:CA:505:G:C2	1:CA:506:G:C5	3.04	0.46
5:CE:137:VAL:O	5:CE:138:ARG:CG	2.64	0.46
1:CA:1105:A:C2	1:CA:1106:G:C5	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:82:GLN:OE1	5:AE:148:ASN:O	2.33	0.46
22:DA:1332:G:C6	22:DA:1609:A:N7	2.84	0.46
23:BB:34:A:N3	23:BB:36:C:N4	2.61	0.46
22:BA:1107:G:H2'	22:BA:1108:U:O4'	2.15	0.46
28:DG:167:GLU:CG	28:DG:169:VAL:HG23	2.45	0.46
22:BA:323:C:C4	22:BA:333:G:C8	3.04	0.46
9:CI:57:MET:HA	9:CI:60:LYS:HB3	1.98	0.46
1:CA:1259:C:N4	1:CA:1260:G:C4	2.84	0.46
22:BA:783:A:H2'	22:BA:784:G:O5'	2.15	0.46
29:DH:34:GLY:O	29:DH:35:LYS:CG	2.64	0.46
2:AB:222:ARG:NH1	2:AB:222:ARG:HB3	2.31	0.46
22:DA:337:C:C2	22:DA:338:G:H1'	2.51	0.46
23:DB:52:A:C5	36:DO:33:ARG:NH2	2.83	0.46
42:DU:33:LYS:HB3	42:DU:64:ALA:HB1	1.97	0.46
22:DA:1845:G:OP1	24:DC:256:LYS:NZ	2.43	0.46
37:BP:29:LYS:HD3	37:BP:40:LEU:HD23	1.98	0.46
22:DA:2209:G:C6	22:DA:2210:U:C4	3.03	0.46
51:D3:31:HIS:CE1	51:D3:32:ILE:HD12	2.50	0.46
30:DI:37:GLU:OE1	30:DI:65:ARG:NH2	2.49	0.46
47:DZ:7:ILE:O	47:DZ:36:VAL:N	2.49	0.46
35:BN:32:GLU:OE1	35:BN:118:ARG:HA	2.14	0.46
1:AA:1070:U:O2	1:AA:1071:C:C6	2.68	0.46
16:CP:23:ASP:OD2	16:CP:25:ARG:HG3	2.16	0.46
1:CA:862:C:N3	1:CA:863:U:C5	2.83	0.46
16:CP:6:LEU:CD1	16:CP:71:VAL:CG2	2.93	0.46
24:BC:142:HIS:C	24:BC:142:HIS:CD2	2.89	0.46
21:AU:29:LEU:HD23	21:AU:29:LEU:O	2.16	0.46
14:CN:46:LEU:HG	19:CS:10:PHE:CD2	2.51	0.46
2:CB:166:ALA:HB2	2:CB:187:VAL:HB	1.98	0.46
22:DA:2318:G:C6	22:DA:2319:G:C6	3.04	0.46
25:BD:186:LEU:HD21	37:BP:4:ILE:HG21	1.97	0.46
22:BA:170:U:H2'	22:BA:171:U:H6	1.79	0.46
22:DA:412:A:H2'	22:DA:413:C:H5'	1.97	0.46
53:B5:200:HIS:O	53:B5:201:LYS:C	2.54	0.46
42:DU:12:ILE:CG2	42:DU:80:ALA:HB2	2.46	0.46
1:AA:849:G:C6	1:AA:850:U:N3	2.84	0.46
1:AA:670:G:C2'	1:AA:671:G:O5'	2.63	0.46
12:AL:3:THR:HG22	12:AL:4:VAL:N	2.30	0.46
21:AU:53:VAL:O	21:AU:54:LYS:HB2	2.15	0.46
1:CA:1009:U:C2	1:CA:1021:A:N6	2.84	0.46
24:BC:161:TYR:CD2	24:BC:194:GLU:HG2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B4:10:LEU:HD12	52:B4:33:HIS:CD2	2.51	0.46
32:BK:66:LYS:O	32:BK:66:LYS:HE3	2.16	0.46
22:BA:1956:U:H2'	22:BA:1957:C:H5'	1.98	0.46
29:DH:60:GLU:HA	29:DH:60:GLU:OE2	2.15	0.46
3:AC:149:ILE:HG12	3:AC:150:LYS:N	2.30	0.46
22:BA:1157:G:N2	22:BA:1158:C:C2	2.84	0.46
29:BH:90:LEU:HD23	29:BH:93:SER:HA	1.97	0.46
22:DA:2715:C:C4	22:DA:2716:C:C5	3.04	0.46
13:AM:11:ASP:CG	13:AM:45:ILE:HG12	2.37	0.46
13:AM:45:ILE:O	13:AM:45:ILE:CG2	2.63	0.46
22:DA:36:G:H4'	22:DA:451:U:C2	2.51	0.46
40:DS:66:ILE:O	40:DS:69:LEU:HB2	2.16	0.46
1:AA:1053:G:H4'	1:AA:1054:C:H5''	1.98	0.46
19:AS:3:ARG:O	19:AS:4:SER:HB2	2.15	0.46
3:AC:64:ILE:CG2	3:AC:99:ALA:HB2	2.46	0.46
1:AA:275:G:O3'	17:AQ:17:MET:HE2	2.15	0.46
4:AD:26:ARG:HD2	4:AD:31:LYS:CE	2.46	0.46
1:AA:207:C:H2'	1:AA:208:U:O2	2.16	0.46
1:CA:1157:A:C5	1:CA:1180:A:C6	3.03	0.46
1:AA:546:A:P	4:AD:69:GLU:HB2	2.56	0.46
17:AQ:80:GLU:C	17:AQ:81:LYS:HD3	2.36	0.46
22:DA:500:G:N2	22:DA:502:A:C8	2.83	0.46
39:BR:39:LEU:CA	39:BR:49:ILE:HG23	2.45	0.46
2:CB:175:GLU:O	2:CB:179:LEU:HD22	2.15	0.46
5:AE:148:ASN:ND2	8:AH:73:GLU:OE2	2.49	0.46
1:CA:731:G:O2'	1:CA:732:C:H5'	2.16	0.46
1:CA:811:C:C4	1:CA:812:G:C6	3.04	0.46
11:AK:102:ALA:O	11:AK:103:ALA:C	2.54	0.46
22:DA:1545:A:H2'	22:DA:1546:G:O4'	2.15	0.46
33:BL:101:ILE:HG13	33:BL:102:GLY:N	2.30	0.46
1:CA:802:A:C2	1:CA:803:G:C1'	2.98	0.46
22:DA:349:U:O2'	22:DA:350:G:H5'	2.15	0.46
35:DN:71:ARG:HG3	35:DN:71:ARG:HH21	1.81	0.46
1:AA:1190:G:OP2	3:AC:5:VAL:HB	2.16	0.46
1:CA:170:U:O2'	1:CA:171:A:H5'	2.15	0.46
27:BF:2:ALA:HB2	27:BF:94:GLU:OE1	2.15	0.46
22:DA:695:G:C6	22:DA:768:G:C5	3.04	0.46
22:BA:340:A:H2'	22:BA:341:C:O4'	2.15	0.46
4:CD:36:GLN:O	4:CD:37:ALA:HB2	2.15	0.46
22:BA:251:A:H2'	22:BA:252:G:O4'	2.16	0.46
22:DA:160:A:C6	22:DA:161:A:C6	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:45:ARG:HA	5:AE:72:ILE:O	2.16	0.46
22:BA:947:A:O2'	22:BA:984:A:H2	1.97	0.46
9:AI:120:LYS:HG3	9:AI:123:ARG:HB2	1.97	0.46
22:DA:1870:C:C3'	22:DA:1871:A:H5'	2.46	0.46
21:AU:12:PHE:CD1	21:AU:16:LEU:HD11	2.50	0.46
22:DA:2345:G:N3	22:DA:2381:A:H2'	2.30	0.46
30:BI:79:LEU:HD22	30:BI:109:ILE:HG23	1.97	0.46
17:AQ:48:ASP:OD2	17:AQ:48:ASP:O	2.34	0.46
22:BA:25:U:C2'	22:BA:26:G:H5'	2.46	0.46
22:DA:2804:U:C4	22:DA:2805:C:C4	3.03	0.46
10:AJ:73:LEU:O	10:AJ:74:VAL:CB	2.64	0.46
22:DA:2412:A:H3'	22:DA:2413:G:H8	1.80	0.46
1:CA:1386:G:C2	1:CA:1387:G:N7	2.84	0.46
22:DA:579:G:C2	22:DA:1262:A:C5	3.04	0.46
37:DP:75:GLN:HB2	37:DP:78:SER:HB2	1.98	0.46
1:AA:188:C:O2	1:AA:188:C:C2'	2.63	0.46
14:CN:46:LEU:CD2	19:CS:10:PHE:CD2	2.99	0.46
22:BA:189:G:P	45:BX:26:LYS:HD2	2.55	0.46
22:DA:1936:A:H2	22:DA:1943:U:H3	1.63	0.46
1:AA:102:G:N1	1:AA:103:U:C4	2.84	0.46
22:BA:1266:G:OP2	48:B0:17:ARG:NE	2.45	0.46
1:CA:513:C:H2'	1:CA:514:C:C6	2.51	0.46
22:DA:1712:U:O4	22:DA:1713:A:C2	2.69	0.46
1:CA:461:A:H2'	1:CA:462:G:O4'	2.16	0.46
22:BA:1381:G:H1'	22:BA:1571:A:N1	2.31	0.46
1:CA:110:C:H2'	1:CA:111:G:O4'	2.16	0.46
22:BA:2256:G:O2'	22:BA:2257:U:H5'	2.15	0.46
22:BA:310:A:O2'	22:BA:311:A:P	2.73	0.46
22:BA:1174:U:O2	22:BA:1174:U:O4'	2.33	0.46
21:AU:47:ARG:HE	21:AU:47:ARG:HA	1.81	0.46
16:AP:23:ASP:C	16:AP:23:ASP:OD1	2.54	0.46
38:DQ:90:ILE:CG2	38:DQ:94:ILE:CG2	2.94	0.46
22:DA:601:C:H2'	22:DA:602:A:O4'	2.16	0.46
22:DA:1364:G:N7	45:DX:2:SER:N	2.64	0.46
1:AA:1048:G:N3	1:AA:1050:G:C8	2.83	0.46
22:DA:973:A:O4'	22:DA:1188:U:C6	2.69	0.46
22:DA:488:G:N1	22:DA:491:G:OP2	2.49	0.46
1:CA:684:U:C2'	11:CK:40:ASN:O	2.64	0.46
1:AA:258:G:C5	1:AA:259:G:C8	3.03	0.46
1:AA:202:G:C2	1:AA:216:U:O2	2.69	0.46
1:AA:464:U:N3	1:AA:466:A:H5''	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:583:G:N2	22:DA:1258:U:C2	2.84	0.46
4:CD:26:ARG:CG	4:CD:27:ALA:N	2.74	0.46
35:BN:65:LEU:HD11	35:BN:69:ARG:HH21	1.78	0.46
1:AA:787:A:C5	1:AA:788:U:C5	3.04	0.46
22:DA:1062:G:C6	22:DA:1063:G:O6	2.69	0.46
22:DA:38:A:C2	22:DA:442:G:O6	2.68	0.46
1:CA:620:C:N1	4:CD:132:ILE:HD13	2.30	0.46
7:AG:13:LEU:HA	7:AG:14:PRO:HD2	1.86	0.46
1:CA:78:A:C2	1:CA:92:U:O2	2.69	0.46
1:CA:93:U:C2'	1:CA:94:G:H5'	2.46	0.46
4:CD:58:LYS:CB	4:CD:200:ILE:HB	2.46	0.46
8:AH:10:MET:HE1	8:AH:33:LYS:CB	2.45	0.46
35:BN:31:HIS:C	35:BN:33:ILE:H	2.19	0.46
24:BC:252:THR:HG22	24:BC:253:LYS:N	2.30	0.46
26:BE:155:GLU:OE2	26:BE:159:LEU:HD21	2.16	0.46
3:CC:111:LEU:HD22	3:CC:111:LEU:N	2.31	0.46
25:DD:177:VAL:CG2	25:DD:187:LEU:HD11	2.46	0.46
22:DA:1585:C:C5	22:DA:1586:A:N7	2.84	0.46
1:CA:728:A:N1	1:CA:729:A:C6	2.84	0.46
1:AA:1080:A:OP1	5:AE:52:LYS:HE3	2.16	0.46
22:DA:704:G:H1'	22:DA:726:G:N2	2.31	0.46
1:CA:1227:A:OP2	13:CM:110:LYS:HD2	2.15	0.46
22:DA:2893:A:O4'	22:DA:2894:G:C2	2.68	0.46
1:AA:587:G:N2	1:AA:755:G:C8	2.84	0.46
28:DG:96:ALA:O	28:DG:128:GLN:HA	2.16	0.46
22:DA:2853:C:H2'	22:DA:2854:G:C8	2.51	0.46
10:AJ:91:ASP:O	10:AJ:92:LEU:HD12	2.15	0.46
22:DA:2499:C:C4	22:DA:2500:U:O4	2.69	0.46
11:AK:55:SER:O	11:AK:58:SER:N	2.48	0.46
6:CF:86:ARG:NH1	6:CF:86:ARG:CG	2.77	0.46
13:CM:23:TYR:O	13:CM:23:TYR:CD2	2.69	0.46
4:CD:146:ARG:O	4:CD:150:LYS:HB2	2.16	0.46
1:CA:798:U:C2'	1:CA:799:G:O5'	2.64	0.46
42:DU:57:GLY:O	42:DU:59:VAL:HG23	2.16	0.46
22:BA:2516:A:O2'	22:BA:2517:C:H5'	2.15	0.46
22:DA:477:A:C2'	22:DA:478:A:O5'	2.63	0.46
27:BF:17:MET:HE3	27:BF:17:MET:HA	1.98	0.46
23:BB:37:C:C5	23:BB:38:C:C5	3.04	0.46
4:AD:34:ILE:HG12	4:AD:35:GLU:N	2.30	0.46
22:DA:1861:G:N1	22:DA:1882:U:O2	2.48	0.46
22:DA:2584:U:OP2	22:DA:2585:U:C5	2.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:D4:25:VAL:HB	52:D4:35:GLN:HB2	1.98	0.46
42:DU:12:ILE:HG21	42:DU:80:ALA:HB2	1.96	0.46
1:AA:273:U:H2'	1:AA:274:A:H5'	1.97	0.46
34:BM:135:VAL:HG23	34:BM:135:VAL:O	2.16	0.46
1:AA:731:G:OP1	1:AA:766:A:H1'	2.15	0.46
34:DM:97:GLN:OE1	34:DM:97:GLN:N	2.49	0.46
22:DA:1425:G:H2'	22:DA:1426:G:O4'	2.16	0.46
7:CG:99:LEU:HB3	7:CG:103:TRP:CZ2	2.50	0.46
28:DG:123:ALA:HB2	28:DG:133:LEU:HA	1.98	0.46
27:BF:148:ARG:CG	27:BF:149:VAL:N	2.78	0.46
30:BI:112:THR:O	30:BI:114:ALA:N	2.48	0.46
1:AA:773:G:H2'	1:AA:774:G:O4'	2.15	0.46
20:AT:35:VAL:CG1	20:AT:79:LEU:HD22	2.46	0.46
22:BA:2609:U:O2'	22:BA:2610:C:H5'	2.16	0.46
35:DN:43:GLU:OE1	35:DN:43:GLU:HA	2.15	0.46
42:DU:85:PHE:CD1	42:DU:85:PHE:N	2.84	0.46
7:AG:48:GLU:O	7:AG:51:ALA:HB3	2.15	0.46
5:CE:104:GLY:O	5:CE:105:ILE:HG22	2.16	0.46
22:BA:1510:G:H2'	22:BA:1511:G:O4'	2.16	0.46
22:DA:1783:A:C2	22:DA:2588:G:O4'	2.68	0.46
4:CD:9:LEU:HG	4:CD:32:CYS:HB2	1.98	0.46
4:CD:33:LYS:NZ	4:CD:33:LYS:HB2	2.31	0.46
22:DA:528:A:C2	22:DA:2043:C:H4'	2.51	0.46
22:BA:2725:A:C4	22:BA:2727:A:C8	3.04	0.46
22:BA:493:G:H2'	22:BA:494:G:O4'	2.16	0.46
22:BA:1000:A:C6	22:BA:1001:A:C6	3.04	0.46
1:AA:826:C:H5'	8:AH:13:ARG:CZ	2.46	0.46
28:DG:126:PRO:C	28:DG:127:THR:OG1	2.53	0.46
1:CA:441:A:C2	1:CA:497:G:C6	3.04	0.46
22:DA:1817:G:H4'	24:DC:86:ASN:O	2.15	0.46
22:DA:2200:C:O2	22:DA:2226:C:N4	2.48	0.46
1:CA:71:A:C6	1:CA:72:A:N7	2.84	0.46
14:AN:41:ARG:O	14:AN:42:TRP:C	2.55	0.46
1:AA:1005:A:H4'	1:AA:1037:C:H1'	1.98	0.46
25:BD:104:VAL:HG23	25:BD:105:LYS:N	2.31	0.46
2:AB:149:GLY:O	2:AB:151:ILE:N	2.49	0.46
39:DR:39:LEU:C	39:DR:49:ILE:HG23	2.36	0.46
22:DA:1068:G:H2'	22:DA:1096:A:H5'	1.98	0.46
30:DI:80:LEU:HA	30:DI:84:ALA:HB3	1.98	0.46
1:CA:1315:U:C5	1:CA:1316:G:C5	3.04	0.46
22:DA:200:U:C6	22:DA:201:C:C5	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1063:C:H2'	1:AA:1064:G:C8	2.51	0.46
2:CB:207:ILE:N	2:CB:207:ILE:HD13	2.30	0.46
22:BA:1688:U:C5'	22:BA:1689:A:OP1	2.64	0.46
17:AQ:12:VAL:O	17:AQ:22:VAL:O	2.34	0.46
22:DA:1568:G:N3	24:DC:58:HIS:CE1	2.84	0.46
22:DA:2650:U:H2'	22:DA:2651:C:C6	2.51	0.46
2:AB:43:LEU:O	2:AB:46:THR:OG1	2.34	0.46
1:CA:819:A:H4'	1:CA:820:U:OP2	2.16	0.46
37:DP:51:ARG:O	37:DP:57:SER:HA	2.16	0.46
22:DA:523:C:H2'	22:DA:524:G:C8	2.51	0.46
22:DA:2473:U:O2	22:DA:2473:U:H2'	2.16	0.46
30:DI:76:ALA:HB2	30:DI:129:ILE:HG23	1.96	0.46
14:CN:62:ASN:OD1	14:CN:73:PHE:CE1	2.69	0.46
1:CA:1260:G:OP1	1:CA:1284:C:O2'	2.19	0.46
12:CL:18:LYS:HD2	12:CL:18:LYS:O	2.16	0.46
22:DA:1652:A:H3'	22:DA:1653:G:C8	2.51	0.46
9:CI:116:VAL:HG21	10:CJ:62:ARG:HD3	1.97	0.46
15:CO:37:ASN:O	15:CO:40:GLN:HB2	2.16	0.46
1:CA:9:G:H5'	5:CE:108:GLY:HA3	1.97	0.46
22:BA:422:A:C2	22:BA:423:A:N3	2.84	0.46
22:DA:2439:A:H4'	22:DA:2440:C:H5''	1.98	0.46
1:CA:1388:C:H2'	1:CA:1389:C:H6	1.81	0.46
4:AD:107:PHE:CG	4:AD:145:ILE:HD11	2.50	0.46
22:BA:790:U:O2'	22:BA:791:C:P	2.74	0.46
1:AA:23:C:C4	1:AA:24:U:C5	3.04	0.46
33:BL:132:ARG:HG3	33:BL:142:ILE:CD1	2.46	0.46
14:AN:12:LYS:O	14:AN:16:LEU:HG	2.15	0.46
9:AI:13:LYS:O	9:AI:15:SER:N	2.44	0.46
24:DC:107:PRO:HD2	24:DC:110:LEU:HD22	1.98	0.46
1:AA:850:U:H2'	1:AA:851:G:O5'	2.16	0.46
1:AA:459:A:N6	1:AA:460:A:N6	2.63	0.46
28:BG:94:TYR:C	28:BG:95:ARG:HG2	2.36	0.46
22:BA:1818:U:OP2	24:BC:156:ARG:NH1	2.49	0.46
8:CH:35:ALA:O	8:CH:39:VAL:HG23	2.16	0.46
1:AA:935:A:C2	1:AA:936:C:C2	3.04	0.46
30:BI:65:ARG:NH1	30:BI:66:SER:OG	2.48	0.46
1:CA:1056:U:H4'	3:CC:163:ALA:HB2	1.98	0.46
22:BA:5:A:H2'	22:BA:6:A:C8	2.51	0.46
16:AP:30:GLY:O	16:AP:31:ARG:C	2.54	0.46
22:BA:1946:U:H2'	22:BA:1947:C:C6	2.51	0.46
22:BA:945:A:H4'	22:BA:946:C:OP2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:184:TYR:CD1	3:CC:201:TRP:CD1	3.04	0.46
22:DA:2885:G:N2	48:D0:32:LYS:HA	2.30	0.46
22:BA:2164:C:H3'	22:BA:2165:C:H5''	1.98	0.46
1:AA:730:G:H2'	1:AA:730:G:N3	2.30	0.46
5:AE:107:ALA:HB1	5:AE:125:ALA:HB3	1.98	0.46
1:CA:139:A:O2'	1:CA:140:U:H5'	2.16	0.46
3:AC:167:TRP:CE3	3:AC:167:TRP:C	2.90	0.46
35:BN:117:ASP:O	35:BN:119:SER:N	2.49	0.46
29:BH:90:LEU:HD21	29:BH:93:SER:HA	1.97	0.45
29:DH:39:ALA:O	29:DH:41:LYS:N	2.47	0.45
22:DA:449:A:N7	22:DA:450:G:N7	2.64	0.45
22:DA:1355:G:C6	22:DA:1377:G:C2	3.03	0.45
22:DA:1379:U:H2'	22:DA:1379:U:O2	2.16	0.45
1:CA:1007:U:C2'	1:CA:1008:U:H5'	2.45	0.45
26:DE:40:ARG:NH2	26:DE:92:HIS:CE1	2.85	0.45
1:AA:186:C:H2'	1:AA:187:G:O4'	2.15	0.45
22:DA:982:C:H5''	22:DA:983:A:OP1	2.15	0.45
22:DA:126:A:N3	50:D2:18:PHE:CE2	2.84	0.45
22:DA:118:A:N3	22:DA:178:G:H1'	2.31	0.45
22:BA:2305:U:H5''	27:BF:131:GLY:HA3	1.97	0.45
39:BR:39:LEU:HA	39:BR:49:ILE:HG21	1.96	0.45
31:BJ:81:ILE:CG2	31:BJ:82:GLY:N	2.72	0.45
22:DA:609:A:H2'	22:DA:610:C:O4'	2.16	0.45
22:DA:609:A:C5	22:DA:610:C:O2	2.70	0.45
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.15	0.45
27:BF:38:MET:HE2	27:BF:152:LEU:HD22	1.98	0.45
46:DY:14:LEU:HD21	46:DY:57:LEU:HD21	1.98	0.45
1:CA:18:C:C2	1:CA:19:A:C8	3.04	0.45
12:AL:63:VAL:HG22	12:AL:64:THR:N	2.31	0.45
16:AP:77:GLU:C	16:AP:79:ASN:H	2.19	0.45
37:DP:103:ARG:HB3	37:DP:108:ALA:CB	2.46	0.45
21:CU:34:ARG:HE	21:CU:35:ARG:HB2	1.82	0.45
22:DA:2725:A:C5	22:DA:2727:A:C8	3.04	0.45
22:BA:1106:G:C2	22:BA:1107:G:C8	3.04	0.45
20:AT:3:ASN:O	20:AT:4:ILE:C	2.54	0.45
22:BA:1936:A:H2	22:BA:1943:U:N3	2.11	0.45
4:AD:68:LEU:N	4:AD:68:LEU:CD2	2.79	0.45
22:DA:2373:G:C6	22:DA:2381:A:N1	2.84	0.45
22:BA:868:U:C4	22:BA:869:G:N7	2.84	0.45
47:BZ:10:THR:HG23	47:BZ:11:ARG:HG3	1.99	0.45
1:CA:1244:G:C6	1:CA:1245:C:N4	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:89:LYS:HA	8:CH:92:LEU:HD13	1.98	0.45
22:DA:1651:G:N2	22:DA:2007:U:C2	2.84	0.45
22:BA:1949:G:N2	22:BA:1958:C:C2	2.84	0.45
8:CH:77:ARG:HD3	8:CH:78:VAL:N	2.31	0.45
13:CM:22:ILE:HD12	13:CM:22:ILE:N	2.31	0.45
11:CK:97:ILE:HG13	11:CK:98:ARG:N	2.30	0.45
49:D1:11:LEU:HB2	49:D1:21:TYR:HB2	1.98	0.45
1:AA:614:C:H2'	1:AA:615:G:O4'	2.15	0.45
22:DA:712:G:N2	22:DA:720:U:H1'	2.31	0.45
1:CA:1055:A:N7	1:CA:1206:G:C6	2.84	0.45
1:CA:1457:G:H2'	1:CA:1458:G:O4'	2.16	0.45
1:AA:141:G:C2	1:AA:142:G:H1'	2.51	0.45
1:AA:142:G:H3'	1:AA:143:A:H8	1.81	0.45
9:AI:85:ARG:O	9:AI:88:MET:CB	2.64	0.45
14:AN:28:LYS:N	14:AN:31:ILE:HB	2.32	0.45
22:DA:170:U:N3	22:DA:171:U:C5	2.84	0.45
35:BN:24:MET:CE	35:BN:44:LEU:HD13	2.46	0.45
22:DA:2734:A:N7	22:DA:2735:G:N7	2.64	0.45
47:DZ:3:LYS:CD	47:DZ:3:LYS:N	2.78	0.45
29:DH:112:LYS:HG2	29:DH:113:SER:N	2.32	0.45
41:DT:32:LEU:O	41:DT:32:LEU:HD12	2.16	0.45
22:DA:1459:G:C2	22:DA:1461:C:C2	3.04	0.45
17:CQ:14:SER:HB3	17:CQ:22:VAL:CG1	2.46	0.45
10:CJ:40:ILE:HG22	10:CJ:42:LEU:HG	1.96	0.45
22:BA:1665:A:H5''	32:BK:66:LYS:HB3	1.98	0.45
1:AA:242:G:C2	1:AA:245:U:C4	3.05	0.45
25:BD:16:THR:O	25:BD:17:GLU:C	2.54	0.45
22:DA:2291:U:H2'	22:DA:2292:U:C6	2.51	0.45
27:DF:111:ILE:HB	27:DF:114:PHE:HB2	1.97	0.45
1:AA:1227:A:H2'	1:AA:1228:C:O5'	2.17	0.45
4:CD:42:GLY:C	4:CD:44:ARG:H	2.19	0.45
1:AA:1319:A:C8	1:AA:1323:G:C5	3.04	0.45
22:BA:1964:G:O2'	22:BA:1967:C:OP2	2.21	0.45
14:CN:48:LEU:O	14:CN:48:LEU:HD23	2.16	0.45
33:BL:122:VAL:HG21	33:BL:135:ILE:HD13	1.98	0.45
15:AO:61:SER:O	15:AO:65:LYS:HG3	2.16	0.45
28:BG:40:ALA:HB2	28:BG:58:TYR:CD2	2.51	0.45
29:BH:79:THR:HG23	29:BH:147:VAL:HB	1.98	0.45
1:CA:429:U:H3'	4:CD:9:LEU:HD23	1.98	0.45
12:AL:110:ARG:NH1	12:AL:113:ALA:HB3	2.30	0.45
22:DA:1345:C:H5'	22:DA:1396:U:C4	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:58:G:C2	22:DA:70:G:C2	3.04	0.45
9:AI:50:GLN:N	9:AI:51:PRO:HD2	2.31	0.45
1:CA:992:U:O4'	1:CA:993:G:C2	2.68	0.45
1:AA:1423:G:P	32:BK:49:ARG:HH22	2.39	0.45
22:DA:2163:A:H2'	22:DA:2164:C:H4'	1.98	0.45
2:AB:84:ALA:O	2:AB:89:GLN:HB2	2.16	0.45
22:BA:1385:A:N3	22:BA:1386:C:C6	2.84	0.45
1:CA:1073:U:H5'	1:CA:1074:G:OP2	2.17	0.45
22:DA:142:A:C6	22:DA:143:C:N4	2.84	0.45
1:CA:952:U:O4	13:CM:103:LYS:HD3	2.15	0.45
22:DA:609:A:N7	22:DA:610:C:C2	2.85	0.45
1:CA:510:A:H5''	1:CA:511:C:P	2.56	0.45
23:DB:84:G:N2	23:DB:93:C:O2	2.49	0.45
22:DA:2571:U:N3	22:DA:2574:G:C8	2.85	0.45
21:CU:29:LEU:C	21:CU:29:LEU:HD23	2.37	0.45
13:CM:96:PRO:CB	13:CM:100:GLN:OE1	2.65	0.45
2:AB:72:THR:O	2:AB:73:LYS:HG2	2.16	0.45
1:AA:427:U:C4	1:AA:428:G:C6	3.04	0.45
10:AJ:17:LEU:HD23	10:AJ:18:ILE:N	2.32	0.45
1:CA:968:A:C8	1:CA:1062:U:H4'	2.51	0.45
1:AA:181:A:H1'	1:AA:194:C:N4	2.31	0.45
13:AM:29:ARG:NH2	13:AM:63:PHE:HB2	2.31	0.45
5:CE:150:PRO:HA	8:CH:99:LEU:HD21	1.98	0.45
22:BA:784:G:H5'	24:BC:226:ASN:OD1	2.16	0.45
21:AU:19:PHE:O	21:AU:22:SER:HB3	2.16	0.45
2:CB:186:ILE:HA	2:CB:200:ILE:O	2.16	0.45
2:CB:90:PHE:HB3	2:CB:150:GLY:O	2.16	0.45
1:CA:756:C:C2'	1:CA:757:U:H5'	2.46	0.45
30:BI:105:GLN:O	30:BI:106:LEU:CB	2.65	0.45
30:BI:75:PRO:O	30:BI:78:VAL:HG22	2.16	0.45
20:CT:54:MET:HE2	20:CT:58:VAL:CG2	2.47	0.45
4:CD:74:ASN:HA	4:CD:77:LYS:HB2	1.98	0.45
1:AA:1144:G:N1	1:AA:1145:A:H2	2.14	0.45
22:BA:54:G:C5	22:BA:55:G:C8	3.05	0.45
1:CA:81:A:H2'	1:CA:82:G:C8	2.51	0.45
1:CA:669:G:N2	1:CA:738:C:O2	2.48	0.45
1:CA:1426:G:C4	1:CA:1475:G:C2	3.05	0.45
24:DC:148:PRO:CD	24:DC:185:GLU:OE2	2.64	0.45
1:CA:1310:G:N2	1:CA:1328:C:O2	2.49	0.45
22:DA:2051:A:C2	22:DA:2052:A:N6	2.84	0.45
33:DL:62:PRO:HG3	51:D3:26:HIS:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:79:ARG:O	26:BE:80:SER:CB	2.63	0.45
15:CO:11:ILE:O	15:CO:14:GLU:HB2	2.16	0.45
16:AP:67:ILE:HG23	16:AP:71:VAL:CG1	2.46	0.45
17:CQ:14:SER:OG	17:CQ:22:VAL:HG12	2.16	0.45
17:CQ:13:VAL:HG13	17:CQ:22:VAL:HG13	1.98	0.45
22:BA:1570:A:C6	22:BA:1571:A:C6	3.05	0.45
17:AQ:10:GLY:HA3	17:AQ:24:ALA:O	2.17	0.45
22:BA:536:G:C6	22:BA:537:G:C4	3.04	0.45
22:BA:2293:G:H2'	22:BA:2294:G:O4'	2.17	0.45
1:CA:701:U:H4'	1:CA:703:G:C8	2.51	0.45
1:CA:525:C:N4	1:CA:526:C:N4	2.63	0.45
22:DA:2361:G:H2'	22:DA:2362:C:O4'	2.17	0.45
22:DA:1066:U:C2'	22:DA:1067:A:OP1	2.64	0.45
1:CA:442:G:C6	1:CA:443:C:C4	3.04	0.45
4:CD:78:GLU:CG	4:CD:93:LEU:HD11	2.46	0.45
22:DA:2643:G:C2'	22:DA:2644:G:H5'	2.47	0.45
30:BI:50:GLU:OE2	30:BI:52:GLY:N	2.50	0.45
1:AA:1024:G:C2'	1:AA:1025:U:O5'	2.65	0.45
41:BT:57:VAL:HG22	41:BT:58:VAL:N	2.30	0.45
23:DB:20:G:C2	23:DB:64:G:C2	3.05	0.45
1:CA:124:C:N3	1:CA:125:U:C4	2.84	0.45
35:BN:38:LEU:HB3	35:BN:39:PRO:HD3	1.99	0.45
12:CL:9:ARG:HB2	12:CL:9:ARG:CZ	2.46	0.45
42:BU:85:PHE:N	42:BU:85:PHE:CD1	2.83	0.45
6:CF:51:ILE:CG1	6:CF:51:ILE:O	2.63	0.45
24:DC:120:VAL:O	24:DC:120:VAL:HG12	2.15	0.45
24:BC:77:VAL:HA	24:BC:114:ASP:O	2.16	0.45
22:DA:1949:G:C6	22:DA:1950:G:C6	3.04	0.45
22:BA:1333:G:C2	22:BA:1334:G:C8	3.04	0.45
8:AH:42:GLU:OE1	8:AH:42:GLU:N	2.49	0.45
22:BA:1161:C:H1'	39:BR:8:GLY:O	2.17	0.45
29:BH:94:ILE:HG23	29:BH:98:ASP:CB	2.47	0.45
22:BA:1056:G:C2	22:BA:1102:C:C5	3.04	0.45
5:CE:154:ALA:C	5:CE:156:LYS:N	2.70	0.45
2:AB:21:ARG:NH1	2:AB:21:ARG:HA	2.30	0.45
22:DA:1361:G:C5	22:DA:1362:C:C5	3.04	0.45
22:DA:2043:C:C2	22:DA:2044:C:C5	3.05	0.45
3:AC:22:TRP:CD1	3:AC:59:ARG:CD	2.99	0.45
22:DA:617:G:H2'	22:DA:618:G:O4'	2.16	0.45
9:AI:57:MET:CG	9:AI:58:VAL:N	2.79	0.45
22:DA:2281:A:C2'	22:DA:2282:G:H5'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2283:C:N3	22:DA:2389:G:C2	2.84	0.45
22:BA:360:U:C4	22:BA:361:G:C6	3.04	0.45
21:AU:37:PHE:HA	21:AU:40:LYS:HE3	1.99	0.45
20:AT:67:ILE:CG1	20:AT:71:LYS:HG2	2.45	0.45
1:AA:72:A:C2'	1:AA:73:C:H5'	2.46	0.45
12:CL:57:LEU:O	12:CL:58:THR:C	2.54	0.45
22:DA:1649:G:N1	22:DA:2009:A:C6	2.84	0.45
4:AD:3:ARG:CZ	4:AD:115:ARG:CD	2.92	0.45
22:DA:2532:G:N2	22:DA:2663:G:O2'	2.50	0.45
22:DA:806:C:H2'	22:DA:807:U:C6	2.50	0.45
22:DA:2817:U:O2	22:DA:2836:U:H1'	2.15	0.45
22:DA:104:A:C8	22:DA:105:C:C4	3.04	0.45
1:CA:22:G:O2'	1:CA:913:A:N1	2.43	0.45
1:AA:597:G:C2	1:AA:644:U:O2	2.69	0.45
8:AH:7:ILE:N	8:AH:7:ILE:HD12	2.31	0.45
33:DL:37:GLY:O	33:DL:40:SER:OG	2.34	0.45
53:B5:79:ALA:CB	53:B5:83:LYS:HB2	2.46	0.45
22:BA:1768:C:N3	22:BA:1769:U:C5	2.84	0.45
1:CA:1137:C:H1'	1:CA:1138:G:N2	2.31	0.45
22:BA:979:A:H2'	22:BA:982:C:H42	1.82	0.45
10:AJ:44:THR:HG22	10:AJ:70:HIS:HA	1.99	0.45
21:AU:11:PRO:O	21:AU:12:PHE:CG	2.69	0.45
22:BA:365:U:H2'	22:BA:366:C:C6	2.51	0.45
22:BA:271:G:C5	22:BA:367:G:C2	3.04	0.45
22:BA:1796:U:H2'	22:BA:1797:G:C8	2.51	0.45
22:BA:2714:G:H2'	22:BA:2715:C:H5'	1.98	0.45
22:DA:7:G:H2'	22:DA:8:C:O4'	2.17	0.45
22:DA:2347:C:C2	22:DA:2371:G:N2	2.84	0.45
22:BA:1402:U:C2'	22:BA:1403:A:O5'	2.64	0.45
29:DH:34:GLY:O	29:DH:35:LYS:CD	2.65	0.45
22:DA:647:G:C6	22:DA:648:G:C5	3.04	0.45
23:DB:50:A:H2'	23:DB:51:G:O4'	2.16	0.45
14:CN:80:SER:O	14:CN:81:ARG:C	2.55	0.45
5:CE:96:MET:CE	5:CE:111:MET:HE3	2.46	0.45
5:CE:95:PHE:CG	5:CE:96:MET:N	2.84	0.45
22:DA:2747:G:C2	22:DA:2756:U:C5	3.04	0.45
5:CE:126:LYS:HE3	5:CE:126:LYS:HA	1.97	0.45
22:DA:752:A:O2'	22:DA:753:A:P	2.74	0.45
35:BN:78:LYS:C	35:BN:79:LEU:O	2.49	0.45
1:AA:1027:C:C2	1:AA:1034:G:O6	2.69	0.45
22:DA:1926:U:H2'	22:DA:1928:A:N7	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:29:U:H5'	1:AA:296:U:OP1	2.16	0.45
22:BA:1139:G:O3'	31:BJ:26:GLY:HA3	2.16	0.45
1:CA:1015:G:H2'	1:CA:1016:A:O4'	2.17	0.45
22:BA:675:A:OP1	26:BE:58:LYS:HE3	2.16	0.45
22:DA:2405:G:N2	22:DA:2411:A:C8	2.83	0.45
41:DT:49:LYS:HD3	41:DT:49:LYS:N	2.31	0.45
35:BN:22:ARG:HG3	35:BN:70:THR:H	1.80	0.45
22:DA:2694:G:C4	22:DA:2695:U:C6	3.04	0.45
9:AI:22:LYS:HD2	9:AI:23:PRO:O	2.17	0.45
22:DA:195:A:C4	22:DA:198:C:N4	2.84	0.45
1:AA:55:A:C6	1:AA:56:U:C2	3.05	0.45
8:AH:79:SER:HA	8:AH:85:ILE:HG12	1.98	0.45
25:BD:166:GLY:O	25:BD:167:ASN:HB3	2.16	0.45
22:DA:1722:A:C2	22:DA:1739:A:H1'	2.51	0.45
1:AA:785:G:N2	1:AA:798:U:C2	2.83	0.45
13:AM:51:GLY:O	13:AM:55:THR:HG23	2.17	0.45
22:BA:593:U:H2'	22:BA:594:U:C6	2.51	0.45
1:AA:1086:U:O2'	1:AA:1087:G:H5'	2.17	0.45
41:DT:67:VAL:HG12	41:DT:68:LYS:N	2.32	0.45
22:BA:1153:C:N4	22:BA:1154:G:C6	2.84	0.45
5:CE:99:ALA:HB2	5:CE:124:LEU:HG	1.99	0.45
22:BA:1098:A:H5'	22:BA:1099:G:OP2	2.16	0.45
8:CH:64:LYS:HE2	8:CH:71:VAL:HG21	1.98	0.45
13:AM:48:LEU:HD23	13:AM:48:LEU:C	2.37	0.45
22:DA:1464:G:N1	22:DA:1465:G:C5	2.84	0.45
22:DA:322:A:O4'	22:DA:340:A:H1'	2.17	0.45
1:AA:1202:U:C5	1:AA:1203:C:C5	3.04	0.45
1:AA:1048:G:OP1	14:AN:3:LYS:HA	2.15	0.45
13:AM:85:CYS:SG	13:AM:87:ARG:HG3	2.56	0.45
3:AC:88:ARG:HG3	3:AC:99:ALA:O	2.15	0.45
22:BA:1917:U:O4	22:BA:1918:A:C6	2.69	0.45
22:DA:419:U:C2	22:DA:420:C:C6	3.04	0.45
26:DE:23:PHE:CD1	26:DE:111:GLU:HG3	2.51	0.45
27:BF:43:ALA:O	27:BF:46:ASP:C	2.55	0.45
22:DA:372:G:P	45:DX:62:LYS:NZ	2.89	0.45
22:DA:2199:A:C5	22:DA:2200:C:C2	3.05	0.45
1:CA:1297:G:HO2'	7:CG:114:LYS:HZ3	1.54	0.45
16:CP:19:VAL:HG12	16:CP:37:GLY:C	2.36	0.45
22:BA:1385:A:C2	22:BA:1386:C:C2	3.05	0.45
22:BA:1385:A:H1'	22:BA:1386:C:H6	1.75	0.45
1:CA:1088:G:C6	1:CA:1089:G:N7	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1250:G:H5'	38:DQ:6:ARG:HD3	1.99	0.45
33:BL:77:ILE:CD1	33:BL:95:LEU:HD13	2.47	0.45
1:CA:1491:G:C5	1:CA:1492:A:C6	3.04	0.45
9:CI:19:VAL:HG22	9:CI:65:ILE:HG22	1.97	0.45
22:DA:2870:C:H5''	35:DN:65:LEU:CD2	2.45	0.45
35:DN:71:ARG:HG2	35:DN:71:ARG:HH21	1.80	0.45
40:BS:84:ARG:HB2	40:BS:96:ILE:CD1	2.46	0.45
1:CA:68:G:C6	1:CA:69:G:H1'	2.52	0.45
30:BI:97:LYS:HG3	30:BI:139:VAL:HG22	1.95	0.45
27:BF:111:ILE:O	27:BF:114:PHE:HB2	2.17	0.45
1:CA:1134:G:H2'	1:CA:1135:U:O4'	2.16	0.45
11:CK:127:ARG:HB2	21:CU:34:ARG:NH1	2.31	0.45
22:DA:236:C:H2'	22:DA:237:C:H6	1.82	0.45
2:AB:33:GLY:HA3	2:AB:40:ILE:H	1.80	0.45
21:CU:14:VAL:O	21:CU:16:LEU:CD1	2.65	0.45
22:DA:696:G:C6	22:DA:767:U:O2	2.70	0.45
22:BA:1045:C:H3'	22:BA:1046:A:C5'	2.45	0.45
22:DA:2344:U:H4'	22:DA:2345:G:OP1	2.16	0.45
34:BM:24:THR:CG2	34:BM:24:THR:O	2.61	0.45
20:AT:7:ALA:HB1	20:AT:10:ARG:HB2	1.98	0.45
22:DA:1036:G:C6	22:DA:1120:G:C5	3.05	0.45
22:BA:1084:A:HO2'	22:BA:1105:U:HO2'	1.64	0.45
22:BA:2575:C:O2'	25:BD:145:SER:HB2	2.16	0.45
22:BA:581:C:H2'	22:BA:582:A:C8	2.51	0.45
22:DA:14:A:H5''	22:DA:15:G:OP2	2.16	0.45
7:CG:53:ARG:NH2	7:CG:125:SER:OG	2.49	0.45
22:BA:1832:C:C4	22:BA:1833:C:C6	3.05	0.45
22:DA:2803:G:N2	22:DA:2804:U:C2	2.85	0.45
9:CI:88:MET:HB2	9:CI:92:GLU:CD	2.37	0.45
1:CA:892:A:C6	1:CA:893:C:C4	3.04	0.45
22:DA:1263:U:O4	40:DS:95:ARG:NH1	2.49	0.45
22:DA:1858:A:N1	22:DA:1859:U:C2	2.84	0.45
22:DA:155:A:H2'	22:DA:156:A:C8	2.50	0.45
17:CQ:10:GLY:HA3	17:CQ:25:ILE:HD13	1.99	0.45
31:BJ:77:HIS:CD2	31:BJ:79:GLY:H	2.34	0.45
22:BA:1887:C:C2'	22:BA:1888:G:O5'	2.64	0.45
24:DC:171:TYR:CD2	24:DC:185:GLU:HA	2.51	0.45
13:CM:27:LYS:O	13:CM:27:LYS:HD2	2.17	0.45
17:AQ:59:VAL:HG23	17:AQ:77:ARG:O	2.17	0.45
1:CA:784:A:H2'	1:CA:785:G:O4'	2.15	0.45
22:BA:1570:A:H2'	22:BA:1571:A:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1366:A:C2	22:BA:1367:A:H1'	2.51	0.45
28:BG:127:THR:HG22	28:BG:128:GLN:N	2.32	0.45
1:CA:186:C:O2'	1:CA:187:G:H5'	2.16	0.45
22:DA:263:G:N2	22:DA:264:C:H1'	2.32	0.45
22:DA:663:G:C6	22:DA:664:G:C5	3.05	0.45
22:BA:1228:G:H2'	22:BA:1229:C:C6	2.52	0.45
22:DA:902:C:H2'	22:DA:903:C:C6	2.51	0.45
1:CA:569:C:H1'	1:CA:574:A:C4	2.51	0.45
22:DA:2204:G:C4	22:DA:2205:A:C8	3.04	0.45
23:BB:65:U:O4	23:BB:108:A:H1'	2.17	0.45
33:BL:49:GLY:O	33:BL:51:GLU:HG3	2.16	0.45
13:CM:18:ALA:CB	13:CM:45:ILE:HD11	2.47	0.45
6:AF:8:PHE:CZ	6:AF:60:VAL:HB	2.52	0.45
1:AA:933:G:OP2	7:AG:3:ARG:HB3	2.16	0.45
50:D2:1:MET:O	50:D2:2:LYS:C	2.54	0.45
43:DV:44:HIS:O	43:DV:45:ASP:C	2.54	0.45
22:BA:19:A:C2	22:BA:522:A:C2	3.04	0.45
5:CE:102:GLY:C	5:CE:104:GLY:N	2.69	0.45
22:DA:333:G:C6	22:DA:334:C:C5	3.05	0.45
41:DT:20:ALA:O	41:DT:24:MET:SD	2.74	0.45
1:AA:374:A:C6	1:AA:375:U:C4	3.05	0.45
22:DA:611:C:H2'	22:DA:612:G:O4'	2.16	0.45
22:DA:1437:C:N4	22:DA:1438:U:O4	2.50	0.45
22:DA:466:A:C2	22:DA:796:C:O4'	2.70	0.45
1:CA:1006:G:OP1	1:CA:1038:C:H5''	2.16	0.45
22:DA:1817:G:O2'	22:DA:1818:U:H5'	2.16	0.45
12:CL:107:VAL:HG23	12:CL:117:TYR:HB3	1.97	0.45
2:AB:57:LEU:CD1	2:AB:221:VAL:HG22	2.46	0.45
1:CA:1377:A:C5	7:CG:7:ILE:HD12	2.51	0.45
4:AD:58:LYS:HG2	4:AD:203:LEU:HD22	1.97	0.45
22:DA:1260:A:N6	57:DA:3277:HOH:O	2.50	0.45
22:DA:1250:G:H5'	38:DQ:6:ARG:CD	2.47	0.45
1:AA:1406:U:C2'	1:AA:1407:C:H5'	2.46	0.45
39:DR:39:LEU:O	39:DR:49:ILE:HG23	2.16	0.45
22:BA:686:U:C4'	22:BA:687:C:OP2	2.61	0.45
22:DA:349:U:H2'	22:DA:350:G:H8	1.81	0.45
22:BA:1277:G:H5'	35:BN:20:MET:HE2	1.98	0.45
30:BI:97:LYS:HB3	30:BI:139:VAL:CG2	2.47	0.45
22:DA:2306:C:OP2	22:DA:2307:G:C2'	2.64	0.45
10:AJ:80:THR:C	10:AJ:82:LYS:N	2.67	0.45
1:AA:129:A:H1'	1:AA:130:A:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2799:A:C6	22:DA:2801:G:C4	3.05	0.45
22:DA:498:G:N3	22:DA:499:U:C6	2.85	0.45
20:CT:69:LYS:O	20:CT:71:LYS:N	2.49	0.45
1:CA:517:G:H4'	1:CA:519:C:C2	2.52	0.45
22:DA:467:G:C2	22:DA:468:G:C8	3.05	0.45
39:BR:29:THR:O	39:BR:30:GLY:C	2.54	0.45
1:AA:221:C:O2	1:AA:222:C:C6	2.69	0.45
1:AA:1122:U:C4	1:AA:1123:U:C5	3.05	0.45
22:DA:2332:C:H4'	22:DA:2336:A:N6	2.31	0.45
1:CA:289:G:C2	1:CA:290:C:C5	3.05	0.45
17:AQ:48:ASP:OD2	17:AQ:51:ASN:HA	2.17	0.45
22:DA:483:A:C1'	42:DU:45:HIS:HB2	2.47	0.45
42:DU:61:LYS:HD2	42:DU:61:LYS:HA	1.82	0.45
22:DA:1645:G:H4'	22:DA:1646:C:C5	2.51	0.45
3:CC:172:ARG:C	3:CC:174:PRO:HD3	2.36	0.45
3:CC:20:SER:HB2	14:CN:92:GLU:O	2.17	0.45
27:DF:9:LYS:O	27:DF:13:VAL:CG2	2.64	0.45
5:CE:15:LEU:HD12	5:CE:15:LEU:C	2.37	0.45
10:CJ:74:VAL:HG12	10:CJ:75:ASP:N	2.30	0.45
1:CA:1418:A:O4'	22:DA:1959:G:H4'	2.16	0.45
1:CA:1053:G:N7	1:CA:1200:C:C5'	2.79	0.45
1:AA:1034:G:C6	1:AA:1035:A:C2	3.04	0.45
22:BA:1109:C:C4	22:BA:1110:G:C6	3.05	0.45
22:DA:1740:G:H2'	22:DA:1741:C:C6	2.52	0.45
1:AA:21:G:N2	1:AA:22:G:C6	2.85	0.45
41:DT:48:GLN:HB2	41:DT:49:LYS:CE	2.47	0.45
1:AA:972:C:H4'	10:AJ:59:LYS:HE3	1.98	0.45
35:BN:67:PHE:CE2	35:BN:71:ARG:NH1	2.84	0.45
46:DY:18:LEU:O	46:DY:22:LEU:CB	2.63	0.45
6:AF:46:GLN:HA	6:AF:56:LYS:HA	1.99	0.45
8:AH:41:LYS:O	8:AH:44:GLY:N	2.49	0.45
22:DA:595:C:O2	22:DA:663:G:C2	2.69	0.45
1:AA:184:G:C6	1:AA:185:U:C4	3.04	0.45
22:BA:1806:C:H2'	22:BA:1807:G:O5'	2.16	0.45
3:AC:16:LYS:HG3	3:AC:17:PRO:HD2	1.99	0.45
6:CF:6:ILE:HG22	6:CF:7:VAL:N	2.31	0.45
53:B5:172:ILE:O	53:B5:173:HIS:CB	2.64	0.45
1:CA:25:C:H2'	1:CA:26:A:C8	2.51	0.45
22:BA:1374:G:O2'	22:BA:1375:U:H5'	2.16	0.45
20:CT:9:LYS:O	20:CT:12:ILE:HG12	2.16	0.45
22:DA:1398:C:H2'	22:DA:1399:C:O5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:147:VAL:HG12	29:DH:148:ALA:N	2.32	0.45
29:BH:72:ILE:HG23	29:BH:142:VAL:HG22	1.99	0.45
40:DS:20:VAL:HG23	40:DS:39:THR:HG21	1.97	0.45
22:DA:445:C:H3'	22:DA:446:G:C8	2.52	0.45
1:AA:1054:C:C5	1:AA:1196:A:H2'	2.51	0.45
5:AE:151:GLU:HG2	5:AE:152:MET:H	1.82	0.45
4:AD:27:ALA:O	4:AD:28:ILE:C	2.55	0.45
22:DA:684:G:OP1	50:D2:16:HIS:ND1	2.49	0.45
1:AA:1108:G:H5'	3:AC:176:HIS:CE1	2.51	0.45
11:AK:35:THR:OG1	11:AK:40:ASN:N	2.50	0.45
1:AA:652:U:C2	1:AA:752:G:N2	2.85	0.45
49:B1:10:LYS:HE3	49:B1:53:LYS:NZ	2.32	0.45
22:DA:49:A:N6	22:DA:177:G:C5	2.84	0.45
2:CB:87:CYS:HB3	2:CB:222:ARG:HA	1.99	0.45
1:CA:505:G:OP2	1:CA:534:U:H2'	2.17	0.45
1:AA:1335:U:H5'	1:AA:1336:C:O5'	2.17	0.45
1:AA:1308:U:OP1	13:AM:96:PRO:HA	2.16	0.45
1:CA:1091:U:H2'	1:CA:1093:A:OP2	2.16	0.45
22:DA:142:A:H2'	22:DA:143:C:C6	2.51	0.45
22:DA:134:G:N2	22:DA:146:A:N3	2.64	0.45
22:DA:2415:G:C6	22:DA:2416:C:N4	2.85	0.45
4:AD:122:ALA:C	4:AD:123:ILE:HG23	2.36	0.45
22:DA:38:A:H4'	26:DE:45:ALA:HB2	1.97	0.45
22:DA:2574:G:N1	22:DA:2575:C:C2	2.85	0.45
1:CA:1408:A:N1	1:CA:1494:G:C5	2.85	0.45
1:CA:706:A:O2'	11:CK:31:ILE:CD1	2.64	0.45
27:DF:44:ILE:HG21	27:DF:79:ILE:HG22	1.98	0.45
1:AA:657:U:O2	15:AO:22:THR:HG22	2.16	0.45
22:DA:693:A:H2'	22:DA:694:U:C6	2.50	0.45
10:AJ:83:THR:HA	10:AJ:86:ALA:HB3	1.98	0.45
53:B5:64:SER:O	53:B5:65:LEU:CB	2.65	0.45
22:BA:250:G:C6	22:BA:251:A:C6	3.05	0.45
22:DA:1432:G:O2'	22:DA:1433:A:H5'	2.15	0.45
1:AA:1368:A:OP2	9:AI:114:LYS:HD2	2.17	0.45
1:CA:517:G:C8	1:CA:531:U:C4	3.04	0.45
17:AQ:47:HIS:CB	17:AQ:67:LEU:HD23	2.47	0.45
30:DI:76:ALA:HA	30:DI:79:LEU:HB2	1.98	0.45
1:CA:681:A:C2	1:CA:710:G:C4	3.05	0.45
1:AA:1441:A:C2'	1:AA:1442:G:O5'	2.64	0.45
3:AC:14:ILE:O	3:AC:15:VAL:HG22	2.16	0.45
2:CB:117:LEU:HB3	2:CB:141:LEU:HG	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:40:THR:O	29:BH:42:LYS:N	2.48	0.45
30:DI:101:ILE:HG22	30:DI:102:SER:N	2.31	0.45
22:BA:1857:G:C4	22:BA:1884:G:C2	3.04	0.45
23:BB:15:A:O2'	23:BB:16:G:P	2.74	0.45
22:DA:1801:A:C8	24:DC:262:ARG:NH2	2.85	0.45
46:DY:28:LEU:CD2	46:DY:37:LEU:HD11	2.46	0.45
1:CA:97:G:C6	1:CA:98:A:H1'	2.52	0.45
22:DA:1847:A:H2'	22:DA:1848:A:OP2	2.16	0.45
41:BT:91:GLN:HG3	41:BT:91:GLN:O	2.17	0.45
22:BA:1935:G:C6	22:BA:1962:C:C5	3.04	0.45
22:DA:2250:G:C8	22:DA:2250:G:O5'	2.70	0.45
27:DF:29:PRO:HB2	27:DF:169:LEU:HD22	1.98	0.45
22:DA:1184:U:OP1	47:DZ:30:ARG:NH2	2.50	0.45
26:DE:146:VAL:HG12	26:DE:185:LYS:HB2	1.99	0.45
3:AC:23:PHE:CE1	10:AJ:13:PHE:CE2	3.04	0.45
1:AA:113:G:O2'	1:AA:114:U:H5'	2.17	0.45
40:DS:89:ALA:O	40:DS:90:LYS:HB2	2.16	0.45
1:AA:654:G:H2'	1:AA:655:A:H5'	1.98	0.45
22:DA:2054:A:C2	22:DA:2616:C:C2	3.04	0.45
53:B5:78:ILE:HG23	53:B5:78:ILE:O	2.17	0.45
27:BF:148:ARG:CG	27:BF:149:VAL:H	2.29	0.45
6:CF:6:ILE:HD12	6:CF:6:ILE:N	2.31	0.45
22:BA:699:A:H4'	22:BA:1634:A:N7	2.30	0.45
26:DE:5:LEU:O	26:DE:6:LYS:C	2.55	0.45
18:CR:25:ASP:N	18:CR:25:ASP:OD1	2.50	0.45
22:DA:1243:C:H2'	22:DA:1244:A:O4'	2.16	0.45
36:DO:53:THR:HB	36:DO:65:THR:CG2	2.46	0.45
27:DF:3:LYS:HD3	27:DF:101:GLU:OE2	2.17	0.45
11:AK:108:THR:HG22	11:AK:109:ASN:ND2	2.31	0.45
30:BI:77:ALA:HB2	30:BI:132:THR:CG2	2.47	0.45
22:DA:553:G:H2'	22:DA:554:U:O4'	2.17	0.45
31:BJ:98:GLU:OE2	31:BJ:126:ALA:HB2	2.16	0.45
36:DO:28:VAL:CG1	36:DO:94:ARG:HA	2.47	0.45
24:BC:84:ASP:OD1	24:BC:84:ASP:C	2.55	0.45
7:CG:126:ASP:N	7:CG:126:ASP:OD1	2.50	0.45
22:DA:2141:G:N2	22:DA:2151:U:O2	2.50	0.45
24:DC:158:ALA:HA	24:DC:195:VAL:HG22	1.99	0.45
49:D1:9:ILE:CG2	49:D1:25:LYS:HB3	2.46	0.45
22:BA:626:A:H2'	33:BL:78:ARG:CZ	2.47	0.45
5:CE:115:LEU:CD2	5:CE:123:VAL:HG21	2.47	0.45
22:DA:1358:G:H2'	22:DA:1359:A:OP2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:28:A:C2	22:DA:513:A:C8	3.05	0.45
1:CA:1039:G:C6	1:CA:1040:U:N3	2.85	0.45
22:DA:1818:U:H2'	24:DC:156:ARG:HD3	1.99	0.45
22:BA:975:A:C4	22:BA:990:A:C5	3.05	0.45
22:BA:58:G:N2	22:BA:70:G:C4	2.85	0.45
22:DA:1140:C:C2'	22:DA:1141:U:H5'	2.47	0.45
5:AE:80:THR:HB	5:AE:122:ASN:OD1	2.16	0.45
21:AU:41:PRO:O	21:AU:45:ARG:HD3	2.16	0.45
2:AB:55:ALA:O	2:AB:59:LYS:N	2.44	0.45
29:DH:31:VAL:CG1	29:DH:32:PRO:HD3	2.47	0.45
1:AA:96:U:O2'	1:AA:97:G:P	2.75	0.45
25:BD:101:PHE:C	25:BD:103:ASP:N	2.68	0.45
1:CA:1070:U:C2	1:CA:1071:C:C5	3.04	0.45
2:AB:151:ILE:CG2	2:AB:152:LYS:N	2.79	0.45
12:CL:22:PRO:O	12:CL:24:LEU:N	2.45	0.45
1:CA:764:C:C4	1:CA:765:G:C5	3.04	0.45
2:CB:16:PHE:N	2:CB:16:PHE:CD2	2.85	0.45
22:DA:2156:G:C6	22:DA:2157:G:N2	2.85	0.45
1:CA:803:G:C5	1:CA:804:U:C4	3.05	0.45
16:AP:4:ILE:HG13	16:AP:21:VAL:CG2	2.47	0.45
22:BA:142:A:N7	22:BA:143:C:C4	2.85	0.45
26:BE:31:VAL:HG21	26:BE:104:ALA:CB	2.47	0.45
22:BA:2419:U:OP1	51:B3:41:LYS:HE2	2.16	0.45
53:B5:67:HIS:CD2	53:B5:188:ASP:HA	2.52	0.45
1:AA:1160:G:HO2'	1:AA:1161:C:P	2.39	0.45
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.52	0.45
22:BA:587:C:C6	22:BA:671:C:H1'	2.52	0.45
1:CA:757:U:C2'	1:CA:758:C:O5'	2.65	0.45
22:DA:30:G:C6	22:DA:31:C:N3	2.85	0.45
17:AQ:50:ASN:O	17:AQ:51:ASN:C	2.53	0.45
22:DA:344:A:C2	22:DA:345:A:N7	2.85	0.45
22:DA:1177:G:H2'	22:DA:1178:C:H4'	1.99	0.45
22:BA:223:A:C4	22:BA:422:A:C8	3.05	0.45
23:DB:21:G:N2	23:DB:63:C:O2	2.50	0.45
22:BA:2315:G:H2'	22:BA:2316:G:C8	2.51	0.45
1:CA:1206:G:C6	1:CA:1207:G:C5	3.04	0.45
34:DM:124:LEU:HD23	34:DM:124:LEU:N	2.31	0.45
22:DA:1087:G:N1	22:DA:1089:A:C2	2.84	0.45
16:CP:23:ASP:OD2	16:CP:25:ARG:HG2	2.17	0.45
7:CG:37:SER:OG	9:CI:43:THR:HG23	2.16	0.45
32:DK:41:ILE:HD11	32:DK:86:LEU:HD22	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1998:A:H2'	22:DA:1999:C:O4'	2.16	0.45
39:DR:68:ARG:HD3	39:DR:92:TRP:CZ2	2.52	0.45
6:AF:9:MET:CE	18:AR:65:LEU:HD22	2.47	0.45
41:DT:30:ILE:HD13	41:DT:32:LEU:CG	2.47	0.45
7:CG:145:ALA:O	7:CG:146:GLU:HB2	2.15	0.45
13:CM:33:ILE:HG22	13:CM:56:LEU:HD23	1.98	0.45
22:DA:663:G:O6	22:DA:664:G:C6	2.70	0.45
3:CC:182:ILE:HD13	3:CC:203:PHE:HA	1.99	0.45
22:BA:909:A:O2'	22:BA:911:A:OP2	2.25	0.45
22:DA:1016:G:C2	22:DA:1147:A:C2	3.04	0.45
1:AA:438:U:C2	1:AA:494:G:C6	3.05	0.45
1:CA:1113:C:H4'	3:CC:14:ILE:HD12	1.99	0.45
22:BA:60:G:C8	22:BA:62:U:C6	3.04	0.45
26:BE:26:ALA:O	26:BE:27:LEU:C	2.54	0.45
26:DE:148:ILE:HG21	26:DE:157:LEU:HD21	1.99	0.45
22:DA:1286:A:N6	22:DA:1329:U:C2	2.85	0.45
1:AA:6:G:N3	1:AA:6:G:H3'	2.31	0.45
32:DK:39:ILE:HG13	32:DK:39:ILE:O	2.16	0.45
22:BA:152:A:H2'	22:BA:153:U:C6	2.52	0.45
24:BC:220:VAL:HB	24:BC:225:MET:CE	2.47	0.45
1:CA:793:U:O2'	1:CA:1516:G:H1'	2.17	0.45
22:BA:997:G:OP1	38:BQ:92:ARG:HG3	2.15	0.45
5:CE:101:GLU:HA	5:CE:122:ASN:CB	2.46	0.45
22:BA:1921:G:N2	22:BA:1922:G:C8	2.84	0.45
22:DA:192:C:H2'	22:DA:193:U:H5'	1.99	0.45
22:DA:2751:G:N3	22:DA:2751:G:H2'	2.32	0.45
14:AN:64:CYS:SG	14:AN:80:SER:HB3	2.57	0.45
5:AE:153:VAL:O	5:AE:156:LYS:HB2	2.17	0.45
13:AM:80:LEU:CD2	13:AM:87:ARG:HB2	2.46	0.45
1:AA:373:A:O2'	1:AA:374:A:H5'	2.15	0.45
22:DA:82:U:O2	22:DA:83:A:C8	2.69	0.45
17:AQ:16:LYS:CA	17:AQ:17:MET:SD	3.05	0.45
22:BA:559:G:H2'	22:BA:560:C:O4'	2.17	0.45
22:DA:2284:A:O2'	22:DA:2288:A:N1	2.37	0.45
22:BA:858:G:C4	22:BA:2268:A:C2	3.05	0.45
22:BA:2192:U:C5	22:BA:2193:G:C8	3.05	0.45
2:AB:148:LEU:C	2:AB:151:ILE:HG22	2.36	0.45
22:DA:136:G:N2	22:DA:144:A:C5	2.85	0.45
22:BA:2311:A:C2	27:BF:41:GLY:CA	3.00	0.45
22:BA:1434:A:C2	22:BA:1435:G:C5	3.04	0.45
14:CN:51:LEU:O	14:CN:53:ARG:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:186:G:C2	22:DA:211:C:O2	2.70	0.45
1:CA:920:U:C2	1:CA:921:U:C5	3.05	0.45
30:DI:57:VAL:HG23	30:DI:71:THR:CA	2.47	0.45
39:BR:66:HIS:ND1	39:BR:94:THR:CG2	2.80	0.45
22:DA:1623:G:C6	22:DA:1624:U:C4	3.05	0.45
1:AA:624:C:C5	1:AA:625:U:C5	3.04	0.45
29:BH:14:SER:OG	29:BH:17:ASP:OD1	2.29	0.45
1:AA:1160:G:O6	1:AA:1181:G:C5	2.70	0.45
6:CF:37:HIS:O	6:CF:38:ARG:HB3	2.17	0.45
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.51	0.45
1:AA:343:U:H2'	1:AA:345:C:C5	2.52	0.45
22:BA:1324:G:H1'	22:BA:1616:A:N6	2.32	0.45
1:AA:631:C:H5''	1:AA:632:U:H5'	1.98	0.45
1:CA:9:G:OP2	5:CE:126:LYS:CE	2.65	0.45
22:BA:1857:G:N3	22:BA:1884:G:C2	2.85	0.45
34:BM:20:LEU:HD12	43:BV:81:PRO:CG	2.46	0.45
1:AA:659:U:N3	1:AA:660:C:C5	2.85	0.45
9:CI:88:MET:CG	9:CI:88:MET:O	2.65	0.45
1:AA:9:G:C2	1:AA:10:A:C8	3.05	0.45
5:CE:16:ILE:N	5:CE:16:ILE:HD12	2.32	0.45
22:BA:1109:C:C5	22:BA:1110:G:C6	3.05	0.45
22:BA:1851:U:O2'	22:BA:1852:U:H5'	2.17	0.45
1:CA:1291:U:OP1	7:CG:37:SER:CB	2.65	0.45
22:BA:2177:C:N4	22:BA:2178:C:O2	2.50	0.45
23:BB:78:A:C2	23:BB:99:A:C4	3.05	0.45
22:DA:533:G:C5	22:DA:534:U:C4	3.04	0.45
1:AA:914:A:C5	1:AA:915:A:N7	2.84	0.45
9:CI:49:ARG:C	9:CI:49:ARG:HD3	2.37	0.45
11:CK:82:LEU:O	11:CK:82:LEU:HD23	2.17	0.45
3:AC:150:LYS:HG3	3:AC:201:TRP:CE3	2.52	0.45
28:BG:94:TYR:HA	28:BG:106:SER:O	2.16	0.45
4:AD:160:GLU:O	4:AD:162:ALA:N	2.49	0.45
30:BI:44:ALA:O	30:BI:45:LYS:HG3	2.17	0.45
22:DA:515:A:H2'	22:DA:516:C:H5'	1.98	0.45
4:AD:105:MET:CG	4:AD:171:LEU:HD22	2.47	0.45
8:AH:88:ARG:O	8:AH:92:LEU:HG	2.17	0.45
22:BA:7:G:C6	22:BA:8:C:C4	3.05	0.45
32:BK:23:LYS:HB3	32:BK:40:LYS:HB3	1.98	0.45
19:CS:51:VAL:O	19:CS:58:VAL:HG13	2.17	0.45
1:AA:695:A:N1	1:AA:696:A:C2	2.85	0.45
29:DH:86:ASP:C	29:DH:88:GLY:H	2.19	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:19:ASN:OD1	3:AC:19:ASN:N	2.49	0.45
24:BC:28:LYS:N	24:BC:28:LYS:HD3	2.32	0.45
29:DH:93:SER:HB3	29:DH:123:ARG:HG3	1.99	0.45
2:AB:167:ASP:OD1	2:AB:168:HIS:N	2.50	0.45
1:AA:908:A:C2	1:AA:909:A:C4	3.04	0.45
29:BH:76:GLU:HA	29:BH:142:VAL:CG1	2.46	0.45
22:DA:1265:A:N6	22:DA:2014:A:OP2	2.40	0.45
22:DA:2059:A:H4'	26:DE:64:GLY:O	2.16	0.45
29:DH:83:LYS:HG3	29:DH:149:GLU:HG3	1.94	0.45
22:DA:1598:A:H2'	22:DA:1599:U:C6	2.52	0.45
22:BA:1169:A:N1	22:BA:1180:U:O4	2.50	0.45
22:BA:1171:G:C5	22:BA:1172:C:C4	3.05	0.45
1:CA:1027:C:N4	1:CA:1034:G:O6	2.50	0.45
22:DA:2195:U:C2	22:DA:2196:C:C6	3.04	0.45
4:AD:58:LYS:HE2	4:AD:69:GLU:OE2	2.17	0.45
22:BA:2258:C:H4'	22:BA:2259:U:OP2	2.17	0.45
22:DA:1526:C:N4	22:DA:1527:G:C6	2.85	0.45
22:DA:1062:G:C2	22:DA:1063:G:N1	2.85	0.45
1:CA:778:G:C6	1:CA:779:C:N3	2.85	0.45
1:CA:782:A:C8	1:CA:783:C:C5	3.05	0.45
22:DA:351:C:H2'	22:DA:352:A:C8	2.52	0.45
22:DA:185:G:C6	22:DA:212:G:N2	2.85	0.45
10:AJ:65:TYR:OH	14:AN:85:ARG:HD2	2.17	0.45
1:CA:541:G:H2'	1:CA:542:G:O4'	2.17	0.45
22:BA:2888:C:O2	22:BA:2888:C:C2'	2.64	0.45
35:BN:72:ASP:O	35:BN:76:VAL:HG12	2.17	0.45
1:CA:16:A:C2	1:CA:17:U:C6	3.05	0.45
4:CD:35:GLU:O	4:CD:37:ALA:N	2.45	0.45
22:DA:1448:G:C4	22:DA:1449:G:C8	3.05	0.45
41:DT:69:ARG:HA	41:DT:74:ILE:HG22	1.99	0.45
38:BQ:49:ASP:OD2	38:BQ:52:GLN:OE1	2.35	0.45
22:DA:2729:G:H2'	22:DA:2730:C:O4'	2.16	0.45
37:DP:39:ARG:HG3	37:DP:40:LEU:H	1.80	0.45
1:AA:221:C:C2	1:AA:222:C:C5	3.05	0.45
22:BA:1795:C:C4	22:BA:1796:U:C5	3.05	0.45
1:AA:1118:U:C1'	1:AA:1179:A:C4	3.00	0.45
22:DA:2345:G:C5	22:DA:2381:A:C2	3.05	0.45
57:DA:3238:HOH:O	26:DE:47:LYS:HD2	2.17	0.45
2:CB:71:GLY:HA3	2:CB:164:ILE:HG21	1.99	0.45
1:AA:457:G:C6	1:AA:458:U:C4	3.05	0.45
22:DA:1965:C:H3'	22:DA:1966:A:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:691:G:O6	11:AK:57:LYS:NZ	2.50	0.45
5:AE:13:GLU:HB2	5:AE:39:VAL:HG12	1.99	0.45
1:AA:765:G:C6	1:AA:812:G:C4	3.05	0.45
1:AA:126:G:O2'	1:AA:635:A:H4'	2.17	0.45
2:CB:10:LEU:HD23	2:CB:12:ALA:O	2.17	0.45
22:BA:55:G:N2	22:BA:56:A:C4	2.85	0.45
22:BA:2694:G:C5	22:BA:2695:U:C4	3.05	0.45
22:BA:2094:A:C2	22:BA:2196:C:C2	3.05	0.45
22:BA:1242:U:H2'	22:BA:1243:C:C6	2.52	0.45
30:DI:24:VAL:HB	30:DI:28:LEU:HD23	1.99	0.45
22:DA:810:U:O4	33:DL:30:THR:HG22	2.17	0.45
10:AJ:57:VAL:CG2	10:AJ:58:ASN:N	2.79	0.45
1:CA:421:U:H4'	1:CA:421:U:OP1	2.17	0.45
45:BX:78:TYR:CD1	45:BX:78:TYR:OXT	2.70	0.45
1:CA:218:U:C2'	1:CA:219:U:H5'	2.47	0.45
1:AA:224:U:H2'	1:AA:225:C:C6	2.51	0.45
35:DN:36:THR:OG1	35:DN:37:THR:N	2.49	0.45
22:BA:2804:U:H2'	22:BA:2805:C:C6	2.52	0.45
28:DG:121:ILE:HD12	28:DG:141:ILE:HG22	1.99	0.45
6:CF:17:GLN:O	6:CF:21:MET:HG3	2.17	0.45
22:BA:441:U:H2'	22:BA:442:G:C8	2.52	0.45
33:DL:119:PRO:HB3	33:DL:139:GLY:HA3	1.98	0.45
1:CA:444:G:C6	1:CA:445:G:N7	2.85	0.45
24:BC:264:ASP:O	24:BC:265:LYS:C	2.55	0.45
3:AC:42:TYR:CZ	3:AC:90:VAL:HG21	2.52	0.45
3:AC:39:VAL:O	3:AC:43:LEU:HB2	2.16	0.45
1:CA:745:G:H5''	1:CA:851:G:O2'	2.17	0.45
22:DA:1194:A:C2'	22:DA:1195:G:O5'	2.64	0.45
41:DT:73:ARG:HA	41:DT:73:ARG:NH2	2.32	0.45
1:CA:240:G:OP1	1:CA:240:G:H4'	2.16	0.45
31:DJ:59:ALA:O	31:DJ:62:VAL:HG12	2.16	0.45
23:DB:66:A:N6	23:DB:107:G:H2'	2.32	0.45
5:CE:101:GLU:HA	5:CE:122:ASN:HB3	1.99	0.45
13:AM:12:HIS:HA	13:AM:44:LYS:HE3	1.99	0.45
22:DA:207:A:C4	22:DA:208:C:C6	3.05	0.45
22:DA:1364:G:OP1	45:DX:3:ARG:CG	2.65	0.45
22:BA:1922:G:N3	22:BA:1922:G:C2'	2.80	0.45
1:CA:33:A:C4	1:CA:34:C:C5	3.04	0.45
22:DA:416:U:H2'	22:DA:417:C:O4'	2.17	0.45
22:DA:1477:A:N6	22:DA:1514:G:H1'	2.30	0.45
22:DA:84:A:N6	22:DA:99:U:H4'	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1509:A:O2'	22:DA:1510:G:O5'	2.34	0.45
22:DA:1345:C:H5'	22:DA:1396:U:C5	2.52	0.45
22:DA:2425:A:H4'	22:DA:2426:A:O5'	2.17	0.45
22:DA:372:G:N2	22:DA:401:A:OP2	2.43	0.45
22:BA:2061:G:O6	55:BA:3001:DOL:H132	2.16	0.45
22:DA:1731:G:C6	22:DA:1733:G:N7	2.85	0.45
1:AA:203:G:C2	1:AA:215:C:C2	3.05	0.45
5:CE:131:THR:O	5:CE:132:ASN:C	2.54	0.45
46:BY:56:LEU:O	46:BY:57:LEU:C	2.54	0.45
22:DA:1095:A:C2	22:DA:1096:A:C2	3.05	0.45
22:DA:1830:C:H5'	24:DC:15:HIS:CD2	2.52	0.45
10:AJ:52:LEU:HB2	14:AN:81:ARG:HD2	1.99	0.45
42:DU:7:ARG:HG3	42:DU:8:ASP:H	1.82	0.45
20:AT:44:LYS:NZ	20:AT:86:LEU:O	2.43	0.45
17:AQ:12:VAL:CG1	17:AQ:13:VAL:N	2.80	0.45
19:CS:40:ILE:HD13	19:CS:66:MET:HB3	1.97	0.45
53:B5:64:SER:O	53:B5:65:LEU:HB3	2.17	0.45
1:CA:1166:G:N1	1:CA:1169:A:OP2	2.45	0.45
13:CM:96:PRO:HB2	13:CM:100:GLN:OE1	2.16	0.45
21:CU:34:ARG:CD	21:CU:35:ARG:HB2	2.47	0.45
2:AB:72:THR:O	2:AB:73:LYS:HB3	2.16	0.45
22:BA:982:C:H5''	22:BA:983:A:P	2.57	0.45
9:AI:114:LYS:NZ	9:AI:118:LEU:O	2.44	0.45
32:BK:107:LEU:C	32:BK:109:SER:N	2.70	0.45
30:BI:116:ASP:OD2	30:BI:117:MET:N	2.50	0.45
22:DA:1767:G:N1	22:DA:1986:C:C4	2.85	0.45
25:DD:125:TRP:O	25:DD:126:ASN:HB2	2.17	0.45
12:CL:86:ARG:NH1	12:CL:88:LYS:HA	2.32	0.45
29:BH:12:LEU:HG	29:BH:13:GLY:N	2.31	0.45
4:AD:147:GLU:O	4:AD:150:LYS:N	2.50	0.45
41:DT:62:VAL:HG12	41:DT:63:VAL:N	2.32	0.45
9:AI:30:ILE:HD11	9:AI:38:TYR:CB	2.47	0.45
1:CA:355:C:H2'	1:CA:356:A:O4'	2.17	0.45
22:DA:1567:G:H2'	24:DC:85:PRO:HG3	1.99	0.45
38:BQ:41:LYS:HA	38:BQ:44:GLN:OE1	2.16	0.45
22:DA:2513:A:C4	22:DA:2514:U:C5	3.05	0.45
34:BM:132:THR:HG22	34:BM:133:LYS:N	2.31	0.45
37:DP:106:LYS:HA	37:DP:109:ARG:HD2	1.98	0.45
1:AA:114:U:H2'	1:AA:115:G:C8	2.52	0.45
1:AA:310:G:H5''	16:AP:31:ARG:HB2	1.97	0.45
4:AD:160:GLU:C	4:AD:162:ALA:H	2.20	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2252:G:H2'	22:DA:2253:G:O4'	2.16	0.45
1:AA:1243:C:H2'	1:AA:1244:G:C8	2.52	0.45
1:CA:714:G:H2'	1:CA:715:A:C8	2.52	0.45
28:BG:99:LYS:O	28:BG:100:GLY:C	2.55	0.45
22:DA:469:G:O6	50:D2:37:LYS:NZ	2.48	0.45
22:BA:187:G:C2	22:BA:210:C:C2	3.05	0.45
22:DA:1559:U:H4'	22:DA:1560:G:OP2	2.17	0.45
29:DH:15:LEU:N	29:DH:15:LEU:HD22	2.32	0.45
22:BA:1972:G:C2	22:BA:1973:G:C5	3.05	0.45
8:AH:34:VAL:O	8:AH:36:ILE:N	2.49	0.45
1:AA:716:A:C6	1:AA:717:U:N3	2.85	0.45
25:DD:151:THR:HB	25:DD:152:PRO:HD2	1.98	0.44
22:DA:188:G:C2	22:DA:209:C:N3	2.85	0.44
22:DA:306:U:O4	22:DA:307:G:C6	2.70	0.44
22:DA:81:G:N7	22:DA:82:U:C4	2.85	0.44
22:DA:682:G:H2'	22:DA:682:G:N3	2.31	0.44
1:AA:1410:A:H2'	1:AA:1411:C:C6	2.52	0.44
22:DA:1246:A:O2'	26:DE:40:ARG:NH2	2.51	0.44
1:AA:202:G:O2'	1:AA:468:A:H2'	2.17	0.44
22:DA:2683:C:H4'	25:DD:13:ARG:NH1	2.31	0.44
2:AB:84:ALA:O	2:AB:89:GLN:CB	2.65	0.44
22:BA:1386:C:H5''	22:BA:1396:U:O2	2.17	0.44
1:CA:951:G:C6	1:CA:952:U:C4	3.05	0.44
1:CA:1226:C:N4	13:CM:103:LYS:HB2	2.33	0.44
22:BA:1022:G:C5	22:BA:1140:C:C4	3.05	0.44
22:DA:868:U:C4	22:DA:869:G:N7	2.85	0.44
22:BA:747:U:N3	22:BA:2613:U:C4	2.85	0.44
1:AA:858:G:C6	1:AA:869:G:C8	3.05	0.44
22:DA:1773:A:C2	22:DA:1978:A:C2	3.05	0.44
35:DN:84:GLY:N	35:DN:85:PRO:HD2	2.32	0.44
14:CN:51:LEU:HB3	14:CN:52:PRO:HD2	1.99	0.44
22:DA:1444:G:N2	22:DA:1548:A:N3	2.65	0.44
30:BI:19:ASN:ND2	30:BI:35:ILE:O	2.51	0.44
17:AQ:12:VAL:O	17:AQ:13:VAL:CG1	2.63	0.44
22:DA:2307:G:N2	22:DA:2312:U:C4	2.85	0.44
8:AH:10:MET:HE2	8:AH:33:LYS:HD3	1.99	0.44
13:AM:114:LYS:CB	13:AM:115:PRO:CD	2.94	0.44
22:DA:1827:U:C4'	22:DA:1970:A:HO2'	2.29	0.44
6:CF:37:HIS:CD2	6:CF:65:GLU:HB2	2.52	0.44
21:AU:11:PRO:C	21:AU:12:PHE:CD2	2.90	0.44
22:BA:1360:G:O6	22:BA:1372:U:C2	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:271:G:C4'	22:BA:272:A:OP1	2.65	0.44
4:CD:5:LEU:CD1	4:CD:5:LEU:N	2.80	0.44
22:BA:2714:G:C5	22:BA:2715:C:C5	3.05	0.44
30:BI:116:ASP:O	30:BI:117:MET:HG2	2.17	0.44
30:BI:117:MET:CE	30:BI:129:ILE:HD11	2.48	0.44
22:DA:546:U:O2	22:DA:546:U:H2'	2.17	0.44
37:BP:113:ARG:O	37:BP:114:LEU:O	2.35	0.44
12:CL:72:HIS:ND1	12:CL:74:LEU:HB2	2.32	0.44
22:DA:1428:C:C4	22:DA:1569:A:H5''	2.52	0.44
1:AA:631:C:H5''	1:AA:632:U:C5'	2.46	0.44
8:AH:95:VAL:CG1	8:AH:96:MET:N	2.80	0.44
32:DK:32:TYR:CD2	32:DK:32:TYR:N	2.85	0.44
22:DA:2112:G:H5'	22:DA:2113:U:OP2	2.17	0.44
1:CA:1287:A:C6	1:CA:1288:A:C6	3.05	0.44
22:BA:55:G:C2	22:BA:56:A:C5	3.06	0.44
51:D3:32:ILE:HG22	51:D3:35:LYS:HD2	1.99	0.44
20:CT:3:ASN:O	20:CT:4:ILE:C	2.55	0.44
29:DH:5:LEU:CD1	29:DH:13:GLY:CA	2.95	0.44
15:CO:35:GLN:NE2	15:CO:39:LEU:HD21	2.32	0.44
1:CA:1411:C:H2'	1:CA:1412:C:H6	1.81	0.44
12:AL:50:ARG:HG3	12:AL:90:LEU:HD11	1.99	0.44
22:DA:1401:G:C5	22:DA:1402:U:C5	3.05	0.44
11:CK:19:GLY:O	11:CK:82:LEU:HA	2.17	0.44
3:AC:84:VAL:CG1	3:AC:101:ILE:HG21	2.47	0.44
6:AF:45:ARG:O	6:AF:56:LYS:HA	2.17	0.44
34:DM:67:VAL:HG11	34:DM:96:ILE:HD12	1.99	0.44
37:DP:30:VAL:HG12	37:DP:31:TRP:O	2.18	0.44
28:BG:118:PRO:O	28:BG:119:ALA:C	2.55	0.44
1:AA:854:U:C6	1:AA:871:U:O4	2.69	0.44
8:CH:59:LEU:HD12	8:CH:60:GLU:N	2.32	0.44
1:AA:196:A:OP1	20:AT:64:LYS:CE	2.66	0.44
22:DA:1480:C:C4	22:DA:1481:U:C4	3.05	0.44
57:DB:307:HOH:O	43:DV:14:LYS:HD2	2.17	0.44
22:BA:532:A:N3	22:BA:532:A:H2'	2.32	0.44
40:DS:22:ASP:N	40:DS:22:ASP:OD2	2.50	0.44
4:AD:50:ASP:C	4:AD:50:ASP:OD2	2.55	0.44
1:AA:992:U:O2	1:AA:1043:G:N7	2.50	0.44
1:CA:197:A:C6	1:CA:221:C:H4'	2.52	0.44
2:CB:118:GLU:HA	2:CB:121:SER:OG	2.17	0.44
5:CE:104:GLY:O	5:CE:105:ILE:HG23	2.17	0.44
22:BA:2720:U:C2	22:BA:2872:A:C6	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1092:C:N4	22:BA:1098:A:H62	2.14	0.44
1:AA:800:G:C6	57:AA:1814:HOH:O	2.54	0.44
5:CE:155:ALA:C	5:CE:156:LYS:HG3	2.36	0.44
1:AA:1309:G:C6	1:AA:1310:G:C5	3.05	0.44
19:AS:3:ARG:O	19:AS:4:SER:CB	2.65	0.44
1:CA:251:G:N1	1:CA:266:G:C6	2.85	0.44
22:DA:613:A:OP2	22:DA:614:A:N7	2.51	0.44
3:AC:85:GLU:HA	3:AC:88:ARG:CZ	2.48	0.44
14:CN:41:ARG:HG2	14:CN:42:TRP:N	2.31	0.44
22:DA:465:G:N2	22:DA:684:G:H1'	2.32	0.44
5:AE:84:PRO:HA	5:AE:98:PRO:HD3	1.99	0.44
22:BA:2267:A:H5''	22:BA:2268:A:H5'	1.99	0.44
22:BA:1378:A:N3	22:BA:1380:G:C8	2.86	0.44
22:BA:2172:U:OP2	22:BA:2173:A:H8	2.00	0.44
25:BD:13:ARG:HD2	25:BD:15:PHE:CE1	2.51	0.44
30:DI:93:PRO:HB3	30:DI:136:MET:HA	1.99	0.44
12:AL:59:ASN:OD1	12:AL:59:ASN:C	2.54	0.44
22:DA:2297:A:N7	22:DA:2320:U:C4	2.85	0.44
9:CI:30:ILE:HD13	9:CI:39:PHE:CE2	2.52	0.44
1:AA:1322:C:O4'	1:AA:1322:C:O2	2.35	0.44
45:DX:21:ALA:O	45:DX:22:LEU:HB2	2.17	0.44
1:CA:540:G:C6	1:CA:541:G:C5	3.05	0.44
11:CK:25:ALA:O	11:CK:89:PRO:O	2.36	0.44
35:BN:31:HIS:O	35:BN:33:ILE:N	2.50	0.44
53:B5:65:LEU:HD21	53:B5:195:ARG:CB	2.48	0.44
22:DA:728:G:C2	22:DA:730:A:C4	3.06	0.44
22:DA:235:U:C4	22:DA:430:A:C2	3.05	0.44
5:AE:20:ARG:HG3	5:AE:21:VAL:N	2.32	0.44
1:AA:1081:A:P	5:AE:21:VAL:HG21	2.57	0.44
1:CA:517:G:H5'	1:CA:519:C:C2	2.51	0.44
44:DW:45:PHE:HB3	44:DW:80:ILE:CD1	2.47	0.44
1:AA:587:G:N2	1:AA:755:G:C4	2.85	0.44
1:AA:587:G:C2	1:AA:755:G:C6	3.05	0.44
22:DA:2103:C:H2'	22:DA:2104:C:C5	2.53	0.44
22:DA:2478:A:C8	22:DA:2529:G:N7	2.85	0.44
35:DN:48:VAL:N	35:DN:50:PRO:HD2	2.33	0.44
11:AK:56:ARG:O	11:AK:59:THR:HG23	2.17	0.44
24:BC:141:VAL:HG11	24:BC:190:ALA:CB	2.47	0.44
22:DA:1569:A:C6	22:DA:1570:A:C2	3.05	0.44
1:AA:1130:A:H1'	1:AA:1146:A:C2	2.53	0.44
42:DU:44:LYS:HE3	42:DU:46:GLN:CB	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2412:A:H5''	22:DA:2413:G:OP2	2.17	0.44
1:CA:632:U:H2'	1:CA:633:G:OP1	2.17	0.44
10:AJ:36:VAL:HA	10:AJ:75:ASP:O	2.17	0.44
27:BF:17:MET:CE	27:BF:22:TYR:HB2	2.47	0.44
1:CA:178:C:H2'	1:CA:179:A:O4'	2.17	0.44
1:AA:1353:G:C2	1:AA:1354:U:C6	3.05	0.44
22:DA:881:G:C2	22:DA:882:G:N7	2.85	0.44
3:AC:26:THR:O	3:AC:27:LYS:C	2.53	0.44
33:DL:116:VAL:HG21	33:DL:135:ILE:HA	1.99	0.44
25:BD:177:VAL:HG23	25:BD:177:VAL:O	2.18	0.44
48:D0:48:TYR:CE2	48:D0:53:LYS:HD3	2.52	0.44
9:CI:46:MET:O	9:CI:49:ARG:HB3	2.17	0.44
1:AA:549:C:C2	1:AA:550:G:C8	3.05	0.44
3:AC:60:PRO:O	3:AC:61:ALA:O	2.35	0.44
1:AA:102:G:C4	1:AA:103:U:C5	3.06	0.44
28:BG:2:SER:C	28:BG:4:VAL:N	2.66	0.44
29:BH:57:LYS:CG	29:BH:58:LEU:N	2.81	0.44
1:AA:472:U:C4	1:AA:473:U:O4	2.70	0.44
22:BA:468:G:O6	22:BA:469:G:C2	2.71	0.44
31:BJ:42:ALA:O	38:BQ:64:ARG:HG2	2.17	0.44
19:CS:36:ARG:NH1	19:CS:72:GLY:HA3	2.32	0.44
33:DL:96:LYS:HD3	33:DL:103:ILE:HA	1.98	0.44
22:BA:1350:C:C2	22:BA:1382:G:C2	3.06	0.44
1:CA:937:A:C2	1:CA:1379:G:O6	2.69	0.44
26:DE:76:PRO:HA	26:DE:82:GLY:HA2	1.98	0.44
1:AA:598:U:H4'	8:AH:86:TYR:CG	2.52	0.44
11:AK:72:ASP:O	11:AK:73:ALA:HB2	2.18	0.44
11:CK:43:GLY:HA3	11:CK:74:VAL:HG12	1.99	0.44
3:CC:117:ALA:HB1	3:CC:187:SER:HB2	1.98	0.44
22:BA:864:G:O2'	22:BA:865:C:H5'	2.16	0.44
1:AA:412:A:H4'	1:AA:413:G:OP1	2.17	0.44
22:DA:2211:A:C4'	22:DA:2212:A:OP1	2.65	0.44
1:AA:1329:A:H5''	13:AM:26:GLY:N	2.33	0.44
2:CB:148:LEU:N	2:CB:148:LEU:HD12	2.33	0.44
26:BE:48:THR:HG22	26:BE:86:ALA:HB3	1.99	0.44
50:D2:30:VAL:O	50:D2:34:ARG:HG3	2.17	0.44
5:AE:115:LEU:CD2	5:AE:123:VAL:HG21	2.47	0.44
1:AA:1263:C:H2'	1:AA:1264:U:C6	2.52	0.44
4:CD:155:VAL:HA	4:CD:158:ALA:HB3	2.00	0.44
1:AA:423:G:H2'	1:AA:424:G:O4'	2.17	0.44
31:DJ:6:ALA:O	31:DJ:7:LYS:CG	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BO:59:ALA:O	36:BO:60:GLU:C	2.55	0.44
29:BH:100:ALA:HB2	29:BH:115:VAL:HG21	1.98	0.44
22:BA:1071:G:P	22:BA:1071:G:H8	2.39	0.44
22:DA:771:G:N3	22:DA:771:G:H2'	2.32	0.44
1:AA:1050:G:C2	1:AA:1209:C:O2	2.69	0.44
22:BA:1073:A:C2'	22:BA:1074:G:H5''	2.47	0.44
22:DA:607:U:H5	22:DA:619:G:C4	2.35	0.44
1:AA:980:C:O3'	14:AN:13:ARG:NH2	2.50	0.44
22:DA:1435:G:O2'	22:DA:1436:G:H5'	2.17	0.44
22:DA:777:G:N2	22:DA:778:G:N9	2.66	0.44
29:DH:1:MET:CE	29:DH:27:ARG:NH1	2.80	0.44
40:BS:55:ILE:CG2	40:BS:66:ILE:HG12	2.48	0.44
22:DA:997:G:OP1	38:DQ:92:ARG:NE	2.50	0.44
22:DA:1668:A:N3	22:DA:1674:G:C8	2.85	0.44
1:CA:734:G:C5	1:CA:735:C:C5	3.05	0.44
22:DA:2114:A:C4	22:DA:2167:U:H4'	2.53	0.44
11:AK:29:ASN:OD1	11:AK:47:ALA:HB3	2.18	0.44
1:AA:844:G:N3	1:AA:845:A:C8	2.85	0.44
14:AN:47:LYS:HD2	19:AS:13:LEU:HD21	1.99	0.44
2:AB:70:VAL:O	2:AB:163:VAL:HA	2.17	0.44
2:CB:18:HIS:O	2:CB:19:GLN:CB	2.65	0.44
32:DK:34:GLY:O	32:DK:35:VAL:C	2.54	0.44
22:BA:2627:G:C6	22:BA:2628:C:C4	3.06	0.44
22:DA:1070:A:H2'	22:DA:1097:U:O5'	2.17	0.44
4:AD:122:ALA:O	4:AD:123:ILE:HG23	2.16	0.44
1:CA:1491:G:C6	1:CA:1492:A:C6	3.05	0.44
38:DQ:10:ALA:C	38:DQ:12:ALA:N	2.71	0.44
22:DA:1395:A:H2'	22:DA:1397:U:OP2	2.17	0.44
6:CF:45:ARG:HG2	6:CF:46:GLN:N	2.32	0.44
1:AA:1500:A:OP2	1:AA:1505:G:OP1	2.35	0.44
44:BW:37:ILE:HD11	44:BW:61:ALA:HB2	1.98	0.44
53:B5:65:LEU:CD2	53:B5:195:ARG:CB	2.95	0.44
1:CA:1142:G:H5'	1:CA:1143:G:OP2	2.17	0.44
22:BA:1718:G:C2	22:BA:1719:G:C8	3.06	0.44
22:DA:1582:C:H2'	22:DA:1583:A:O4'	2.17	0.44
22:BA:878:A:H5'	22:BA:879:G:OP2	2.17	0.44
22:DA:2334:U:O3'	36:DO:13:ARG:HD3	2.17	0.44
10:CJ:52:LEU:HD23	10:CJ:62:ARG:HG2	1.99	0.44
22:DA:1797:G:H4'	24:DC:255:LYS:O	2.18	0.44
9:CI:54:LEU:O	9:CI:55:VAL:HG13	2.18	0.44
36:BO:79:ALA:CB	36:BO:113:ALA:HB3	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:160:GLU:O	4:CD:163:GLU:CB	2.65	0.44
3:CC:196:ILE:O	3:CC:196:ILE:HG22	2.17	0.44
22:DA:1663:G:C6	22:DA:1992:G:N7	2.86	0.44
35:BN:55:ALA:HA	35:BN:80:PHE:CE1	2.53	0.44
22:DA:2440:C:N3	22:DA:2441:U:H1'	2.33	0.44
22:DA:2038:G:N7	22:DA:2039:U:C5	2.86	0.44
29:DH:37:VAL:HG22	29:DH:38:PRO:HD2	1.98	0.44
1:AA:815:A:N7	1:AA:1509:C:O2'	2.49	0.44
26:BE:197:GLU:O	26:BE:201:ALA:N	2.50	0.44
1:AA:394:G:C5	1:AA:395:C:C5	3.05	0.44
49:B1:17:THR:HG21	49:B1:42:VAL:HB	1.98	0.44
27:DF:169:LEU:O	27:DF:169:LEU:HG	2.16	0.44
22:BA:1503:A:C6	22:BA:1504:A:C5	3.05	0.44
22:DA:2695:U:O2	22:DA:2696:U:C5	2.71	0.44
22:DA:2053:G:H2'	22:DA:2054:A:O4'	2.17	0.44
2:AB:15:HIS:O	2:AB:16:PHE:C	2.55	0.44
16:AP:20:VAL:HG23	16:AP:34:GLU:O	2.18	0.44
22:BA:440:C:C2'	22:BA:441:U:H5'	2.47	0.44
25:BD:142:VAL:HB	25:BD:143:PRO:CD	2.47	0.44
22:DA:167:A:C2	22:DA:168:G:H1'	2.52	0.44
14:AN:26:GLU:HG2	14:AN:27:LEU:N	2.30	0.44
9:CI:95:ARG:HG2	9:CI:104:VAL:HG11	1.99	0.44
49:B1:40:ASP:C	49:B1:40:ASP:OD1	2.55	0.44
36:BO:12:THR:O	36:BO:12:THR:HG22	2.16	0.44
15:AO:55:GLY:O	15:AO:58:ARG:HB3	2.17	0.44
5:CE:70:ASN:OD1	5:CE:70:ASN:N	2.49	0.44
29:BH:62:LEU:O	29:BH:62:LEU:HD12	2.17	0.44
17:CQ:55:ILE:C	17:CQ:55:ILE:HD13	2.37	0.44
9:AI:25:ASN:HB2	9:AI:27:LYS:HG2	1.98	0.44
22:BA:1988:G:H2'	22:BA:1989:G:O4'	2.17	0.44
7:AG:8:GLY:O	7:AG:9:GLN:HB3	2.17	0.44
22:BA:1709:U:C2	22:BA:1750:G:N2	2.85	0.44
25:DD:148:GLN:HB2	25:DD:152:PRO:HG2	2.00	0.44
5:CE:103:THR:O	5:CE:122:ASN:HA	2.18	0.44
22:BA:2846:G:H2'	22:BA:2847:U:O4'	2.18	0.44
37:BP:53:ARG:HG2	37:BP:53:ARG:HH11	1.81	0.44
22:DA:841:G:H2'	22:DA:842:U:O4'	2.18	0.44
22:DA:425:G:N1	22:DA:426:C:C4	2.85	0.44
7:AG:56:LYS:O	7:AG:57:SER:OG	2.29	0.44
12:AL:44:LYS:O	12:AL:45:PRO:C	2.55	0.44
23:DB:48:U:H2'	23:DB:49:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:80:VAL:O	7:AG:81:GLY:C	2.56	0.44
4:AD:126:ASN:HA	4:AD:142:VAL:HG23	2.00	0.44
49:B1:34:LEU:H	49:B1:52:ALA:HB2	1.82	0.44
1:CA:1160:G:O6	1:CA:1181:G:C6	2.70	0.44
20:AT:71:LYS:HD2	20:AT:74:ARG:HH21	1.80	0.44
20:AT:74:ARG:O	20:AT:78:ASN:OD1	2.34	0.44
1:CA:505:G:H5'	1:CA:534:U:C2	2.53	0.44
22:DA:503:A:C6	22:DA:506:G:C6	3.05	0.44
16:CP:5:ARG:O	16:CP:19:VAL:HA	2.17	0.44
1:CA:765:G:H5''	1:CA:766:A:OP1	2.17	0.44
22:DA:41:C:H2'	22:DA:42:A:C8	2.52	0.44
1:CA:174:A:C4	1:CA:175:C:C6	3.05	0.44
22:BA:1421:G:N2	22:BA:1495:A:N1	2.65	0.44
22:DA:248:G:O2'	22:DA:2432:A:OP1	2.23	0.44
1:CA:68:G:C5	1:CA:69:G:H1'	2.52	0.44
1:CA:824:G:H1'	8:CH:2:SER:HA	2.00	0.44
28:BG:121:ILE:HG22	28:BG:122:THR:N	2.32	0.44
28:BG:85:LYS:HG3	28:BG:141:ILE:CD1	2.47	0.44
26:DE:48:THR:OG1	26:DE:49:ARG:N	2.50	0.44
40:BS:37:THR:HG22	40:BS:38:TYR:CE1	2.53	0.44
1:CA:1138:G:C2	1:CA:1140:C:C4	3.06	0.44
22:DA:2652:C:N4	22:DA:2653:U:C4	2.85	0.44
21:CU:34:ARG:HD3	21:CU:35:ARG:CB	2.48	0.44
20:CT:67:ILE:O	20:CT:68:HIS:O	2.34	0.44
28:DG:167:GLU:HG3	28:DG:169:VAL:HG23	1.98	0.44
49:B1:29:THR:O	49:B1:31:PRO:CD	2.66	0.44
31:DJ:35:ARG:HB3	31:DJ:54:ILE:HD11	1.99	0.44
22:BA:1846:G:N2	22:BA:1895:C:C2	2.86	0.44
22:DA:2854:G:N2	22:DA:2864:G:N3	2.66	0.44
42:DU:83:VAL:HG11	42:DU:94:ARG:HD2	1.99	0.44
29:BH:31:VAL:N	29:BH:32:PRO:CD	2.80	0.44
30:BI:62:TYR:N	30:BI:62:TYR:CD2	2.84	0.44
33:DL:78:ARG:CZ	33:DL:113:ALA:HB1	2.48	0.44
14:CN:93:ILE:HG21	14:CN:96:LEU:HD22	1.99	0.44
1:AA:1154:G:C2	1:AA:1155:A:N7	2.85	0.44
22:BA:482:A:C5'	22:BA:483:A:OP1	2.66	0.44
20:CT:72:ALA:O	20:CT:75:HIS:HB2	2.18	0.44
15:CO:58:ARG:O	15:CO:62:GLN:HB2	2.18	0.44
1:AA:833:G:N2	1:AA:834:U:H1'	2.32	0.44
18:AR:35:GLU:OE2	21:AU:5:LYS:HE3	2.18	0.44
36:BO:78:VAL:HG23	36:BO:79:ALA:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:73:ASN:O	12:AL:74:LEU:CD2	2.65	0.44
42:DU:103:ILE:HG22	42:DU:103:ILE:O	2.16	0.44
22:BA:1128:G:O4'	22:BA:2516:A:O2'	2.35	0.44
1:CA:747:A:C5	1:CA:748:G:C5	3.05	0.44
1:CA:853:C:H2'	1:CA:854:U:O4'	2.18	0.44
1:CA:144:G:C5	1:CA:179:A:C2	3.06	0.44
35:BN:32:GLU:CD	35:BN:86:ARG:HH22	2.20	0.44
48:D0:7:LYS:HE2	48:D0:8:PRO:O	2.17	0.44
33:DL:29:LYS:O	33:DL:30:THR:CB	2.64	0.44
1:AA:189:A:C6	1:AA:190:A:N1	2.85	0.44
29:DH:25:TYR:O	29:DH:29:PHE:HB3	2.18	0.44
22:BA:225:C:H2'	22:BA:226:A:O4'	2.17	0.44
1:CA:862:C:C2	1:CA:863:U:C5	3.05	0.44
22:DA:158:U:C2'	22:DA:159:G:H5'	2.46	0.44
22:BA:1501:G:C2'	22:BA:1502:A:H5'	2.48	0.44
1:CA:1029:U:O2	1:CA:1031:C:H1'	2.18	0.44
22:DA:2051:A:N3	22:DA:2052:A:N6	2.61	0.44
22:DA:2221:G:C5	22:DA:2222:C:C5	3.05	0.44
47:BZ:24:LEU:HD11	47:BZ:54:MET:CE	2.48	0.44
19:AS:29:LYS:CB	19:AS:30:PRO:HD2	2.47	0.44
3:AC:84:VAL:CG1	3:AC:101:ILE:CG2	2.95	0.44
22:DA:1194:A:H2'	22:DA:1195:G:O5'	2.18	0.44
22:DA:580:U:H4'	38:DQ:31:VAL:HG11	2.00	0.44
22:BA:2856:A:N6	22:BA:2857:G:C6	2.85	0.44
22:BA:2779:U:C6	22:BA:2781:A:C2	3.06	0.44
18:AR:71:THR:OG1	18:AR:73:ARG:HB2	2.18	0.44
10:AJ:5:ARG:HG2	10:AJ:79:PRO:HG3	1.99	0.44
1:AA:750:C:O2'	15:AO:21:ASP:HA	2.17	0.44
33:DL:17:LYS:HB3	33:DL:19:LEU:HD12	1.98	0.44
1:CA:888:G:H4'	1:CA:1488:G:O2'	2.17	0.44
1:AA:510:A:H5"	1:AA:511:C:OP1	2.18	0.44
22:DA:1655:A:C6	22:DA:1656:C:C2	3.05	0.44
4:AD:90:LEU:C	4:AD:90:LEU:HD12	2.38	0.44
2:AB:32:PHE:C	2:AB:32:PHE:CD1	2.90	0.44
25:DD:112:THR:O	25:DD:112:THR:HG22	2.16	0.44
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.53	0.44
22:DA:2238:G:H4'	22:DA:2239:G:OP1	2.17	0.44
1:CA:130:A:OP1	17:CQ:65:ARG:HD2	2.18	0.44
36:DO:18:LEU:O	36:DO:22:GLY:N	2.50	0.44
22:BA:612:G:H2'	22:BA:614:A:C8	2.51	0.44
52:D4:17:VAL:HG11	52:D4:26:ILE:HD13	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:26:G:C6	22:DA:27:G:N1	2.86	0.44
22:DA:226:A:H4'	22:DA:258:G:OP1	2.17	0.44
1:CA:1007:U:C2'	1:CA:1008:U:C5'	2.95	0.44
6:CF:91:ARG:HG2	6:CF:93:LYS:NZ	2.32	0.44
22:DA:2199:A:C1'	29:DH:28:ASN:ND2	2.80	0.44
5:AE:80:THR:OG1	5:AE:81:LEU:N	2.51	0.44
1:CA:73:C:HO2'	1:CA:74:A:P	2.39	0.44
21:AU:40:LYS:N	21:AU:41:PRO:HD2	2.32	0.44
20:AT:67:ILE:CD1	20:AT:71:LYS:HG2	2.47	0.44
14:AN:7:LYS:O	14:AN:10:GLU:N	2.50	0.44
1:AA:568:G:N3	1:AA:569:C:C6	2.85	0.44
22:DA:2822:G:OP1	25:DD:164:GLN:NE2	2.48	0.44
22:BA:2311:A:H1'	27:BF:85:ILE:HD11	1.99	0.44
1:CA:66:A:N6	1:CA:67:C:N4	2.65	0.44
37:DP:60:THR:HA	37:DP:73:VAL:HA	1.99	0.44
22:DA:2502:G:H5'	22:DA:2503:A:C5'	2.47	0.44
1:CA:1361:G:H3'	1:CA:1362:A:H5''	2.00	0.44
22:BA:2345:G:H4'	22:BA:2346:A:H5''	1.99	0.44
11:CK:89:PRO:HD3	21:CU:29:LEU:HD11	1.97	0.44
1:CA:159:G:H5'	1:CA:160:A:OP2	2.18	0.44
35:BN:33:ILE:HG23	35:BN:33:ILE:O	2.18	0.44
22:BA:1223:G:OP2	39:BR:68:ARG:NH1	2.50	0.44
10:AJ:35:GLN:OE1	10:AJ:35:GLN:HA	2.17	0.44
22:DA:749:A:C6	22:DA:750:A:N7	2.85	0.44
22:BA:2379:G:O3'	36:BO:17:LYS:NZ	2.49	0.44
22:BA:1793:C:O2'	22:BA:1794:A:H5'	2.18	0.44
17:CQ:46:VAL:HG12	17:CQ:47:HIS:N	2.33	0.44
22:BA:581:C:H2'	22:BA:582:A:H8	1.83	0.44
41:BT:16:VAL:O	41:BT:17:SER:CB	2.65	0.44
15:CO:37:ASN:O	15:CO:40:GLN:HB3	2.17	0.44
8:CH:20:ALA:C	8:CH:22:LYS:H	2.21	0.44
36:BO:48:LEU:HD12	36:BO:87:ILE:CD1	2.46	0.44
4:CD:148:LYS:H	4:CD:148:LYS:CE	2.31	0.44
22:BA:1883:U:O4	22:BA:1884:G:N1	2.51	0.44
23:BB:15:A:O2'	23:BB:16:G:OP1	2.35	0.44
12:AL:74:LEU:HD11	12:AL:80:ILE:HG21	2.00	0.44
22:BA:55:G:N3	22:BA:56:A:C8	2.86	0.44
2:AB:125:THR:O	2:AB:126:PHE:HB3	2.17	0.44
7:CG:117:ALA:O	7:CG:121:ALA:CB	2.66	0.44
7:CG:51:ALA:HB1	7:CG:57:SER:O	2.18	0.44
22:DA:933:A:H5'	22:DA:934:U:OP2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:223:A:C4	1:AA:224:U:C5	3.05	0.44
22:BA:1050:A:H2'	22:BA:1051:G:O4'	2.17	0.44
14:CN:10:GLU:O	14:CN:13:ARG:N	2.51	0.44
33:BL:142:ILE:O	33:BL:142:ILE:HG22	2.17	0.44
25:BD:85:ALA:O	25:BD:86:GLU:O	2.36	0.44
13:CM:6:GLY:O	13:CM:8:ASN:N	2.51	0.44
2:AB:132:LYS:HA	2:AB:132:LYS:HE3	1.99	0.44
21:AU:53:VAL:O	21:AU:54:LYS:CB	2.66	0.44
28:DG:133:LEU:CD1	28:DG:141:ILE:HB	2.47	0.44
4:AD:105:MET:HG2	4:AD:171:LEU:HD22	1.98	0.44
1:AA:471:U:H2'	1:AA:472:U:O4'	2.18	0.44
22:BA:1444:G:H2'	22:BA:1445:G:C8	2.52	0.44
11:AK:22:HIS:N	11:AK:33:THR:O	2.50	0.44
44:DW:56:ASP:O	44:DW:57:HIS:HB2	2.16	0.44
48:B0:27:SER:O	48:B0:28:LEU:C	2.56	0.44
22:DA:2073:C:H5''	24:DC:228:VAL:CB	2.48	0.44
38:DQ:47:TYR:CD2	38:DQ:47:TYR:C	2.90	0.44
25:BD:106:LYS:HA	25:BD:175:LEU:O	2.18	0.44
17:CQ:60:GLU:HB3	17:CQ:76:VAL:HG23	1.98	0.44
23:BB:3:C:C4	23:BB:4:C:C5	3.05	0.44
22:BA:412:A:H2'	22:BA:413:C:H5'	1.99	0.44
23:BB:112:G:H2'	23:BB:113:C:C6	2.52	0.44
15:AO:43:PHE:HB3	15:AO:53:ARG:NH2	2.31	0.44
22:BA:599:A:O2'	22:BA:600:G:H5'	2.18	0.44
6:AF:38:ARG:HD2	6:AF:40:GLU:OE2	2.17	0.44
24:BC:124:ILE:HG22	24:BC:124:ILE:O	2.17	0.44
22:DA:1584:U:O2	22:DA:1584:U:H3'	2.17	0.44
22:BA:1858:A:H1'	22:BA:1885:A:C2	2.53	0.44
1:CA:230:G:H2'	1:CA:231:U:O4'	2.17	0.44
22:BA:826:U:O2'	33:BL:53:GLY:N	2.50	0.44
22:DA:1355:G:C6	22:DA:1356:G:N7	2.85	0.44
22:BA:1075:C:N3	22:BA:1076:C:N4	2.66	0.44
1:AA:451:A:N6	1:AA:481:G:H5'	2.33	0.44
47:DZ:52:SER:C	47:DZ:54:MET:H	2.20	0.44
1:CA:1004:A:H2'	1:CA:1005:A:C8	2.52	0.44
7:AG:69:VAL:HG23	7:AG:100:ALA:HB1	2.00	0.44
22:DA:117:G:N1	22:DA:119:A:N6	2.66	0.44
22:DA:116:C:H5'	22:DA:128:C:C5	2.53	0.44
22:DA:1677:A:H5''	57:DA:3436:HOH:O	2.17	0.44
1:CA:1347:G:HO2'	1:CA:1348:U:P	2.38	0.44
4:AD:58:LYS:HD3	4:AD:203:LEU:CD2	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2127:G:H1'	22:DA:2162:G:N7	2.33	0.44
1:AA:946:A:C2	1:AA:1236:A:C2	3.06	0.44
22:BA:2189:U:C2'	22:BA:2190:G:C1'	2.94	0.44
22:BA:2191:A:C2	22:BA:2192:U:O4	2.71	0.44
29:BH:97:ARG:O	29:BH:101:ASP:HB2	2.17	0.44
2:AB:67:ILE:O	2:AB:68:LEU:HB3	2.17	0.44
22:DA:1734:G:C2	22:DA:1735:A:C5	3.06	0.44
35:DN:65:LEU:HD11	35:DN:69:ARG:NH2	2.33	0.44
22:BA:2128:G:OP2	53:B5:37:LYS:HB2	2.18	0.44
22:DA:2121:G:C2	22:DA:2122:U:C2	3.06	0.44
20:CT:67:ILE:HA	20:CT:67:ILE:HD13	1.84	0.44
41:BT:48:GLN:HG2	41:BT:53:VAL:O	2.18	0.44
31:DJ:35:ARG:HG2	31:DJ:40:HIS:NE2	2.33	0.44
22:DA:2234:G:C4	22:DA:2235:G:C8	3.05	0.44
22:DA:2347:C:O2'	49:D1:39:PHE:HB3	2.18	0.44
14:AN:49:GLN:OE1	14:AN:49:GLN:CA	2.66	0.44
22:BA:515:A:H1'	22:BA:581:C:H1'	2.00	0.44
8:CH:104:VAL:HA	8:CH:126:ILE:CD1	2.48	0.44
22:BA:2503:A:H5'	22:BA:2503:A:N3	2.32	0.44
36:BO:40:ILE:HG22	36:BO:41:ALA:O	2.17	0.44
43:BV:63:ILE:HD12	43:BV:72:VAL:HG21	1.98	0.44
22:BA:1356:G:C5	22:BA:1357:C:C5	3.05	0.44
22:DA:389:G:N9	22:DA:2413:G:H4'	2.32	0.44
22:DA:2392:A:OP2	51:D3:31:HIS:CE1	2.70	0.44
9:AI:19:VAL:HA	9:AI:65:ILE:HG22	2.00	0.44
1:CA:954:G:N2	1:CA:1228:C:N3	2.65	0.44
44:BW:56:ASP:O	44:BW:57:HIS:CB	2.65	0.44
1:CA:862:C:H2'	1:CA:863:U:C6	2.52	0.44
22:BA:2218:G:C2'	22:BA:2219:U:H5'	2.48	0.44
36:BO:92:PHE:HB2	36:BO:117:PHE:CE1	2.52	0.44
39:DR:68:ARG:HG3	39:DR:92:TRP:CZ3	2.52	0.44
41:DT:2:ILE:HG23	41:DT:4:GLU:N	2.33	0.44
22:BA:1866:A:C6	22:BA:1876:A:N7	2.86	0.44
22:BA:1811:G:C5	22:BA:1812:U:C5	3.06	0.44
24:DC:3:VAL:CG1	24:DC:202:LEU:HD23	2.47	0.44
22:BA:548:G:H4'	22:BA:549:G:N2	2.32	0.44
36:DO:51:ALA:HB1	36:DO:77:ALA:HB1	2.00	0.44
1:CA:110:C:C4	1:CA:111:G:C5	3.06	0.44
3:AC:167:TRP:O	3:AC:168:TYR:HB2	2.16	0.44
41:DT:73:ARG:HA	41:DT:73:ARG:CZ	2.47	0.44
29:BH:57:LYS:HG3	29:BH:58:LEU:N	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2073:C:H5''	24:DC:228:VAL:HB	1.99	0.44
46:DY:16:THR:O	46:DY:19:LEU:HB2	2.18	0.44
22:DA:874:G:C2	22:DA:904:G:C2	3.05	0.44
1:AA:279:A:H5''	1:AA:281:G:O4'	2.18	0.44
13:CM:81:MET:O	13:CM:82:ASP:C	2.56	0.44
22:DA:2540:C:H2'	22:DA:2541:A:O4'	2.18	0.44
1:AA:355:C:O2'	1:AA:388:G:N3	2.38	0.44
22:DA:153:U:H2'	22:DA:154:U:C6	2.52	0.44
3:AC:114:LYS:HD3	3:AC:185:ASN:OD1	2.17	0.44
22:DA:2539:C:H4'	52:D4:3:VAL:HG11	1.99	0.44
22:BA:1469:A:C2	22:BA:1470:A:C4	3.05	0.44
1:AA:767:A:H2'	1:AA:768:A:O4'	2.17	0.44
22:BA:2400:G:C2'	22:BA:2401:U:H5'	2.48	0.44
22:BA:2040:G:H2'	22:BA:2041:U:O4'	2.17	0.44
44:DW:81:SER:O	44:DW:82:ILE:HG13	2.18	0.44
5:CE:11:LEU:HG	5:CE:12:GLN:N	2.33	0.44
22:BA:2366:A:H2'	22:BA:2367:G:O4'	2.17	0.44
29:BH:89:LYS:CE	29:BH:124:THR:HG22	2.48	0.44
22:DA:2452:C:N4	22:DA:2453:A:N1	2.66	0.44
22:DA:2751:G:H4'	28:DG:4:VAL:HG23	1.99	0.44
1:CA:483:C:H5''	1:CA:484:G:OP2	2.17	0.44
24:DC:65:VAL:O	24:DC:67:PHE:CD1	2.71	0.44
22:DA:489:G:C2	22:DA:491:G:H1'	2.53	0.44
1:CA:1157:A:N6	1:CA:1178:G:H1'	2.32	0.44
22:DA:2128:G:H1'	22:DA:2173:A:O2'	2.17	0.44
11:AK:60:PRO:N	11:AK:91:PRO:HB2	2.33	0.44
22:BA:1676:A:H2'	22:BA:1677:A:O4'	2.18	0.44
55:BA:3001:DOL:C37	55:BA:3001:DOL:C29	2.96	0.44
22:DA:1255:U:C2'	22:DA:1256:G:OP1	2.66	0.44
29:DH:31:VAL:CB	29:DH:32:PRO:HD3	2.47	0.44
1:CA:1073:U:H2'	1:CA:1073:U:O2	2.17	0.44
1:CA:811:C:C5	1:CA:812:G:C5	3.06	0.44
22:BA:2259:U:H1'	22:BA:2427:C:C2	2.52	0.44
39:DR:52:PRO:O	39:DR:53:PHE:HB2	2.18	0.44
22:DA:2230:G:H5'	45:DX:30:LEU:HD13	2.00	0.44
1:CA:803:G:C6	1:CA:804:U:N3	2.86	0.44
1:CA:455:G:C2	1:CA:478:A:N1	2.86	0.44
22:DA:1638:C:C5'	22:DA:2710:C:O2'	2.63	0.44
1:CA:978:A:OP1	1:CA:1361:G:N2	2.42	0.44
1:CA:1492:A:N7	1:CA:1493:A:C2	2.86	0.44
36:BO:54:VAL:HG13	36:BO:54:VAL:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1149:C:C4	1:CA:1150:A:C6	3.05	0.44
38:DQ:13:ARG:O	38:DQ:16:LYS:HB3	2.17	0.44
22:DA:2602:A:H4'	22:DA:2603:G:C5'	2.48	0.44
41:BT:2:ILE:N	41:BT:3:ARG:HB2	2.33	0.44
29:BH:4:ILE:HG23	29:BH:17:ASP:O	2.17	0.44
2:AB:46:THR:CG2	2:AB:201:PRO:HB2	2.47	0.44
15:AO:2:SER:O	15:AO:3:LEU:HB3	2.18	0.44
53:B5:214:TYR:O	53:B5:215:VAL:CB	2.65	0.44
1:CA:791:G:C5	1:CA:792:A:N7	2.85	0.44
19:AS:42:PRO:C	19:AS:44:MET:H	2.20	0.44
39:BR:14:VAL:CG1	39:BR:15:SER:N	2.80	0.44
1:AA:239:U:H5''	1:AA:240:G:OP2	2.18	0.44
44:DW:45:PHE:HB3	44:DW:80:ILE:HD12	1.98	0.44
22:BA:1734:G:H2'	22:BA:1735:A:O4'	2.18	0.44
22:BA:1401:G:C6	22:BA:1402:U:C4	3.06	0.44
1:CA:756:C:H2'	1:CA:757:U:H5'	2.00	0.44
22:DA:2744:G:N2	22:DA:2745:C:C2	2.86	0.44
10:AJ:91:ASP:C	10:AJ:92:LEU:HG	2.37	0.44
11:AK:53:ARG:O	11:AK:56:ARG:HG3	2.18	0.44
41:DT:91:GLN:O	41:DT:91:GLN:CG	2.66	0.44
22:DA:2341:G:C6	22:DA:2342:C:N3	2.86	0.44
43:BV:58:SER:O	43:BV:73:LYS:CE	2.66	0.44
22:BA:223:A:C5	22:BA:422:A:C8	3.06	0.44
1:CA:797:C:O2'	1:CA:798:U:H5'	2.18	0.44
1:CA:1288:A:N6	1:CA:1289:A:N6	2.66	0.44
22:DA:1324:G:C1'	22:DA:1616:A:N6	2.80	0.44
22:DA:479:A:N3	22:DA:481:G:H5''	2.33	0.44
1:CA:121:U:C3'	1:CA:122:G:H5'	2.48	0.44
22:DA:851:C:H2'	22:DA:852:U:C6	2.53	0.44
22:BA:630:G:H5''	22:BA:631:A:OP2	2.17	0.44
26:DE:8:ALA:HB2	26:DE:122:GLU:CG	2.48	0.44
1:CA:1126:U:N1	1:CA:1281:C:C5	2.86	0.44
1:AA:973:G:H1'	10:AJ:56:HIS:CD2	2.52	0.44
7:CG:88:PRO:HD2	7:CG:151:PHE:O	2.17	0.44
1:CA:1304:G:O2'	1:CA:1333:A:N6	2.33	0.44
22:DA:1957:C:O2'	22:DA:1985:C:H1'	2.18	0.44
11:CK:30:THR:HG21	11:CK:92:GLY:HA3	1.99	0.44
22:DA:1926:U:H2'	22:DA:1928:A:C8	2.53	0.44
1:AA:949:A:C4	1:AA:950:U:C6	3.06	0.44
6:CF:70:VAL:HG23	6:CF:71:ILE:CD1	2.48	0.44
1:CA:834:U:C2	1:CA:835:U:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:71:ASP:O	31:DJ:73:VAL:CG2	2.66	0.44
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.53	0.44
28:BG:7:ALA:O	28:BG:69:ARG:NE	2.46	0.44
7:AG:146:GLU:O	7:AG:149:LYS:HB2	2.16	0.44
1:AA:978:A:C4	1:AA:1319:A:C2	3.06	0.44
1:CA:715:A:H1'	1:CA:777:A:C2	2.52	0.44
22:DA:1420:A:C2	22:DA:2211:A:C4	3.05	0.44
22:BA:1536:C:O4'	22:BA:1537:G:C2	2.70	0.44
53:B5:61:GLY:O	53:B5:62:THR:C	2.55	0.44
22:DA:1512:C:C4	22:DA:1513:U:C4	3.06	0.44
1:CA:260:G:C6	1:CA:261:U:C4	3.06	0.44
17:CQ:4:LYS:HG2	17:CQ:5:ILE:N	2.32	0.44
43:BV:14:LYS:CD	43:BV:18:ARG:NH1	2.81	0.44
22:BA:1082:U:H5'	30:BI:119:GLY:N	2.33	0.44
22:BA:1664:A:H1'	22:BA:2726:A:N1	2.33	0.44
22:BA:2880:C:N3	22:BA:2881:U:C5	2.86	0.44
41:DT:37:ASP:CG	41:DT:38:ALA:N	2.70	0.44
42:BU:102:THR:HG22	42:BU:103:ILE:N	2.31	0.44
11:CK:56:ARG:O	11:CK:59:THR:HG23	2.17	0.44
1:CA:1119:C:O2	1:CA:1155:A:C2	2.71	0.44
13:CM:43:VAL:O	13:CM:43:VAL:HG23	2.18	0.44
32:DK:56:ASP:OD2	32:DK:56:ASP:N	2.51	0.44
15:CO:88:ARG:O	15:CO:88:ARG:HG3	2.18	0.44
1:AA:963:G:H2'	1:AA:963:G:N3	2.33	0.44
1:AA:1291:U:OP1	7:AG:38:THR:HG22	2.18	0.44
22:DA:1768:C:H2'	22:DA:1769:U:O4'	2.18	0.44
22:BA:162:U:H4'	22:BA:163:C:OP1	2.17	0.44
22:BA:1394:U:H2'	22:BA:1395:A:O4'	2.17	0.44
22:BA:1395:A:O2'	22:BA:1397:U:C6	2.67	0.44
22:BA:1056:G:O2'	22:BA:1086:A:H1'	2.18	0.44
22:BA:1094:U:N3	22:BA:1097:U:OP2	2.50	0.44
5:CE:156:LYS:O	5:CE:159:LYS:NZ	2.48	0.44
2:AB:27:MET:CE	2:AB:193:PRO:HG3	2.48	0.44
22:DA:772:C:N3	22:DA:773:U:C5	2.86	0.44
1:CA:1197:A:C2'	1:CA:1198:G:H5'	2.47	0.44
1:AA:1342:C:O2'	9:AI:126:GLN:CG	2.66	0.44
7:AG:55:GLY:C	7:AG:57:SER:H	2.21	0.44
1:AA:981:U:C2	1:AA:982:U:C5	3.06	0.44
22:DA:1287:A:H2'	22:DA:1288:G:H5'	2.00	0.44
1:CA:1004:A:C6	1:CA:1005:A:N1	2.86	0.44
22:DA:568:U:H2'	22:DA:570:G:OP2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:90:ARG:HB2	14:AN:92:GLU:HG2	1.99	0.44
22:BA:1744:A:H2'	22:BA:1745:A:O4'	2.17	0.44
22:DA:855:G:C2	22:DA:923:G:N3	2.86	0.44
22:DA:117:G:C6	22:DA:119:A:N1	2.86	0.44
11:AK:126:LYS:HA	21:AU:34:ARG:HH21	1.82	0.44
22:BA:616:A:C2	22:BA:617:G:H1'	2.52	0.44
22:DA:2163:A:OP2	22:DA:2171:A:C8	2.71	0.44
1:AA:569:C:H2'	1:AA:569:C:O2	2.17	0.44
22:BA:2191:A:C2	22:BA:2192:U:N3	2.86	0.44
1:CA:711:G:N2	1:CA:712:A:C4	2.86	0.44
22:DA:79:C:H2'	22:DA:346:A:N3	2.32	0.44
22:BA:263:G:C2'	22:BA:264:C:H5'	2.48	0.44
1:CA:960:U:O2'	1:CA:1223:C:H4'	2.17	0.44
22:DA:1809:A:H2'	22:DA:1810:A:H8	1.78	0.44
1:CA:173:U:H3'	1:CA:174:A:H5'	1.99	0.44
39:BR:66:HIS:CE1	39:BR:94:THR:HG22	2.53	0.44
20:AT:44:LYS:HB3	20:AT:87:ALA:HB1	2.00	0.44
22:DA:2837:A:H2'	22:DA:2838:G:O4'	2.18	0.44
6:CF:8:PHE:CD2	6:CF:8:PHE:N	2.86	0.44
22:BA:136:G:C6	22:BA:137:U:O4	2.71	0.44
41:BT:1:MET:C	41:BT:2:ILE:HD12	2.38	0.44
27:BF:108:VAL:N	27:BF:109:PRO:HD2	2.33	0.44
17:AQ:14:SER:CB	17:AQ:22:VAL:CG1	2.94	0.44
34:DM:2:LEU:N	34:DM:2:LEU:HD12	2.33	0.44
19:CS:55:ARG:CZ	19:CS:79:THR:CG2	2.95	0.44
11:CK:126:LYS:O	21:CU:34:ARG:CZ	2.66	0.44
22:DA:2544:G:H5'	22:DA:2645:G:C2	2.53	0.44
1:AA:194:C:C2'	1:AA:195:A:H5'	2.48	0.44
4:CD:3:ARG:O	4:CD:5:LEU:HD13	2.18	0.44
18:CR:37:GLY:O	18:CR:63:ARG:NH2	2.47	0.44
22:DA:8:C:O2'	22:DA:9:G:H5'	2.18	0.44
22:DA:2106:U:H2'	22:DA:2107:G:C8	2.53	0.44
22:DA:13:A:N3	22:DA:14:A:N6	2.61	0.44
1:CA:147:G:C2	1:CA:148:G:C6	3.06	0.44
20:CT:32:ILE:CG1	20:CT:54:MET:HE3	2.48	0.44
13:CM:25:VAL:O	13:CM:25:VAL:HG13	2.18	0.44
9:CI:55:VAL:HG23	9:CI:55:VAL:O	2.17	0.44
21:CU:37:PHE:O	21:CU:39:GLU:N	2.44	0.44
1:AA:552:U:O2'	1:AA:553:A:H5'	2.17	0.44
22:DA:1754:A:C6	22:DA:1755:A:C5	3.05	0.44
1:CA:327:A:C2	1:CA:329:A:C4	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:17:GLN:O	6:AF:21:MET:HG3	2.18	0.44
4:CD:188:ARG:NH2	4:CD:197:GLU:OE2	2.49	0.44
22:DA:478:A:C6	22:DA:480:A:C6	3.06	0.44
1:AA:1030:U:OP2	1:AA:1031:C:C5	2.71	0.44
22:DA:810:U:OP1	57:DA:3333:HOH:O	2.21	0.44
47:BZ:35:THR:HG22	47:BZ:36:VAL:N	2.32	0.44
22:DA:1905:C:O4'	22:DA:1928:A:C2	2.71	0.44
22:DA:1906:G:C8	22:DA:1929:G:H2'	2.53	0.44
22:BA:1644:C:O2	22:BA:1644:C:H2'	2.17	0.44
36:BO:7:ARG:HG3	36:BO:96:GLY:HA3	1.99	0.44
2:CB:93:ASN:OD1	2:CB:94:HIS:N	2.50	0.44
13:CM:53:ILE:O	13:CM:57:ARG:HB2	2.17	0.44
22:BA:1050:A:C2	22:BA:2751:G:C4	3.06	0.44
1:CA:774:G:C5	1:CA:775:G:C8	3.06	0.44
22:BA:368:A:C6	22:BA:369:U:N3	2.86	0.44
3:CC:30:ALA:O	3:CC:34:ASP:HB2	2.18	0.44
3:AC:77:ILE:HA	3:AC:84:VAL:CG2	2.48	0.44
1:AA:1244:G:C2	1:AA:1294:G:C2	3.06	0.44
22:BA:863:A:O2'	22:BA:864:G:H5'	2.18	0.44
22:DA:2431:U:H2'	22:DA:2433:A:OP2	2.17	0.44
22:DA:137:U:H2'	22:DA:140:C:C2	2.53	0.44
1:CA:1077:G:N2	1:CA:1080:A:OP2	2.50	0.44
2:CB:104:TRP:CH2	2:CB:108:ARG:HD3	2.53	0.44
26:DE:109:LEU:O	26:DE:112:LEU:HB2	2.17	0.44
2:CB:173:ILE:HG22	2:CB:177:ASN:ND2	2.33	0.44
7:CG:71:PRO:HD2	7:CG:96:ARG:O	2.18	0.44
11:AK:63:ALA:CB	11:AK:92:GLY:HA3	2.48	0.44
22:BA:1479:G:H2'	22:BA:1480:C:O4'	2.17	0.44
26:BE:164:LEU:HB3	26:BE:167:VAL:HB	1.99	0.44
1:AA:85:U:O2	1:AA:85:U:O4'	2.36	0.44
50:B2:35:ARG:NE	50:B2:42:LEU:HD21	2.33	0.44
22:BA:1492:G:C6	22:BA:1499:C:N3	2.86	0.44
28:BG:153:ARG:O	28:BG:154:PRO:C	2.57	0.44
33:DL:22:GLY:O	33:DL:25:SER:OG	2.36	0.44
22:DA:560:C:O2	38:DQ:48:ARG:NH1	2.48	0.44
12:CL:51:LYS:N	12:CL:51:LYS:HD2	2.33	0.44
20:AT:66:LEU:HD12	20:AT:66:LEU:C	2.38	0.44
1:CA:438:U:C2	1:CA:494:G:C6	3.06	0.44
53:B5:66:PRO:HG3	53:B5:194:ILE:CB	2.48	0.44
29:BH:99:ILE:CD1	29:BH:117:LEU:HD13	2.48	0.44
8:AH:39:VAL:CG1	8:AH:112:THR:HG22	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1213:A:C5	1:CA:1215:G:C4	3.06	0.44
23:DB:34:A:N6	23:DB:44:G:O2'	2.48	0.44
1:CA:246:A:N3	1:CA:279:A:N6	2.65	0.44
22:DA:2199:A:C4	22:DA:2225:A:N1	2.86	0.44
1:CA:73:C:O2'	1:CA:74:A:P	2.76	0.44
49:B1:51:GLU:OE2	49:B1:53:LYS:HD3	2.18	0.44
11:CK:118:HIS:O	11:CK:119:ASN:HB2	2.18	0.44
1:CA:1345:U:H4'	1:CA:1346:A:H5'	1.99	0.44
51:B3:32:ILE:O	51:B3:32:ILE:HG22	2.18	0.44
14:AN:41:ARG:HD3	14:AN:42:TRP:CH2	2.53	0.44
1:CA:552:U:C2	1:CA:553:A:C8	3.05	0.44
41:BT:49:LYS:H	41:BT:49:LYS:HD3	1.82	0.44
27:BF:36:LEU:HD11	27:BF:99:PHE:CZ	2.53	0.44
42:BU:12:ILE:HG13	42:BU:21:LYS:O	2.18	0.44
22:DA:39:G:N2	22:DA:441:U:C2	2.86	0.44
22:DA:1829:A:H2'	24:DC:15:HIS:NE2	2.33	0.44
35:DN:80:PHE:O	35:DN:85:PRO:HD3	2.18	0.44
10:AJ:65:TYR:CB	14:AN:96:LEU:HD11	2.48	0.44
8:AH:111:MET:CE	8:AH:116:ALA:HA	2.44	0.44
22:BA:1688:U:H1'	22:BA:1701:A:C5	2.52	0.44
1:AA:1014:A:C2	19:AS:34:TRP:CZ2	3.06	0.44
1:CA:1462:C:H2'	1:CA:1463:U:C6	2.53	0.44
13:CM:85:CYS:HB3	19:CS:74:PHE:CE2	2.52	0.44
25:DD:105:LYS:O	25:DD:177:VAL:HG12	2.18	0.44
22:BA:1716:U:O2'	22:BA:1717:A:H5'	2.18	0.44
10:AJ:66:GLU:HB3	14:AN:99:ALA:HB2	2.00	0.44
22:DA:2728:U:C2	22:DA:2729:G:C8	3.06	0.44
1:AA:1539:C:H5''	21:AU:18:ARG:HG3	1.99	0.44
43:BV:10:LYS:CE	43:BV:10:LYS:H	2.31	0.44
22:BA:608:A:C2	22:BA:609:A:N3	2.86	0.44
22:BA:785:G:C6	22:BA:786:C:C4	3.05	0.44
22:DA:546:U:O2	22:DA:546:U:C2'	2.65	0.44
40:BS:41:LYS:O	40:BS:43:ALA:N	2.50	0.44
1:CA:1480:A:H2'	1:CA:1481:U:O4'	2.18	0.44
17:AQ:48:ASP:CG	17:AQ:52:GLU:OE1	2.56	0.44
1:AA:125:U:H2'	1:AA:126:G:O4'	2.17	0.44
4:CD:149:ALA:O	4:CD:152:GLN:HB2	2.17	0.44
22:DA:483:A:O2'	42:DU:56:GLY:HA3	2.18	0.44
24:DC:247:PRO:HG2	24:DC:248:TRP:CZ3	2.53	0.44
1:CA:237:G:C4	1:CA:238:A:C8	3.06	0.44
23:DB:21:G:N2	23:DB:63:C:C2	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:49:PHE:HB3	8:AH:61:LEU:CD2	2.47	0.44
1:AA:815:A:H4'	1:AA:817:C:C4	2.53	0.44
40:BS:36:LEU:CD1	40:BS:48:LYS:HA	2.48	0.44
35:DN:51:LEU:N	35:DN:51:LEU:CD2	2.79	0.44
22:BA:1951:U:H2'	22:BA:1953:A:OP2	2.18	0.44
22:BA:108:G:C5	22:BA:109:C:C5	3.06	0.44
35:BN:52:ILE:HG21	35:BN:94:TYR:CG	2.53	0.44
2:AB:101:LEU:CD1	2:AB:158:PRO:HG2	2.48	0.44
44:DW:71:VAL:HA	44:DW:77:ARG:O	2.17	0.44
27:BF:73:SER:OG	27:BF:80:ARG:HA	2.18	0.44
30:BI:58:VAL:HG12	30:BI:59:ILE:H	1.82	0.44
11:CK:67:ALA:HB1	11:CK:100:LEU:HD13	2.00	0.44
9:AI:127:PHE:CD2	9:AI:127:PHE:C	2.91	0.44
42:DU:71:ALA:HB3	42:DU:80:ALA:HB1	1.98	0.44
1:AA:933:G:OP2	7:AG:3:ARG:CB	2.66	0.44
12:CL:51:LYS:N	12:CL:51:LYS:CD	2.81	0.44
22:DA:1780:A:OP1	57:DA:3687:HOH:O	2.20	0.44
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.99	0.44
4:AD:197:GLU:O	4:AD:199:LEU:N	2.50	0.44
2:AB:10:LEU:HD23	2:AB:10:LEU:C	2.38	0.44
17:AQ:5:ILE:N	17:AQ:5:ILE:HD12	2.33	0.44
8:CH:51:VAL:O	8:CH:51:VAL:HG22	2.18	0.44
22:DA:110:G:H2'	22:DA:110:G:N3	2.33	0.44
1:CA:781:A:OP2	57:CA:1812:HOH:O	2.21	0.44
16:AP:56:ARG:O	16:AP:59:HIS:HB3	2.18	0.44
22:DA:2784:U:H4'	25:DD:42:ASN:O	2.18	0.44
29:BH:89:LYS:HE3	29:BH:124:THR:HG22	1.99	0.43
22:DA:2716:C:H2'	22:DA:2717:C:C6	2.52	0.43
22:BA:996:A:N3	22:BA:997:G:C8	2.86	0.43
1:AA:1048:G:N3	1:AA:1050:G:N7	2.65	0.43
1:AA:1197:A:OP1	1:AA:1198:G:OP2	2.36	0.43
1:CA:35:G:C2	1:CA:550:G:C2	3.06	0.43
9:AI:80:ARG:C	9:AI:80:ARG:HD2	2.37	0.43
22:DA:466:A:N1	22:DA:795:C:O2'	2.44	0.43
22:DA:2093:G:C2	22:DA:2094:A:C8	3.06	0.43
35:DN:1:MET:HE3	35:DN:1:MET:N	2.31	0.43
13:CM:14:HIS:HB2	13:CM:17:ILE:CD1	2.48	0.43
1:CA:1345:U:C2	1:CA:1377:A:N1	2.86	0.43
1:AA:263:A:H2'	1:AA:264:C:C5	2.53	0.43
17:AQ:81:LYS:C	17:AQ:83:VAL:N	2.69	0.43
22:BA:2506:U:C6	55:BA:3001:DOL:H422	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:39:LEU:C	39:BR:49:ILE:HG23	2.39	0.43
1:CA:376:G:N3	1:CA:389:A:C2	2.86	0.43
16:CP:19:VAL:HG12	16:CP:37:GLY:CA	2.48	0.43
22:DA:1317:G:C5	22:DA:1318:U:C4	3.05	0.43
2:AB:144:LEU:HD23	2:AB:144:LEU:N	2.32	0.43
1:CA:8:A:N6	4:CD:206:LYS:HG2	2.33	0.43
1:CA:458:U:H2'	1:CA:459:A:C8	2.53	0.43
4:AD:112:ALA:O	4:AD:115:ARG:N	2.50	0.43
1:CA:971:G:N2	1:CA:1363:A:C8	2.86	0.43
22:DA:185:G:C5	22:DA:212:G:N2	2.85	0.43
1:CA:1493:A:H4'	22:DA:1913:A:N1	2.33	0.43
30:BI:38:PHE:O	30:BI:39:CYS:SG	2.76	0.43
32:DK:91:SER:O	32:DK:92:GLU:C	2.56	0.43
22:BA:1899:A:O2'	22:BA:1900:A:H5''	2.19	0.43
1:CA:378:G:N2	1:CA:386:C:O2	2.50	0.43
11:AK:34:ILE:HG13	11:AK:70:CYS:SG	2.58	0.43
1:AA:1014:A:H5''	19:AS:14:HIS:CG	2.53	0.43
25:DD:104:VAL:HG23	25:DD:105:LYS:N	2.33	0.43
3:CC:173:VAL:O	3:CC:173:VAL:HG12	2.18	0.43
22:DA:162:U:H4'	22:DA:163:C:OP1	2.18	0.43
1:AA:1077:G:N1	1:AA:1081:A:C6	2.85	0.43
22:DA:704:G:O2'	22:DA:725:G:O6	2.36	0.43
24:BC:125:LYS:HB2	24:BC:126:PRO:HD2	2.00	0.43
1:AA:1136:C:OP2	1:AA:1137:C:C5	2.71	0.43
2:CB:68:LEU:CD2	2:CB:68:LEU:C	2.86	0.43
27:BF:146:VAL:HG23	27:BF:146:VAL:O	2.18	0.43
22:BA:2009:A:C4'	35:BN:107:ASN:HD22	2.30	0.43
22:BA:1949:G:C2	22:BA:1958:C:C2	3.05	0.43
1:CA:635:A:C5	1:CA:636:U:C5	3.06	0.43
23:BB:109:A:C5	23:BB:110:C:C4	3.06	0.43
1:AA:126:G:OP1	1:AA:605:U:O2'	2.28	0.43
43:BV:40:ILE:CG2	43:BV:41:GLU:N	2.81	0.43
2:CB:60:ILE:HA	2:CB:63:ARG:HB2	2.00	0.43
22:DA:1801:A:N7	24:DC:262:ARG:NH2	2.66	0.43
1:AA:1130:A:C2	1:AA:1146:A:C5	3.06	0.43
22:BA:1355:G:C2	22:BA:1356:G:C8	3.06	0.43
29:DH:127:GLU:CG	29:DH:144:VAL:O	2.65	0.43
22:DA:1693:U:H4'	22:DA:1694:C:OP2	2.18	0.43
41:DT:61:LEU:CD1	41:DT:62:VAL:N	2.81	0.43
8:AH:49:PHE:CB	8:AH:61:LEU:HD23	2.48	0.43
2:AB:78:GLU:HA	2:AB:81:LYS:HB3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:145:ILE:HD12	4:AD:145:ILE:N	2.33	0.43
1:CA:1238:A:H2'	1:CA:1241:G:H1'	1.99	0.43
1:CA:1537:U:C4	1:CA:1538:C:C4	3.06	0.43
22:BA:1851:U:C4	22:BA:1852:U:C4	3.06	0.43
1:AA:495:A:C2	1:AA:496:A:C6	3.05	0.43
24:BC:107:PRO:HB3	24:BC:142:HIS:HE1	1.82	0.43
10:AJ:49:PHE:CD2	14:AN:77:PHE:CE1	3.05	0.43
22:BA:1813:G:H1'	24:BC:50:THR:OG1	2.18	0.43
1:CA:414:A:C6	1:CA:415:A:C5	3.05	0.43
22:BA:2076:U:O5'	22:BA:2076:U:O2	2.36	0.43
34:DM:97:GLN:O	34:DM:100:LYS:HB2	2.18	0.43
42:BU:102:THR:CG2	42:BU:103:ILE:N	2.81	0.43
1:CA:1077:G:N2	1:CA:1081:A:C4	2.86	0.43
34:DM:57:VAL:HG11	34:DM:105:MET:SD	2.57	0.43
28:DG:24:ILE:HD13	28:DG:72:LEU:HD21	2.00	0.43
22:BA:22:C:C2'	22:BA:23:G:O5'	2.66	0.43
28:BG:74:SER:HA	28:BG:77:ILE:CG1	2.48	0.43
3:CC:23:PHE:CG	3:CC:24:ALA:N	2.85	0.43
22:BA:2020:A:C2	22:BA:2022:U:O4'	2.70	0.43
1:CA:57:G:C5	1:CA:58:C:C4	3.05	0.43
22:BA:1303:G:O2'	22:BA:1304:A:H5'	2.17	0.43
17:AQ:4:LYS:HD2	17:AQ:4:LYS:C	2.39	0.43
27:BF:69:LYS:N	27:BF:69:LYS:HD2	2.33	0.43
4:CD:129:VAL:O	4:CD:129:VAL:HG13	2.17	0.43
15:CO:23:GLY:O	15:CO:24:SER:C	2.57	0.43
39:DR:69:GLY:O	39:DR:70:GLU:C	2.56	0.43
8:AH:46:ILE:HG22	8:AH:63:LEU:HA	2.00	0.43
2:AB:99:GLY:O	2:AB:103:ASN:N	2.48	0.43
22:BA:1010:A:N3	22:BA:1153:C:H1'	2.33	0.43
26:DE:24:ASN:O	26:DE:28:VAL:HG23	2.17	0.43
4:CD:32:CYS:SG	4:CD:33:LYS:N	2.91	0.43
1:CA:32:A:N3	1:CA:33:A:C8	2.87	0.43
17:CQ:21:ILE:O	17:CQ:21:ILE:HG23	2.18	0.43
14:AN:17:ALA:HA	14:AN:55:SER:O	2.18	0.43
47:DZ:24:LEU:HD11	47:DZ:54:MET:HE2	1.99	0.43
17:AQ:16:LYS:C	17:AQ:17:MET:CE	2.86	0.43
9:AI:57:MET:SD	9:AI:58:VAL:N	2.84	0.43
22:DA:678:C:H2'	22:DA:679:C:C6	2.54	0.43
22:DA:2283:C:C2'	22:DA:2284:A:H5'	2.49	0.43
22:BA:479:A:H4'	22:BA:480:A:OP1	2.19	0.43
40:BS:29:VAL:HG21	40:BS:69:LEU:HB3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1298:U:O4'	1:AA:1299:A:C2	2.71	0.43
22:DA:1257:C:C4	22:DA:1258:U:O4	2.71	0.43
22:BA:501:A:H5''	22:BA:502:A:OP2	2.18	0.43
22:DA:2264:C:C2	22:DA:2277:G:N2	2.86	0.43
22:BA:1419:A:C4	22:BA:1421:G:C8	3.06	0.43
1:CA:1494:G:C6	1:CA:1495:U:C4	3.07	0.43
1:CA:1321:U:C4	1:CA:1322:C:H5	2.36	0.43
1:CA:1361:G:H3'	1:CA:1362:A:C5'	2.47	0.43
22:DA:2311:A:H3'	22:DA:2312:U:C6	2.53	0.43
41:BT:12:ARG:HB2	41:BT:33:LYS:O	2.18	0.43
22:DA:2727:A:N1	22:DA:2728:U:C4	2.86	0.43
22:BA:1449:G:C4	22:BA:1450:G:C8	3.06	0.43
10:AJ:12:ALA:HB2	10:AJ:96:VAL:HA	2.00	0.43
22:BA:927:A:H2'	22:BA:928:A:O4'	2.18	0.43
4:AD:191:LEU:O	4:AD:192:SER:CB	2.66	0.43
29:BH:1:MET:HE3	29:BH:23:ALA:HA	2.00	0.43
22:DA:2370:G:C6	22:DA:2371:G:C6	3.07	0.43
1:AA:69:G:N3	1:AA:69:G:H2'	2.33	0.43
22:DA:2386:A:H2'	22:DA:2387:U:C6	2.53	0.43
17:CQ:75:LEU:C	17:CQ:75:LEU:CD1	2.87	0.43
1:CA:206:C:H2'	1:CA:207:C:C5'	2.46	0.43
22:BA:1340:U:H4'	22:BA:1341:G:OP2	2.18	0.43
15:AO:48:LYS:O	15:AO:50:HIS:N	2.49	0.43
22:DA:1176:U:N3	22:DA:1177:G:C6	2.86	0.43
8:CH:78:VAL:HG12	8:CH:79:SER:N	2.33	0.43
1:AA:1129:C:H4'	1:AA:1130:A:OP1	2.18	0.43
1:CA:847:G:C2	1:CA:848:C:C2	3.06	0.43
25:DD:127:PHE:CE2	25:DD:160:LYS:HD2	2.53	0.43
14:CN:87:ALA:HA	14:CN:92:GLU:HG3	2.00	0.43
22:DA:1230:A:C6	22:DA:1231:U:N3	2.86	0.43
22:DA:579:G:C5'	22:DA:2018:G:OP2	2.66	0.43
22:DA:1980:G:C2	22:DA:1982:U:C4	3.06	0.43
22:DA:1930:G:O2'	22:DA:1931:U:P	2.76	0.43
1:CA:135:C:O2	16:CP:1:MET:HB2	2.18	0.43
25:BD:12:THR:HG21	37:BP:9:GLU:OE2	2.19	0.43
1:AA:174:A:C2	1:AA:175:C:H1'	2.54	0.43
24:BC:21:ASN:O	24:BC:24:LEU:HB2	2.18	0.43
1:CA:651:C:C4	1:CA:652:U:O4	2.72	0.43
8:CH:29:SER:HB2	8:CH:59:LEU:HB2	2.00	0.43
22:DA:538:A:O2'	31:DJ:8:PRO:CG	2.65	0.43
1:CA:57:G:C6	1:CA:58:C:C4	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:531:U:H5''	3:AC:161:GLU:OE2	2.18	0.43
1:CA:436:C:C2	1:CA:437:U:C5	3.06	0.43
22:BA:451:U:H4'	26:BE:47:LYS:NZ	2.32	0.43
31:BJ:32:LEU:O	31:BJ:36:LEU:HG	2.18	0.43
22:BA:2788:C:O2'	22:BA:2809:A:N3	2.38	0.43
22:DA:1270:C:O2	22:DA:1325:U:O2'	2.36	0.43
1:CA:934:C:C5'	57:CA:1827:HOH:O	2.65	0.43
7:AG:24:ALA:O	7:AG:27:VAL:HG22	2.18	0.43
8:AH:15:ARG:HB2	8:AH:75:ILE:CG2	2.48	0.43
22:DA:1002:G:H2'	22:DA:1003:G:O5'	2.18	0.43
26:BE:124:PHE:CD1	26:BE:124:PHE:C	2.92	0.43
45:DX:47:VAL:O	45:DX:47:VAL:CG1	2.65	0.43
12:CL:37:VAL:HG12	12:CL:37:VAL:O	2.18	0.43
22:DA:379:G:H4'	22:DA:2232:C:H5''	2.00	0.43
22:BA:2364:C:OP1	44:BW:55:ARG:NH1	2.50	0.43
29:BH:96:THR:O	29:BH:100:ALA:N	2.50	0.43
29:BH:80:ILE:HG21	29:BH:94:ILE:HG13	2.00	0.43
22:DA:2712:C:C2	22:DA:2715:C:OP1	2.71	0.43
5:CE:104:GLY:HA3	5:CE:122:ASN:O	2.18	0.43
22:DA:623:C:H2'	22:DA:624:C:O4'	2.19	0.43
22:BA:1063:G:C6	22:BA:1064:C:H1'	2.54	0.43
2:AB:24:ASN:HA	2:AB:25:PRO:HD2	1.78	0.43
22:DA:1783:A:H5'	22:DA:2608:G:H4'	1.99	0.43
26:DE:131:THR:HB	26:DE:164:LEU:HD22	1.99	0.43
29:BH:27:ARG:O	29:BH:28:ASN:CB	2.66	0.43
41:DT:20:ALA:HA	41:DT:31:VAL:HG21	2.00	0.43
19:AS:4:SER:HB2	19:AS:5:LEU:HD12	1.99	0.43
22:DA:2834:G:O6	22:DA:2879:A:C2'	2.65	0.43
22:BA:1168:G:N2	22:BA:1182:G:C4	2.86	0.43
1:CA:1005:A:N7	1:CA:1006:G:C4	2.86	0.43
22:BA:975:A:C8	22:BA:990:A:N6	2.86	0.43
20:AT:54:MET:CE	20:AT:58:VAL:HG21	2.48	0.43
49:B1:34:LEU:HB3	49:B1:52:ALA:HB2	2.01	0.43
22:DA:53:A:C2	22:DA:179:C:H4'	2.52	0.43
1:CA:1158:C:O2	1:CA:1158:C:C2'	2.66	0.43
22:DA:2128:G:C6	22:DA:2129:C:C4	3.06	0.43
22:DA:2116:G:C6	22:DA:2171:A:N6	2.86	0.43
2:AB:79:ALA:O	2:AB:80:VAL:HG23	2.18	0.43
5:CE:133:PRO:HA	5:CE:136:VAL:HG13	2.00	0.43
25:BD:104:VAL:O	25:BD:105:LYS:CB	2.65	0.43
22:BA:1142:A:C2	22:BA:1144:A:N9	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:121:LYS:HB3	4:AD:129:VAL:HG21	1.99	0.43
22:DA:590:A:H2'	22:DA:591:U:O4'	2.19	0.43
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.53	0.43
27:DF:123:ASP:N	27:DF:127:ASN:O	2.51	0.43
30:BI:42:PHE:O	30:BI:46:THR:OG1	2.32	0.43
2:CB:206:ALA:O	2:CB:207:ILE:C	2.56	0.43
30:BI:19:ASN:N	30:BI:20:PRO:HD2	2.33	0.43
22:DA:2467:C:H41	22:DA:2468:A:N6	2.16	0.43
1:CA:944:G:H5''	1:CA:945:G:OP2	2.18	0.43
1:CA:946:A:H2'	1:CA:947:G:C8	2.53	0.43
39:BR:79:ARG:O	39:BR:80:ARG:HB3	2.18	0.43
1:CA:184:G:N2	1:CA:185:U:C2	2.87	0.43
1:AA:723:U:H5'	1:AA:724:G:P	2.59	0.43
22:DA:1249:U:H4'	38:DQ:4:VAL:HB	1.99	0.43
8:CH:95:VAL:O	8:CH:99:LEU:O	2.36	0.43
4:AD:190:ASP:C	4:AD:191:LEU:HG	2.38	0.43
22:DA:2234:G:C5	22:DA:2235:G:N7	2.86	0.43
20:CT:32:ILE:HG12	20:CT:54:MET:CE	2.47	0.43
24:DC:251:GLN:HG2	24:DC:255:LYS:HB2	2.00	0.43
1:CA:1018:G:O6	1:CA:1019:A:N6	2.51	0.43
4:AD:103:TYR:HB2	4:AD:114:ALA:HB2	2.00	0.43
29:BH:9:VAL:O	29:BH:10:ALA:O	2.36	0.43
26:BE:149:ILE:HD11	26:BE:172:ALA:CA	2.48	0.43
22:BA:2001:C:C2	22:BA:2002:G:C8	3.06	0.43
22:BA:255:A:H2'	22:BA:256:A:O4'	2.18	0.43
22:BA:1347:A:C2	22:BA:1348:C:H1'	2.53	0.43
1:AA:1337:G:H5''	1:AA:1338:G:OP1	2.17	0.43
1:CA:420:U:O2'	1:CA:421:U:H5''	2.18	0.43
22:DA:1905:C:O2'	22:DA:1929:G:H1'	2.18	0.43
22:BA:1881:C:H2'	22:BA:1882:U:O4'	2.18	0.43
23:BB:99:A:H2'	23:BB:99:A:N3	2.33	0.43
1:AA:641:U:H4'	8:AH:107:SER:O	2.18	0.43
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.53	0.43
6:AF:47:LEU:HD13	6:AF:51:ILE:HG23	1.99	0.43
7:AG:145:ALA:C	7:AG:147:ALA:H	2.22	0.43
24:BC:209:GLY:O	24:BC:212:ARG:N	2.51	0.43
22:BA:1193:G:O2'	22:BA:1194:A:H5'	2.18	0.43
1:AA:1319:A:C8	1:AA:1323:G:C6	3.06	0.43
41:BT:57:VAL:HG13	41:BT:86:THR:OG1	2.18	0.43
38:DQ:27:ALA:HB1	38:DQ:31:VAL:CG2	2.48	0.43
5:CE:12:GLN:HA	5:CE:12:GLN:OE1	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BV:14:LYS:HD2	43:BV:18:ARG:NH1	2.33	0.43
7:AG:66:LEU:O	7:AG:70:ARG:HD3	2.18	0.43
22:BA:1165:A:C2	22:BA:1185:G:C2	3.06	0.43
22:DA:520:G:H2'	22:DA:521:U:C6	2.54	0.43
14:AN:15:ALA:O	14:AN:18:ASP:OD2	2.36	0.43
37:DP:62:ARG:CZ	37:DP:101:ARG:HA	2.48	0.43
22:DA:1456:G:C6	22:DA:1457:U:C4	3.06	0.43
16:AP:12:LYS:HG2	16:AP:13:LYS:HG2	2.00	0.43
16:AP:8:ARG:HG3	16:AP:17:TYR:CE2	2.53	0.43
40:BS:25:ARG:HB2	40:BS:74:ILE:CG2	2.49	0.43
40:BS:74:ILE:HG23	40:BS:74:ILE:O	2.18	0.43
53:B5:84:ILE:HG22	53:B5:84:ILE:O	2.18	0.43
1:CA:1496:C:H2'	1:CA:1497:G:C1'	2.48	0.43
22:BA:2275:C:O2	34:BM:84:LYS:CD	2.66	0.43
29:BH:76:GLU:HA	29:BH:142:VAL:HG12	2.00	0.43
22:BA:999:U:C5	22:BA:1154:G:C6	3.06	0.43
38:BQ:76:TYR:CE2	38:BQ:80:ILE:HG13	2.53	0.43
22:BA:1064:C:H2'	22:BA:1064:C:O2	2.17	0.43
22:DA:1364:G:C5	22:DA:1368:G:N1	2.87	0.43
22:DA:207:A:C2	22:DA:208:C:H1'	2.53	0.43
1:CA:409:U:H5'	4:CD:25:VAL:HG23	2.00	0.43
22:DA:305:C:C2	22:DA:313:G:N1	2.86	0.43
28:DG:91:GLY:HA3	28:DG:160:LYS:HG3	2.00	0.43
1:CA:256:U:OP1	17:CQ:19:LYS:NZ	2.40	0.43
1:AA:980:C:C5	1:AA:981:U:C4	3.06	0.43
22:DA:225:C:H2'	22:DA:226:A:O4'	2.18	0.43
22:DA:1595:C:H2'	22:DA:1596:A:O4'	2.19	0.43
7:AG:16:PRO:HB2	9:AI:46:MET:HE3	2.00	0.43
22:DA:679:C:H2'	22:DA:680:C:H6	1.82	0.43
1:CA:1211:U:H1'	1:CA:1213:A:C2	2.53	0.43
22:DA:776:G:C8	22:DA:793:A:C5	3.07	0.43
22:DA:487:C:N4	22:DA:488:G:N1	2.67	0.43
50:D2:43:THR:O	50:D2:44:VAL:CB	2.66	0.43
1:CA:195:A:C6	1:CA:196:A:N1	2.86	0.43
5:AE:83:HIS:HB2	5:AE:84:PRO:CD	2.49	0.43
1:CA:718:A:OP2	1:CA:720:C:N4	2.50	0.43
1:CA:718:A:H5'	11:CK:119:ASN:ND2	2.33	0.43
29:BH:91:PHE:HB3	1:CA:55:A:C4	2.54	0.43
1:AA:947:G:C6	1:AA:948:C:C4	3.07	0.43
10:CJ:80:THR:O	10:CJ:84:VAL:HG12	2.18	0.43
22:DA:1470:A:H2'	22:DA:1471:G:H5'	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1105:A:H2'	1:CA:1106:G:H8	1.83	0.43
2:AB:115:LYS:NZ	2:AB:153:ASP:OD1	2.43	0.43
1:CA:764:C:N4	1:CA:765:G:C5	2.87	0.43
1:CA:583:A:C6	1:CA:759:A:N7	2.86	0.43
22:DA:1524:G:N3	22:DA:1525:A:C8	2.86	0.43
33:BL:81:ASP:CB	33:BL:100:ILE:HD12	2.48	0.43
45:DX:30:LEU:HB3	45:DX:31:PRO:CD	2.48	0.43
1:CA:1318:A:O2'	19:CS:37:ARG:HD2	2.19	0.43
1:CA:919:A:N1	1:CA:920:U:C4	2.86	0.43
30:BI:28:LEU:HG	30:BI:35:ILE:CD1	2.48	0.43
23:BB:29:A:H2'	23:BB:30:C:O4'	2.18	0.43
26:DE:130:LYS:CB	26:DE:133:LEU:HB2	2.48	0.43
1:AA:1182:G:C4'	1:AA:1183:U:H5'	2.48	0.43
24:DC:64:ILE:O	24:DC:103:TYR:HB2	2.18	0.43
37:BP:103:ARG:HG3	37:BP:103:ARG:HH11	1.81	0.43
22:DA:1272:A:C2	22:DA:1618:A:C4	3.06	0.43
1:AA:192:A:C2	1:AA:193:C:C2	3.06	0.43
22:BA:1059:G:C6	22:BA:1060:U:C4	3.07	0.43
22:BA:1059:G:C5	22:BA:1080:A:C2	3.06	0.43
1:CA:938:A:N6	1:CA:939:G:C5	2.86	0.43
22:DA:647:G:C4	22:DA:648:G:C8	3.07	0.43
1:AA:32:A:C2	1:AA:33:A:C4	3.06	0.43
37:DP:93:ARG:O	37:DP:94:LYS:HB2	2.18	0.43
22:DA:64:A:H2'	22:DA:65:U:C6	2.53	0.43
6:AF:14:GLN:OE1	6:AF:17:GLN:HB2	2.18	0.43
6:AF:16:GLU:HG3	4:CD:188:ARG:HH12	1.82	0.43
24:BC:53:HIS:CD2	24:BC:219:THR:HA	2.54	0.43
22:BA:2694:G:H2'	22:BA:2695:U:H6	1.82	0.43
27:DF:9:LYS:O	27:DF:13:VAL:HG23	2.18	0.43
9:AI:29:VAL:O	9:AI:30:ILE:HG22	2.18	0.43
1:AA:900:A:N1	1:AA:901:A:C2	2.87	0.43
20:CT:36:TYR:CG	20:CT:37:ALA:N	2.87	0.43
22:BA:226:A:N6	22:BA:227:A:C6	2.86	0.43
16:CP:67:ILE:HG23	16:CP:71:VAL:CG1	2.49	0.43
22:DA:599:A:H1'	22:DA:659:G:N2	2.34	0.43
32:DK:7:MET:C	32:DK:8:LEU:HD12	2.38	0.43
43:DV:42:LEU:HD12	43:DV:47:VAL:HG21	2.00	0.43
23:DB:13:G:O2'	23:DB:15:A:H5'	2.18	0.43
27:DF:158:THR:OG1	27:DF:169:LEU:CD2	2.67	0.43
1:AA:346:G:P	32:BK:105:ARG:HH12	2.41	0.43
45:DX:68:LEU:HD22	45:DX:78:TYR:CE1	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:983:A:H2'	1:CA:983:A:N3	2.33	0.43
1:AA:174:A:C2'	1:AA:175:C:H5'	2.48	0.43
17:AQ:41:THR:HG22	17:AQ:42:THR:N	2.33	0.43
22:DA:538:A:O2'	31:DJ:8:PRO:HG3	2.18	0.43
1:AA:1251:A:H2'	1:AA:1252:A:O4'	2.18	0.43
25:DD:108:ASP:OD1	25:DD:207:VAL:HG12	2.18	0.43
32:BK:10:VAL:CG1	32:BK:12:ASP:OD1	2.67	0.43
34:DM:78:LEU:O	34:DM:79:ALA:HB3	2.19	0.43
22:DA:717:C:N4	22:DA:718:A:N3	2.65	0.43
22:BA:315:G:H2'	22:BA:316:C:C6	2.53	0.43
15:AO:24:SER:O	15:AO:25:THR:C	2.56	0.43
22:BA:1941:C:C4	22:BA:1942:C:C4	3.05	0.43
22:DA:1486:U:N3	22:DA:1504:A:C2	2.86	0.43
22:BA:1864:U:C5	22:BA:1865:U:C4	3.06	0.43
1:AA:1415:G:C6	1:AA:1486:G:C6	3.07	0.43
10:AJ:19:ASP:HA	10:AJ:22:THR:HB	2.00	0.43
1:AA:1332:A:C8	1:AA:1333:A:C8	3.07	0.43
31:DJ:56:VAL:HB	31:DJ:124:VAL:HG12	2.00	0.43
23:DB:114:C:O2'	23:DB:115:A:H5'	2.18	0.43
6:AF:76:THR:O	6:AF:79:ARG:N	2.44	0.43
29:BH:94:ILE:CD1	29:BH:98:ASP:HB3	2.48	0.43
22:BA:996:A:H4'	38:BQ:91:ASP:OD1	2.19	0.43
1:AA:780:A:C8	1:AA:800:G:O6	2.71	0.43
22:DA:1370:C:H2'	22:DA:1371:G:C8	2.54	0.43
22:DA:208:C:H2'	22:DA:209:C:C6	2.53	0.43
40:DS:33:LEU:CD2	40:DS:52:GLU:HG3	2.48	0.43
22:BA:1189:A:H2'	22:BA:1190:G:O4'	2.18	0.43
22:DA:616:A:H2'	22:DA:616:A:N3	2.33	0.43
17:AQ:17:MET:HB2	17:AQ:20:SER:HB3	2.01	0.43
4:AD:26:ARG:HD3	4:AD:31:LYS:HD2	2.01	0.43
20:AT:54:MET:CE	20:AT:58:VAL:CG2	2.97	0.43
4:CD:192:SER:HB2	4:CD:195:ILE:HG12	2.01	0.43
21:AU:34:ARG:O	21:AU:36:GLU:N	2.52	0.43
1:AA:77:A:H2'	1:AA:78:A:C8	2.53	0.43
1:AA:567:G:N2	1:AA:568:G:H1'	2.33	0.43
1:CA:678:U:H2'	1:CA:679:C:O4'	2.19	0.43
22:DA:2823:A:C5	22:DA:2824:C:C5	3.06	0.43
46:BY:54:LYS:HA	46:BY:57:LEU:HD23	2.00	0.43
1:AA:1406:U:C6	1:AA:1407:C:C5	3.06	0.43
22:BA:2309:A:C6	22:BA:2310:C:C4	3.06	0.43
22:DA:2415:G:C5	22:DA:2416:C:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:186:G:C2	22:DA:211:C:C2	3.06	0.43
1:CA:1255:G:C6	1:CA:1279:G:C5	3.06	0.43
32:DK:92:GLU:N	32:DK:92:GLU:OE2	2.49	0.43
22:BA:141:G:N1	41:BT:1:MET:CE	2.82	0.43
22:DA:1203:U:O4	22:DA:1204:A:C6	2.72	0.43
1:CA:1459:G:H2'	1:CA:1460:C:O4'	2.18	0.43
2:CB:35:ARG:O	2:CB:38:VAL:HG12	2.18	0.43
1:CA:947:G:N2	1:CA:1235:U:O2	2.52	0.43
37:DP:100:LEU:HD22	37:DP:108:ALA:HB1	2.00	0.43
1:AA:841:C:C2	1:AA:843:U:H5'	2.54	0.43
24:BC:174:LEU:N	24:BC:174:LEU:CD1	2.82	0.43
22:DA:830:G:C4	22:DA:2448:A:C5	3.06	0.43
1:CA:1141:C:HO2'	1:CA:1142:G:C5'	2.30	0.43
1:CA:790:A:N6	1:CA:791:G:C6	2.87	0.43
22:DA:1248:G:C5	38:DQ:3:ARG:HB2	2.53	0.43
22:DA:2720:U:C6	22:DA:2872:A:C6	3.07	0.43
1:AA:1529:G:H4'	1:AA:1530:G:OP2	2.18	0.43
9:CI:24:GLY:N	9:CI:61:LEU:HA	2.34	0.43
4:AD:88:GLU:O	4:AD:91:LEU:N	2.51	0.43
22:BA:1404:C:N3	22:BA:1405:U:C5	2.86	0.43
30:BI:108:GLU:OE2	30:BI:109:ILE:CG1	2.67	0.43
10:AJ:92:LEU:O	10:AJ:93:ALA:HB2	2.19	0.43
22:DA:1838:C:C6	22:DA:1899:A:C6	3.07	0.43
12:CL:74:LEU:HD11	12:CL:80:ILE:HG21	2.01	0.43
1:CA:635:A:C5	1:CA:636:U:C4	3.07	0.43
2:CB:141:LEU:O	2:CB:142:GLU:C	2.57	0.43
10:AJ:40:ILE:HB	10:AJ:73:LEU:HB2	2.00	0.43
24:DC:147:LYS:HB2	24:DC:150:LYS:CB	2.49	0.43
1:CA:1126:U:O4	10:CJ:73:LEU:CD1	2.66	0.43
30:DI:67:PHE:CD2	30:DI:67:PHE:N	2.86	0.43
20:CT:33:LYS:O	20:CT:36:TYR:CE2	2.71	0.43
4:AD:145:ILE:CD1	4:AD:145:ILE:N	2.81	0.43
25:DD:193:VAL:HB	25:DD:194:PRO:CD	2.49	0.43
24:DC:69:ARG:NH2	24:DC:116:ILE:HD11	2.33	0.43
1:CA:1424:U:H2'	1:CA:1425:U:O4'	2.17	0.43
9:AI:22:LYS:O	9:AI:62:ASP:HB2	2.18	0.43
2:AB:106:THR:O	2:AB:107:VAL:CB	2.66	0.43
1:AA:895:G:C6	1:AA:896:C:C4	3.06	0.43
24:BC:77:VAL:HG22	24:BC:78:VAL:N	2.34	0.43
18:CR:25:ASP:C	18:CR:27:ALA:N	2.71	0.43
50:D2:31:LEU:CD2	50:D2:42:LEU:HB3	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2880:C:C2	22:BA:2881:U:C5	3.07	0.43
36:BO:107:ALA:O	36:BO:111:ARG:HG3	2.17	0.43
23:DB:71:C:C2	23:DB:106:G:N2	2.86	0.43
22:DA:870:U:OP1	34:DM:6:ARG:CD	2.66	0.43
29:BH:41:LYS:HA	29:BH:44:ILE:HG12	2.01	0.43
30:BI:67:PHE:N	30:BI:67:PHE:CD2	2.86	0.43
26:BE:88:ARG:HB3	26:BE:89:PRO:HD2	2.01	0.43
27:DF:40:VAL:HG13	27:DF:41:GLY:N	2.34	0.43
25:DD:167:ASN:O	25:DD:168:GLU:HB3	2.18	0.43
22:DA:605:G:C5	22:DA:606:U:C5	3.07	0.43
22:DA:605:G:C6	22:DA:606:U:C4	3.07	0.43
23:DB:94:A:H2'	23:DB:95:U:O4'	2.18	0.43
16:CP:52:LEU:HD22	16:CP:57:ILE:HD11	2.01	0.43
24:DC:221:ARG:NH2	57:DC:306:HOH:O	2.51	0.43
22:DA:661:A:H1'	33:DL:12:SER:O	2.17	0.43
31:BJ:93:ILE:CD1	31:BJ:100:VAL:HG21	2.49	0.43
22:DA:2749:A:C8	22:DA:2750:A:H2'	2.52	0.43
25:BD:39:ASP:CG	25:BD:40:LEU:N	2.71	0.43
26:BE:32:VAL:HG21	33:BL:6:LEU:HD13	2.01	0.43
1:CA:1032:G:H2'	1:CA:1032:G:N3	2.34	0.43
22:BA:231:A:C6	22:BA:232:G:C2	3.07	0.43
18:AR:52:GLN:OE1	18:AR:52:GLN:HA	2.17	0.43
22:BA:1043:C:N4	22:BA:1044:C:N4	2.65	0.43
3:AC:159:GLY:O	3:AC:160:ALA:C	2.57	0.43
29:BH:103:VAL:O	29:BH:108:VAL:O	2.37	0.43
22:DA:621:A:OP2	33:DL:99:ASN:ND2	2.51	0.43
22:BA:1086:A:O2'	22:BA:1087:G:N7	2.49	0.43
22:DA:2057:G:H2'	22:DA:2058:A:O4'	2.19	0.43
22:DA:1365:A:H3'	22:DA:1366:A:C8	2.54	0.43
22:BA:1923:U:H2'	22:BA:1923:U:O2	2.17	0.43
28:DG:91:GLY:O	28:DG:94:TYR:CD1	2.72	0.43
5:AE:156:LYS:HB3	8:AH:71:VAL:HG13	2.01	0.43
47:DZ:13:ALA:HB2	47:DZ:24:LEU:HD12	1.99	0.43
22:DA:1439:A:C2	22:DA:1553:A:C4	3.06	0.43
22:DA:1594:U:H2'	22:DA:1595:C:C6	2.53	0.43
23:DB:34:A:N6	23:DB:44:G:H1'	2.33	0.43
22:DA:443:A:C8	26:DE:40:ARG:HD3	2.54	0.43
1:CA:216:U:C5'	1:CA:464:U:H4'	2.47	0.43
1:AA:1109:C:P	3:AC:176:HIS:CE1	3.12	0.43
2:CB:87:CYS:SG	2:CB:89:GLN:OE1	2.76	0.43
27:BF:158:THR:CG2	27:BF:160:ALA:HB3	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2190:G:N2	22:BA:2191:A:H1'	2.33	0.43
22:DA:586:A:C8	22:DA:586:A:OP2	2.72	0.43
5:CE:133:PRO:HG2	5:CE:134:ILE:HD12	2.00	0.43
25:BD:13:ARG:HD3	25:BD:21:SER:OG	2.19	0.43
23:BB:90:C:H5'	34:BM:18:ARG:HG3	2.00	0.43
1:AA:692:U:O2	1:AA:694:A:C8	2.70	0.43
22:DA:1208:C:N4	22:DA:1209:U:O4	2.52	0.43
33:BL:81:ASP:O	33:BL:82:LEU:HB3	2.18	0.43
33:BL:82:LEU:C	33:BL:82:LEU:HD23	2.38	0.43
22:DA:2409:G:H2'	22:DA:2410:G:O4'	2.17	0.43
22:BA:1496:A:N3	22:BA:1577:C:O2'	2.46	0.43
22:DA:1829:A:HO2'	24:DC:15:HIS:CD2	2.36	0.43
4:AD:3:ARG:NH2	4:AD:115:ARG:HD3	2.33	0.43
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.33	0.43
1:CA:1323:G:O2'	1:CA:1362:A:N3	2.40	0.43
33:BL:68:SER:HB3	33:BL:71:ALA:CB	2.49	0.43
22:DA:1802:A:N1	22:DA:1803:A:C2	2.86	0.43
22:DA:1803:A:N1	22:DA:1822:C:O2'	2.49	0.43
22:DA:2547:A:C8	22:DA:2566:A:C8	3.06	0.43
1:AA:1158:C:N3	1:AA:1160:G:N7	2.67	0.43
22:BA:1712:U:C4	22:BA:1713:A:C5	3.07	0.43
1:AA:130:A:N1	1:AA:233:C:O2'	2.42	0.43
22:BA:2360:G:H4'	33:BL:61:LEU:HD21	2.00	0.43
1:CA:794:A:H2'	1:CA:795:C:C6	2.52	0.43
1:AA:1081:A:H5'	5:AE:23:LYS:HG3	2.01	0.43
49:B1:29:THR:C	49:B1:31:PRO:CD	2.85	0.43
7:CG:42:ILE:CG2	7:CG:116:MET:HG3	2.49	0.43
1:AA:927:G:N1	1:AA:1391:U:C2	2.86	0.43
22:BA:1867:G:C2'	22:BA:1868:C:H5'	2.49	0.43
2:CB:68:LEU:HG	2:CB:154:MET:HE1	2.01	0.43
1:AA:457:G:H5'	1:AA:458:U:OP2	2.18	0.43
1:AA:474:G:C5	1:AA:475:C:C5	3.06	0.43
22:DA:2201:G:C4	22:DA:2202:U:C5	3.06	0.43
1:CA:632:U:H5''	1:CA:633:G:C8	2.54	0.43
22:DA:1277:G:H5'	35:DN:20:MET:HE1	1.99	0.43
27:BF:64:LYS:HA	27:BF:65:PRO:HD3	1.90	0.43
22:BA:1607:C:N4	22:BA:1622:G:C5	2.86	0.43
12:AL:38:TYR:O	12:AL:39:THR:HG22	2.18	0.43
36:DO:49:VAL:HG12	36:DO:50:ALA:N	2.33	0.43
9:AI:30:ILE:O	9:AI:33:ARG:N	2.52	0.43
1:AA:39:G:N3	1:AA:40:C:C6	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:89:GLU:O	41:BT:91:GLN:N	2.52	0.43
1:CA:1306:A:H1'	1:CA:1332:A:N7	2.34	0.43
8:AH:21:ASN:HA	8:AH:65:TYR:CE1	2.53	0.43
2:AB:119:THR:O	2:AB:120:GLN:HB2	2.18	0.43
22:BA:2078:C:O2'	22:BA:2079:U:H5'	2.18	0.43
10:CJ:8:ILE:CD1	10:CJ:25:ILE:HD11	2.48	0.43
39:DR:68:ARG:HD3	39:DR:92:TRP:CE2	2.54	0.43
26:DE:170:ARG:NH1	26:DE:176:ASP:OD1	2.52	0.43
22:DA:2335:A:N6	22:DA:2337:G:H1'	2.34	0.43
4:CD:138:SER:HB3	4:CD:139:PRO:CD	2.48	0.43
1:CA:671:G:C6	1:CA:672:U:N3	2.86	0.43
1:CA:38:G:N2	1:CA:397:A:C4	2.86	0.43
24:BC:30:PHE:CZ	24:BC:32:PRO:HG2	2.53	0.43
22:BA:417:C:H2'	22:BA:418:C:H6	1.82	0.43
1:AA:849:G:C5	1:AA:850:U:C4	3.06	0.43
7:CG:95:ARG:O	7:CG:99:LEU:HG	2.19	0.43
41:BT:29:THR:OG1	41:BT:86:THR:HG22	2.19	0.43
41:DT:67:VAL:CG1	41:DT:68:LYS:N	2.80	0.43
1:CA:129:A:H1'	1:CA:130:A:C8	2.54	0.43
26:BE:59:PRO:HD3	26:BE:71:GLY:O	2.19	0.43
24:DC:183:LYS:O	24:DC:184:VAL:HG23	2.18	0.43
45:BX:74:ARG:NH2	45:BX:76:GLU:HG3	2.33	0.43
1:CA:258:G:H2'	1:CA:259:G:O4'	2.18	0.43
4:AD:161:LEU:HD22	4:AD:161:LEU:N	2.34	0.43
22:BA:191:A:H2'	22:BA:192:C:C6	2.53	0.43
22:DA:1989:G:H2'	22:DA:1990:C:H5'	2.00	0.43
32:DK:10:VAL:HB	32:DK:16:ALA:O	2.19	0.43
22:BA:773:U:O2'	24:BC:48:ARG:HD3	2.19	0.43
3:AC:203:PHE:CE1	3:AC:205:GLY:O	2.72	0.43
37:DP:79:PRO:O	37:DP:80:VAL:C	2.57	0.43
1:CA:104:G:C2	1:CA:105:G:C8	3.06	0.43
2:AB:83:ALA:O	2:AB:86:SER:OG	2.35	0.43
22:BA:2117:A:N1	22:BA:2170:A:N1	2.66	0.43
42:BU:54:GLN:N	42:BU:55:PRO:CD	2.81	0.43
1:AA:810:C:H2'	1:AA:810:C:O2	2.18	0.43
27:DF:31:VAL:O	27:DF:31:VAL:HG13	2.19	0.43
22:DA:1851:U:H2'	22:DA:1852:U:O4'	2.19	0.43
25:DD:28:GLU:HA	25:DD:185:ASN:O	2.19	0.43
31:DJ:106:LYS:HD2	31:DJ:119:PHE:CZ	2.54	0.43
28:BG:38:ASN:O	28:BG:39:ASP:HB2	2.19	0.43
22:DA:485:C:C2	22:DA:496:G:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1176:A:H3'	1:AA:1177:G:C8	2.54	0.43
42:DU:3:ALA:O	42:DU:6:ARG:NH1	2.52	0.43
22:BA:2847:U:C2'	22:BA:2848:G:H5'	2.49	0.43
22:DA:1356:G:C2	22:DA:1376:C:O2	2.72	0.43
22:DA:772:C:C2	22:DA:773:U:C6	3.07	0.43
24:BC:76:ALA:HB2	24:BC:96:TYR:CG	2.54	0.43
1:CA:322:C:O2	1:CA:332:G:N2	2.43	0.43
22:BA:1075:C:H2'	22:BA:1076:C:N1	2.34	0.43
43:BV:83:LYS:O	43:BV:85:LYS:N	2.52	0.43
1:CA:1006:G:OP1	1:CA:1038:C:C5'	2.66	0.43
1:AA:1492:A:OP1	12:AL:44:LYS:CA	2.66	0.43
24:DC:67:PHE:CE2	24:DC:156:ARG:CZ	3.02	0.43
2:AB:57:LEU:HD11	2:AB:221:VAL:CG2	2.49	0.43
49:B1:23:THR:OG1	49:B1:24:THR:N	2.51	0.43
22:DA:55:G:H2'	22:DA:55:G:N3	2.34	0.43
1:AA:264:C:O2'	17:AQ:66:PRO:O	2.25	0.43
27:BF:158:THR:HG22	27:BF:160:ALA:H	1.83	0.43
22:DA:1717:A:H2'	22:DA:1718:G:O4'	2.19	0.43
1:AA:202:G:O2'	1:AA:468:A:C8	2.67	0.43
22:DA:2683:C:OP1	37:DP:56:HIS:HB3	2.18	0.43
22:BA:2555:U:H5''	22:BA:2556:C:OP2	2.19	0.43
2:CB:16:PHE:CE1	2:CB:18:HIS:CE1	3.06	0.43
22:DA:1671:U:O2'	22:DA:1673:G:N7	2.35	0.43
22:DA:2815:C:HO2'	48:D0:41:HIS:CE1	2.36	0.43
22:DA:1060:U:OP2	30:DI:75:PRO:HA	2.18	0.43
22:DA:1063:G:O4'	30:DI:77:ALA:HB1	2.17	0.43
22:DA:41:C:O2	22:DA:438:G:N2	2.48	0.43
22:DA:2408:U:H2'	22:DA:2409:G:C8	2.54	0.43
22:DA:2320:U:H5'	22:DA:2321:U:C5	2.53	0.43
1:CA:1359:C:H2'	1:CA:1361:G:OP2	2.18	0.43
10:AJ:65:TYR:HH	14:AN:85:ARG:HD2	1.83	0.43
14:AN:84:VAL:HG12	14:AN:85:ARG:N	2.33	0.43
1:CA:1151:A:C2	1:CA:1152:A:C4	3.07	0.43
30:DI:8:TYR:CB	30:DI:59:ILE:H	2.32	0.43
1:CA:68:G:O4'	1:CA:171:A:H1'	2.19	0.43
22:DA:668:A:C2	22:DA:670:A:C6	3.07	0.43
22:DA:1805:A:N3	22:DA:1813:G:N2	2.66	0.43
3:CC:111:LEU:CD2	3:CC:111:LEU:N	2.82	0.43
1:AA:1173:U:H2'	1:AA:1174:G:C8	2.54	0.43
22:BA:1587:G:C5	22:BA:1588:G:N7	2.87	0.43
1:AA:686:U:O4	1:AA:703:G:O2'	2.30	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:87:LEU:N	15:AO:87:LEU:CD2	2.81	0.43
12:CL:14:ARG:NH1	12:CL:15:LYS:HG3	2.33	0.43
43:BV:40:ILE:HG21	43:BV:42:LEU:HD21	1.99	0.43
21:CU:39:GLU:HA	21:CU:42:THR:OG1	2.19	0.43
9:CI:25:ASN:O	9:CI:27:LYS:HG2	2.18	0.43
9:AI:6:TYR:CB	9:AI:89:GLU:OE2	2.67	0.43
24:DC:141:VAL:HG13	24:DC:191:THR:O	2.18	0.43
11:CK:18:ASP:CB	11:CK:81:ASN:OD1	2.66	0.43
1:CA:643:C:C5'	8:CH:32:LEU:CD2	2.97	0.43
1:AA:949:A:C2'	1:AA:950:U:H5'	2.48	0.43
49:B1:17:THR:CG2	49:B1:43:VAL:HG13	2.48	0.43
1:AA:986:U:C2	1:AA:987:G:C8	3.07	0.43
43:DV:41:GLU:C	43:DV:42:LEU:HD23	2.39	0.43
1:CA:963:G:C2	1:CA:973:G:C6	3.06	0.43
27:DF:29:PRO:CB	27:DF:169:LEU:HD22	2.49	0.43
1:CA:924:C:O2'	1:CA:1502:A:N1	2.44	0.43
1:AA:607:A:C6	1:AA:608:A:C6	3.06	0.43
24:DC:126:PRO:HA	24:DC:192:LEU:O	2.19	0.43
3:CC:34:ASP:CG	14:CN:65:ARG:HG2	2.39	0.43
19:AS:40:ILE:HG13	19:AS:71:LEU:HD22	2.00	0.43
1:AA:895:G:C5	1:AA:896:C:C5	3.07	0.43
1:CA:110:C:N4	1:CA:111:G:C6	2.86	0.43
50:D2:34:ARG:HD3	50:D2:42:LEU:O	2.18	0.43
36:BO:12:THR:O	36:BO:16:ARG:HG3	2.19	0.43
22:BA:1469:A:H2'	22:BA:1470:A:C8	2.54	0.43
22:BA:1499:C:C4	22:BA:1500:G:N7	2.87	0.43
22:DA:963:U:H2'	22:DA:964:C:C6	2.53	0.43
22:BA:2006:C:O2'	22:BA:2823:A:O2'	2.21	0.43
46:BY:49:ASP:O	46:BY:52:ARG:HB2	2.19	0.43
6:CF:52:ASN:O	6:CF:53:LYS:HB2	2.19	0.43
23:BB:22:U:H2'	23:BB:23:G:C8	2.54	0.43
22:BA:820:A:H2'	22:BA:821:A:O4'	2.17	0.43
1:CA:538:G:H2'	1:CA:539:A:O4'	2.18	0.43
22:DA:108:G:H1'	22:DA:347:A:N3	2.33	0.43
22:BA:832:U:H5'	33:BL:38:GLN:OE1	2.19	0.43
22:BA:2598:A:N7	22:BA:2599:G:H1'	2.34	0.43
22:BA:2201:G:C4	22:BA:2223:G:N2	2.87	0.43
41:BT:47:VAL:HG12	41:BT:55:VAL:CG2	2.48	0.43
22:DA:828:U:H2'	22:DA:829:A:C8	2.54	0.43
22:BA:2607:G:H2'	22:BA:2608:G:O4'	2.17	0.43
40:BS:42:LYS:O	40:BS:42:LYS:HG2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:114:LEU:O	31:DJ:118:MET:HG2	2.18	0.43
22:BA:1603:A:H5''	57:BA:3414:HOH:O	2.18	0.43
22:DA:2418:A:OP1	51:D3:45:ARG:NH1	2.52	0.43
24:DC:226:ASN:HB3	24:DC:227:PRO:CD	2.49	0.43
12:AL:5:ASN:HB3	12:AL:9:ARG:NH1	2.34	0.43
1:CA:32:A:C2	1:CA:33:A:N7	2.86	0.43
22:DA:618:G:C6	22:DA:619:G:C4	3.07	0.43
1:CA:280:C:H4'	1:CA:281:G:OP2	2.19	0.43
22:DA:2282:G:H1'	22:DA:2390:U:C4	2.54	0.43
22:DA:819:A:C8	22:DA:1188:U:O4	2.71	0.43
22:DA:565:C:H2'	22:DA:566:U:O4'	2.19	0.43
22:DA:566:U:C5	39:DR:80:ARG:HD3	2.54	0.43
5:AE:74:VAL:HG23	5:AE:76:LEU:HD12	1.99	0.43
40:BS:69:LEU:HG	40:BS:107:VAL:HG22	2.01	0.43
22:DA:1668:A:H4'	22:DA:1669:A:O5'	2.18	0.43
1:CA:1375:A:C5	1:CA:1376:U:C5	3.06	0.43
1:CA:1124:G:C2'	1:CA:1145:A:H62	2.32	0.43
22:DA:149:A:C2'	22:DA:150:U:H5'	2.49	0.43
1:AA:946:A:C6	1:AA:947:G:C6	3.06	0.43
22:BA:2190:G:C6	22:BA:2191:A:C4	3.06	0.43
22:DA:77:G:C2	22:DA:78:U:C2	3.06	0.43
22:DA:1670:C:C5	22:DA:1671:U:C4	3.07	0.43
22:BA:528:A:C2	22:BA:2043:C:C5'	2.97	0.43
23:BB:91:C:H2'	23:BB:92:C:H6	1.84	0.43
22:DA:1207:C:O2	22:DA:1239:G:N2	2.42	0.43
1:AA:1014:A:C2	19:AS:34:TRP:CE2	3.07	0.43
22:BA:1717:A:C2	22:BA:1718:G:H1'	2.54	0.43
1:AA:1501:C:C4	1:AA:1504:G:C5	3.07	0.43
22:BA:1250:G:OP2	33:BL:21:ARG:NH2	2.52	0.43
1:CA:794:A:C5	1:CA:795:C:C4	3.06	0.43
22:BA:1731:G:C4	22:BA:1733:G:C8	3.07	0.43
22:BA:2650:U:C2'	22:BA:2651:C:H5'	2.49	0.43
8:AH:78:VAL:HG21	8:AH:128:TYR:CD1	2.53	0.43
14:CN:54:ASP:OD1	14:CN:59:ARG:NH1	2.52	0.43
29:DH:62:LEU:HD13	29:DH:63:ALA:N	2.34	0.43
7:CG:49:THR:O	7:CG:53:ARG:HD3	2.18	0.43
22:BA:1115:G:C2	22:BA:1116:G:C5	3.07	0.43
22:BA:538:A:H4'	31:BJ:7:LYS:HG2	2.01	0.43
22:DA:2868:A:C6	22:DA:2869:G:C6	3.06	0.43
1:AA:704:A:N6	1:AA:705:G:C6	2.86	0.43
41:DT:11:LEU:CD2	41:DT:34:VAL:HG12	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1467:U:C5	22:BA:1546:G:N3	2.87	0.43
1:CA:860:A:N6	1:CA:861:G:C2	2.86	0.43
22:DA:2185:U:H2'	22:DA:2186:G:C8	2.54	0.43
22:DA:632:A:H4'	33:DL:68:SER:HB2	2.00	0.43
34:BM:57:VAL:O	34:BM:58:LYS:HG3	2.19	0.43
19:AS:58:VAL:CG1	19:AS:75:ALA:CB	2.97	0.43
1:CA:1412:C:O2	1:CA:1413:A:C8	2.72	0.43
26:DE:52:VAL:HG21	26:DE:81:GLY:CA	2.48	0.43
16:AP:67:ILE:CG2	16:AP:71:VAL:HG12	2.49	0.43
17:CQ:14:SER:HB3	17:CQ:22:VAL:HG12	2.01	0.43
22:DA:2898:U:H2'	22:DA:2899:A:C8	2.54	0.43
22:DA:1722:A:C6	22:DA:1739:A:C8	3.06	0.43
22:DA:2786:U:H2'	22:DA:2787:C:C6	2.54	0.43
7:AG:67:GLU:HA	7:AG:70:ARG:HE	1.84	0.43
22:DA:1219:U:H2'	22:DA:1220:G:C8	2.54	0.43
29:BH:45:GLU:HA	29:BH:48:GLU:HB2	2.01	0.43
1:AA:41:G:H2'	1:AA:42:G:C8	2.54	0.43
24:BC:157:SER:O	24:BC:158:ALA:C	2.56	0.43
1:CA:996:A:H2'	1:CA:997:U:C5	2.54	0.43
22:BA:912:C:C2'	22:BA:913:U:H5'	2.48	0.43
22:BA:829:A:N7	22:BA:2247:A:O2'	2.49	0.43
19:CS:16:LEU:O	19:CS:20:GLU:HG2	2.17	0.43
1:AA:482:A:H2'	1:AA:483:C:O4'	2.19	0.43
30:BI:99:GLY:C	30:BI:100:LYS:HG2	2.39	0.43
30:BI:103:ARG:HE	30:BI:104:ALA:N	2.17	0.43
39:DR:27:ILE:HG13	39:DR:33:VAL:HG11	2.01	0.43
25:DD:178:VAL:HG12	25:DD:179:ARG:HG3	2.01	0.43
3:CC:22:TRP:CH2	14:CN:94:PRO:HG2	2.53	0.43
22:BA:2633:G:H2'	22:BA:2634:A:O4'	2.19	0.43
27:DF:161:LYS:HB2	27:DF:165:GLU:OE1	2.19	0.43
22:DA:2350:C:H2'	22:DA:2351:G:O4'	2.18	0.43
20:AT:9:LYS:O	20:AT:12:ILE:HG12	2.19	0.43
22:BA:996:A:C6	22:BA:1160:G:C2	3.07	0.43
22:BA:1098:A:N7	22:BA:1099:G:C6	2.86	0.43
22:DA:1358:G:C2'	22:DA:1359:A:OP2	2.67	0.43
22:DA:729:G:C4	22:DA:1775:U:O2	2.72	0.43
29:DH:82:SER:O	29:DH:83:LYS:C	2.57	0.43
1:AA:1049:U:H4'	1:AA:1050:G:OP2	2.18	0.43
1:AA:1202:U:N3	1:AA:1203:C:C6	2.86	0.43
1:AA:1269:A:H2	1:AA:1312:G:N3	2.16	0.43
1:AA:1326:U:H2'	1:AA:1327:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1131:G:N7	22:DA:2025:C:H4'	2.34	0.43
4:AD:26:ARG:NH1	4:AD:31:LYS:HB3	2.34	0.43
39:DR:83:TYR:C	39:DR:83:TYR:CD1	2.92	0.43
22:BA:1179:G:C8	22:BA:1180:U:O4'	2.72	0.43
9:AI:84:THR:HG21	9:AI:103:PHE:HB2	2.00	0.43
25:BD:149:ASN:OD1	25:BD:150:GLN:N	2.52	0.43
22:DA:2388:A:H5'	22:DA:2389:G:OP2	2.19	0.43
22:DA:973:A:OP2	39:DR:81:LYS:HD2	2.19	0.43
2:AB:50:PHE:CE2	2:AB:51:ASN:OD1	2.72	0.43
1:AA:946:A:H2'	1:AA:947:G:C8	2.54	0.43
1:AA:960:U:O2'	1:AA:1223:C:C5'	2.67	0.43
25:DD:56:LYS:C	25:DD:58:ASN:N	2.72	0.43
22:BA:2187:U:H2'	22:BA:2188:U:O4'	2.19	0.43
46:BY:6:LEU:HD13	46:BY:56:LEU:HD22	2.00	0.43
22:BA:2871:U:OP1	35:BN:69:ARG:NH1	2.50	0.43
22:DA:1829:A:C8	22:DA:1830:C:C5	3.07	0.43
22:DA:2143:C:H2'	22:DA:2144:G:O4'	2.19	0.43
1:CA:1362:A:H4'	1:CA:1362:A:OP1	2.19	0.43
22:DA:2655:G:O2'	22:DA:2656:U:OP1	2.30	0.43
2:CB:21:ARG:HH12	2:CB:39:HIS:CD2	2.37	0.43
30:DI:8:TYR:HB2	30:DI:59:ILE:H	1.84	0.43
1:CA:1520:C:H2'	1:CA:1521:C:C6	2.54	0.43
22:DA:980:A:N6	22:DA:2027:G:O2'	2.52	0.43
2:AB:164:ILE:HD12	2:AB:210:VAL:CG1	2.49	0.43
22:BA:2323:G:C2'	22:BA:2324:U:H5'	2.49	0.43
28:BG:174:ALA:O	28:BG:175:LYS:HB3	2.18	0.43
1:AA:722:G:C2'	1:AA:723:U:OP2	2.67	0.43
22:DA:1914:C:O4'	22:DA:1914:C:O2	2.35	0.43
50:D2:9:VAL:HG12	50:D2:13:ASN:OD1	2.18	0.43
22:DA:2473:U:O4	28:DG:176:LYS:NZ	2.47	0.43
22:DA:8:C:C2'	22:DA:9:G:H5'	2.49	0.43
2:CB:70:VAL:O	2:CB:164:ILE:HG22	2.18	0.43
2:CB:164:ILE:O	2:CB:186:ILE:HG23	2.19	0.43
22:DA:2314:A:N1	22:DA:2315:G:C5	2.87	0.43
22:BA:1248:G:O6	26:BE:46:GLN:NE2	2.48	0.43
1:CA:1244:G:C2	1:CA:1294:G:C2	3.07	0.43
1:CA:206:C:H2'	1:CA:207:C:C4'	2.49	0.43
22:DA:2379:G:H2'	22:DA:2380:C:C6	2.54	0.43
9:CI:54:LEU:C	9:CI:55:VAL:HG13	2.39	0.43
22:DA:2215:C:O2'	22:DA:2216:G:H5'	2.19	0.43
1:AA:425:G:H2'	1:AA:426:U:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BV:35:GLU:HB2	43:BV:93:ARG:CZ	2.49	0.43
7:CG:33:ASP:HB3	7:CG:35:LYS:HE3	2.00	0.43
45:DX:25:THR:O	45:DX:27:ARG:N	2.52	0.43
30:DI:65:ARG:HG3	30:DI:66:SER:N	2.32	0.43
30:DI:24:VAL:CG1	30:DI:28:LEU:HB3	2.49	0.43
30:DI:28:LEU:HD11	30:DI:35:ILE:CD1	2.49	0.43
12:AL:107:VAL:CG2	12:AL:117:TYR:HB3	2.48	0.43
36:BO:94:ARG:HD2	36:BO:97:PHE:O	2.19	0.43
22:DA:2740:A:C6	22:DA:2764:A:C8	3.07	0.43
22:DA:170:U:C2	22:DA:171:U:C6	3.07	0.43
22:DA:2736:A:C2	22:DA:2769:U:O2	2.71	0.43
22:BA:1208:C:C4	22:BA:1209:U:C4	3.07	0.43
22:DA:2873:A:O4'	35:DN:6:SER:HB2	2.18	0.43
23:BB:43:C:H5''	23:BB:44:G:OP2	2.19	0.43
17:AQ:9:GLN:HA	17:AQ:59:VAL:O	2.19	0.43
11:AK:23:ILE:HD12	11:AK:23:ILE:C	2.39	0.43
23:BB:112:G:H2'	23:BB:113:C:H6	1.84	0.43
15:CO:46:HIS:O	15:CO:48:LYS:N	2.41	0.43
34:DM:107:GLY:C	34:DM:108:VAL:HG22	2.39	0.43
22:DA:1506:U:H2'	22:DA:1507:C:C6	2.54	0.43
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.54	0.43
1:CA:439:U:H4'	4:CD:121:LYS:HE3	2.01	0.43
28:BG:52:PHE:CZ	28:BG:72:LEU:HD22	2.54	0.43
22:DA:2677:G:C4	22:DA:2731:G:N2	2.87	0.43
22:BA:1286:A:N6	22:BA:1329:U:C2	2.87	0.43
27:DF:36:LEU:HD23	27:DF:57:LEU:HD22	2.01	0.43
37:DP:23:GLY:O	37:DP:90:GLY:HA3	2.19	0.43
22:DA:815:C:H2'	22:DA:816:C:C6	2.54	0.43
2:CB:32:PHE:N	2:CB:40:ILE:O	2.46	0.43
22:DA:2648:G:C4	22:DA:2673:G:C2	3.06	0.43
23:DB:2:G:H8	23:DB:2:G:P	2.41	0.43
1:CA:84:U:O2'	1:CA:85:U:H5'	2.18	0.43
1:CA:1402:C:H2'	1:CA:1403:C:O4'	2.19	0.43
22:BA:2185:U:C2'	22:BA:2186:G:H5'	2.49	0.43
1:AA:1405:G:H1'	1:AA:1519:A:O4'	2.18	0.43
1:AA:539:A:N6	1:AA:540:G:O6	2.52	0.43
19:AS:23:VAL:HG12	19:AS:24:GLU:N	2.34	0.43
36:BO:55:GLU:OE1	36:BO:81:ARG:NH1	2.50	0.43
22:BA:638:G:C5	22:BA:651:G:C2	3.07	0.43
22:BA:626:A:C2'	33:BL:78:ARG:NH1	2.77	0.43
22:BA:1097:U:H3'	22:BA:1098:A:H4'	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1507:C:H2'	22:BA:1508:A:C4'	2.49	0.43
5:CE:154:ALA:O	5:CE:156:LYS:N	2.52	0.43
12:CL:44:LYS:HB3	12:CL:45:PRO:CD	2.48	0.43
22:DA:1357:C:C2'	22:DA:1358:G:H5'	2.49	0.43
4:CD:9:LEU:HD22	4:CD:22:LYS:HD2	2.01	0.43
22:DA:192:C:C4	22:DA:193:U:C2	3.07	0.43
22:DA:303:G:C2	22:DA:315:G:C6	3.07	0.43
40:DS:61:ASN:O	40:DS:62:ASP:OD1	2.37	0.43
22:BA:1073:A:H2'	22:BA:1074:G:H5''	2.00	0.43
1:CA:484:G:N7	1:CA:486:U:C1'	2.82	0.43
14:AN:13:ARG:O	14:AN:17:ALA:HB2	2.19	0.43
22:DA:232:G:N2	22:DA:420:C:OP1	2.51	0.43
1:CA:992:U:O4	1:CA:1044:A:C8	2.72	0.43
22:BA:830:G:H4'	22:BA:831:G:OP2	2.19	0.43
2:AB:47:VAL:C	2:AB:49:MET:H	2.22	0.43
22:BA:278:A:C6	22:BA:362:A:N7	2.87	0.43
1:AA:82:G:O6	1:AA:87:C:N4	2.52	0.43
22:BA:2684:U:O4'	32:BK:70:ARG:NH2	2.51	0.43
1:AA:1225:A:H2'	1:AA:1226:C:C6	2.53	0.43
1:AA:947:G:H2'	1:AA:948:C:C6	2.54	0.43
14:CN:25:ALA:O	14:CN:28:LYS:HG2	2.19	0.43
22:BA:2192:U:H2'	22:BA:2193:G:C5'	2.43	0.43
39:BR:49:ILE:HG22	39:BR:53:PHE:C	2.38	0.43
14:AN:41:ARG:HB2	14:AN:42:TRP:CZ3	2.54	0.43
1:CA:1074:G:O2'	2:CB:102:THR:HG23	2.18	0.43
22:BA:2258:C:O2'	22:BA:2426:A:H4'	2.19	0.43
30:DI:91:GLY:O	30:DI:93:PRO:HD3	2.19	0.43
33:BL:81:ASP:O	33:BL:83:ALA:N	2.43	0.43
22:DA:290:U:N3	22:DA:291:G:N7	2.67	0.43
1:CA:978:A:C6	1:CA:1318:A:N6	2.86	0.43
22:DA:1304:A:C6	22:DA:1305:C:N4	2.87	0.43
8:AH:126:ILE:HG22	8:AH:127:CYS:N	2.34	0.43
28:BG:141:ILE:HD12	28:BG:142:GLY:N	2.34	0.43
1:CA:957:U:H4'	19:CS:79:THR:O	2.19	0.43
21:CU:34:ARG:HD3	21:CU:35:ARG:HB3	2.00	0.43
22:DA:1884:G:O2'	22:DA:1885:A:OP2	2.34	0.43
6:CF:37:HIS:O	6:CF:97:THR:HG23	2.19	0.43
22:BA:18:U:O3'	38:BQ:23:GLY:HA2	2.18	0.43
1:AA:1368:A:OP2	9:AI:114:LYS:CD	2.66	0.43
1:AA:1150:A:H2'	1:AA:1151:A:H5'	2.01	0.43
21:AU:18:ARG:HD2	21:AU:18:ARG:H	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:30:SER:O	8:AH:31:LYS:C	2.58	0.43
1:AA:591:U:OP2	8:AH:31:LYS:HD2	2.18	0.43
22:BA:2838:G:C2'	22:BA:2839:G:H5'	2.48	0.43
22:DA:2021:C:OP1	48:D0:9:THR:HG21	2.19	0.43
22:BA:1406:U:C2'	22:BA:1407:G:O5'	2.66	0.43
22:BA:2564:A:C6	22:BA:2565:A:N1	2.87	0.43
22:DA:2332:C:H4'	22:DA:2336:A:H62	1.84	0.43
35:DN:38:LEU:N	35:DN:39:PRO:CD	2.82	0.43
14:CN:64:CYS:SG	14:CN:83:LYS:HG3	2.59	0.43
1:CA:1262:C:N4	1:CA:1263:C:N4	2.67	0.43
1:CA:328:C:O2	1:CA:328:C:O2'	2.34	0.43
22:DA:753:A:H2'	22:DA:754:U:C6	2.54	0.43
45:DX:27:ARG:NE	45:DX:28:ARG:O	2.50	0.43
42:DU:74:ASN:O	42:DU:75:ALA:HB3	2.18	0.43
1:CA:179:A:C5	1:CA:180:U:C4	3.06	0.43
15:AO:35:GLN:HB3	15:AO:59:MET:HE2	1.99	0.43
16:CP:6:LEU:CD1	16:CP:71:VAL:HG23	2.49	0.43
13:CM:48:LEU:HD22	13:CM:53:ILE:HG13	2.01	0.43
22:DA:2511:U:C4	22:DA:2512:C:C4	3.07	0.43
31:BJ:30:THR:CG2	31:BJ:31:GLU:N	2.82	0.43
22:DA:1662:U:O2	22:DA:2687:U:H4'	2.19	0.43
25:DD:122:VAL:HG21	25:DD:141:ARG:NH1	2.34	0.43
9:CI:49:ARG:C	9:CI:51:PRO:HD2	2.38	0.43
22:BA:108:G:C2'	22:BA:109:C:H5'	2.49	0.43
22:BA:2356:U:O3'	44:BW:20:ARG:CD	2.67	0.43
22:BA:1839:G:C2'	22:BA:1840:G:O5'	2.66	0.43
5:CE:20:ARG:NH2	5:CE:31:PHE:CZ	2.87	0.43
1:CA:302:G:C6	1:CA:303:A:C5	3.07	0.43
24:BC:22:PRO:C	24:BC:24:LEU:H	2.23	0.43
31:DJ:59:ALA:O	31:DJ:62:VAL:CG1	2.67	0.43
22:BA:1972:G:C2	22:BA:1973:G:N7	2.86	0.43
6:AF:38:ARG:CG	6:AF:39:LEU:N	2.82	0.43
3:CC:119:SER:O	3:CC:123:GLN:HG3	2.19	0.43
36:BO:64:TYR:HB3	36:BO:67:ASN:ND2	2.34	0.43
1:CA:320:A:C2	1:CA:334:C:N3	2.87	0.43
9:CI:28:ILE:HB	9:CI:35:LEU:HB2	2.01	0.43
10:CJ:27:GLU:O	10:CJ:31:ARG:HB3	2.18	0.43
1:CA:363:A:OP1	12:CL:31:ARG:N	2.51	0.43
22:BA:297:G:H2'	22:BA:298:G:O4'	2.19	0.43
22:BA:100:U:H4'	22:BA:101:A:C5'	2.49	0.43
1:CA:1112:C:O2	3:CC:179:ARG:HG3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:25:ASN:O	3:CC:29:PHE:HB2	2.18	0.43
22:BA:111:A:N1	22:BA:112:U:C2	2.87	0.43
27:DF:66:LEU:O	27:DF:87:CYS:HA	2.19	0.43
25:DD:14:ILE:HG12	25:DD:24:VAL:CG2	2.49	0.43
1:AA:639:G:N3	1:AA:639:G:H2'	2.33	0.43
22:DA:1765:U:O2'	22:DA:1766:G:H5'	2.19	0.43
1:CA:314:C:N4	1:CA:315:A:N6	2.66	0.43
13:CM:64:VAL:O	13:CM:69:LEU:HB2	2.18	0.43
29:BH:79:THR:CG2	29:BH:147:VAL:CG2	2.97	0.42
22:DA:600:G:OP1	26:DE:24:ASN:ND2	2.48	0.42
1:CA:411:A:H4'	1:CA:412:A:O5'	2.18	0.42
26:DE:131:THR:O	26:DE:135:ALA:HB2	2.19	0.42
1:AA:1233:G:OP1	9:AI:126:GLN:HB3	2.19	0.42
1:AA:1310:G:O2'	1:AA:1311:A:H5'	2.18	0.42
13:AM:80:LEU:HD21	13:AM:87:ARG:NE	2.34	0.42
17:CQ:21:ILE:HB	17:CQ:48:ASP:OD1	2.18	0.42
22:DA:683:U:OP1	50:D2:26:ASN:CB	2.67	0.42
1:AA:131:A:C2	1:AA:132:C:C4	3.07	0.42
1:AA:958:A:C6	1:AA:959:A:N1	2.87	0.42
14:CN:21:PHE:CD2	14:CN:25:ALA:HB2	2.54	0.42
39:BR:51:VAL:CG2	39:BR:52:PRO:HD2	2.49	0.42
2:AB:147:SER:O	2:AB:148:LEU:CG	2.67	0.42
22:BA:263:G:H2'	22:BA:264:C:C5'	2.49	0.42
22:BA:2308:G:C6	22:BA:2311:A:N7	2.87	0.42
30:DI:10:LYS:HB2	30:DI:56:PRO:HB2	2.01	0.42
33:BL:82:LEU:C	33:BL:84:LYS:H	2.22	0.42
1:CA:1317:C:H2'	1:CA:1318:A:O5'	2.19	0.42
15:AO:62:GLN:O	15:AO:63:ARG:C	2.57	0.42
30:BI:39:CYS:O	30:BI:42:PHE:HB3	2.19	0.42
20:AT:44:LYS:HD3	20:AT:87:ALA:HA	2.01	0.42
22:DA:2311:A:H2	27:DF:79:ILE:CG2	2.31	0.42
19:AS:34:TRP:O	19:AS:36:ARG:N	2.52	0.42
4:CD:90:LEU:CD2	4:CD:200:ILE:HD11	2.49	0.42
3:AC:110:GLU:HG2	3:AC:140:ASN:HB3	2.01	0.42
1:CA:1134:G:C6	1:CA:1141:C:N4	2.87	0.42
1:AA:1181:G:H4'	1:AA:1182:G:OP1	2.18	0.42
18:CR:33:ILE:CA	18:CR:40:VAL:HG23	2.47	0.42
1:AA:448:A:C5	1:AA:487:A:C2	3.07	0.42
22:BA:2577:A:C2'	22:BA:2578:G:OP1	2.67	0.42
22:BA:1253:A:C8	57:BA:3337:HOH:O	2.72	0.42
22:BA:846:U:HO2'	22:BA:847:U:P	2.39	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:324:A:C6	22:DA:325:G:C4	3.06	0.42
2:CB:140:GLU:O	2:CB:141:LEU:C	2.56	0.42
4:CD:170:TRP:O	4:CD:183:LYS:HB2	2.19	0.42
12:AL:67:ILE:HG21	12:AL:72:HIS:CD2	2.54	0.42
1:CA:81:A:N1	1:CA:88:U:O4	2.52	0.42
22:DA:779:U:OP1	24:DC:49:ILE:HG13	2.19	0.42
1:AA:1031:C:O2'	1:AA:1032:G:P	2.77	0.42
6:AF:71:ILE:HG23	6:AF:72:ASP:N	2.33	0.42
22:DA:447:A:O2'	22:DA:473:G:N7	2.40	0.42
39:BR:74:ILE:HD13	39:BR:74:ILE:N	2.34	0.42
1:CA:1537:U:C5	1:CA:1538:C:N4	2.87	0.42
10:CJ:17:LEU:HD21	10:CJ:96:VAL:HG22	2.00	0.42
7:CG:51:ALA:HB2	7:CG:58:GLU:HA	2.00	0.42
22:DA:158:U:O4	22:DA:159:G:C6	2.72	0.42
41:DT:4:GLU:O	41:DT:8:LEU:N	2.51	0.42
43:DV:75:GLN:CB	43:DV:92:VAL:HG23	2.49	0.42
26:BE:77:ILE:HG13	26:BE:77:ILE:O	2.19	0.42
22:BA:2436:G:C2	22:BA:2437:G:C8	3.07	0.42
22:BA:471:A:H5''	26:BE:79:ARG:NH2	2.34	0.42
22:DA:1462:C:C2	22:DA:1463:C:C5	3.07	0.42
4:CD:142:VAL:CG1	4:CD:181:THR:OG1	2.67	0.42
1:AA:670:G:H2'	1:AA:671:G:O5'	2.18	0.42
1:CA:124:C:N4	1:CA:125:U:O4	2.52	0.42
1:CA:793:U:HO2'	1:CA:1516:G:C2'	2.29	0.42
22:BA:1535:A:H5'	22:BA:1536:C:C5	2.55	0.42
22:BA:164:C:H2'	22:BA:165:A:O4'	2.18	0.42
1:AA:83:C:H2'	1:AA:85:U:OP2	2.18	0.42
4:AD:157:ALA:O	4:AD:161:LEU:HD22	2.19	0.42
22:DA:109:C:H5'	22:DA:348:A:C4'	2.49	0.42
25:DD:109:VAL:CG1	25:DD:201:LEU:HD22	2.48	0.42
52:D4:7:VAL:HG13	52:D4:38:GLY:CA	2.49	0.42
24:BC:201:MET:HG3	24:BC:202:LEU:CD1	2.49	0.42
4:AD:167:LYS:O	4:AD:168:PRO:O	2.37	0.42
53:B5:208:THR:O	53:B5:209:PHE:CB	2.67	0.42
25:BD:119:ALA:HB2	25:BD:165:MET:HG2	2.00	0.42
22:BA:2:G:H2'	22:BA:3:U:C6	2.54	0.42
21:CU:26:ALA:O	21:CU:27:GLY:C	2.56	0.42
1:CA:108:G:C6	20:CT:10:ARG:HG2	2.54	0.42
1:CA:392:C:C2	1:CA:393:A:C8	3.07	0.42
22:BA:685:A:H1'	22:BA:688:U:O4	2.19	0.42
27:DF:110:ARG:CZ	27:DF:110:ARG:HB3	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:64:VAL:O	39:DR:65:ALA:HB2	2.19	0.42
1:AA:160:A:N6	1:AA:347:G:H1'	2.34	0.42
22:BA:1515:A:H2'	22:BA:1516:G:O4'	2.19	0.42
22:DA:597:G:C6	22:DA:598:U:C2	3.07	0.42
22:BA:1070:A:C2	22:BA:1097:U:O2'	2.68	0.42
22:DA:1264:A:N7	22:DA:1265:A:C5	2.87	0.42
22:DA:2013:A:N1	22:DA:2014:A:C2	2.87	0.42
22:DA:2587:A:H5''	22:DA:2588:G:OP2	2.20	0.42
22:DA:1361:G:C6	22:DA:1371:G:C2	3.07	0.42
22:DA:426:C:C4	22:DA:427:U:C5	3.07	0.42
22:BA:2727:A:C6	22:BA:2728:U:O4	2.72	0.42
41:DT:24:MET:HG2	41:DT:29:THR:O	2.19	0.42
8:AH:64:LYS:HB3	8:AH:71:VAL:HG21	2.01	0.42
22:DA:965:C:C4'	22:DA:2273:A:H1'	2.49	0.42
17:CQ:15:ASP:HA	17:CQ:21:ILE:HD12	2.01	0.42
1:AA:209:U:C4'	1:AA:210:C:OP2	2.64	0.42
6:CF:92:THR:HG22	6:CF:93:LYS:N	2.34	0.42
39:DR:80:ARG:C	39:DR:82:HIS:N	2.72	0.42
1:AA:1012:A:C2	1:AA:1018:G:N7	2.87	0.42
40:BS:28:LYS:O	40:BS:29:VAL:C	2.57	0.42
22:DA:1394:U:H3'	22:DA:1394:U:H6	1.84	0.42
1:CA:1179:A:H2'	1:CA:1180:A:O4'	2.19	0.42
1:AA:1359:C:P	14:AN:62:ASN:HD22	2.43	0.42
1:AA:959:A:N7	1:AA:960:U:C6	2.87	0.42
22:BA:2190:G:C2'	22:BA:2191:A:H5'	2.49	0.42
1:CA:552:U:N3	1:CA:553:A:N7	2.67	0.42
22:DA:1250:G:H4'	38:DQ:6:ARG:HD2	2.01	0.42
22:BA:1140:C:OP2	31:BJ:68:LYS:NZ	2.45	0.42
22:DA:1525:A:H2'	22:DA:1526:C:O4'	2.19	0.42
30:DI:54:PRO:O	30:DI:75:PRO:HD2	2.18	0.42
1:CA:6:G:H4'	1:CA:298:A:H4'	2.01	0.42
24:DC:17:VAL:N	24:DC:204:VAL:HG22	2.34	0.42
4:AD:97:ARG:HB3	4:AD:99:ASP:OD1	2.19	0.42
1:CA:978:A:P	1:CA:1362:A:N6	2.92	0.42
22:DA:249:C:P	22:DA:2394:C:O2'	2.77	0.42
1:CA:542:G:C2	1:CA:543:U:C6	3.08	0.42
26:DE:149:ILE:HG22	26:DE:186:VAL:HG12	2.00	0.42
27:BF:105:THR:HG23	27:BF:106:ILE:HG12	2.01	0.42
27:BF:3:LYS:HB3	27:BF:101:GLU:OE1	2.19	0.42
1:CA:158:G:C6	1:CA:164:G:C5	3.07	0.42
19:CS:66:MET:O	19:CS:68:GLY:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:959:A:C2	1:CA:1222:G:O4'	2.72	0.42
3:AC:141:ALA:O	3:AC:146:ALA:HB3	2.18	0.42
1:AA:1182:G:C3'	1:AA:1183:U:H5'	2.49	0.42
22:BA:2298:A:N6	22:BA:2318:G:H1'	2.34	0.42
22:DA:237:C:C4	22:DA:238:C:H5	2.36	0.42
22:DA:1857:G:N2	22:DA:1884:G:C4	2.87	0.42
33:BL:29:LYS:HB3	33:BL:30:THR:H	1.70	0.42
1:CA:519:C:C4	1:CA:520:A:C6	3.07	0.42
14:CN:31:ILE:N	14:CN:31:ILE:HD12	2.34	0.42
1:CA:405:U:OP2	4:CD:3:ARG:NH1	2.52	0.42
22:DA:1875:G:H2'	22:DA:1876:A:OP2	2.19	0.42
42:DU:49:VAL:HG13	42:DU:53:ASN:O	2.19	0.42
4:AD:188:ARG:O	4:AD:190:ASP:O	2.37	0.42
1:AA:760:G:C8	1:AA:761:G:C8	3.07	0.42
5:AE:39:VAL:HG22	5:AE:67:ALA:HB1	2.00	0.42
1:AA:812:G:OP1	1:AA:903:G:H1'	2.18	0.42
13:CM:22:ILE:HB	13:CM:25:VAL:HG12	2.00	0.42
22:DA:2098:U:C4	22:DA:2099:U:O4	2.72	0.42
22:BA:511:U:O4	22:BA:512:G:N1	2.52	0.42
1:CA:466:A:C2	1:CA:468:A:N7	2.88	0.42
1:AA:1418:A:N6	1:AA:1482:G:O2'	2.46	0.42
22:BA:102:U:C4	46:BY:2:LYS:HD2	2.55	0.42
1:CA:954:G:C2	1:CA:1228:C:N3	2.87	0.42
37:DP:114:LEU:HG	37:DP:114:LEU:O	2.20	0.42
4:AD:76:TYR:O	4:AD:77:LYS:C	2.57	0.42
22:BA:734:A:C5	22:BA:735:A:C8	3.07	0.42
1:AA:28:A:C6	1:AA:29:U:N3	2.87	0.42
3:CC:40:ARG:NH1	3:CC:55:ILE:HG13	2.34	0.42
22:BA:866:A:N7	22:BA:914:G:C6	2.88	0.42
1:AA:292:G:O2'	1:AA:608:A:N6	2.52	0.42
1:CA:671:G:C2	1:CA:672:U:C2	3.07	0.42
22:BA:418:C:H2'	22:BA:419:U:O4'	2.19	0.42
5:AE:115:LEU:HG	5:AE:120:VAL:HG21	2.01	0.42
1:AA:1264:U:O2	1:AA:1272:G:C2	2.71	0.42
53:B5:66:PRO:O	53:B5:190:ILE:CB	2.67	0.42
22:BA:1299:G:O2'	22:BA:1301:A:N7	2.50	0.42
22:BA:991:C:C2	22:BA:1185:G:N1	2.87	0.42
35:BN:77:ALA:O	35:BN:81:ASN:HB2	2.19	0.42
23:DB:90:C:H5'	34:DM:18:ARG:HG2	2.01	0.42
23:DB:96:G:O2'	23:DB:97:C:H5'	2.19	0.42
15:CO:67:LEU:O	15:CO:70:LEU:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2289:G:O2'	22:DA:2383:G:O2'	2.32	0.42
33:BL:26:GLY:C	33:BL:27:LEU:HD23	2.40	0.42
1:CA:1115:U:O2	1:CA:1186:G:C2	2.72	0.42
2:CB:25:PRO:O	2:CB:28:LYS:HB2	2.19	0.42
1:CA:297:G:N2	1:CA:300:A:OP2	2.47	0.42
19:AS:37:ARG:O	19:AS:70:LYS:HD2	2.18	0.42
22:BA:2500:U:O2	22:BA:2504:U:C4	2.72	0.42
1:CA:866:C:C4	1:CA:867:G:H1'	2.54	0.42
16:AP:53:ASP:OD1	16:AP:53:ASP:O	2.37	0.42
35:DN:47:VAL:O	35:DN:47:VAL:HG12	2.19	0.42
35:DN:2:ARG:CD	35:DN:2:ARG:O	2.68	0.42
30:BI:72:LYS:N	30:BI:72:LYS:CD	2.82	0.42
22:DA:1680:U:H2'	22:DA:1681:G:O4'	2.19	0.42
9:CI:47:VAL:O	9:CI:80:ARG:HG3	2.19	0.42
22:BA:1064:C:H4'	30:BI:90:SER:CB	2.48	0.42
22:DA:1267:U:C5	22:DA:2012:G:N2	2.88	0.42
2:AB:20:THR:O	2:AB:21:ARG:NH2	2.53	0.42
22:DA:1355:G:N1	22:DA:1356:G:C8	2.88	0.42
22:DA:1361:G:N3	22:DA:1362:C:C6	2.87	0.42
22:DA:1298:C:N4	22:DA:1299:G:C6	2.87	0.42
1:CA:270:A:H2'	1:CA:271:C:C6	2.54	0.42
3:AC:85:GLU:O	3:AC:87:LEU:N	2.52	0.42
22:DA:1553:A:N7	22:DA:1555:G:C5	2.87	0.42
22:BA:2748:A:C2	22:BA:2757:A:C4	3.07	0.42
1:CA:1000:A:N3	1:CA:1041:G:N2	2.67	0.42
1:CA:244:U:O4	1:CA:906:A:H1'	2.18	0.42
6:CF:3:HIS:O	6:CF:92:THR:HA	2.19	0.42
22:DA:2225:A:H1'	22:DA:2226:C:OP2	2.20	0.42
11:AK:35:THR:CG2	11:AK:39:GLY:HA2	2.49	0.42
22:BA:476:G:C2	22:BA:479:A:C8	3.07	0.42
1:CA:1144:G:N2	1:CA:1145:A:C2	2.87	0.42
22:BA:1353:A:C8	22:BA:1378:A:N6	2.88	0.42
13:AM:6:GLY:C	13:AM:8:ASN:N	2.70	0.42
5:AE:94:VAL:HG21	5:AE:140:THR:HG22	2.00	0.42
1:CA:456:A:H2'	1:CA:457:G:O4'	2.19	0.42
1:CA:1362:A:C4'	1:CA:1362:A:OP1	2.67	0.42
22:BA:301:G:C6	22:BA:317:G:C6	3.07	0.42
23:BB:116:G:C4'	36:BO:54:VAL:HG13	2.46	0.42
2:CB:21:ARG:HA	2:CB:21:ARG:NE	2.32	0.42
22:DA:1607:C:H4'	22:DA:1608:A:C5'	2.49	0.42
22:DA:2393:U:H2'	22:DA:2394:C:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1277:G:C5'	35:BN:20:MET:CE	2.97	0.42
22:BA:644:A:H5''	22:BA:645:C:OP2	2.18	0.42
37:BP:103:ARG:HG2	37:BP:103:ARG:HH11	1.83	0.42
22:BA:1449:G:C6	22:BA:1450:G:N7	2.88	0.42
39:BR:2:TYR:HA	39:BR:14:VAL:O	2.20	0.42
1:AA:1538:C:O2'	1:AA:1539:C:H5'	2.19	0.42
21:CU:14:VAL:CG1	21:CU:15:ALA:N	2.82	0.42
24:BC:75:PRO:HA	24:BC:117:GLN:HG2	2.00	0.42
22:BA:1847:A:C8	22:BA:1847:A:OP2	2.73	0.42
22:BA:1738:G:HO2'	22:BA:1739:A:P	2.43	0.42
1:CA:189:A:N7	1:CA:190:A:C5	2.88	0.42
22:BA:122:G:H2'	22:BA:123:G:O4'	2.19	0.42
1:CA:623:C:C4	1:CA:624:C:C5	3.07	0.42
1:AA:457:G:H2'	1:AA:457:G:N3	2.34	0.42
8:AH:78:VAL:HG11	8:AH:125:ILE:HD11	2.00	0.42
22:DA:927:A:H2'	22:DA:928:A:O4'	2.19	0.42
6:AF:99:ALA:O	6:AF:100:SER:CB	2.67	0.42
46:DY:29:ARG:C	46:DY:31:GLN:H	2.22	0.42
30:BI:16:GLY:CA	30:BI:51:LYS:HB3	2.49	0.42
14:CN:87:ALA:HB1	14:CN:92:GLU:CB	2.49	0.42
1:CA:853:C:C2	1:CA:854:U:C6	3.06	0.42
40:BS:109:ASP:O	40:BS:110:ARG:O	2.37	0.42
22:DA:1858:A:C6	22:DA:1859:U:N3	2.87	0.42
30:DI:46:THR:HG22	30:DI:51:LYS:HG3	2.01	0.42
22:DA:121:G:N2	22:DA:131:A:C4	2.88	0.42
43:DV:80:HIS:CG	43:DV:81:PRO:HD2	2.55	0.42
13:CM:4:ILE:HG22	13:CM:53:ILE:CG2	2.48	0.42
1:CA:1087:G:N2	1:CA:1099:G:H1'	2.35	0.42
42:BU:39:ILE:HG22	42:BU:40:ASN:N	2.34	0.42
22:BA:1805:A:N3	24:BC:50:THR:HB	2.33	0.42
1:AA:939:G:C2	1:AA:940:C:C2	3.07	0.42
1:AA:172:A:C5	1:AA:174:A:C8	3.08	0.42
22:BA:2214:C:H2'	22:BA:2215:C:O4'	2.19	0.42
52:B4:10:LEU:N	52:B4:14:CYS:SG	2.80	0.42
22:DA:538:A:H5''	31:DJ:7:LYS:NZ	2.35	0.42
22:DA:110:G:N2	22:DA:111:A:H1'	2.35	0.42
23:DB:94:A:C2'	23:DB:95:U:H5'	2.49	0.42
22:BA:1283:G:N1	22:BA:1286:A:OP2	2.53	0.42
25:DD:14:ILE:HG12	25:DD:24:VAL:HG21	2.01	0.42
28:BG:96:ALA:HB2	28:BG:105:LEU:HD23	2.02	0.42
16:CP:42:ILE:O	16:CP:43:ALA:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:12:VAL:HG12	49:B1:13:SER:N	2.34	0.42
22:DA:2096:C:H2'	22:DA:2097:A:C8	2.54	0.42
35:DN:76:VAL:HA	35:DN:79:LEU:HD12	2.01	0.42
1:CA:662:U:H2'	1:CA:663:A:C8	2.55	0.42
35:BN:36:THR:HG23	35:BN:37:THR:O	2.19	0.42
11:CK:116:ILE:O	11:CK:116:ILE:HG22	2.19	0.42
20:CT:84:ASN:O	20:CT:84:ASN:ND2	2.53	0.42
22:BA:996:A:C5	22:BA:1160:G:C2	3.08	0.42
22:DA:2056:G:N2	22:DA:2057:G:C1'	2.83	0.42
13:AM:45:ILE:HG13	13:AM:48:LEU:HD13	2.01	0.42
40:DS:29:VAL:HG22	40:DS:71:VAL:HG22	2.01	0.42
1:AA:1270:G:O3'	1:AA:1314:C:H5'	2.19	0.42
31:DJ:42:ALA:C	31:DJ:44:TYR:H	2.23	0.42
35:DN:103:ARG:HB2	35:DN:110:MET:HE3	2.02	0.42
18:CR:57:ARG:HG2	18:CR:58:ALA:N	2.34	0.42
22:DA:1140:C:O4'	22:DA:1143:A:C2	2.72	0.42
22:DA:1973:G:O6	22:DA:1974:C:N4	2.52	0.42
22:DA:116:C:H4'	22:DA:127:A:H5'	2.02	0.42
22:BA:2271:G:H2'	22:BA:2272:U:C6	2.55	0.42
22:DA:2119:A:N1	22:DA:2169:A:H2'	2.34	0.42
2:CB:86:SER:O	2:CB:87:CYS:O	2.36	0.42
1:AA:1359:C:H2'	1:AA:1361:G:OP2	2.20	0.42
1:AA:694:A:N1	1:AA:787:A:O2'	2.52	0.42
22:BA:464:U:C5	22:BA:788:A:C4	3.08	0.42
1:CA:1317:C:C4	14:CN:53:ARG:HD2	2.54	0.42
42:BU:97:LYS:O	42:BU:98:SER:CB	2.67	0.42
22:DA:2836:U:H2'	22:DA:2837:A:C8	2.54	0.42
22:BA:141:G:C6	41:BT:1:MET:HE1	2.54	0.42
22:BA:1439:A:C2	22:BA:1553:A:C6	3.07	0.42
19:CS:44:MET:HE1	19:CS:71:LEU:HD21	2.00	0.42
22:DA:1027:A:C5	22:DA:1126:A:N3	2.88	0.42
10:AJ:80:THR:C	10:AJ:82:LYS:H	2.22	0.42
11:AK:16:VAL:HG13	11:AK:17:SER:H	1.84	0.42
3:CC:141:ALA:O	3:CC:146:ALA:HB3	2.18	0.42
25:DD:105:LYS:O	25:DD:177:VAL:CG1	2.68	0.42
11:CK:127:ARG:O	21:CU:34:ARG:NH1	2.40	0.42
24:BC:237:GLY:HA3	57:BC:407:HOH:O	2.19	0.42
20:CT:69:LYS:HD2	20:CT:70:ASN:OD1	2.19	0.42
7:CG:130:ASN:HA	7:CG:135:VAL:HG11	2.00	0.42
38:BQ:25:TYR:O	38:BQ:26:GLY:C	2.57	0.42
22:DA:2741:A:C2'	22:DA:2742:G:H5'	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:11:PRO:C	21:CU:12:PHE:CG	2.93	0.42
50:D2:9:VAL:O	50:D2:10:LEU:C	2.58	0.42
22:DA:230:G:N3	22:DA:231:A:C8	2.88	0.42
1:AA:328:C:C2'	1:AA:328:C:O2	2.68	0.42
22:DA:1121:C:N3	22:DA:1122:G:C8	2.88	0.42
17:CQ:46:VAL:HG11	17:CQ:61:ILE:CG1	2.49	0.42
22:DA:308:G:C2	22:DA:309:A:N3	2.86	0.42
46:BY:22:LEU:O	46:BY:23:ARG:O	2.37	0.42
1:AA:764:C:O2'	1:AA:765:G:H5'	2.19	0.42
20:CT:58:VAL:CG1	20:CT:72:ALA:HB1	2.49	0.42
4:CD:145:ILE:HG22	4:CD:146:ARG:O	2.19	0.42
53:B5:23:ILE:HG22	53:B5:23:ILE:O	2.20	0.42
25:DD:127:PHE:CZ	25:DD:160:LYS:HD2	2.54	0.42
7:AG:91:VAL:O	7:AG:96:ARG:NH2	2.53	0.42
22:DA:2038:G:C5	22:DA:2039:U:C5	3.07	0.42
7:AG:49:THR:O	7:AG:53:ARG:HB2	2.18	0.42
22:BA:2674:G:H4'	32:BK:30:ARG:HD2	2.02	0.42
30:DI:19:ASN:OD1	30:DI:35:ILE:HG22	2.18	0.42
22:BA:2315:G:H2'	22:BA:2316:G:H8	1.83	0.42
27:BF:95:ARG:HA	27:BF:98:GLU:HB2	2.02	0.42
22:BA:189:G:H2'	22:BA:205:G:N2	2.35	0.42
1:AA:1468:A:O2'	1:AA:1469:C:H5'	2.19	0.42
22:DA:1835:G:C2	22:DA:1836:C:C6	3.08	0.42
22:DA:1835:G:N3	22:DA:1836:C:C6	2.87	0.42
25:DD:3:GLY:C	25:DD:82:PHE:CE1	2.93	0.42
34:DM:67:VAL:CG1	34:DM:100:LYS:HD2	2.50	0.42
20:AT:79:LEU:O	20:AT:82:GLN:HB2	2.19	0.42
24:BC:78:VAL:HG21	24:BC:110:LEU:CD2	2.49	0.42
3:CC:147:LYS:HB2	3:CC:203:PHE:CD2	2.54	0.42
18:AR:71:THR:OG1	18:AR:73:ARG:N	2.50	0.42
24:DC:228:VAL:HG13	24:DC:229:ASP:N	2.34	0.42
1:CA:57:G:H2'	1:CA:58:C:C6	2.55	0.42
41:BT:44:LYS:HG3	41:BT:55:VAL:CG1	2.50	0.42
22:BA:82:U:H2'	22:BA:83:A:O4'	2.19	0.42
22:BA:1447:C:H1'	22:BA:1545:A:H1'	2.01	0.42
7:CG:40:GLU:HA	7:CG:43:VAL:HB	2.01	0.42
34:DM:62:LYS:HD3	34:DM:64:TRP:CZ2	2.55	0.42
33:DL:120:VAL:CG1	33:DL:121:THR:N	2.83	0.42
22:DA:2366:A:H2'	22:DA:2367:G:H5'	2.01	0.42
26:BE:141:MET:O	26:BE:142:ALA:HB3	2.19	0.42
37:DP:46:VAL:HG12	37:DP:47:VAL:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:25:LEU:HD12	32:BK:38:ILE:HG22	2.01	0.42
1:CA:47:C:H4'	1:CA:48:C:OP1	2.20	0.42
22:DA:822:G:O6	22:DA:943:A:H2	2.03	0.42
37:DP:26:VAL:CG1	37:DP:28:VAL:HG22	2.49	0.42
12:CL:30:LYS:O	12:CL:81:LEU:HD12	2.19	0.42
22:BA:1122:G:H2'	22:BA:1122:G:N3	2.33	0.42
31:BJ:53:TYR:CD1	31:BJ:121:LYS:HB3	2.55	0.42
22:DA:2776:A:O4'	22:DA:2778:A:C8	2.72	0.42
22:DA:1744:A:C5	22:DA:1745:A:C5	3.07	0.42
35:BN:116:VAL:O	35:BN:116:VAL:HG13	2.19	0.42
46:BY:7:ARG:HG3	46:BY:7:ARG:O	2.20	0.42
22:BA:196:A:H2'	22:BA:196:A:N3	2.34	0.42
10:AJ:67:ILE:HG22	10:AJ:67:ILE:O	2.19	0.42
22:DA:1946:U:H2'	22:DA:1947:C:C6	2.54	0.42
1:AA:1178:G:C8	9:AI:99:ARG:NH2	2.87	0.42
22:BA:1692:U:H2'	22:BA:1694:C:C5	2.54	0.42
22:DA:2714:G:C5	22:DA:2715:C:C5	3.07	0.42
33:BL:78:ARG:HG2	33:BL:113:ALA:HB3	2.02	0.42
5:CE:122:ASN:ND2	5:CE:123:VAL:N	2.68	0.42
22:DA:2452:C:C4	22:DA:2453:A:C6	3.07	0.42
22:BA:1091:G:H2'	22:BA:1092:C:C6	2.54	0.42
22:DA:747:U:C4'	40:DS:92:ARG:NH1	2.82	0.42
22:DA:770:G:C2	22:DA:771:G:C8	3.08	0.42
22:DA:332:A:HO2'	22:DA:334:C:P	2.35	0.42
22:DA:2879:A:H8	22:DA:2881:U:O4	2.03	0.42
35:DN:87:PHE:O	35:DN:88:ALA:C	2.58	0.42
9:AI:84:THR:HG21	9:AI:103:PHE:HB3	2.00	0.42
22:DA:972:A:C6	22:DA:973:A:C6	3.08	0.42
32:DK:105:ARG:NH1	32:DK:122:VAL:O	2.53	0.42
22:DA:117:G:C2	22:DA:119:A:N6	2.87	0.42
22:BA:278:A:N1	22:BA:362:A:C8	2.87	0.42
22:DA:1603:A:P	22:DA:1604:C:OP2	2.77	0.42
1:AA:466:A:H5'	1:AA:467:U:OP2	2.19	0.42
27:BF:92:ARG:CA	27:BF:96:MET:HB2	2.49	0.42
22:BA:2553:G:C5'	22:BA:2554:U:OP2	2.67	0.42
4:AD:173:VAL:HG13	4:AD:174:ASP:N	2.34	0.42
4:AD:123:ILE:CD1	4:AD:123:ILE:N	2.83	0.42
22:DA:2409:G:C6	22:DA:2410:G:C6	3.07	0.42
22:DA:1310:G:N2	22:DA:1605:C:C2	2.88	0.42
22:DA:201:C:C5	22:DA:202:U:C5	3.08	0.42
2:AB:176:ALA:CB	2:AB:183:VAL:CG2	2.97	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2306:C:C5	22:DA:2307:G:C8	3.08	0.42
8:AH:10:MET:O	8:AH:11:LEU:C	2.57	0.42
11:CK:126:LYS:O	11:CK:127:ARG:CB	2.68	0.42
22:DA:1793:C:H5''	22:DA:1794:A:OP2	2.19	0.42
22:BA:1449:G:C2	22:BA:1450:G:C8	3.07	0.42
5:AE:72:ILE:CD1	5:AE:145:GLU:OE2	2.67	0.42
2:AB:118:GLU:O	2:AB:121:SER:HB3	2.19	0.42
49:B1:29:THR:O	49:B1:31:PRO:HD2	2.20	0.42
22:DA:2521:C:C2	22:DA:2545:G:N2	2.88	0.42
1:AA:1521:C:C2	1:AA:1522:U:C6	3.08	0.42
1:AA:702:A:N6	22:BA:1846:G:HO2'	2.17	0.42
22:DA:2233:U:H2'	22:DA:2234:G:C8	2.54	0.42
1:AA:19:A:C2	1:AA:917:G:C4	3.07	0.42
15:AO:87:LEU:N	15:AO:87:LEU:HD23	2.34	0.42
1:CA:756:C:N3	1:CA:757:U:C6	2.88	0.42
8:CH:104:VAL:HA	8:CH:126:ILE:HD12	2.01	0.42
46:BY:9:LYS:O	46:BY:12:GLU:HB2	2.20	0.42
18:AR:25:ASP:O	18:AR:26:ILE:C	2.58	0.42
6:CF:18:VAL:HB	6:CF:19:PRO:HD3	2.01	0.42
30:DI:24:VAL:CG2	30:DI:28:LEU:HD23	2.50	0.42
30:DI:28:LEU:HD11	30:DI:35:ILE:HD12	2.01	0.42
40:DS:59:GLU:HG2	40:DS:64:ALA:HA	2.01	0.42
33:DL:29:LYS:C	33:DL:30:THR:HG23	2.39	0.42
2:CB:62:SER:C	2:CB:64:LYS:N	2.73	0.42
22:BA:2199:A:N7	22:BA:2200:C:C5	2.87	0.42
45:BX:68:LEU:HD22	45:BX:78:TYR:CD1	2.55	0.42
22:DA:1519:G:H3'	22:DA:1520:U:C6	2.53	0.42
1:CA:135:C:O2	16:CP:1:MET:CB	2.68	0.42
1:AA:223:A:C6	1:AA:224:U:O4	2.72	0.42
1:AA:22:G:H4'	1:AA:885:G:C8	2.55	0.42
22:BA:2665:A:C2	22:BA:2666:C:C2	3.08	0.42
15:AO:85:LEU:HD13	15:AO:85:LEU:HA	1.83	0.42
22:DA:282:A:H2'	22:DA:283:G:C8	2.54	0.42
22:BA:1812:U:H2'	22:BA:1813:G:H8	1.84	0.42
22:BA:548:G:O2'	22:BA:549:G:N1	2.52	0.42
35:DN:34:ILE:HD11	35:DN:44:LEU:CD2	2.50	0.42
41:BT:40:LYS:HD3	41:BT:58:VAL:O	2.19	0.42
2:AB:32:PHE:O	2:AB:32:PHE:CG	2.72	0.42
25:DD:113:SER:O	25:DD:167:ASN:HA	2.19	0.42
22:DA:606:U:O2'	26:DE:95:LYS:NZ	2.52	0.42
29:BH:45:GLU:C	29:BH:47:PHE:N	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1500:G:C6	22:DA:1501:G:N7	2.87	0.42
30:DI:73:THR:HG21	30:DI:113:LYS:HE3	2.01	0.42
22:BA:1197:G:H2'	22:BA:1198:U:C6	2.55	0.42
1:CA:1300:G:C6	1:CA:1335:U:C5	3.07	0.42
45:DX:65:ASP:O	45:DX:66:THR:C	2.57	0.42
36:DO:74:VAL:HG12	36:DO:106:LEU:HD11	2.01	0.42
5:AE:30:ILE:HD11	5:AE:54:ARG:NH1	2.34	0.42
15:AO:32:LEU:O	15:AO:33:THR:C	2.58	0.42
39:DR:7:SER:O	39:DR:9:GLY:N	2.47	0.42
22:DA:2685:G:C4	22:DA:2686:G:C8	3.07	0.42
1:CA:532:A:N6	3:CC:192:THR:OG1	2.53	0.42
2:CB:131:LYS:HE2	2:CB:131:LYS:HA	2.02	0.42
12:CL:108:LYS:O	12:CL:109:ASP:HB2	2.20	0.42
34:DM:33:LEU:HB2	34:DM:117:PHE:CD2	2.54	0.42
1:AA:628:G:H2'	1:AA:629:A:O4'	2.20	0.42
32:DK:62:VAL:HG11	32:DK:65:THR:CG2	2.48	0.42
1:AA:1241:G:C2	1:AA:1242:G:C5	3.08	0.42
22:BA:998:C:P	38:BQ:92:ARG:NH2	2.92	0.42
5:CE:122:ASN:ND2	5:CE:123:VAL:H	2.17	0.42
22:DA:2446:G:H3'	22:DA:2447:G:H5''	2.01	0.42
1:CA:411:A:C6	1:CA:429:U:C4	3.07	0.42
22:DA:618:G:N2	22:DA:619:G:H1'	2.35	0.42
22:BA:1177:G:H2'	22:BA:1178:C:O4'	2.20	0.42
22:DA:790:U:C4	22:DA:794:A:O2'	2.73	0.42
1:CA:1036:A:H3'	1:CA:1037:C:C6	2.54	0.42
1:AA:651:C:H2'	1:AA:652:U:O5'	2.20	0.42
1:CA:72:A:N6	1:CA:73:C:H42	2.18	0.42
1:AA:1277:C:O2'	1:AA:1279:G:H8	1.99	0.42
1:CA:1175:G:O6	1:CA:1182:G:O6	2.37	0.42
1:AA:251:G:H4'	1:AA:252:U:O5'	2.20	0.42
22:BA:2394:C:P	51:B3:30:ARG:HH21	2.43	0.42
27:BF:158:THR:CG2	27:BF:160:ALA:CB	2.98	0.42
22:DA:503:A:N6	22:DA:505:A:N6	2.67	0.42
31:BJ:64:VAL:HG11	31:BJ:68:LYS:HB2	2.01	0.42
22:DA:864:G:C6	22:DA:865:C:C4	3.07	0.42
23:BB:90:C:H2'	23:BB:91:C:O4'	2.20	0.42
4:CD:53:VAL:CG2	4:CD:54:GLN:N	2.82	0.42
22:DA:2322:A:C5	22:DA:2323:G:C5	3.07	0.42
27:DF:122:PHE:CE1	27:DF:166:GLY:CA	3.02	0.42
22:BA:301:G:H1'	22:BA:302:C:C6	2.55	0.42
5:CE:57:PRO:O	5:CE:60:ILE:HG13	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:119:ALA:HB2	27:BF:177:PHE:CD2	2.54	0.42
29:BH:114:GLU:CB	29:BH:133:GLN:O	2.66	0.42
22:DA:2305:U:O4'	27:DF:131:GLY:HA3	2.18	0.42
12:AL:21:VAL:O	12:AL:21:VAL:HG13	2.20	0.42
8:AH:7:ILE:O	8:AH:11:LEU:HG	2.20	0.42
1:CA:1349:A:OP1	9:CI:123:ARG:N	2.52	0.42
10:AJ:34:ALA:O	10:AJ:35:GLN:HB3	2.19	0.42
24:BC:7:LYS:HB3	24:BC:8:PRO:HD2	2.02	0.42
1:CA:1139:G:O6	1:CA:1143:G:N2	2.52	0.42
6:CF:64:VAL:HG12	6:CF:65:GLU:H	1.85	0.42
4:CD:198:HIS:CE1	4:CD:199:LEU:CD2	3.03	0.42
22:DA:1869:G:C2	22:DA:1873:G:C6	3.07	0.42
22:BA:1564:C:O2'	22:BA:1565:C:H5'	2.20	0.42
2:AB:35:ARG:HB3	2:AB:40:ILE:HD11	1.99	0.42
21:CU:14:VAL:O	21:CU:16:LEU:CG	2.66	0.42
42:DU:13:VAL:CG2	42:DU:39:ILE:HG21	2.50	0.42
4:CD:4:TYR:CZ	4:CD:6:GLY:HA3	2.54	0.42
22:BA:1730:C:H4'	22:BA:1730:C:OP1	2.19	0.42
9:AI:63:LEU:N	9:AI:63:LEU:CD2	2.82	0.42
1:AA:340:U:N3	1:AA:341:C:C5	2.88	0.42
11:AK:55:SER:O	11:AK:57:LYS:N	2.52	0.42
1:AA:764:C:C2'	1:AA:765:G:H5'	2.49	0.42
6:CF:86:ARG:HD3	18:CR:64:TYR:CE1	2.54	0.42
27:DF:77:PHE:C	27:DF:78:LYS:HG3	2.40	0.42
1:AA:575:G:C6	1:AA:821:G:C8	3.07	0.42
22:BA:26:G:H1'	22:BA:514:A:H61	1.83	0.42
36:BO:28:VAL:CG2	36:BO:29:HIS:N	2.83	0.42
22:BA:2015:A:C6	48:B0:3:VAL:HG23	2.54	0.42
19:AS:15:LEU:CD1	19:AS:33:THR:HG21	2.50	0.42
22:DA:2736:A:C2	22:DA:2737:G:C8	3.08	0.42
1:AA:1317:C:H2'	1:AA:1318:A:H5'	2.02	0.42
14:CN:46:LEU:HD23	19:CS:10:PHE:HB2	2.02	0.42
1:CA:833:G:O2'	1:CA:834:U:H5'	2.19	0.42
1:CA:689:C:H2'	1:CA:690:G:O4'	2.19	0.42
49:D1:19:HIS:CD2	49:D1:49:TYR:OH	2.72	0.42
13:CM:45:ILE:O	13:CM:45:ILE:HG22	2.20	0.42
1:CA:445:G:C2	1:CA:490:C:C2	3.07	0.42
22:BA:2020:A:H5'	48:B0:9:THR:HG22	2.01	0.42
22:BA:773:U:H5'	24:BC:47:GLY:HA3	2.01	0.42
22:DA:87:U:O2	46:DY:44:LYS:NZ	2.48	0.42
1:AA:363:A:O2'	1:AA:364:A:H5'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2660:A:H2'	22:BA:2661:G:O4'	2.18	0.42
40:BS:19:LEU:HB3	48:B0:22:LEU:HD11	2.02	0.42
22:BA:2208:C:O2'	22:BA:2209:G:H5'	2.20	0.42
31:BJ:38:GLY:O	31:BJ:44:TYR:HB2	2.20	0.42
3:AC:47:LEU:HB3	3:AC:50:ALA:HB3	2.00	0.42
22:DA:2560:A:H2'	22:DA:2561:U:O4'	2.19	0.42
1:CA:41:G:H2'	1:CA:42:G:C8	2.55	0.42
22:BA:2236:U:H2'	22:BA:2237:G:O4'	2.20	0.42
35:DN:52:ILE:HD12	35:DN:94:TYR:HB2	2.02	0.42
24:DC:166:ALA:HB3	24:DC:173:THR:HB	1.99	0.42
29:DH:69:ALA:HB2	29:DH:138:VAL:HG12	2.02	0.42
22:DA:2861:U:C2	22:DA:2862:G:C8	3.07	0.42
9:CI:130:ARG:HA	9:CI:130:ARG:HD2	1.82	0.42
1:CA:899:C:OP1	1:CA:899:C:H6	2.02	0.42
12:AL:18:LYS:HG3	12:AL:18:LYS:O	2.19	0.42
16:AP:76:LYS:O	16:AP:76:LYS:HG3	2.20	0.42
36:DO:88:LYS:HE3	36:DO:88:LYS:HA	2.02	0.42
26:BE:54:GLY:O	26:BE:74:LYS:HE2	2.20	0.42
23:BB:97:C:H2'	23:BB:98:G:H5'	2.02	0.42
41:DT:65:GLY:O	41:DT:66:LYS:C	2.57	0.42
22:DA:2702:G:N7	22:DA:2703:C:C5	2.87	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:BA:637:A:OP1	33:BL:130:GLY:HA3	2.20	0.42
37:BP:53:ARG:HG3	37:BP:53:ARG:HH11	1.82	0.42
22:DA:2057:G:P	57:DA:3665:HOH:O	2.77	0.42
29:DH:41:LYS:HE2	29:DH:44:ILE:CD1	2.50	0.42
1:CA:408:A:H2'	1:CA:409:U:O4'	2.19	0.42
22:BA:1927:A:H2'	22:BA:1928:A:C8	2.54	0.42
22:BA:2727:A:H2'	22:BA:2728:U:H5'	2.01	0.42
28:DG:155:GLU:OE1	28:DG:158:LYS:HG3	2.20	0.42
35:DN:108:ALA:HB3	35:DN:110:MET:HE3	2.02	0.42
22:DA:84:A:C2	22:DA:103:A:C5	3.08	0.42
1:CA:210:C:OP1	1:CA:211:G:OP1	2.37	0.42
11:CK:15:GLN:OE1	11:CK:17:SER:N	2.53	0.42
12:CL:110:ARG:NE	12:CL:117:TYR:CD2	2.88	0.42
49:B1:25:LYS:HE3	49:B1:30:LYS:O	2.20	0.42
1:AA:1100:C:O2'	1:AA:1102:A:OP1	2.32	0.42
13:CM:14:HIS:HB2	13:CM:17:ILE:HD12	2.01	0.42
2:CB:217:VAL:O	2:CB:220:THR:HG22	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:350:G:O2'	1:AA:351:G:H5'	2.20	0.42
1:CA:1377:A:C4	7:CG:7:ILE:HD11	2.54	0.42
22:DA:1714:U:O5'	22:DA:1715:G:H5'	2.19	0.42
1:AA:844:G:H2'	1:AA:845:A:H5''	2.02	0.42
22:DA:77:G:H2'	22:DA:78:U:O4'	2.19	0.42
2:AB:148:LEU:HD22	2:AB:148:LEU:HA	1.92	0.42
11:AK:102:ALA:C	11:AK:104:GLY:N	2.73	0.42
1:CA:509:A:N3	1:CA:543:U:O2'	2.46	0.42
1:CA:927:G:OP2	1:CA:927:G:H4'	2.20	0.42
22:BA:136:G:O5'	22:BA:136:G:H8	2.03	0.42
41:BT:2:ILE:HA	41:BT:3:ARG:CB	2.47	0.42
27:BF:108:VAL:HG13	27:BF:114:PHE:CZ	2.54	0.42
10:AJ:86:ALA:O	10:AJ:90:LEU:HB2	2.20	0.42
25:DD:187:LEU:HD21	25:DD:203:VAL:HG11	2.01	0.42
24:DC:82:GLU:OE1	24:DC:103:TYR:OH	2.31	0.42
2:AB:186:ILE:HD11	2:AB:204:ASP:CB	2.50	0.42
22:BA:875:G:C2'	22:BA:876:C:H5'	2.49	0.42
1:AA:1151:A:C4	1:AA:1152:A:C8	3.08	0.42
1:CA:1286:U:O2	1:CA:1286:U:H2'	2.18	0.42
1:AA:244:U:O4	1:AA:906:A:H1'	2.19	0.42
1:AA:19:A:H1'	1:AA:917:G:N2	2.34	0.42
22:DA:7:G:HO2'	31:DJ:15:TRP:HZ2	1.64	0.42
15:AO:87:LEU:O	15:AO:88:ARG:HB2	2.19	0.42
22:DA:2371:G:C2	22:DA:2372:U:C5	3.07	0.42
1:CA:994:A:C2	1:CA:995:C:C1'	3.02	0.42
2:CB:71:GLY:HA3	2:CB:164:ILE:CG2	2.50	0.42
1:AA:596:A:N6	1:AA:645:G:N1	2.68	0.42
3:CC:75:ILE:CG1	3:CC:75:ILE:O	2.68	0.42
22:DA:1838:C:H4'	22:DA:1839:G:H8	1.85	0.42
11:AK:52:PHE:O	11:AK:57:LYS:HB3	2.20	0.42
1:CA:1261:A:C6	1:CA:1275:A:C4	3.08	0.42
5:CE:126:LYS:HA	5:CE:126:LYS:CE	2.49	0.42
22:DA:927:A:C2	47:DZ:43:ALA:HB1	2.55	0.42
22:DA:1562:U:C4	22:DA:1563:U:C4	3.07	0.42
22:DA:2718:G:O2'	37:DP:96:LYS:HG3	2.20	0.42
9:AI:6:TYR:HB2	9:AI:89:GLU:OE2	2.19	0.42
22:DA:1663:G:C6	22:DA:1992:G:C8	3.08	0.42
1:AA:616:G:C2'	1:AA:617:G:H5'	2.50	0.42
22:DA:1824:G:O3'	24:DC:247:PRO:CD	2.67	0.42
9:AI:30:ILE:CG2	9:AI:65:ILE:HD11	2.50	0.42
22:DA:1262:A:N1	22:DA:1263:U:O2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1263:U:C4'	48:D0:7:LYS:HE3	2.49	0.42
22:DA:563:A:C6	22:DA:2018:G:C4	3.08	0.42
27:DF:117:LEU:O	27:DF:118:SER:C	2.57	0.42
1:AA:1033:G:O2'	1:AA:1034:G:H5'	2.19	0.42
29:DH:72:ILE:O	29:DH:72:ILE:CG2	2.67	0.42
1:CA:609:A:C5	1:CA:610:U:C6	3.07	0.42
11:CK:77:TYR:O	11:CK:78:GLY:C	2.58	0.42
22:DA:2461:A:H1'	22:DA:2492:U:N3	2.35	0.42
1:CA:1291:U:H4'	9:CI:42:GLU:HG2	2.01	0.42
22:DA:2735:G:H2'	22:DA:2736:A:H8	1.84	0.42
30:BI:101:ILE:HD11	30:BI:138:LEU:HD13	2.01	0.42
30:BI:101:ILE:HG22	30:BI:102:SER:N	2.35	0.42
22:DA:656:G:O2'	22:DA:657:U:H5'	2.20	0.42
22:BA:2805:C:C4	22:BA:2806:C:C4	3.07	0.42
22:BA:1366:A:C6	22:BA:1367:A:C4	3.08	0.42
31:DJ:6:ALA:O	31:DJ:7:LYS:CB	2.68	0.42
41:DT:39:THR:HG23	41:DT:42:GLU:HB2	2.02	0.42
22:BA:1299:G:H8	22:BA:1299:G:O5'	2.03	0.42
22:BA:451:U:C2	22:BA:453:A:N7	2.88	0.42
22:DA:717:C:N4	22:DA:718:A:C2	2.87	0.42
3:CC:179:ARG:HD2	3:CC:179:ARG:C	2.40	0.42
7:CG:43:VAL:HG12	7:CG:44:TYR:CD1	2.55	0.42
22:BA:959:A:N1	22:BA:960:A:C2	2.87	0.42
22:DA:233:A:C2	22:DA:234:U:H1'	2.54	0.42
34:BM:4:PRO:HB2	34:BM:7:THR:CG2	2.49	0.42
22:BA:1539:U:H2'	22:BA:1540:G:C8	2.53	0.42
24:DC:130:LEU:HD11	24:DC:135:ILE:HG12	2.02	0.42
22:DA:941:A:O2'	22:DA:1190:G:O3'	2.37	0.42
34:DM:22:GLN:O	34:DM:24:THR:N	2.53	0.42
22:DA:572:A:H5''	22:DA:573:U:OP2	2.19	0.42
10:AJ:87:LEU:HD13	10:AJ:88:MET:N	2.34	0.42
22:DA:660:C:H5''	26:DE:94:GLN:OE1	2.20	0.42
31:BJ:70:THR:OG1	31:BJ:71:ASP:OD2	2.35	0.42
22:BA:80:G:N2	22:BA:81:G:H1'	2.35	0.42
26:DE:129:PRO:HG3	26:DE:156:ASN:OD1	2.20	0.42
41:BT:71:GLY:O	41:BT:73:ARG:N	2.52	0.42
34:BM:68:PHE:CD2	34:BM:68:PHE:C	2.93	0.42
22:BA:158:U:O2	22:BA:158:U:H2'	2.18	0.42
1:CA:599:C:H4'	8:CH:122:GLY:C	2.40	0.42
51:B3:7:VAL:HB	51:B3:61:CYS:HB3	2.00	0.42
40:DS:76:VAL:HG13	40:DS:103:ILE:HG12	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:68:C:H2'	23:DB:69:G:O4'	2.19	0.42
27:DF:174:ASP:O	27:DF:175:PHE:O	2.37	0.42
5:CE:157:ARG:C	5:CE:159:LYS:N	2.72	0.42
33:BL:53:GLY:O	33:BL:54:GLN:C	2.58	0.42
2:AB:19:GLN:O	2:AB:38:VAL:HG23	2.19	0.42
1:CA:409:U:C4	1:CA:410:G:C5	3.08	0.42
22:DA:1047:G:H4'	22:DA:1048:A:H5'	2.02	0.42
1:AA:1053:G:C6	1:AA:1199:U:C2	3.07	0.42
22:DA:83:A:OP1	22:DA:83:A:H4'	2.19	0.42
22:DA:1598:A:C6	22:DA:1599:U:N3	2.88	0.42
22:BA:971:G:OP2	22:BA:974:G:N2	2.53	0.42
22:DA:1654:A:N7	22:DA:2005:A:C2	2.88	0.42
38:DQ:58:ARG:NH2	38:DQ:92:ARG:NH1	2.68	0.42
22:BA:275:C:H3'	22:BA:276:U:H5''	2.01	0.42
22:DA:120:U:O4	22:DA:177:G:C8	2.73	0.42
22:DA:2166:U:H2'	22:DA:2167:U:H5'	2.02	0.42
1:AA:958:A:N1	19:AS:54:GLY:HA3	2.34	0.42
29:DH:31:VAL:HG12	29:DH:32:PRO:HD3	2.02	0.42
2:AB:151:ILE:O	2:AB:153:ASP:N	2.53	0.42
5:AE:133:PRO:HA	5:AE:136:VAL:CG1	2.49	0.42
22:DA:2320:U:H4'	22:DA:2321:U:C6	2.55	0.42
22:DA:2663:G:H3'	22:DA:2664:G:C8	2.54	0.42
28:DG:144:VAL:O	28:DG:144:VAL:CG1	2.68	0.42
30:BI:96:ASP:OD1	30:BI:97:LYS:N	2.53	0.42
1:CA:155:A:C2	1:CA:167:A:C4	3.08	0.42
19:CS:44:MET:CB	19:CS:62:VAL:HG11	2.50	0.42
16:AP:78:VAL:O	16:AP:79:ASN:HB2	2.20	0.42
4:CD:59:GLN:OE1	4:CD:59:GLN:CA	2.64	0.42
22:DA:1802:A:C2	22:DA:1803:A:N3	2.88	0.42
15:AO:2:SER:O	15:AO:3:LEU:HB2	2.19	0.42
7:CG:4:ARG:HG3	7:CG:5:ARG:N	2.35	0.42
22:DA:161:A:P	22:DA:162:U:H3'	2.60	0.42
1:AA:721:G:H4'	1:AA:722:G:C5'	2.50	0.42
1:CA:728:A:C2	1:CA:729:A:C4	3.08	0.42
1:AA:1152:A:H5'	10:AJ:15:HIS:CD2	2.55	0.42
9:AI:91:ASP:C	9:AI:91:ASP:OD2	2.58	0.42
22:DA:2360:G:H1'	33:DL:60:ARG:CD	2.49	0.42
24:BC:125:LYS:CG	24:BC:128:ASN:ND2	2.83	0.42
22:BA:1735:A:C2'	22:BA:1736:U:H5'	2.50	0.42
23:DB:7:G:C5'	36:DO:29:HIS:CE1	3.01	0.42
35:DN:46:ARG:O	35:DN:50:PRO:HG2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:295:G:N2	22:DA:296:U:C6	2.88	0.42
22:DA:2216:G:H2'	22:DA:2217:G:H8	1.83	0.42
12:AL:55:VAL:HG21	12:AL:80:ILE:HD11	2.00	0.42
29:DH:127:GLU:HA	29:DH:144:VAL:O	2.19	0.42
4:CD:119:SER:O	4:CD:131:ASN:OD1	2.38	0.42
1:CA:1132:C:H2'	1:CA:1133:G:C1'	2.50	0.42
22:DA:2186:G:C5	22:DA:2187:U:C4	3.08	0.42
22:DA:2734:A:N7	22:DA:2735:G:C8	2.88	0.42
27:DF:128:TYR:CB	27:DF:170:LEU:CD1	2.98	0.42
22:DA:1082:U:OP1	30:DI:124:ALA:HB2	2.19	0.42
1:AA:21:G:H2'	1:AA:22:G:C8	2.55	0.42
42:BU:41:LEU:HD13	42:BU:60:GLU:OE2	2.20	0.42
35:DN:33:ILE:HD12	35:DN:118:ARG:NH1	2.34	0.42
1:AA:102:G:C2	1:AA:103:U:C6	3.08	0.42
1:AA:443:C:C2	1:AA:444:G:C8	3.07	0.42
22:BA:2076:U:C5'	22:BA:2076:U:O2	2.68	0.42
35:DN:24:MET:HE3	35:DN:44:LEU:HB2	2.02	0.42
1:AA:714:G:O2'	1:AA:715:A:H5'	2.19	0.42
57:DB:307:HOH:O	43:DV:14:LYS:CE	2.68	0.42
38:DQ:47:TYR:HD1	39:DR:74:ILE:HG23	1.84	0.42
22:DA:1190:G:OP1	33:DL:32:GLY:CA	2.68	0.42
1:CA:337:G:H2'	1:CA:338:A:C8	2.55	0.42
51:D3:7:VAL:O	51:D3:10:ALA:HB3	2.19	0.42
1:AA:53:A:H2'	1:AA:54:C:O5'	2.20	0.42
1:CA:1269:A:H1'	1:CA:1326:U:H1'	2.02	0.42
18:CR:42:SER:HB2	18:CR:46:GLY:O	2.19	0.42
1:AA:1217:C:H2'	1:AA:1218:C:H6	1.83	0.42
4:CD:169:THR:HG22	4:CD:184:ARG:NH2	2.34	0.42
3:AC:120:ILE:O	3:AC:124:LEU:HG	2.20	0.42
18:AR:55:LEU:HA	18:AR:55:LEU:HD22	1.91	0.42
33:DL:86:GLU:HG3	33:DL:86:GLU:O	2.19	0.42
41:BT:50:LEU:CD1	41:BT:50:LEU:N	2.83	0.42
24:BC:197:ASN:O	24:BC:197:ASN:CG	2.57	0.42
22:BA:2884:U:O2	22:BA:2884:U:O4'	2.37	0.42
26:DE:91:ASP:O	26:DE:91:ASP:CG	2.58	0.42
38:BQ:19:LYS:O	38:BQ:22:LYS:HG3	2.20	0.42
1:CA:1130:A:C8	1:CA:1146:A:N1	2.88	0.42
46:BY:32:ALA:HB2	46:BY:37:LEU:CD2	2.50	0.42
6:CF:12:PRO:O	6:CF:15:SER:OG	2.23	0.42
39:DR:66:HIS:CD2	39:DR:94:THR:HG23	2.55	0.42
29:BH:82:SER:HG	29:BH:90:LEU:HG	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1355:G:C6	22:DA:1356:G:C8	3.08	0.42
22:DA:300:A:O2'	22:DA:318:C:O2'	2.08	0.42
22:DA:303:G:C6	22:DA:304:U:C4	3.08	0.42
6:AF:92:THR:HG22	6:AF:93:LYS:N	2.34	0.42
6:AF:91:ARG:HG2	6:AF:93:LYS:HD3	2.01	0.42
22:DA:966:G:H4'	22:DA:2272:U:O2	2.19	0.42
35:DN:116:VAL:HG13	35:DN:117:ASP:OD1	2.19	0.42
29:DH:121:VAL:O	29:DH:122:LEU:CB	2.67	0.42
22:DA:681:G:C6	22:DA:682:G:N7	2.88	0.42
22:BA:622:G:H5''	57:BA:3294:HOH:O	2.20	0.42
22:DA:2283:C:H2'	22:DA:2284:A:H5'	2.02	0.42
22:BA:1745:A:C2	22:BA:1746:A:C8	3.08	0.42
22:DA:2005:A:H5''	57:DA:3382:HOH:O	2.19	0.42
22:DA:1340:U:H5	22:DA:1603:A:C8	2.34	0.42
22:BA:2193:G:C2'	22:BA:2194:U:H5'	2.49	0.42
22:BA:1131:G:O2'	22:BA:2026:U:H5'	2.20	0.42
46:DY:2:LYS:O	46:DY:6:LEU:HB2	2.19	0.42
1:CA:373:A:N3	1:CA:374:A:C8	2.88	0.42
22:DA:2276:G:O2'	22:DA:2277:G:H5'	2.19	0.42
1:CA:1070:U:O2	1:CA:1071:C:C6	2.73	0.42
33:BL:85:VAL:HB	33:BL:94:THR:HG23	2.01	0.42
22:BA:1495:A:O2'	22:BA:1496:A:H5'	2.20	0.42
1:CA:780:A:N3	1:CA:803:G:C2	2.88	0.42
22:DA:2118:U:O4	22:DA:2149:U:C1'	2.68	0.42
10:AJ:61:ALA:O	10:AJ:62:ARG:HB2	2.18	0.42
22:DA:85:G:OP2	42:DU:28:VAL:CG1	2.68	0.42
6:CF:59:TYR:CE2	18:CR:67:LEU:CD2	3.03	0.42
8:AH:105:SER:HB2	8:AH:126:ILE:HD11	2.01	0.42
8:AH:10:MET:C	8:AH:12:THR:N	2.73	0.42
22:DA:1126:A:H4'	22:DA:1127:A:O5'	2.20	0.42
22:DA:728:G:HO2'	22:DA:730:A:H8	1.66	0.42
2:AB:14:VAL:HG23	2:AB:208:ARG:NH2	2.35	0.42
1:CA:345:C:OP1	37:DP:39:ARG:HD3	2.20	0.42
1:AA:198:G:C5	1:AA:220:G:C2	3.08	0.42
20:CT:79:LEU:O	20:CT:83:ILE:HG23	2.20	0.42
28:DG:95:ARG:HA	28:DG:128:GLN:O	2.19	0.42
22:DA:1874:C:C5'	22:DA:1875:G:OP2	2.68	0.42
22:BA:1046:A:H4'	22:BA:1046:A:OP2	2.19	0.42
1:AA:1118:U:O2	1:AA:1179:A:C6	2.73	0.42
42:DU:83:VAL:HG11	42:DU:94:ARG:HB3	2.02	0.42
22:DA:2371:G:C2	22:DA:2372:U:C6	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:596:A:C5	1:AA:645:G:C2	3.08	0.42
22:DA:2330:G:C2	22:DA:2386:A:C2	3.08	0.42
22:BA:1454:C:H5'	35:BN:63:ARG:CD	2.49	0.42
22:DA:324:A:H2'	22:DA:325:G:O4'	2.20	0.42
2:CB:82:ASP:N	2:CB:85:LEU:HB3	2.35	0.42
10:CJ:73:LEU:HD23	10:CJ:73:LEU:C	2.40	0.42
22:BA:2218:G:O2'	22:BA:2219:U:H5'	2.19	0.42
26:BE:29:HIS:O	26:BE:33:VAL:HG23	2.20	0.42
22:BA:2489:U:O2	22:BA:2491:U:C4	2.72	0.42
22:DA:1461:C:N3	22:DA:1462:C:C5	2.88	0.42
43:DV:48:MET:SD	43:DV:85:LYS:HA	2.59	0.42
1:AA:200:G:N2	1:AA:218:U:O2	2.52	0.42
19:AS:29:LYS:HG2	19:AS:30:PRO:HD2	2.02	0.42
3:AC:152:GLU:HA	3:AC:167:TRP:HA	2.02	0.42
3:AC:42:TYR:CZ	3:AC:46:GLU:HG3	2.54	0.42
22:BA:83:A:C6	22:BA:101:A:C4	3.08	0.42
22:DA:1190:G:OP1	33:DL:32:GLY:HA2	2.20	0.42
1:CA:1130:A:N9	1:CA:1146:A:C2	2.87	0.42
22:BA:184:C:H2'	22:BA:185:G:H8	1.85	0.42
1:CA:1530:G:H2'	1:CA:1531:A:C8	2.54	0.42
3:AC:37:PHE:O	3:AC:41:GLN:HB2	2.20	0.42
22:DA:2191:A:C6	22:DA:2192:U:C4	3.07	0.42
18:CR:45:THR:OG1	18:CR:47:THR:HG23	2.20	0.42
35:DN:72:ASP:OD2	35:DN:75:ILE:HG12	2.20	0.42
12:AL:60:GLY:O	12:AL:61:PHE:C	2.58	0.42
22:BA:503:A:H4'	22:BA:504:A:O5'	2.19	0.42
23:BB:60:C:N4	57:BB:303:HOH:O	2.52	0.42
22:BA:2151:U:H2'	22:BA:2152:G:N7	2.35	0.42
30:BI:131:GLY:O	30:BI:135:SER:N	2.53	0.42
49:D1:26:ASN:O	49:D1:27:LYS:C	2.58	0.42
27:BF:27:GLN:O	27:BF:29:PRO:HD3	2.20	0.42
26:DE:155:GLU:O	26:DE:159:LEU:HG	2.20	0.42
2:CB:30:PHE:CD1	2:CB:30:PHE:N	2.85	0.42
1:CA:1221:G:O3'	19:CS:77:THR:HB	2.20	0.42
28:BG:35:ARG:HD3	28:BG:71:LEU:HD13	2.01	0.42
38:BQ:57:PHE:O	38:BQ:58:ARG:C	2.56	0.42
2:CB:73:LYS:O	2:CB:74:ARG:C	2.57	0.42
40:DS:30:SER:HA	40:DS:33:LEU:HD12	2.01	0.42
3:AC:22:TRP:HB3	3:AC:59:ARG:H	1.85	0.42
28:DG:91:GLY:O	28:DG:92:VAL:O	2.37	0.42
22:DA:1435:G:H2'	22:DA:1436:G:H5'	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1171:G:C2	22:BA:1179:G:N1	2.88	0.42
9:AI:57:MET:C	9:AI:59:GLU:N	2.73	0.42
22:DA:796:C:H2'	22:DA:797:G:C8	2.55	0.42
1:CA:990:C:C4	1:CA:991:U:O4	2.73	0.42
22:DA:570:G:C2'	22:DA:571:U:H5'	2.49	0.42
5:AE:105:ILE:HG13	5:AE:105:ILE:O	2.19	0.42
22:DA:54:G:C4	22:DA:55:G:C8	3.08	0.42
22:DA:1312:U:C2	22:DA:1603:A:N1	2.88	0.42
1:CA:1280:A:O4'	10:CJ:43:PRO:HG3	2.19	0.42
22:DA:2167:U:O2	22:DA:2170:A:OP2	2.38	0.42
14:AN:7:LYS:O	14:AN:8:ALA:C	2.58	0.42
55:BA:3001:DOL:O38	55:BA:3001:DOL:C29	2.68	0.42
46:BY:61:ALA:O	46:BY:62:GLY:C	2.58	0.42
51:B3:8:ARG:O	51:B3:12:LYS:HG3	2.20	0.42
22:DA:584:C:N4	22:DA:585:G:O6	2.52	0.42
1:AA:144:G:C4	1:AA:179:A:H2	2.36	0.42
2:AB:80:VAL:HA	2:AB:214:LEU:HD21	2.01	0.42
1:AA:73:C:O2'	1:AA:74:A:P	2.78	0.42
1:AA:167:A:H2'	1:AA:168:G:O4'	2.20	0.42
43:DV:51:GLN:HB3	43:DV:56:PHE:CD2	2.55	0.42
22:BA:2311:A:C5	27:BF:77:PHE:HB3	2.55	0.42
1:AA:787:A:C6	1:AA:788:U:C4	3.08	0.42
22:DA:782:A:H4'	22:DA:783:A:O5'	2.19	0.42
1:CA:801:U:N3	1:CA:802:A:N7	2.68	0.42
1:CA:457:G:C5	1:CA:458:U:C4	3.08	0.42
1:CA:1359:C:OP2	14:CN:75:ARG:NH1	2.53	0.42
10:AJ:63:ASP:OD1	14:AN:85:ARG:HD2	2.19	0.42
14:AN:93:ILE:HG21	14:AN:96:LEU:HD22	2.02	0.42
22:DA:1221:C:H2'	22:DA:1222:U:O4'	2.20	0.42
6:CF:45:ARG:HD2	6:CF:59:TYR:CD2	2.54	0.42
26:DE:192:ALA:O	26:DE:196:VAL:HG23	2.20	0.42
1:CA:68:G:N2	1:CA:152:A:H1'	2.35	0.42
1:CA:91:U:C4	1:CA:92:U:C4	3.08	0.42
22:DA:2839:G:N2	22:DA:2880:C:C2	2.87	0.42
2:CB:207:ILE:HG12	2:CB:208:ARG:N	2.35	0.42
19:CS:74:PHE:CD1	19:CS:74:PHE:N	2.87	0.42
53:B5:65:LEU:C	53:B5:65:LEU:HD13	2.40	0.42
22:DA:2800:A:H3'	22:DA:2801:G:H5'	2.02	0.42
10:AJ:10:LEU:O	10:AJ:71:LEU:HA	2.19	0.42
22:BA:17:G:H2'	22:BA:18:U:C6	2.54	0.42
1:CA:1240:U:O4	7:CG:30:LEU:HG	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2864:G:C2'	22:DA:2865:U:H5'	2.50	0.42
22:BA:2839:G:C5	22:BA:2840:C:C5	3.07	0.42
26:DE:47:LYS:O	26:DE:83:VAL:HG11	2.20	0.42
2:CB:68:LEU:HD12	2:CB:158:PRO:CG	2.50	0.42
22:DA:2553:G:H2'	22:DA:2554:U:H4'	2.02	0.42
40:BS:41:LYS:O	40:BS:44:ALA:N	2.52	0.42
36:BO:87:ILE:HG22	36:BO:88:LYS:N	2.34	0.42
32:DK:31:ARG:CB	32:DK:32:TYR:CE2	3.03	0.42
6:AF:98:GLU:O	6:AF:99:ALA:O	2.38	0.42
22:BA:54:G:H2'	22:BA:55:G:O5'	2.20	0.42
22:BA:1442:U:H2'	22:BA:1443:U:C6	2.55	0.42
4:AD:150:LYS:O	4:AD:151:LYS:C	2.57	0.42
9:CI:21:ILE:HG22	9:CI:21:ILE:O	2.20	0.42
5:AE:126:LYS:CD	5:AE:128:TYR:HE2	2.33	0.42
6:AF:68:GLN:HA	6:AF:71:ILE:CG2	2.50	0.42
22:BA:2672:U:C2'	22:BA:2673:G:O5'	2.68	0.42
30:DI:33:VAL:O	30:DI:33:VAL:HG12	2.19	0.42
1:AA:944:G:O2'	1:AA:1339:A:N6	2.53	0.42
22:DA:1926:U:H5''	22:DA:1927:A:OP2	2.19	0.42
4:AD:13:ARG:HD2	4:AD:34:ILE:HA	2.02	0.42
30:DI:86:ILE:HD11	30:DI:89:GLY:HA2	2.01	0.42
22:BA:1850:G:C2	22:BA:1893:C:O2	2.73	0.42
45:DX:52:SER:O	45:DX:55:GLY:N	2.53	0.42
22:BA:2808:G:C2	22:BA:2891:U:C6	3.07	0.42
1:AA:607:A:H2'	1:AA:608:A:C8	2.55	0.42
2:CB:187:VAL:HG22	2:CB:187:VAL:O	2.20	0.42
22:DA:1051:G:H4'	22:DA:2752:C:O2'	2.19	0.42
28:DG:133:LEU:HD13	28:DG:141:ILE:HB	2.02	0.42
28:DG:121:ILE:HD12	28:DG:141:ILE:CG2	2.50	0.42
22:DA:2885:G:O6	48:D0:29:SER:HB3	2.20	0.42
41:BT:57:VAL:CG2	41:BT:58:VAL:N	2.83	0.42
37:DP:30:VAL:HG22	37:DP:81:VAL:HA	2.01	0.42
26:BE:48:THR:HG23	26:BE:51:GLU:OE1	2.20	0.42
7:AG:27:VAL:HG23	7:AG:28:ASN:N	2.35	0.42
8:AH:5:ASP:OD1	8:AH:8:ALA:HB2	2.20	0.42
22:DA:495:G:O4'	40:DS:57:ASN:ND2	2.53	0.42
45:BX:66:THR:O	45:BX:69:ALA:HB3	2.19	0.42
1:AA:921:U:H2'	1:AA:922:G:O4'	2.20	0.42
33:BL:23:ILE:O	33:BL:24:GLY:C	2.58	0.42
22:BA:2717:C:H2'	22:BA:2718:G:O4'	2.19	0.42
22:BA:1483:G:C6	22:BA:1484:U:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BV:25:LYS:HE2	43:BV:43:ASP:CA	2.49	0.42
37:DP:70:VAL:HG12	37:DP:71:GLU:N	2.35	0.42
3:CC:167:TRP:C	3:CC:167:TRP:HE3	2.23	0.42
2:AB:131:LYS:HA	2:AB:131:LYS:HE2	2.02	0.42
46:BY:39:GLN:HB3	46:BY:41:HIS:CE1	2.54	0.42
22:DA:2061:G:C8	22:DA:2501:C:H4'	2.55	0.41
22:BA:825:A:H2'	22:BA:826:U:O4'	2.20	0.41
22:BA:1922:G:C2	22:BA:1923:U:C6	3.07	0.41
22:DA:322:A:H3'	22:DA:323:C:C5'	2.50	0.41
5:AE:159:LYS:OXT	8:AH:64:LYS:NZ	2.51	0.41
17:CQ:15:ASP:O	17:CQ:17:MET:N	2.51	0.41
9:AI:44:ALA:O	9:AI:47:VAL:HG22	2.20	0.41
22:DA:464:U:H2'	22:DA:465:G:O4'	2.20	0.41
1:CA:1022:A:C5	1:CA:1023:U:C5	3.08	0.41
22:BA:971:G:H2'	22:BA:972:A:O4'	2.20	0.41
38:DQ:58:ARG:CZ	38:DQ:92:ARG:NH1	2.83	0.41
1:CA:1144:G:C2	1:CA:1145:A:C2	3.07	0.41
4:AD:58:LYS:CE	4:AD:69:GLU:OE2	2.67	0.41
1:AA:1237:C:C4	1:AA:1336:C:N3	2.87	0.41
19:AS:52:HIS:CD2	19:AS:54:GLY:N	2.88	0.41
22:BA:2584:U:O2'	55:BA:3001:DOL:C48	2.66	0.41
10:CJ:81:GLU:HA	10:CJ:84:VAL:HG12	2.02	0.41
1:CA:451:A:OP2	16:CP:70:ARG:NH2	2.48	0.41
29:DH:31:VAL:HB	29:DH:32:PRO:HD2	2.00	0.41
2:AB:151:ILE:CD1	2:AB:154:MET:SD	3.06	0.41
1:CA:1225:A:C2'	1:CA:1225:A:N3	2.83	0.41
22:BA:2043:C:N3	22:BA:2777:G:C2	2.88	0.41
22:DA:2322:A:C6	22:DA:2323:G:C5	3.08	0.41
16:AP:45:GLU:O	16:AP:46:LYS:C	2.58	0.41
22:BA:545:U:C3'	22:BA:546:U:H4'	2.49	0.41
1:CA:459:A:C2	1:CA:460:A:C5	3.08	0.41
22:DA:287:G:N2	22:DA:354:A:C2	2.88	0.41
1:CA:978:A:O5'	1:CA:1362:A:N6	2.51	0.41
22:DA:1222:U:H2'	22:DA:1223:G:C8	2.55	0.41
22:DA:1305:C:N4	22:DA:1607:C:OP2	2.53	0.41
1:CA:919:A:C2	1:CA:920:U:C6	3.08	0.41
32:DK:92:GLU:O	32:DK:93:GLN:HB2	2.19	0.41
22:BA:137:U:H2'	22:BA:140:C:N1	2.35	0.41
29:BH:104:THR:CG2	29:BH:110:VAL:O	2.68	0.41
1:AA:11:G:O2'	1:AA:12:U:H5'	2.20	0.41
22:DA:669:G:N3	22:DA:801:G:C2	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:237:GLY:CA	57:BC:407:HOH:O	2.66	0.41
23:BB:33:G:C2'	23:BB:34:A:H5'	2.50	0.41
10:AJ:42:LEU:HA	10:AJ:43:PRO:HD2	1.83	0.41
22:BA:983:A:C6	22:BA:984:A:N1	2.88	0.41
1:CA:570:G:C4	1:CA:571:U:C5	3.08	0.41
2:AB:118:GLU:O	2:AB:121:SER:CB	2.68	0.41
22:BA:2526:G:N3	52:B4:1:MET:N	2.68	0.41
9:CI:26:GLY:CA	9:CI:61:LEU:O	2.68	0.41
22:DA:2334:U:O2'	36:DO:13:ARG:NH1	2.53	0.41
22:DA:641:U:C5	22:DA:642:U:O4	2.73	0.41
14:CN:58:SER:O	14:CN:59:ARG:HG3	2.20	0.41
20:CT:54:MET:CE	20:CT:58:VAL:HG21	2.50	0.41
22:BA:303:G:C5	22:BA:304:U:C5	3.07	0.41
22:DA:294:A:N6	22:DA:345:A:N9	2.67	0.41
1:AA:501:C:H2'	1:AA:502:A:H8	1.84	0.41
28:DG:71:LEU:O	28:DG:75:MET:HG3	2.19	0.41
22:DA:470:A:C2	22:DA:471:A:C4	3.08	0.41
42:DU:59:VAL:HG12	42:DU:61:LYS:HD3	2.02	0.41
1:AA:1130:A:C4	1:AA:1146:A:C2	3.08	0.41
22:BA:1357:C:O2	22:BA:1357:C:H2'	2.20	0.41
35:BN:55:ALA:HB2	35:BN:79:LEU:HB3	2.01	0.41
22:DA:1824:G:OP1	24:DC:53:HIS:CE1	2.73	0.41
22:BA:1320:C:N3	22:BA:1331:G:O6	2.53	0.41
22:BA:1243:C:H1'	33:BL:4:ASN:O	2.20	0.41
3:AC:6:HIS:CD2	3:AC:7:PRO:HD2	2.56	0.41
22:DA:711:G:C2	22:DA:721:A:C2	3.08	0.41
22:BA:2070:A:H2'	22:BA:2071:A:O4'	2.20	0.41
1:AA:1348:U:C5	1:AA:1373:G:N2	2.88	0.41
42:DU:99:ASN:ND2	42:DU:101:GLU:HB2	2.35	0.41
1:AA:945:G:C6	1:AA:1337:G:C5	3.08	0.41
1:CA:1298:U:H4'	1:CA:1299:A:C4	2.54	0.41
22:DA:1905:C:N4	22:DA:1930:G:C2	2.87	0.41
16:CP:71:VAL:O	16:CP:75:ILE:HD12	2.21	0.41
1:CA:247:G:C6	1:CA:278:G:C2	3.08	0.41
25:BD:157:LYS:HE3	25:BD:157:LYS:HB2	1.86	0.41
30:DI:20:PRO:CG	30:DI:23:PRO:HG2	2.50	0.41
25:BD:37:VAL:HG12	25:BD:38:LYS:N	2.35	0.41
22:DA:1043:C:C5	22:DA:1044:C:C5	3.08	0.41
9:AI:61:LEU:H	9:AI:61:LEU:HD23	1.85	0.41
22:DA:2829:A:C2'	22:DA:2830:C:H5'	2.50	0.41
24:BC:209:GLY:O	24:BC:212:ARG:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1266:G:N7	40:BS:16:LYS:HE3	2.35	0.41
22:DA:2847:U:C2'	22:DA:2848:G:H5'	2.50	0.41
22:BA:1491:G:N2	22:BA:1500:G:H1'	2.35	0.41
22:DA:347:A:N6	22:DA:348:A:N6	2.68	0.41
22:DA:1764:C:C2'	22:DA:1765:U:H5'	2.50	0.41
22:BA:918:A:H4'	23:BB:97:C:O2	2.19	0.41
22:BA:804:A:H5''	22:BA:805:G:OP1	2.20	0.41
23:DB:46:A:C5	23:DB:47:C:C5	3.07	0.41
26:DE:56:GLY:O	26:DE:57:LYS:C	2.58	0.41
22:DA:2876:G:C6	22:DA:2877:G:C5	3.08	0.41
33:DL:127:VAL:HG12	33:DL:131:ALA:C	2.41	0.41
40:DS:10:ALA:HB3	40:DS:101:SER:O	2.20	0.41
15:CO:89:ARG:CZ	22:DA:714:U:C5	3.03	0.41
1:AA:588:G:N1	1:AA:589:U:C2	2.88	0.41
1:AA:588:G:C6	1:AA:589:U:N3	2.88	0.41
22:BA:2402:U:C2'	22:BA:2403:C:OP2	2.68	0.41
1:AA:1128:C:H4'	1:AA:1148:U:O2	2.20	0.41
13:AM:39:ILE:HG22	13:AM:40:ALA:N	2.34	0.41
2:CB:55:ALA:O	2:CB:59:LYS:HB2	2.20	0.41
13:AM:111:GLY:O	13:AM:112:PRO:C	2.58	0.41
42:DU:37:GLU:O	42:DU:37:GLU:HG3	2.19	0.41
6:CF:25:TYR:CD2	6:CF:25:TYR:N	2.84	0.41
13:CM:46:SER:O	13:CM:47:GLU:HB3	2.19	0.41
24:DC:266:PHE:CD1	24:DC:266:PHE:N	2.87	0.41
26:BE:112:LEU:HD13	26:BE:186:VAL:HG21	2.02	0.41
28:BG:10:VAL:HG23	28:BG:48:ASN:O	2.20	0.41
28:BG:48:ASN:C	28:BG:49:THR:HG23	2.40	0.41
1:AA:606:G:N3	1:AA:633:G:C6	2.88	0.41
29:BH:139:PHE:O	29:BH:140:ALA:HB3	2.20	0.41
5:CE:104:GLY:HA3	5:CE:122:ASN:HA	2.01	0.41
26:DE:100:MET:O	26:DE:104:ALA:CB	2.68	0.41
29:DH:40:THR:OG1	29:DH:43:ASN:ND2	2.54	0.41
22:DA:265:A:N1	22:DA:427:U:O2'	2.53	0.41
22:BA:1916:A:P	22:BA:1917:U:P	3.18	0.41
22:DA:1288:G:C8	22:DA:1327:A:C6	3.08	0.41
22:DA:227:A:H4'	22:DA:228:C:OP1	2.20	0.41
22:DA:1555:G:C2	22:DA:1556:C:C2	3.08	0.41
26:BE:7:ASP:C	26:BE:9:GLN:N	2.73	0.41
22:DA:82:U:N3	22:DA:83:A:N7	2.68	0.41
22:DA:1343:G:C4	22:DA:1597:A:C6	3.09	0.41
22:BA:2748:A:C2	22:BA:2757:A:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:71:A:H5'	22:BA:73:A:C8	2.55	0.41
22:DA:1091:G:N2	22:DA:1092:C:C4	2.88	0.41
22:DA:2286:G:C4'	22:DA:2287:A:O5'	2.63	0.41
1:AA:203:G:O2'	1:AA:466:A:N1	2.53	0.41
2:CB:18:HIS:O	2:CB:19:GLN:HB2	2.19	0.41
4:CD:53:VAL:O	4:CD:54:GLN:C	2.58	0.41
16:AP:45:GLU:O	16:AP:46:LYS:O	2.38	0.41
22:DA:2144:G:C2	22:DA:2146:C:O2	2.73	0.41
1:CA:1408:A:C2	1:CA:1494:G:C2	3.08	0.41
22:BA:2345:G:C5	22:BA:2381:A:C2	3.08	0.41
11:CK:89:PRO:HD3	21:CU:29:LEU:CD1	2.51	0.41
22:DA:876:C:N4	22:DA:877:A:N6	2.68	0.41
25:DD:104:VAL:O	25:DD:105:LYS:HB3	2.20	0.41
22:DA:1331:G:O2'	22:DA:1332:G:H5'	2.20	0.41
36:DO:115:LEU:O	36:DO:117:PHE:N	2.48	0.41
9:CI:15:SER:OG	9:CI:70:GLY:HA3	2.19	0.41
1:AA:874:G:O2'	1:AA:875:U:H5'	2.20	0.41
22:BA:1588:G:C5	22:BA:1589:U:C5	3.08	0.41
6:CF:38:ARG:HG3	6:CF:63:ASN:HB2	2.00	0.41
1:AA:180:U:H2'	1:AA:181:A:O5'	2.19	0.41
13:AM:33:ILE:HG23	13:AM:59:GLU:HB3	2.02	0.41
1:AA:1121:U:H2'	1:AA:1122:U:O4'	2.20	0.41
1:AA:1134:G:N2	1:AA:1135:U:O2	2.53	0.41
22:BA:2648:G:H2'	22:BA:2649:C:C6	2.55	0.41
22:DA:2336:A:N3	22:DA:2385:C:H1'	2.35	0.41
17:AQ:50:ASN:O	17:AQ:51:ASN:O	2.38	0.41
3:CC:81:GLY:O	3:CC:82:GLU:C	2.59	0.41
1:CA:1261:A:C2	1:CA:1262:C:C5	3.08	0.41
12:CL:90:LEU:HB2	12:CL:93:VAL:CG2	2.49	0.41
2:CB:57:LEU:O	2:CB:60:ILE:CD1	2.68	0.41
22:DA:2718:G:C2	22:DA:2719:G:C1'	3.03	0.41
1:CA:1289:A:O2'	7:CG:35:LYS:HE2	2.20	0.41
5:AE:41:ASP:OD1	5:AE:44:GLY:O	2.38	0.41
22:BA:1990:C:H2'	22:BA:1991:U:C1'	2.50	0.41
10:AJ:56:HIS:C	10:AJ:57:VAL:HG12	2.41	0.41
10:AJ:56:HIS:O	10:AJ:57:VAL:O	2.38	0.41
22:BA:591:U:H1'	51:B3:2:PRO:N	2.35	0.41
7:CG:22:LEU:HG	7:CG:25:LYS:HE2	2.02	0.41
16:CP:78:VAL:HG22	16:CP:78:VAL:O	2.20	0.41
24:BC:142:HIS:HB2	24:BC:195:VAL:HG23	2.02	0.41
22:BA:2078:C:H2'	22:BA:2079:U:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BO:92:PHE:HB2	36:BO:117:PHE:CD1	2.55	0.41
22:DA:1999:C:O2	22:DA:2687:U:O2'	2.33	0.41
22:BA:1887:C:H2'	22:BA:1888:G:O5'	2.20	0.41
22:BA:31:C:O2'	22:BA:1238:G:H5'	2.21	0.41
22:BA:660:C:H2'	22:BA:661:A:H8	1.85	0.41
22:DA:381:G:C2'	22:DA:382:A:H5'	2.50	0.41
16:AP:6:LEU:HD13	16:AP:71:VAL:HG23	2.01	0.41
1:AA:666:G:C6	1:AA:741:G:C6	3.08	0.41
17:AQ:61:ILE:CG2	17:AQ:73:TRP:CE3	3.03	0.41
22:BA:953:G:H5''	34:BM:16:ARG:NH1	2.35	0.41
22:DA:2477:U:O4	52:D4:10:LEU:CD2	2.68	0.41
22:DA:875:G:N2	22:DA:903:C:C2	2.88	0.41
22:BA:1806:C:C2'	22:BA:1807:G:O5'	2.67	0.41
1:CA:1516:G:C2	1:CA:1518:A:OP2	2.73	0.41
22:DA:1193:G:C2	22:DA:1194:A:C5	3.08	0.41
22:DA:2238:G:C4'	22:DA:2239:G:OP1	2.68	0.41
22:BA:163:C:H2'	22:BA:164:C:C6	2.54	0.41
22:DA:2784:U:H2'	22:DA:2785:C:C6	2.55	0.41
22:BA:2020:A:H5'	48:B0:9:THR:CG2	2.50	0.41
1:CA:313:A:H2'	1:CA:314:C:C6	2.55	0.41
25:BD:1:MET:HA	25:BD:88:GLU:OE1	2.20	0.41
22:BA:1819:A:OP1	24:BC:155:ALA:HA	2.20	0.41
7:AG:87:VAL:HA	7:AG:88:PRO:HD3	1.92	0.41
48:D0:10:ARG:HG2	48:D0:11:SER:N	2.35	0.41
1:CA:1282:C:O2	1:CA:1282:C:H2'	2.19	0.41
1:CA:1282:C:N3	1:CA:1283:U:C4	2.88	0.41
25:BD:26:VAL:HG22	25:BD:188:LEU:CD2	2.50	0.41
27:DF:73:SER:HB2	27:DF:81:GLN:HB2	2.03	0.41
1:CA:50:A:H1'	1:CA:52:C:O4'	2.20	0.41
1:AA:1044:A:C5	1:AA:1045:C:H1'	2.54	0.41
18:CR:72:ASP:C	18:CR:73:ARG:HG2	2.41	0.41
22:BA:1269:A:O5'	22:BA:1269:A:H8	2.03	0.41
1:AA:1286:U:O2	1:AA:1286:U:H2'	2.20	0.41
9:AI:5:GLN:OE1	9:AI:5:GLN:HA	2.20	0.41
51:B3:55:LEU:O	51:B3:59:ILE:HG13	2.20	0.41
39:DR:87:GLN:HG2	39:DR:88:GLY:N	2.35	0.41
22:BA:1196:C:O4'	22:BA:1226:A:C2	2.74	0.41
5:AE:88:VAL:HG23	5:AE:93:ARG:HG2	2.02	0.41
55:DA:3001:DOL:H432	55:DA:3001:DOL:C1	2.49	0.41
1:CA:857:C:H2'	1:CA:858:G:O4'	2.20	0.41
22:DA:581:C:H2'	22:DA:582:A:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:3:HIS:CA	6:AF:92:THR:HG23	2.50	0.41
1:CA:1394:A:H2'	1:CA:1501:C:O2'	2.20	0.41
31:DJ:80:HIS:C	31:DJ:82:GLY:N	2.73	0.41
22:BA:1180:U:H2'	22:BA:1181:U:O4'	2.19	0.41
9:AI:80:ARG:NH1	9:AI:103:PHE:CE1	2.88	0.41
22:DA:372:G:H1'	22:DA:400:G:O6	2.20	0.41
23:DB:29:A:H2'	23:DB:30:C:O4'	2.20	0.41
22:DA:1933:G:H2'	22:DA:1934:C:O4'	2.21	0.41
6:AF:15:SER:HB2	4:CD:193:ALA:CB	2.50	0.41
1:CA:75:G:N2	1:CA:96:U:H1'	2.34	0.41
1:AA:132:C:H2'	1:AA:133:U:O4'	2.21	0.41
1:AA:956:U:H2'	1:AA:957:U:O4'	2.20	0.41
22:BA:2452:C:N3	55:BA:3001:DOL:H131	2.34	0.41
27:BF:92:ARG:N	27:BF:96:MET:HB2	2.35	0.41
22:DA:1319:C:C2	22:DA:1334:G:C2	3.08	0.41
1:CA:1095:U:N3	1:CA:1096:C:C4	2.88	0.41
2:AB:145:GLU:O	2:AB:149:GLY:N	2.54	0.41
22:BA:309:A:H4'	42:BU:16:GLY:HA2	2.01	0.41
1:CA:977:A:O2'	1:CA:1223:C:N4	2.52	0.41
22:DA:46:G:N3	22:DA:47:C:C6	2.88	0.41
37:DP:49:ALA:HB3	37:DP:60:THR:OG1	2.21	0.41
24:DC:17:VAL:HB	24:DC:204:VAL:HG22	2.02	0.41
22:DA:290:U:N3	22:DA:291:G:C5	2.88	0.41
22:DA:200:U:C5	22:DA:201:C:C5	3.09	0.41
3:AC:3:GLN:OE1	3:AC:3:GLN:N	2.53	0.41
20:AT:44:LYS:CE	20:AT:87:ALA:HA	2.50	0.41
22:DA:1623:G:C2	22:DA:1624:U:C6	3.08	0.41
22:BA:136:G:N2	22:BA:144:A:C6	2.88	0.41
22:DA:878:A:C2	22:DA:900:A:C4	3.09	0.41
48:B0:11:SER:O	48:B0:15:MET:HG3	2.20	0.41
41:BT:12:ARG:CB	41:BT:33:LYS:O	2.68	0.41
36:DO:92:PHE:HB2	36:DO:117:PHE:CD1	2.55	0.41
22:BA:1846:G:H2'	22:BA:1847:A:C4	2.55	0.41
22:BA:1739:A:H2'	22:BA:1740:G:O4'	2.19	0.41
22:BA:2714:G:O2'	22:BA:2715:C:H5'	2.20	0.41
22:BA:785:G:C5	22:BA:786:C:C5	3.09	0.41
22:DA:2345:G:H5'	22:DA:2347:C:O4'	2.20	0.41
22:BA:870:U:N3	22:BA:871:U:C5	2.89	0.41
1:CA:1243:C:H2'	1:CA:1244:G:C8	2.56	0.41
33:DL:78:ARG:CB	33:DL:113:ALA:CB	2.98	0.41
34:BM:55:ARG:CZ	34:BM:55:ARG:CB	2.99	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:401:C:OP2	4:CD:70:ARG:HD3	2.20	0.41
1:CA:1262:C:N4	1:CA:1263:C:C4	2.88	0.41
1:CA:842:U:O2'	1:CA:846:G:C6	2.73	0.41
12:AL:32:GLY:HA3	12:AL:55:VAL:HG12	2.02	0.41
22:DA:1847:A:O2'	22:DA:1848:A:P	2.77	0.41
1:CA:743:A:C5	1:CA:744:C:C5	3.08	0.41
16:AP:19:VAL:HG13	16:AP:38:PHE:N	2.35	0.41
41:DT:34:VAL:HG11	41:DT:43:ILE:HD13	2.02	0.41
5:CE:38:VAL:HG12	5:CE:39:VAL:N	2.36	0.41
22:BA:281:C:H2'	22:BA:282:A:C8	2.55	0.41
10:AJ:56:HIS:O	10:AJ:57:VAL:CG1	2.68	0.41
1:CA:1458:G:O3'	20:CT:23:SER:HA	2.20	0.41
22:DA:121:G:H1'	22:DA:131:A:N1	2.35	0.41
1:CA:926:G:C6	1:CA:1505:G:C6	3.08	0.41
15:CO:35:GLN:NE2	15:CO:39:LEU:CD2	2.83	0.41
1:CA:28:A:H2'	1:CA:29:U:O4'	2.20	0.41
22:BA:393:C:H2'	22:BA:394:C:C6	2.55	0.41
9:CI:51:PRO:HG2	9:CI:83:ILE:HD12	2.02	0.41
1:AA:748:G:N1	1:AA:749:A:C5	2.88	0.41
3:AC:51:SER:O	3:AC:115:LEU:HD21	2.20	0.41
1:CA:785:G:N3	1:CA:785:G:H2'	2.34	0.41
30:BI:59:ILE:HG22	30:BI:61:VAL:HG23	2.01	0.41
41:DT:38:ALA:C	41:DT:39:THR:HG22	2.41	0.41
28:BG:74:SER:HA	28:BG:77:ILE:HG12	2.02	0.41
1:CA:436:C:H2'	1:CA:437:U:C6	2.55	0.41
22:DA:485:C:H2'	22:DA:486:C:O4'	2.19	0.41
22:DA:109:C:H5'	22:DA:348:A:O4'	2.20	0.41
1:CA:1300:G:N1	1:CA:1335:U:C6	2.88	0.41
22:DA:562:U:H2'	22:DA:572:A:O4'	2.20	0.41
33:DL:127:VAL:CG1	33:DL:131:ALA:C	2.89	0.41
1:CA:980:C:OP1	57:CA:1866:HOH:O	2.22	0.41
24:BC:166:ALA:HB3	24:BC:173:THR:HB	2.02	0.41
22:DA:435:C:H2'	22:DA:436:C:H5'	2.01	0.41
22:DA:2193:G:H2'	22:DA:2194:U:C6	2.55	0.41
40:DS:18:ARG:HA	40:DS:21:ALA:HB3	2.02	0.41
20:CT:30:THR:O	20:CT:34:LYS:HG2	2.20	0.41
22:BA:1203:U:O4	22:BA:1204:A:C6	2.73	0.41
28:DG:80:THR:HG22	28:DG:81:GLU:N	2.35	0.41
1:CA:1159:U:H5''	1:CA:1159:U:O2	2.19	0.41
22:DA:1537:G:N3	22:DA:1537:G:H3'	2.36	0.41
22:DA:1760:C:H2'	22:DA:1761:C:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:44:ILE:HG21	27:BF:79:ILE:HG22	2.01	0.41
42:BU:34:VAL:HG23	42:BU:65:ILE:HG22	2.01	0.41
22:DA:2896:C:H2'	22:DA:2897:U:O5'	2.20	0.41
26:DE:29:HIS:CD2	33:DL:6:LEU:HB3	2.55	0.41
29:BH:90:LEU:HD13	29:BH:125:THR:HA	2.03	0.41
22:DA:2010:G:H5''	40:DS:42:LYS:HB2	2.00	0.41
22:DA:842:U:C4	22:DA:843:G:N7	2.88	0.41
22:DA:1360:G:O6	22:DA:1372:U:N3	2.53	0.41
22:DA:191:A:C6	22:DA:192:C:N4	2.89	0.41
22:BA:494:G:C2'	22:BA:495:G:H5'	2.50	0.41
22:DA:2271:G:H2'	22:DA:2272:U:C6	2.55	0.41
17:CQ:48:ASP:O	17:CQ:49:GLU:C	2.57	0.41
1:AA:454:G:C2'	1:AA:455:G:H5'	2.50	0.41
17:AQ:15:ASP:HA	17:AQ:21:ILE:CD1	2.51	0.41
1:AA:411:A:N7	1:AA:429:U:C5	2.89	0.41
22:BA:1179:G:N7	22:BA:1180:U:N1	2.69	0.41
1:CA:496:A:N3	1:CA:496:A:H2'	2.35	0.41
22:BA:195:A:C6	22:BA:198:C:C5	3.09	0.41
22:DA:2196:C:O2'	22:DA:2197:U:H5'	2.20	0.41
22:BA:404:A:C8	22:BA:406:G:C6	3.07	0.41
22:DA:1022:G:C6	22:DA:1140:C:C5	3.08	0.41
2:AB:47:VAL:C	2:AB:49:MET:N	2.74	0.41
1:AA:1074:G:C2	1:AA:1075:U:C2	3.08	0.41
21:AU:37:PHE:CD1	21:AU:40:LYS:HG2	2.55	0.41
1:AA:338:A:H2'	1:AA:339:C:O4'	2.19	0.41
22:BA:1378:A:C4	22:BA:1380:G:C8	3.09	0.41
1:AA:1238:A:H5'	1:AA:1336:C:H41	1.84	0.41
13:AM:90:ARG:NH1	13:AM:95:LEU:HB3	2.35	0.41
22:BA:2191:A:C4	22:BA:2192:U:C4	3.09	0.41
1:AA:215:C:H2'	1:AA:216:U:O4'	2.21	0.41
22:DA:102:U:C2	46:DY:2:LYS:HE2	2.56	0.41
1:CA:373:A:C2'	1:CA:374:A:H5'	2.50	0.41
49:D1:5:ILE:HG22	49:D1:28:ARG:CZ	2.50	0.41
22:BA:2259:U:C6	22:BA:2427:C:C4	3.09	0.41
22:DA:46:G:C2	22:DA:47:C:C4	3.09	0.41
26:DE:45:ALA:HA	26:DE:87:ALA:O	2.21	0.41
22:DA:609:A:C5	22:DA:610:C:C2	3.09	0.41
1:CA:64:G:N2	1:CA:67:C:C4	2.89	0.41
1:CA:64:G:C2	1:CA:67:C:N4	2.88	0.41
13:AM:23:TYR:O	13:AM:69:LEU:HD23	2.20	0.41
13:AM:2:ALA:C	13:AM:9:ILE:HG23	2.41	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:51:VAL:O	10:AJ:62:ARG:HA	2.20	0.41
22:DA:201:C:C4	22:DA:202:U:C5	3.08	0.41
10:CJ:91:ASP:O	10:CJ:92:LEU:CB	2.68	0.41
2:AB:71:GLY:HA2	2:AB:164:ILE:CG2	2.51	0.41
22:DA:1581:G:N7	22:DA:1582:C:N4	2.69	0.41
1:AA:872:A:N7	1:AA:874:G:C8	2.88	0.41
22:BA:1456:G:C5	22:BA:1457:U:C5	3.08	0.41
22:DA:2428:G:H5"	22:DA:2429:G:P	2.60	0.41
22:BA:1206:G:C5	22:BA:1207:C:C4	3.09	0.41
22:DA:17:G:C6	22:DA:524:G:C6	3.08	0.41
22:DA:1866:A:C2	22:DA:1876:A:C5	3.07	0.41
1:AA:602:A:C2	1:AA:603:U:C2	3.09	0.41
1:AA:937:A:C2	1:AA:1379:G:O6	2.73	0.41
1:CA:821:G:H2'	1:CA:822:U:C6	2.54	0.41
22:BA:257:C:H3'	22:BA:258:G:C8	2.55	0.41
22:DA:2314:A:O4'	27:DF:155:THR:HG21	2.19	0.41
41:BT:18:GLU:O	41:BT:19:LYS:C	2.58	0.41
22:BA:2502:G:C5'	22:BA:2503:A:C5'	2.99	0.41
12:CL:90:LEU:HB2	12:CL:93:VAL:HG21	2.02	0.41
43:BV:41:GLU:O	43:BV:41:GLU:HG2	2.18	0.41
4:CD:168:PRO:HB3	4:CD:171:LEU:HD12	2.00	0.41
2:CB:60:ILE:HD12	2:CB:61:ALA:N	2.36	0.41
44:DW:50:ASN:OD1	44:DW:63:ALA:CB	2.68	0.41
22:DA:2802:G:C6	22:DA:2803:G:C5	3.08	0.41
3:CC:153:VAL:HG23	3:CC:196:ILE:CG2	2.50	0.41
4:CD:188:ARG:O	4:CD:191:LEU:HD12	2.21	0.41
1:AA:1145:A:O2'	1:AA:1146:A:P	2.78	0.41
22:BA:78:U:OP2	46:BY:2:LYS:HD3	2.21	0.41
22:BA:2765:A:C2'	22:BA:2765:A:N3	2.83	0.41
22:BA:54:G:C2'	22:BA:55:G:O5'	2.68	0.41
22:DA:2391:G:OP2	51:D3:35:LYS:NZ	2.50	0.41
25:DD:32:ASN:N	25:DD:96:ILE:O	2.53	0.41
36:DO:48:LEU:C	36:DO:49:VAL:HG23	2.41	0.41
5:CE:15:LEU:C	5:CE:16:ILE:HD12	2.41	0.41
22:BA:2559:C:H2'	22:BA:2560:A:O5'	2.21	0.41
9:AI:85:ARG:O	9:AI:88:MET:HB2	2.20	0.41
11:CK:112:ASP:HB3	21:CU:20:LYS:HE3	2.02	0.41
26:DE:170:ARG:NH2	26:DE:176:ASP:OD1	2.52	0.41
22:BA:570:G:C4	22:BA:2030:A:N7	2.88	0.41
2:AB:96:TRP:O	2:AB:97:LEU:C	2.59	0.41
31:DJ:84:ILE:O	31:DJ:85:LYS:C	2.59	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:676:A:C6	1:AA:677:U:C4	3.08	0.41
32:BK:53:LYS:HG3	32:BK:56:ASP:OD2	2.20	0.41
13:CM:19:LEU:CD1	13:CM:33:ILE:HB	2.50	0.41
22:DA:2064:C:H4'	22:DA:2251:G:N2	2.35	0.41
22:DA:1710:G:O2'	22:DA:1711:A:H5'	2.21	0.41
28:BG:55:ARG:HG2	28:BG:58:TYR:CD1	2.56	0.41
1:AA:715:A:N6	1:AA:716:A:N6	2.69	0.41
22:DA:167:A:H2'	22:DA:168:G:O4'	2.21	0.41
1:CA:312:C:H2'	1:CA:313:A:O4'	2.21	0.41
24:BC:165:VAL:O	24:BC:166:ALA:HB2	2.20	0.41
4:AD:19:LEU:HD22	4:AD:64:ILE:HG13	2.02	0.41
4:AD:61:VAL:O	4:AD:64:ILE:HB	2.20	0.41
26:BE:147:LEU:HB2	26:BE:183:PHE:CD1	2.55	0.41
1:CA:545:C:O2'	1:CA:549:C:H5''	2.20	0.41
22:DA:2851:A:O2'	35:DN:64:ARG:NH2	2.51	0.41
13:AM:58:ASP:O	13:AM:61:ALA:HB3	2.21	0.41
22:BA:75:G:H4'	46:BY:48:ARG:NH2	2.34	0.41
27:DF:135:GLN:HG2	27:DF:141:ILE:HG12	2.03	0.41
3:CC:101:ILE:HG23	3:CC:101:ILE:O	2.20	0.41
42:BU:26:LYS:HA	42:BU:26:LYS:HD2	1.88	0.41
28:DG:109:PHE:CD2	28:DG:109:PHE:N	2.89	0.41
13:AM:109:ARG:O	13:AM:109:ARG:HG3	2.20	0.41
29:DH:135:HIS:CG	29:DH:136:SER:N	2.89	0.41
22:BA:2721:A:C2	22:BA:2873:A:C5	3.09	0.41
1:CA:878:A:C5	1:CA:879:C:C5	3.08	0.41
22:BA:247:G:H4'	22:BA:386:G:C5	2.55	0.41
22:DA:781:A:H2'	22:DA:1777:U:O2'	2.19	0.41
37:BP:43:PHE:CE2	37:BP:63:LYS:HD3	2.56	0.41
28:DG:89:LEU:CD1	28:DG:162:VAL:HG22	2.51	0.41
22:BA:1070:A:N1	22:BA:1097:U:O2'	2.44	0.41
1:CA:858:G:N7	1:CA:869:G:N7	2.69	0.41
22:DA:1359:A:C2	22:DA:1360:G:H1'	2.56	0.41
1:CA:406:G:C2	1:CA:407:U:C6	3.09	0.41
1:CA:429:U:O3'	4:CD:22:LYS:HE3	2.20	0.41
22:DA:28:A:H2'	22:DA:29:U:O4'	2.21	0.41
40:DS:55:ILE:O	40:DS:58:ALA:HB3	2.21	0.41
1:AA:1327:C:O2'	1:AA:1328:C:H5'	2.20	0.41
22:DA:1404:C:H2'	22:DA:1405:U:O5'	2.21	0.41
7:CG:92:ARG:HE	7:CG:92:ARG:HA	1.84	0.41
31:DJ:64:VAL:HG23	31:DJ:65:THR:N	2.36	0.41
22:DA:116:C:C5'	22:DA:128:C:C5	3.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1341:G:C2	41:DT:84:TYR:CD2	3.08	0.41
1:AA:1307:U:H2'	1:AA:1308:U:H6	1.85	0.41
19:AS:52:HIS:CD2	19:AS:54:GLY:H	2.39	0.41
1:AA:568:G:H2'	1:AA:569:C:H6	1.86	0.41
22:BA:454:A:H4'	22:BA:455:C:OP2	2.20	0.41
22:DA:1317:G:N2	22:DA:1336:A:N3	2.68	0.41
2:AB:144:LEU:O	2:AB:148:LEU:HB2	2.20	0.41
22:DA:377:G:O6	22:DA:378:C:N4	2.54	0.41
1:CA:66:A:C4'	1:CA:173:U:C4	3.03	0.41
22:BA:1494:A:H2'	22:BA:1495:A:C8	2.55	0.41
1:CA:456:A:C6	1:CA:457:G:C5	3.09	0.41
26:DE:188:MET:CE	26:DE:192:ALA:HB3	2.50	0.41
27:BF:175:PHE:CE1	27:BF:177:PHE:CZ	3.08	0.41
37:DP:103:ARG:HD3	37:DP:108:ALA:HB2	2.02	0.41
22:BA:2820:A:H2'	22:BA:2821:A:OP1	2.20	0.41
26:BE:145:ASP:HA	26:BE:166:LYS:O	2.20	0.41
22:DA:2262:U:N3	22:DA:2279:G:C2	2.88	0.41
22:BA:1414:C:C5	22:BA:1415:U:C5	3.09	0.41
4:CD:57:GLU:OE1	4:CD:57:GLU:HA	2.20	0.41
21:AU:14:VAL:CG1	21:AU:16:LEU:HD21	2.50	0.41
22:DA:2544:G:H2'	22:DA:2545:G:O4'	2.20	0.41
25:DD:114:LYS:HE2	25:DD:196:ALA:HB1	2.03	0.41
14:CN:31:ILE:HG22	14:CN:32:SER:N	2.36	0.41
22:DA:1006:C:O5'	22:DA:1006:C:H6	2.04	0.41
1:AA:591:U:OP2	8:AH:31:LYS:CD	2.68	0.41
30:DI:109:ILE:HG22	30:DI:109:ILE:O	2.20	0.41
22:DA:1854:A:O4'	22:DA:2233:U:H4'	2.20	0.41
22:DA:2811:G:OP1	25:DD:62:LYS:N	2.53	0.41
22:BA:1406:U:N3	22:BA:1407:G:N7	2.68	0.41
22:BA:2496:C:C2'	22:BA:2497:A:O5'	2.69	0.41
26:DE:47:LYS:O	26:DE:83:VAL:CG1	2.69	0.41
1:AA:69:G:H5'	1:AA:70:U:P	2.61	0.41
22:BA:257:C:H3'	22:BA:258:G:H8	1.85	0.41
22:BA:48:G:N2	22:BA:49:A:N1	2.69	0.41
22:DA:2331:G:C2	22:DA:2385:C:C2	3.08	0.41
22:BA:1592:C:C2'	22:BA:1593:A:H5'	2.50	0.41
33:DL:77:ILE:HG22	33:DL:78:ARG:N	2.36	0.41
33:DL:82:LEU:HD23	33:DL:82:LEU:C	2.41	0.41
22:BA:589:U:H2'	22:BA:590:A:H8	1.85	0.41
22:BA:2154:A:H2'	22:BA:2155:U:C6	2.55	0.41
22:DA:1124:G:O2'	52:D4:37:GLN:O	2.37	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BV:6:ALA:HB2	43:BV:42:LEU:HD23	2.03	0.41
22:DA:2718:G:OP1	37:DP:98:TYR:CD1	2.74	0.41
23:BB:54:G:N2	27:BF:26:MET:CE	2.83	0.41
35:DN:12:ARG:CZ	35:DN:20:MET:HE3	2.50	0.41
8:AH:49:PHE:C	8:AH:49:PHE:CD1	2.93	0.41
5:AE:56:VAL:O	5:AE:60:ILE:CG2	2.68	0.41
22:BA:744:U:H2'	22:BA:745:G:O4'	2.20	0.41
1:CA:1332:A:H2'	1:CA:1333:A:O4'	2.21	0.41
42:DU:82:ARG:O	42:DU:97:LYS:CG	2.69	0.41
22:DA:764:A:N1	22:DA:1789:A:O2'	2.49	0.41
1:AA:1000:A:N1	1:AA:1041:G:N1	2.69	0.41
22:DA:2184:A:H2'	22:DA:2185:U:C6	2.55	0.41
8:AH:89:LYS:HG3	8:AH:90:ASP:H	1.84	0.41
21:CU:4:ILE:HA	21:CU:20:LYS:HZ1	1.84	0.41
22:DA:1184:U:OP1	47:DZ:30:ARG:HD2	2.19	0.41
43:DV:75:GLN:HB2	43:DV:92:VAL:CG2	2.50	0.41
22:BA:2488:G:C2'	22:BA:2489:U:H5'	2.51	0.41
22:BA:2861:U:O2	22:BA:2862:G:C8	2.74	0.41
24:BC:31:ALA:HA	24:BC:34:LEU:HD12	2.03	0.41
22:BA:368:A:C6	22:BA:369:U:C4	3.09	0.41
17:CQ:13:VAL:CG1	17:CQ:22:VAL:HG13	2.50	0.41
24:DC:75:PRO:O	24:DC:76:ALA:HB2	2.20	0.41
1:AA:935:A:C2	1:AA:936:C:N1	2.89	0.41
41:BT:29:THR:HG23	41:BT:86:THR:HG23	2.03	0.41
37:DP:31:TRP:O	37:DP:32:VAL:HB	2.20	0.41
49:B1:40:ASP:HB2	49:B1:49:TYR:OH	2.20	0.41
23:BB:113:C:H1'	36:BO:45:SER:O	2.20	0.41
43:BV:14:LYS:CD	43:BV:18:ARG:HH11	2.33	0.41
22:DA:2785:C:H2'	22:DA:2786:U:O4'	2.20	0.41
16:AP:12:LYS:O	16:AP:13:LYS:HB2	2.20	0.41
27:DF:57:LEU:HB2	27:DF:65:PRO:HG2	2.03	0.41
1:CA:1186:G:H4'	9:CI:112:GLU:CD	2.41	0.41
24:DC:130:LEU:HD12	24:DC:135:ILE:HG13	2.03	0.41
24:BC:111:LYS:O	24:BC:112:ALA:C	2.57	0.41
28:DG:34:THR:HG22	28:DG:35:ARG:N	2.36	0.41
32:DK:97:THR:C	32:DK:98:ARG:HG2	2.41	0.41
44:BW:49:ALA:O	44:BW:50:ASN:HB2	2.21	0.41
1:AA:656:G:N2	15:AO:23:GLY:HA3	2.35	0.41
26:DE:12:LEU:HD23	26:DE:13:THR:N	2.35	0.41
42:BU:6:ARG:O	42:BU:9:ASP:HB2	2.20	0.41
2:CB:111:ILE:O	2:CB:114:LEU:HB3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:140:VAL:HG13	30:BI:140:VAL:O	2.20	0.41
29:BH:33:GLN:O	29:BH:35:LYS:N	2.53	0.41
38:BQ:66:ASN:CG	38:BQ:76:TYR:HB2	2.40	0.41
36:BO:102:ARG:O	36:BO:105:ALA:HB3	2.20	0.41
22:DA:1362:C:N4	22:DA:1363:C:C4	2.89	0.41
22:DA:1378:A:H4'	22:DA:1379:U:OP1	2.20	0.41
22:DA:770:G:O4'	22:DA:1379:U:C5	2.74	0.41
1:AA:1048:G:N2	1:AA:1214:C:O2	2.54	0.41
22:DA:2015:A:C6	48:D0:3:VAL:HG23	2.55	0.41
24:BC:71:LYS:HB3	24:BC:96:TYR:HE2	1.84	0.41
22:DA:612:G:H2'	22:DA:614:A:C8	2.55	0.41
50:D2:11:LYS:O	50:D2:15:SER:N	2.53	0.41
22:DA:683:U:H2'	22:DA:684:G:O5'	2.20	0.41
26:DE:40:ARG:CZ	26:DE:92:HIS:CE1	3.03	0.41
22:DA:2280:G:O2'	22:DA:2388:A:N1	2.40	0.41
22:DA:947:A:H2'	22:DA:948:C:C6	2.56	0.41
22:DA:56:A:C2	22:DA:115:C:C2	3.08	0.41
29:DH:53:GLU:C	29:DH:55:GLU:N	2.72	0.41
1:CA:1346:A:O3'	1:CA:1347:G:H4'	2.21	0.41
17:AQ:45:HIS:CG	17:AQ:70:THR:HG22	2.56	0.41
22:DA:1731:G:H2'	22:DA:1732:C:H3'	2.02	0.41
1:CA:1088:G:C4	1:CA:1089:G:C8	3.08	0.41
1:CA:1089:G:C2	1:CA:1090:U:H1'	2.56	0.41
1:CA:1106:G:N2	1:CA:1107:C:C2	2.89	0.41
48:D0:40:ARG:O	48:D0:41:HIS:HB2	2.21	0.41
22:BA:2043:C:C4	22:BA:2777:G:C2	3.09	0.41
4:CD:50:ASP:O	4:CD:53:VAL:HG22	2.20	0.41
12:AL:24:LEU:CB	12:AL:59:ASN:HD22	2.33	0.41
13:AM:6:GLY:HA3	13:AM:66:GLU:HG3	2.02	0.41
1:AA:1370:G:H5''	9:AI:111:VAL:HG21	2.03	0.41
22:DA:1605:C:C4'	22:DA:1610:A:C6	3.03	0.41
24:BC:17:VAL:HB	24:BC:204:VAL:HG13	2.03	0.41
6:CF:55:HIS:O	6:CF:56:LYS:O	2.37	0.41
27:DF:74:VAL:CG2	27:DF:79:ILE:HD11	2.51	0.41
8:AH:28:PRO:O	8:AH:33:LYS:NZ	2.48	0.41
22:DA:900:A:C6	22:DA:901:C:C2	3.09	0.41
19:CS:79:THR:O	19:CS:79:THR:OG1	2.33	0.41
1:AA:663:A:H5'	1:AA:836:G:OP1	2.20	0.41
29:DH:130:VAL:CG1	29:DH:131:SER:N	2.82	0.41
1:AA:65:A:C5	1:AA:381:C:C5	3.08	0.41
22:BA:250:G:OP2	51:B3:13:ARG:NH1	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:114:LYS:HG2	25:DD:196:ALA:HB2	2.02	0.41
22:DA:536:G:H2'	22:DA:537:G:O4'	2.21	0.41
1:AA:457:G:C6	1:AA:458:U:N3	2.88	0.41
22:DA:920:A:C5	22:DA:921:C:C5	3.08	0.41
1:AA:426:U:H5''	4:AD:37:ALA:HB1	2.01	0.41
4:CD:150:LYS:O	4:CD:152:GLN:OE1	2.39	0.41
22:DA:752:A:N3	22:DA:752:A:H2'	2.36	0.41
1:CA:846:G:H2'	1:CA:846:G:N3	2.35	0.41
1:AA:1462:C:C2	1:AA:1463:U:C6	3.09	0.41
22:DA:1663:G:H3'	57:DA:3423:HOH:O	2.21	0.41
22:BA:2414:G:O2'	22:BA:2415:G:H5'	2.21	0.41
22:DA:792:A:O2'	22:DA:2440:C:N3	2.42	0.41
22:DA:2413:G:O2'	22:DA:2414:G:H5'	2.20	0.41
9:CI:118:LEU:CD1	9:CI:118:LEU:N	2.84	0.41
1:CA:144:G:C4	1:CA:179:A:C2	3.09	0.41
22:BA:388:G:N7	22:BA:390:U:C2'	2.84	0.41
5:CE:38:VAL:HG12	5:CE:117:VAL:CG2	2.50	0.41
22:DA:447:A:C8	22:DA:473:G:C6	3.08	0.41
20:CT:33:LYS:HA	20:CT:36:TYR:HD2	1.86	0.41
22:DA:171:U:H2'	22:DA:172:A:C8	2.55	0.41
27:BF:13:VAL:O	27:BF:14:LYS:C	2.59	0.41
1:AA:595:A:C6	1:AA:641:U:C6	3.09	0.41
1:AA:21:G:H1'	1:AA:915:A:N6	2.36	0.41
22:DA:245:G:O6	51:D3:8:ARG:CD	2.68	0.41
1:AA:172:A:C6	1:AA:174:A:C8	3.09	0.41
22:DA:2848:G:C8	37:DP:95:ALA:HB2	2.55	0.41
22:DA:2205:A:C2	22:DA:2206:C:C2	3.08	0.41
22:BA:210:C:OP1	50:B2:29:GLN:NE2	2.53	0.41
50:D2:34:ARG:HB2	50:D2:42:LEU:CD1	2.51	0.41
4:AD:197:GLU:CD	4:AD:197:GLU:H	2.24	0.41
42:BU:54:GLN:N	42:BU:55:PRO:HD2	2.35	0.41
22:DA:485:C:C4	22:DA:496:G:C6	3.08	0.41
9:CI:35:LEU:HD21	9:CI:48:VAL:HG21	2.02	0.41
1:CA:1269:A:N7	1:CA:1270:G:H1'	2.35	0.41
1:CA:1431:A:C6	1:CA:1432:G:N1	2.89	0.41
22:DA:1073:A:H2'	22:DA:1074:G:H5'	2.03	0.41
22:BA:833:A:OP2	33:BL:39:LYS:HE2	2.21	0.41
34:BM:17:ASN:O	34:BM:38:ARG:HD3	2.21	0.41
22:BA:1575:C:H2'	22:BA:1576:U:O4'	2.21	0.41
1:CA:560:A:N7	1:CA:566:G:C4	2.89	0.41
1:AA:1147:C:H4'	9:AI:7:TYR:CE1	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:23:TYR:CE1	18:AR:24:LYS:HG3	2.56	0.41
22:DA:2140:G:C6	22:DA:2152:G:C5	3.08	0.41
44:DW:37:ILE:HG22	44:DW:38:VAL:CG2	2.51	0.41
29:BH:82:SER:HB3	29:BH:146:VAL:HG12	2.03	0.41
37:BP:53:ARG:NH1	37:BP:53:ARG:CG	2.75	0.41
2:AB:27:MET:HE3	2:AB:193:PRO:HG3	2.02	0.41
22:DA:1366:A:C4	22:DA:1367:A:C8	3.09	0.41
22:DA:772:C:H2'	22:DA:773:U:O4'	2.20	0.41
1:AA:1195:C:H2'	1:AA:1197:A:O4'	2.20	0.41
28:DG:91:GLY:O	28:DG:92:VAL:C	2.58	0.41
1:CA:257:G:C2	1:CA:270:A:C6	3.08	0.41
22:BA:1001:A:P	57:BA:3736:HOH:O	2.73	0.41
22:DA:232:G:N1	22:DA:420:C:OP1	2.53	0.41
18:CR:20:GLU:O	18:CR:21:ILE:C	2.57	0.41
41:DT:77:ARG:O	41:DT:78:SER:HB2	2.21	0.41
43:BV:80:HIS:ND1	43:BV:83:LYS:CG	2.84	0.41
1:CA:1000:A:H3'	1:CA:1001:C:C6	2.56	0.41
23:DB:29:A:C2	23:DB:30:C:C2	3.09	0.41
1:AA:1099:G:C5	1:AA:1100:C:C5	3.08	0.41
22:BA:2271:G:H2'	22:BA:2272:U:H6	1.86	0.41
2:CB:87:CYS:SG	2:CB:89:GLN:NE2	2.94	0.41
1:AA:1299:A:C6	1:AA:1301:U:O2	2.74	0.41
1:AA:1308:U:OP2	13:AM:98:ARG:HG3	2.21	0.41
45:DX:39:TRP:HB2	45:DX:46:PHE:CE2	2.56	0.41
22:BA:499:U:O4	22:BA:500:G:C6	2.73	0.41
22:BA:221:A:C4	22:BA:266:G:N7	2.88	0.41
22:DA:251:A:H4'	33:DL:47:ARG:NH2	2.35	0.41
30:DI:57:VAL:HG22	30:DI:69:PHE:HB2	2.02	0.41
22:BA:1584:U:C6	22:BA:1584:U:OP1	2.73	0.41
22:DA:804:A:H2'	22:DA:806:C:C4	2.56	0.41
1:CA:79:G:N2	1:CA:91:U:O2	2.54	0.41
1:CA:587:G:H4'	8:CH:4:GLN:HA	2.03	0.41
22:BA:1688:U:O2	22:BA:1688:U:H2'	2.20	0.41
1:CA:164:G:H2'	1:CA:164:G:N3	2.35	0.41
1:AA:1014:A:C4	19:AS:34:TRP:CZ3	3.08	0.41
16:AP:78:VAL:HG13	16:AP:78:VAL:O	2.20	0.41
1:AA:1162:C:H2'	1:AA:1163:A:O4'	2.21	0.41
1:CA:792:A:H1'	1:CA:794:A:N7	2.35	0.41
1:AA:855:U:C4	1:AA:856:C:C5	3.08	0.41
1:AA:238:A:H2'	1:AA:239:U:O4'	2.21	0.41
22:BA:2243:U:O2'	22:BA:2244:U:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:43:PHE:CZ	15:CO:53:ARG:HA	2.56	0.41
42:DU:21:LYS:HB2	42:DU:39:ILE:HD12	2.02	0.41
22:DA:1866:A:N7	22:DA:1867:G:C8	2.88	0.41
22:BA:2444:G:OP2	26:BE:63:LYS:HD3	2.20	0.41
4:AD:88:GLU:HG2	4:AD:188:ARG:HD3	2.01	0.41
1:AA:18:C:H2'	1:AA:19:A:O4'	2.21	0.41
22:DA:1120:G:C5	22:DA:1121:C:C5	3.09	0.41
22:DA:2314:A:C2	22:DA:2315:G:C5	3.09	0.41
29:BH:30:LEU:C	29:BH:32:PRO:HD2	2.41	0.41
13:CM:22:ILE:HG22	13:CM:23:TYR:N	2.36	0.41
1:CA:972:C:H4'	10:CJ:59:LYS:CG	2.50	0.41
4:CD:76:TYR:O	4:CD:77:LYS:C	2.58	0.41
1:AA:1140:C:HO2'	1:AA:1141:C:P	2.44	0.41
16:AP:51:ARG:HB3	16:AP:51:ARG:NH1	2.35	0.41
22:DA:1231:U:C2'	22:DA:1232:G:H8	2.33	0.41
36:DO:48:LEU:O	36:DO:49:VAL:CG2	2.69	0.41
40:DS:95:ARG:CG	40:DS:95:ARG:O	2.68	0.41
30:BI:127:ARG:HA	30:BI:130:GLU:HG3	2.02	0.41
30:DI:29:GLY:HA2	30:DI:33:VAL:HB	2.03	0.41
22:BA:2592:G:C5	22:BA:2593:U:C4	3.09	0.41
40:BS:36:LEU:HD13	40:BS:48:LYS:HA	2.01	0.41
22:BA:1424:G:C2	22:BA:1425:G:H1'	2.56	0.41
24:BC:199:GLU:O	24:BC:200:HIS:C	2.58	0.41
22:BA:2534:A:C2'	22:BA:2535:G:O5'	2.69	0.41
22:BA:1879:C:H2'	22:BA:1880:U:O4'	2.20	0.41
27:BF:14:LYS:O	27:BF:18:THR:CG2	2.69	0.41
21:AU:25:LYS:O	21:AU:27:GLY:N	2.53	0.41
11:CK:52:PHE:CE2	11:CK:62:ALA:HB1	2.55	0.41
22:DA:2250:G:C2	34:DM:82:MET:CB	3.03	0.41
22:DA:218:A:H2'	22:DA:219:A:O4'	2.21	0.41
1:CA:382:A:H2'	1:CA:383:A:C8	2.55	0.41
25:DD:106:LYS:HB2	25:DD:206:ALA:HB2	2.02	0.41
43:DV:42:LEU:N	43:DV:42:LEU:HD23	2.36	0.41
34:BM:58:LYS:C	34:BM:60:GLN:H	2.24	0.41
41:DT:8:LEU:CD2	41:DT:50:LEU:HD21	2.50	0.41
48:D0:27:SER:O	48:D0:28:LEU:C	2.59	0.41
26:BE:134:LEU:HD23	26:BE:160:ALA:O	2.19	0.41
27:DF:111:ILE:HB	27:DF:114:PHE:CB	2.51	0.41
41:BT:29:THR:HG23	41:BT:86:THR:N	2.35	0.41
22:BA:439:A:H2'	22:BA:440:C:O4'	2.19	0.41
2:CB:115:LYS:HA	2:CB:118:GLU:HG2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1350:C:N3	22:BA:1382:G:C2	2.88	0.41
49:B1:35:GLU:HA	49:B1:49:TYR:O	2.21	0.41
13:CM:81:MET:O	13:CM:83:LEU:N	2.53	0.41
41:DT:38:ALA:O	41:DT:39:THR:CB	2.67	0.41
22:BA:2166:U:O4	22:BA:2170:A:N7	2.54	0.41
41:BT:47:VAL:CG1	41:BT:55:VAL:CG2	2.99	0.41
24:DC:129:THR:CG2	24:DC:130:LEU:N	2.83	0.41
40:DS:47:VAL:HB	40:DS:103:ILE:HG21	2.02	0.41
8:AH:2:SER:N	8:AH:4:GLN:HG3	2.36	0.41
22:DA:1040:A:H2'	22:DA:1041:G:O4'	2.20	0.41
46:DY:20:ASN:O	46:DY:24:GLU:HB2	2.20	0.41
22:DA:2179:C:H2'	22:DA:2180:U:C6	2.55	0.41
10:CJ:78:GLU:HA	10:CJ:79:PRO:HD3	1.89	0.41
23:BB:46:A:H2'	23:BB:47:C:O4'	2.21	0.41
7:CG:133:THR:HA	7:CG:136:LYS:HB3	2.03	0.41
45:BX:18:ARG:CZ	45:BX:24:ALA:HB2	2.51	0.41
4:AD:143:VAL:O	4:AD:143:VAL:CG2	2.65	0.41
3:AC:175:LEU:O	3:AC:175:LEU:HD12	2.21	0.41
2:AB:9:MET:SD	2:AB:9:MET:N	2.94	0.41
20:AT:51:PHE:C	20:AT:51:PHE:CD1	2.93	0.41
22:BA:779:U:H2'	22:BA:779:U:O2	2.21	0.41
17:AQ:43:LYS:O	17:AQ:44:LEU:HD23	2.21	0.41
8:AH:26:THR:O	8:AH:27:MET:HB3	2.21	0.41
43:DV:49:ASN:O	43:DV:52:ALA:HB3	2.21	0.41
23:DB:55:U:H4'	27:DF:25:VAL:HG12	2.02	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
22:BA:999:U:H5	22:BA:1154:G:N7	2.19	0.41
22:BA:1071:G:O4'	22:BA:1089:A:N7	2.53	0.41
5:CE:153:VAL:HG23	5:CE:153:VAL:O	2.20	0.41
22:BA:826:U:H2'	22:BA:828:U:O4'	2.21	0.41
22:DA:36:G:N2	22:DA:445:C:C2	2.89	0.41
22:DA:1358:G:O6	22:DA:1371:G:C8	2.74	0.41
22:DA:513:A:C2	22:DA:514:A:N7	2.89	0.41
22:DA:191:A:C2	22:DA:192:C:N3	2.89	0.41
14:AN:64:CYS:HB2	14:AN:80:SER:HB2	2.03	0.41
41:DT:24:MET:CG	41:DT:29:THR:O	2.69	0.41
1:AA:1314:C:N4	19:AS:4:SER:HA	2.35	0.41
24:BC:71:LYS:HE3	24:BC:96:TYR:CD2	2.56	0.41
22:DA:373:U:C2	22:DA:374:A:C8	3.08	0.41
45:DX:54:LYS:HA	45:DX:57:ARG:CG	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:116:C:C4	22:DA:117:G:N7	2.88	0.41
22:DA:128:C:C4	22:DA:129:C:N4	2.89	0.41
22:BA:359:G:H2'	22:BA:360:U:O4'	2.21	0.41
22:DA:410:G:C6	22:DA:2407:A:N6	2.89	0.41
33:BL:87:GLY:O	33:BL:89:VAL:HG12	2.21	0.41
1:AA:464:U:N3	1:AA:467:U:OP2	2.50	0.41
31:BJ:80:HIS:O	31:BJ:81:ILE:C	2.58	0.41
1:CA:375:U:C4	1:CA:376:G:N7	2.89	0.41
5:CE:134:ILE:HD12	5:CE:134:ILE:H	1.85	0.41
5:CE:36:LEU:HD21	5:CE:137:VAL:CG1	2.50	0.41
46:BY:57:LEU:O	46:BY:57:LEU:CG	2.69	0.41
22:BA:1140:C:O4'	22:BA:1143:A:C2	2.73	0.41
22:DA:2134:A:C6	22:DA:2135:A:C5	3.08	0.41
22:DA:1096:A:C5	22:DA:1097:U:H5	2.39	0.41
22:DA:2115:G:N3	22:DA:2117:A:C8	2.89	0.41
13:AM:64:VAL:O	13:AM:64:VAL:CG1	2.63	0.41
16:AP:21:VAL:HG21	16:AP:60:TRP:CD1	2.56	0.41
26:DE:150:THR:O	26:DE:192:ALA:HB2	2.20	0.41
1:CA:913:A:H4'	1:CA:914:A:H4'	2.03	0.41
22:DA:2466:C:O2'	22:DA:2467:C:H5'	2.21	0.41
23:BB:30:C:C2'	23:BB:31:C:H5'	2.48	0.41
2:AB:210:VAL:O	2:AB:211:THR:C	2.59	0.41
2:AB:41:ILE:N	2:AB:41:ILE:CD1	2.83	0.41
1:AA:721:G:C6	1:AA:733:G:C2	3.09	0.41
20:CT:44:LYS:HB3	20:CT:87:ALA:HB1	2.02	0.41
42:DU:18:ASP:HB3	42:DU:21:LYS:HG3	2.01	0.41
22:DA:1877:A:H2'	22:DA:1878:G:C8	2.56	0.41
22:BA:1735:A:C4	22:BA:1736:U:C6	3.08	0.41
35:BN:46:ARG:O	35:BN:50:PRO:HG2	2.21	0.41
22:DA:1838:C:C4	22:DA:1899:A:C4	3.08	0.41
1:AA:691:G:O6	11:AK:57:LYS:HE2	2.20	0.41
22:DA:1911:U:H2'	22:DA:1918:A:C2	2.55	0.41
32:BK:41:ILE:HD11	32:BK:58:LEU:CD2	2.51	0.41
8:CH:78:VAL:N	8:CH:126:ILE:O	2.51	0.41
24:DC:252:THR:O	24:DC:253:LYS:HB2	2.21	0.41
4:CD:149:ALA:O	4:CD:150:LYS:C	2.56	0.41
1:AA:1125:U:C5	1:AA:1127:G:C5	3.09	0.41
16:AP:38:PHE:CE2	16:AP:51:ARG:HB2	2.56	0.41
22:DA:1275:A:C5	35:DN:16:HIS:CD2	3.08	0.41
12:AL:38:TYR:O	12:AL:39:THR:CG2	2.69	0.41
22:DA:2771:C:H2'	22:DA:2772:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:86:ALA:O	9:AI:88:MET:N	2.54	0.41
23:DB:15:A:H1'	23:DB:109:A:C8	2.56	0.41
1:CA:101:A:C5	1:CA:102:G:N7	2.88	0.41
1:CA:834:U:H2'	1:CA:835:U:C6	2.56	0.41
9:CI:13:LYS:O	9:CI:14:SER:CB	2.69	0.41
1:AA:676:A:C2	1:AA:677:U:C2	3.09	0.41
1:CA:414:A:N1	1:CA:415:A:C4	2.89	0.41
11:CK:100:LEU:O	11:CK:101:ASN:C	2.59	0.41
22:DA:515:A:C8	22:DA:516:C:C6	3.08	0.41
22:BA:2779:U:C5	22:BA:2781:A:C2	3.09	0.41
1:AA:675:A:OP1	18:AR:71:THR:HG21	2.21	0.41
3:CC:179:ARG:O	3:CC:206:GLU:O	2.38	0.41
25:DD:8:LYS:HB2	25:DD:201:LEU:CD1	2.51	0.41
23:DB:90:C:C5'	34:DM:18:ARG:HG2	2.50	0.41
1:CA:40:C:H2'	1:CA:41:G:O4'	2.20	0.41
40:DS:47:VAL:O	40:DS:47:VAL:CG2	2.69	0.41
22:BA:629:G:N3	22:BA:639:U:O2'	2.51	0.41
34:BM:95:LEU:C	34:BM:96:ILE:HD13	2.40	0.41
22:DA:2634:A:O2'	25:DD:79:LEU:HD12	2.21	0.41
50:D2:24:THR:HG23	50:D2:27:GLY:HA3	2.03	0.41
22:BA:2392:A:O2'	33:BL:60:ARG:O	2.36	0.41
4:CD:153:SER:O	4:CD:154:ARG:C	2.58	0.41
39:BR:69:GLY:C	39:BR:70:GLU:O	2.58	0.41
50:B2:30:VAL:O	50:B2:34:ARG:HG3	2.20	0.41
23:BB:101:A:H2'	23:BB:102:G:O4'	2.21	0.41
1:AA:409:U:H2'	1:AA:410:G:O4'	2.21	0.41
28:DG:62:TRP:HA	28:DG:62:TRP:CE3	2.56	0.41
27:DF:136:ILE:HG22	27:DF:136:ILE:O	2.21	0.41
42:BU:77:THR:O	42:BU:79:LYS:HG2	2.20	0.41
22:BA:2816:G:O3'	35:BN:99:LYS:HE2	2.21	0.41
22:DA:2516:A:C2'	22:DA:2517:C:O5'	2.69	0.41
24:DC:71:LYS:HG2	24:DC:102:ARG:CZ	2.51	0.41
29:BH:90:LEU:HG	29:BH:92:GLY:C	2.41	0.41
22:BA:1071:G:C4	22:BA:1089:A:C6	3.08	0.41
5:CE:156:LYS:HD3	8:CH:71:VAL:HG13	2.03	0.41
12:CL:43:LYS:O	12:CL:44:LYS:O	2.39	0.41
22:DA:36:G:C2	22:DA:445:C:N3	2.88	0.41
26:DE:135:ALA:O	26:DE:139:LYS:HB2	2.20	0.41
40:DS:33:LEU:CD2	40:DS:52:GLU:CG	2.98	0.41
40:DS:58:ALA:O	40:DS:62:ASP:O	2.39	0.41
3:AC:22:TRP:CD1	3:AC:59:ARG:HD2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:154:ALA:O	5:AE:157:ARG:C	2.59	0.41
22:DA:952:G:C2	22:DA:966:G:C2	3.09	0.41
1:AA:375:U:C2	1:AA:376:G:C8	3.09	0.41
1:AA:454:G:H2'	1:AA:455:G:H5'	2.02	0.41
22:DA:420:C:H2'	22:DA:421:C:H6	1.85	0.41
22:DA:1439:A:C8	22:DA:1440:U:C6	3.09	0.41
22:DA:83:A:H2	22:DA:103:A:N7	2.18	0.41
4:AD:28:ILE:HG22	4:AD:28:ILE:O	2.20	0.41
22:DA:1404:C:C2'	22:DA:1405:U:O5'	2.68	0.41
22:DA:1599:U:P	41:DT:40:LYS:HD2	2.60	0.41
4:AD:30:THR:O	4:AD:31:LYS:C	2.58	0.41
9:AI:44:ALA:HB1	9:AI:47:VAL:CG1	2.50	0.41
22:BA:971:G:C6	22:BA:972:A:C4	3.08	0.41
1:CA:243:A:C2	1:CA:246:A:C8	3.08	0.41
1:CA:243:A:C2	1:CA:245:U:C2	3.09	0.41
1:CA:463:U:H5'	1:CA:464:U:OP2	2.21	0.41
22:DA:2281:A:H2'	22:DA:2282:G:H5'	2.03	0.41
22:BA:71:A:N1	22:BA:114:U:H1'	2.36	0.41
22:DA:565:C:C2'	22:DA:566:U:H5'	2.51	0.41
22:DA:569:U:H2'	22:DA:570:G:O4'	2.21	0.41
22:DA:1933:G:O2'	22:DA:1974:C:H4'	2.20	0.41
29:DH:1:MET:HB3	29:DH:21:VAL:O	2.20	0.41
49:B1:25:LYS:CD	49:B1:52:ALA:O	2.69	0.41
7:AG:69:VAL:HG21	7:AG:104:ILE:CD1	2.50	0.41
22:DA:55:G:C2	22:DA:116:C:C2	3.09	0.41
22:DA:116:C:C2	22:DA:117:G:C8	3.09	0.41
1:AA:1101:A:N3	1:AA:1102:A:H1'	2.36	0.41
38:DQ:58:ARG:NH2	38:DQ:92:ARG:CZ	2.84	0.41
1:CA:684:U:O2	11:CK:41:ALA:HB3	2.21	0.41
22:DA:2127:G:O2'	22:DA:2173:A:C4	2.73	0.41
20:AT:67:ILE:HD12	20:AT:71:LYS:HG2	2.01	0.41
1:AA:257:G:N2	1:AA:258:G:C4	2.89	0.41
1:AA:960:U:H2'	1:AA:1225:A:H62	1.85	0.41
1:AA:1239:A:H2'	1:AA:1298:U:O4	2.21	0.41
1:AA:178:C:H2'	1:AA:179:A:O4'	2.21	0.41
1:CA:1219:A:C6	1:CA:1220:G:C6	3.09	0.41
1:CA:1090:U:H2'	1:CA:1091:U:C6	2.56	0.41
2:AB:68:LEU:HD12	2:AB:154:MET:HE1	2.02	0.41
22:DA:2415:G:C5	22:DA:2416:C:C4	3.08	0.41
22:BA:2311:A:C8	27:BF:77:PHE:CG	3.08	0.41
22:BA:1142:A:N3	22:BA:1144:A:C8	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:869:G:H1'	34:DM:8:LYS:HD2	2.01	0.41
33:BL:81:ASP:HB3	33:BL:100:ILE:CD1	2.51	0.41
22:DA:377:G:C6	22:DA:378:C:N4	2.89	0.41
22:BA:1421:G:H2'	22:BA:1421:G:N3	2.35	0.41
13:AM:66:GLU:O	13:AM:69:LEU:N	2.54	0.41
13:AM:8:ASN:OD1	13:AM:9:ILE:N	2.54	0.41
32:DK:78:ARG:NH2	37:DP:73:VAL:CG1	2.84	0.41
22:DA:2503:A:C5'	22:DA:2503:A:N3	2.84	0.41
16:AP:46:LYS:HD3	16:AP:47:GLU:H	1.82	0.41
16:AP:60:TRP:HA	16:AP:63:GLN:HB3	2.03	0.41
22:DA:291:G:N2	22:DA:350:G:C8	2.89	0.41
22:DA:826:U:H5''	57:DA:3696:HOH:O	2.19	0.41
1:AA:1401:G:C2	1:AA:1402:C:H1'	2.56	0.41
4:AD:97:ARG:O	4:AD:100:ASN:HB3	2.20	0.41
1:CA:228:A:H2'	1:CA:229:U:O4'	2.21	0.41
1:CA:976:G:C8	1:CA:1361:G:O6	2.74	0.41
1:AA:1059:C:N3	1:AA:1060:U:C5	2.89	0.41
22:BA:2326:C:C1'	22:BA:2327:A:OP1	2.68	0.41
1:CA:69:G:H5'	1:CA:70:U:OP1	2.20	0.41
22:BA:817:C:H2'	22:BA:818:G:O4'	2.21	0.41
22:DA:1203:U:C1'	33:DL:4:ASN:HB3	2.47	0.41
22:DA:1237:A:N3	22:DA:1238:G:H1'	2.35	0.41
16:AP:78:VAL:CG1	16:AP:78:VAL:O	2.68	0.41
4:CD:58:LYS:HG3	4:CD:59:GLN:N	2.36	0.41
8:AH:11:LEU:HD23	8:AH:11:LEU:N	2.36	0.41
22:DA:877:A:C2'	22:DA:878:A:OP2	2.68	0.41
24:BC:252:THR:O	24:BC:254:GLY:N	2.54	0.41
22:BA:585:G:H5''	22:BA:586:A:OP1	2.21	0.41
22:BA:2317:A:H2'	22:BA:2318:G:H5'	2.03	0.41
10:AJ:42:LEU:HG	10:AJ:43:PRO:HD2	2.02	0.41
22:BA:1106:G:C2	22:BA:1107:G:N9	2.88	0.41
22:BA:1452:G:C4	22:BA:2702:G:C6	3.09	0.41
1:AA:1080:A:OP1	5:AE:52:LYS:CE	2.68	0.41
16:CP:28:ARG:CG	16:CP:29:ASN:N	2.84	0.41
22:DA:2720:U:C4	22:DA:2872:A:C2	3.08	0.41
21:CU:15:ALA:O	21:CU:16:LEU:C	2.59	0.41
1:CA:345:C:OP1	37:DP:39:ARG:CD	2.69	0.41
22:DA:2646:C:N3	22:DA:2675:A:C2	2.89	0.41
38:DQ:25:TYR:CD2	38:DQ:25:TYR:C	2.94	0.41
20:CT:39:ILE:HD11	20:CT:83:ILE:CG2	2.51	0.41
1:AA:181:A:N6	1:AA:195:A:C8	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:591:U:H2'	1:AA:592:G:C8	2.56	0.41
22:BA:2839:G:H2'	22:BA:2840:C:O5'	2.20	0.41
1:AA:69:G:H3'	1:AA:70:U:C6	2.56	0.41
11:AK:31:ILE:HG13	11:AK:31:ILE:O	2.18	0.41
22:DA:2553:G:H2'	22:DA:2554:U:C4'	2.50	0.41
22:DA:1806:C:C5	22:DA:1807:G:C8	3.08	0.41
36:DO:97:PHE:HB3	36:DO:103:VAL:HG11	2.01	0.41
1:CA:1293:C:H2'	1:CA:1294:G:O4'	2.21	0.41
12:CL:38:TYR:O	12:CL:39:THR:HG23	2.21	0.41
1:CA:1092:A:C2	1:CA:1183:U:C2	3.09	0.41
1:CA:1183:U:C2'	1:CA:1184:G:OP1	2.69	0.41
1:AA:1154:G:H2'	1:AA:1155:A:H8	1.86	0.41
1:AA:1153:G:C4	1:AA:1154:G:C8	3.09	0.41
32:BK:41:ILE:HD11	32:BK:58:LEU:HD22	2.02	0.41
12:CL:72:HIS:O	12:CL:72:HIS:ND1	2.54	0.41
22:BA:45:G:H5''	22:BA:46:G:OP1	2.21	0.41
22:DA:1844:C:C2	22:DA:1845:G:C8	3.09	0.41
13:CM:22:ILE:HB	13:CM:25:VAL:CG1	2.51	0.41
1:CA:1261:A:N6	1:CA:1275:A:N9	2.68	0.41
34:BM:69:PRO:O	34:BM:70:ASP:OD2	2.39	0.41
22:DA:2209:G:C2	22:DA:2216:G:N3	2.88	0.41
22:BA:523:C:C2'	22:BA:524:G:H5'	2.51	0.41
4:CD:152:GLN:N	4:CD:152:GLN:OE1	2.53	0.41
1:CA:109:A:N1	1:CA:327:A:C6	2.88	0.41
3:CC:134:MET:SD	3:CC:153:VAL:HG12	2.60	0.41
46:DY:27:ASN:O	46:DY:31:GLN:HB2	2.21	0.41
6:AF:17:GLN:HG2	4:CD:189:SER:HB2	2.02	0.41
24:BC:221:ARG:NH2	57:BC:404:HOH:O	2.53	0.41
22:BA:1354:A:H2'	22:BA:1355:G:O4'	2.21	0.41
1:AA:1461:G:H2'	1:AA:1462:C:H6	1.86	0.41
22:BA:1441:G:H2'	22:BA:1442:U:H6	1.84	0.41
1:AA:615:G:C2	1:AA:616:G:C8	3.09	0.41
1:AA:616:G:O2'	1:AA:617:G:H5'	2.20	0.41
24:DC:53:HIS:HA	24:DC:217:ARG:HB2	2.03	0.41
27:DF:9:LYS:O	27:DF:13:VAL:HB	2.21	0.41
27:BF:17:MET:HE1	27:BF:22:TYR:HB2	2.01	0.41
1:AA:771:G:C5	1:AA:772:U:C5	3.08	0.41
29:DH:2:GLN:O	29:DH:3:VAL:O	2.38	0.41
23:DB:24:G:H4'	23:DB:25:U:C5	2.55	0.41
1:AA:1296:C:H5''	1:AA:1297:G:OP2	2.21	0.41
22:BA:2673:G:N3	22:BA:2674:G:C8	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2001:C:H4'	22:BA:2689:U:H2'	2.03	0.41
22:BA:1346:G:C2'	22:BA:1347:A:H5'	2.51	0.41
22:BA:770:G:O2'	22:BA:771:G:H5'	2.21	0.41
1:CA:1055:A:C5	1:CA:1206:G:C6	3.09	0.41
2:CB:94:HIS:CG	2:CB:95:ARG:NH2	2.89	0.41
1:AA:737:C:C2	1:AA:738:C:C5	3.08	0.41
1:CA:4:U:C2'	1:CA:4:U:O2	2.68	0.41
22:DA:404:A:C1'	22:DA:405:U:OP2	2.69	0.41
15:CO:41:GLY:O	15:CO:42:HIS:C	2.59	0.41
31:BJ:23:LYS:CE	31:BJ:142:ILE:OXT	2.69	0.41
3:CC:64:ILE:HG23	3:CC:99:ALA:HB2	2.02	0.41
1:AA:225:C:H2'	1:AA:226:G:O4'	2.20	0.41
25:BD:11:MET:O	25:BD:12:THR:CG2	2.68	0.41
21:CU:4:ILE:N	21:CU:19:PHE:CE1	2.89	0.41
47:DZ:3:LYS:N	47:DZ:3:LYS:HD3	2.35	0.41
30:DI:22:PRO:CB	30:DI:23:PRO:HD3	2.51	0.41
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.21	0.41
1:CA:1412:C:C2	1:CA:1413:A:C8	3.09	0.41
1:CA:1327:C:N4	1:CA:1328:C:N4	2.68	0.41
1:CA:671:G:O2'	1:CA:672:U:H5'	2.21	0.41
1:AA:728:A:OP1	15:AO:54:ARG:NH2	2.53	0.41
22:BA:416:U:H2'	22:BA:417:C:C6	2.55	0.41
22:BA:954:G:OP2	34:BM:16:ARG:NH2	2.54	0.41
31:DJ:4:PHE:CG	38:DQ:100:VAL:HG11	2.56	0.41
5:AE:107:ALA:CB	5:AE:125:ALA:HB3	2.51	0.41
1:AA:1323:G:O2'	1:AA:1324:A:H5'	2.21	0.41
8:AH:41:LYS:O	8:AH:42:GLU:C	2.59	0.41
22:DA:688:U:OP1	50:D2:2:LYS:HD3	2.20	0.41
1:CA:186:C:H2'	1:CA:186:C:O2	2.21	0.41
3:CC:13:GLY:C	3:CC:14:ILE:HD13	2.41	0.41
22:DA:459:U:C5	22:DA:469:G:N2	2.88	0.41
22:BA:1301:A:N3	22:BA:1301:A:H2'	2.36	0.41
3:CC:23:PHE:CD2	10:CJ:97:ASP:HB2	2.56	0.41
1:AA:539:A:H2'	1:AA:540:G:C8	2.56	0.41
1:CA:867:G:C5	1:CA:868:C:C5	3.08	0.41
22:DA:1501:G:H2'	22:DA:1502:A:O4'	2.21	0.41
40:DS:57:ASN:N	40:DS:57:ASN:OD1	2.53	0.41
3:CC:167:TRP:C	3:CC:167:TRP:CE3	2.94	0.41
22:BA:167:A:H2'	22:BA:168:G:O4'	2.21	0.41
7:AG:108:ALA:O	7:AG:119:ARG:HD3	2.19	0.41
26:DE:195:GLN:O	26:DE:199:MET:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:28:A:C5	22:BA:29:U:C5	3.08	0.41
22:BA:2486:C:H2'	22:BA:2487:G:O5'	2.19	0.41
39:BR:40:MET:O	39:BR:41:ILE:HG12	2.21	0.41
15:CO:60:VAL:O	15:CO:63:ARG:HB3	2.20	0.41
22:DA:1014:A:C6	22:DA:1015:U:C4	3.09	0.41
22:BA:1906:G:C5	22:BA:1929:G:N2	2.88	0.41
29:BH:129:GLU:C	29:BH:130:VAL:HG23	2.41	0.41
53:B5:94:TYR:O	53:B5:95:VAL:HG23	2.20	0.41
3:CC:50:ALA:O	3:CC:51:SER:HB2	2.21	0.41
1:CA:49:U:O4	1:CA:365:U:H5	2.03	0.41
1:CA:1428:A:N1	1:CA:1473:G:C6	2.89	0.41
27:DF:69:LYS:HG3	27:DF:84:PRO:HA	2.02	0.41
22:BA:215:G:H4'	22:BA:216:A:OP1	2.20	0.41
9:CI:71:GLY:O	9:CI:75:GLN:N	2.46	0.41
42:BU:7:ARG:O	42:BU:8:ASP:O	2.38	0.41
29:DH:118:PRO:HB2	29:DH:119:ASN:H	1.72	0.41
22:DA:2884:U:O2	22:DA:2884:U:O4'	2.38	0.41
26:DE:22:ASP:N	26:DE:22:ASP:OD2	2.54	0.41
37:BP:110:ILE:O	37:BP:110:ILE:HG12	2.20	0.41
44:DW:85:GLU:OE2	44:DW:85:GLU:HA	2.21	0.41
22:DA:2766:A:H2'	22:DA:2766:A:N3	2.36	0.41
1:AA:1340:A:H2'	1:AA:1341:U:O4'	2.21	0.41
1:AA:865:A:H5'	1:AA:1078:U:O4	2.20	0.41
43:DV:30:ILE:O	43:DV:37:PRO:HA	2.21	0.41
22:DA:2246:G:H2'	22:DA:2247:A:O4'	2.21	0.41
22:BA:259:G:O2'	22:BA:260:G:H5'	2.20	0.41
22:BA:1816:C:C5	24:BC:62:TYR:CE1	3.09	0.41
16:CP:4:ILE:CD1	16:CP:65:ALA:HB1	2.51	0.41
22:DA:100:U:O4'	22:DA:101:A:C2	2.73	0.41
27:DF:99:PHE:HA	27:DF:102:ARG:NE	2.36	0.41
6:CF:88:MET:SD	6:CF:90:MET:SD	3.19	0.41
2:AB:111:ILE:O	2:AB:114:LEU:N	2.54	0.41
22:DA:1483:G:C6	22:DA:1484:U:C4	3.09	0.41
1:AA:697:U:C5	1:AA:698:G:C8	3.09	0.41
1:CA:929:G:C5	1:CA:930:C:C5	3.08	0.41
22:BA:2331:G:O2'	22:BA:2336:A:N1	2.49	0.41
22:BA:218:A:OP2	57:BA:3225:HOH:O	2.22	0.41
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.56	0.41
13:CM:34:LEU:HD22	13:CM:39:ILE:HG21	2.02	0.41
3:AC:97:VAL:HB	3:AC:98:PRO:HD2	2.02	0.41
34:DM:34:LYS:O	34:DM:128:THR:CG2	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:132:PHE:CE2	29:BH:142:VAL:CG2	3.04	0.41
22:BA:1153:C:C4	22:BA:1154:G:C5	3.09	0.41
23:BB:28:C:OP1	36:BO:31:THR:HG21	2.20	0.41
22:DA:206:U:C2	22:DA:207:A:C8	3.08	0.41
22:DA:802:A:H2'	22:DA:803:U:C6	2.56	0.41
19:AS:4:SER:O	19:AS:5:LEU:HB2	2.21	0.41
1:AA:451:A:H4'	1:AA:452:A:O5'	2.21	0.41
22:DA:2282:G:OP1	22:DA:2283:C:H1'	2.21	0.41
23:DB:59:A:H2'	23:DB:60:C:O4'	2.20	0.41
1:CA:74:A:C2	1:CA:75:G:C8	3.09	0.41
22:DA:178:G:C6	22:DA:179:C:C5	3.09	0.41
40:BS:29:VAL:CG1	40:BS:55:ILE:CD1	2.99	0.41
11:CK:36:ASP:CG	11:CK:40:ASN:HB2	2.42	0.41
1:AA:258:G:C5	1:AA:259:G:N7	2.89	0.41
1:AA:958:A:N6	1:AA:959:A:N1	2.69	0.41
22:BA:2188:U:C4	22:BA:2189:U:O4	2.74	0.41
22:DA:79:C:C4	22:DA:80:G:N7	2.89	0.41
22:DA:1469:A:C2	22:DA:1470:A:C5	3.09	0.41
2:AB:79:ALA:C	2:AB:82:ASP:OD2	2.58	0.41
16:CP:39:PHE:O	16:CP:41:PRO:HD3	2.21	0.41
1:CA:1072:G:C4	1:CA:1104:G:N2	2.89	0.41
2:CB:102:THR:HA	2:CB:179:LEU:HD21	2.01	0.41
2:AB:149:GLY:O	2:AB:152:LYS:N	2.53	0.41
27:BF:33:LYS:HG2	27:BF:157:THR:HB	2.02	0.41
20:AT:43:ASP:O	20:AT:47:ALA:HB2	2.21	0.41
22:DA:2819:G:H1'	22:DA:2828:G:N2	2.36	0.41
33:BL:85:VAL:HA	33:BL:98:ALA:HB2	2.02	0.41
22:DA:396:G:H5'	22:DA:396:G:H8	1.86	0.41
22:BA:300:A:OP2	42:BU:97:LYS:NZ	2.53	0.41
1:CA:77:A:C2	1:CA:93:U:N3	2.89	0.41
2:CB:207:ILE:O	2:CB:210:VAL:HG13	2.21	0.41
27:BF:119:ALA:HB1	27:BF:167:ARG:CD	2.51	0.41
22:BA:1088:A:N3	22:BA:1088:A:H3'	2.36	0.41
34:DM:2:LEU:HB2	34:DM:69:PRO:HG2	2.03	0.41
22:BA:2127:G:H5'	22:BA:2128:G:OP1	2.21	0.41
23:BB:35:C:C3'	23:BB:36:C:H5'	2.50	0.41
22:DA:2728:U:O2'	22:DA:2729:G:H5''	2.21	0.41
22:BA:1014:A:C2	22:BA:1149:G:C4	3.08	0.41
13:AM:29:ARG:CZ	13:AM:63:PHE:CB	2.99	0.41
5:CE:83:HIS:HB2	5:CE:84:PRO:HD2	2.01	0.41
22:DA:2370:G:H4'	49:D1:44:ARG:NH1	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:115:ALA:O	30:BI:116:ASP:HB2	2.21	0.41
2:CB:199:VAL:C	2:CB:200:ILE:HD12	2.41	0.41
1:CA:822:U:C2	1:CA:823:C:C5	3.08	0.41
22:BA:49:A:C8	22:BA:51:G:C2	3.09	0.41
17:CQ:52:GLU:CD	17:CQ:75:LEU:HD21	2.42	0.41
22:DA:1838:C:C5	22:DA:1899:A:C6	3.09	0.41
24:BC:36:LYS:O	24:BC:37:ASN:HB3	2.19	0.41
11:AK:55:SER:O	11:AK:56:ARG:C	2.58	0.41
1:AA:1288:A:C6	1:AA:1289:A:C5	3.08	0.41
1:CA:1263:C:C5	1:CA:1264:U:C5	3.09	0.41
1:CA:9:G:C2	1:CA:10:A:C8	3.08	0.41
22:DA:2420:C:OP1	51:D3:34:THR:CB	2.68	0.41
1:AA:1130:A:C2	1:AA:1146:A:C4	3.09	0.41
22:BA:2516:A:N6	22:BA:2517:C:N4	2.68	0.41
1:CA:748:G:C2	1:CA:749:A:C5	3.09	0.41
31:BJ:7:LYS:HA	31:BJ:8:PRO:HD3	1.85	0.41
1:AA:704:A:C6	1:AA:705:G:C4	3.09	0.41
9:AI:29:VAL:HB	9:AI:64:TYR:HA	2.03	0.41
22:BA:790:U:HO2'	22:BA:791:C:P	2.43	0.41
1:AA:987:G:H2'	1:AA:987:G:N3	2.36	0.41
1:CA:263:A:P	20:CT:74:ARG:NH1	2.94	0.41
6:CF:70:VAL:HG23	6:CF:71:ILE:HD12	2.01	0.41
1:CA:1502:A:C8	1:CA:1504:G:C4	3.09	0.41
2:AB:101:LEU:HD13	2:AB:101:LEU:HA	1.90	0.41
22:DA:283:G:C5	22:DA:284:U:C5	3.09	0.41
1:AA:669:G:O2'	1:AA:670:G:H5'	2.21	0.41
34:BM:135:VAL:O	34:BM:136:MET:HB3	2.21	0.41
28:DG:123:ALA:CB	28:DG:133:LEU:HA	2.50	0.41
1:AA:459:A:H2'	1:AA:460:A:C8	2.56	0.41
35:BN:38:LEU:N	35:BN:39:PRO:CD	2.84	0.41
6:CF:51:ILE:HG12	6:CF:51:ILE:O	2.21	0.41
26:BE:25:GLU:O	26:BE:26:ALA:C	2.59	0.41
7:CG:71:PRO:HD2	7:CG:96:ARG:HG2	2.03	0.41
19:AS:50:ALA:HB1	19:AS:57:HIS:CB	2.51	0.41
28:DG:24:ILE:CD1	28:DG:43:VAL:HG11	2.51	0.41
22:BA:21:A:O2'	22:BA:22:C:H5'	2.21	0.41
22:BA:1165:A:H2'	22:BA:1166:G:H8	1.86	0.41
30:BI:33:VAL:HG13	30:BI:67:PHE:CZ	2.56	0.41
22:BA:1121:C:H2'	22:BA:1122:G:O4'	2.22	0.41
23:DB:67:G:C6	23:DB:68:C:N4	2.89	0.41
29:BH:129:GLU:C	29:BH:130:VAL:CG2	2.90	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:111:ILE:HG22	33:DL:112:LEU:N	2.36	0.41
22:DA:1059:G:N2	30:DI:131:GLY:HA3	2.36	0.41
28:DG:39:ASP:O	28:DG:58:TYR:CE1	2.74	0.41
1:AA:953:G:C2	1:AA:1229:A:C2	3.09	0.41
38:BQ:81:ASN:O	38:BQ:84:LYS:HB3	2.21	0.41
30:BI:122:ILE:HG23	30:BI:125:MET:SD	2.61	0.41
22:BA:764:A:OP2	24:BC:213:TRP:CZ3	2.74	0.41
41:BT:69:ARG:CB	41:BT:74:ILE:HG22	2.50	0.41
22:BA:597:G:C6	22:BA:598:U:C4	3.08	0.41
22:DA:2125:G:H5'	22:DA:2126:A:OP2	2.21	0.41
41:BT:61:LEU:HD12	41:BT:61:LEU:C	2.42	0.41
11:AK:82:LEU:O	11:AK:82:LEU:HD23	2.20	0.41
35:BN:9:GLN:O	35:BN:11:ASN:N	2.54	0.41
39:BR:11:GLN:C	39:BR:12:HIS:CG	2.94	0.41
29:BH:88:GLY:C	29:BH:125:THR:OG1	2.59	0.40
22:BA:2498:C:P	57:BA:3686:HOH:O	2.61	0.40
22:DA:1783:A:C5'	22:DA:2608:G:H4'	2.51	0.40
4:CD:9:LEU:HD13	4:CD:9:LEU:HA	1.80	0.40
22:DA:319:G:N9	22:DA:333:G:N2	2.69	0.40
1:AA:1211:U:O2'	1:AA:1212:U:P	2.78	0.40
5:AE:151:GLU:C	5:AE:153:VAL:H	2.24	0.40
13:AM:77:ILE:O	13:AM:80:LEU:HB2	2.21	0.40
1:AA:1533:C:C5'	1:AA:1534:A:OP1	2.70	0.40
35:DN:103:ARG:HD3	35:DN:110:MET:SD	2.60	0.40
22:DA:1436:G:N2	22:DA:1557:C:C2	2.89	0.40
1:CA:243:A:C5	1:CA:281:G:N2	2.90	0.40
4:CD:194:ASP:O	4:CD:195:ILE:CG2	2.69	0.40
32:DK:121:GLU:OE2	37:DP:66:ASN:OD1	2.39	0.40
1:AA:790:A:H2'	1:AA:791:G:C8	2.56	0.40
2:AB:62:SER:C	2:AB:64:LYS:N	2.74	0.40
4:AD:4:TYR:CE2	4:AD:11:LEU:HD11	2.56	0.40
22:DA:176:A:C5	22:DA:177:G:C6	3.09	0.40
22:DA:120:U:O4	22:DA:177:G:N7	2.54	0.40
22:DA:2128:G:C4	22:DA:2173:A:O2'	2.74	0.40
22:BA:2190:G:C4	22:BA:2191:A:C8	3.09	0.40
16:CP:19:VAL:CG1	16:CP:37:GLY:CA	2.99	0.40
48:D0:43:ILE:HG22	48:D0:49:TYR:HB2	2.03	0.40
22:DA:46:G:C2'	22:DA:47:C:O5'	2.69	0.40
22:BA:1577:C:H2'	22:BA:1578:U:O4'	2.21	0.40
22:DA:2322:A:N6	22:DA:2323:G:C6	2.89	0.40
1:CA:782:A:C5	1:CA:801:U:N3	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:98:LEU:O	4:AD:99:ASP:C	2.59	0.40
1:AA:1058:G:C5	1:AA:1059:C:C5	3.10	0.40
27:BF:20:PHE:O	27:BF:21:ASN:C	2.59	0.40
41:BT:1:MET:HG3	41:BT:2:ILE:N	2.36	0.40
22:DA:1203:U:H1'	33:DL:4:ASN:CB	2.46	0.40
25:DD:4:LEU:HD22	25:DD:101:PHE:CE2	2.56	0.40
11:CK:124:PRO:HB2	11:CK:126:LYS:CD	2.50	0.40
2:AB:186:ILE:HD11	2:AB:204:ASP:HA	2.02	0.40
22:BA:1936:A:C2	22:BA:1943:U:N3	2.87	0.40
22:BA:1014:A:C2	22:BA:1149:G:N3	2.89	0.40
22:BA:2243:U:H2'	22:BA:2244:U:H6	1.85	0.40
22:DA:2820:A:C6	25:DD:197:THR:HB	2.56	0.40
8:CH:95:VAL:CG1	8:CH:96:MET:N	2.84	0.40
22:DA:537:G:OP1	22:DA:995:C:N4	2.54	0.40
49:D1:40:ASP:HA	49:D1:41:PRO:HD2	1.90	0.40
23:DB:77:U:C2'	23:DB:78:A:H5'	2.50	0.40
1:CA:189:A:N6	1:CA:190:A:C2	2.89	0.40
22:DA:647:G:C5	22:DA:648:G:C5	3.08	0.40
1:AA:457:G:O6	1:AA:458:U:N3	2.54	0.40
1:CA:1244:G:H2'	1:CA:1245:C:C6	2.56	0.40
33:DL:77:ILE:HG23	33:DL:81:ASP:OD2	2.21	0.40
22:BA:2615:U:H1'	48:B0:4:GLN:HB3	2.02	0.40
3:AC:14:ILE:N	3:AC:14:ILE:HD13	2.36	0.40
2:CB:141:LEU:O	2:CB:143:LYS:N	2.54	0.40
22:BA:2492:U:H2'	22:BA:2493:U:C6	2.55	0.40
22:BA:1856:U:C4	22:BA:1857:G:C6	3.09	0.40
1:CA:799:G:C6	1:CA:800:G:C4	3.09	0.40
42:DU:56:GLY:O	42:DU:57:GLY:C	2.59	0.40
22:DA:690:G:H1'	22:DA:779:U:O3'	2.21	0.40
22:DA:779:U:H5''	24:DC:49:ILE:HD11	2.02	0.40
1:AA:270:A:H2'	1:AA:271:C:O4'	2.21	0.40
22:BA:2001:C:N3	22:BA:2002:G:C8	2.89	0.40
27:DF:117:LEU:CD2	27:DF:176:PRO:HG2	2.51	0.40
1:AA:1035:A:H2'	1:AA:1036:A:C1'	2.51	0.40
22:DA:1820:U:OP1	24:DC:177:ARG:HG3	2.21	0.40
31:DJ:120:ARG:O	31:DJ:123:LYS:NZ	2.37	0.40
31:BJ:31:GLU:OE1	31:BJ:34:ARG:NE	2.54	0.40
1:AA:987:G:H5'	1:AA:988:G:OP2	2.21	0.40
1:CA:263:A:OP1	20:CT:74:ARG:NH1	2.53	0.40
22:DA:270:A:H2	22:DA:369:U:H4'	1.85	0.40
1:AA:223:A:H2'	1:AA:224:U:C6	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DF:16:LEU:HD11	27:DF:169:LEU:HD12	2.03	0.40
1:CA:923:A:H2'	1:CA:924:C:O4'	2.21	0.40
22:DA:2690:U:C5	22:DA:2873:A:N1	2.89	0.40
25:DD:186:LEU:HD21	37:DP:4:ILE:CG2	2.51	0.40
35:BN:71:ARG:O	35:BN:71:ARG:CG	2.69	0.40
22:DA:2052:A:OP1	25:DD:146:ILE:HG12	2.21	0.40
24:DC:192:LEU:N	24:DC:192:LEU:HD22	2.36	0.40
1:AA:774:G:C4	1:AA:775:G:C8	3.09	0.40
20:AT:35:VAL:HG11	20:AT:79:LEU:HD22	2.03	0.40
1:AA:955:U:O4'	1:AA:1227:A:N6	2.52	0.40
22:BA:1366:A:C5	22:BA:1367:A:C8	3.09	0.40
49:D1:25:LYS:HE2	49:D1:30:LYS:O	2.20	0.40
1:CA:793:U:HO2'	1:CA:1516:G:C1'	2.34	0.40
37:DP:31:TRP:NE1	37:DP:82:ASP:OD1	2.54	0.40
22:DA:140:C:O2	22:DA:140:C:O4'	2.37	0.40
22:BA:451:U:H5'	57:BA:3238:HOH:O	2.21	0.40
9:CI:28:ILE:HG21	9:CI:35:LEU:HD22	2.02	0.40
27:BF:44:ILE:HG21	27:BF:79:ILE:CG2	2.51	0.40
22:DA:2896:C:C2'	22:DA:2897:U:O5'	2.69	0.40
22:BA:2690:U:C4	22:BA:2873:A:C2	3.09	0.40
7:CG:136:LYS:O	7:CG:136:LYS:HD2	2.21	0.40
22:DA:1059:G:H1'	30:DI:117:MET:HE1	2.02	0.40
12:CL:114:ARG:CZ	12:CL:121:ARG:HA	2.51	0.40
2:AB:171:ILE:O	2:AB:175:GLU:HG3	2.21	0.40
1:AA:827:U:H2'	1:AA:870:U:O4	2.21	0.40
22:BA:449:A:C6	22:BA:450:G:C5	3.09	0.40
22:DA:2457:U:C4	22:DA:2458:G:C6	3.09	0.40
1:AA:1385:G:O2'	1:AA:1386:G:H5'	2.21	0.40
44:DW:67:VAL:HG12	44:DW:68:LYS:N	2.37	0.40
1:CA:453:G:H2'	1:CA:454:G:C8	2.56	0.40
26:BE:157:LEU:HG	26:BE:169:VAL:HG21	2.02	0.40
3:CC:154:SER:CB	3:CC:165:THR:HG22	2.51	0.40
11:AK:61:PHE:O	11:AK:64:GLN:N	2.54	0.40
14:AN:68:GLY:O	14:AN:69:ARG:C	2.58	0.40
38:BQ:99:ALA:O	38:BQ:103:LYS:HE2	2.21	0.40
1:CA:128:G:C2	1:CA:234:C:C2	3.09	0.40
22:BA:958:U:H2'	23:BB:89:U:O2	2.22	0.40
1:AA:146:G:C2	1:AA:147:G:C4	3.10	0.40
1:CA:975:A:N3	1:CA:975:A:H5'	2.36	0.40
3:AC:10:ILE:HG13	3:AC:10:ILE:O	2.21	0.40
22:BA:328:U:H2'	22:BA:329:G:OP1	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:16:ASP:C	37:BP:16:ASP:OD1	2.59	0.40
26:BE:4:VAL:C	26:BE:6:LYS:H	2.24	0.40
1:CA:1049:U:OP1	57:CA:1846:HOH:O	2.21	0.40
1:CA:1049:U:H4'	1:CA:1050:G:O5'	2.20	0.40
39:DR:67:GLY:C	39:DR:93:PHE:CE2	2.94	0.40
22:DA:600:G:C1'	26:DE:100:MET:HG2	2.51	0.40
22:DA:1378:A:O3'	57:DA:3751:HOH:O	2.21	0.40
4:CD:30:THR:O	4:CD:31:LYS:HD3	2.21	0.40
1:CA:1500:A:C5	1:CA:1501:C:C5	3.09	0.40
1:AA:1210:C:C4	1:AA:1211:U:C4	3.09	0.40
1:AA:1211:U:H1'	1:AA:1213:A:C2	2.56	0.40
22:DA:432:A:H2'	22:DA:433:C:C6	2.56	0.40
47:DZ:24:LEU:HD11	47:DZ:54:MET:CE	2.50	0.40
22:DA:2881:U:H2'	22:DA:2882:A:C8	2.57	0.40
22:DA:1022:G:C5	22:DA:1140:C:C4	3.10	0.40
1:CA:1295:U:H2'	1:CA:1296:C:C6	2.56	0.40
22:DA:1953:A:C2	22:DA:2550:G:O4'	2.74	0.40
39:BR:49:ILE:HG13	39:BR:49:ILE:O	2.21	0.40
24:BC:247:PRO:HG2	24:BC:248:TRP:CZ3	2.56	0.40
1:CA:374:A:OP1	1:CA:452:A:N1	2.54	0.40
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.86	0.40
2:AB:144:LEU:O	2:AB:145:GLU:C	2.60	0.40
22:DA:145:C:H2'	22:DA:146:A:C8	2.56	0.40
22:BA:1142:A:C4	22:BA:1144:A:C8	3.10	0.40
20:AT:46:ALA:HA	20:AT:49:LYS:HB2	2.03	0.40
22:DA:2115:G:C4	22:DA:2117:A:C8	3.09	0.40
10:AJ:65:TYR:HB3	14:AN:96:LEU:HD11	2.03	0.40
22:BA:2345:G:N3	22:BA:2381:A:H2'	2.36	0.40
22:DA:200:U:C6	22:DA:201:C:C6	3.09	0.40
22:BA:1838:C:N4	22:BA:1899:A:C4	2.90	0.40
22:DA:2838:G:C6	22:DA:2839:G:C6	3.10	0.40
26:DE:108:ILE:HD13	26:DE:181:ILE:HG13	2.03	0.40
11:AK:69:ARG:HD2	22:BA:2146:C:C4	2.56	0.40
22:DA:1090:A:C6	22:DA:1102:C:O2	2.74	0.40
22:DA:825:A:H4'	22:DA:2428:G:C5	2.56	0.40
1:CA:577:G:N3	1:CA:578:C:C6	2.90	0.40
31:DJ:38:GLY:O	31:DJ:40:HIS:N	2.54	0.40
22:DA:2345:G:C5	22:DA:2347:C:C5	3.09	0.40
32:BK:102:PRO:HB3	32:BK:121:GLU:HB2	2.04	0.40
30:BI:116:ASP:O	30:BI:117:MET:CG	2.70	0.40
4:AD:78:GLU:CG	4:AD:93:LEU:HD21	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1442:G:H5'	37:BP:114:LEU:HD13	2.04	0.40
22:BA:2564:A:C5	22:BA:2565:A:C6	3.10	0.40
1:AA:457:G:C6	1:AA:458:U:C2	3.09	0.40
1:CA:207:C:O2	1:CA:207:C:H2'	2.21	0.40
41:DT:91:GLN:O	41:DT:91:GLN:HG2	2.20	0.40
2:CB:139:ARG:HD2	2:CB:140:GLU:N	2.36	0.40
4:CD:102:VAL:HG13	4:CD:107:PHE:HB2	2.04	0.40
22:DA:1645:G:H5''	22:DA:1646:C:C5'	2.50	0.40
12:AL:72:HIS:ND1	12:AL:74:LEU:HB2	2.37	0.40
12:AL:74:LEU:HD21	12:AL:104:CYS:HA	2.02	0.40
4:AD:147:GLU:O	4:AD:148:LYS:C	2.59	0.40
10:AJ:8:ILE:O	10:AJ:73:LEU:O	2.39	0.40
22:DA:2392:A:H4'	51:D3:28:ASN:OD1	2.22	0.40
16:AP:38:PHE:C	16:AP:38:PHE:CD1	2.94	0.40
35:DN:20:MET:HG3	35:DN:21:PHE:N	2.36	0.40
22:BA:767:U:O2'	22:BA:768:G:H5'	2.21	0.40
33:DL:29:LYS:CG	33:DL:29:LYS:O	2.68	0.40
47:BZ:35:THR:CG2	47:BZ:36:VAL:N	2.84	0.40
22:BA:2176:A:H2'	22:BA:2177:C:C6	2.56	0.40
1:AA:862:C:H2'	1:AA:863:U:H5'	2.02	0.40
30:DI:53:LEU:CG	30:DI:82:LYS:HE2	2.51	0.40
1:AA:914:A:C6	1:AA:915:A:C5	3.09	0.40
1:AA:1259:C:O2	1:AA:1283:U:H1'	2.21	0.40
22:DA:2066:C:O2'	22:DA:2067:G:H5'	2.21	0.40
41:DT:45:ALA:HA	41:DT:49:LYS:HE3	2.02	0.40
17:CQ:38:ILE:HG22	17:CQ:39:LYS:O	2.21	0.40
12:AL:3:THR:HB	12:AL:6:GLN:HG3	2.03	0.40
1:AA:1324:A:H2'	1:AA:1325:C:C6	2.56	0.40
2:AB:167:ASP:O	2:AB:170:HIS:ND1	2.55	0.40
7:CG:91:VAL:HG21	7:CG:96:ARG:HA	2.03	0.40
22:DA:1989:G:C2'	22:DA:1990:C:H5'	2.51	0.40
22:DA:2351:G:O6	51:D3:39:LYS:HE3	2.21	0.40
1:CA:599:C:C2	1:CA:640:A:C2	3.09	0.40
1:AA:53:A:C2'	1:AA:54:C:O5'	2.70	0.40
35:BN:9:GLN:O	35:BN:10:LEU:C	2.60	0.40
1:AA:147:G:H2'	1:AA:148:G:C8	2.56	0.40
26:BE:4:VAL:O	26:BE:4:VAL:HG22	2.21	0.40
22:DA:2619:C:OP1	25:DD:157:LYS:HE2	2.21	0.40
22:DA:2526:G:O2'	52:D4:34:LYS:HE2	2.22	0.40
22:DA:2436:G:C2	22:DA:2437:G:C8	3.09	0.40
53:B5:49:GLY:CA	53:B5:206:LYS:CB	2.99	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B5:133:GLY:O	53:B5:134:PRO:CB	2.69	0.40
22:BA:839:U:H2'	22:BA:840:C:C6	2.56	0.40
22:BA:1759:A:H2'	22:BA:1760:C:C6	2.55	0.40
22:BA:1671:U:O2	22:BA:1673:G:C8	2.75	0.40
1:CA:659:U:O2'	1:CA:660:C:H5'	2.21	0.40
42:BU:57:GLY:O	42:BU:59:VAL:HG23	2.21	0.40
24:BC:97:LYS:HD2	24:BC:97:LYS:N	2.35	0.40
50:D2:6:GLN:HA	50:D2:6:GLN:OE1	2.21	0.40
31:BJ:37:ARG:O	31:BJ:37:ARG:HG3	2.21	0.40
5:CE:147:MET:HG2	5:CE:147:MET:O	2.21	0.40
11:AK:65:VAL:O	11:AK:65:VAL:CG2	2.69	0.40
22:BA:669:G:C2'	22:BA:669:G:N3	2.83	0.40
29:DH:96:THR:O	29:DH:98:ASP:N	2.54	0.40
39:DR:85:LYS:HG2	39:DR:86:GLN:N	2.36	0.40
22:BA:1844:C:C2	22:BA:1897:G:C2	3.10	0.40
22:BA:2824:C:C4	22:BA:2825:G:C5	3.09	0.40
20:AT:15:GLU:OE1	20:AT:19:LYS:NZ	2.55	0.40
22:BA:2031:A:C6	22:BA:2498:C:H1'	2.55	0.40
55:DA:3001:DOL:O15	55:DA:3001:DOL:C21	2.62	0.40
13:AM:11:ASP:CG	13:AM:45:ILE:CG1	2.90	0.40
22:DA:445:C:H2'	22:DA:446:G:C8	2.56	0.40
22:DA:2033:A:H4'	22:DA:2034:U:OP1	2.21	0.40
1:AA:389:A:C6	1:AA:390:U:H1'	2.56	0.40
22:BA:2756:U:C1'	22:BA:2757:A:H5''	2.51	0.40
22:DA:681:G:N3	22:DA:682:G:C8	2.89	0.40
1:CA:890:G:H22	1:CA:906:A:H2'	1.85	0.40
22:DA:491:G:C2	22:DA:492:A:C4	3.09	0.40
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.56	0.40
1:AA:1301:U:C5	1:AA:1303:C:C4	3.09	0.40
17:AQ:81:LYS:N	17:AQ:81:LYS:CD	2.85	0.40
1:CA:678:U:N3	1:CA:713:G:N2	2.70	0.40
1:AA:204:G:N2	1:AA:465:A:C8	2.89	0.40
22:DA:144:A:N1	22:DA:145:C:C2	2.88	0.40
32:DK:35:VAL:HG22	32:DK:69:VAL:HG12	2.02	0.40
1:CA:582:C:O2'	1:CA:583:A:H5'	2.21	0.40
1:CA:583:A:C8	1:CA:584:G:C8	3.10	0.40
22:BA:752:A:C2	22:BA:1781:U:N1	2.89	0.40
25:DD:140:HIS:CD2	25:DD:140:HIS:N	2.88	0.40
27:BF:4:LEU:HD22	27:BF:173:PHE:CE2	2.56	0.40
17:AQ:13:VAL:HG12	17:AQ:22:VAL:O	2.21	0.40
16:AP:77:GLU:C	16:AP:79:ASN:N	2.75	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1028:A:N6	22:DA:1125:G:H2'	2.36	0.40
15:CO:16:GLY:O	15:CO:18:ASP:N	2.54	0.40
1:CA:1129:C:C5	1:CA:1139:G:C8	3.09	0.40
22:BA:2298:A:C2	22:BA:2321:U:C5	3.09	0.40
1:AA:722:G:H2'	1:AA:723:U:OP2	2.21	0.40
1:AA:193:C:H2'	1:AA:194:C:H6	1.86	0.40
22:DA:1198:U:H2'	22:DA:1199:U:C6	2.56	0.40
52:B4:36:ARG:HG2	52:B4:37:GLN:H	1.86	0.40
22:BA:272:A:H2'	22:BA:273:G:C8	2.56	0.40
15:AO:82:ILE:HG22	15:AO:87:LEU:HD21	2.04	0.40
1:AA:1134:G:H2'	1:AA:1135:U:O4'	2.21	0.40
17:CQ:44:LEU:O	17:CQ:46:VAL:HG23	2.21	0.40
22:DA:2744:G:C6	22:DA:2761:A:C6	3.10	0.40
22:BA:2564:A:OP1	22:BA:2648:G:H4'	2.21	0.40
1:CA:116:A:H2'	1:CA:117:G:O5'	2.21	0.40
22:BA:1248:G:C5	26:BE:46:GLN:NE2	2.89	0.40
46:DY:55:THR:O	46:DY:58:ASN:CB	2.70	0.40
3:CC:130:PHE:CZ	3:CC:131:ARG:HD3	2.55	0.40
21:CU:36:GLU:OE1	21:CU:36:GLU:HA	2.20	0.40
1:AA:1133:G:C6	1:AA:1142:G:C6	3.09	0.40
35:BN:55:ALA:HB1	35:BN:80:PHE:N	2.36	0.40
1:CA:53:A:H2'	1:CA:54:C:O4'	2.21	0.40
1:CA:1386:G:O2'	1:CA:1387:G:H5'	2.21	0.40
9:CI:101:ALA:HB1	9:CI:103:PHE:CE1	2.56	0.40
22:BA:744:U:C4	22:BA:745:G:C5	3.09	0.40
33:DL:29:LYS:O	33:DL:29:LYS:HG2	2.22	0.40
42:DU:82:ARG:O	42:DU:97:LYS:CB	2.70	0.40
7:CG:57:SER:HB3	7:CG:60:GLU:HB2	2.03	0.40
22:DA:1999:C:H5''	22:DA:2723:C:O2'	2.22	0.40
22:DA:2050:C:C4	22:DA:2051:A:C6	3.09	0.40
1:AA:666:G:C2	1:AA:741:G:C4	3.09	0.40
1:AA:1126:U:O4'	1:AA:1281:C:C2	2.73	0.40
1:AA:849:G:N1	1:AA:850:U:C2	2.90	0.40
32:BK:66:LYS:HA	32:BK:79:PHE:O	2.21	0.40
1:AA:273:U:C2'	1:AA:274:A:H5'	2.51	0.40
1:AA:935:A:O2'	1:AA:1383:C:O2	2.38	0.40
3:AC:167:TRP:HE3	3:AC:167:TRP:C	2.25	0.40
33:BL:38:GLN:O	33:BL:44:GLY:HA3	2.21	0.40
28:BG:52:PHE:N	28:BG:52:PHE:CD2	2.90	0.40
23:DB:96:G:C2'	23:DB:97:C:H5'	2.51	0.40
42:BU:8:ASP:OD2	42:BU:24:LYS:HD3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:995:C:O2	31:BJ:3:THR:OG1	2.32	0.40
44:BW:75:LYS:O	44:BW:76:ASN:HB2	2.21	0.40
26:DE:115:GLN:O	26:DE:117:ARG:HG3	2.22	0.40
22:BA:1842:G:H5''	22:BA:1843:C:OP2	2.21	0.40
14:AN:66:GLN:HG3	14:AN:79:LEU:HD21	2.03	0.40
1:CA:1057:G:C5	1:CA:1204:A:C2	3.09	0.40
33:BL:120:VAL:HG22	33:BL:121:THR:N	2.36	0.40
16:AP:36:VAL:CG2	16:AP:57:ILE:HG13	2.51	0.40
28:BG:25:THR:HG23	28:BG:34:THR:OG1	2.22	0.40
22:DA:380:G:O3'	45:DX:16:ASN:HB2	2.21	0.40
29:BH:120:GLY:HA2	29:BH:122:LEU:HA	2.04	0.40
40:DS:33:LEU:HD21	40:DS:52:GLU:CG	2.51	0.40
22:DA:528:A:C2	22:DA:2043:C:C5'	3.05	0.40
22:DA:2043:C:O2	22:DA:2044:C:C5	2.75	0.40
1:AA:1209:C:O2'	1:AA:1210:C:H5'	2.21	0.40
8:AH:64:LYS:HB3	8:AH:64:LYS:HE2	1.94	0.40
1:AA:451:A:H5''	16:AP:70:ARG:NH2	2.37	0.40
1:AA:982:U:H4'	1:AA:983:A:O5'	2.22	0.40
22:DA:1187:G:H5''	39:DR:83:TYR:CZ	2.55	0.40
22:BA:1178:C:O3'	22:BA:1179:G:C8	2.74	0.40
22:DA:684:G:OP1	50:D2:16:HIS:CE1	2.74	0.40
22:DA:922:C:H2'	22:DA:923:G:C8	2.57	0.40
22:DA:1340:U:H2'	22:DA:1340:U:O2	2.20	0.40
1:CA:1179:A:C2'	1:CA:1180:A:H5'	2.52	0.40
1:AA:957:U:H1'	1:AA:960:U:C4	2.56	0.40
39:BR:49:ILE:HB	39:BR:52:PRO:CA	2.52	0.40
27:BF:91:LEU:HB3	27:BF:96:MET:HA	2.03	0.40
22:DA:1316:U:H2'	22:DA:1317:G:C8	2.57	0.40
22:BA:2627:G:N2	22:BA:2777:G:OP2	2.54	0.40
22:DA:590:A:H2'	22:DA:591:U:C6	2.56	0.40
10:AJ:52:LEU:HD23	10:AJ:62:ARG:CG	2.50	0.40
10:AJ:52:LEU:HD22	10:AJ:62:ARG:HG3	2.02	0.40
22:DA:201:C:H2'	22:DA:202:U:O5'	2.22	0.40
22:BA:1583:A:O2'	22:BA:1584:U:P	2.80	0.40
14:AN:51:LEU:HB3	14:AN:52:PRO:HD2	2.03	0.40
10:AJ:32:THR:HG21	10:AJ:86:ALA:CB	2.51	0.40
24:BC:172:VAL:HG23	24:BC:174:LEU:CD1	2.51	0.40
33:DL:100:ILE:CG1	33:DL:100:ILE:O	2.69	0.40
22:BA:64:A:C6	22:BA:65:U:C4	3.09	0.40
22:BA:2297:A:C2	22:BA:2321:U:C5	3.09	0.40
6:CF:38:ARG:CG	6:CF:63:ASN:HB2	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:51:ARG:CG	37:DP:51:ARG:O	2.69	0.40
31:DJ:35:ARG:CG	31:DJ:40:HIS:CD2	3.04	0.40
1:AA:600:A:C2	1:AA:601:G:C4	3.09	0.40
9:AI:28:ILE:HG13	9:AI:63:LEU:HD21	2.04	0.40
1:CA:1292:G:C2	1:CA:1293:C:C2	3.09	0.40
22:DA:1651:G:C6	22:DA:1652:A:C5	3.09	0.40
17:AQ:49:GLU:O	17:AQ:51:ASN:N	2.54	0.40
2:CB:56:GLU:OE2	2:CB:56:GLU:HA	2.22	0.40
22:DA:2756:U:C4	22:DA:2759:G:O6	2.75	0.40
23:BB:111:U:H2'	23:BB:111:U:O2	2.21	0.40
2:AB:77:SER:O	2:AB:93:ASN:HB2	2.21	0.40
1:CA:1352:C:C2	1:CA:1371:G:N1	2.89	0.40
1:AA:1419:G:C4	1:AA:1420:U:C5	3.09	0.40
35:BN:55:ALA:HB1	35:BN:80:PHE:H	1.87	0.40
4:AD:147:GLU:O	4:AD:150:LYS:HB2	2.21	0.40
1:CA:88:U:C5	1:CA:89:U:C5	3.09	0.40
26:DE:8:ALA:CB	26:DE:122:GLU:CG	2.99	0.40
1:AA:270:A:C5	1:AA:271:C:C4	3.09	0.40
1:AA:945:G:H2'	1:AA:945:G:N3	2.37	0.40
33:DL:29:LYS:O	33:DL:30:THR:OG1	2.25	0.40
33:DL:29:LYS:O	33:DL:30:THR:HG23	2.22	0.40
22:BA:1851:U:C2'	22:BA:1852:U:H5'	2.51	0.40
1:CA:861:G:N7	1:CA:862:C:C5	2.90	0.40
22:BA:2512:C:H4'	25:BD:127:PHE:CE1	2.57	0.40
33:DL:68:SER:O	33:DL:69:ARG:HG3	2.21	0.40
1:AA:397:A:C5	1:AA:548:G:N7	2.90	0.40
22:BA:1840:G:C2'	22:BA:1841:U:H5'	2.52	0.40
9:CI:91:ASP:OD2	9:CI:91:ASP:C	2.59	0.40
22:BA:1665:A:O2'	32:BK:1:MET:HB3	2.21	0.40
3:CC:184:TYR:CD1	3:CC:201:TRP:NE1	2.89	0.40
1:AA:1319:A:C5	1:AA:1323:G:C4	3.10	0.40
3:CC:117:ALA:HB1	3:CC:187:SER:CB	2.51	0.40
4:CD:106:GLY:O	4:CD:158:ALA:HB1	2.21	0.40
22:BA:1301:A:C2	22:BA:1303:G:C6	3.10	0.40
7:AG:122:ASN:O	7:AG:126:ASP:OD1	2.39	0.40
26:BE:97:ASN:O	26:BE:98:LYS:C	2.59	0.40
22:BA:1205:A:C6	26:BE:165:HIS:HB2	2.57	0.40
22:BA:1036:G:C5	22:BA:1120:G:C6	3.10	0.40
22:BA:2432:A:H2'	22:BA:2433:A:O4'	2.21	0.40
22:BA:1920:C:O2	22:BA:1920:C:H2'	2.21	0.40
22:BA:976:G:C2	22:BA:977:G:C8	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2900:A:H2'	22:BA:2901:C:O4'	2.22	0.40
22:DA:1358:G:N2	22:DA:1374:G:C6	2.90	0.40
22:DA:1359:A:C5	22:DA:1360:G:C8	3.09	0.40
4:CD:24:GLY:O	4:CD:161:LEU:CD1	2.70	0.40
22:DA:190:A:N6	22:DA:191:A:N1	2.70	0.40
22:DA:299:A:C2	22:DA:319:G:N3	2.89	0.40
22:DA:320:A:H2'	26:DE:131:THR:CG2	2.52	0.40
22:DA:422:A:N1	22:DA:423:A:C4	2.89	0.40
8:AH:43:GLU:HG3	8:AH:112:THR:HG21	2.03	0.40
22:DA:1437:C:C4	22:DA:1438:U:O4	2.75	0.40
4:AD:29:ASP:O	4:AD:31:LYS:CE	2.70	0.40
9:AI:51:PRO:HD3	9:AI:80:ARG:HG2	2.03	0.40
1:CA:496:A:N3	1:CA:497:G:N7	2.69	0.40
1:CA:1007:U:C3'	1:CA:1008:U:H5'	2.52	0.40
23:DB:44:G:N2	23:DB:48:U:C2	2.89	0.40
11:AK:38:GLN:O	11:AK:38:GLN:HG2	2.21	0.40
4:CD:195:ILE:O	4:CD:195:ILE:CG1	2.69	0.40
2:AB:49:MET:C	2:AB:51:ASN:O	2.60	0.40
1:CA:563:A:N7	1:CA:567:G:H1'	2.36	0.40
13:CM:13:LYS:O	13:CM:14:HIS:CG	2.72	0.40
22:BA:613:A:C8	22:BA:616:A:H2	2.38	0.40
1:CA:505:G:H2'	1:CA:505:G:N3	2.36	0.40
1:AA:1239:A:H4'	1:AA:1239:A:OP1	2.22	0.40
22:DA:476:G:H4'	22:DA:502:A:N1	2.36	0.40
42:DU:38:GLY:HA2	42:DU:41:LEU:HD21	2.01	0.40
1:AA:201:G:H2'	1:AA:202:G:O4'	2.21	0.40
1:AA:324:G:N2	1:AA:326:G:H3'	2.36	0.40
46:BY:14:LEU:HG	46:BY:57:LEU:HD11	2.02	0.40
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.57	0.40
1:CA:1540:U:H4'	21:CU:18:ARG:HG2	2.02	0.40
39:DR:51:VAL:O	39:DR:52:PRO:C	2.58	0.40
22:DA:1409:U:H2'	22:DA:1410:G:C8	2.56	0.40
22:DA:211:C:H2'	22:DA:212:G:O4'	2.21	0.40
22:DA:1737:G:C6	22:DA:1738:G:C6	3.10	0.40
1:CA:91:U:C4	1:CA:92:U:C5	3.10	0.40
22:DA:756:A:H2'	22:DA:757:G:O4'	2.21	0.40
23:BB:30:C:O2'	23:BB:57:A:N1	2.45	0.40
22:BA:2127:G:O2'	22:BA:2128:G:O4'	2.39	0.40
22:DA:1924:C:H2'	22:DA:1925:C:O4'	2.21	0.40
22:BA:319:G:C5	22:BA:333:G:N2	2.90	0.40
22:BA:1588:G:C4	22:BA:1589:U:C5	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2741:A:H2'	22:BA:2742:G:O4'	2.21	0.40
9:CI:61:LEU:N	9:CI:61:LEU:CD2	2.85	0.40
22:DA:2234:G:C6	22:DA:2235:G:C8	3.10	0.40
25:DD:62:LYS:N	25:DD:63:PRO:CD	2.84	0.40
22:DA:7:G:H4'	31:DJ:15:TRP:HH2	1.87	0.40
1:AA:69:G:C3'	1:AA:70:U:H6	2.34	0.40
21:AU:17:ARG:NH1	21:AU:20:LYS:HG3	2.36	0.40
22:BA:565:C:H4'	22:BA:1253:A:N6	2.37	0.40
23:BB:109:A:C6	23:BB:110:C:N3	2.90	0.40
36:BO:110:ALA:O	36:BO:115:LEU:HB3	2.20	0.40
36:BO:88:LYS:CG	36:BO:89:ASP:N	2.85	0.40
32:DK:31:ARG:HB2	32:DK:32:TYR:CD2	2.56	0.40
1:AA:57:G:C6	1:AA:58:C:C4	3.09	0.40
4:CD:91:LEU:HD12	4:CD:188:ARG:NE	2.37	0.40
1:AA:1125:U:O4'	10:AJ:73:LEU:CD1	2.70	0.40
22:DA:1275:A:H4'	22:DA:1276:A:OP1	2.19	0.40
22:DA:690:G:O2'	22:DA:780:G:OP1	2.29	0.40
26:BE:119:ILE:O	26:BE:187:VAL:HA	2.21	0.40
1:AA:1030:U:H5'	1:AA:1031:C:OP1	2.22	0.40
6:AF:72:ASP:O	6:AF:75:GLU:N	2.54	0.40
1:AA:1302:C:C4	13:AM:17:ILE:HD13	2.56	0.40
22:DA:1263:U:H4'	48:D0:7:LYS:HE3	2.04	0.40
22:DA:563:A:C2	22:DA:2018:G:H1'	2.56	0.40
8:AH:25:VAL:HG13	8:AH:25:VAL:O	2.21	0.40
1:CA:223:A:C6	1:CA:224:U:C4	3.09	0.40
1:CA:420:U:C2'	1:CA:421:U:H5''	2.51	0.40
22:BA:735:A:N7	22:BA:761:A:H2	2.20	0.40
1:CA:1536:C:H2'	1:CA:1537:U:C6	2.56	0.40
22:BA:1109:C:N4	22:BA:1110:G:N1	2.70	0.40
45:BX:45:ARG:HG2	45:BX:46:PHE:N	2.37	0.40
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.37	0.40
1:CA:844:G:C8	1:CA:844:G:OP2	2.74	0.40
22:BA:2619:C:O2'	22:BA:2620:C:H5'	2.21	0.40
6:CF:71:ILE:N	6:CF:71:ILE:CD1	2.85	0.40
41:DT:2:ILE:HG12	41:DT:7:LEU:CD1	2.52	0.40
41:DT:2:ILE:HG12	41:DT:7:LEU:HD12	2.02	0.40
26:DE:18:THR:O	26:DE:110:SER:OG	2.40	0.40
22:BA:149:A:C5	22:BA:150:U:C5	3.10	0.40
26:DE:52:VAL:HB	26:DE:74:LYS:HD3	2.03	0.40
22:BA:2052:A:O4'	25:BD:147:GLY:HA3	2.22	0.40
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2232:C:C4	22:BA:2233:U:C5	3.10	0.40
16:AP:20:VAL:CG2	16:AP:34:GLU:O	2.69	0.40
1:AA:1383:C:H2'	1:AA:1384:C:C6	2.56	0.40
36:BO:12:THR:O	36:BO:12:THR:CG2	2.69	0.40
1:AA:279:A:N3	1:AA:281:G:N2	2.69	0.40
22:BA:2021:C:P	48:B0:9:THR:HG21	2.61	0.40
1:CA:1434:A:N6	1:CA:1435:G:C6	2.89	0.40
22:DA:2677:G:H2'	22:DA:2678:C:C6	2.56	0.40
37:DP:28:VAL:HG21	37:DP:74:PHE:CE2	2.56	0.40
22:DA:61:C:OP1	46:DY:44:LYS:HD3	2.21	0.40
1:AA:606:G:H1'	1:AA:633:G:C2	2.56	0.40
31:DJ:17:VAL:HG23	31:DJ:137:PRO:HB2	2.03	0.40
37:BP:6:LYS:O	37:BP:7:GLN:C	2.59	0.40
1:AA:557:G:C6	1:AA:558:G:N1	2.89	0.40
15:CO:57:LEU:O	15:CO:61:SER:N	2.46	0.40
22:BA:2010:G:H2'	22:BA:2011:U:O4'	2.21	0.40
22:BA:634:C:H2'	22:BA:635:C:C6	2.57	0.40
47:BZ:5:ILE:HG23	47:BZ:40:ASP:HB2	2.04	0.40
9:CI:31:ASN:HA	9:CI:66:THR:HG22	2.03	0.40
45:DX:58:VAL:CG1	45:DX:59:ILE:N	2.85	0.40
18:CR:49:ALA:O	18:CR:50:LYS:C	2.58	0.40
22:BA:1100:C:H2'	22:BA:1101:U:C6	2.56	0.40
12:AL:7:LEU:HD12	17:AQ:34:TYR:CE2	2.56	0.40
22:DA:540:C:C2	22:DA:541:A:C8	3.10	0.40
22:BA:115:C:O2'	22:BA:116:C:H5'	2.22	0.40
9:CI:76:ALA:HA	9:CI:79:ILE:HD12	2.03	0.40
1:AA:139:A:C2'	1:AA:140:U:H5'	2.51	0.40
7:CG:148:ASN:C	7:CG:150:ALA:N	2.75	0.40
38:BQ:18:LEU:HD13	38:BQ:18:LEU:HA	1.99	0.40
41:DT:93:LEU:HD22	41:DT:93:LEU:N	2.36	0.40
12:CL:79:VAL:O	12:CL:103:ASP:HB2	2.21	0.40
13:CM:24:GLY:HA3	13:CM:65:VAL:HG12	2.04	0.40
51:B3:45:ARG:N	51:B3:46:PRO:HD2	2.37	0.40

All (3) 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:357:G:O2'	29:DH:91:PHE:O[4_455]	2.12	0.08
1:AA:368:U:OP1	29:DH:93:SER:OG[4_455]	2.16	0.04
1:AA:359:G:OP1	29:DH:89:LYS:NZ[4_455]	2.17	0.03

## 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%)	132 (61%)	40 (18%)	44 (20%)	0	0
2	CB	216/218 (99%)	142 (66%)	48 (22%)	26 (12%)	0	1
3	AC	204/206 (99%)	149 (73%)	31 (15%)	24 (12%)	0	1
3	CC	204/206 (99%)	154 (76%)	39 (19%)	11 (5%)	2	7
4	AD	203/205 (99%)	133 (66%)	45 (22%)	25 (12%)	0	1
4	CD	203/205 (99%)	147 (72%)	33 (16%)	23 (11%)	0	1
5	AE	148/150 (99%)	102 (69%)	23 (16%)	23 (16%)	0	0
5	CE	148/150 (99%)	98 (66%)	34 (23%)	16 (11%)	0	1
6	AF	98/100 (98%)	67 (68%)	22 (22%)	9 (9%)	1	2
6	CF	98/100 (98%)	66 (67%)	18 (18%)	14 (14%)	0	0
7	AG	149/151 (99%)	110 (74%)	26 (17%)	13 (9%)	1	2
7	CG	149/151 (99%)	120 (80%)	20 (13%)	9 (6%)	2	6
8	AH	127/129 (98%)	87 (68%)	31 (24%)	9 (7%)	1	3
8	CH	127/129 (98%)	102 (80%)	17 (13%)	8 (6%)	2	5
9	AI	125/127 (98%)	88 (70%)	23 (18%)	14 (11%)	0	1
9	CI	125/127 (98%)	89 (71%)	21 (17%)	15 (12%)	0	1
10	AJ	96/98 (98%)	62 (65%)	14 (15%)	20 (21%)	0	0
10	CJ	96/98 (98%)	74 (77%)	10 (10%)	12 (12%)	0	1
11	AK	115/117 (98%)	81 (70%)	15 (13%)	19 (16%)	0	0
11	CK	115/117 (98%)	80 (70%)	26 (23%)	9 (8%)	1	3
12	AL	121/123 (98%)	91 (75%)	20 (16%)	10 (8%)	1	2
12	CL	121/123 (98%)	89 (74%)	20 (16%)	12 (10%)	1	2
13	AM	112/114 (98%)	80 (71%)	21 (19%)	11 (10%)	1	2
13	CM	112/114 (98%)	82 (73%)	17 (15%)	13 (12%)	0	1
14	AN	92/100 (92%)	54 (59%)	29 (32%)	9 (10%)	1	2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	CN	92/100 (92%)	56 (61%)	22 (24%)	14 (15%)	0	0
15	AO	86/88 (98%)	61 (71%)	19 (22%)	6 (7%)	1	4
15	CO	86/88 (98%)	66 (77%)	16 (19%)	4 (5%)	3	11
16	AP	80/82 (98%)	57 (71%)	11 (14%)	12 (15%)	0	0
16	CP	80/82 (98%)	59 (74%)	16 (20%)	5 (6%)	2	5
17	AQ	78/80 (98%)	55 (70%)	15 (19%)	8 (10%)	1	1
17	CQ	78/80 (98%)	58 (74%)	11 (14%)	9 (12%)	0	1
18	AR	53/55 (96%)	41 (77%)	10 (19%)	2 (4%)	4	16
18	CR	53/55 (96%)	34 (64%)	16 (30%)	3 (6%)	2	6
19	AS	77/79 (98%)	55 (71%)	13 (17%)	9 (12%)	0	1
19	CS	77/79 (98%)	56 (73%)	12 (16%)	9 (12%)	0	1
20	AT	83/85 (98%)	57 (69%)	20 (24%)	6 (7%)	1	3
20	CT	83/85 (98%)	64 (77%)	10 (12%)	9 (11%)	0	1
21	AU	49/51 (96%)	28 (57%)	8 (16%)	13 (26%)	0	0
21	CU	49/51 (96%)	26 (53%)	10 (20%)	13 (26%)	0	0
24	BC	269/271 (99%)	219 (81%)	38 (14%)	12 (4%)	3	12
24	DC	269/271 (99%)	195 (72%)	50 (19%)	24 (9%)	1	2
25	BD	207/209 (99%)	178 (86%)	22 (11%)	7 (3%)	5	19
25	DD	207/209 (99%)	153 (74%)	45 (22%)	9 (4%)	3	13
26	BE	199/201 (99%)	162 (81%)	34 (17%)	3 (2%)	13	42
26	DE	199/201 (99%)	153 (77%)	29 (15%)	17 (8%)	1	2
27	BF	175/177 (99%)	139 (79%)	28 (16%)	8 (5%)	3	11
27	DF	175/177 (99%)	140 (80%)	23 (13%)	12 (7%)	1	4
28	BG	174/176 (99%)	147 (84%)	18 (10%)	9 (5%)	2	8
28	DG	174/176 (99%)	130 (75%)	29 (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%)	81 (58%)	34 (24%)	24 (17%)	0	0
30	DI	139/141 (99%)	81 (58%)	38 (27%)	20 (14%)	0	0
31	BJ	140/142 (99%)	130 (93%)	7 (5%)	3 (2%)	9	32
31	DJ	140/142 (99%)	112 (80%)	14 (10%)	14 (10%)	1	2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
32	BK	120/122 (98%)	97 (81%)	16 (13%)	7 (6%)	2	6
32	DK	120/122 (98%)	97 (81%)	13 (11%)	10 (8%)	1	2
33	BL	141/143 (99%)	118 (84%)	18 (13%)	5 (4%)	4	18
33	DL	141/143 (99%)	101 (72%)	25 (18%)	15 (11%)	0	1
34	BM	134/136 (98%)	118 (88%)	14 (10%)	2 (2%)	13	42
34	DM	134/136 (98%)	108 (81%)	19 (14%)	7 (5%)	2	8
35	BN	118/120 (98%)	99 (84%)	16 (14%)	3 (2%)	7	27
35	DN	118/120 (98%)	92 (78%)	16 (14%)	10 (8%)	1	2
36	BO	114/116 (98%)	94 (82%)	17 (15%)	3 (3%)	7	26
36	DO	114/116 (98%)	84 (74%)	23 (20%)	7 (6%)	2	5
37	BP	112/114 (98%)	96 (86%)	10 (9%)	6 (5%)	2	7
37	DP	112/114 (98%)	86 (77%)	19 (17%)	7 (6%)	2	5
38	BQ	115/117 (98%)	109 (95%)	4 (4%)	2 (2%)	11	38
38	DQ	115/117 (98%)	93 (81%)	20 (17%)	2 (2%)	11	38
39	BR	101/103 (98%)	81 (80%)	10 (10%)	10 (10%)	1	2
39	DR	101/103 (98%)	73 (72%)	22 (22%)	6 (6%)	2	6
40	BS	108/110 (98%)	92 (85%)	13 (12%)	3 (3%)	6	24
40	DS	108/110 (98%)	83 (77%)	17 (16%)	8 (7%)	1	3
41	BT	91/93 (98%)	74 (81%)	8 (9%)	9 (10%)	1	2
41	DT	91/93 (98%)	53 (58%)	26 (29%)	12 (13%)	0	1
42	BU	100/102 (98%)	77 (77%)	17 (17%)	6 (6%)	2	6
42	DU	100/102 (98%)	69 (69%)	17 (17%)	14 (14%)	0	0
43	BV	92/94 (98%)	84 (91%)	6 (6%)	2 (2%)	8	31
43	DV	92/94 (98%)	77 (84%)	12 (13%)	3 (3%)	5	20
44	BW	74/76 (97%)	68 (92%)	6 (8%)	0	100	100
44	DW	73/76 (96%)	60 (82%)	13 (18%)	0	100	100
45	BX	75/77 (97%)	66 (88%)	8 (11%)	1 (1%)	15	46
45	DX	75/77 (97%)	57 (76%)	11 (15%)	7 (9%)	1	2
46	BY	61/63 (97%)	42 (69%)	11 (18%)	8 (13%)	0	1
46	DY	61/63 (97%)	46 (75%)	12 (20%)	3 (5%)	3	10
47	BZ	56/58 (97%)	51 (91%)	3 (5%)	2 (4%)	4	18

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
47	DZ	56/58 (97%)	45 (80%)	7 (12%)	4 (7%)	1	3
48	B0	54/56 (96%)	47 (87%)	4 (7%)	3 (6%)	2	7
48	D0	54/56 (96%)	38 (70%)	12 (22%)	4 (7%)	1	3
49	B1	48/50 (96%)	38 (79%)	7 (15%)	3 (6%)	2	5
49	D1	48/50 (96%)	39 (81%)	4 (8%)	5 (10%)	1	1
50	B2	44/46 (96%)	38 (86%)	4 (9%)	2 (4%)	3	12
50	D2	44/46 (96%)	32 (73%)	8 (18%)	4 (9%)	1	2
51	B3	62/64 (97%)	56 (90%)	5 (8%)	1 (2%)	12	40
51	D3	62/64 (97%)	49 (79%)	11 (18%)	2 (3%)	5	20
52	B4	36/38 (95%)	31 (86%)	4 (11%)	1 (3%)	6	24
52	D4	36/38 (95%)	31 (86%)	3 (8%)	2 (6%)	2	7
53	B5	183/228 (80%)	85 (46%)	59 (32%)	39 (21%)	0	0
All	All	11418/11672 (98%)	8535 (75%)	1900 (17%)	983 (9%)	1	2

All (983) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	16	PHE
2	AB	22	TYR
2	AB	25	PRO
2	AB	34	ALA
2	AB	64	LYS
2	AB	73	LYS
2	AB	74	ARG
2	AB	75	ALA
2	AB	76	ALA
2	AB	88	ASP
2	AB	107	VAL
2	AB	120	GLN
2	AB	126	PHE
2	AB	134	ALA
2	AB	148	LEU
2	AB	152	LYS
2	AB	155	GLY
2	AB	194	ASP
2	AB	201	PRO
3	AC	12	LEU
3	AC	15	VAL

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Mol	Chain	Res	Type
3	AC	17	PRO
3	AC	18	TRP
3	AC	26	THR
3	AC	61	ALA
3	AC	80	LYS
3	AC	140	ASN
3	AC	141	ALA
3	AC	146	ALA
4	AD	23	SER
4	AD	25	VAL
4	AD	29	ASP
4	AD	33	LYS
4	AD	35	GLU
4	AD	85	ASN
4	AD	121	LYS
4	AD	126	ASN
4	AD	153	SER
4	AD	168	PRO
4	AD	191	LEU
4	AD	192	SER
5	AE	26	LYS
5	AE	69	ARG
5	AE	70	ASN
5	AE	100	SER
5	AE	138	ARG
5	AE	158	GLY
6	AF	91	ARG
6	AF	92	THR
6	AF	99	ALA
7	AG	9	GLN
7	AG	14	PRO
7	AG	15	ASP
7	AG	56	LYS
7	AG	57	SER
7	AG	81	GLY
7	AG	100	ALA
7	AG	130	ASN
9	AI	41	ARG
9	AI	44	ALA
9	AI	58	VAL
9	AI	59	GLU
10	AJ	34	ALA

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Mol	Chain	Res	Type
10	AJ	35	GLN
10	AJ	57	VAL
10	AJ	74	VAL
10	AJ	93	ALA
10	AJ	101	SER
11	AK	27	PHE
11	AK	39	GLY
11	AK	41	ALA
11	AK	52	PHE
11	AK	56	ARG
11	AK	73	ALA
11	AK	103	ALA
11	AK	126	LYS
12	AL	24	LEU
12	AL	44	LYS
12	AL	89	ASP
13	AM	5	ALA
13	AM	12	HIS
13	AM	107	ARG
13	AM	114	LYS
14	AN	34	VAL
14	AN	42	TRP
14	AN	47	LYS
14	AN	52	PRO
14	AN	62	ASN
15	AO	17	ARG
16	AP	43	ALA
16	AP	46	LYS
16	AP	80	LYS
17	AQ	13	VAL
17	AQ	51	ASN
17	AQ	82	ALA
19	AS	6	LYS
19	AS	23	VAL
19	AS	64	ASP
19	AS	65	GLU
20	AT	4	ILE
20	AT	6	SER
21	AU	9	ASN
21	AU	12	PHE
21	AU	24	GLU
21	AU	35	ARG

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Mol	Chain	Res	Type
21	AU	36	GLU
21	AU	37	PHE
21	AU	40	LYS
24	BC	71	LYS
24	BC	122	ALA
24	BC	196	GLY
24	BC	253	LYS
25	BD	86	GLU
25	BD	152	PRO
26	BE	86	ALA
27	BF	3	LYS
27	BF	41	GLY
27	BF	175	PHE
28	BG	110	SER
28	BG	119	ALA
28	BG	175	LYS
29	BH	10	ALA
29	BH	34	GLY
29	BH	53	GLU
29	BH	87	GLU
29	BH	90	LEU
29	BH	118	PRO
29	BH	121	VAL
29	BH	140	ALA
30	BI	19	ASN
30	BI	45	LYS
30	BI	63	ALA
30	BI	83	ALA
30	BI	86	ILE
30	BI	113	LYS
30	BI	117	MET
32	BK	35	VAL
32	BK	108	ARG
33	BL	69	ARG
33	BL	94	THR
34	BM	69	PRO
37	BP	114	LEU
38	BQ	25	TYR
39	BR	29	THR
39	BR	31	GLU
39	BR	49	ILE
39	BR	51	VAL

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Mol	Chain	Res	Type
39	BR	53	PHE
40	BS	64	ALA
41	BT	2	ILE
41	BT	17	SER
41	BT	25	GLU
41	BT	89	GLU
42	BU	21	LYS
42	BU	52	LEU
45	BX	3	ARG
46	BY	22	LEU
46	BY	23	ARG
46	BY	36	GLN
46	BY	58	ASN
46	BY	62	GLY
49	B1	5	ILE
49	B1	17	THR
50	B2	44	VAL
53	B5	53	ARG
53	B5	60	ARG
53	B5	86	GLU
53	B5	126	SER
53	B5	134	PRO
53	B5	141	PRO
53	B5	167	ASP
53	B5	173	HIS
53	B5	175	PRO
53	B5	183	PRO
53	B5	184	GLU
53	B5	185	LYS
53	B5	203	GLU
53	B5	209	PHE
53	B5	214	TYR
53	B5	215	VAL
53	B5	216	THR
53	B5	221	PRO
2	CB	16	PHE
2	CB	35	ARG
2	CB	36	ASN
2	CB	74	ARG
2	CB	87	CYS
2	CB	88	ASP
2	CB	120	GLN

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Mol	Chain	Res	Type
2	CB	126	PHE
2	CB	141	LEU
2	CB	168	HIS
2	CB	194	ASP
2	CB	207	ILE
2	CB	220	THR
3	CC	82	GLU
3	CC	127	ARG
3	CC	146	ALA
4	CD	28	ILE
4	CD	30	THR
4	CD	32	CYS
4	CD	33	LYS
4	CD	35	GLU
4	CD	42	GLY
4	CD	169	THR
4	CD	175	ALA
5	CE	100	SER
5	CE	101	GLU
5	CE	102	GLY
5	CE	103	THR
5	CE	123	VAL
5	CE	158	GLY
6	CF	33	GLU
6	CF	55	HIS
6	CF	56	LYS
6	CF	65	GLU
6	CF	92	THR
6	CF	98	GLU
6	CF	99	ALA
7	CG	3	ARG
7	CG	130	ASN
7	CG	146	GLU
8	CH	3	MET
9	CI	26	GLY
9	CI	41	ARG
9	CI	53	GLU
9	CI	91	ASP
9	CI	120	LYS
10	CJ	91	ASP
11	CK	52	PHE
11	CK	93	ARG

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Mol	Chain	Res	Type
11	CK	127	ARG
12	CL	4	VAL
12	CL	44	LYS
12	CL	48	ALA
12	CL	58	THR
12	CL	89	ASP
13	CM	7	ILE
13	CM	41	GLU
13	CM	99	GLY
14	CN	22	ALA
14	CN	29	ALA
14	CN	32	SER
14	CN	52	PRO
14	CN	59	ARG
14	CN	81	ARG
14	CN	92	GLU
15	CO	14	GLU
15	CO	18	ASP
17	CQ	51	ASN
17	CQ	70	THR
17	CQ	76	VAL
18	CR	21	ILE
18	CR	25	ASP
19	CS	5	LEU
19	CS	32	ARG
20	CT	4	ILE
20	CT	6	SER
20	CT	68	HIS
21	CU	9	ASN
21	CU	12	PHE
21	CU	13	ASP
21	CU	24	GLU
21	CU	36	GLU
21	CU	37	PHE
21	CU	40	LYS
21	CU	52	ALA
24	DC	10	SER
24	DC	19	VAL
24	DC	29	PRO
24	DC	35	GLU
24	DC	58	HIS
24	DC	71	LYS

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Mol	Chain	Res	Type
24	DC	122	ALA
24	DC	238	ARG
25	DD	36	GLN
25	DD	57	ALA
25	DD	98	VAL
25	DD	105	LYS
25	DD	151	THR
25	DD	152	PRO
27	DF	122	PHE
27	DF	123	ASP
27	DF	175	PHE
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	3	LYS
30	DI	7	ALA
30	DI	19	ASN
30	DI	93	PRO
30	DI	101	ILE
30	DI	102	SER
30	DI	115	ALA
31	DJ	6	ALA
31	DJ	11	VAL
31	DJ	42	ALA
31	DJ	81	ILE
31	DJ	94	ALA
32	DK	35	VAL
32	DK	92	GLU
32	DK	105	ARG
32	DK	108	ARG
32	DK	120	PRO
33	DL	39	LYS
33	DL	111	ILE

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Mol	Chain	Res	Type
34	DM	3	GLN
35	DN	70	THR
35	DN	88	ALA
35	DN	104	ALA
35	DN	107	ASN
36	DO	12	THR
36	DO	34	HIS
36	DO	57	ALA
37	DP	66	ASN
37	DP	94	LYS
39	DR	102	SER
40	DS	29	VAL
40	DS	62	ASP
40	DS	67	ASP
40	DS	72	THR
41	DT	18	GLU
41	DT	21	SER
41	DT	22	THR
41	DT	28	ASN
41	DT	39	THR
41	DT	78	SER
42	DU	37	GLU
42	DU	89	ASP
47	DZ	52	SER
47	DZ	53	PHE
48	D0	56	ALA
49	D1	16	GLY
50	D2	44	VAL
52	D4	23	ILE
2	AB	13	GLY
2	AB	20	THR
2	AB	35	ARG
2	AB	43	LEU
2	AB	80	VAL
2	AB	83	ALA
2	AB	137	ARG
2	AB	150	GLY
2	AB	156	GLY
2	AB	182	PRO
2	AB	188	ASP
2	AB	193	PRO
2	AB	210	VAL

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Mol	Chain	Res	Type
2	AB	212	LEU
2	AB	220	THR
3	AC	30	ALA
3	AC	88	ARG
3	AC	166	GLU
3	AC	168	TYR
4	AD	17	THR
4	AD	24	GLY
4	AD	32	CYS
4	AD	34	ILE
4	AD	160	GLU
5	AE	12	GLN
5	AE	51	GLY
5	AE	88	VAL
5	AE	101	GLU
5	AE	109	GLY
5	AE	110	ALA
5	AE	137	VAL
6	AF	6	ILE
7	AG	5	ARG
8	AH	96	MET
9	AI	13	LYS
9	AI	67	VAL
9	AI	116	VAL
10	AJ	16	ARG
10	AJ	17	LEU
10	AJ	36	VAL
10	AJ	58	ASN
10	AJ	61	ALA
10	AJ	81	GLU
10	AJ	92	LEU
11	AK	14	LYS
11	AK	17	SER
11	AK	36	ASP
11	AK	55	SER
11	AK	108	THR
11	AK	128	ARG
12	AL	25	GLU
12	AL	26	ALA
12	AL	118	GLY
13	AM	4	ILE
13	AM	65	VAL

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Mol	Chain	Res	Type
14	AN	23	LYS
14	AN	28	LYS
14	AN	92	GLU
15	AO	3	LEU
15	AO	73	LYS
15	AO	88	ARG
16	AP	10	GLY
16	AP	11	ALA
16	AP	31	ARG
16	AP	48	GLU
16	AP	57	ILE
17	AQ	18	GLU
17	AQ	70	THR
18	AR	66	SER
19	AS	35	SER
19	AS	43	ASN
20	AT	5	LYS
21	AU	23	CYS
21	AU	27	GLY
21	AU	39	GLU
24	BC	124	ILE
24	BC	168	ASP
24	BC	265	LYS
25	BD	102	ALA
25	BD	104	VAL
25	BD	114	LYS
27	BF	85	ILE
27	BF	172	ALA
28	BG	39	ASP
29	BH	3	VAL
29	BH	11	ASN
29	BH	14	SER
29	BH	15	LEU
29	BH	66	ASN
29	BH	119	ASN
30	BI	10	LYS
30	BI	39	CYS
30	BI	58	VAL
30	BI	102	SER
30	BI	116	ASP
30	BI	138	LEU
32	BK	109	SER

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Mol	Chain	Res	Type
32	BK	110	GLU
33	BL	15	ALA
33	BL	88	GLY
35	BN	118	ARG
36	BO	87	ILE
37	BP	16	ASP
37	BP	94	LYS
37	BP	105	GLY
39	BR	52	PRO
39	BR	55	ASP
39	BR	57	GLY
40	BS	63	GLY
41	BT	52	GLU
41	BT	71	GLY
41	BT	90	GLY
42	BU	8	ASP
42	BU	19	LYS
43	BV	66	ASP
46	BY	24	GLU
46	BY	35	GLY
48	B0	56	ALA
49	B1	52	ALA
51	B3	28	ASN
53	B5	37	LYS
53	B5	41	THR
53	B5	62	THR
53	B5	69	LEU
53	B5	90	ALA
53	B5	136	GLY
53	B5	217	THR
53	B5	219	MET
2	CB	22	TYR
2	CB	124	GLY
2	CB	130	THR
2	CB	193	PRO
3	CC	66	VAL
3	CC	140	ASN
3	CC	141	ALA
3	CC	174	PRO
4	CD	4	TYR
4	CD	43	ALA
5	CE	45	ARG

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Mol	Chain	Res	Type
5	CE	51	GLY
5	CE	122	ASN
5	CE	155	ALA
6	CF	93	LYS
6	CF	94	HIS
7	CG	114	LYS
8	CH	54	ASP
9	CI	57	MET
9	CI	72	ILE
9	CI	123	ARG
10	CJ	38	GLY
10	CJ	41	PRO
10	CJ	57	VAL
10	CJ	90	LEU
10	CJ	93	ALA
11	CK	78	GLY
11	CK	126	LYS
12	CL	76	GLU
13	CM	94	GLY
14	CN	53	ARG
15	CO	21	ASP
16	CP	77	GLU
17	CQ	18	GLU
19	CS	6	LYS
19	CS	45	ILE
21	CU	35	ARG
24	DC	205	LEU
24	DC	239	ASN
24	DC	251	GLN
24	DC	255	LYS
26	DE	6	LYS
26	DE	18	THR
26	DE	61	ARG
26	DE	82	GLY
26	DE	86	ALA
26	DE	122	GLU
26	DE	126	VAL
26	DE	129	PRO
26	DE	145	ASP
27	DF	9	LYS
27	DF	148	ARG
28	DG	20	ASN

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Mol	Chain	Res	Type
28	DG	28	GLY
28	DG	127	THR
28	DG	175	LYS
29	DH	31	VAL
29	DH	77	THR
29	DH	118	PRO
30	DI	9	VAL
30	DI	106	LEU
30	DI	134	ARG
33	DL	40	SER
33	DL	53	GLY
33	DL	69	ARG
34	DM	23	GLY
36	DO	115	LEU
37	DP	36	SER
37	DP	80	VAL
38	DQ	102	ASP
39	DR	53	PHE
40	DS	40	ASN
40	DS	64	ALA
40	DS	66	ILE
41	DT	66	LYS
41	DT	90	GLY
42	DU	53	ASN
42	DU	57	GLY
42	DU	98	SER
42	DU	99	ASN
45	DX	7	VAL
45	DX	62	LYS
46	DY	37	LEU
46	DY	57	LEU
47	DZ	4	THR
48	D0	55	ILE
50	D2	8	SER
50	D2	45	SER
51	D3	26	HIS
2	AB	68	LEU
2	AB	202	GLY
2	AB	203	ASN
3	AC	13	GLY
3	AC	54	ARG
3	AC	127	ARG

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Mol	Chain	Res	Type
3	AC	160	ALA
4	AD	36	GLN
4	AD	167	LYS
4	AD	169	THR
5	AE	45	ARG
5	AE	76	LEU
5	AE	78	ASN
6	AF	54	LEU
6	AF	69	GLU
8	AH	67	GLN
8	AH	88	ARG
9	AI	91	ASP
10	AJ	32	THR
10	AJ	41	PRO
12	AL	58	THR
12	AL	102	LEU
13	AM	10	PRO
15	AO	20	ASN
16	AP	49	GLY
16	AP	53	ASP
17	AQ	16	LYS
19	AS	4	SER
19	AS	9	PRO
19	AS	76	PRO
20	AT	68	HIS
21	AU	10	GLU
25	BD	105	LYS
27	BF	174	ASP
27	BF	176	PRO
28	BG	79	VAL
29	BH	9	VAL
29	BH	30	LEU
29	BH	85	GLY
29	BH	93	SER
29	BH	105	ALA
30	BI	20	PRO
30	BI	60	THR
30	BI	75	PRO
30	BI	84	ALA
30	BI	101	ILE
31	BJ	25	LEU
31	BJ	98	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
35	BN	10	LEU
41	BT	18	GLU
41	BT	72	GLN
48	B0	34	SER
48	B0	55	ILE
53	B5	79	ALA
53	B5	133	GLY
2	CB	19	GLN
2	CB	203	ASN
3	CC	64	ILE
4	CD	36	GLN
4	CD	168	PRO
4	CD	174	ASP
5	CE	12	GLN
5	CE	110	ALA
5	CE	138	ARG
5	CE	143	GLY
5	CE	150	PRO
6	CF	91	ARG
6	CF	95	ALA
7	CG	56	LYS
7	CG	126	ASP
8	CH	21	ASN
8	CH	97	ALA
8	CH	114	ARG
9	CI	12	ARG
10	CJ	79	PRO
12	CL	17	ALA
12	CL	22	PRO
12	CL	26	ALA
12	CL	43	LYS
13	CM	11	ASP
13	CM	12	HIS
13	CM	37	ALA
13	CM	66	GLU
13	CM	114	LYS
14	CN	21	PHE
14	CN	31	ILE
16	CP	46	LYS
17	CQ	20	SER
17	CQ	80	GLU
18	CR	47	THR

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Mol	Chain	Res	Type
19	CS	31	LEU
20	CT	5	LYS
20	CT	70	ASN
21	CU	10	GLU
21	CU	16	LEU
24	DC	34	LEU
24	DC	143	ASN
24	DC	240	PHE
25	DD	114	LYS
26	DE	48	THR
26	DE	127	GLU
27	DF	21	ASN
28	DG	8	PRO
29	DH	16	GLY
29	DH	40	THR
31	DJ	8	PRO
31	DJ	10	THR
31	DJ	25	LEU
33	DL	16	GLY
33	DL	30	THR
33	DL	42	SER
33	DL	54	GLN
34	DM	57	VAL
34	DM	58	LYS
34	DM	69	PRO
35	DN	59	SER
35	DN	105	GLY
36	DO	63	LYS
36	DO	116	GLN
37	DP	25	THR
37	DP	114	LEU
42	DU	7	ARG
42	DU	41	LEU
42	DU	52	LEU
45	DX	26	LYS
45	DX	44	LYS
48	D0	52	ARG
49	D1	27	LYS
52	D4	20	ASP
2	AB	143	LYS
2	AB	211	THR
3	AC	100	GLN

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Mol	Chain	Res	Type
4	AD	26	ARG
4	AD	28	ILE
5	AE	24	THR
5	AE	108	GLY
6	AF	98	GLU
7	AG	77	SER
7	AG	85	TYR
7	AG	113	ASP
8	AH	11	LEU
8	AH	25	VAL
8	AH	57	PRO
9	AI	51	PRO
10	AJ	28	THR
10	AJ	42	LEU
10	AJ	75	ASP
10	AJ	91	ASP
11	AK	16	VAL
11	AK	119	ASN
11	AK	127	ARG
12	AL	61	PHE
13	AM	64	VAL
15	AO	46	HIS
16	AP	50	THR
16	AP	79	ASN
17	AQ	12	VAL
17	AQ	50	ASN
20	AT	69	LYS
24	BC	271	ARG
26	BE	5	LEU
29	BH	83	LYS
30	BI	4	LYS
31	BJ	81	ILE
32	BK	93	GLN
32	BK	119	ALA
39	BR	43	ASN
40	BS	42	LYS
42	BU	64	ALA
43	BV	55	GLU
47	BZ	3	LYS
50	B2	42	LEU
53	B5	27	ALA
53	B5	51	ASP

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Mol	Chain	Res	Type
53	B5	65	LEU
53	B5	66	PRO
53	B5	148	PHE
2	CB	136	MET
2	CB	142	GLU
4	CD	23	SER
4	CD	29	ASP
4	CD	153	SER
4	CD	154	ARG
4	CD	192	SER
7	CG	79	ARG
7	CG	84	THR
7	CG	140	ASP
8	CH	66	PHE
9	CI	9	THR
10	CJ	35	GLN
10	CJ	36	VAL
12	CL	23	ALA
12	CL	24	LEU
13	CM	82	ASP
14	CN	62	ASN
15	CO	46	HIS
16	CP	15	PRO
20	CT	7	ALA
24	DC	76	ALA
24	DC	168	ASP
24	DC	247	PRO
24	DC	253	LYS
24	DC	260	ASN
26	DE	125	SER
27	DF	79	ILE
27	DF	174	ASP
29	DH	9	VAL
30	DI	22	PRO
30	DI	65	ARG
30	DI	84	ALA
30	DI	117	MET
31	DJ	127	GLY
31	DJ	128	ASN
32	DK	93	GLN
33	DL	25	SER
33	DL	36	LYS

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Mol	Chain	Res	Type
34	DM	79	ALA
35	DN	106	ASP
35	DN	118	ARG
36	DO	3	LYS
37	DP	32	VAL
38	DQ	87	SER
39	DR	82	HIS
40	DS	63	GLY
42	DU	58	ILE
43	DV	84	PRO
47	DZ	30	ARG
49	D1	5	ILE
2	AB	41	ILE
2	AB	207	ILE
3	AC	86	LYS
3	AC	121	THR
3	AC	159	GLY
4	AD	47	ARG
4	AD	161	LEU
5	AE	122	ASN
6	AF	62	MET
8	AH	34	VAL
9	AI	87	LEU
10	AJ	43	PRO
14	AN	44	ALA
21	AU	38	TYR
24	BC	121	ASP
27	BF	177	PHE
28	BG	12	PRO
28	BG	152	ARG
30	BI	8	TYR
30	BI	23	PRO
33	BL	29	LYS
34	BM	58	LYS
36	BO	77	ALA
37	BP	76	THR
39	BR	70	GLU
52	B4	37	GLN
53	B5	168	LYS
53	B5	171	ALA
53	B5	201	LYS
53	B5	210	LEU

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Mol	Chain	Res	Type
53	B5	213	VAL
53	B5	223	VAL
2	CB	68	LEU
2	CB	127	ASP
2	CB	149	GLY
3	CC	37	PHE
4	CD	47	ARG
4	CD	85	ASN
5	CE	151	GLU
6	CF	18	VAL
8	CH	22	LYS
8	CH	96	MET
9	CI	55	VAL
10	CJ	95	GLY
11	CK	15	GLN
13	CM	14	HIS
14	CN	11	VAL
17	CQ	16	LYS
19	CS	67	VAL
19	CS	69	HIS
19	CS	76	PRO
21	CU	11	PRO
24	DC	85	PRO
25	DD	75	ALA
25	DD	194	PRO
26	DE	62	GLN
26	DE	200	LEU
27	DF	118	SER
28	DG	46	ALA
28	DG	80	THR
28	DG	158	LYS
28	DG	173	GLU
30	DI	10	LYS
30	DI	20	PRO
32	DK	48	PRO
32	DK	110	GLU
33	DL	29	LYS
33	DL	79	LEU
34	DM	77	PRO
35	DN	86	ARG
39	DR	7	SER
39	DR	81	LYS

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Mol	Chain	Res	Type
42	DU	102	THR
43	DV	85	LYS
45	DX	42	SER
45	DX	66	THR
49	D1	15	ALA
49	D1	51	GLU
2	AB	183	VAL
3	AC	66	VAL
5	AE	54	ARG
5	AE	98	PRO
8	AH	14	ILE
9	AI	9	THR
9	AI	88	MET
13	AM	66	GLU
13	AM	67	GLY
20	AT	82	GLN
21	AU	26	ALA
24	BC	97	LYS
25	BD	148	GLN
26	BE	44	ARG
28	BG	61	GLY
29	BH	120	GLY
30	BI	9	VAL
35	BN	119	SER
36	BO	88	LYS
37	BP	35	GLY
38	BQ	24	TYR
42	BU	98	SER
2	CB	205	ASP
2	CB	208	ARG
3	CC	84	VAL
3	CC	191	THR
4	CD	10	LYS
9	CI	39	PHE
9	CI	58	VAL
9	CI	128	SER
10	CJ	75	ASP
11	CK	80	LYS
13	CM	96	PRO
16	CP	14	ARG
17	CQ	5	ILE
20	CT	56	PRO

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Mol	Chain	Res	Type
20	CT	65	GLY
24	DC	121	ASP
26	DE	80	SER
26	DE	83	VAL
27	DF	176	PRO
30	DI	61	VAL
31	DJ	85	LYS
31	DJ	95	ARG
33	DL	20	GLY
41	DT	50	LEU
41	DT	57	VAL
43	DV	24	ASN
3	AC	101	ILE
8	AH	100	GLY
11	AK	124	PRO
28	BG	100	GLY
46	BY	46	VAL
47	BZ	14	ILE
6	CF	85	ILE
11	CK	120	GLY
14	CN	34	VAL
24	DC	235	GLY
27	DF	31	VAL
30	DI	52	GLY
31	DJ	64	VAL
32	DK	72	PRO
41	DT	10	VAL
45	DX	51	VAL
46	DY	11	VAL
50	D2	38	GLY
9	AI	72	ILE
13	AM	111	GLY
32	BK	120	PRO
11	CK	92	GLY
16	CP	42	ILE
17	CQ	13	VAL
20	CT	67	ILE
21	CU	27	GLY
26	DE	149	ILE
27	DF	85	ILE
28	DG	12	PRO
28	DG	17	VAL

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Mol	Chain	Res	Type
30	DI	13	VAL
31	DJ	82	GLY
33	DL	46	VAL
35	DN	85	PRO
41	DT	47	VAL
2	AB	224	GLY
4	AD	139	PRO
5	AE	134	ILE
6	AF	43	GLY
7	AG	80	VAL
9	AI	24	GLY
24	BC	234	GLY
30	BI	13	VAL
4	CD	37	ALA
9	CI	104	VAL
28	DG	118	PRO
32	DK	119	ALA
39	DR	101	ILE
42	DU	47	LYS
42	DU	54	GLN
51	D3	7	VAL
2	AB	48	PRO
5	AE	105	ILE
12	AL	22	PRO
18	AR	26	ILE
30	BI	98	VAL
4	CD	167	LYS
10	CJ	42	LEU
13	CM	25	VAL
14	CN	72	GLY
19	CS	30	PRO
24	DC	228	VAL
30	DI	98	VAL
42	DU	25	VAL
48	D0	43	ILE
11	AK	91	PRO
24	BC	233	GLY
6	CF	64	VAL

### 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%)	132 (73%)	48 (27%)	0	2
2	CB	180/180 (100%)	132 (73%)	48 (27%)	0	2
3	AC	170/170 (100%)	136 (80%)	34 (20%)	1	5
3	CC	170/170 (100%)	146 (86%)	24 (14%)	4	12
4	AD	172/172 (100%)	138 (80%)	34 (20%)	1	5
4	CD	172/172 (100%)	145 (84%)	27 (16%)	3	9
5	AE	113/113 (100%)	86 (76%)	27 (24%)	1	2
5	CE	113/113 (100%)	84 (74%)	29 (26%)	0	2
6	AF	87/87 (100%)	71 (82%)	16 (18%)	2	6
6	CF	87/87 (100%)	60 (69%)	27 (31%)	0	1
7	AG	124/124 (100%)	105 (85%)	19 (15%)	3	10
7	CG	124/124 (100%)	100 (81%)	24 (19%)	2	5
8	AH	104/104 (100%)	84 (81%)	20 (19%)	2	5
8	CH	104/104 (100%)	84 (81%)	20 (19%)	2	5
9	AI	105/105 (100%)	76 (72%)	29 (28%)	0	1
9	CI	105/105 (100%)	90 (86%)	15 (14%)	4	12
10	AJ	86/86 (100%)	69 (80%)	17 (20%)	1	5
10	CJ	86/86 (100%)	65 (76%)	21 (24%)	1	2
11	AK	90/90 (100%)	75 (83%)	15 (17%)	3	8
11	CK	90/90 (100%)	73 (81%)	17 (19%)	2	6
12	AL	103/103 (100%)	86 (84%)	17 (16%)	3	8
12	CL	103/103 (100%)	83 (81%)	20 (19%)	2	5
13	AM	92/92 (100%)	76 (83%)	16 (17%)	2	7
13	CM	92/92 (100%)	75 (82%)	17 (18%)	2	6
14	AN	79/83 (95%)	65 (82%)	14 (18%)	2	7
14	CN	79/83 (95%)	71 (90%)	8 (10%)	9	28

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
15	AO	75/76 (99%)	63 (84%)	12 (16%)	3	9
15	CO	75/76 (99%)	64 (85%)	11 (15%)	4	11
16	AP	65/65 (100%)	49 (75%)	16 (25%)	1	2
16	CP	65/65 (100%)	55 (85%)	10 (15%)	3	10
17	AQ	74/74 (100%)	50 (68%)	24 (32%)	0	1
17	CQ	74/74 (100%)	52 (70%)	22 (30%)	0	1
18	AR	48/48 (100%)	37 (77%)	11 (23%)	1	3
18	CR	48/48 (100%)	39 (81%)	9 (19%)	2	6
19	AS	70/70 (100%)	54 (77%)	16 (23%)	1	3
19	CS	70/70 (100%)	57 (81%)	13 (19%)	2	6
20	AT	65/65 (100%)	51 (78%)	14 (22%)	1	4
20	CT	65/65 (100%)	57 (88%)	8 (12%)	6	17
21	AU	44/44 (100%)	29 (66%)	15 (34%)	0	0
21	CU	44/44 (100%)	27 (61%)	17 (39%)	0	0
24	BC	216/216 (100%)	189 (88%)	27 (12%)	6	17
24	DC	216/216 (100%)	194 (90%)	22 (10%)	9	27
25	BD	164/164 (100%)	147 (90%)	17 (10%)	9	26
25	DD	164/164 (100%)	147 (90%)	17 (10%)	9	26
26	BE	165/165 (100%)	138 (84%)	27 (16%)	3	8
26	DE	165/165 (100%)	139 (84%)	26 (16%)	3	9
27	BF	148/148 (100%)	115 (78%)	33 (22%)	1	3
27	DF	148/148 (100%)	121 (82%)	27 (18%)	2	6
28	BG	137/137 (100%)	120 (88%)	17 (12%)	6	17
28	DG	137/137 (100%)	114 (83%)	23 (17%)	2	8
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%)	83 (76%)	26 (24%)	1	2
30	DI	109/109 (100%)	83 (76%)	26 (24%)	1	2
31	BJ	116/116 (100%)	104 (90%)	12 (10%)	9	26
31	DJ	116/116 (100%)	97 (84%)	19 (16%)	3	8
32	BK	103/103 (100%)	90 (87%)	13 (13%)	5	16

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
32	DK	103/103 (100%)	92 (89%)	11 (11%)	8	24
33	BL	102/102 (100%)	92 (90%)	10 (10%)	10	30
33	DL	102/102 (100%)	89 (87%)	13 (13%)	5	16
34	BM	109/109 (100%)	100 (92%)	9 (8%)	14	38
34	DM	109/109 (100%)	97 (89%)	12 (11%)	8	23
35	BN	100/100 (100%)	93 (93%)	7 (7%)	19	47
35	DN	100/100 (100%)	77 (77%)	23 (23%)	1	3
36	BO	86/86 (100%)	66 (77%)	20 (23%)	1	3
36	DO	86/86 (100%)	69 (80%)	17 (20%)	1	5
37	BP	99/99 (100%)	84 (85%)	15 (15%)	3	10
37	DP	99/99 (100%)	90 (91%)	9 (9%)	12	34
38	BQ	89/89 (100%)	78 (88%)	11 (12%)	6	17
38	DQ	89/89 (100%)	78 (88%)	11 (12%)	6	17
39	BR	84/84 (100%)	74 (88%)	10 (12%)	6	19
39	DR	84/84 (100%)	79 (94%)	5 (6%)	24	57
40	BS	93/93 (100%)	77 (83%)	16 (17%)	2	7
40	DS	93/93 (100%)	82 (88%)	11 (12%)	6	19
41	BT	80/80 (100%)	70 (88%)	10 (12%)	6	17
41	DT	80/80 (100%)	69 (86%)	11 (14%)	4	13
42	BU	83/83 (100%)	71 (86%)	12 (14%)	4	12
42	DU	83/83 (100%)	68 (82%)	15 (18%)	2	6
43	BV	78/78 (100%)	61 (78%)	17 (22%)	1	3
43	DV	78/78 (100%)	65 (83%)	13 (17%)	3	8
44	BW	57/58 (98%)	48 (84%)	9 (16%)	3	9
44	DW	56/58 (97%)	48 (86%)	8 (14%)	4	12
45	BX	67/67 (100%)	59 (88%)	8 (12%)	6	19
45	DX	67/67 (100%)	57 (85%)	10 (15%)	4	11
46	BY	55/55 (100%)	49 (89%)	6 (11%)	8	23
46	DY	55/55 (100%)	42 (76%)	13 (24%)	1	2
47	BZ	48/48 (100%)	43 (90%)	5 (10%)	9	26
47	DZ	48/48 (100%)	38 (79%)	10 (21%)	1	4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
48	B0	47/47 (100%)	43 (92%)	4 (8%)	13	37
48	D0	47/47 (100%)	42 (89%)	5 (11%)	8	25
49	B1	45/45 (100%)	42 (93%)	3 (7%)	20	50
49	D1	45/45 (100%)	38 (84%)	7 (16%)	3	10
50	B2	38/38 (100%)	34 (90%)	4 (10%)	8	25
50	D2	38/38 (100%)	32 (84%)	6 (16%)	3	9
51	B3	51/51 (100%)	45 (88%)	6 (12%)	6	19
51	D3	51/51 (100%)	46 (90%)	5 (10%)	10	30
52	B4	34/34 (100%)	32 (94%)	2 (6%)	24	58
52	D4	34/34 (100%)	28 (82%)	6 (18%)	2	7
53	B5	61/180 (34%)	47 (77%)	14 (23%)	1	3
All	All	9386/9518 (99%)	7782 (83%)	1604 (17%)	2	7

All (1604) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	9	MET
2	AB	14	VAL
2	AB	15	HIS
2	AB	20	THR
2	AB	21	ARG
2	AB	27	MET
2	AB	30	PHE
2	AB	31	ILE
2	AB	32	PHE
2	AB	39	HIS
2	AB	41	ILE
2	AB	43	LEU
2	AB	46	THR
2	AB	50	PHE
2	AB	64	LYS
2	AB	66	LYS
2	AB	68	LEU
2	AB	85	LEU
2	AB	87	CYS
2	AB	88	ASP
2	AB	95	ARG
2	AB	100	MET

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Mol	Chain	Res	Type
2	AB	101	LEU
2	AB	102	THR
2	AB	107	VAL
2	AB	108	ARG
2	AB	114	LEU
2	AB	122	GLN
2	AB	123	ASP
2	AB	126	PHE
2	AB	129	LEU
2	AB	130	THR
2	AB	132	LYS
2	AB	135	LEU
2	AB	148	LEU
2	AB	153	ASP
2	AB	157	LEU
2	AB	161	LEU
2	AB	164	ILE
2	AB	170	HIS
2	AB	188	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
2	AB	226	SER
3	AC	3	GLN
3	AC	14	ILE
3	AC	15	VAL
3	AC	18	TRP
3	AC	19	ASN
3	AC	21	THR
3	AC	27	LYS
3	AC	28	GLU
3	AC	29	PHE
3	AC	33	LEU
3	AC	37	PHE
3	AC	38	LYS
3	AC	43	LEU
3	AC	52	VAL
3	AC	53	SER
3	AC	55	ILE

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Mol	Chain	Res	Type
3	AC	57	ILE
3	AC	59	ARG
3	AC	64	ILE
3	AC	69	HIS
3	AC	75	ILE
3	AC	86	LYS
3	AC	88	ARG
3	AC	107	ARG
3	AC	127	ARG
3	AC	131	ARG
3	AC	144	LEU
3	AC	167	TRP
3	AC	168	TYR
3	AC	185	ASN
3	AC	186	THR
3	AC	192	THR
3	AC	193	TYR
3	AC	196	ILE
4	AD	5	LEU
4	AD	13	ARG
4	AD	17	THR
4	AD	23	SER
4	AD	31	LYS
4	AD	32	CYS
4	AD	33	LYS
4	AD	34	ILE
4	AD	35	GLU
4	AD	44	ARG
4	AD	45	LYS
4	AD	56	ARG
4	AD	58	LYS
4	AD	63	ARG
4	AD	73	ARG
4	AD	83	LYS
4	AD	90	LEU
4	AD	93	LEU
4	AD	103	TYR
4	AD	104	ARG
4	AD	111	ARG
4	AD	121	LYS
4	AD	123	ILE
4	AD	132	ILE

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Mol	Chain	Res	Type
4	AD	143	VAL
4	AD	153	SER
4	AD	161	LEU
4	AD	163	GLU
4	AD	173	VAL
4	AD	190	ASP
4	AD	195	ILE
4	AD	198	HIS
4	AD	205	SER
4	AD	206	LYS
5	AE	10	GLU
5	AE	14	LYS
5	AE	15	LEU
5	AE	16	ILE
5	AE	18	VAL
5	AE	21	VAL
5	AE	25	VAL
5	AE	32	SER
5	AE	36	LEU
5	AE	37	THR
5	AE	38	VAL
5	AE	60	ILE
5	AE	78	ASN
5	AE	81	LEU
5	AE	83	HIS
5	AE	85	VAL
5	AE	94	VAL
5	AE	115	LEU
5	AE	120	VAL
5	AE	124	LEU
5	AE	134	ILE
5	AE	136	VAL
5	AE	140	THR
5	AE	142	ASP
5	AE	149	SER
5	AE	153	VAL
5	AE	159	LYS
6	AF	7	VAL
6	AF	14	GLN
6	AF	15	SER
6	AF	17	GLN
6	AF	24	ARG

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Mol	Chain	Res	Type
6	AF	50	PRO
6	AF	51	ILE
6	AF	54	LEU
6	AF	55	HIS
6	AF	68	GLN
6	AF	69	GLU
6	AF	73	GLU
6	AF	75	GLU
6	AF	84	VAL
6	AF	86	ARG
6	AF	98	GLU
7	AG	4	ARG
7	AG	7	ILE
7	AG	23	LEU
7	AG	32	VAL
7	AG	36	LYS
7	AG	38	THR
7	AG	40	GLU
7	AG	48	GLU
7	AG	50	LEU
7	AG	52	GLN
7	AG	58	GLU
7	AG	59	LEU
7	AG	63	GLU
7	AG	70	ARG
7	AG	78	ARG
7	AG	115	SER
7	AG	135	VAL
7	AG	136	LYS
7	AG	143	ARG
8	AH	2	SER
8	AH	3	MET
8	AH	22	LYS
8	AH	25	VAL
8	AH	26	THR
8	AH	36	ILE
8	AH	38	ASN
8	AH	39	VAL
8	AH	42	GLU
8	AH	47	GLU
8	AH	51	VAL
8	AH	59	LEU

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Mol	Chain	Res	Type
8	AH	77	ARG
8	AH	83	LEU
8	AH	87	LYS
8	AH	104	VAL
8	AH	108	LYS
8	AH	117	ARG
8	AH	121	LEU
8	AH	129	VAL
9	AI	12	ARG
9	AI	18	ARG
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	47	VAL
9	AI	48	VAL
9	AI	49	ARG
9	AI	55	VAL
9	AI	56	ASP
9	AI	57	MET
9	AI	60	LYS
9	AI	61	LEU
9	AI	63	LEU
9	AI	65	ILE
9	AI	68	LYS
9	AI	85	ARG
9	AI	88	MET
9	AI	89	GLU
9	AI	90	TYR
9	AI	91	ASP
9	AI	94	LEU
9	AI	100	LYS
9	AI	127	PHE
9	AI	129	LYS
9	AI	130	ARG
10	AJ	5	ARG
10	AJ	6	ILE
10	AJ	8	ILE
10	AJ	27	GLU
10	AJ	30	LYS

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Mol	Chain	Res	Type
10	AJ	40	ILE
10	AJ	42	LEU
10	AJ	45	ARG
10	AJ	49	PHE
10	AJ	50	THR
10	AJ	52	LEU
10	AJ	59	LYS
10	AJ	66	GLU
10	AJ	73	LEU
10	AJ	84	VAL
10	AJ	87	LEU
10	AJ	91	ASP
11	AK	31	ILE
11	AK	33	THR
11	AK	34	ILE
11	AK	52	PHE
11	AK	56	ARG
11	AK	65	VAL
11	AK	81	ASN
11	AK	85	MET
11	AK	96	THR
11	AK	97	ILE
11	AK	100	LEU
11	AK	101	ASN
11	AK	107	ILE
11	AK	126	LYS
11	AK	128	ARG
12	AL	7	LEU
12	AL	10	LYS
12	AL	19	SER
12	AL	29	GLN
12	AL	30	LYS
12	AL	33	VAL
12	AL	36	ARG
12	AL	44	LYS
12	AL	58	THR
12	AL	62	GLU
12	AL	74	LEU
12	AL	89	ASP
12	AL	102	LEU
12	AL	105	SER
12	AL	110	ARG

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Mol	Chain	Res	Type
12	AL	115	SER
12	AL	121	ARG
13	AM	4	ILE
13	AM	7	ILE
13	AM	13	LYS
13	AM	16	VAL
13	AM	25	VAL
13	AM	27	LYS
13	AM	50	GLU
13	AM	59	GLU
13	AM	71	ARG
13	AM	72	GLU
13	AM	80	LEU
13	AM	82	ASP
13	AM	87	ARG
13	AM	90	ARG
13	AM	101	ARG
13	AM	104	THR
14	AN	7	LYS
14	AN	12	LYS
14	AN	14	VAL
14	AN	26	GLU
14	AN	28	LYS
14	AN	46	LEU
14	AN	49	GLN
14	AN	50	THR
14	AN	51	LEU
14	AN	59	ARG
14	AN	84	VAL
14	AN	85	ARG
14	AN	97	LYS
14	AN	98	LYS
15	AO	8	THR
15	AO	13	SER
15	AO	17	ARG
15	AO	22	THR
15	AO	35	GLN
15	AO	39	LEU
15	AO	59	MET
15	AO	67	LEU
15	AO	83	GLU
15	AO	85	LEU

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Mol	Chain	Res	Type
15	AO	87	LEU
15	AO	88	ARG
16	AP	1	MET
16	AP	2	VAL
16	AP	3	THR
16	AP	5	ARG
16	AP	8	ARG
16	AP	18	GLN
16	AP	19	VAL
16	AP	29	ASN
16	AP	33	ILE
16	AP	46	LYS
16	AP	51	ARG
16	AP	56	ARG
16	AP	66	THR
16	AP	68	SER
16	AP	76	LYS
16	AP	80	LYS
17	AQ	4	LYS
17	AQ	6	ARG
17	AQ	7	THR
17	AQ	8	LEU
17	AQ	13	VAL
17	AQ	14	SER
17	AQ	16	LYS
17	AQ	17	MET
17	AQ	21	ILE
17	AQ	29	VAL
17	AQ	30	LYS
17	AQ	33	ILE
17	AQ	38	ILE
17	AQ	48	ASP
17	AQ	52	GLU
17	AQ	55	ILE
17	AQ	61	ILE
17	AQ	69	LYS
17	AQ	74	THR
17	AQ	75	LEU
17	AQ	76	VAL
17	AQ	77	ARG
17	AQ	81	LYS
17	AQ	83	VAL

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Mol	Chain	Res	Type
18	AR	21	ILE
18	AR	25	ASP
18	AR	29	LEU
18	AR	30	LYS
18	AR	31	ASN
18	AR	33	ILE
18	AR	34	THR
18	AR	43	ARG
18	AR	55	LEU
18	AR	57	ARG
18	AR	71	THR
19	AS	6	LYS
19	AS	7	LYS
19	AS	21	LYS
19	AS	24	GLU
19	AS	27	ASP
19	AS	29	LYS
19	AS	32	ARG
19	AS	37	ARG
19	AS	41	PHE
19	AS	43	ASN
19	AS	45	ILE
19	AS	55	ARG
19	AS	56	GLN
19	AS	58	VAL
19	AS	63	THR
19	AS	65	GLU
20	AT	3	ASN
20	AT	5	LYS
20	AT	6	SER
20	AT	10	ARG
20	AT	12	ILE
20	AT	24	ARG
20	AT	34	LYS
20	AT	36	TYR
20	AT	54	MET
20	AT	67	ILE
20	AT	69	LYS
20	AT	70	ASN
20	AT	74	ARG
20	AT	86	LEU
21	AU	5	LYS

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Mol	Chain	Res	Type
21	AU	10	GLU
21	AU	12	PHE
21	AU	18	ARG
21	AU	20	LYS
21	AU	23	CYS
21	AU	25	LYS
21	AU	28	VAL
21	AU	34	ARG
21	AU	37	PHE
21	AU	42	THR
21	AU	46	LYS
21	AU	47	ARG
21	AU	49	LYS
21	AU	54	LYS
24	BC	13	ARG
24	BC	14	ARG
24	BC	18	LYS
24	BC	20	VAL
24	BC	24	LEU
24	BC	64	ILE
24	BC	86	ASN
24	BC	97	LYS
24	BC	105	LEU
24	BC	111	LYS
24	BC	117	GLN
24	BC	121	ASP
24	BC	156	ARG
24	BC	162	VAL
24	BC	164	ILE
24	BC	174	LEU
24	BC	177	ARG
24	BC	187	ASP
24	BC	197	ASN
24	BC	199	GLU
24	BC	213	TRP
24	BC	216	VAL
24	BC	220	VAL
24	BC	228	VAL
24	BC	245	VAL
24	BC	265	LYS
24	BC	268	VAL
25	BD	1	MET

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Mol	Chain	Res	Type
25	BD	4	LEU
25	BD	13	ARG
25	BD	14	ILE
25	BD	18	ASP
25	BD	42	ASN
25	BD	58	ASN
25	BD	89	GLU
25	BD	95	SER
25	BD	97	SER
25	BD	121	THR
25	BD	129	THR
25	BD	133	THR
25	BD	145	SER
25	BD	165	MET
25	BD	174	SER
25	BD	186	LEU
26	BE	4	VAL
26	BE	5	LEU
26	BE	12	LEU
26	BE	16	GLU
26	BE	40	ARG
26	BE	44	ARG
26	BE	55	SER
26	BE	63	LYS
26	BE	74	LYS
26	BE	77	ILE
26	BE	79	ARG
26	BE	90	GLN
26	BE	93	SER
26	BE	107	SER
26	BE	108	ILE
26	BE	111	GLU
26	BE	116	ASP
26	BE	120	VAL
26	BE	126	VAL
26	BE	131	THR
26	BE	136	GLN
26	BE	149	ILE
26	BE	171	ASP
26	BE	178	VAL
26	BE	197	GLU
26	BE	198	GLU

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Mol	Chain	Res	Type
26	BE	200	LEU
27	BF	14	LYS
27	BF	17	MET
27	BF	18	THR
27	BF	21	ASN
27	BF	25	VAL
27	BF	34	ILE
27	BF	35	THR
27	BF	36	LEU
27	BF	37	ASN
27	BF	40	VAL
27	BF	42	GLU
27	BF	44	ILE
27	BF	48	LYS
27	BF	49	LEU
27	BF	51	ASP
27	BF	67	ILE
27	BF	83	TYR
27	BF	85	ILE
27	BF	92	ARG
27	BF	104	ILE
27	BF	108	VAL
27	BF	112	ARG
27	BF	120	LYS
27	BF	125	ARG
27	BF	132	VAL
27	BF	133	ARG
27	BF	147	ASP
27	BF	150	ARG
27	BF	152	LEU
27	BF	155	THR
27	BF	158	THR
27	BF	174	ASP
27	BF	178	ARG
28	BG	11	VAL
28	BG	33	LEU
28	BG	39	ASP
28	BG	55	ARG
28	BG	56	ASP
28	BG	67	THR
28	BG	69	ARG
28	BG	77	ILE

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Mol	Chain	Res	Type
28	BG	84	THR
28	BG	87	LEU
28	BG	88	GLN
28	BG	99	LYS
28	BG	104	ASN
28	BG	124	GLU
28	BG	133	LEU
28	BG	139	GLN
28	BG	155	GLU
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
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	9	VAL
30	BI	13	VAL
30	BI	17	MET
30	BI	19	ASN
30	BI	31	GLN
30	BI	34	ASN

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Mol	Chain	Res	Type
30	BI	38	PHE
30	BI	45	LYS
30	BI	47	ASP
30	BI	50	GLU
30	BI	51	LYS
30	BI	58	VAL
30	BI	69	PHE
30	BI	72	LYS
30	BI	82	LYS
30	BI	86	ILE
30	BI	87	LYS
30	BI	90	SER
30	BI	94	ASN
30	BI	103	ARG
30	BI	107	GLN
30	BI	125	MET
30	BI	128	SER
30	BI	134	ARG
30	BI	136	MET
31	BJ	5	THR
31	BJ	30	THR
31	BJ	37	ARG
31	BJ	40	HIS
31	BJ	43	GLU
31	BJ	61	LYS
31	BJ	64	VAL
31	BJ	86	GLN
31	BJ	96	ARG
31	BJ	114	LEU
31	BJ	124	VAL
31	BJ	142	ILE
32	BK	1	MET
32	BK	40	LYS
32	BK	49	ARG
32	BK	58	LEU
32	BK	66	LYS
32	BK	80	ASP
32	BK	91	SER
32	BK	92	GLU
32	BK	105	ARG
32	BK	114	LYS
32	BK	116	ILE

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Mol	Chain	Res	Type
32	BK	117	SER
32	BK	121	GLU
33	BL	19	LEU
33	BL	40	SER
33	BL	60	ARG
33	BL	82	LEU
33	BL	86	GLU
33	BL	94	THR
33	BL	100	ILE
33	BL	104	GLN
33	BL	115	GLU
33	BL	125	LEU
34	BM	20	LEU
34	BM	24	THR
34	BM	45	GLN
34	BM	55	ARG
34	BM	69	PRO
34	BM	80	VAL
34	BM	112	LEU
34	BM	115	GLU
34	BM	126	ILE
35	BN	2	ARG
35	BN	20	MET
35	BN	69	ARG
35	BN	70	THR
35	BN	95	THR
35	BN	113	ILE
35	BN	116	VAL
36	BO	2	ASP
36	BO	3	LYS
36	BO	4	LYS
36	BO	5	SER
36	BO	9	ARG
36	BO	17	LYS
36	BO	18	LEU
36	BO	24	THR
36	BO	27	VAL
36	BO	28	VAL
36	BO	31	THR
36	BO	36	TYR
36	BO	45	SER
36	BO	47	VAL

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Mol	Chain	Res	Type
36	BO	49	VAL
36	BO	55	GLU
36	BO	60	GLU
36	BO	61	GLN
36	BO	87	ILE
36	BO	89	ASP
37	BP	6	LYS
37	BP	7	GLN
37	BP	12	GLN
37	BP	26	VAL
37	BP	27	GLU
37	BP	38	LYS
37	BP	57	SER
37	BP	63	LYS
37	BP	64	ILE
37	BP	68	GLU
37	BP	88	ARG
37	BP	93	ARG
37	BP	103	ARG
37	BP	109	ARG
37	BP	110	ILE
38	BQ	18	LEU
38	BQ	30	ARG
38	BQ	51	ARG
38	BQ	52	GLN
38	BQ	58	ARG
38	BQ	78	LYS
38	BQ	85	LYS
38	BQ	87	SER
38	BQ	92	ARG
38	BQ	103	LYS
38	BQ	117	LEU
39	BR	10	LYS
39	BR	14	VAL
39	BR	16	GLU
39	BR	20	VAL
39	BR	32	THR
39	BR	38	VAL
39	BR	46	GLU
39	BR	48	LYS
39	BR	74	ILE
39	BR	85	LYS

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Mol	Chain	Res	Type
40	BS	6	LYS
40	BS	7	HIS
40	BS	8	ARG
40	BS	19	LEU
40	BS	25	ARG
40	BS	28	LYS
40	BS	30	SER
40	BS	42	LYS
40	BS	47	VAL
40	BS	69	LEU
40	BS	81	SER
40	BS	82	MET
40	BS	90	LYS
40	BS	92	ARG
40	BS	97	LEU
40	BS	109	ASP
41	BT	1	MET
41	BT	12	ARG
41	BT	18	GLU
41	BT	27	SER
41	BT	30	ILE
41	BT	49	LYS
41	BT	70	HIS
41	BT	73	ARG
41	BT	86	THR
41	BT	93	LEU
42	BU	5	ILE
42	BU	9	ASP
42	BU	15	THR
42	BU	26	LYS
42	BU	28	VAL
42	BU	29	LEU
42	BU	52	LEU
42	BU	68	SER
42	BU	72	ILE
42	BU	77	THR
42	BU	86	ARG
42	BU	99	ASN
43	BV	1	MET
43	BV	2	PHE
43	BV	8	VAL
43	BV	10	LYS

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Mol	Chain	Res	Type
43	BV	14	LYS
43	BV	17	SER
43	BV	29	ILE
43	BV	34	LYS
43	BV	41	GLU
43	BV	43	ASP
43	BV	61	LEU
43	BV	62	THR
43	BV	65	VAL
43	BV	66	ASP
43	BV	90	ASP
43	BV	92	VAL
43	BV	93	ARG
44	BW	20	ARG
44	BW	29	GLU
44	BW	38	VAL
44	BW	39	ARG
44	BW	41	ARG
44	BW	60	PHE
44	BW	64	ASP
44	BW	72	LYS
44	BW	81	SER
45	BX	5	CYS
45	BX	14	THR
45	BX	25	THR
45	BX	26	LYS
45	BX	43	GLU
45	BX	48	THR
45	BX	66	THR
45	BX	76	GLU
46	BY	5	GLU
46	BY	6	LEU
46	BY	16	THR
46	BY	22	LEU
46	BY	29	ARG
46	BY	57	LEU
47	BZ	10	THR
47	BZ	19	LYS
47	BZ	31	ARG
47	BZ	36	VAL
47	BZ	57	VAL
48	B0	20	ASP

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Mol	Chain	Res	Type
48	B0	26	THR
48	B0	36	GLU
48	B0	40	ARG
49	B1	40	ASP
49	B1	47	VAL
49	B1	51	GLU
50	B2	3	ARG
50	B2	4	THR
50	B2	21	ARG
50	B2	45	SER
51	B3	5	LYS
51	B3	16	LYS
51	B3	30	ARG
51	B3	31	HIS
51	B3	47	LYS
51	B3	55	LEU
52	B4	18	LYS
52	B4	26	ILE
53	B5	21	TYR
53	B5	23	ILE
53	B5	38	PHE
53	B5	47	LYS
53	B5	48	LEU
53	B5	51	ASP
53	B5	64	SER
53	B5	73	VAL
53	B5	76	LEU
53	B5	78	ILE
53	B5	86	GLU
53	B5	93	ASP
53	B5	94	TYR
53	B5	100	ILE
2	CB	15	HIS
2	CB	16	PHE
2	CB	20	THR
2	CB	21	ARG
2	CB	23	TRP
2	CB	26	LYS
2	CB	27	MET
2	CB	32	PHE
2	CB	40	ILE
2	CB	43	LEU

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Mol	Chain	Res	Type
2	CB	49	MET
2	CB	50	PHE
2	CB	56	GLU
2	CB	63	ARG
2	CB	66	LYS
2	CB	67	ILE
2	CB	68	LEU
2	CB	73	LYS
2	CB	74	ARG
2	CB	77	SER
2	CB	80	VAL
2	CB	85	LEU
2	CB	87	CYS
2	CB	88	ASP
2	CB	94	HIS
2	CB	95	ARG
2	CB	96	TRP
2	CB	101	LEU
2	CB	106	THR
2	CB	111	ILE
2	CB	126	PHE
2	CB	130	THR
2	CB	136	MET
2	CB	148	LEU
2	CB	163	VAL
2	CB	164	ILE
2	CB	171	ILE
2	CB	174	LYS
2	CB	175	GLU
2	CB	179	LEU
2	CB	187	VAL
2	CB	205	ASP
2	CB	207	ILE
2	CB	208	ARG
2	CB	210	VAL
2	CB	213	TYR
2	CB	222	ARG
2	CB	225	ARG
3	CC	3	GLN
3	CC	16	LYS
3	CC	27	LYS
3	CC	37	PHE

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Mol	Chain	Res	Type
3	CC	38	LYS
3	CC	43	LEU
3	CC	70	THR
3	CC	75	ILE
3	CC	80	LYS
3	CC	103	ILE
3	CC	107	ARG
3	CC	110	GLU
3	CC	121	THR
3	CC	131	ARG
3	CC	140	ASN
3	CC	157	LEU
3	CC	167	TRP
3	CC	168	TYR
3	CC	175	LEU
3	CC	179	ARG
3	CC	185	ASN
3	CC	186	THR
3	CC	193	TYR
3	CC	200	VAL
4	CD	5	LEU
4	CD	8	LYS
4	CD	9	LEU
4	CD	10	LYS
4	CD	30	THR
4	CD	32	CYS
4	CD	33	LYS
4	CD	48	LEU
4	CD	50	ASP
4	CD	54	GLN
4	CD	55	LEU
4	CD	56	ARG
4	CD	58	LYS
4	CD	59	GLN
4	CD	81	ARG
4	CD	142	VAL
4	CD	148	LYS
4	CD	152	GLN
4	CD	155	VAL
4	CD	159	LEU
4	CD	161	LEU
4	CD	163	GLU

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Mol	Chain	Res	Type
4	CD	174	ASP
4	CD	191	LEU
4	CD	192	SER
4	CD	200	ILE
4	CD	206	LYS
5	CE	10	GLU
5	CE	15	LEU
5	CE	24	THR
5	CE	25	VAL
5	CE	26	LYS
5	CE	32	SER
5	CE	45	ARG
5	CE	46	VAL
5	CE	52	LYS
5	CE	70	ASN
5	CE	81	LEU
5	CE	88	VAL
5	CE	93	ARG
5	CE	94	VAL
5	CE	100	SER
5	CE	101	GLU
5	CE	105	ILE
5	CE	114	VAL
5	CE	115	LEU
5	CE	126	LYS
5	CE	131	THR
5	CE	136	VAL
5	CE	140	THR
5	CE	146	ASN
5	CE	149	SER
5	CE	150	PRO
5	CE	151	GLU
5	CE	153	VAL
5	CE	156	LYS
6	CF	1	MET
6	CF	8	PHE
6	CF	16	GLU
6	CF	23	GLU
6	CF	24	ARG
6	CF	26	THR
6	CF	30	THR
6	CF	33	GLU

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Mol	Chain	Res	Type
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	64	VAL
6	CF	65	GLU
6	CF	69	GLU
6	CF	71	ILE
6	CF	74	LEU
6	CF	75	GLU
6	CF	80	PHE
6	CF	85	ILE
6	CF	87	SER
6	CF	93	LYS
6	CF	97	THR
7	CG	4	ARG
7	CG	5	ARG
7	CG	6	VAL
7	CG	7	ILE
7	CG	12	ILE
7	CG	22	LEU
7	CG	30	LEU
7	CG	43	VAL
7	CG	48	GLU
7	CG	59	LEU
7	CG	62	PHE
7	CG	64	VAL
7	CG	66	LEU
7	CG	67	GLU
7	CG	72	THR
7	CG	73	VAL
7	CG	78	ARG
7	CG	92	ARG
7	CG	94	VAL
7	CG	120	LEU
7	CG	123	GLU
7	CG	126	ASP
7	CG	140	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
7	CG	142	HIS
8	CH	13	ARG
8	CH	26	THR
8	CH	32	LEU
8	CH	39	VAL
8	CH	42	GLU
8	CH	45	PHE
8	CH	48	ASP
8	CH	52	GLU
8	CH	67	GLN
8	CH	73	GLU
8	CH	74	SER
8	CH	75	ILE
8	CH	77	ARG
8	CH	83	LEU
8	CH	87	LYS
8	CH	92	LEU
8	CH	99	LEU
8	CH	112	THR
8	CH	121	LEU
8	CH	125	ILE
9	CI	9	THR
9	CI	21	ILE
9	CI	28	ILE
9	CI	36	GLU
9	CI	49	ARG
9	CI	50	GLN
9	CI	55	VAL
9	CI	61	LEU
9	CI	62	ASP
9	CI	88	MET
9	CI	89	GLU
9	CI	94	LEU
9	CI	111	VAL
9	CI	127	PHE
9	CI	129	LYS
10	CJ	7	ARG
10	CJ	9	ARG
10	CJ	16	ARG
10	CJ	17	LEU
10	CJ	22	THR
10	CJ	25	ILE

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Mol	Chain	Res	Type
10	CJ	30	LYS
10	CJ	51	VAL
10	CJ	53	ILE
10	CJ	59	LYS
10	CJ	71	LEU
10	CJ	74	VAL
10	CJ	80	THR
10	CJ	83	THR
10	CJ	87	LEU
10	CJ	88	MET
10	CJ	90	LEU
10	CJ	91	ASP
10	CJ	100	ILE
10	CJ	101	SER
10	CJ	102	LEU
11	CK	14	LYS
11	CK	15	GLN
11	CK	26	SER
11	CK	33	THR
11	CK	64	GLN
11	CK	77	TYR
11	CK	81	ASN
11	CK	82	LEU
11	CK	83	GLU
11	CK	86	VAL
11	CK	96	THR
11	CK	106	ARG
11	CK	107	ILE
11	CK	108	THR
11	CK	109	ASN
11	CK	126	LYS
11	CK	128	ARG
12	CL	3	THR
12	CL	4	VAL
12	CL	10	LYS
12	CL	18	LYS
12	CL	19	SER
12	CL	20	ASN
12	CL	29	GLN
12	CL	38	TYR
12	CL	44	LYS
12	CL	59	ASN

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Mol	Chain	Res	Type
12	CL	63	VAL
12	CL	86	ARG
12	CL	89	ASP
12	CL	93	VAL
12	CL	94	ARG
12	CL	97	THR
12	CL	107	VAL
12	CL	110	ARG
12	CL	111	LYS
12	CL	121	ARG
13	CM	8	ASN
13	CM	13	LYS
13	CM	14	HIS
13	CM	19	LEU
13	CM	29	ARG
13	CM	31	LYS
13	CM	41	GLU
13	CM	48	LEU
13	CM	58	ASP
13	CM	59	GLU
13	CM	60	VAL
13	CM	63	PHE
13	CM	66	GLU
13	CM	90	ARG
13	CM	91	HIS
13	CM	101	ARG
13	CM	113	ARG
14	CN	10	GLU
14	CN	18	ASP
14	CN	23	LYS
14	CN	26	GLU
14	CN	28	LYS
14	CN	75	ARG
14	CN	77	PHE
14	CN	83	LYS
15	CO	6	GLU
15	CO	17	ARG
15	CO	18	ASP
15	CO	26	GLU
15	CO	35	GLN
15	CO	38	HIS
15	CO	64	ARG

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Mol	Chain	Res	Type
15	CO	70	LEU
15	CO	84	ARG
15	CO	87	LEU
15	CO	88	ARG
16	CP	1	MET
16	CP	18	GLN
16	CP	20	VAL
16	CP	31	ARG
16	CP	46	LYS
16	CP	51	ARG
16	CP	55	ASP
16	CP	63	GLN
16	CP	74	LEU
16	CP	80	LYS
17	CQ	5	ILE
17	CQ	9	GLN
17	CQ	14	SER
17	CQ	17	MET
17	CQ	18	GLU
17	CQ	25	ILE
17	CQ	28	PHE
17	CQ	40	ARG
17	CQ	41	THR
17	CQ	50	ASN
17	CQ	52	GLU
17	CQ	55	ILE
17	CQ	61	ILE
17	CQ	62	ARG
17	CQ	63	GLU
17	CQ	65	ARG
17	CQ	70	THR
17	CQ	75	LEU
17	CQ	76	VAL
17	CQ	79	VAL
17	CQ	80	GLU
17	CQ	81	LYS
18	CR	21	ILE
18	CR	25	ASP
18	CR	33	ILE
18	CR	43	ARG
18	CR	45	THR
18	CR	47	THR

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Mol	Chain	Res	Type
18	CR	54	GLN
18	CR	57	ARG
18	CR	66	SER
19	CS	5	LEU
19	CS	6	LYS
19	CS	11	ILE
19	CS	13	LEU
19	CS	20	GLU
19	CS	21	LYS
19	CS	23	VAL
19	CS	27	ASP
19	CS	31	LEU
19	CS	36	ARG
19	CS	43	ASN
19	CS	49	ILE
19	CS	58	VAL
20	CT	6	SER
20	CT	8	LYS
20	CT	15	GLU
20	CT	30	THR
20	CT	36	TYR
20	CT	59	ASP
20	CT	64	LYS
20	CT	69	LYS
21	CU	5	LYS
21	CU	7	ARG
21	CU	12	PHE
21	CU	16	LEU
21	CU	18	ARG
21	CU	19	PHE
21	CU	21	ARG
21	CU	24	GLU
21	CU	25	LYS
21	CU	28	VAL
21	CU	34	ARG
21	CU	37	PHE
21	CU	38	TYR
21	CU	42	THR
21	CU	47	ARG
21	CU	53	VAL
21	CU	54	LYS
24	DC	6	CYS

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Mol	Chain	Res	Type
24	DC	30	PHE
24	DC	63	ARG
24	DC	80	ARG
24	DC	94	VAL
24	DC	103	TYR
24	DC	111	LYS
24	DC	116	ILE
24	DC	130	LEU
24	DC	153	GLN
24	DC	156	ARG
24	DC	157	SER
24	DC	167	ARG
24	DC	175	ARG
24	DC	195	VAL
24	DC	202	LEU
24	DC	203	ARG
24	DC	229	ASP
24	DC	250	VAL
24	DC	259	SER
24	DC	262	ARG
24	DC	267	ILE
25	DD	4	LEU
25	DD	12	THR
25	DD	33	ARG
25	DD	55	LYS
25	DD	73	VAL
25	DD	77	ARG
25	DD	86	GLU
25	DD	95	SER
25	DD	103	ASP
25	DD	118	PHE
25	DD	129	THR
25	DD	138	LEU
25	DD	140	HIS
25	DD	141	ARG
25	DD	146	ILE
25	DD	170	VAL
25	DD	189	VAL
26	DE	9	GLN
26	DE	22	ASP
26	DE	40	ARG
26	DE	41	GLN

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Mol	Chain	Res	Type
26	DE	58	LYS
26	DE	69	ARG
26	DE	77	ILE
26	DE	78	TRP
26	DE	84	THR
26	DE	91	ASP
26	DE	105	LEU
26	DE	107	SER
26	DE	108	ILE
26	DE	118	LEU
26	DE	126	VAL
26	DE	127	GLU
26	DE	131	THR
26	DE	137	LYS
26	DE	149	ILE
26	DE	150	THR
26	DE	163	ASN
26	DE	164	LEU
26	DE	170	ARG
26	DE	173	THR
26	DE	187	VAL
26	DE	188	MET
27	DF	6	ASP
27	DF	7	TYR
27	DF	8	TYR
27	DF	14	LYS
27	DF	18	THR
27	DF	26	MET
27	DF	35	THR
27	DF	36	LEU
27	DF	38	MET
27	DF	44	ILE
27	DF	48	LYS
27	DF	52	ASN
27	DF	56	ASP
27	DF	64	LYS
27	DF	74	VAL
27	DF	78	LYS
27	DF	110	ARG
27	DF	117	LEU
27	DF	125	ARG
27	DF	132	VAL

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Mol	Chain	Res	Type
27	DF	140	GLU
27	DF	141	ILE
27	DF	143	TYR
27	DF	147	ASP
27	DF	150	ARG
27	DF	174	ASP
27	DF	177	PHE
28	DG	11	VAL
28	DG	24	ILE
28	DG	29	LYS
28	DG	30	ASN
28	DG	42	GLU
28	DG	45	HIS
28	DG	49	THR
28	DG	56	ASP
28	DG	62	TRP
28	DG	69	ARG
28	DG	89	LEU
28	DG	90	VAL
28	DG	92	VAL
28	DG	98	VAL
28	DG	117	LEU
28	DG	124	GLU
28	DG	127	THR
28	DG	139	GLN
28	DG	149	ARG
28	DG	151	TYR
28	DG	155	GLU
28	DG	158	LYS
28	DG	166	ASP
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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	10	LYS
30	DI	11	LEU
30	DI	12	GLN
30	DI	24	VAL
30	DI	38	PHE
30	DI	40	LYS
30	DI	62	TYR
30	DI	68	THR
30	DI	69	PHE
30	DI	72	LYS
30	DI	79	LEU
30	DI	86	ILE
30	DI	87	LYS
30	DI	88	SER
30	DI	97	LYS
30	DI	98	VAL
30	DI	103	ARG
30	DI	105	GLN
30	DI	106	LEU
30	DI	112	THR
30	DI	117	MET
30	DI	122	ILE
30	DI	127	ARG
31	DJ	9	GLU
31	DJ	28	LEU

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Mol	Chain	Res	Type
31	DJ	39	LYS
31	DJ	40	HIS
31	DJ	43	GLU
31	DJ	44	TYR
31	DJ	50	THR
31	DJ	62	VAL
31	DJ	65	THR
31	DJ	72	LYS
31	DJ	76	HIS
31	DJ	81	ILE
31	DJ	84	ILE
31	DJ	85	LYS
31	DJ	96	ARG
31	DJ	103	ILE
31	DJ	109	LEU
31	DJ	129	GLU
31	DJ	138	GLN
32	DK	47	ILE
32	DK	49	ARG
32	DK	56	ASP
32	DK	66	LYS
32	DK	70	ARG
32	DK	87	LEU
32	DK	92	GLU
32	DK	95	ILE
32	DK	104	THR
32	DK	110	GLU
32	DK	114	LYS
33	DL	2	ARG
33	DL	21	ARG
33	DL	25	SER
33	DL	29	LYS
33	DL	48	ARG
33	DL	69	ARG
33	DL	78	ARG
33	DL	82	LEU
33	DL	94	THR
33	DL	100	ILE
33	DL	104	GLN
33	DL	118	THR
33	DL	126	ARG
34	DM	6	ARG

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Mol	Chain	Res	Type
34	DM	14	LYS
34	DM	31	PHE
34	DM	47	GLU
34	DM	54	THR
34	DM	59	ARG
34	DM	60	GLN
34	DM	108	VAL
34	DM	115	GLU
34	DM	119	LEU
34	DM	124	LEU
34	DM	128	THR
35	DN	1	MET
35	DN	2	ARG
35	DN	8	ARG
35	DN	10	LEU
35	DN	12	ARG
35	DN	14	SER
35	DN	20	MET
35	DN	33	ILE
35	DN	35	LYS
35	DN	51	LEU
35	DN	53	THR
35	DN	69	ARG
35	DN	70	THR
35	DN	71	ARG
35	DN	82	GLU
35	DN	83	LEU
35	DN	90	ARG
35	DN	95	THR
35	DN	100	CYS
35	DN	114	GLU
35	DN	115	LEU
35	DN	116	VAL
35	DN	118	ARG
36	DO	5	SER
36	DO	9	ARG
36	DO	18	LEU
36	DO	26	LEU
36	DO	31	THR
36	DO	35	ILE
36	DO	36	TYR
36	DO	46	GLU

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Mol	Chain	Res	Type
36	DO	47	VAL
36	DO	48	LEU
36	DO	56	LYS
36	DO	61	GLN
36	DO	78	VAL
36	DO	88	LYS
36	DO	93	ASP
36	DO	103	VAL
36	DO	117	PHE
37	DP	4	ILE
37	DP	26	VAL
37	DP	34	GLU
37	DP	68	GLU
37	DP	73	VAL
37	DP	93	ARG
37	DP	109	ARG
37	DP	110	ILE
37	DP	112	GLU
38	DQ	6	ARG
38	DQ	9	ILE
38	DQ	11	ARG
38	DQ	25	TYR
38	DQ	41	LYS
38	DQ	51	ARG
38	DQ	52	GLN
38	DQ	60	LEU
38	DQ	97	ASP
38	DQ	104	VAL
38	DQ	117	LEU
39	DR	25	LEU
39	DR	46	GLU
39	DR	48	LYS
39	DR	58	VAL
39	DR	90	ARG
40	DS	19	LEU
40	DS	20	VAL
40	DS	22	ASP
40	DS	23	LEU
40	DS	47	VAL
40	DS	57	ASN
40	DS	67	ASP
40	DS	70	LYS

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Mol	Chain	Res	Type
40	DS	72	THR
40	DS	96	ILE
40	DS	107	VAL
41	DT	3	ARG
41	DT	22	THR
41	DT	30	ILE
41	DT	32	LEU
41	DT	44	LYS
41	DT	49	LYS
41	DT	68	LYS
41	DT	69	ARG
41	DT	73	ARG
41	DT	74	ILE
41	DT	77	ARG
42	DU	11	VAL
42	DU	18	ASP
42	DU	24	LYS
42	DU	34	VAL
42	DU	35	ILE
42	DU	45	HIS
42	DU	46	GLN
42	DU	49	VAL
42	DU	54	GLN
42	DU	67	VAL
42	DU	70	VAL
42	DU	81	ASP
42	DU	85	PHE
42	DU	91	LYS
42	DU	99	ASN
43	DV	2	PHE
43	DV	3	THR
43	DV	26	PHE
43	DV	29	ILE
43	DV	30	ILE
43	DV	42	LEU
43	DV	43	ASP
43	DV	45	ASP
43	DV	50	MET
43	DV	51	GLN
43	DV	53	LYS
43	DV	65	VAL
43	DV	68	LYS

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Mol	Chain	Res	Type
44	DW	20	ARG
44	DW	39	ARG
44	DW	41	ARG
44	DW	50	ASN
44	DW	56	ASP
44	DW	70	GLU
44	DW	72	LYS
44	DW	85	GLU
45	DX	4	VAL
45	DX	13	VAL
45	DX	23	ASN
45	DX	46	PHE
45	DX	47	VAL
45	DX	50	ARG
45	DX	58	VAL
45	DX	64	ILE
45	DX	71	LEU
45	DX	74	ARG
46	DY	11	VAL
46	DY	13	GLU
46	DY	16	THR
46	DY	25	GLN
46	DY	38	GLN
46	DY	39	GLN
46	DY	41	HIS
46	DY	45	GLN
46	DY	47	ARG
46	DY	49	ASP
46	DY	55	THR
46	DY	57	LEU
46	DY	58	ASN
47	DZ	3	LYS
47	DZ	6	LYS
47	DZ	10	THR
47	DZ	12	SER
47	DZ	17	LEU
47	DZ	25	LEU
47	DZ	31	ARG
47	DZ	36	VAL
47	DZ	52	SER
47	DZ	57	VAL
48	D0	3	VAL

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Mol	Chain	Res	Type
48	D0	20	ASP
48	D0	22	LEU
48	D0	25	VAL
48	D0	28	LEU
49	D1	5	ILE
49	D1	12	VAL
49	D1	19	HIS
49	D1	26	ASN
49	D1	42	VAL
49	D1	46	HIS
49	D1	47	VAL
50	D2	4	THR
50	D2	10	LEU
50	D2	24	THR
50	D2	41	ARG
50	D2	43	THR
50	D2	44	VAL
51	D3	6	THR
51	D3	30	ARG
51	D3	31	HIS
51	D3	47	LYS
51	D3	49	MET
52	D4	2	LYS
52	D4	3	VAL
52	D4	12	ARG
52	D4	13	ASN
52	D4	26	ILE
52	D4	32	LYS

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (51) such sidechains are listed below:

Mol	Chain	Res	Type
5	AE	82	GLN
6	AF	3	HIS
8	AH	18	GLN
9	AI	126	GLN
11	AK	22	HIS
11	AK	40	ASN
11	AK	109	ASN
13	AM	91	HIS
15	AO	50	HIS
17	AQ	45	HIS

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Mol	Chain	Res	Type
19	AS	14	HIS
27	BF	21	ASN
28	BG	111	HIS
29	BH	119	ASN
29	BH	135	HIS
31	BJ	47	HIS
31	BJ	77	HIS
36	BO	29	HIS
40	BS	9	HIS
53	B5	45	HIS
53	B5	67	HIS
2	CB	103	ASN
3	CC	176	HIS
4	CD	136	GLN
5	CE	122	ASN
7	CG	97	ASN
8	CH	67	GLN
9	CI	25	ASN
14	CN	66	GLN
15	CO	42	HIS
17	CQ	31	HIS
20	CT	21	ASN
20	CT	61	GLN
24	DC	53	HIS
24	DC	251	GLN
25	DD	140	HIS
25	DD	150	GLN
28	DG	48	ASN
28	DG	115	HIS
29	DH	28	ASN
29	DH	128	HIS
38	DQ	37	GLN
39	DR	89	HIS
41	DT	15	HIS
42	DU	74	ASN
45	DX	34	HIS
46	DY	41	HIS
48	D0	19	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%)	327 (21%)	10 (0%)
1	CA	1538/1539 (99%)	330 (21%)	8 (0%)
22	BA	2896/2903 (99%)	569 (19%)	27 (0%)
22	DA	2895/2903 (99%)	685 (23%)	30 (1%)
23	BB	118/119 (99%)	17 (14%)	0
23	DB	117/119 (98%)	20 (17%)	0
All	All	9101/9122 (99%)	1948 (21%)	75 (0%)

All (1948) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	4	U
1	AA	5	U
1	AA	8	A
1	AA	9	G
1	AA	13	U
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	70	U
1	AA	71	A
1	AA	72	A
1	AA	73	C
1	AA	74	A
1	AA	75	G
1	AA	76	G
1	AA	80	A
1	AA	81	A
1	AA	82	G
1	AA	83	C
1	AA	85	U
1	AA	86	G
1	AA	89	U
1	AA	90	C
1	AA	91	U
1	AA	95	C
1	AA	97	G
1	AA	108	G

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Mol	Chain	Res	Type
1	AA	116	A
1	AA	120	A
1	AA	121	U
1	AA	122	G
1	AA	127	G
1	AA	130	A
1	AA	131	A
1	AA	137	U
1	AA	138	G
1	AA	140	U
1	AA	143	A
1	AA	144	G
1	AA	163	C
1	AA	168	G
1	AA	177	G
1	AA	181	A
1	AA	182	A
1	AA	183	C
1	AA	188	C
1	AA	191	G
1	AA	195	A
1	AA	197	A
1	AA	205	A
1	AA	206	C
1	AA	210	C
1	AA	211	G
1	AA	217	C
1	AA	226	G
1	AA	240	G
1	AA	245	U
1	AA	247	G
1	AA	251	G
1	AA	262	A
1	AA	263	A
1	AA	266	G
1	AA	267	C
1	AA	281	G
1	AA	289	G
1	AA	316	C
1	AA	317	U
1	AA	318	G
1	AA	320	A

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Mol	Chain	Res	Type
1	AA	321	A
1	AA	327	A
1	AA	328	C
1	AA	329	A
1	AA	330	C
1	AA	331	G
1	AA	332	G
1	AA	346	G
1	AA	347	G
1	AA	352	C
1	AA	354	G
1	AA	364	A
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	376	G
1	AA	384	G
1	AA	392	C
1	AA	398	U
1	AA	406	G
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	429	U
1	AA	430	A
1	AA	435	A
1	AA	436	C
1	AA	445	G
1	AA	454	G
1	AA	457	G
1	AA	458	U
1	AA	462	G
1	AA	466	A
1	AA	467	U
1	AA	468	A
1	AA	476	U
1	AA	479	U
1	AA	481	G

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Mol	Chain	Res	Type
1	AA	482	A
1	AA	485	U
1	AA	486	U
1	AA	495	A
1	AA	499	A
1	AA	501	C
1	AA	505	G
1	AA	511	C
1	AA	512	U
1	AA	521	G
1	AA	524	G
1	AA	527	G
1	AA	530	G
1	AA	532	A
1	AA	533	A
1	AA	541	G
1	AA	544	G
1	AA	547	A
1	AA	559	A
1	AA	562	U
1	AA	564	C
1	AA	570	G
1	AA	573	A
1	AA	576	C
1	AA	615	G
1	AA	631	C
1	AA	632	U
1	AA	650	G
1	AA	651	C
1	AA	652	U
1	AA	653	U
1	AA	661	G
1	AA	665	A
1	AA	671	G
1	AA	686	U
1	AA	687	A
1	AA	702	A
1	AA	703	G
1	AA	721	G
1	AA	723	U
1	AA	724	G
1	AA	731	G

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Mol	Chain	Res	Type
1	AA	748	G
1	AA	750	C
1	AA	753	A
1	AA	755	G
1	AA	765	G
1	AA	773	G
1	AA	777	A
1	AA	784	A
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	799	G
1	AA	814	A
1	AA	815	A
1	AA	817	C
1	AA	818	G
1	AA	828	U
1	AA	832	G
1	AA	841	C
1	AA	842	U
1	AA	843	U
1	AA	845	A
1	AA	846	G
1	AA	851	G
1	AA	859	G
1	AA	888	G
1	AA	892	A
1	AA	902	G
1	AA	910	C
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	958	A
1	AA	960	U
1	AA	966	G
1	AA	969	A
1	AA	971	G
1	AA	973	G
1	AA	975	A
1	AA	976	G

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Mol	Chain	Res	Type
1	AA	977	A
1	AA	983	A
1	AA	987	G
1	AA	989	U
1	AA	992	U
1	AA	993	G
1	AA	1004	A
1	AA	1009	U
1	AA	1019	A
1	AA	1021	A
1	AA	1025	U
1	AA	1026	G
1	AA	1028	C
1	AA	1029	U
1	AA	1030	U
1	AA	1031	C
1	AA	1032	G
1	AA	1033	G
1	AA	1034	G
1	AA	1036	A
1	AA	1037	C
1	AA	1043	G
1	AA	1044	A
1	AA	1050	G
1	AA	1065	U
1	AA	1066	C
1	AA	1069	C
1	AA	1070	U
1	AA	1084	G
1	AA	1086	U
1	AA	1090	U
1	AA	1092	A
1	AA	1093	A
1	AA	1094	G
1	AA	1095	U
1	AA	1098	C
1	AA	1101	A
1	AA	1103	C
1	AA	1124	G
1	AA	1125	U
1	AA	1133	G
1	AA	1135	U

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Mol	Chain	Res	Type
1	AA	1136	C
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1141	C
1	AA	1142	G
1	AA	1143	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	1167	A
1	AA	1168	U
1	AA	1181	G
1	AA	1183	U
1	AA	1184	G
1	AA	1196	A
1	AA	1197	A
1	AA	1202	U
1	AA	1212	U
1	AA	1213	A
1	AA	1227	A
1	AA	1228	C
1	AA	1233	G
1	AA	1236	A
1	AA	1238	A
1	AA	1239	A
1	AA	1240	U
1	AA	1241	G
1	AA	1250	A
1	AA	1256	A
1	AA	1258	G
1	AA	1280	A
1	AA	1286	U
1	AA	1287	A
1	AA	1293	C
1	AA	1299	A
1	AA	1300	G

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Mol	Chain	Res	Type
1	AA	1302	C
1	AA	1304	G
1	AA	1305	G
1	AA	1312	G
1	AA	1317	C
1	AA	1319	A
1	AA	1320	C
1	AA	1321	U
1	AA	1323	G
1	AA	1325	C
1	AA	1328	C
1	AA	1329	A
1	AA	1335	U
1	AA	1336	C
1	AA	1337	G
1	AA	1338	G
1	AA	1353	G
1	AA	1363	A
1	AA	1364	U
1	AA	1378	C
1	AA	1379	G
1	AA	1396	A
1	AA	1398	A
1	AA	1400	C
1	AA	1419	G
1	AA	1429	A
1	AA	1441	A
1	AA	1442	G
1	AA	1443	C
1	AA	1446	A
1	AA	1452	C
1	AA	1453	G
1	AA	1455	G
1	AA	1486	G
1	AA	1493	A
1	AA	1497	G
1	AA	1503	A
1	AA	1505	G
1	AA	1506	U
1	AA	1507	A
1	AA	1517	G
1	AA	1529	G

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Mol	Chain	Res	Type
1	AA	1530	G
1	AA	1535	C
1	AA	1538	C
22	BA	10	A
22	BA	12	U
22	BA	13	A
22	BA	15	G
22	BA	27	G
22	BA	34	U
22	BA	35	G
22	BA	46	G
22	BA	61	C
22	BA	63	A
22	BA	71	A
22	BA	74	A
22	BA	75	G
22	BA	98	G
22	BA	118	A
22	BA	119	A
22	BA	120	U
22	BA	131	A
22	BA	138	U
22	BA	139	U
22	BA	140	C
22	BA	141	G
22	BA	142	A
22	BA	143	C
22	BA	196	A
22	BA	215	G
22	BA	216	A
22	BA	221	A
22	BA	222	A
22	BA	226	A
22	BA	248	G
22	BA	255	A
22	BA	257	C
22	BA	265	A
22	BA	266	G
22	BA	271	G
22	BA	272	A
22	BA	276	U
22	BA	279	A

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Mol	Chain	Res	Type
22	BA	302	C
22	BA	311	A
22	BA	325	G
22	BA	329	G
22	BA	330	A
22	BA	343	C
22	BA	353	C
22	BA	361	G
22	BA	362	A
22	BA	371	A
22	BA	372	G
22	BA	386	G
22	BA	389	G
22	BA	404	A
22	BA	405	U
22	BA	411	G
22	BA	420	C
22	BA	424	G
22	BA	441	U
22	BA	450	G
22	BA	451	U
22	BA	457	A
22	BA	479	A
22	BA	481	G
22	BA	482	A
22	BA	483	A
22	BA	491	G
22	BA	501	A
22	BA	504	A
22	BA	505	A
22	BA	508	A
22	BA	528	A
22	BA	532	A
22	BA	533	G
22	BA	544	C
22	BA	546	U
22	BA	547	A
22	BA	548	G
22	BA	549	G
22	BA	563	A
22	BA	573	U
22	BA	575	A

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Mol	Chain	Res	Type
22	BA	585	G
22	BA	586	A
22	BA	603	A
22	BA	613	A
22	BA	615	U
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	646	U
22	BA	647	G
22	BA	648	G
22	BA	653	U
22	BA	654	A
22	BA	655	A
22	BA	664	G
22	BA	669	G
22	BA	686	U
22	BA	702	U
22	BA	726	G
22	BA	729	G
22	BA	730	A
22	BA	738	G
22	BA	747	U
22	BA	749	A
22	BA	764	A
22	BA	775	G
22	BA	776	G
22	BA	782	A
22	BA	783	A
22	BA	784	G
22	BA	785	G
22	BA	790	U
22	BA	791	C
22	BA	792	A
22	BA	805	G
22	BA	812	C
22	BA	814	C
22	BA	819	A
22	BA	822	G

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Mol	Chain	Res	Type
22	BA	827	U
22	BA	828	U
22	BA	845	A
22	BA	846	U
22	BA	847	U
22	BA	858	G
22	BA	859	G
22	BA	866	A
22	BA	878	A
22	BA	879	G
22	BA	882	G
22	BA	885	C
22	BA	893	C
22	BA	896	A
22	BA	897	C
22	BA	910	A
22	BA	914	G
22	BA	915	C
22	BA	931	U
22	BA	932	U
22	BA	934	U
22	BA	941	A
22	BA	942	G
22	BA	946	C
22	BA	961	C
22	BA	962	G
22	BA	974	G
22	BA	978	G
22	BA	982	C
22	BA	983	A
22	BA	984	A
22	BA	985	C
22	BA	991	C
22	BA	995	C
22	BA	996	A
22	BA	999	U
22	BA	1005	C
22	BA	1006	C
22	BA	1012	U
22	BA	1013	C
22	BA	1022	G
22	BA	1026	G

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Mol	Chain	Res	Type
22	BA	1033	U
22	BA	1040	A
22	BA	1046	A
22	BA	1047	G
22	BA	1057	A
22	BA	1058	U
22	BA	1061	U
22	BA	1062	G
22	BA	1063	G
22	BA	1065	U
22	BA	1066	U
22	BA	1067	A
22	BA	1068	G
22	BA	1069	A
22	BA	1070	A
22	BA	1072	C
22	BA	1073	A
22	BA	1074	G
22	BA	1075	C
22	BA	1077	A
22	BA	1079	C
22	BA	1080	A
22	BA	1081	U
22	BA	1082	U
22	BA	1087	G
22	BA	1088	A
22	BA	1089	A
22	BA	1092	C
22	BA	1093	G
22	BA	1097	U
22	BA	1098	A
22	BA	1099	G
22	BA	1100	C
22	BA	1101	U
22	BA	1103	A
22	BA	1104	C
22	BA	1106	G
22	BA	1112	G
22	BA	1128	G
22	BA	1132	U
22	BA	1133	A
22	BA	1135	C

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Mol	Chain	Res	Type
22	BA	1136	G
22	BA	1138	G
22	BA	1139	G
22	BA	1141	U
22	BA	1142	A
22	BA	1168	G
22	BA	1170	C
22	BA	1171	G
22	BA	1172	C
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	1186	G
22	BA	1218	G
22	BA	1230	A
22	BA	1231	U
22	BA	1238	G
22	BA	1252	G
22	BA	1253	A
22	BA	1256	G
22	BA	1266	G
22	BA	1271	G
22	BA	1272	A
22	BA	1273	U
22	BA	1275	A
22	BA	1300	G
22	BA	1301	A
22	BA	1303	G
22	BA	1305	C
22	BA	1320	C
22	BA	1325	U
22	BA	1332	G
22	BA	1348	C
22	BA	1352	U
22	BA	1355	G
22	BA	1357	C
22	BA	1359	A
22	BA	1365	A
22	BA	1374	G

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Mol	Chain	Res	Type
22	BA	1377	G
22	BA	1378	A
22	BA	1379	U
22	BA	1383	A
22	BA	1386	C
22	BA	1406	U
22	BA	1407	G
22	BA	1411	U
22	BA	1415	U
22	BA	1416	G
22	BA	1419	A
22	BA	1420	A
22	BA	1427	A
22	BA	1428	C
22	BA	1435	G
22	BA	1437	C
22	BA	1452	G
22	BA	1453	A
22	BA	1458	U
22	BA	1475	G
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	1510	G
22	BA	1515	A
22	BA	1530	G
22	BA	1532	A
22	BA	1533	C
22	BA	1534	U
22	BA	1535	A
22	BA	1536	C
22	BA	1547	C
22	BA	1548	A
22	BA	1554	U
22	BA	1555	G
22	BA	1560	G
22	BA	1569	A
22	BA	1578	U

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Mol	Chain	Res	Type
22	BA	1579	A
22	BA	1583	A
22	BA	1584	U
22	BA	1585	C
22	BA	1593	A
22	BA	1597	A
22	BA	1606	C
22	BA	1607	C
22	BA	1608	A
22	BA	1609	A
22	BA	1610	A
22	BA	1616	A
22	BA	1632	A
22	BA	1647	U
22	BA	1648	U
22	BA	1649	G
22	BA	1652	A
22	BA	1659	G
22	BA	1674	G
22	BA	1685	C
22	BA	1688	U
22	BA	1697	G
22	BA	1714	U
22	BA	1715	G
22	BA	1718	G
22	BA	1729	U
22	BA	1730	C
22	BA	1736	U
22	BA	1738	G
22	BA	1739	A
22	BA	1744	A
22	BA	1764	C
22	BA	1773	A
22	BA	1776	G
22	BA	1786	A
22	BA	1795	C
22	BA	1800	C
22	BA	1801	A
22	BA	1808	A
22	BA	1813	G
22	BA	1816	C
22	BA	1819	A

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Mol	Chain	Res	Type
22	BA	1828	G
22	BA	1829	A
22	BA	1830	C
22	BA	1835	G
22	BA	1839	G
22	BA	1840	G
22	BA	1841	U
22	BA	1842	G
22	BA	1849	G
22	BA	1853	A
22	BA	1870	C
22	BA	1871	A
22	BA	1872	A
22	BA	1873	G
22	BA	1876	A
22	BA	1885	A
22	BA	1886	U
22	BA	1888	G
22	BA	1890	A
22	BA	1900	A
22	BA	1902	C
22	BA	1906	G
22	BA	1909	C
22	BA	1912	A
22	BA	1913	A
22	BA	1914	C
22	BA	1915	U
22	BA	1916	A
22	BA	1917	U
22	BA	1920	C
22	BA	1923	U
22	BA	1924	C
22	BA	1925	C
22	BA	1926	U
22	BA	1929	G
22	BA	1930	G
22	BA	1931	U
22	BA	1932	A
22	BA	1938	A
22	BA	1955	U
22	BA	1964	G
22	BA	1965	C

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Mol	Chain	Res	Type
22	BA	1967	C
22	BA	1970	A
22	BA	1972	G
22	BA	1986	C
22	BA	1991	U
22	BA	1992	G
22	BA	1993	U
22	BA	1995	U
22	BA	1997	C
22	BA	2018	G
22	BA	2022	U
22	BA	2023	C
22	BA	2031	A
22	BA	2033	A
22	BA	2043	C
22	BA	2051	A
22	BA	2055	C
22	BA	2056	G
22	BA	2060	A
22	BA	2061	G
22	BA	2062	A
22	BA	2064	C
22	BA	2067	G
22	BA	2069	G
22	BA	2072	C
22	BA	2092	U
22	BA	2093	G
22	BA	2097	A
22	BA	2098	U
22	BA	2099	U
22	BA	2100	G
22	BA	2102	G
22	BA	2103	C
22	BA	2106	U
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

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Mol	Chain	Res	Type
22	BA	2119	A
22	BA	2122	U
22	BA	2126	A
22	BA	2127	G
22	BA	2128	G
22	BA	2129	C
22	BA	2132	U
22	BA	2133	G
22	BA	2134	A
22	BA	2136	G
22	BA	2138	G
22	BA	2139	U
22	BA	2145	C
22	BA	2147	A
22	BA	2148	G
22	BA	2162	G
22	BA	2163	A
22	BA	2164	C
22	BA	2165	C
22	BA	2166	U
22	BA	2167	U
22	BA	2169	A
22	BA	2170	A
22	BA	2171	A
22	BA	2172	U
22	BA	2173	A
22	BA	2176	A
22	BA	2178	C
22	BA	2179	C
22	BA	2181	U
22	BA	2182	U
22	BA	2187	U
22	BA	2188	U
22	BA	2190	G
22	BA	2197	U
22	BA	2198	A
22	BA	2203	U
22	BA	2204	G
22	BA	2210	U
22	BA	2211	A
22	BA	2212	A
22	BA	2214	C

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Mol	Chain	Res	Type
22	BA	2220	U
22	BA	2225	A
22	BA	2238	G
22	BA	2239	G
22	BA	2248	C
22	BA	2250	G
22	BA	2258	C
22	BA	2268	A
22	BA	2278	A
22	BA	2283	C
22	BA	2286	G
22	BA	2287	A
22	BA	2296	U
22	BA	2305	U
22	BA	2308	G
22	BA	2309	A
22	BA	2311	A
22	BA	2322	A
22	BA	2325	G
22	BA	2327	A
22	BA	2331	G
22	BA	2335	A
22	BA	2346	A
22	BA	2347	C
22	BA	2350	C
22	BA	2357	G
22	BA	2361	G
22	BA	2383	G
22	BA	2385	C
22	BA	2389	G
22	BA	2394	C
22	BA	2402	U
22	BA	2403	C
22	BA	2406	A
22	BA	2420	C
22	BA	2424	C
22	BA	2425	A
22	BA	2428	G
22	BA	2429	G
22	BA	2430	A
22	BA	2431	U
22	BA	2435	A

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Mol	Chain	Res	Type
22	BA	2441	U
22	BA	2446	G
22	BA	2448	A
22	BA	2456	C
22	BA	2465	C
22	BA	2469	A
22	BA	2474	U
22	BA	2476	A
22	BA	2487	G
22	BA	2490	G
22	BA	2491	U
22	BA	2497	A
22	BA	2498	C
22	BA	2502	G
22	BA	2504	U
22	BA	2505	G
22	BA	2506	U
22	BA	2507	C
22	BA	2515	C
22	BA	2518	A
22	BA	2529	G
22	BA	2535	G
22	BA	2554	U
22	BA	2555	U
22	BA	2556	C
22	BA	2566	A
22	BA	2567	G
22	BA	2573	C
22	BA	2578	G
22	BA	2594	C
22	BA	2602	A
22	BA	2603	G
22	BA	2609	U
22	BA	2613	U
22	BA	2629	U
22	BA	2630	G
22	BA	2662	A
22	BA	2663	G
22	BA	2689	U
22	BA	2690	U
22	BA	2714	G
22	BA	2726	A

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Mol	Chain	Res	Type
22	BA	2729	G
22	BA	2733	A
22	BA	2748	A
22	BA	2757	A
22	BA	2765	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	2820	A
22	BA	2821	A
22	BA	2825	G
22	BA	2826	A
22	BA	2836	U
22	BA	2867	G
22	BA	2873	A
22	BA	2879	A
22	BA	2880	C
22	BA	2883	A
22	BA	2884	U
22	BA	2887	A
22	BA	2891	U
22	BA	2903	U
23	BB	2	G
23	BB	9	G
23	BB	15	A
23	BB	16	G
23	BB	25	U
23	BB	35	C
23	BB	37	C
23	BB	42	C
23	BB	44	G
23	BB	45	A
23	BB	56	G
23	BB	66	A
23	BB	89	U
23	BB	90	C
23	BB	91	C
23	BB	109	A

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Mol	Chain	Res	Type
23	BB	119	A
1	CA	5	U
1	CA	6	G
1	CA	9	G
1	CA	17	U
1	CA	21	G
1	CA	32	A
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	51	A
1	CA	52	C
1	CA	67	C
1	CA	70	U
1	CA	71	A
1	CA	74	A
1	CA	75	G
1	CA	79	G
1	CA	80	A
1	CA	84	U
1	CA	85	U
1	CA	86	G
1	CA	87	C
1	CA	88	U
1	CA	91	U
1	CA	93	U
1	CA	94	G
1	CA	116	A
1	CA	117	G
1	CA	120	A
1	CA	121	U
1	CA	122	G
1	CA	130	A
1	CA	131	A
1	CA	135	C
1	CA	137	U
1	CA	142	G
1	CA	143	A
1	CA	144	G
1	CA	154	U
1	CA	155	A
1	CA	156	C

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Mol	Chain	Res	Type
1	CA	159	G
1	CA	169	C
1	CA	173	U
1	CA	174	A
1	CA	181	A
1	CA	182	A
1	CA	183	C
1	CA	184	G
1	CA	191	G
1	CA	197	A
1	CA	200	G
1	CA	201	G
1	CA	204	G
1	CA	207	C
1	CA	208	U
1	CA	209	U
1	CA	210	C
1	CA	211	G
1	CA	212	G
1	CA	214	C
1	CA	240	G
1	CA	244	U
1	CA	245	U
1	CA	247	G
1	CA	250	A
1	CA	251	G
1	CA	253	A
1	CA	254	G
1	CA	266	G
1	CA	267	C
1	CA	269	C
1	CA	280	C
1	CA	289	G
1	CA	294	U
1	CA	316	C
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	330	C
1	CA	332	G
1	CA	345	C
1	CA	347	G

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Mol	Chain	Res	Type
1	CA	352	C
1	CA	354	G
1	CA	367	U
1	CA	372	C
1	CA	376	G
1	CA	378	G
1	CA	384	G
1	CA	389	A
1	CA	390	U
1	CA	398	U
1	CA	399	G
1	CA	404	G
1	CA	406	G
1	CA	411	A
1	CA	412	A
1	CA	413	G
1	CA	421	U
1	CA	422	C
1	CA	424	G
1	CA	427	U
1	CA	429	U
1	CA	430	A
1	CA	439	U
1	CA	446	G
1	CA	457	G
1	CA	459	A
1	CA	463	U
1	CA	467	U
1	CA	468	A
1	CA	473	U
1	CA	474	G
1	CA	478	A
1	CA	479	U
1	CA	481	G
1	CA	484	G
1	CA	485	U
1	CA	486	U
1	CA	498	A
1	CA	500	G
1	CA	505	G
1	CA	509	A
1	CA	511	C

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Mol	Chain	Res	Type
1	CA	518	C
1	CA	519	C
1	CA	527	G
1	CA	531	U
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	570	G
1	CA	572	A
1	CA	573	A
1	CA	576	C
1	CA	581	G
1	CA	582	C
1	CA	615	G
1	CA	619	U
1	CA	622	A
1	CA	636	U
1	CA	650	G
1	CA	653	U
1	CA	654	G
1	CA	665	A
1	CA	687	A
1	CA	695	A
1	CA	702	A
1	CA	721	G
1	CA	723	U
1	CA	724	G
1	CA	731	G
1	CA	747	A
1	CA	755	G
1	CA	758	C
1	CA	765	G
1	CA	777	A
1	CA	785	G
1	CA	787	A
1	CA	793	U
1	CA	794	A

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Mol	Chain	Res	Type
1	CA	799	G
1	CA	802	A
1	CA	812	G
1	CA	815	A
1	CA	817	C
1	CA	828	U
1	CA	832	G
1	CA	841	C
1	CA	842	U
1	CA	843	U
1	CA	844	G
1	CA	845	A
1	CA	846	G
1	CA	849	G
1	CA	874	G
1	CA	876	C
1	CA	880	C
1	CA	889	A
1	CA	906	A
1	CA	914	A
1	CA	919	A
1	CA	922	G
1	CA	926	G
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	964	A
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	991	U
1	CA	992	U
1	CA	993	G
1	CA	994	A
1	CA	995	C
1	CA	996	A
1	CA	1004	A
1	CA	1008	U
1	CA	1018	G

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Mol	Chain	Res	Type
1	CA	1020	G
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	1042	A
1	CA	1043	G
1	CA	1044	A
1	CA	1047	G
1	CA	1050	G
1	CA	1052	U
1	CA	1054	C
1	CA	1055	A
1	CA	1065	U
1	CA	1069	C
1	CA	1070	U
1	CA	1072	G
1	CA	1073	U
1	CA	1086	U
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1104	G
1	CA	1124	G
1	CA	1125	U
1	CA	1129	C
1	CA	1133	G
1	CA	1134	G
1	CA	1136	C
1	CA	1137	C
1	CA	1139	G
1	CA	1140	C
1	CA	1141	C
1	CA	1142	G
1	CA	1145	A

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Mol	Chain	Res	Type
1	CA	1154	G
1	CA	1157	A
1	CA	1159	U
1	CA	1160	G
1	CA	1161	C
1	CA	1168	U
1	CA	1181	G
1	CA	1182	G
1	CA	1184	G
1	CA	1196	A
1	CA	1198	G
1	CA	1202	U
1	CA	1212	U
1	CA	1213	A
1	CA	1222	G
1	CA	1227	A
1	CA	1228	C
1	CA	1230	C
1	CA	1236	A
1	CA	1238	A
1	CA	1239	A
1	CA	1240	U
1	CA	1253	G
1	CA	1257	A
1	CA	1259	C
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	1297	G
1	CA	1299	A
1	CA	1301	U
1	CA	1305	G
1	CA	1312	G
1	CA	1317	C
1	CA	1318	A
1	CA	1320	C
1	CA	1322	C
1	CA	1323	G
1	CA	1324	A

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Mol	Chain	Res	Type
1	CA	1332	A
1	CA	1336	C
1	CA	1337	G
1	CA	1338	G
1	CA	1346	A
1	CA	1353	G
1	CA	1362	A
1	CA	1363	A
1	CA	1368	A
1	CA	1379	G
1	CA	1381	U
1	CA	1382	C
1	CA	1418	A
1	CA	1441	A
1	CA	1442	G
1	CA	1446	A
1	CA	1451	U
1	CA	1452	C
1	CA	1454	G
1	CA	1475	G
1	CA	1477	U
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	1519	A
1	CA	1529	G
1	CA	1530	G
1	CA	1533	C
1	CA	1534	A
1	CA	1535	C
1	CA	1536	C
22	DA	10	A
22	DA	15	G
22	DA	32	C
22	DA	34	U
22	DA	39	G

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Mol	Chain	Res	Type
22	DA	42	A
22	DA	43	G
22	DA	46	G
22	DA	47	C
22	DA	55	G
22	DA	57	C
22	DA	61	C
22	DA	63	A
22	DA	64	A
22	DA	66	C
22	DA	70	G
22	DA	71	A
22	DA	73	A
22	DA	74	A
22	DA	75	G
22	DA	80	G
22	DA	81	G
22	DA	82	U
22	DA	83	A
22	DA	84	A
22	DA	85	G
22	DA	87	U
22	DA	91	A
22	DA	96	C
22	DA	97	C
22	DA	98	G
22	DA	101	A
22	DA	103	A
22	DA	104	A
22	DA	111	A
22	DA	118	A
22	DA	119	A
22	DA	120	U
22	DA	121	G
22	DA	128	C
22	DA	137	U
22	DA	138	U
22	DA	139	U
22	DA	140	C
22	DA	141	G
22	DA	142	A
22	DA	143	C

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Mol	Chain	Res	Type
22	DA	145	C
22	DA	150	U
22	DA	155	A
22	DA	158	U
22	DA	159	G
22	DA	162	U
22	DA	166	U
22	DA	178	G
22	DA	180	G
22	DA	184	C
22	DA	185	G
22	DA	196	A
22	DA	199	A
22	DA	202	U
22	DA	206	U
22	DA	216	A
22	DA	221	A
22	DA	222	A
22	DA	223	A
22	DA	224	U
22	DA	225	C
22	DA	228	C
22	DA	233	A
22	DA	245	G
22	DA	248	G
22	DA	249	C
22	DA	251	A
22	DA	252	G
22	DA	258	G
22	DA	262	A
22	DA	265	A
22	DA	266	G
22	DA	271	G
22	DA	272	A
22	DA	276	U
22	DA	279	A
22	DA	281	C
22	DA	283	G
22	DA	285	G
22	DA	291	G
22	DA	294	A
22	DA	311	A

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Mol	Chain	Res	Type
22	DA	321	U
22	DA	329	G
22	DA	330	A
22	DA	335	C
22	DA	346	A
22	DA	348	A
22	DA	350	G
22	DA	361	G
22	DA	362	A
22	DA	367	G
22	DA	371	A
22	DA	372	G
22	DA	380	G
22	DA	385	C
22	DA	386	G
22	DA	387	U
22	DA	392	U
22	DA	396	G
22	DA	401	A
22	DA	405	U
22	DA	411	G
22	DA	412	A
22	DA	417	C
22	DA	420	C
22	DA	421	C
22	DA	424	G
22	DA	426	C
22	DA	430	A
22	DA	435	C
22	DA	444	C
22	DA	446	G
22	DA	448	U
22	DA	451	U
22	DA	455	C
22	DA	461	C
22	DA	462	C
22	DA	478	A
22	DA	480	A
22	DA	481	G
22	DA	490	C
22	DA	491	G
22	DA	496	G

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Mol	Chain	Res	Type
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	528	A
22	DA	531	C
22	DA	532	A
22	DA	533	G
22	DA	543	G
22	DA	544	C
22	DA	546	U
22	DA	547	A
22	DA	548	G
22	DA	549	G
22	DA	550	C
22	DA	563	A
22	DA	564	C
22	DA	568	U
22	DA	569	U
22	DA	572	A
22	DA	573	U
22	DA	575	A
22	DA	586	A
22	DA	588	U
22	DA	603	A
22	DA	613	A
22	DA	614	A
22	DA	615	U
22	DA	617	G
22	DA	627	A
22	DA	628	G
22	DA	631	A
22	DA	637	A
22	DA	642	U
22	DA	645	C
22	DA	647	G
22	DA	648	G
22	DA	649	G
22	DA	654	A
22	DA	655	A

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Mol	Chain	Res	Type
22	DA	656	G
22	DA	657	U
22	DA	664	G
22	DA	672	C
22	DA	682	G
22	DA	684	G
22	DA	685	A
22	DA	686	U
22	DA	694	U
22	DA	695	G
22	DA	696	G
22	DA	701	G
22	DA	702	U
22	DA	704	G
22	DA	717	C
22	DA	726	G
22	DA	727	A
22	DA	728	G
22	DA	729	G
22	DA	730	A
22	DA	740	C
22	DA	747	U
22	DA	748	G
22	DA	752	A
22	DA	757	G
22	DA	758	C
22	DA	771	G
22	DA	773	U
22	DA	775	G
22	DA	776	G
22	DA	777	G
22	DA	782	A
22	DA	784	G
22	DA	785	G
22	DA	790	U
22	DA	792	A
22	DA	793	A
22	DA	798	G
22	DA	800	A
22	DA	801	G
22	DA	802	A
22	DA	805	G

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Mol	Chain	Res	Type
22	DA	812	C
22	DA	814	C
22	DA	815	C
22	DA	819	A
22	DA	826	U
22	DA	827	U
22	DA	828	U
22	DA	829	A
22	DA	830	G
22	DA	844	A
22	DA	845	A
22	DA	846	U
22	DA	847	U
22	DA	858	G
22	DA	859	G
22	DA	878	A
22	DA	881	G
22	DA	882	G
22	DA	885	C
22	DA	896	A
22	DA	897	C
22	DA	907	G
22	DA	910	A
22	DA	914	G
22	DA	915	C
22	DA	931	U
22	DA	933	A
22	DA	941	A
22	DA	946	C
22	DA	953	G
22	DA	958	U
22	DA	959	A
22	DA	961	C
22	DA	974	G
22	DA	983	A
22	DA	995	C
22	DA	996	A
22	DA	1012	U
22	DA	1013	C
22	DA	1022	G
22	DA	1023	U
22	DA	1025	G

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Mol	Chain	Res	Type
22	DA	1026	G
22	DA	1033	U
22	DA	1046	A
22	DA	1047	G
22	DA	1057	A
22	DA	1058	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	1069	A
22	DA	1070	A
22	DA	1071	G
22	DA	1072	C
22	DA	1075	C
22	DA	1077	A
22	DA	1088	A
22	DA	1089	A
22	DA	1092	C
22	DA	1094	U
22	DA	1096	A
22	DA	1097	U
22	DA	1098	A
22	DA	1100	C
22	DA	1101	U
22	DA	1104	C
22	DA	1110	G
22	DA	1112	G
22	DA	1115	G
22	DA	1116	G
22	DA	1119	U
22	DA	1128	G
22	DA	1132	U
22	DA	1135	C
22	DA	1136	G
22	DA	1139	G
22	DA	1153	C
22	DA	1155	A
22	DA	1171	G
22	DA	1172	C

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Mol	Chain	Res	Type
22	DA	1175	A
22	DA	1176	U
22	DA	1178	C
22	DA	1179	G
22	DA	1180	U
22	DA	1183	U
22	DA	1186	G
22	DA	1199	U
22	DA	1204	A
22	DA	1205	A
22	DA	1212	G
22	DA	1227	G
22	DA	1230	A
22	DA	1231	U
22	DA	1235	G
22	DA	1236	G
22	DA	1237	A
22	DA	1238	G
22	DA	1242	U
22	DA	1243	C
22	DA	1244	A
22	DA	1247	A
22	DA	1248	G
22	DA	1250	G
22	DA	1253	A
22	DA	1256	G
22	DA	1266	G
22	DA	1268	A
22	DA	1272	A
22	DA	1273	U
22	DA	1276	A
22	DA	1282	U
22	DA	1288	G
22	DA	1289	C
22	DA	1293	C
22	DA	1294	U
22	DA	1300	G
22	DA	1301	A
22	DA	1321	A
22	DA	1330	C
22	DA	1339	G
22	DA	1344	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	1374	G
22	DA	1376	C
22	DA	1378	A
22	DA	1379	U
22	DA	1380	G
22	DA	1383	A
22	DA	1384	A
22	DA	1391	U
22	DA	1393	A
22	DA	1395	A
22	DA	1411	U
22	DA	1416	G
22	DA	1418	G
22	DA	1419	A
22	DA	1420	A
22	DA	1428	C
22	DA	1434	A
22	DA	1446	C
22	DA	1452	G
22	DA	1456	G
22	DA	1458	U
22	DA	1462	C
22	DA	1465	G
22	DA	1468	U
22	DA	1471	G
22	DA	1476	U
22	DA	1482	G
22	DA	1493	C
22	DA	1503	A
22	DA	1504	A
22	DA	1509	A
22	DA	1510	G
22	DA	1515	A
22	DA	1523	U
22	DA	1524	G
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	1540	G
22	DA	1546	G
22	DA	1555	G
22	DA	1560	G
22	DA	1566	A
22	DA	1569	A
22	DA	1576	U
22	DA	1578	U
22	DA	1581	G
22	DA	1582	C
22	DA	1583	A
22	DA	1584	U
22	DA	1585	C
22	DA	1587	G
22	DA	1592	C
22	DA	1602	U
22	DA	1603	A
22	DA	1606	C
22	DA	1607	C
22	DA	1608	A
22	DA	1610	A
22	DA	1613	G
22	DA	1616	A
22	DA	1626	A
22	DA	1645	G
22	DA	1646	C
22	DA	1647	U
22	DA	1648	U
22	DA	1649	G
22	DA	1651	G
22	DA	1652	A
22	DA	1653	G
22	DA	1660	G
22	DA	1663	G
22	DA	1664	A
22	DA	1674	G
22	DA	1715	G

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Mol	Chain	Res	Type
22	DA	1729	U
22	DA	1730	C
22	DA	1732	C
22	DA	1738	G
22	DA	1740	G
22	DA	1744	A
22	DA	1750	G
22	DA	1758	U
22	DA	1764	C
22	DA	1773	A
22	DA	1781	U
22	DA	1791	A
22	DA	1793	C
22	DA	1800	C
22	DA	1802	A
22	DA	1808	A
22	DA	1810	A
22	DA	1812	U
22	DA	1816	C
22	DA	1817	G
22	DA	1829	A
22	DA	1848	A
22	DA	1858	A
22	DA	1870	C
22	DA	1871	A
22	DA	1872	A
22	DA	1873	G
22	DA	1876	A
22	DA	1878	G
22	DA	1880	U
22	DA	1882	U
22	DA	1889	A
22	DA	1903	G
22	DA	1906	G
22	DA	1914	C
22	DA	1920	C
22	DA	1926	U
22	DA	1927	A
22	DA	1929	G
22	DA	1930	G
22	DA	1937	A
22	DA	1938	A

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Mol	Chain	Res	Type
22	DA	1945	G
22	DA	1955	U
22	DA	1965	C
22	DA	1967	C
22	DA	1970	A
22	DA	1971	U
22	DA	1972	G
22	DA	1975	G
22	DA	1981	A
22	DA	1991	U
22	DA	1992	G
22	DA	1993	U
22	DA	1997	C
22	DA	2004	G
22	DA	2007	U
22	DA	2018	G
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	2049	G
22	DA	2051	A
22	DA	2055	C
22	DA	2056	G
22	DA	2060	A
22	DA	2061	G
22	DA	2062	A
22	DA	2064	C
22	DA	2069	G
22	DA	2075	U
22	DA	2080	A
22	DA	2087	G
22	DA	2092	U
22	DA	2093	G
22	DA	2108	A
22	DA	2110	G
22	DA	2111	U
22	DA	2112	G

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Mol	Chain	Res	Type
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	2120	G
22	DA	2125	G
22	DA	2126	A
22	DA	2127	G
22	DA	2128	G
22	DA	2131	U
22	DA	2132	U
22	DA	2133	G
22	DA	2135	A
22	DA	2137	U
22	DA	2146	C
22	DA	2147	A
22	DA	2149	U
22	DA	2158	A
22	DA	2162	G
22	DA	2163	A
22	DA	2164	C
22	DA	2165	C
22	DA	2166	U
22	DA	2169	A
22	DA	2170	A
22	DA	2171	A
22	DA	2172	U
22	DA	2189	U
22	DA	2190	G
22	DA	2194	U
22	DA	2198	A
22	DA	2203	U
22	DA	2204	G
22	DA	2207	C
22	DA	2211	A
22	DA	2212	A
22	DA	2215	C
22	DA	2225	A
22	DA	2226	C
22	DA	2230	G

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Mol	Chain	Res	Type
22	DA	2238	G
22	DA	2239	G
22	DA	2242	G
22	DA	2243	U
22	DA	2245	U
22	DA	2246	G
22	DA	2250	G
22	DA	2268	A
22	DA	2273	A
22	DA	2279	G
22	DA	2280	G
22	DA	2283	C
22	DA	2285	C
22	DA	2287	A
22	DA	2305	U
22	DA	2307	G
22	DA	2308	G
22	DA	2309	A
22	DA	2310	C
22	DA	2311	A
22	DA	2313	C
22	DA	2321	U
22	DA	2322	A
22	DA	2325	G
22	DA	2327	A
22	DA	2333	A
22	DA	2345	G
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	2397	G
22	DA	2402	U
22	DA	2406	A
22	DA	2407	A
22	DA	2410	G
22	DA	2412	A
22	DA	2417	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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	2436	G
22	DA	2441	U
22	DA	2447	G
22	DA	2448	A
22	DA	2449	U
22	DA	2476	A
22	DA	2484	G
22	DA	2491	U
22	DA	2502	G
22	DA	2503	A
22	DA	2505	G
22	DA	2517	C
22	DA	2518	A
22	DA	2525	G
22	DA	2529	G
22	DA	2535	G
22	DA	2547	A
22	DA	2550	G
22	DA	2554	U
22	DA	2556	C
22	DA	2563	U
22	DA	2566	A
22	DA	2567	G
22	DA	2573	C
22	DA	2578	G
22	DA	2585	U
22	DA	2586	U
22	DA	2600	A
22	DA	2602	A
22	DA	2603	G
22	DA	2609	U
22	DA	2613	U
22	DA	2615	U
22	DA	2619	C

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Mol	Chain	Res	Type
22	DA	2629	U
22	DA	2630	G
22	DA	2644	G
22	DA	2646	C
22	DA	2648	G
22	DA	2656	U
22	DA	2661	G
22	DA	2663	G
22	DA	2665	A
22	DA	2682	A
22	DA	2688	G
22	DA	2689	U
22	DA	2690	U
22	DA	2691	C
22	DA	2714	G
22	DA	2716	C
22	DA	2718	G
22	DA	2726	A
22	DA	2727	A
22	DA	2729	G
22	DA	2739	U
22	DA	2748	A
22	DA	2751	G
22	DA	2757	A
22	DA	2778	A
22	DA	2791	G
22	DA	2794	C
22	DA	2799	A
22	DA	2803	G
22	DA	2809	A
22	DA	2812	G
22	DA	2820	A
22	DA	2823	A
22	DA	2825	G
22	DA	2826	A
22	DA	2833	U
22	DA	2834	G
22	DA	2835	A
22	DA	2843	G
22	DA	2850	A
22	DA	2852	G
22	DA	2861	U

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Mol	Chain	Res	Type
22	DA	2867	G
22	DA	2871	U
22	DA	2872	A
22	DA	2879	A
22	DA	2880	C
22	DA	2883	A
22	DA	2891	U
22	DA	2897	U
23	DB	13	G
23	DB	15	A
23	DB	16	G
23	DB	24	G
23	DB	35	C
23	DB	36	C
23	DB	44	G
23	DB	51	G
23	DB	54	G
23	DB	56	G
23	DB	61	G
23	DB	66	A
23	DB	87	U
23	DB	88	C
23	DB	89	U
23	DB	90	C
23	DB	99	A
23	DB	109	A
23	DB	110	C
23	DB	111	U

All (75) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	209	U
1	AA	351	G
1	AA	429	U
1	AA	484	G
1	AA	722	G
1	AA	1031	C
1	AA	1049	U
1	AA	1145	A
1	AA	1201	A
1	AA	1211	U

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Mol	Chain	Res	Type
22	BA	70	G
22	BA	199	A
22	BA	271	G
22	BA	310	A
22	BA	404	A
22	BA	668	A
22	BA	764	A
22	BA	784	G
22	BA	859	G
22	BA	892	A
22	BA	960	A
22	BA	984	A
22	BA	995	C
22	BA	1378	A
22	BA	1583	A
22	BA	1606	C
22	BA	1610	A
22	BA	1738	G
22	BA	1875	G
22	BA	1925	C
22	BA	2127	G
22	BA	2211	A
22	BA	2286	G
22	BA	2326	C
22	BA	2585	U
22	BA	2756	U
22	BA	2873	A
1	CA	85	U
1	CA	115	G
1	CA	209	U
1	CA	429	U
1	CA	484	G
1	CA	1049	U
1	CA	1201	A
1	CA	1211	U
22	DA	271	G
22	DA	404	A
22	DA	479	A
22	DA	613	A
22	DA	800	A
22	DA	846	U
22	DA	877	A

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Mol	Chain	Res	Type
22	DA	1237	A
22	DA	1275	A
22	DA	1344	U
22	DA	1378	A
22	DA	1475	G
22	DA	1514	G
22	DA	1606	C
22	DA	1847	A
22	DA	1875	G
22	DA	2109	U
22	DA	2127	G
22	DA	2145	C
22	DA	2146	C
22	DA	2162	G
22	DA	2211	A
22	DA	2225	A
22	DA	2286	G
22	DA	2307	G
22	DA	2308	G
22	DA	2326	C
22	DA	2425	A
22	DA	2655	G
22	DA	2756	U

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

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

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

Of 501 ligands modelled in this entry, 499 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	DOL	BA	3001	-	43,50,50	3.15	17 (39%)	50,70,70	3.33	16 (32%)
55	DOL	DA	3001	-	43,50,50	3.23	14 (32%)	50,70,70	3.14	11 (22%)

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	DOL	BA	3001	-	-	0/58/77/77	0/1/3/3
55	DOL	DA	3001	-	-	0/58/77/77	0/1/3/3

All (31) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	BA	3001	DOL	C1-C2	-8.02	1.43	1.55
55	DA	3001	DOL	C1-C2	-6.85	1.44	1.55
55	BA	3001	DOL	C16-C17	-3.45	1.48	1.54
55	BA	3001	DOL	O36-C32	-3.44	1.39	1.44
55	DA	3001	DOL	O18-C17	-3.15	1.37	1.43
55	DA	3001	DOL	C16-C17	-2.98	1.49	1.54
55	BA	3001	DOL	O36-C37	-2.89	1.27	1.34
55	BA	3001	DOL	O18-C17	-2.84	1.38	1.43
55	DA	3001	DOL	O36-C32	-2.77	1.40	1.44
55	DA	3001	DOL	O36-C37	-2.23	1.29	1.34
55	BA	3001	DOL	C30-C32	-2.18	1.49	1.54
55	BA	3001	DOL	C1-N5	-2.16	1.43	1.46
55	BA	3001	DOL	C22-C20	2.08	1.50	1.45
55	BA	3001	DOL	C42-S39	2.08	1.81	1.78
55	BA	3001	DOL	C3-C4	2.30	1.57	1.52
55	DA	3001	DOL	C22-C20	2.78	1.52	1.45
55	BA	3001	DOL	C28-C29	3.04	1.40	1.32
55	DA	3001	DOL	C42-S39	3.16	1.83	1.78
55	DA	3001	DOL	C28-C29	3.29	1.41	1.32
55	BA	3001	DOL	C19-C20	4.42	1.49	1.34
55	DA	3001	DOL	C19-C20	4.75	1.51	1.34
55	BA	3001	DOL	C6-N5	5.87	1.45	1.35
55	DA	3001	DOL	C6-N5	5.95	1.45	1.35
55	DA	3001	DOL	O38-C37	6.48	1.37	1.21

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	BA	3001	DOL	O38-C37	6.54	1.37	1.21
55	BA	3001	DOL	C22-C23	6.80	1.50	1.31
55	DA	3001	DOL	C22-C23	7.53	1.52	1.31
55	BA	3001	DOL	C26-N25	7.64	1.45	1.34
55	BA	3001	DOL	O15-C14	8.44	1.37	1.21
55	DA	3001	DOL	O15-C14	8.56	1.37	1.21
55	DA	3001	DOL	C26-N25	9.22	1.47	1.34

All (27) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	DA	3001	DOL	O40-S39-O41	-18.28	100.41	117.98
55	BA	3001	DOL	O40-S39-O41	-13.54	104.96	117.98
55	BA	3001	DOL	C24-N25-C26	-6.25	114.69	121.76
55	DA	3001	DOL	C4-N5-C1	-5.68	106.19	112.39
55	BA	3001	DOL	O7-C6-N5	-4.43	115.41	121.52
55	DA	3001	DOL	C23-C22-C20	-4.00	119.65	125.75
55	BA	3001	DOL	C24-C23-C22	-3.74	114.37	125.31
55	BA	3001	DOL	O27-C26-N25	-3.71	117.75	122.53
55	BA	3001	DOL	C4-N5-C1	-3.37	108.72	112.39
55	BA	3001	DOL	C23-C22-C20	-2.57	121.84	125.75
55	DA	3001	DOL	C24-C23-C22	-2.43	118.22	125.31
55	DA	3001	DOL	C3-C4-N5	-2.43	100.73	103.34
55	BA	3001	DOL	C16-C17-C19	-2.19	107.05	111.38
55	DA	3001	DOL	O38-C37-C1	-2.14	120.74	124.61
55	BA	3001	DOL	C12-C8-C6	-2.07	122.57	129.47
55	BA	3001	DOL	C21-C20-C22	2.29	121.92	118.10
55	DA	3001	DOL	C43-C42-S39	2.51	117.16	112.50
55	BA	3001	DOL	O36-C37-C1	2.57	116.99	111.56
55	DA	3001	DOL	O40-S39-C42	2.85	111.77	107.95
55	BA	3001	DOL	C28-C26-N25	2.96	121.69	114.87
55	DA	3001	DOL	O36-C37-C1	3.03	117.96	111.56
55	DA	3001	DOL	C32-O36-C37	3.33	123.81	118.01
55	BA	3001	DOL	O41-S39-C42	3.95	113.24	107.95
55	DA	3001	DOL	O41-S39-C42	4.16	113.52	107.95
55	BA	3001	DOL	O40-S39-C42	6.99	117.31	107.95
55	BA	3001	DOL	C43-C42-S39	7.73	126.83	112.50
55	BA	3001	DOL	C8-C6-N5	9.13	127.83	119.89

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.



2 monomers are involved in 38 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
55	BA	3001	DOL	11	0
55	DA	3001	DOL	27	0

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95<sup>th</sup> percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	AA	1538/1539 (99%)	-0.08	30 (1%) 68 64	11, 51, 132, 183	0
1	CA	1539/1539 (100%)	0.34	113 (7%) 18 12	24, 70, 147, 178	0
2	AB	218/218 (100%)	1.04	37 (16%) 2 1	40, 75, 101, 117	0
2	CB	218/218 (100%)	1.10	47 (21%) 1 0	60, 88, 108, 123	0
3	AC	206/206 (100%)	0.17	7 (3%) 49 41	37, 58, 80, 95	0
3	CC	206/206 (100%)	1.00	35 (16%) 2 1	55, 80, 98, 108	0
4	AD	205/205 (100%)	0.30	9 (4%) 38 32	33, 57, 80, 100	0
4	CD	205/205 (100%)	-0.07	6 (2%) 55 49	15, 36, 60, 84	0
5	AE	150/150 (100%)	0.16	4 (2%) 58 52	29, 48, 78, 94	0
5	CE	150/150 (100%)	0.28	7 (4%) 35 29	27, 53, 83, 104	0
6	AF	100/100 (100%)	0.49	10 (10%) 9 5	35, 56, 75, 79	0
6	CF	100/100 (100%)	0.56	8 (8%) 15 10	43, 73, 92, 104	0
7	AG	151/151 (100%)	0.80	17 (11%) 7 4	54, 76, 92, 100	0
7	CG	151/151 (100%)	2.76	88 (58%) 0 0	82, 106, 115, 119	0
8	AH	129/129 (100%)	0.03	2 (1%) 74 72	29, 48, 68, 79	0
8	CH	129/129 (100%)	0.27	4 (3%) 52 45	48, 64, 81, 96	0
9	AI	127/127 (100%)	1.11	24 (18%) 2 1	45, 75, 98, 107	0
9	CI	127/127 (100%)	1.77	44 (34%) 0 0	81, 97, 114, 121	0
10	AJ	98/98 (100%)	0.84	17 (17%) 2 1	41, 68, 88, 116	0
10	CJ	98/98 (100%)	2.61	52 (53%) 0 0	73, 98, 115, 124	0
11	AK	117/117 (100%)	0.46	12 (10%) 9 5	28, 62, 92, 120	0
11	CK	117/117 (100%)	0.34	5 (4%) 39 32	36, 68, 82, 90	0
12	AL	123/123 (100%)	0.06	4 (3%) 50 42	20, 35, 65, 97	0
12	CL	123/123 (100%)	0.34	7 (5%) 27 21	33, 50, 75, 96	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	AM	114/114 (100%)	1.17	25 (21%) 1 0	49, 72, 93, 104	0
13	CM	114/114 (100%)	3.79	91 (79%) 0 0	94, 115, 124, 126	0
14	AN	96/100 (96%)	0.74	11 (11%) 6 4	41, 62, 96, 105	0
14	CN	96/100 (96%)	2.39	51 (53%) 0 0	71, 97, 116, 123	0
15	AO	88/88 (100%)	0.20	3 (3%) 49 41	31, 48, 65, 90	0
15	CO	88/88 (100%)	0.39	6 (6%) 20 14	38, 65, 80, 103	0
16	AP	82/82 (100%)	0.34	4 (4%) 33 27	35, 48, 84, 109	0
16	CP	82/82 (100%)	0.64	7 (8%) 13 8	45, 62, 92, 113	0
17	AQ	80/80 (100%)	0.47	4 (5%) 32 26	28, 49, 75, 110	0
17	CQ	80/80 (100%)	1.25	19 (23%) 1 0	43, 79, 98, 100	0
18	AR	55/55 (100%)	0.69	8 (14%) 3 2	42, 55, 78, 101	0
18	CR	55/55 (100%)	0.49	7 (12%) 5 3	36, 55, 78, 109	0
19	AS	79/79 (100%)	1.34	25 (31%) 1 0	56, 72, 89, 97	0
19	CS	79/79 (100%)	3.45	56 (70%) 0 0	98, 115, 124, 129	0
20	AT	85/85 (100%)	0.47	7 (8%) 14 9	36, 48, 70, 95	0
20	CT	85/85 (100%)	1.57	25 (29%) 1 0	54, 78, 96, 101	0
21	AU	51/51 (100%)	1.46	16 (31%) 1 0	44, 76, 97, 105	0
21	CU	51/51 (100%)	0.66	4 (7%) 16 10	45, 71, 100, 103	0
22	BA	2897/2903 (99%)	0.07	135 (4%) 35 29	1, 14, 129, 195	0
22	DA	2897/2903 (99%)	0.58	206 (7%) 19 13	41, 85, 148, 181	0
23	BB	119/119 (100%)	-0.35	0 100 100	2, 23, 50, 80	0
23	DB	118/119 (99%)	0.77	12 (10%) 9 5	69, 115, 134, 143	0
24	BC	271/271 (100%)	-0.33	3 (1%) 82 80	2, 20, 37, 55	0
24	DC	271/271 (100%)	0.47	14 (5%) 31 24	47, 64, 77, 96	0
25	BD	209/209 (100%)	-0.44	0 100 100	0, 10, 36, 65	0
25	DD	209/209 (100%)	0.77	32 (15%) 3 1	53, 72, 88, 96	0
26	BE	201/201 (100%)	-0.37	0 100 100	2, 24, 55, 88	0
26	DE	201/201 (100%)	1.43	52 (25%) 1 0	53, 90, 107, 114	0
27	BF	177/177 (100%)	0.23	14 (7%) 15 10	23, 44, 76, 90	0
27	DF	177/177 (100%)	3.15	121 (68%) 0 0	97, 114, 126, 131	0
28	BG	176/176 (100%)	-0.28	2 (1%) 82 80	16, 36, 57, 72	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
28	DG	176/176 (100%)	2.21	88 (50%) 0 0	77, 96, 111, 121	0
29	BH	149/149 (100%)	2.75	74 (49%) 0 0	25, 102, 121, 129	0
29	DH	149/149 (100%)	1.30	36 (24%) 1 0	25, 92, 107, 115	0
30	BI	141/141 (100%)	3.87	97 (68%) 0 0	90, 117, 127, 134	0
30	DI	141/141 (100%)	5.73	131 (92%) 0 0	105, 126, 137, 143	0
31	BJ	142/142 (100%)	-0.37	0 100 100	1, 6, 23, 36	0
31	DJ	142/142 (100%)	0.57	11 (7%) 16 11	52, 69, 83, 91	0
32	BK	122/122 (100%)	-0.35	0 100 100	3, 12, 31, 62	0
32	DK	122/122 (100%)	0.54	10 (8%) 14 9	48, 66, 84, 96	0
33	BL	143/143 (100%)	-0.32	0 100 100	1, 19, 43, 65	0
33	DL	143/143 (100%)	1.73	54 (37%) 0 0	46, 87, 99, 115	0
34	BM	136/136 (100%)	-0.45	0 100 100	1, 10, 30, 83	0
34	DM	136/136 (100%)	0.64	15 (11%) 7 4	42, 71, 86, 100	0
35	BN	120/120 (100%)	-0.42	0 100 100	3, 8, 18, 63	0
35	DN	120/120 (100%)	1.01	22 (18%) 2 1	59, 79, 94, 112	0
36	BO	116/116 (100%)	-0.31	0 100 100	14, 26, 45, 55	0
36	DO	116/116 (100%)	2.13	59 (50%) 0 0	86, 100, 111, 118	0
37	BP	114/114 (100%)	-0.35	2 (1%) 71 68	8, 17, 41, 72	0
37	DP	114/114 (100%)	1.00	19 (16%) 2 1	61, 75, 86, 95	0
38	BQ	117/117 (100%)	-0.30	0 100 100	0, 3, 13, 34	0
38	DQ	117/117 (100%)	1.04	20 (17%) 2 1	57, 71, 80, 89	0
39	BR	103/103 (100%)	-0.38	0 100 100	1, 13, 30, 58	0
39	DR	103/103 (100%)	1.55	33 (32%) 1 0	58, 81, 94, 104	0
40	BS	110/110 (100%)	-0.42	0 100 100	2, 5, 24, 66	0
40	DS	110/110 (100%)	1.21	25 (22%) 1 0	62, 80, 95, 106	0
41	BT	93/93 (100%)	0.08	4 (4%) 39 32	9, 26, 68, 100	0
41	DT	93/93 (100%)	2.12	48 (51%) 0 0	73, 92, 106, 115	0
42	BU	102/102 (100%)	0.24	11 (10%) 8 4	12, 29, 63, 79	0
42	DU	102/102 (100%)	2.81	60 (58%) 0 0	78, 96, 110, 122	0
43	BV	94/94 (100%)	-0.37	0 100 100	5, 21, 43, 55	0
43	DV	94/94 (100%)	1.19	23 (24%) 1 0	74, 88, 99, 106	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
44	BW	76/76 (100%)	-0.34	1 (1%) 79 78	5, 12, 30, 57	0
44	DW	75/76 (98%)	1.44	22 (29%) 1 0	58, 83, 92, 105	0
45	BX	77/77 (100%)	-0.31	0 100 100	8, 22, 51, 68	0
45	DX	77/77 (100%)	1.04	16 (20%) 1 1	50, 72, 87, 92	0
46	BY	63/63 (100%)	0.23	3 (4%) 34 28	24, 41, 73, 95	0
46	DY	63/63 (100%)	2.08	34 (53%) 0 0	82, 99, 107, 110	0
47	BZ	58/58 (100%)	-0.32	0 100 100	2, 9, 29, 35	0
47	DZ	58/58 (100%)	0.81	7 (12%) 6 3	60, 74, 85, 103	0
48	B0	56/56 (100%)	-0.48	0 100 100	1, 10, 35, 60	0
48	D0	56/56 (100%)	1.44	15 (26%) 1 0	52, 83, 98, 105	0
49	B1	50/50 (100%)	-0.19	0 100 100	15, 27, 51, 58	0
49	D1	50/50 (100%)	2.10	25 (50%) 0 0	74, 90, 95, 105	0
50	B2	46/46 (100%)	-0.33	1 (2%) 65 60	5, 9, 16, 79	0
50	D2	46/46 (100%)	1.25	11 (23%) 1 0	58, 72, 87, 102	0
51	B3	64/64 (100%)	-0.39	0 100 100	4, 10, 20, 29	0
51	D3	64/64 (100%)	1.46	17 (26%) 1 0	62, 75, 84, 95	0
52	B4	38/38 (100%)	-0.08	1 (2%) 59 54	8, 19, 34, 54	0
52	D4	38/38 (100%)	2.57	20 (52%) 0 0	64, 79, 90, 100	0
53	B5	191/228 (83%)	6.38	188 (98%) 0 0	100, 122, 133, 142	0
All	All	20734/20794 (99%)	0.63	2752 (13%) 4 2	0, 64, 125, 195	0

All (2752) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
53	B5	218	THR	28.7
53	B5	140	ASN	22.1
29	BH	130	VAL	18.4
30	BI	53	LEU	17.6
10	AJ	102	LEU	17.5
22	BA	2100	G	17.0
30	BI	54	PRO	15.8
30	DI	68	THR	15.7
53	B5	217	THR	15.4
30	BI	79	LEU	15.0
22	BA	2184	A	15.0

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Mol	Chain	Res	Type	RSRZ
53	B5	97	GLY	14.7
30	BI	2	ALA	14.2
53	B5	162	ILE	14.2
30	DI	2	ALA	14.1
53	B5	170	GLY	14.1
53	B5	147	GLY	13.7
22	BA	2148	G	13.3
53	B5	96	GLY	13.1
1	CA	1536	C	13.1
22	BA	2101	A	12.9
30	DI	80	LEU	12.8
30	DI	130	GLU	12.7
30	DI	78	VAL	12.6
30	DI	67	PHE	12.6
53	B5	214	TYR	12.6
22	BA	2121	G	12.6
53	B5	173	HIS	12.5
53	B5	107	GLY	12.5
30	BI	12	GLN	12.5
53	B5	143	ALA	12.4
30	DI	54	PRO	12.4
22	BA	2135	A	12.2
22	BA	2102	G	12.1
53	B5	111	PHE	12.1
30	BI	4	LYS	12.0
22	BA	2103	C	12.0
53	B5	122	GLY	11.9
22	BA	2174	C	11.8
53	B5	131	ILE	11.7
30	DI	3	LYS	11.7
53	B5	106	ASP	11.5
22	BA	2159	G	11.4
30	DI	53	LEU	11.3
22	BA	2112	G	11.2
22	BA	2145	C	11.2
30	BI	3	LYS	11.2
53	B5	76	LEU	11.2
10	CJ	74	VAL	11.2
1	CA	1538	C	11.1
22	BA	2177	C	11.1
7	CG	62	PHE	11.1
53	B5	55	SER	11.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	CA	1539	C	11.0
28	DG	33	LEU	11.0
30	DI	133	ALA	11.0
22	BA	2136	G	10.9
22	DA	1073	A	10.9
22	BA	2140	G	10.9
30	BI	11	LEU	10.8
13	CM	45	ILE	10.8
30	DI	129	ILE	10.8
53	B5	157	ILE	10.8
20	CT	4	ILE	10.8
30	BI	69	PHE	10.7
22	BA	2147	A	10.6
22	BA	2160	C	10.6
53	B5	66	PRO	10.6
27	DF	76	GLY	10.5
2	AB	157	LEU	10.4
30	DI	85	GLY	10.3
53	B5	141	PRO	10.3
53	B5	95	VAL	10.3
29	BH	98	ASP	10.3
22	BA	2161	C	10.2
22	BA	2117	A	10.2
22	BA	2178	C	10.0
30	DI	76	ALA	9.9
22	BA	2183	A	9.9
53	B5	68	GLY	9.9
29	BH	102	ALA	9.8
29	BH	101	ASP	9.8
13	CM	10	PRO	9.8
53	B5	134	PRO	9.7
9	CI	128	SER	9.7
22	BA	2176	A	9.6
53	B5	223	VAL	9.6
29	BH	97	ARG	9.6
22	BA	2144	G	9.5
30	BI	114	ALA	9.5
1	CA	1535	C	9.5
30	DI	139	VAL	9.5
30	DI	69	PHE	9.4
22	BA	2158	A	9.4
22	BA	2120	G	9.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
30	BI	87	LYS	9.3
29	DH	142	VAL	9.3
53	B5	142	LYS	9.3
22	BA	2124	G	9.2
30	DI	52	GLY	9.2
29	BH	96	THR	9.2
30	DI	22	PRO	9.2
22	BA	2123	G	9.2
53	B5	148	PHE	9.1
13	CM	23	TYR	9.1
30	DI	56	PRO	9.1
27	DF	39	GLY	9.0
30	DI	6	GLN	9.0
22	BA	2156	G	9.0
29	BH	72	ILE	9.0
29	DH	136	SER	9.0
53	B5	98	GLU	8.9
22	DA	1067	A	8.9
22	BA	2104	C	8.8
30	BI	80	LEU	8.8
30	DI	98	VAL	8.8
30	DI	4	LYS	8.8
28	DG	32	GLU	8.6
13	CM	39	ILE	8.6
30	DI	121	ASP	8.6
53	B5	165	ARG	8.6
30	DI	120	ALA	8.6
30	DI	110	ALA	8.6
22	BA	2143	C	8.6
53	B5	62	THR	8.5
53	B5	183	PRO	8.5
22	BA	2138	G	8.5
30	DI	77	ALA	8.5
22	BA	2169	A	8.4
22	DA	2174	C	8.4
53	B5	219	MET	8.4
2	AB	156	GLY	8.4
22	BA	2162	G	8.4
53	B5	109	MET	8.4
14	CN	20	TYR	8.4
30	DI	79	LEU	8.4
30	DI	8	TYR	8.4

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Mol	Chain	Res	Type	RSRZ
30	DI	58	VAL	8.4
19	CS	71	LEU	8.4
36	DO	65	THR	8.4
53	B5	87	ALA	8.3
53	B5	166	ASN	8.3
13	CM	63	PHE	8.3
30	BI	133	ALA	8.3
30	DI	82	LYS	8.3
53	B5	84	ILE	8.3
30	BI	13	VAL	8.2
7	CG	66	LEU	8.2
30	DI	23	PRO	8.2
53	B5	207	GLY	8.2
30	DI	28	LEU	8.2
30	BI	67	PHE	8.2
30	DI	60	THR	8.2
36	DO	64	TYR	8.1
53	B5	27	ALA	8.1
30	DI	99	GLY	8.1
42	DU	58	ILE	8.1
53	B5	108	TRP	8.1
30	DI	57	VAL	8.1
53	B5	45	HIS	8.1
53	B5	156	GLU	8.1
53	B5	94	TYR	8.0
27	DF	128	TYR	8.0
22	DA	2124	G	8.0
30	DI	25	GLY	8.0
53	B5	174	ALA	8.0
33	DL	92	LEU	8.0
22	BA	2168	G	8.0
30	DI	48	SER	7.9
22	BA	2107	G	7.9
53	B5	216	THR	7.9
1	AA	1536	C	7.9
1	AA	86	G	7.9
1	CA	1020	G	7.9
22	BA	2115	G	7.9
30	DI	59	ILE	7.9
53	B5	67	HIS	7.9
29	BH	146	VAL	7.8
53	B5	48	LEU	7.9

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Mol	Chain	Res	Type	RSRZ
26	DE	119	ILE	7.8
53	B5	93	ASP	7.8
53	B5	155	ARG	7.8
53	B5	77	ALA	7.8
7	CG	111	ARG	7.8
53	B5	132	LEU	7.8
22	DA	1537	G	7.7
30	DI	96	ASP	7.7
22	BA	2116	G	7.7
30	DI	66	SER	7.7
42	DU	89	ASP	7.7
19	CS	67	VAL	7.7
22	BA	2152	G	7.6
29	BH	136	SER	7.6
13	CM	95	LEU	7.6
53	B5	182	PRO	7.6
27	DF	147	ASP	7.6
27	DF	129	SER	7.6
29	BH	110	VAL	7.6
22	BA	2179	C	7.6
53	B5	179	ALA	7.6
1	AA	1535	C	7.6
10	CJ	77	VAL	7.6
22	BA	2185	U	7.5
27	DF	35	THR	7.5
22	BA	2132	U	7.5
22	BA	2157	G	7.5
36	DO	66	GLY	7.5
42	DU	20	GLY	7.5
28	DG	62	TRP	7.5
22	BA	2153	C	7.4
30	DI	90	SER	7.4
53	B5	180	SER	7.4
22	BA	2165	C	7.4
2	CB	32	PHE	7.4
19	CS	80	TYR	7.4
13	CM	84	GLY	7.4
53	B5	78	ILE	7.4
1	CA	1032	G	7.4
9	CI	130	ARG	7.4
52	D4	10	LEU	7.3
53	B5	154	ILE	7.3

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Mol	Chain	Res	Type	RSRZ
53	B5	208	THR	7.3
53	B5	20	VAL	7.3
29	BH	106	ALA	7.2
1	AA	1538	C	7.2
14	CN	4	GLN	7.2
53	B5	81	GLY	7.2
22	BA	2142	A	7.2
30	BI	115	ALA	7.2
42	DU	52	LEU	7.2
13	CM	85	CYS	7.2
1	AA	1539	C	7.2
53	B5	59	VAL	7.2
53	B5	104	ILE	7.2
30	DI	95	LYS	7.2
22	DA	1093	G	7.1
30	BI	88	SER	7.1
19	CS	60	VAL	7.1
30	BI	5	VAL	7.1
22	DA	2309	A	7.1
42	DU	50	PRO	7.1
53	B5	85	LYS	7.1
14	CN	51	LEU	7.1
4	AD	37	ALA	7.1
53	B5	69	LEU	7.1
53	B5	46	ALA	7.1
53	B5	100	ILE	7.1
22	BA	2182	U	7.0
22	DA	1175	A	7.0
53	B5	42	VAL	7.0
53	B5	146	VAL	7.0
1	CA	1024	G	7.0
22	BA	2175	C	7.0
42	DU	51	ALA	7.0
42	DU	78	GLY	7.0
14	CN	36	ALA	7.0
10	CJ	76	ILE	7.0
38	DQ	29	SER	7.0
2	AB	136	MET	6.9
7	CG	88	PRO	6.9
27	DF	113	ASP	6.9
19	CS	74	PHE	6.9
30	DI	55	ILE	6.9

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Mol	Chain	Res	Type	RSRZ
28	DG	105	LEU	6.9
9	AI	43	THR	6.9
4	CD	25	VAL	6.9
53	B5	171	ALA	6.8
27	DF	79	ILE	6.8
22	BA	2127	G	6.8
7	CG	133	THR	6.8
30	DI	61	VAL	6.8
52	D4	25	VAL	6.8
29	BH	69	ALA	6.8
19	CS	24	GLU	6.8
53	B5	161	ARG	6.8
13	CM	69	LEU	6.8
7	CG	52	GLN	6.7
13	CM	22	ILE	6.7
30	DI	73	THR	6.7
7	CG	41	SER	6.7
22	BA	2141	G	6.7
22	BA	2164	C	6.7
27	DF	24	SER	6.7
30	DI	5	VAL	6.7
42	DU	39	ILE	6.7
1	AA	78	A	6.7
22	BA	2139	U	6.7
42	DU	12	ILE	6.6
22	BA	2163	A	6.6
53	B5	86	GLU	6.6
7	AG	5	ARG	6.6
22	BA	2150	C	6.6
30	BI	99	GLY	6.6
53	B5	213	VAL	6.6
30	DI	34	ASN	6.6
19	CS	51	VAL	6.6
12	AL	124	ALA	6.6
14	CN	52	PRO	6.5
2	CB	135	LEU	6.5
13	CM	64	VAL	6.5
13	CM	83	LEU	6.5
30	DI	46	THR	6.5
37	DP	115	ASN	6.5
53	B5	37	LYS	6.5
29	BH	68	ARG	6.5

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Mol	Chain	Res	Type	RSRZ
29	BH	54	LEU	6.5
22	BA	2110	G	6.5
42	DU	87	PHE	6.5
22	BA	2149	U	6.5
29	BH	105	ALA	6.5
7	CG	151	PHE	6.5
53	B5	160	GLY	6.5
22	DA	1536	C	6.5
53	B5	64	SER	6.5
53	B5	110	ASP	6.5
27	DF	21	ASN	6.5
44	DW	52	GLY	6.4
9	AI	129	LYS	6.4
27	DF	78	LYS	6.4
30	DI	11	LEU	6.4
30	DI	75	PRO	6.4
22	BA	2114	A	6.4
29	BH	85	GLY	6.4
53	B5	72	GLN	6.4
1	CA	1022	A	6.4
53	B5	151	GLY	6.4
19	CS	31	LEU	6.4
53	B5	80	LYS	6.4
9	AI	130	ARG	6.4
27	DF	28	VAL	6.4
27	DF	130	MET	6.4
53	B5	70	GLY	6.4
30	BI	22	PRO	6.3
53	B5	52	PRO	6.3
27	DF	114	PHE	6.3
30	DI	47	ASP	6.3
9	CI	43	THR	6.3
30	DI	83	ALA	6.3
53	B5	149	ASN	6.3
1	CA	1031	C	6.3
7	CG	57	SER	6.3
22	BA	2130	U	6.3
45	DX	49	LEU	6.3
7	CG	54	SER	6.3
27	DF	112	ARG	6.3
19	CS	29	LYS	6.2
30	DI	118	THR	6.2

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Mol	Chain	Res	Type	RSRZ
30	DI	142	ASP	6.2
53	B5	199	ALA	6.2
1	CA	1302	C	6.2
19	CS	30	PRO	6.2
53	B5	158	LYS	6.2
53	B5	105	LEU	6.2
27	DF	43	ALA	6.2
28	DG	166	ASP	6.2
30	BI	101	ILE	6.2
7	CG	118	LEU	6.2
41	DT	2	ILE	6.2
29	BH	119	ASN	6.2
22	BA	2134	A	6.2
22	BA	2154	A	6.2
30	BI	97	LYS	6.2
30	BI	100	LYS	6.2
42	DU	60	GLU	6.1
53	B5	194	ILE	6.1
30	BI	25	GLY	6.1
29	BH	86	ASP	6.1
30	DI	140	VAL	6.1
1	CA	1018	G	6.1
18	AR	20	GLU	6.1
22	BA	2099	U	6.1
19	CS	66	MET	6.1
22	DA	1057	A	6.1
53	B5	198	GLU	6.1
28	DG	52	PHE	6.1
30	DI	126	THR	6.1
49	D1	24	THR	6.1
30	DI	21	SER	6.1
30	DI	114	ALA	6.1
13	CM	32	ALA	6.1
20	CT	38	ALA	6.1
19	CS	72	GLY	6.1
10	CJ	100	ILE	6.0
42	DU	35	ILE	6.0
53	B5	224	ARG	6.0
30	BI	8	TYR	6.0
14	CN	27	LEU	6.0
29	BH	121	VAL	6.0
19	CS	11	ILE	6.0

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Mol	Chain	Res	Type	RSRZ
13	CM	46	SER	6.0
1	CA	1534	A	6.0
22	BA	885	C	6.0
29	BH	137	GLU	6.0
14	AN	30	ILE	6.0
53	B5	153	ILE	6.0
22	BA	2111	U	6.0
9	CI	38	TYR	5.9
22	DA	1077	A	5.9
53	B5	181	PHE	5.9
30	DI	131	GLY	5.9
27	DF	155	THR	5.9
53	B5	26	ALA	5.9
27	DF	23	ASN	5.9
13	CM	80	LEU	5.9
42	DU	21	LYS	5.9
39	DR	27	ILE	5.9
10	CJ	99	GLN	5.9
19	CS	39	THR	5.9
29	BH	58	LEU	5.9
7	CG	77	SER	5.9
30	BI	135	SER	5.9
10	CJ	82	LYS	5.9
53	B5	206	LYS	5.9
27	DF	77	PHE	5.9
27	DF	122	PHE	5.9
9	CI	64	TYR	5.9
10	CJ	87	LEU	5.8
53	B5	152	GLU	5.8
22	DA	2120	G	5.8
53	B5	90	ALA	5.8
1	CA	1537	U	5.8
30	BI	66	SER	5.8
21	AU	4	ILE	5.8
2	AB	9	MET	5.8
30	BI	21	SER	5.8
27	DF	67	ILE	5.8
3	CC	193	TYR	5.8
17	AQ	20	SER	5.8
22	BA	2155	U	5.8
10	CJ	86	ALA	5.8
22	DA	1065	U	5.8

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Mol	Chain	Res	Type	RSRZ
27	DF	25	VAL	5.8
19	CS	49	ILE	5.8
29	BH	113	SER	5.8
2	AB	135	LEU	5.8
16	AP	80	LYS	5.8
29	BH	91	PHE	5.8
19	CS	48	THR	5.7
30	DI	112	THR	5.7
53	B5	128	LEU	5.7
7	CG	75	VAL	5.7
42	BU	49	VAL	5.7
42	BU	55	PRO	5.7
53	B5	82	GLU	5.7
22	BA	2113	U	5.7
42	DU	77	THR	5.7
22	DA	1068	G	5.7
53	B5	172	ILE	5.7
8	AH	2	SER	5.7
8	CH	2	SER	5.7
30	DI	32	GLY	5.7
1	CA	1016	A	5.7
29	BH	144	VAL	5.7
30	BI	68	THR	5.7
16	CP	80	LYS	5.7
27	DF	54	ALA	5.7
30	DI	20	PRO	5.7
13	CM	109	ARG	5.7
53	B5	121	MET	5.7
22	DA	2169	A	5.7
41	DT	34	VAL	5.7
22	BA	2125	G	5.7
22	DA	2168	G	5.7
7	CG	73	VAL	5.7
22	BA	2180	U	5.7
22	DA	2126	A	5.7
30	DI	35	ILE	5.7
53	B5	41	THR	5.7
30	DI	91	GLY	5.7
33	DL	144	GLU	5.7
9	CI	125	PRO	5.7
30	DI	43	ASN	5.7
13	CM	47	GLU	5.7

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Mol	Chain	Res	Type	RSRZ
26	DE	104	ALA	5.6
22	DA	1171	G	5.6
41	DT	15	HIS	5.6
53	B5	212	SER	5.6
42	DU	48	PRO	5.6
53	B5	61	GLY	5.6
53	B5	144	GLY	5.6
22	BA	2171	A	5.6
22	DA	2175	C	5.6
30	DI	138	LEU	5.6
7	CG	18	PHE	5.6
22	BA	2118	U	5.6
2	CB	130	THR	5.6
13	CM	2	ALA	5.6
41	DT	70	HIS	5.6
13	CM	52	GLN	5.6
28	DG	80	THR	5.5
10	CJ	10	LEU	5.5
14	CN	54	ASP	5.5
27	DF	51	ASP	5.5
21	AU	38	TYR	5.5
29	DH	79	THR	5.5
22	BA	2126	A	5.5
27	DF	152	LEU	5.5
51	D3	57	LEU	5.5
10	CJ	19	ASP	5.5
19	CS	76	PRO	5.5
53	B5	38	PHE	5.5
53	B5	65	LEU	5.5
7	CG	91	VAL	5.5
13	CM	106	ALA	5.5
22	BA	2172	U	5.5
29	BH	112	LYS	5.5
22	BA	2166	U	5.5
13	CM	62	LYS	5.5
22	BA	2173	A	5.5
40	DS	84	ARG	5.5
29	BH	115	VAL	5.5
27	DF	22	TYR	5.5
52	D4	8	LYS	5.5
13	CM	19	LEU	5.5
27	DF	26	MET	5.5

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Mol	Chain	Res	Type	RSRZ
42	DU	36	VAL	5.4
46	DY	36	GLN	5.4
53	B5	137	LEU	5.4
27	DF	29	PRO	5.4
17	AQ	83	VAL	5.4
30	BI	55	ILE	5.4
28	DG	43	VAL	5.4
7	CG	134	ALA	5.4
9	CI	89	GLU	5.4
14	CN	29	ALA	5.4
40	DS	92	ARG	5.4
19	CS	44	MET	5.4
22	DA	2125	G	5.4
14	CN	60	GLN	5.4
53	B5	187	ALA	5.4
53	B5	164	PHE	5.4
10	CJ	81	GLU	5.3
32	DK	111	LYS	5.3
30	DI	17	MET	5.3
1	CA	1026	G	5.3
19	AS	49	ILE	5.3
22	BA	2133	G	5.3
12	CL	124	ALA	5.3
13	CM	55	THR	5.3
14	CN	45	VAL	5.3
25	DD	60	VAL	5.3
30	BI	14	ALA	5.3
30	DI	10	LYS	5.3
28	DG	103	ILE	5.3
19	CS	17	LYS	5.3
29	BH	83	LYS	5.3
13	CM	79	ARG	5.3
13	CM	86	TYR	5.3
29	BH	123	ARG	5.3
22	BA	2186	G	5.3
29	BH	132	PHE	5.3
30	BI	96	ASP	5.3
14	CN	47	LYS	5.3
13	CM	12	HIS	5.3
30	DI	12	GLN	5.3
22	DA	1172	C	5.3
46	DY	59	GLU	5.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
30	DI	128	SER	5.2
28	DG	58	TYR	5.2
36	DO	99	TYR	5.2
53	B5	39	ASP	5.2
7	CG	59	LEU	5.2
27	DF	156	ILE	5.2
53	B5	89	GLU	5.2
53	B5	169	THR	5.2
53	B5	83	LYS	5.2
29	BH	131	SER	5.2
13	CM	31	LYS	5.2
53	B5	197	LEU	5.2
22	DA	1084	A	5.2
30	BI	23	PRO	5.2
53	B5	50	ILE	5.2
7	CG	85	TYR	5.2
30	BI	84	ALA	5.2
42	DU	71	ALA	5.2
53	B5	79	ALA	5.2
1	CA	94	G	5.1
30	DI	36	MET	5.1
22	BA	2146	C	5.1
28	DG	167	GLU	5.1
30	DI	92	LYS	5.1
13	CM	75	MET	5.1
53	B5	192	ALA	5.1
33	DL	101	ILE	5.1
7	CG	53	ARG	5.1
53	B5	188	ASP	5.1
1	CA	1242	G	5.1
19	CS	68	GLY	5.1
30	BI	92	LYS	5.1
22	BA	2119	A	5.1
19	CS	59	PRO	5.1
46	DY	28	LEU	5.1
29	BH	120	GLY	5.1
30	DI	15	ALA	5.1
46	BY	63	ALA	5.1
41	DT	76	ARG	5.1
10	CJ	73	LEU	5.0
26	DE	144	GLU	5.0
9	AI	20	PHE	5.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
51	D3	61	CYS	5.0
53	B5	222	SER	5.0
7	CG	79	ARG	5.0
10	CJ	72	ARG	5.0
14	CN	35	ASN	5.0
14	CN	48	LEU	5.0
19	CS	13	LEU	5.0
30	BI	78	VAL	5.0
53	B5	176	VAL	5.0
53	B5	126	SER	5.0
7	CG	152	ALA	5.0
30	DI	87	LYS	5.0
14	CN	11	VAL	5.0
15	AO	89	ARG	5.0
10	CJ	71	LEU	5.0
13	CM	51	GLY	5.0
30	DI	119	GLY	5.0
27	DF	143	TYR	5.0
27	DF	10	ASP	5.0
26	DE	164	LEU	5.0
28	DG	26	ILE	5.0
53	B5	225	ILE	5.0
19	CS	41	PHE	5.0
29	BH	87	GLU	5.0
22	BA	1063	G	5.0
27	DF	80	ARG	5.0
49	D1	36	LEU	4.9
7	CG	148	ASN	4.9
10	CJ	80	THR	4.9
27	BF	80	ARG	4.9
27	DF	65	PRO	4.9
22	BA	2181	U	4.9
41	DT	43	ILE	4.9
13	CM	58	ASP	4.9
13	CM	94	GLY	4.9
7	CG	69	VAL	4.9
53	B5	24	ASP	4.9
42	DU	80	ALA	4.9
13	CM	114	LYS	4.9
28	DG	168	VAL	4.9
48	D0	57	LYS	4.9
1	AA	87	C	4.9

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Mol	Chain	Res	Type	RSRZ
7	CG	72	THR	4.9
48	D0	26	THR	4.9
28	DG	45	HIS	4.9
30	BI	121	ASP	4.9
36	DO	117	PHE	4.9
53	B5	57	GLN	4.9
53	B5	75	VAL	4.9
13	CM	38	GLY	4.9
14	CN	26	GLU	4.9
1	AA	844	G	4.9
22	BA	1171	G	4.9
41	DT	8	LEU	4.8
2	CB	136	MET	4.8
3	CC	79	LYS	4.8
3	CC	91	VAL	4.8
7	CG	78	ARG	4.8
22	DA	1870	C	4.8
29	BH	148	ALA	4.8
3	CC	192	THR	4.8
9	CI	129	LYS	4.8
20	CT	3	ASN	4.8
30	DI	63	ALA	4.8
2	CB	67	ILE	4.8
53	B5	99	GLU	4.8
22	DA	1090	A	4.8
30	DI	24	VAL	4.8
36	DO	24	THR	4.8
53	B5	167	ASP	4.8
2	CB	37	LYS	4.8
22	DA	896	A	4.8
20	CT	9	LYS	4.8
40	DS	94	ASP	4.8
29	BH	62	LEU	4.8
9	AI	104	VAL	4.8
33	DL	89	VAL	4.8
53	B5	74	ARG	4.8
9	CI	126	GLN	4.8
11	AK	14	LYS	4.8
52	D4	12	ARG	4.8
1	CA	1021	A	4.8
53	B5	210	LEU	4.8
53	B5	136	GLY	4.8

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Mol	Chain	Res	Type	RSRZ
22	DA	1076	C	4.8
16	AP	81	ALA	4.7
30	DI	86	ILE	4.7
30	DI	122	ILE	4.7
51	D3	14	PHE	4.7
22	BA	2122	U	4.7
19	CS	42	PRO	4.7
27	DF	32	GLU	4.7
7	CG	15	ASP	4.7
13	AM	4	ILE	4.7
33	DL	142	ILE	4.7
42	DU	3	ALA	4.7
9	CI	58	VAL	4.7
13	CM	65	VAL	4.7
27	DF	31	VAL	4.7
48	D0	54	VAL	4.7
28	DG	48	ASN	4.7
30	BI	117	MET	4.7
13	CM	56	LEU	4.7
2	CB	83	ALA	4.7
50	B2	46	LYS	4.7
53	B5	53	ARG	4.7
41	DT	42	GLU	4.7
49	D1	53	LYS	4.7
1	CA	1030	U	4.7
43	DV	57	TYR	4.7
36	DO	85	LYS	4.7
30	DI	18	ALA	4.7
30	DI	31	GLN	4.7
13	CM	43	VAL	4.7
29	BH	55	GLU	4.7
36	DO	40	ILE	4.7
7	CG	116	MET	4.7
29	DH	15	LEU	4.7
36	DO	46	GLU	4.7
42	DU	63	ALA	4.7
22	DA	1075	C	4.7
7	CG	45	SER	4.7
34	DM	99	GLY	4.7
22	DA	1064	C	4.7
27	DF	120	LYS	4.7
30	DI	81	LYS	4.7

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Mol	Chain	Res	Type	RSRZ
53	B5	63	VAL	4.7
53	B5	73	VAL	4.7
50	D2	42	LEU	4.6
22	DA	2173	A	4.6
38	DQ	74	ILE	4.6
22	DA	2176	A	4.6
30	DI	70	VAL	4.6
49	D1	52	ALA	4.6
13	CM	72	GLU	4.6
14	CN	34	VAL	4.6
13	AM	33	ILE	4.6
20	AT	68	HIS	4.6
27	BF	74	VAL	4.6
28	DG	57	GLY	4.6
40	DS	68	ASP	4.6
32	DK	110	GLU	4.6
7	CG	49	THR	4.6
10	AJ	74	VAL	4.6
22	DA	885	C	4.6
30	BI	6	GLN	4.6
13	CM	98	ARG	4.6
39	DR	29	THR	4.6
29	BH	61	VAL	4.6
41	DT	55	VAL	4.6
1	AA	1534	A	4.6
19	CS	43	ASN	4.6
19	CS	75	ALA	4.6
53	B5	54	ARG	4.6
30	BI	71	THR	4.6
53	B5	145	THR	4.6
22	DA	1606	C	4.6
22	DA	1048	A	4.5
22	DA	1074	G	4.5
2	CB	9	MET	4.5
3	CC	39	VAL	4.5
52	D4	33	HIS	4.5
13	CM	48	LEU	4.5
30	DI	62	TYR	4.5
22	BA	2170	A	4.5
52	D4	9	LYS	4.5
27	DF	106	ILE	4.5
40	DS	85	ILE	4.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
18	AR	51	TYR	4.5
19	CS	28	LYS	4.5
26	DE	201	ALA	4.5
27	DF	176	PRO	4.5
53	B5	124	VAL	4.5
36	DO	63	LYS	4.5
28	DG	111	HIS	4.5
9	CI	90	TYR	4.5
48	D0	27	SER	4.5
53	B5	200	HIS	4.5
39	DR	50	GLY	4.5
28	DG	56	ASP	4.5
32	DK	89	ASN	4.5
27	DF	38	MET	4.5
10	CJ	102	LEU	4.5
53	B5	195	ARG	4.5
30	BI	34	ASN	4.5
27	DF	173	PHE	4.5
4	CD	36	GLN	4.5
33	DL	62	PRO	4.5
29	BH	64	ALA	4.5
30	BI	91	GLY	4.5
13	CM	33	ILE	4.5
27	DF	153	ASP	4.5
22	DA	1085	A	4.5
44	DW	38	VAL	4.5
53	B5	130	ARG	4.5
22	BA	1172	C	4.4
30	BI	81	LYS	4.4
53	B5	215	VAL	4.4
27	DF	41	GLY	4.4
2	AB	131	LYS	4.4
30	DI	42	PHE	4.4
30	DI	50	GLU	4.4
22	BA	896	A	4.4
27	DF	157	THR	4.4
19	CS	12	ASP	4.4
42	DU	49	VAL	4.4
2	CB	138	THR	4.4
1	AA	1030	U	4.4
22	DA	1087	G	4.4
53	B5	211	ARG	4.4

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Mol	Chain	Res	Type	RSRZ
2	CB	129	LEU	4.4
30	DI	39	CYS	4.4
19	AS	39	THR	4.4
30	DI	101	ILE	4.4
30	BI	48	SER	4.4
13	CM	4	ILE	4.4
2	AB	74	ARG	4.4
2	CB	139	ARG	4.4
34	DM	136	MET	4.4
7	CG	43	VAL	4.4
2	CB	22	TYR	4.3
19	CS	50	ALA	4.3
29	DH	119	ASN	4.3
29	BH	94	ILE	4.3
53	B5	101	ILE	4.3
53	B5	103	LYS	4.3
19	AS	31	LEU	4.3
33	DL	80	SER	4.3
17	CQ	50	ASN	4.3
27	DF	60	ILE	4.3
53	B5	135	ARG	4.3
7	CG	80	VAL	4.3
53	B5	123	ALA	4.3
24	DC	49	ILE	4.3
30	DI	127	ARG	4.3
37	DP	111	LYS	4.3
1	CA	1025	U	4.3
53	B5	203	GLU	4.3
1	CA	1305	G	4.3
43	DV	32	GLY	4.3
2	CB	132	LYS	4.3
22	DA	2107	G	4.3
30	BI	41	ALA	4.3
42	DU	79	LYS	4.3
19	CS	64	ASP	4.3
2	CB	34	ALA	4.3
53	B5	196	ALA	4.3
42	DU	88	GLU	4.3
19	CS	25	SER	4.2
3	CC	42	TYR	4.2
7	CG	87	VAL	4.2
21	CU	38	TYR	4.2

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Mol	Chain	Res	Type	RSRZ
26	DE	28	VAL	4.2
39	DR	96	VAL	4.2
30	DI	7	ALA	4.2
7	AG	4	ARG	4.2
13	CM	71	ARG	4.2
4	AD	36	GLN	4.2
7	CG	86	GLN	4.2
9	CI	32	GLN	4.2
52	D4	29	ALA	4.2
22	BA	2167	U	4.2
22	DA	1049	C	4.2
53	B5	204	GLY	4.2
1	CA	211	G	4.2
37	DP	84	ILE	4.2
30	BI	26	PRO	4.2
10	CJ	8	ILE	4.2
17	CQ	5	ILE	4.2
27	DF	89	VAL	4.2
49	D1	47	VAL	4.2
1	AA	79	G	4.2
22	DA	2121	G	4.2
27	DF	151	GLY	4.2
14	CN	24	ARG	4.2
28	DG	86	LYS	4.2
22	DA	1078	U	4.2
30	BI	15	ALA	4.2
39	DR	75	VAL	4.2
30	BI	142	ASP	4.2
7	CG	109	ARG	4.2
29	BH	67	ALA	4.2
44	DW	32	LEU	4.2
7	CG	103	TRP	4.2
19	AS	74	PHE	4.2
16	AP	22	ALA	4.2
40	DS	3	THR	4.1
53	B5	175	PRO	4.1
53	B5	28	ARG	4.1
22	DA	2307	G	4.1
7	CG	50	LEU	4.1
28	DG	10	VAL	4.1
1	CA	999	C	4.1
13	CM	29	ARG	4.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
46	DY	4	LYS	4.1
30	BI	56	PRO	4.1
13	CM	17	ILE	4.1
7	CG	51	ALA	4.1
22	BA	2108	A	4.1
9	AI	21	ILE	4.1
22	DA	1103	A	4.1
28	DG	150	ALA	4.1
30	BI	83	ALA	4.1
33	DL	106	GLU	4.1
10	CJ	75	ASP	4.1
22	DA	2123	G	4.1
13	AM	115	PRO	4.1
49	D1	48	ILE	4.1
26	DE	33	VAL	4.1
22	DA	931	U	4.1
22	DA	2165	C	4.1
30	DI	45	LYS	4.1
1	CA	1017	U	4.1
28	DG	151	TYR	4.1
7	CG	84	THR	4.1
1	CA	983	A	4.1
22	DA	2163	A	4.1
2	CB	35	ARG	4.1
10	CJ	89	ARG	4.1
1	CA	207	C	4.1
46	DY	56	LEU	4.1
9	CI	124	ARG	4.1
22	DA	1046	A	4.1
52	D4	1	MET	4.1
4	AD	25	VAL	4.1
10	CJ	7	ARG	4.1
46	DY	37	LEU	4.1
27	DF	158	THR	4.1
7	CG	76	LYS	4.0
13	CM	16	VAL	4.0
35	DN	76	VAL	4.0
42	DU	13	VAL	4.0
53	B5	193	PHE	4.0
53	B5	102	GLN	4.0
52	D4	26	ILE	4.0
28	DG	112	PRO	4.0

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Mol	Chain	Res	Type	RSRZ
14	CN	50	THR	4.0
28	DG	59	ALA	4.0
37	DP	91	ALA	4.0
27	DF	40	VAL	4.0
27	DF	149	VAL	4.0
9	CI	7	TYR	4.0
32	DK	112	PHE	4.0
33	DL	70	LYS	4.0
27	DF	27	GLN	4.0
22	DA	1066	U	4.0
22	DA	1086	A	4.0
22	DA	1535	A	4.0
10	CJ	92	LEU	4.0
53	B5	184	GLU	4.0
7	CG	137	LYS	4.0
22	DA	1407	G	4.0
42	DU	47	LYS	4.0
9	CI	20	PHE	4.0
22	BA	2131	U	4.0
53	B5	220	GLY	4.0
10	CJ	20	GLN	4.0
30	BI	17	MET	4.0
30	DI	125	MET	4.0
4	AD	28	ILE	4.0
13	CM	61	ALA	4.0
27	DF	111	ILE	4.0
14	CN	12	LYS	4.0
14	CN	23	LYS	4.0
28	DG	27	LYS	4.0
30	BI	95	LYS	4.0
33	DL	121	THR	4.0
35	DN	29	VAL	4.0
49	D1	34	LEU	4.0
22	DA	2585	U	4.0
30	DI	123	GLU	4.0
10	AJ	75	ASP	4.0
13	CM	24	GLY	4.0
53	B5	133	GLY	4.0
14	CN	2	ALA	4.0
30	DI	84	ALA	4.0
26	DE	126	VAL	4.0
46	DY	14	LEU	4.0

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Mol	Chain	Res	Type	RSRZ
6	AF	92	THR	4.0
28	DG	84	THR	4.0
41	DT	60	THR	4.0
53	B5	49	GLY	4.0
13	CM	87	ARG	4.0
17	CQ	53	CYS	4.0
27	DF	102	ARG	4.0
42	BU	54	GLN	4.0
17	CQ	23	VAL	4.0
28	DG	9	VAL	4.0
29	DH	54	LEU	4.0
13	AM	63	PHE	4.0
26	DE	17	THR	4.0
33	DL	78	ARG	4.0
42	DU	19	LYS	4.0
14	CN	10	GLU	3.9
3	CC	77	ILE	3.9
10	CJ	90	LEU	3.9
33	DL	82	LEU	3.9
19	AS	32	ARG	3.9
22	DA	2127	G	3.9
22	DA	2157	G	3.9
29	BH	109	GLU	3.9
10	CJ	35	GLN	3.9
13	CM	70	ARG	3.9
29	DH	140	ALA	3.9
7	CG	141	VAL	3.9
26	DE	143	LEU	3.9
33	DL	49	GLY	3.9
10	CJ	27	GLU	3.9
2	AB	132	LYS	3.9
29	BH	149	GLU	3.9
21	AU	23	CYS	3.9
30	DI	94	ASN	3.9
42	BU	53	ASN	3.9
22	DA	277	G	3.9
27	DF	174	ASP	3.9
52	D4	20	ASP	3.9
6	AF	95	ALA	3.9
29	DH	74	ALA	3.9
28	DG	77	ILE	3.9
12	CL	25	GLU	3.9

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Mol	Chain	Res	Type	RSRZ
22	DA	1104	C	3.9
33	DL	108	ALA	3.9
30	DI	102	SER	3.9
48	D0	34	SER	3.9
2	AB	88	ASP	3.9
27	DF	148	ARG	3.9
42	DU	14	LEU	3.9
9	CI	127	PHE	3.9
27	DF	175	PHE	3.9
30	DI	30	GLN	3.9
13	AM	31	LYS	3.9
13	CM	103	LYS	3.9
14	CN	44	ALA	3.9
50	D2	33	ARG	3.9
3	CC	158	GLY	3.9
19	CS	63	THR	3.9
1	AA	82	G	3.9
9	AI	32	GLN	3.9
11	CK	126	LYS	3.9
39	DR	26	ASP	3.9
7	CG	8	GLY	3.9
29	DH	130	VAL	3.9
41	DT	74	ILE	3.9
42	DU	29	LEU	3.9
1	CA	209	U	3.8
36	DO	92	PHE	3.8
7	CG	17	LYS	3.8
30	BI	118	THR	3.8
46	DY	16	THR	3.8
27	DF	142	ASP	3.8
2	AB	139	ARG	3.8
13	CM	115	PRO	3.8
29	BH	142	VAL	3.8
51	D3	58	VAL	3.8
20	CT	71	LYS	3.8
46	DY	54	LYS	3.8
19	AS	56	GLN	3.8
7	CG	83	SER	3.8
28	DG	20	ASN	3.8
2	AB	221	VAL	3.8
13	AM	114	LYS	3.8
22	DA	343	C	3.8

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Mol	Chain	Res	Type	RSRZ
22	DA	1044	C	3.8
50	D2	46	LYS	3.8
22	DA	1106	G	3.8
14	CN	57	PRO	3.8
30	BI	39	CYS	3.8
13	CM	108	THR	3.8
10	CJ	34	ALA	3.8
13	CM	36	ALA	3.8
41	DT	75	GLY	3.8
43	DV	74	ALA	3.8
2	CB	36	ASN	3.8
17	AQ	5	ILE	3.8
22	DA	1095	A	3.8
53	B5	43	GLU	3.8
22	DA	1063	G	3.8
53	B5	22	THR	3.8
30	BI	120	ALA	3.8
1	CA	844	G	3.8
22	BA	2128	G	3.8
11	CK	43	GLY	3.8
13	AM	5	ALA	3.8
33	DL	79	LEU	3.8
36	DO	26	LEU	3.8
14	CN	30	ILE	3.8
27	DF	12	VAL	3.8
30	DI	51	LYS	3.8
30	DI	134	ARG	3.8
27	DF	117	LEU	3.8
2	CB	152	LYS	3.8
37	DP	92	VAL	3.8
22	BA	138	U	3.8
22	DA	2119	A	3.8
22	DA	1211	C	3.8
13	AM	19	LEU	3.8
1	CA	79	G	3.8
1	CA	1006	G	3.8
22	DA	2112	G	3.8
37	DP	110	ILE	3.8
2	AB	226	SER	3.8
22	BA	2309	A	3.8
17	CQ	8	LEU	3.7
29	BH	122	LEU	3.7

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Mol	Chain	Res	Type	RSRZ
42	BU	52	LEU	3.7
41	DT	47	VAL	3.7
16	CP	47	GLU	3.7
27	DF	45	ALA	3.7
26	DE	12	LEU	3.7
29	DH	58	LEU	3.7
27	DF	164	GLU	3.7
46	DY	24	GLU	3.7
10	CJ	26	VAL	3.7
30	BI	10	LYS	3.7
36	DO	56	LYS	3.7
30	DI	111	GLN	3.7
28	DG	104	ASN	3.7
9	AI	17	ALA	3.7
10	CJ	45	ARG	3.7
16	CP	39	PHE	3.7
53	B5	51	ASP	3.7
2	CB	226	SER	3.7
9	CI	39	PHE	3.7
22	BA	1065	U	3.7
27	DF	91	LEU	3.7
22	DA	331	C	3.7
28	DG	102	VAL	3.7
33	DL	87	GLY	3.7
53	B5	125	GLY	3.7
33	DL	132	ARG	3.7
21	AU	9	ASN	3.7
28	DG	40	ALA	3.7
20	AT	4	ILE	3.7
19	AS	55	ARG	3.7
46	DY	7	ARG	3.7
43	DV	94	ALA	3.7
29	BH	66	ASN	3.7
53	B5	88	GLU	3.7
30	DI	65	ARG	3.7
30	DI	105	GLN	3.7
36	DO	22	GLY	3.7
1	CA	82	G	3.7
36	DO	51	ALA	3.7
42	BU	51	ALA	3.7
19	AS	3	ARG	3.7
30	BI	98	VAL	3.7

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Mol	Chain	Res	Type	RSRZ
22	DA	2110	G	3.6
2	CB	225	ARG	3.6
13	CM	44	LYS	3.6
35	DN	28	LEU	3.6
1	AA	81	A	3.6
22	DA	1043	C	3.6
30	DI	100	LYS	3.6
49	D1	38	LYS	3.6
1	CA	988	G	3.6
27	DF	131	GLY	3.6
13	CM	73	ILE	3.6
30	DI	13	VAL	3.6
50	D2	1	MET	3.6
24	DC	242	LYS	3.6
26	DE	2	GLU	3.6
22	BA	1925	C	3.6
9	CI	117	GLY	3.6
26	DE	103	GLY	3.6
13	CM	105	ASN	3.6
33	DL	81	ASP	3.6
53	B5	120	VAL	3.6
1	AA	1492	A	3.6
17	AQ	4	LYS	3.6
10	CJ	23	ALA	3.6
30	DI	44	ALA	3.6
19	CS	47	LEU	3.6
28	DG	21	GLY	3.6
9	CI	4	ASN	3.6
27	DF	37	ASN	3.6
30	BI	20	PRO	3.6
46	DY	49	ASP	3.6
52	D4	16	ILE	3.6
30	DI	19	ASN	3.6
27	DF	172	ALA	3.6
1	CA	1296	C	3.6
22	BA	1094	U	3.6
13	CM	9	ILE	3.6
26	DE	129	PRO	3.6
30	DI	64	ASP	3.6
42	DU	5	ILE	3.6
53	B5	205	ALA	3.6
27	DF	144	ASP	3.6

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Mol	Chain	Res	Type	RSRZ
19	AS	9	PRO	3.6
7	CG	131	LYS	3.6
17	CQ	6	ARG	3.6
7	CG	132	GLY	3.6
13	CM	89	LEU	3.6
22	DA	2797	U	3.6
6	AF	36	ILE	3.6
27	DF	88	LYS	3.6
27	BF	76	GLY	3.6
42	DU	90	GLY	3.6
28	DG	17	VAL	3.6
27	BF	72	LYS	3.6
28	DG	176	LYS	3.6
52	D4	15	LYS	3.6
41	DT	92	ASN	3.6
42	DU	40	ASN	3.6
14	AN	55	SER	3.6
14	AN	21	PHE	3.6
7	CG	123	GLU	3.5
19	AS	33	THR	3.5
9	AI	90	TYR	3.5
30	DI	108	GLU	3.5
22	DA	2172	U	3.5
45	DX	50	ARG	3.5
44	BW	10	THR	3.5
13	AM	25	VAL	3.5
29	DH	61	VAL	3.5
28	DG	54	PRO	3.5
19	CS	14	HIS	3.5
25	DD	55	LYS	3.5
27	DF	95	ARG	3.5
45	DX	11	ARG	3.5
22	BA	2106	U	3.5
2	AB	134	ALA	3.5
29	BH	84	ALA	3.5
29	DH	123	ARG	3.5
1	CA	1320	C	3.5
29	BH	73	ASN	3.5
22	BA	277	G	3.5
22	BA	1093	G	3.5
41	DT	87	LEU	3.5
22	DA	878	A	3.5

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Mol	Chain	Res	Type	RSRZ
22	DA	2308	G	3.5
9	CI	120	LYS	3.5
30	DI	117	MET	3.5
33	DL	13	LYS	3.5
42	DU	32	GLY	3.5
22	DA	1094	U	3.5
22	DA	2300	C	3.5
30	DI	106	LEU	3.5
42	DU	53	ASN	3.5
53	B5	58	ASN	3.5
30	BI	38	PHE	3.5
33	DL	66	PHE	3.5
36	DO	21	LEU	3.5
7	CG	5	ARG	3.5
7	CG	122	ASN	3.5
17	CQ	21	ILE	3.5
19	CS	40	ILE	3.5
22	DA	138	U	3.5
22	BA	2885	G	3.5
26	DE	64	GLY	3.5
29	BH	59	ALA	3.5
29	DH	139	PHE	3.5
13	CM	101	ARG	3.5
14	CN	42	TRP	3.5
46	DY	19	LEU	3.5
1	CA	1028	C	3.5
22	DA	1045	C	3.5
13	CM	77	ILE	3.5
3	CC	146	ALA	3.5
13	AM	3	ARG	3.5
21	AU	7	ARG	3.5
46	DY	30	MET	3.5
53	B5	185	LYS	3.5
10	CJ	41	PRO	3.5
1	CA	1317	C	3.5
28	DG	92	VAL	3.5
30	BI	140	VAL	3.5
34	DM	80	VAL	3.5
22	DA	846	U	3.5
22	DA	2180	U	3.5
37	DP	20	PHE	3.5
30	BI	138	LEU	3.4

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Mol	Chain	Res	Type	RSRZ
33	DL	61	LEU	3.4
44	DW	59	LEU	3.4
9	CI	37	GLN	3.4
1	AA	1031	C	3.4
27	BF	79	ILE	3.4
6	CF	39	LEU	3.4
53	B5	221	PRO	3.4
22	BA	1087	G	3.4
3	CC	196	ILE	3.4
30	BI	16	GLY	3.4
30	BI	49	ILE	3.4
22	DA	1072	C	3.4
14	CN	22	ALA	3.4
22	BA	2105	U	3.4
27	DF	170	LEU	3.4
40	DS	19	LEU	3.4
50	D2	22	MET	3.4
9	CI	5	GLN	3.4
47	DZ	48	ILE	3.4
22	DA	1107	G	3.4
22	DA	1170	C	3.4
30	BI	104	ALA	3.4
29	BH	82	SER	3.4
43	DV	41	GLU	3.4
27	DF	66	LEU	3.4
22	DA	2402	U	3.4
42	BU	56	GLY	3.4
35	DN	63	ARG	3.4
22	DA	883	G	3.4
43	DV	56	PHE	3.4
30	DI	97	LYS	3.4
33	DL	3	LEU	3.4
7	AG	80	VAL	3.4
43	DV	67	GLY	3.4
44	DW	25	ARG	3.4
36	DO	113	ALA	3.4
1	CA	1271	A	3.4
29	DH	6	LEU	3.4
25	DD	87	GLY	3.4
37	DP	35	GLY	3.4
41	DT	85	VAL	3.4
25	DD	133	THR	3.4

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Mol	Chain	Res	Type	RSRZ
39	DR	99	THR	3.4
13	CM	54	ASP	3.4
39	DR	66	HIS	3.4
53	B5	56	ASP	3.4
29	DH	12	LEU	3.4
1	CA	1027	C	3.4
22	DA	613	A	3.4
2	CB	33	GLY	3.4
19	CS	38	SER	3.4
45	DX	35	SER	3.4
49	D1	18	GLY	3.4
22	DA	882	G	3.4
7	CG	14	PRO	3.4
36	DO	60	GLU	3.4
11	AK	111	THR	3.4
29	DH	135	HIS	3.4
22	DA	1174	U	3.4
27	DF	36	LEU	3.4
27	DF	69	LYS	3.4
5	CE	151	GLU	3.4
2	CB	213	TYR	3.4
22	DA	1071	G	3.4
22	DA	1179	G	3.4
36	DO	93	ASP	3.4
24	DC	47	GLY	3.3
12	AL	25	GLU	3.3
22	DA	877	A	3.3
14	CN	58	SER	3.3
22	DA	2310	C	3.3
53	B5	150	ILE	3.3
13	CM	96	PRO	3.3
19	CS	37	ARG	3.3
29	BH	139	PHE	3.3
46	DY	63	ALA	3.3
22	DA	2116	G	3.3
27	BF	78	LYS	3.3
40	DS	69	LEU	3.3
30	BI	94	ASN	3.3
30	DI	33	VAL	3.3
9	CI	44	ALA	3.3
26	DE	128	ALA	3.3
30	DI	27	ALA	3.3

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Mol	Chain	Res	Type	RSRZ
13	CM	11	ASP	3.3
36	DO	62	LEU	3.3
39	DR	32	THR	3.3
53	B5	129	GLY	3.3
44	DW	23	VAL	3.3
44	DW	78	LYS	3.3
53	B5	47	LYS	3.3
9	AI	79	ILE	3.3
13	CM	30	SER	3.3
17	CQ	20	SER	3.3
53	B5	163	GLU	3.3
18	CR	74	HIS	3.3
15	CO	25	THR	3.3
10	AJ	36	VAL	3.3
22	DA	914	G	3.3
27	DF	17	MET	3.3
39	DR	43	ASN	3.3
30	DI	49	ILE	3.3
53	B5	23	ILE	3.3
5	AE	31	PHE	3.3
26	DE	23	PHE	3.3
37	BP	2	SER	3.3
1	CA	1217	C	3.3
22	DA	2150	C	3.3
7	CG	23	LEU	3.3
28	DG	37	LEU	3.3
33	DL	19	LEU	3.3
39	DR	63	VAL	3.3
13	CM	40	ALA	3.3
22	BA	1067	A	3.3
1	CA	206	C	3.3
27	DF	6	ASP	3.3
51	D3	52	LYS	3.3
3	CC	144	LEU	3.3
52	D4	35	GLN	3.3
22	DA	12	U	3.3
26	DE	131	THR	3.3
1	CA	1004	A	3.3
22	BA	1847	A	3.3
44	DW	53	CYS	3.3
49	D1	37	LYS	3.3
29	BH	90	LEU	3.3

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Mol	Chain	Res	Type	RSRZ
36	DO	61	GLN	3.3
7	CG	70	ARG	3.3
38	DQ	2	ALA	3.3
27	DF	50	LEU	3.3
32	DK	14	SER	3.3
42	BU	48	PRO	3.3
22	DA	2306	C	3.3
45	DX	18	ARG	3.3
7	CG	139	GLU	3.3
3	CC	71	ALA	3.3
7	CG	42	ILE	3.3
20	CT	41	ALA	3.3
22	DA	546	U	3.3
29	BH	63	ALA	3.3
33	DL	139	GLY	3.3
9	AI	19	VAL	3.2
10	CJ	36	VAL	3.2
26	DE	32	VAL	3.2
13	CM	37	ALA	3.2
52	D4	23	ILE	3.2
30	BI	119	GLY	3.2
26	DE	21	ARG	3.2
27	DF	133	ARG	3.2
53	B5	186	LEU	3.2
18	AR	74	HIS	3.2
26	DE	14	VAL	3.2
27	DF	13	VAL	3.2
36	DO	103	VAL	3.2
14	AN	36	ALA	3.2
38	DQ	118	ALA	3.2
41	DT	72	GLN	3.2
9	CI	118	LEU	3.2
19	CS	16	LEU	3.2
36	DO	106	LEU	3.2
49	D1	23	THR	3.2
46	DY	13	GLU	3.2
28	DG	106	SER	3.2
46	DY	10	SER	3.2
42	DU	28	VAL	3.2
9	CI	33	ARG	3.2
22	DA	2667	C	3.2
28	DG	136	ALA	3.2

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Mol	Chain	Res	Type	RSRZ
23	DB	117	G	3.2
41	DT	1	MET	3.2
53	B5	71	LYS	3.2
7	CG	58	GLU	3.2
42	BU	50	PRO	3.2
11	AK	129	VAL	3.2
13	CM	25	VAL	3.2
36	DO	5	SER	3.2
10	CJ	30	LYS	3.2
3	CC	92	ALA	3.2
27	DF	154	ILE	3.2
41	DT	71	GLY	3.2
51	D3	49	MET	3.2
1	AA	85	U	3.2
49	D1	32	GLU	3.2
22	DA	879	G	3.2
1	AA	845	A	3.2
40	DS	110	ARG	3.2
53	B5	178	LYS	3.2
27	DF	83	TYR	3.2
7	CG	143	ARG	3.2
43	DV	42	LEU	3.2
53	B5	191	ARG	3.2
25	DD	154	LYS	3.2
45	DX	17	ASN	3.2
1	CA	202	G	3.2
27	DF	82	GLY	3.2
28	DG	82	GLY	3.2
30	BI	89	GLY	3.2
42	DU	76	ALA	3.2
3	CC	85	GLU	3.2
9	CI	115	LYS	3.2
27	DF	93	GLY	3.2
1	CA	1033	G	3.2
9	CI	108	ALA	3.2
22	DA	2128	G	3.2
13	CM	76	SER	3.2
41	DT	35	ALA	3.2
48	D0	56	ALA	3.2
38	DQ	37	GLN	3.2
23	DB	35	C	3.2
4	CD	24	GLY	3.2

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Mol	Chain	Res	Type	RSRZ
30	DI	38	PHE	3.2
4	CD	27	ALA	3.2
22	DA	356	G	3.2
27	DF	7	TYR	3.2
28	DG	110	SER	3.2
37	DP	85	SER	3.2
49	D1	45	GLN	3.2
26	DE	200	LEU	3.2
4	AD	151	LYS	3.1
6	AF	96	VAL	3.1
30	BI	58	VAL	3.1
38	DQ	22	LYS	3.1
43	DV	55	GLU	3.1
7	CG	2	PRO	3.1
7	CG	61	ALA	3.1
29	DH	148	ALA	3.1
30	DI	104	ALA	3.1
34	DM	79	ALA	3.1
42	DU	55	PRO	3.1
41	BT	2	ILE	3.1
47	DZ	8	THR	3.1
3	AC	168	TYR	3.1
1	AA	1537	U	3.1
7	AG	59	LEU	3.1
20	CT	24	ARG	3.1
22	BA	1072	C	3.1
22	DA	2143	C	3.1
23	DB	118	C	3.1
26	DE	11	ALA	3.1
41	DT	41	ALA	3.1
20	CT	39	ILE	3.1
22	BA	1175	A	3.1
45	DX	31	PRO	3.1
7	CG	38	THR	3.1
16	CP	17	TYR	3.1
38	DQ	25	TYR	3.1
18	AR	68	LEU	3.1
26	DE	118	LEU	3.1
42	DU	26	LYS	3.1
1	AA	1032	G	3.1
10	CJ	33	GLY	3.1
1	CA	1314	C	3.1

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Mol	Chain	Res	Type	RSRZ
17	CQ	78	VAL	3.1
22	BA	1100	C	3.1
22	DA	1100	C	3.1
39	DR	33	VAL	3.1
28	DG	170	ARG	3.1
18	AR	23	TYR	3.1
27	DF	14	LYS	3.1
53	B5	21	TYR	3.1
10	CJ	98	VAL	3.1
30	BI	33	VAL	3.1
33	DL	50	PHE	3.1
30	BI	7	ALA	3.1
34	DM	8	LYS	3.1
9	CI	10	GLY	3.1
9	CI	40	GLY	3.1
22	DA	2109	U	3.1
36	DO	4	LYS	3.1
28	DG	19	ILE	3.1
1	CA	1274	A	3.1
22	DA	345	A	3.1
22	DA	1069	A	3.1
22	DA	1089	A	3.1
1	CA	1540	U	3.1
9	CI	103	PHE	3.1
13	AM	27	LYS	3.1
42	DU	43	LYS	3.1
44	DW	85	GLU	3.1
22	BA	892	A	3.1
22	DA	75	G	3.1
23	DB	21	G	3.1
25	DD	59	ARG	3.1
28	DG	53	GLY	3.1
31	DJ	47	HIS	3.1
27	DF	68	THR	3.1
27	DF	162	SER	3.1
28	DG	74	SER	3.1
14	CN	8	ALA	3.1
27	DF	146	VAL	3.1
33	DL	83	ALA	3.1
39	DR	42	ALA	3.1
41	DT	16	VAL	3.1
13	AM	85	CYS	3.1

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Mol	Chain	Res	Type	RSRZ
22	BA	2137	U	3.1
26	DE	127	GLU	3.1
28	DG	42	GLU	3.1
53	B5	40	GLU	3.1
7	CG	4	ARG	3.1
29	BH	11	ASN	3.1
28	DG	134	LYS	3.1
38	DQ	23	GLY	3.1
22	BA	1068	G	3.1
30	BI	62	TYR	3.1
19	CS	79	THR	3.1
21	AU	42	THR	3.1
44	DW	60	PHE	3.1
13	CM	35	ALA	3.1
9	AI	41	ARG	3.1
27	DF	150	ARG	3.1
35	DN	98	LEU	3.1
3	CC	127	ARG	3.0
9	CI	16	ALA	3.0
22	DA	881	G	3.0
30	DI	124	ALA	3.0
42	DU	33	LYS	3.0
13	CM	88	GLY	3.0
22	DA	1083	U	3.0
53	B5	202	PRO	3.0
26	DE	124	PHE	3.0
18	CR	20	GLU	3.0
27	BF	42	GLU	3.0
27	DF	87	CYS	3.0
48	D0	38	HIS	3.0
20	CT	8	LYS	3.0
27	DF	55	ALA	3.0
30	DI	14	ALA	3.0
43	DV	34	LYS	3.0
51	D3	15	LYS	3.0
1	CA	1235	U	3.0
22	BA	2109	U	3.0
2	CB	40	ILE	3.0
28	DG	148	LEU	3.0
15	CO	89	ARG	3.0
22	DA	1053	C	3.0
22	DA	2177	C	3.0

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Mol	Chain	Res	Type	RSRZ
28	DG	44	LYS	3.0
30	DI	72	LYS	3.0
39	DR	37	GLU	3.0
42	DU	44	LYS	3.0
20	AT	36	TYR	3.0
33	DL	114	GLY	3.0
22	DA	1091	G	3.0
7	CG	110	LYS	3.0
22	DA	2167	U	3.0
9	CI	31	ASN	3.0
22	DA	2170	A	3.0
36	DO	14	ALA	3.0
40	DS	86	MET	3.0
44	DW	61	ALA	3.0
42	DU	54	GLN	3.0
46	DY	38	GLN	3.0
3	CC	156	ARG	3.0
10	CJ	16	ARG	3.0
14	CN	31	ILE	3.0
2	AB	128	LYS	3.0
52	D4	32	LYS	3.0
22	DA	2341	G	3.0
30	DI	9	VAL	3.0
21	AU	21	ARG	3.0
36	DO	88	LYS	3.0
53	B5	127	LYS	3.0
30	DI	132	THR	3.0
10	CJ	94	ALA	3.0
14	CN	17	ALA	3.0
22	BA	883	G	3.0
28	DG	30	ASN	3.0
30	BI	76	ALA	3.0
36	DO	50	ALA	3.0
30	BI	82	LYS	3.0
33	DL	58	TYR	3.0
49	D1	21	TYR	3.0
9	AI	128	SER	3.0
25	DD	186	LEU	3.0
28	DG	133	LEU	3.0
30	DI	71	THR	3.0
35	DN	25	ALA	3.0
1	CA	210	C	3.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	CA	1019	A	3.0
20	CT	68	HIS	3.0
22	DA	866	A	3.0
37	DP	112	GLU	3.0
35	DN	118	ARG	3.0
14	CN	19	LYS	3.0
20	CT	85	LYS	3.0
28	DG	6	LYS	3.0
10	CJ	51	VAL	3.0
24	DC	172	VAL	3.0
27	DF	165	GLU	3.0
1	CA	984	C	3.0
51	D3	26	HIS	3.0
22	DA	1112	G	3.0
23	DB	18	G	3.0
42	DU	31	SER	3.0
42	DU	98	SER	3.0
48	D0	3	VAL	2.9
52	D4	7	VAL	2.9
30	DI	107	GLN	2.9
22	BA	2151	U	2.9
1	CA	1015	G	2.9
3	CC	206	GLU	2.9
10	CJ	78	GLU	2.9
30	BI	30	GLN	2.9
33	DL	117	THR	2.9
25	DD	126	ASN	2.9
25	DD	185	ASN	2.9
29	BH	145	ASN	2.9
26	DE	165	HIS	2.9
1	CA	1214	C	2.9
22	BA	140	C	2.9
30	DI	141	GLU	2.9
9	AI	67	VAL	2.9
17	CQ	59	VAL	2.9
22	DA	1056	G	2.9
30	DI	16	GLY	2.9
33	DL	68	SER	2.9
11	CK	42	LEU	2.9
2	CB	133	GLU	2.9
9	AI	89	GLU	2.9
7	CG	117	ALA	2.9

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Mol	Chain	Res	Type	RSRZ
27	DF	119	ALA	2.9
7	CG	125	SER	2.9
51	D3	53	GLY	2.9
30	BI	122	ILE	2.9
19	CS	52	HIS	2.9
1	CA	1441	A	2.9
13	CM	78	LYS	2.9
7	CG	39	ALA	2.9
25	DD	26	VAL	2.9
11	AK	42	LEU	2.9
22	DA	2630	G	2.9
29	DH	77	THR	2.9
6	CF	8	PHE	2.9
3	CC	78	GLY	2.9
38	DQ	38	ALA	2.9
14	AN	33	ASP	2.9
15	CO	17	ARG	2.9
41	BT	69	ARG	2.9
26	DE	89	PRO	2.9
49	D1	5	ILE	2.9
14	CN	16	LEU	2.9
19	AS	15	LEU	2.9
20	CT	86	LEU	2.9
22	BA	1066	U	2.9
33	DL	57	LEU	2.9
47	DZ	29	LEU	2.9
50	D2	18	PHE	2.9
5	CE	109	GLY	2.9
7	CG	65	ALA	2.9
7	CG	150	ALA	2.9
53	B5	92	ALA	2.9
41	DT	53	VAL	2.9
11	AK	126	LYS	2.9
13	CM	13	LYS	2.9
14	CN	7	LYS	2.9
26	DE	55	SER	2.9
42	DU	30	SER	2.9
7	CG	90	GLU	2.9
13	AM	47	GLU	2.9
19	AS	24	GLU	2.9
19	CS	65	GLU	2.9
37	DP	97	LEU	2.9

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Mol	Chain	Res	Type	RSRZ
26	DE	156	ASN	2.9
28	DG	165	ALA	2.9
22	DA	892	A	2.9
36	DO	90	VAL	2.9
40	DS	46	LEU	2.9
41	DT	73	ARG	2.9
27	BF	83	TYR	2.8
39	DR	31	GLU	2.8
9	CI	30	ILE	2.8
36	DO	114	GLY	2.8
9	AI	4	ASN	2.8
44	DW	63	ALA	2.8
7	AG	6	VAL	2.8
46	DY	5	GLU	2.8
19	AS	81	ARG	2.8
21	CU	35	ARG	2.8
42	DU	41	LEU	2.8
7	CG	26	PHE	2.8
22	DA	544	C	2.8
30	DI	137	GLY	2.8
28	DG	13	ALA	2.8
13	CM	3	ARG	2.8
28	DG	25	THR	2.8
28	DG	132	VAL	2.8
41	BT	92	ASN	2.8
14	AN	20	TYR	2.8
51	D3	64	TYR	2.8
45	DX	46	PHE	2.8
53	B5	91	GLY	2.8
1	AA	1026	G	2.8
1	CA	1003	G	2.8
4	CD	46	PRO	2.8
21	AU	11	PRO	2.8
22	DA	2313	C	2.8
2	AB	27	MET	2.8
17	CQ	63	GLU	2.8
27	BF	71	ARG	2.8
46	DY	33	ALA	2.8
48	D0	23	THR	2.8
14	CN	33	ASP	2.8
42	DU	81	ASP	2.8
24	DC	249	GLY	2.8

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Mol	Chain	Res	Type	RSRZ
13	AM	92	ARG	2.8
13	CM	113	ARG	2.8
28	DG	46	ALA	2.8
33	DL	115	GLU	2.8
1	CA	1002	G	2.8
22	BA	141	G	2.8
22	BA	879	G	2.8
22	DA	880	G	2.8
22	DA	884	U	2.8
19	AS	71	LEU	2.8
22	DA	2602	A	2.8
27	DF	44	ILE	2.8
28	DG	50	LEU	2.8
30	BI	59	ILE	2.8
21	CU	47	ARG	2.8
5	AE	159	LYS	2.8
36	DO	80	GLU	2.8
1	AA	1001	C	2.8
3	CC	195	VAL	2.8
10	AJ	98	VAL	2.8
1	CA	1331	G	2.8
39	DR	19	THR	2.8
45	DX	22	LEU	2.8
1	CA	1236	A	2.8
7	AG	18	PHE	2.8
27	DF	109	PRO	2.8
35	DN	116	VAL	2.8
2	AB	57	LEU	2.8
19	CS	21	LYS	2.8
29	DH	75	LEU	2.8
41	DT	40	LYS	2.8
1	CA	1035	A	2.8
22	BA	1090	A	2.8
26	DE	150	THR	2.8
27	DF	100	PHE	2.8
25	DD	132	ALA	2.8
46	DY	45	GLN	2.8
22	DA	893	C	2.8
46	DY	35	GLY	2.8
2	AB	30	PHE	2.8
8	CH	90	ASP	2.8
27	DF	169	LEU	2.8

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Mol	Chain	Res	Type	RSRZ
44	DW	64	ASP	2.8
22	BA	139	U	2.8
26	DE	24	ASN	2.8
53	B5	189	ASN	2.8
18	CR	51	TYR	2.8
10	AJ	37	ARG	2.8
19	CS	81	ARG	2.8
24	DC	48	ARG	2.8
26	DE	102	ARG	2.8
43	DV	6	ALA	2.8
32	DK	35	VAL	2.8
42	DU	93	VAL	2.8
27	DF	118	SER	2.7
52	D4	13	ASN	2.7
22	DA	1420	A	2.7
31	DJ	118	MET	2.7
7	CG	112	GLY	2.7
26	DE	10	SER	2.7
3	CC	14	ILE	2.7
9	CI	83	ILE	2.7
12	AL	14	ARG	2.7
30	BI	103	ARG	2.7
33	DL	73	ILE	2.7
41	DT	30	ILE	2.7
6	CF	35	LYS	2.7
22	BA	884	U	2.7
35	DN	73	ASN	2.7
28	DG	164	TYR	2.7
29	BH	25	TYR	2.7
38	DQ	44	GLN	2.7
7	AG	88	PRO	2.7
11	AK	113	VAL	2.7
26	DE	178	VAL	2.7
39	DR	20	VAL	2.7
53	B5	44	VAL	2.7
2	AB	65	GLY	2.7
7	CG	82	GLY	2.7
39	DR	88	GLY	2.7
33	DL	7	SER	2.7
1	CA	1001	C	2.7
14	AN	18	ASP	2.7
29	BH	89	LYS	2.7

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Mol	Chain	Res	Type	RSRZ
35	DN	97	ILE	2.7
42	DU	2	ALA	2.7
43	DV	23	ALA	2.7
7	CG	60	GLU	2.7
7	CG	74	GLU	2.7
14	CN	69	ARG	2.7
19	CS	58	VAL	2.7
30	BI	73	THR	2.7
32	DK	98	ARG	2.7
42	DU	25	VAL	2.7
22	DA	1059	G	2.7
22	BA	2129	C	2.7
39	DR	28	ALA	2.7
47	DZ	2	ALA	2.7
51	D3	27	ALA	2.7
1	CA	1227	A	2.7
11	AK	43	GLY	2.7
29	DH	144	VAL	2.7
7	CG	71	PRO	2.7
34	DM	62	LYS	2.7
16	CP	54	LEU	2.7
2	AB	123	ASP	2.7
30	DI	116	ASP	2.7
1	CA	1132	C	2.7
22	BA	2193	G	2.7
22	DA	88	G	2.7
2	CB	74	ARG	2.7
27	DF	107	ALA	2.7
36	DO	107	ALA	2.7
2	CB	149	GLY	2.7
22	BA	1098	A	2.7
3	CC	157	LEU	2.7
27	BF	77	PHE	2.7
28	DG	117	LEU	2.7
41	DT	80	TRP	2.7
2	CB	15	HIS	2.7
24	DC	238	ARG	2.7
29	BH	116	ARG	2.7
16	AP	82	ALA	2.7
22	DA	1092	C	2.7
26	DE	190	ALA	2.7
27	BF	41	GLY	2.7

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Mol	Chain	Res	Type	RSRZ
49	D1	43	VAL	2.7
53	B5	177	GLY	2.7
9	AI	63	LEU	2.7
13	CM	112	PRO	2.7
14	CN	21	PHE	2.7
25	DD	77	ARG	2.7
26	DE	13	THR	2.7
39	DR	49	ILE	2.7
13	CM	5	ALA	2.7
1	CA	1237	C	2.7
30	BI	24	VAL	2.7
14	CN	53	ARG	2.7
21	AU	35	ARG	2.7
22	DA	141	G	2.7
7	CG	144	MET	2.7
9	AI	83	ILE	2.7
13	AM	17	ILE	2.7
22	DA	653	U	2.7
27	DF	85	ILE	2.7
28	DG	24	ILE	2.7
28	DG	131	ILE	2.7
30	BI	86	ILE	2.7
39	DR	34	GLU	2.7
41	DT	56	GLU	2.7
10	CJ	91	ASP	2.7
27	DF	75	ALA	2.7
7	AG	69	VAL	2.7
19	CS	3	ARG	2.7
26	DE	88	ARG	2.7
34	DM	6	ARG	2.7
2	CB	30	PHE	2.6
12	CL	123	LYS	2.6
19	AS	61	PHE	2.6
29	DH	91	PHE	2.6
53	B5	19	LYS	2.6
2	AB	29	PRO	2.6
2	AB	117	LEU	2.6
22	DA	344	A	2.6
22	DA	1408	G	2.6
39	DR	22	LEU	2.6
41	DT	89	GLU	2.6
29	BH	99	ILE	2.6

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Mol	Chain	Res	Type	RSRZ
40	DS	4	ILE	2.6
44	DW	43	THR	2.6
36	DO	41	ALA	2.6
10	AJ	38	GLY	2.6
10	CJ	15	HIS	2.6
37	DP	19	SER	2.6
46	DY	60	LYS	2.6
10	AJ	71	LEU	2.6
29	DH	122	LEU	2.6
41	DT	50	LEU	2.6
22	DA	291	G	2.6
22	DA	1173	U	2.6
37	DP	95	ALA	2.6
51	D3	65	ALA	2.6
46	BY	2	LYS	2.6
29	DH	137	GLU	2.6
1	CA	1209	C	2.6
2	CB	91	PHE	2.6
8	CH	3	MET	2.6
9	CI	57	MET	2.6
25	DD	96	ILE	2.6
26	DE	199	MET	2.6
29	DH	143	ILE	2.6
40	DS	103	ILE	2.6
13	CM	28	THR	2.6
18	CR	40	VAL	2.6
27	DF	42	GLU	2.6
9	CI	11	ARG	2.6
20	CT	13	GLN	2.6
22	DA	2860	A	2.6
27	DF	81	GLN	2.6
30	BI	27	ALA	2.6
2	CB	217	VAL	2.6
17	CQ	83	VAL	2.6
19	CS	32	ARG	2.6
19	CS	62	VAL	2.6
30	BI	9	VAL	2.6
29	DH	47	PHE	2.6
14	CN	43	ASN	2.6
22	DA	139	U	2.6
22	DA	895	U	2.6
35	DN	107	ASN	2.6

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Mol	Chain	Res	Type	RSRZ
43	DV	49	ASN	2.6
9	CI	91	ASP	2.6
22	DA	2171	A	2.6
52	D4	38	GLY	2.6
2	AB	187	VAL	2.6
51	D3	24	HIS	2.6
22	DA	2181	U	2.6
2	AB	129	LEU	2.6
1	CA	1218	C	2.6
20	CT	43	ASP	2.6
41	DT	45	ALA	2.6
13	CM	110	LYS	2.6
40	DS	6	LYS	2.6
29	BH	5	LEU	2.6
2	AB	67	ILE	2.6
23	DB	20	G	2.6
46	DY	62	GLY	2.6
25	DD	41	ALA	2.6
30	BI	63	ALA	2.6
40	DS	93	ALA	2.6
43	DV	1	MET	2.6
2	CB	182	PRO	2.6
12	CL	44	LYS	2.6
22	DA	1533	C	2.6
27	DF	47	LYS	2.6
41	DT	49	LYS	2.6
1	CA	845	A	2.6
30	BI	139	VAL	2.6
17	CQ	44	LEU	2.6
19	CS	77	THR	2.6
22	DA	1058	U	2.6
29	BH	76	GLU	2.6
38	DQ	82	GLY	2.6
27	DF	9	LYS	2.6
13	AM	105	ASN	2.6
13	CM	18	ALA	2.6
46	DY	1	MET	2.6
1	CA	1270	G	2.6
18	AR	32	TYR	2.6
22	BA	880	G	2.6
22	DA	548	G	2.6
1	CA	995	C	2.6

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Mol	Chain	Res	Type	RSRZ
22	DA	33	C	2.6
7	AG	151	PHE	2.5
22	DA	2118	U	2.6
22	DA	2305	U	2.6
22	DA	2903	U	2.6
33	DL	85	VAL	2.6
35	DN	26	GLY	2.5
10	CJ	40	ILE	2.5
42	DU	15	THR	2.5
43	DV	89	ILE	2.5
51	D3	59	ILE	2.5
14	CN	6	MET	2.5
29	DH	10	ALA	2.5
29	DH	84	ALA	2.5
43	DV	43	ASP	2.5
22	DA	2129	C	2.5
52	B4	12	ARG	2.5
6	CF	80	PHE	2.5
22	DA	2147	A	2.5
33	DL	107	PHE	2.5
11	AK	19	GLY	2.5
46	BY	6	LEU	2.5
10	CJ	6	ILE	2.5
25	DD	27	ILE	2.5
14	CN	55	SER	2.5
26	DE	179	SER	2.5
29	BH	81	ALA	2.5
36	DO	38	GLN	2.5
36	DO	57	ALA	2.5
30	BI	43	ASN	2.5
29	BH	138	VAL	2.5
1	CA	841	C	2.5
2	CB	128	LYS	2.5
20	AT	64	LYS	2.5
29	DH	57	LYS	2.5
39	DR	24	LYS	2.5
42	DU	91	LYS	2.5
15	CO	26	GLU	2.5
22	DA	436	C	2.5
23	DB	19	C	2.5
25	DD	56	LYS	2.5
41	DT	54	GLU	2.5

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Mol	Chain	Res	Type	RSRZ
52	D4	30	GLU	2.5
1	CA	987	G	2.5
1	CA	1455	G	2.5
22	DA	2801	G	2.5
25	DD	76	GLY	2.5
30	BI	106	LEU	2.5
20	CT	45	ALA	2.5
20	CT	47	ALA	2.5
39	DR	101	ILE	2.5
30	DI	103	ARG	2.5
41	DT	86	THR	2.5
46	DY	40	SER	2.5
24	DC	5	LYS	2.5
9	AI	6	TYR	2.5
20	CT	36	TYR	2.5
5	AE	115	LEU	2.5
6	AF	54	LEU	2.5
17	CQ	75	LEU	2.5
24	DC	205	LEU	2.5
49	D1	46	HIS	2.5
17	CQ	61	ILE	2.5
26	DE	9	GLN	2.5
27	BF	81	GLN	2.5
1	CA	950	U	2.5
42	DU	75	ALA	2.5
24	DC	26	LYS	2.5
36	DO	3	LYS	2.5
40	DS	100	THR	2.5
2	CB	107	VAL	2.5
9	AI	48	VAL	2.5
29	BH	20	ASN	2.5
30	DI	37	GLU	2.5
7	CG	44	TYR	2.5
30	DI	26	PRO	2.5
35	DN	62	ASN	2.5
46	DY	26	PHE	2.5
1	CA	81	A	2.5
2	AB	35	ARG	2.5
34	DM	29	GLY	2.5
22	DA	316	C	2.5
22	DA	897	C	2.5
22	DA	1321	A	2.5

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Mol	Chain	Res	Type	RSRZ
10	AJ	25	ILE	2.5
38	DQ	59	GLN	2.5
23	DB	64	G	2.5
10	CJ	32	THR	2.5
28	DG	171	THR	2.5
39	DR	1	MET	2.5
34	DM	27	SER	2.5
3	CC	102	ASN	2.5
28	DG	35	ARG	2.5
7	CG	81	GLY	2.5
29	BH	126	GLY	2.5
40	DS	40	ASN	2.5
2	CB	161	LEU	2.5
46	DY	9	LYS	2.5
3	CC	162	ILE	2.5
13	AM	35	ALA	2.5
36	DO	19	GLN	2.5
39	DR	103	ALA	2.5
42	BU	46	GLN	2.5
4	AD	177	LYS	2.5
51	D3	28	ASN	2.5
2	AB	213	TYR	2.5
31	DJ	74	TYR	2.5
1	AA	412	A	2.5
2	AB	18	HIS	2.5
27	DF	171	ALA	2.5
28	DG	174	ALA	2.5
10	CJ	37	ARG	2.5
34	DM	64	TRP	2.5
37	DP	109	ARG	2.5
46	DY	48	ARG	2.5
14	CN	46	LEU	2.5
30	BI	93	PRO	2.5
14	CN	99	ALA	2.5
21	AU	24	GLU	2.5
21	AU	50	ALA	2.5
29	DH	72	ILE	2.5
22	DA	1105	U	2.5
37	DP	13	MET	2.5
3	CC	107	ARG	2.4
33	DL	118	THR	2.4
28	DG	38	ASN	2.4

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Mol	Chain	Res	Type	RSRZ
36	DO	30	ARG	2.4
3	AC	193	TYR	2.4
25	DD	209	ALA	2.4
46	DY	3	ALA	2.4
53	B5	168	LYS	2.4
2	AB	15	HIS	2.4
22	BA	546	U	2.4
22	BA	893	C	2.4
22	DA	228	C	2.4
28	DG	137	ASP	2.4
26	DE	1	MET	2.4
35	DN	93	GLY	2.4
43	DV	45	ASP	2.4
41	DT	10	VAL	2.4
1	CA	1007	U	2.4
7	AG	56	LYS	2.4
30	BI	112	THR	2.4
30	DI	113	LYS	2.4
37	BP	115	ASN	2.4
29	BH	4	ILE	2.4
48	D0	2	ALA	2.4
22	DA	1734	G	2.4
2	CB	88	ASP	2.4
3	CC	37	PHE	2.4
22	DA	2164	C	2.4
30	BI	47	ASP	2.4
27	DF	132	VAL	2.4
45	DX	30	LEU	2.4
7	CG	115	SER	2.4
38	DQ	45	TYR	2.4
1	AA	1042	A	2.4
1	CA	1036	A	2.4
13	CM	93	ARG	2.4
36	DO	9	ARG	2.4
41	DT	77	ARG	2.4
52	D4	36	ARG	2.4
27	DF	99	PHE	2.4
42	BU	57	GLY	2.4
6	AF	89	VAL	2.4
27	DF	74	VAL	2.4
14	AN	26	GLU	2.4
3	CC	87	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
10	AJ	90	LEU	2.4
26	DE	180	LEU	2.4
26	DE	90	GLN	2.4
36	DO	81	ARG	2.4
45	DX	78	TYR	2.4
46	DY	47	ARG	2.4
1	CA	1275	A	2.4
22	DA	583	G	2.4
22	DA	1052	C	2.4
22	DA	1212	G	2.4
1	CA	1023	U	2.4
2	CB	137	ARG	2.4
8	CH	130	ALA	2.4
36	DO	105	ALA	2.4
38	DQ	30	ARG	2.4
13	CM	82	ASP	2.4
24	DC	245	VAL	2.4
33	DL	122	VAL	2.4
42	DU	83	VAL	2.4
48	D0	39	LEU	2.4
1	CA	1241	G	2.4
14	CN	3	LYS	2.4
22	BA	1062	G	2.4
22	DA	549	G	2.4
22	DA	619	G	2.4
32	DK	53	LYS	2.4
25	DD	125	TRP	2.4
7	CG	129	GLU	2.4
25	DD	6	GLY	2.4
19	AS	41	PHE	2.4
28	DG	36	THR	2.4
33	DL	5	THR	2.4
1	CA	978	A	2.4
7	CG	6	VAL	2.4
22	DA	2158	A	2.4
28	DG	4	VAL	2.4
28	DG	169	VAL	2.4
36	DO	108	ASP	2.4
22	DA	1730	C	2.4
22	DA	2178	C	2.4
33	DL	15	ALA	2.4
22	DA	1042	G	2.4

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Mol	Chain	Res	Type	RSRZ
29	DH	149	GLU	2.4
49	D1	35	GLU	2.4
7	CG	20	SER	2.4
14	CN	63	ARG	2.4
27	DF	138	PHE	2.4
14	CN	18	ASP	2.4
29	DH	86	ASP	2.4
27	DF	57	LEU	2.4
13	CM	15	ALA	2.4
29	BH	111	ALA	2.4
1	AA	1027	C	2.4
10	CJ	66	GLU	2.4
36	DO	87	ILE	2.4
6	CF	91	ARG	2.4
10	CJ	31	ARG	2.4
44	DW	73	GLY	2.4
28	DG	12	PRO	2.4
53	B5	209	PHE	2.4
21	AU	51	SER	2.4
28	BG	177	LYS	2.4
41	DT	31	VAL	2.4
50	D2	30	VAL	2.4
45	DX	20	HIS	2.4
51	D3	6	THR	2.4
4	AD	82	LEU	2.3
37	DP	114	LEU	2.3
30	BI	36	MET	2.3
3	CC	141	ALA	2.3
53	B5	159	ALA	2.3
14	CN	68	GLY	2.3
24	BC	237	GLY	2.3
33	DL	124	GLY	2.3
2	AB	32	PHE	2.3
10	CJ	11	LYS	2.3
39	DR	35	PHE	2.3
26	DE	96	VAL	2.3
43	DV	58	SER	2.3
17	CQ	77	ARG	2.3
28	DG	88	GLN	2.3
10	AJ	34	ALA	2.3
35	DN	82	GLU	2.3
36	DO	23	ALA	2.3

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Mol	Chain	Res	Type	RSRZ
42	DU	37	GLU	2.3
28	DG	28	GLY	2.3
28	DG	31	GLY	2.3
53	B5	201	LYS	2.3
1	CA	1325	C	2.3
31	DJ	97	PRO	2.3
2	AB	127	ASP	2.3
15	CO	75	VAL	2.3
27	DF	71	ARG	2.3
25	DD	49	GLN	2.3
21	AU	52	ALA	2.3
28	DG	127	THR	2.3
33	DL	26	GLY	2.3
33	DL	102	GLY	2.3
9	AI	28	ILE	2.3
18	AR	21	ILE	2.3
20	CT	67	ILE	2.3
33	DL	77	ILE	2.3
9	AI	39	PHE	2.3
22	DA	1729	U	2.3
31	DJ	119	PHE	2.3
2	CB	210	VAL	2.3
39	DR	51	VAL	2.3
2	CB	159	ASP	2.3
10	CJ	24	GLU	2.3
13	CM	41	GLU	2.3
19	CS	73	GLU	2.3
20	CT	70	ASN	2.3
30	BI	102	SER	2.3
33	DL	86	GLU	2.3
48	D0	49	TYR	2.3
27	DF	168	ALA	2.3
1	AA	88	U	2.3
2	AB	20	THR	2.3
3	CC	159	GLY	2.3
13	AM	99	GLY	2.3
1	CA	1050	G	2.3
22	DA	1538	G	2.3
23	DB	2	G	2.3
7	AG	58	GLU	2.3
36	DO	84	GLU	2.3
41	DT	36	LYS	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
20	CT	87	ALA	2.3
29	BH	65	ALA	2.3
1	CA	80	A	2.3
13	CM	81	MET	2.3
6	CF	79	ARG	2.3
11	AK	13	ARG	2.3
27	DF	30	ARG	2.3
31	DJ	142	ILE	2.3
35	DN	113	ILE	2.3
36	DO	53	THR	2.3
39	DR	92	TRP	2.3
19	CS	10	PHE	2.3
23	DB	16	G	2.3
48	D0	53	LYS	2.3
13	AM	43	VAL	2.3
2	CB	116	ASP	2.3
20	CT	79	LEU	2.3
27	DF	116	GLY	2.3
38	DQ	73	GLY	2.3
2	CB	39	HIS	2.3
3	CC	126	ARG	2.3
41	DT	46	ALA	2.3
43	DV	33	GLY	2.3
34	DM	105	MET	2.3
1	CA	1492	A	2.3
3	AC	86	LYS	2.3
15	CO	15	PHE	2.3
29	DH	132	PHE	2.3
21	AU	10	GLU	2.3
25	DD	84	LEU	2.3
22	DA	1167	C	2.3
28	DG	157	TYR	2.3
34	DM	56	ALA	2.3
41	DT	59	ASN	2.3
46	DY	32	ALA	2.3
44	DW	57	HIS	2.3
20	CT	12	ILE	2.3
22	DA	508	A	2.3
22	DA	1205	A	2.3
43	DV	91	PHE	2.3
27	DF	97	TRP	2.3
19	AS	13	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
22	BA	2402	U	2.3
22	DA	1460	U	2.3
25	DD	115	GLY	2.3
41	DT	32	LEU	2.3
47	DZ	9	GLN	2.3
2	AB	66	LYS	2.3
22	DA	11	C	2.3
22	DA	1475	G	2.3
22	DA	2146	C	2.3
29	BH	26	ALA	2.3
2	AB	42	ASN	2.3
5	CE	149	SER	2.3
27	DF	121	SER	2.3
35	DN	94	TYR	2.3
26	DE	183	PHE	2.3
28	DG	141	ILE	2.3
44	DW	83	GLU	2.3
22	DA	1214	A	2.3
22	DA	1509	A	2.3
22	DA	2211	A	2.3
10	CJ	44	THR	2.3
28	DG	129	THR	2.3
34	DM	24	THR	2.3
35	DN	30	ARG	2.3
41	DT	69	ARG	2.3
49	D1	44	ARG	2.3
7	CG	30	LEU	2.3
11	AK	18	ASP	2.2
13	CM	42	ASP	2.2
41	DT	79	ASP	2.2
19	AS	20	GLU	2.2
22	BA	882	G	2.2
22	DA	2106	U	2.2
22	DA	2162	G	2.2
28	DG	73	ASN	2.2
13	CM	57	ARG	2.2
27	DF	115	ARG	2.2
30	BI	65	ARG	2.2
9	CI	67	VAL	2.2
14	AN	12	LYS	2.2
19	AS	60	VAL	2.2
29	DH	13	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
33	DL	130	GLY	2.2
36	DO	98	GLN	2.2
46	DY	25	GLN	2.2
1	CA	989	U	2.2
4	AD	147	GLU	2.2
9	CI	112	GLU	2.2
27	DF	20	PHE	2.2
2	CB	154	MET	2.2
16	CP	76	LYS	2.2
10	CJ	38	GLY	2.2
29	DH	110	VAL	2.2
25	DD	201	LEU	2.2
28	DG	22	GLN	2.2
29	BH	125	THR	2.2
47	DZ	24	LEU	2.2
3	AC	64	ILE	2.2
3	CC	80	LYS	2.2
33	DL	103	ILE	2.2
38	DQ	101	PHE	2.2
19	CS	46	GLY	2.2
29	DH	78	VAL	2.2
36	DO	54	VAL	2.2
6	AF	61	LEU	2.2
7	AG	78	ARG	2.2
26	DE	157	LEU	2.2
9	AI	97	GLU	2.2
25	DD	47	ALA	2.2
28	DG	29	LYS	2.2
2	CB	164	ILE	2.2
1	AA	841	C	2.2
1	CA	990	C	2.2
1	CA	1228	C	2.2
22	DA	275	C	2.2
13	CM	99	GLY	2.2
29	BH	147	VAL	2.2
1	CA	460	A	2.2
1	CA	1362	A	2.2
19	CS	5	LEU	2.2
19	CS	15	LEU	2.2
19	CS	20	GLU	2.2
22	BA	1089	A	2.2
22	DA	1169	A	2.2

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Mol	Chain	Res	Type	RSRZ
29	BH	75	LEU	2.2
9	CI	68	LYS	2.2
23	DB	54	G	2.2
33	DL	141	LYS	2.2
14	CN	73	PHE	2.2
7	CG	7	ILE	2.2
53	B5	190	ILE	2.2
36	DO	25	ARG	2.2
1	AA	83	C	2.2
1	CA	1210	C	2.2
20	CT	72	ALA	2.2
40	DS	5	ALA	2.2
1	CA	1260	G	2.2
1	CA	1453	G	2.2
22	BA	1071	G	2.2
22	DA	329	G	2.2
22	DA	2668	G	2.2
44	DW	58	THR	2.2
6	AF	6	ILE	2.2
11	AK	110	ILE	2.2
48	D0	55	ILE	2.2
12	AL	15	LYS	2.2
25	DD	8	LYS	2.2
27	DF	161	LYS	2.2
31	DJ	92	MET	2.2
36	DO	20	GLU	2.2
34	DM	17	ASN	2.2
13	AM	30	SER	2.2
41	DT	67	VAL	2.2
40	DS	36	LEU	2.2
1	CA	1493	A	2.2
7	CG	107	ALA	2.2
7	CG	121	ALA	2.2
22	DA	1111	A	2.2
22	DA	2108	A	2.2
36	DO	37	ALA	2.2
3	CC	179	ARG	2.2
10	AJ	89	ARG	2.2
13	AM	109	ARG	2.2
13	CM	104	THR	2.2
44	DW	44	LYS	2.2
50	D2	2	LYS	2.2

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Mol	Chain	Res	Type	RSRZ
1	AA	91	U	2.2
7	CG	89	VAL	2.2
20	AT	20	HIS	2.2
10	AJ	35	GLN	2.2
12	CL	38	TYR	2.2
14	CN	41	ARG	2.2
46	DY	29	ARG	2.2
18	CR	21	ILE	2.2
27	DF	104	ILE	2.2
33	DL	8	PRO	2.2
2	AB	130	THR	2.2
19	AS	77	THR	2.2
41	DT	90	GLY	2.2
48	D0	35	GLY	2.2
2	CB	23	TRP	2.2
2	CB	104	TRP	2.2
5	CE	124	LEU	2.2
22	BA	1179	G	2.2
22	DA	1311	G	2.2
22	DA	1731	G	2.2
28	DG	149	ARG	2.2
39	DR	18	GLN	2.2
44	DW	71	VAL	2.2
45	DX	13	VAL	2.2
45	DX	33	LEU	2.2
1	CA	87	C	2.1
40	DS	101	SER	2.1
41	DT	83	ALA	2.2
27	BF	113	ASP	2.1
22	DA	603	A	2.1
7	AG	7	ILE	2.1
20	AT	12	ILE	2.1
29	BH	95	GLY	2.1
33	DL	119	PRO	2.1
49	D1	7	GLU	2.1
5	CE	152	MET	2.1
13	CM	97	VAL	2.1
19	AS	5	LEU	2.1
25	DD	1	MET	2.1
28	DG	90	VAL	2.1
1	CA	4	U	2.1
2	CB	131	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
2	CB	134	ALA	2.1
25	DD	38	LYS	2.1
30	BI	72	LYS	2.1
10	AJ	14	ASP	2.1
10	CJ	101	SER	2.1
13	CM	68	ASP	2.1
40	DS	109	ASP	2.1
1	CA	1287	A	2.1
2	CB	151	ILE	2.1
3	CC	81	GLY	2.1
7	AG	8	GLY	2.1
10	AJ	7	ARG	2.1
51	D3	21	GLY	2.1
41	DT	88	LYS	2.1
2	AB	114	LEU	2.1
3	AC	66	VAL	2.1
4	AD	148	LYS	2.1
26	DE	41	GLN	2.1
13	AM	80	LEU	2.1
14	AN	16	LEU	2.1
3	CC	160	ALA	2.1
13	AM	40	ALA	2.1
8	AH	54	ASP	2.1
26	DE	191	ASP	2.1
29	BH	93	SER	2.1
30	BI	64	ASP	2.1
37	DP	9	GLU	2.1
1	CA	90	C	2.1
1	CA	1276	G	2.1
7	AG	79	ARG	2.1
42	DU	22	ARG	2.1
50	D2	14	ARG	2.1
1	CA	101	A	2.1
3	AC	101	ILE	2.1
22	DA	279	A	2.1
22	DA	2412	A	2.1
30	DI	109	ILE	2.1
33	DL	65	GLY	2.1
33	DL	88	GLY	2.1
10	CJ	59	LYS	2.1
19	AS	21	LYS	2.1
38	DQ	71	GLN	2.1

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Mol	Chain	Res	Type	RSRZ
42	DU	70	VAL	2.1
45	DX	47	VAL	2.1
2	CB	125	THR	2.1
18	CR	73	ARG	2.1
36	DO	55	GLU	2.1
2	AB	167	ASP	2.1
19	AS	10	PHE	2.1
27	DF	56	ASP	2.1
28	DG	114	ASP	2.1
36	DO	2	ASP	2.1
10	AJ	101	SER	2.1
34	DM	87	GLY	2.1
39	DR	102	SER	2.1
3	CC	207	ILE	2.1
26	DE	175	ILE	2.1
1	AA	1002	G	2.1
1	CA	979	C	2.1
22	DA	117	G	2.1
22	DA	180	G	2.1
22	DA	446	G	2.1
19	CS	9	PRO	2.1
14	AN	51	LEU	2.1
16	CP	2	VAL	2.1
22	DA	1176	U	2.1
4	CD	47	ARG	2.1
33	DL	125	LEU	2.1
12	CL	62	GLU	2.1
24	DC	2	ALA	2.1
36	DO	7	ARG	2.1
29	BH	124	THR	2.1
36	DO	31	THR	2.1
50	D2	32	ALA	2.1
7	CG	140	ASP	2.1
29	BH	71	LYS	2.1
42	DU	27	ASN	2.1
14	CN	101	TRP	2.1
49	D1	9	ILE	2.1
22	BA	1088	A	2.1
11	CK	13	ARG	2.1
9	CI	94	LEU	2.1
19	AS	16	LEU	2.1
22	DA	70	G	2.1

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Mol	Chain	Res	Type	RSRZ
22	DA	2410	G	2.1
39	DR	47	VAL	2.1
39	DR	87	GLN	2.1
3	CC	89	LYS	2.1
7	CG	56	LYS	2.1
25	DD	140	HIS	2.1
30	BI	45	LYS	2.1
30	BI	77	ALA	2.1
40	DS	82	MET	2.1
44	DW	72	LYS	2.1
47	DZ	10	THR	2.1
27	BF	116	GLY	2.1
35	DN	101	GLY	2.1
13	AM	107	ARG	2.1
22	DA	183	C	2.1
22	DA	281	C	2.1
22	DA	1872	A	2.1
37	DP	12	GLN	2.1
37	DP	31	TRP	2.1
3	AC	39	VAL	2.1
17	CQ	29	VAL	2.1
27	DF	19	GLU	2.1
29	DH	83	LYS	2.1
38	DQ	34	VAL	2.1
42	DU	59	VAL	2.1
50	D2	31	LEU	2.1
1	CA	1220	G	2.1
1	CA	1300	G	2.1
20	CT	81	ALA	2.1
22	BA	881	G	2.1
36	DO	97	PHE	2.1
19	AS	48	THR	2.1
26	DE	116	ASP	2.1
28	DG	49	THR	2.1
32	DK	37	ASP	2.1
18	AR	73	ARG	2.1
36	DO	13	ARG	2.1
11	CK	15	GLN	2.1
12	CL	15	LYS	2.1
14	CN	49	GLN	2.1
31	DJ	9	GLU	2.1
22	DA	2830	C	2.1

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Mol	Chain	Res	Type	RSRZ
5	CE	147	MET	2.1
1	CA	1048	G	2.1
1	CA	1312	G	2.1
6	AF	91	ARG	2.1
18	CR	48	ARG	2.1
31	DJ	35	ARG	2.1
15	AO	22	THR	2.1
33	DL	74	THR	2.1
28	DG	173	GLU	2.1
41	DT	68	LYS	2.1
1	CA	1363	A	2.1
7	AG	141	VAL	2.1
21	AU	28	VAL	2.1
24	BC	272	SER	2.1
9	CI	63	LEU	2.1
1	CA	83	C	2.1
22	BA	1870	C	2.1
36	DO	11	ALA	2.1
6	AF	80	PHE	2.0
21	CU	37	PHE	2.0
24	BC	238	ARG	2.1
25	DD	46	ARG	2.1
40	DS	9	HIS	2.0
41	BT	70	HIS	2.0
1	CA	1034	G	2.0
35	DN	120	GLU	2.0
6	CF	52	ASN	2.0
13	CM	100	GLN	2.0
1	AA	4	U	2.0
2	AB	141	LEU	2.0
7	AG	64	VAL	2.0
9	CI	111	VAL	2.0
11	AK	82	LEU	2.0
25	DD	97	SER	2.0
5	CE	75	ALA	2.0
20	AT	87	ALA	2.0
22	BA	654	A	2.0
1	CA	1452	C	2.0
19	CS	61	PHE	2.0
38	DQ	112	LYS	2.0
21	AU	13	ASP	2.0
42	DU	18	ASP	2.0

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Mol	Chain	Res	Type	RSRZ
17	CQ	38	ILE	2.0
15	AO	17	ARG	2.0
25	DD	25	THR	2.0
31	DJ	13	ARG	2.0
49	D1	22	THR	2.0
53	B5	60	ARG	2.0
1	CA	203	G	2.0
1	CA	204	G	2.0
38	DQ	39	VAL	2.0
22	DA	2799	A	2.0
26	DE	98	LYS	2.0
32	DK	28	SER	2.0
35	DN	111	ALA	2.0
40	DS	108	SER	2.0
49	D1	13	SER	2.0
23	DB	88	C	2.0
43	DV	69	GLU	2.0
22	BA	2585	U	2.0
28	BG	111	HIS	2.0
10	AJ	100	ILE	2.0
9	CI	110	GLN	2.0
31	DJ	86	GLN	2.0
13	AM	56	LEU	2.0
40	DS	48	LYS	2.0
42	DU	74	ASN	2.0
43	DV	92	VAL	2.0
1	CA	963	G	2.0
1	CA	1297	G	2.0
22	DA	289	G	2.0
22	DA	409	G	2.0
45	DX	21	ALA	2.0
27	DF	177	PHE	2.0
44	DW	74	PRO	2.0
1	CA	1219	A	2.0
22	BA	613	A	2.0
22	BA	2191	A	2.0
22	DA	2800	A	2.0
1	CA	948	C	2.0
1	CA	1322	C	2.0
6	CF	62	MET	2.0
9	AI	33	ARG	2.0
17	CQ	11	ARG	2.0

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Mol	Chain	Res	Type	RSRZ
35	DN	1	MET	2.0
5	AE	12	GLN	2.0
24	DC	183	LYS	2.0
49	D1	30	LYS	2.0
43	DV	38	LEU	2.0
49	D1	49	TYR	2.0
20	CT	84	ASN	2.0
28	DG	51	THR	2.0
30	BI	52	GLY	2.0
36	DO	109	ALA	2.0
24	DC	266	PHE	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	AA	1668	1/1	0.72	0.90	26.43	54,54,54,54	0
54	MG	BA	3139	1/1	0.98	0.36	21.89	0,0,0,0	0
54	MG	BA	3178	1/1	0.91	0.47	21.31	27,27,27,27	0
54	MG	BA	3195	1/1	0.91	0.57	20.73	31,31,31,31	0
54	MG	BA	3042	1/1	0.89	0.34	19.16	2,2,2,2	0
54	MG	AA	1634	1/1	0.94	0.43	17.52	73,73,73,73	0
54	MG	DA	3028	1/1	0.60	1.16	14.08	104,104,104,104	0
54	MG	DA	3161	1/1	0.86	0.30	13.23	46,46,46,46	0
54	MG	AA	1669	1/1	0.71	0.29	12.48	45,45,45,45	0
54	MG	BA	3085	1/1	0.81	0.22	10.82	29,29,29,29	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	DA	3113	1/1	0.68	0.57	10.81	72,72,72,72	0
54	MG	DA	3137	1/1	0.61	0.48	9.79	52,52,52,52	0
54	MG	DA	3003	1/1	0.48	0.63	9.60	101,101,101,101	0
54	MG	AA	1661	1/1	0.75	0.37	8.87	55,55,55,55	0
54	MG	BA	3137	1/1	0.88	0.36	8.82	46,46,46,46	0
54	MG	AA	1629	1/1	0.94	0.27	8.07	79,79,79,79	0
54	MG	DA	3116	1/1	0.84	0.32	7.48	72,72,72,72	0
54	MG	AA	1653	1/1	0.94	0.24	6.75	47,47,47,47	0
54	MG	BA	3075	1/1	0.89	0.22	6.48	35,35,35,35	0
54	MG	CA	1612	1/1	0.95	0.20	5.98	46,46,46,46	0
54	MG	DA	3027	1/1	0.76	0.33	5.93	97,97,97,97	0
54	MG	BA	3169	1/1	0.93	0.16	5.77	29,29,29,29	0
54	MG	BA	3049	1/1	0.72	0.17	5.70	50,50,50,50	0
54	MG	BA	3177	1/1	0.98	0.18	5.21	12,12,12,12	0
54	MG	DA	3072	1/1	0.79	0.29	5.12	86,86,86,86	0
54	MG	CA	1626	1/1	0.84	0.20	4.88	54,54,54,54	0
54	MG	DA	3093	1/1	0.68	0.36	4.83	94,94,94,94	0
54	MG	BA	3158	1/1	0.97	0.25	4.83	22,22,22,22	0
54	MG	AA	1621	1/1	0.98	0.17	4.62	19,19,19,19	0
54	MG	DA	3071	1/1	0.67	0.22	4.28	87,87,87,87	0
55	DOL	DA	3001	48/48	0.88	0.32	3.93	28,49,62,81	0
55	DOL	BA	3001	48/48	0.96	0.20	3.76	1,7,30,58	0
54	MG	DA	3110	1/1	0.92	0.24	3.14	39,39,39,39	0
54	MG	BA	3131	1/1	0.98	0.24	2.76	1,1,1,1	0
54	MG	BA	3107	1/1	0.97	0.19	2.74	0,0,0,0	0
54	MG	CA	1617	1/1	0.79	0.19	2.72	57,57,57,57	0
54	MG	BA	3013	1/1	0.96	0.22	2.57	0,0,0,0	0
54	MG	BA	3110	1/1	0.97	0.20	2.56	4,4,4,4	0
54	MG	BA	3146	1/1	0.87	0.18	2.50	32,32,32,32	0
54	MG	AA	1622	1/1	0.86	0.18	2.50	50,50,50,50	0
54	MG	DA	3097	1/1	0.95	0.21	1.98	87,87,87,87	0
54	MG	BA	3055	1/1	0.97	0.18	1.94	0,0,0,0	0
54	MG	BA	3106	1/1	0.97	0.18	1.91	5,5,5,5	0
54	MG	DA	3094	1/1	0.89	0.30	1.77	87,87,87,87	0
54	MG	DA	3150	1/1	0.88	0.27	1.74	50,50,50,50	0
54	MG	BA	3065	1/1	0.99	0.17	1.72	1,1,1,1	0
54	MG	BA	3152	1/1	0.94	0.18	1.67	12,12,12,12	0
54	MG	AA	1628	1/1	0.92	0.24	1.64	59,59,59,59	0
54	MG	DA	3025	1/1	0.88	0.23	1.59	68,68,68,68	0
54	MG	DA	3032	1/1	0.84	0.23	1.56	71,71,71,71	0
54	MG	CA	1635	1/1	0.73	0.35	1.53	122,122,122,122	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	BA	3183	1/1	0.95	0.16	1.46	19,19,19,19	0
54	MG	DA	3132	1/1	0.80	0.25	1.28	64,64,64,64	0
54	MG	BA	3151	1/1	0.93	0.20	1.28	12,12,12,12	0
54	MG	BA	3136	1/1	0.93	0.17	1.09	24,24,24,24	0
54	MG	CA	1646	1/1	0.87	0.40	0.87	97,97,97,97	0
54	MG	DA	3105	1/1	0.92	0.21	0.83	81,81,81,81	0
54	MG	DA	3019	1/1	0.44	0.32	0.80	109,109,109,109	0
54	MG	BA	3018	1/1	0.97	0.19	0.76	0,0,0,0	0
54	MG	DA	3115	1/1	0.91	0.33	0.76	113,113,113,113	0
54	MG	CA	1615	1/1	0.56	0.18	0.76	52,52,52,52	0
54	MG	BA	3186	1/1	0.97	0.20	0.73	14,14,14,14	0
54	MG	BA	3187	1/1	0.97	0.14	0.64	30,30,30,30	0
54	MG	CA	1622	1/1	0.94	0.16	0.50	46,46,46,46	0
54	MG	BA	3109	1/1	0.99	0.16	0.44	6,6,6,6	0
54	MG	DA	3130	1/1	0.86	0.24	0.34	80,80,80,80	0
54	MG	DA	3156	1/1	0.90	0.19	0.33	57,57,57,57	0
54	MG	CA	1630	1/1	0.66	0.35	0.07	120,120,120,120	0
54	MG	BA	3113	1/1	0.94	0.15	0.07	39,39,39,39	0
54	MG	BA	3025	1/1	0.98	0.17	0.07	2,2,2,2	0
54	MG	BA	3038	1/1	0.95	0.16	0.07	31,31,31,31	0
54	MG	CA	1632	1/1	0.75	0.16	0.07	79,79,79,79	0
54	MG	BA	3057	1/1	0.84	0.20	-0.04	68,68,68,68	0
54	MG	AA	1631	1/1	0.89	0.14	-0.05	52,52,52,52	0
54	MG	DA	3009	1/1	0.68	0.20	-0.05	91,91,91,91	0
54	MG	DA	3078	1/1	0.65	0.21	-0.19	110,110,110,110	0
54	MG	BA	3132	1/1	0.97	0.17	-0.19	27,27,27,27	0
54	MG	DA	3120	1/1	0.85	0.18	-0.20	81,81,81,81	0
54	MG	DA	3106	1/1	0.73	0.19	-0.23	49,49,49,49	0
54	MG	DA	3124	1/1	0.83	0.18	-0.25	87,87,87,87	0
54	MG	DA	3024	1/1	0.90	0.19	-0.29	46,46,46,46	0
54	MG	DA	3098	1/1	0.81	0.19	-0.33	60,60,60,60	0
54	MG	DA	3108	1/1	0.92	0.19	-0.37	61,61,61,61	0
54	MG	BA	3133	1/1	0.96	0.20	-0.39	39,39,39,39	0
54	MG	DA	3036	1/1	0.94	0.17	-0.42	62,62,62,62	0
54	MG	DA	3069	1/1	0.93	0.17	-0.44	80,80,80,80	0
54	MG	CA	1614	1/1	0.78	0.12	-0.47	49,49,49,49	0
54	MG	DA	3063	1/1	0.94	0.17	-0.50	50,50,50,50	0
54	MG	AN	201	1/1	0.94	0.19	-0.50	62,62,62,62	0
54	MG	DA	3136	1/1	0.68	0.18	-0.67	94,94,94,94	0
54	MG	BA	3174	1/1	0.95	0.12	-0.76	14,14,14,14	0
54	MG	BA	3150	1/1	0.94	0.14	-0.88	29,29,29,29	0
54	MG	CA	1640	1/1	0.95	0.13	-0.98	27,27,27,27	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	BA	3111	1/1	0.99	0.15	-1.07	4,4,4,4	0
54	MG	BA	3103	1/1	0.93	0.16	-1.09	0,0,0,0	0
54	MG	DA	3080	1/1	0.82	0.19	-1.12	96,96,96,96	0
54	MG	BA	3185	1/1	0.98	0.11	-1.17	13,13,13,13	0
54	MG	BA	3117	1/1	0.99	0.16	-1.22	2,2,2,2	0
54	MG	AA	1607	1/1	0.90	0.05	-1.24	54,54,54,54	0
54	MG	BA	3154	1/1	0.97	0.13	-1.25	12,12,12,12	0
54	MG	DA	3042	1/1	0.79	0.13	-1.34	87,87,87,87	0
54	MG	DA	3049	1/1	0.77	0.18	-1.36	87,87,87,87	0
54	MG	DA	3109	1/1	0.90	0.14	-1.43	47,47,47,47	0
54	MG	DB	202	1/1	0.93	0.10	-1.44	64,64,64,64	0
54	MG	DA	3023	1/1	0.76	0.13	-1.52	76,76,76,76	0
56	ZN	D4	101	1/1	0.98	0.06	-1.53	91,91,91,91	0
54	MG	DA	3129	1/1	0.90	0.15	-1.54	50,50,50,50	0
54	MG	DA	3102	1/1	0.95	0.14	-1.57	61,61,61,61	0
54	MG	AA	1624	1/1	0.78	0.12	-1.64	46,46,46,46	0
54	MG	BA	3115	1/1	0.95	0.14	-1.66	17,17,17,17	0
54	MG	DA	3018	1/1	0.91	0.17	-1.76	55,55,55,55	0
54	MG	DA	3059	1/1	0.94	0.11	-1.81	39,39,39,39	0
54	MG	AA	1638	1/1	0.82	0.09	-1.89	64,64,64,64	0
54	MG	DA	3013	1/1	0.94	0.18	-1.91	45,45,45,45	0
54	MG	BA	3070	1/1	0.97	0.14	-1.97	0,0,0,0	0
54	MG	CA	1610	1/1	0.83	0.09	-2.10	65,65,65,65	0
54	MG	DA	3096	1/1	0.88	0.11	-2.13	61,61,61,61	0
54	MG	AA	1613	1/1	0.92	0.11	-2.22	33,33,33,33	0
54	MG	DA	3128	1/1	0.94	0.12	-2.24	79,79,79,79	0
54	MG	DA	3134	1/1	0.82	0.14	-2.34	54,54,54,54	0
54	MG	BA	3064	1/1	0.96	0.14	-2.37	1,1,1,1	0
54	MG	DB	201	1/1	0.72	0.13	-2.37	113,113,113,113	0
54	MG	AA	1639	1/1	0.82	0.14	-2.38	45,45,45,45	0
54	MG	BA	3009	1/1	0.95	0.13	-2.44	4,4,4,4	0
54	MG	DA	3064	1/1	0.94	0.17	-2.46	53,53,53,53	0
54	MG	BA	3164	1/1	0.93	0.12	-2.46	4,4,4,4	0
54	MG	DA	3066	1/1	0.88	0.14	-2.48	58,58,58,58	0
54	MG	AA	1640	1/1	0.96	0.10	-2.52	21,21,21,21	0
54	MG	BA	3029	1/1	0.98	0.13	-2.65	23,23,23,23	0
54	MG	DA	3047	1/1	0.85	0.11	-2.66	74,74,74,74	0
54	MG	BA	3135	1/1	0.92	0.12	-2.68	3,3,3,3	0
54	MG	AA	1612	1/1	0.86	0.11	-2.71	48,48,48,48	0
54	MG	CA	1603	1/1	0.78	0.08	-2.77	37,37,37,37	0
54	MG	BA	3066	1/1	0.96	0.14	-2.79	0,0,0,0	0
54	MG	DA	3152	1/1	0.91	0.10	-2.81	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	BA	3006	1/1	0.99	0.10	-2.82	43,43,43,43	0
56	ZN	B4	101	1/1	1.00	0.06	-2.84	36,36,36,36	0
54	MG	AA	1616	1/1	0.94	0.08	-2.86	57,57,57,57	0
54	MG	AA	1609	1/1	0.90	0.12	-2.86	35,35,35,35	0
54	MG	AA	1604	1/1	0.93	0.11	-2.99	56,56,56,56	0
54	MG	DA	3079	1/1	0.89	0.12	-3.14	98,98,98,98	0
54	MG	DA	3074	1/1	0.91	0.09	-3.27	72,72,72,72	0
54	MG	BA	3019	1/1	0.99	0.07	-3.28	14,14,14,14	0
54	MG	BB	201	1/1	0.95	0.08	-3.33	31,31,31,31	0
54	MG	BA	3051	1/1	0.98	0.12	-3.56	1,1,1,1	0
54	MG	BB	202	1/1	0.95	0.08	-3.61	6,6,6,6	0
54	MG	BA	3030	1/1	0.96	0.14	-3.68	6,6,6,6	0
54	MG	CA	1601	1/1	0.93	0.11	-3.95	38,38,38,38	0
54	MG	BA	3081	1/1	0.92	0.11	-3.97	18,18,18,18	0
54	MG	BA	3067	1/1	0.99	0.11	-3.98	1,1,1,1	0
54	MG	DA	3035	1/1	0.89	0.10	-4.00	79,79,79,79	0
54	MG	BA	3162	1/1	0.94	0.11	-4.18	21,21,21,21	0
54	MG	DA	3051	1/1	0.98	0.10	-4.21	32,32,32,32	0
54	MG	BA	3034	1/1	0.97	0.13	-4.43	2,2,2,2	0
54	MG	AA	1606	1/1	0.90	0.08	-4.49	44,44,44,44	0
54	MG	BA	3014	1/1	0.94	0.14	-4.52	0,0,0,0	0
54	MG	AA	1641	1/1	0.99	0.07	-4.70	24,24,24,24	0
54	MG	BA	3099	1/1	0.98	0.04	-4.84	5,5,5,5	0
54	MG	BA	3130	1/1	0.98	0.14	-4.87	0,0,0,0	0
54	MG	BA	3015	1/1	0.91	0.09	-4.88	4,4,4,4	0
54	MG	CA	1616	1/1	0.95	0.09	-5.00	38,38,38,38	0
54	MG	BA	3079	1/1	0.90	0.08	-5.05	22,22,22,22	0
54	MG	BA	3160	1/1	0.97	0.10	-5.06	3,3,3,3	0
54	MG	BA	3073	1/1	0.91	0.08	-5.20	12,12,12,12	0
54	MG	DA	3006	1/1	0.84	0.06	-5.24	95,95,95,95	0
54	MG	AA	1617	1/1	0.95	0.06	-5.25	42,42,42,42	0
54	MG	BA	3003	1/1	0.97	0.08	-5.29	18,18,18,18	0
54	MG	DA	3022	1/1	0.86	0.07	-5.40	55,55,55,55	0
54	MG	CA	1607	1/1	0.90	0.09	-5.46	53,53,53,53	0
54	MG	BA	3052	1/1	0.93	0.08	-5.52	7,7,7,7	0
54	MG	BA	3024	1/1	0.99	0.12	-5.61	0,0,0,0	0
54	MG	BA	3010	1/1	0.99	0.09	-5.62	0,0,0,0	0
54	MG	AA	1611	1/1	0.96	0.07	-5.75	20,20,20,20	0
54	MG	DA	3043	1/1	0.91	0.09	-5.96	68,68,68,68	0
54	MG	BA	3121	1/1	0.93	0.09	-6.49	2,2,2,2	0
54	MG	BA	3098	1/1	0.96	0.08	-6.60	3,3,3,3	0
54	MG	BA	3026	1/1	0.97	0.11	-7.00	3,3,3,3	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	BA	3023	1/1	0.97	0.08	-7.68	1,1,1,1	0
54	MG	AA	1632	1/1	0.93	0.06	-8.33	37,37,37,37	0
54	MG	DA	3054	1/1	0.94	0.11	-8.52	48,48,48,48	0
54	MG	BA	3060	1/1	0.95	0.07	-10.12	14,14,14,14	0
54	MG	BA	3119	1/1	0.90	0.09	-10.31	21,21,21,21	0
54	MG	BA	3112	1/1	0.95	0.06	-10.39	29,29,29,29	0
54	MG	DA	3050	1/1	0.98	0.11	-11.40	48,48,48,48	0
54	MG	CA	1619	1/1	0.96	0.09	-12.44	34,34,34,34	0
54	MG	BA	3072	1/1	0.98	0.08	-12.50	7,7,7,7	0
54	MG	DA	3135	1/1	0.33	0.65	-	101,101,101,101	0
54	MG	AA	1627	1/1	0.87	0.06	-	48,48,48,48	0
54	MG	AA	1644	1/1	0.90	0.38	-	45,45,45,45	0
54	MG	BA	3037	1/1	1.00	0.16	-	0,0,0,0	0
54	MG	BA	3069	1/1	0.93	0.16	-	1,1,1,1	0
54	MG	AA	1610	1/1	0.93	0.29	-	65,65,65,65	0
54	MG	BA	3002	1/1	0.93	0.06	-	19,19,19,19	0
54	MG	DA	3147	1/1	0.68	0.26	-	67,67,67,67	0
54	MG	CA	1623	1/1	0.95	0.19	-	50,50,50,50	0
54	MG	DA	3040	1/1	0.86	0.12	-	80,80,80,80	0
54	MG	CA	1604	1/1	0.42	0.16	-	95,95,95,95	0
54	MG	DA	3029	1/1	0.45	0.24	-	77,77,77,77	0
54	MG	DA	3033	1/1	0.93	0.16	-	63,63,63,63	0
54	MG	AA	1623	1/1	0.95	0.10	-	41,41,41,41	0
54	MG	CA	1624	1/1	0.93	0.07	-	39,39,39,39	0
54	MG	DA	3163	1/1	0.86	0.26	-	64,64,64,64	0
54	MG	DB	203	1/1	0.66	0.09	-	85,85,85,85	0
54	MG	DA	3090	1/1	0.94	0.07	-	84,84,84,84	0
54	MG	AA	1614	1/1	0.86	0.23	-	74,74,74,74	0
54	MG	BA	3086	1/1	0.94	0.15	-	24,24,24,24	0
54	MG	DA	3004	1/1	0.87	0.08	-	78,78,78,78	0
54	MG	DA	3012	1/1	0.66	0.22	-	78,78,78,78	0
54	MG	BA	3104	1/1	0.88	0.12	-	8,8,8,8	0
54	MG	BA	3163	1/1	0.96	0.39	-	12,12,12,12	0
54	MG	DA	3099	1/1	0.52	0.39	-	91,91,91,91	0
54	MG	DA	3041	1/1	0.61	0.45	-	72,72,72,72	0
54	MG	AA	1654	1/1	0.94	0.14	-	34,34,34,34	0
54	MG	DA	3086	1/1	0.98	0.10	-	74,74,74,74	0
54	MG	CA	1638	1/1	0.84	0.06	-	65,65,65,65	0
54	MG	AA	1670	1/1	0.95	0.39	-	58,58,58,58	0
54	MG	BA	3170	1/1	0.92	0.15	-	36,36,36,36	0
54	MG	CA	1606	1/1	0.81	0.22	-	90,90,90,90	0
54	MG	BA	3063	1/1	0.94	0.53	-	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	BA	3093	1/1	0.95	0.15	-	57,57,57,57	0
54	MG	BA	3191	1/1	0.92	0.29	-	12,12,12,12	0
54	MG	DA	3154	1/1	0.97	0.45	-	57,57,57,57	0
54	MG	BA	3167	1/1	0.88	0.25	-	32,32,32,32	0
54	MG	AA	1636	1/1	0.98	0.09	-	17,17,17,17	0
54	MG	DA	3117	1/1	0.91	0.07	-	72,72,72,72	0
54	MG	CA	1609	1/1	0.88	0.07	-	87,87,87,87	0
54	MG	DA	3056	1/1	0.77	0.29	-	91,91,91,91	0
54	MG	AA	1605	1/1	0.96	0.17	-	26,26,26,26	0
54	MG	DA	3084	1/1	0.76	0.25	-	104,104,104,104	0
54	MG	AA	1646	1/1	0.98	0.07	-	54,54,54,54	0
54	MG	CA	1654	1/1	0.96	0.19	-	55,55,55,55	0
54	MG	BA	3166	1/1	0.96	0.12	-	23,23,23,23	0
54	MG	BA	3140	1/1	0.93	0.33	-	0,0,0,0	0
54	MG	AA	1615	1/1	0.97	0.10	-	62,62,62,62	0
54	MG	CA	1618	1/1	0.98	0.16	-	35,35,35,35	0
54	MG	BA	3059	1/1	0.86	0.35	-	36,36,36,36	0
54	MG	DA	3037	1/1	0.88	0.12	-	92,92,92,92	0
54	MG	DA	3146	1/1	0.90	0.40	-	48,48,48,48	0
54	MG	DA	3007	1/1	0.87	0.33	-	119,119,119,119	0
54	MG	AA	1665	1/1	0.88	0.26	-	47,47,47,47	0
54	MG	BA	3118	1/1	0.98	0.12	-	4,4,4,4	0
54	MG	BA	3053	1/1	0.98	0.10	-	6,6,6,6	0
54	MG	DA	3011	1/1	0.84	0.15	-	73,73,73,73	0
54	MG	DA	3020	1/1	0.92	0.22	-	49,49,49,49	0
54	MG	DA	3100	1/1	0.30	0.43	-	86,86,86,86	0
54	MG	DA	3073	1/1	0.93	0.31	-	61,61,61,61	0
54	MG	DA	3142	1/1	0.93	0.13	-	34,34,34,34	0
54	MG	DA	3162	1/1	0.73	0.69	-	63,63,63,63	0
54	MG	AM	201	1/1	0.89	0.85	-	59,59,59,59	0
54	MG	BA	3147	1/1	0.90	0.46	-	23,23,23,23	0
54	MG	BA	3142	1/1	0.98	0.37	-	0,0,0,0	0
54	MG	AA	1652	1/1	0.97	0.18	-	18,18,18,18	0
54	MG	BA	3068	1/1	0.99	0.14	-	1,1,1,1	0
54	MG	CA	1636	1/1	0.14	0.24	-	127,127,127,127	0
54	MG	DA	3159	1/1	0.77	0.33	-	47,47,47,47	0
54	MG	CA	1621	1/1	0.79	0.14	-	72,72,72,72	0
54	MG	DA	3151	1/1	0.78	0.58	-	56,56,56,56	0
54	MG	BA	3031	1/1	0.93	0.10	-	20,20,20,20	0
54	MG	AA	1647	1/1	0.91	0.17	-	48,48,48,48	0
54	MG	CA	1650	1/1	0.97	0.09	-	42,42,42,42	0
54	MG	BA	3082	1/1	0.75	0.12	-	16,16,16,16	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	CA	1648	1/1	0.94	0.25	-	19,19,19,19	0
54	MG	BA	3062	1/1	0.94	0.32	-	46,46,46,46	0
54	MG	CA	1633	1/1	0.89	0.53	-	76,76,76,76	0
54	MG	DA	3044	1/1	0.71	0.45	-	113,113,113,113	0
54	MG	DA	3153	1/1	0.91	0.12	-	45,45,45,45	0
54	MG	DA	3164	1/1	0.88	0.26	-	40,40,40,40	0
54	MG	BB	204	1/1	0.95	0.41	-	12,12,12,12	0
54	MG	DA	3082	1/1	0.94	0.10	-	59,59,59,59	0
54	MG	DA	3048	1/1	0.70	0.31	-	123,123,123,123	0
54	MG	DA	3143	1/1	0.81	0.10	-	73,73,73,73	0
54	MG	BA	3153	1/1	0.97	0.10	-	26,26,26,26	0
54	MG	BA	3011	1/1	0.97	0.08	-	0,0,0,0	0
54	MG	DA	3061	1/1	0.64	2.99	-	102,102,102,102	0
54	MG	CA	1644	1/1	0.89	0.24	-	43,43,43,43	0
54	MG	BA	3020	1/1	0.95	0.07	-	24,24,24,24	0
54	MG	AA	1642	1/1	0.88	0.19	-	32,32,32,32	0
54	MG	BA	3097	1/1	0.96	0.06	-	8,8,8,8	0
54	MG	BA	3041	1/1	0.99	0.14	-	2,2,2,2	0
54	MG	BA	3128	1/1	0.98	0.07	-	0,0,0,0	0
54	MG	BA	3032	1/1	0.94	0.18	-	5,5,5,5	0
54	MG	DA	3046	1/1	0.60	0.13	-	68,68,68,68	0
54	MG	BA	3096	1/1	0.92	0.09	-	19,19,19,19	0
54	MG	DA	3038	1/1	0.83	0.12	-	64,64,64,64	0
54	MG	BA	3061	1/1	0.95	0.27	-	40,40,40,40	0
54	MG	BA	3044	1/1	0.95	0.11	-	3,3,3,3	0
54	MG	BA	3058	1/1	0.77	0.16	-	9,9,9,9	0
54	MG	DA	3060	1/1	0.82	0.35	-	81,81,81,81	0
54	MG	BA	3108	1/1	1.00	0.20	-	1,1,1,1	0
54	MG	CA	1649	1/1	0.79	0.29	-	61,61,61,61	0
54	MG	DA	3085	1/1	0.83	0.17	-	76,76,76,76	0
54	MG	CA	1645	1/1	0.96	0.14	-	28,28,28,28	0
54	MG	DA	3149	1/1	0.89	0.41	-	55,55,55,55	0
54	MG	BA	3083	1/1	0.99	0.14	-	2,2,2,2	0
54	MG	DA	3103	1/1	0.67	0.15	-	67,67,67,67	0
54	MG	BA	3120	1/1	0.76	0.18	-	47,47,47,47	0
54	MG	BA	3159	1/1	0.91	0.20	-	8,8,8,8	0
54	MG	AA	1635	1/1	0.96	0.05	-	23,23,23,23	0
54	MG	CA	1602	1/1	0.63	0.12	-	87,87,87,87	0
54	MG	CA	1625	1/1	0.96	0.13	-	17,17,17,17	0
54	MG	BA	3048	1/1	0.98	0.16	-	9,9,9,9	0
54	MG	BA	3144	1/1	0.99	0.28	-	6,6,6,6	0
54	MG	BA	3181	1/1	0.95	0.14	-	16,16,16,16	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	CA	1652	1/1	0.93	0.15	-	86,86,86,86	0
54	MG	DA	3058	1/1	0.83	0.91	-	107,107,107,107	0
54	MG	DA	3068	1/1	0.89	0.14	-	64,64,64,64	0
54	MG	DA	3112	1/1	0.89	0.42	-	92,92,92,92	0
54	MG	BA	3182	1/1	0.97	0.16	-	16,16,16,16	0
54	MG	DA	3122	1/1	0.91	0.10	-	36,36,36,36	0
54	MG	DA	3126	1/1	0.82	0.20	-	77,77,77,77	0
54	MG	BA	3033	1/1	0.95	0.10	-	9,9,9,9	0
54	MG	BA	3054	1/1	0.93	0.09	-	6,6,6,6	0
54	MG	BA	3171	1/1	0.95	0.15	-	28,28,28,28	0
54	MG	DA	3158	1/1	0.86	0.23	-	52,52,52,52	0
54	MG	D2	101	1/1	0.85	0.17	-	76,76,76,76	0
54	MG	DA	3055	1/1	0.88	0.12	-	59,59,59,59	0
54	MG	BA	3143	1/1	0.95	0.31	-	22,22,22,22	0
54	MG	DA	3138	1/1	0.94	0.22	-	38,38,38,38	0
54	MG	BA	3124	1/1	0.96	0.10	-	20,20,20,20	0
54	MG	AA	1656	1/1	0.71	0.94	-	66,66,66,66	0
54	MG	DA	3160	1/1	0.94	0.26	-	64,64,64,64	0
54	MG	DA	3121	1/1	0.90	0.06	-	48,48,48,48	0
54	MG	AA	1660	1/1	0.93	0.34	-	45,45,45,45	0
54	MG	BA	3092	1/1	0.96	0.09	-	21,21,21,21	0
54	MG	AA	1630	1/1	0.92	0.07	-	35,35,35,35	0
54	MG	BA	3035	1/1	0.95	0.15	-	3,3,3,3	0
54	MG	AA	1649	1/1	0.97	0.14	-	32,32,32,32	0
54	MG	BA	3129	1/1	0.96	0.15	-	3,3,3,3	0
54	MG	AA	1618	1/1	0.68	0.28	-	75,75,75,75	0
54	MG	DA	3089	1/1	0.86	0.31	-	87,87,87,87	0
54	MG	AA	1608	1/1	0.89	0.13	-	27,27,27,27	0
54	MG	BA	3141	1/1	0.94	0.14	-	17,17,17,17	0
54	MG	BA	3123	1/1	0.98	0.17	-	0,0,0,0	0
54	MG	DA	3133	1/1	-0.13	1.03	-	105,105,105,105	0
54	MG	BA	3155	1/1	0.97	0.10	-	18,18,18,18	0
54	MG	DA	3140	1/1	0.81	0.36	-	42,42,42,42	0
54	MG	BA	3077	1/1	0.97	0.13	-	12,12,12,12	0
54	MG	DA	3119	1/1	0.49	0.81	-	112,112,112,112	0
54	MG	AA	1657	1/1	0.84	0.29	-	60,60,60,60	0
54	MG	DA	3010	1/1	0.74	0.06	-	80,80,80,80	0
54	MG	BA	3156	1/1	0.93	0.35	-	26,26,26,26	0
54	MG	DA	3002	1/1	0.62	0.14	-	78,78,78,78	0
54	MG	BA	3105	1/1	0.93	0.10	-	10,10,10,10	0
54	MG	DA	3139	1/1	0.93	0.26	-	31,31,31,31	0
54	MG	BA	3089	1/1	0.88	0.13	-	24,24,24,24	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	CA	1613	1/1	0.89	0.11	-	20,20,20,20	0
54	MG	CA	1605	1/1	0.83	0.17	-	86,86,86,86	0
54	MG	BA	3193	1/1	0.97	0.21	-	32,32,32,32	0
54	MG	AA	1601	1/1	0.92	0.10	-	53,53,53,53	0
54	MG	BA	3116	1/1	0.90	0.20	-	32,32,32,32	0
54	MG	BA	3165	1/1	0.87	0.22	-	38,38,38,38	0
54	MG	BA	3043	1/1	0.96	0.12	-	5,5,5,5	0
54	MG	CA	1634	1/1	0.91	0.12	-	51,51,51,51	0
54	MG	CA	1608	1/1	0.81	0.17	-	80,80,80,80	0
54	MG	DA	3165	1/1	0.80	0.15	-	100,100,100,100	0
54	MG	AA	1666	1/1	0.21	0.37	-	61,61,61,61	0
54	MG	DA	3131	1/1	0.90	0.61	-	94,94,94,94	0
54	MG	DA	3045	1/1	0.80	0.14	-	87,87,87,87	0
54	MG	AA	1645	1/1	0.79	0.26	-	54,54,54,54	0
54	MG	BA	3004	1/1	0.96	0.07	-	22,22,22,22	0
54	MG	DA	3015	1/1	0.90	0.13	-	63,63,63,63	0
54	MG	DA	3076	1/1	0.97	0.07	-	66,66,66,66	0
54	MG	BA	3076	1/1	0.85	0.17	-	33,33,33,33	0
54	MG	DA	3016	1/1	0.78	0.37	-	73,73,73,73	0
54	MG	DA	3017	1/1	0.82	0.54	-	100,100,100,100	0
54	MG	BA	3046	1/1	0.97	0.15	-	6,6,6,6	0
54	MG	DA	3062	1/1	0.46	0.61	-	89,89,89,89	0
54	MG	DA	3123	1/1	0.91	0.14	-	62,62,62,62	0
54	MG	CA	1651	1/1	0.94	0.16	-	42,42,42,42	0
54	MG	BA	3179	1/1	0.95	0.34	-	30,30,30,30	0
54	MG	BA	3122	1/1	0.93	0.11	-	25,25,25,25	0
54	MG	BA	3022	1/1	0.96	0.08	-	16,16,16,16	0
54	MG	BA	3168	1/1	0.79	0.26	-	41,41,41,41	0
54	MG	BA	3190	1/1	0.92	0.14	-	39,39,39,39	0
54	MG	CA	1629	1/1	0.50	0.10	-	89,89,89,89	0
54	MG	DA	3148	1/1	0.91	0.19	-	41,41,41,41	0
54	MG	DA	3087	1/1	0.87	0.15	-	64,64,64,64	0
54	MG	CA	1653	1/1	0.84	0.17	-	47,47,47,47	0
54	MG	BA	3100	1/1	0.86	0.29	-	51,51,51,51	0
54	MG	CA	1655	1/1	0.88	0.11	-	45,45,45,45	0
54	MG	BA	3036	1/1	0.93	0.14	-	10,10,10,10	0
54	MG	BA	3084	1/1	0.98	0.08	-	16,16,16,16	0
54	MG	BA	3194	1/1	0.82	0.86	-	41,41,41,41	0
54	MG	BA	3149	1/1	0.92	0.23	-	44,44,44,44	0
54	MG	AA	1648	1/1	0.97	0.16	-	33,33,33,33	0
54	MG	AA	1650	1/1	0.65	0.34	-	61,61,61,61	0
54	MG	DA	3077	1/1	0.14	0.37	-	115,115,115,115	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	BA	3138	1/1	0.96	0.38	-	1,1,1,1	0
54	MG	DA	3157	1/1	0.86	0.67	-	76,76,76,76	0
54	MG	BA	3078	1/1	0.88	0.49	-	87,87,87,87	0
54	MG	CA	1628	1/1	0.70	0.30	-	99,99,99,99	0
54	MG	BA	3173	1/1	0.96	0.15	-	38,38,38,38	0
54	MG	DA	3057	1/1	0.82	0.20	-	92,92,92,92	0
54	MG	DA	3053	1/1	0.88	0.12	-	44,44,44,44	0
54	MG	DA	3005	1/1	0.60	0.53	-	103,103,103,103	0
54	MG	BA	3176	1/1	0.96	0.08	-	28,28,28,28	0
54	MG	BA	3126	1/1	0.98	0.17	-	4,4,4,4	0
54	MG	DA	3067	1/1	0.87	0.12	-	53,53,53,53	0
54	MG	DA	3145	1/1	0.74	0.19	-	56,56,56,56	0
54	MG	DA	3081	1/1	0.88	0.22	-	66,66,66,66	0
54	MG	AA	1603	1/1	0.93	0.14	-	44,44,44,44	0
54	MG	BA	3021	1/1	0.96	0.27	-	0,0,0,0	0
54	MG	AA	1619	1/1	0.84	0.08	-	71,71,71,71	0
54	MG	BA	3188	1/1	0.97	0.14	-	6,6,6,6	0
54	MG	BA	3027	1/1	0.71	0.30	-	44,44,44,44	0
54	MG	DA	3141	1/1	0.96	0.21	-	39,39,39,39	0
54	MG	DA	3111	1/1	0.63	0.20	-	103,103,103,103	0
54	MG	AA	1658	1/1	0.67	0.67	-	52,52,52,52	0
54	MG	DA	3118	1/1	0.89	0.09	-	55,55,55,55	0
54	MG	BA	3114	1/1	0.92	0.12	-	0,0,0,0	0
54	MG	DA	3091	1/1	0.71	0.17	-	82,82,82,82	0
54	MG	BA	3094	1/1	0.89	0.10	-	42,42,42,42	0
54	MG	BA	3157	1/1	0.96	0.07	-	18,18,18,18	0
54	MG	CA	1639	1/1	0.93	0.08	-	49,49,49,49	0
54	MG	BA	3192	1/1	0.96	0.18	-	23,23,23,23	0
54	MG	BA	3090	1/1	0.84	0.16	-	34,34,34,34	0
54	MG	AA	1625	1/1	0.91	0.13	-	14,14,14,14	0
54	MG	BA	3017	1/1	0.91	0.14	-	13,13,13,13	0
54	MG	CA	1620	1/1	0.97	0.04	-	61,61,61,61	0
54	MG	BA	3056	1/1	0.95	0.10	-	2,2,2,2	0
54	MG	AA	1633	1/1	0.88	0.12	-	51,51,51,51	0
54	MG	CA	1642	1/1	0.92	0.22	-	25,25,25,25	0
54	MG	BA	3180	1/1	0.93	0.14	-	29,29,29,29	0
54	MG	DA	3034	1/1	0.75	0.17	-	69,69,69,69	0
54	MG	BA	3095	1/1	0.93	0.07	-	17,17,17,17	0
54	MG	BA	3008	1/1	0.96	0.14	-	33,33,33,33	0
54	MG	CA	1611	1/1	0.85	0.25	-	87,87,87,87	0
54	MG	AA	1664	1/1	0.54	0.72	-	49,49,49,49	0
54	MG	DA	3075	1/1	0.90	0.19	-	83,83,83,83	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	DA	3021	1/1	0.87	0.16	-	53,53,53,53	0
54	MG	DA	3088	1/1	0.80	0.12	-	75,75,75,75	0
54	MG	BA	3172	1/1	0.92	0.09	-	27,27,27,27	0
54	MG	AA	1662	1/1	0.70	0.46	-	58,58,58,58	0
54	MG	BA	3039	1/1	1.00	0.23	-	0,0,0,0	0
54	MG	DA	3052	1/1	0.95	0.10	-	60,60,60,60	0
54	MG	BA	3184	1/1	0.99	0.16	-	3,3,3,3	0
54	MG	BA	3016	1/1	0.92	0.34	-	51,51,51,51	0
54	MG	BA	3145	1/1	0.96	0.27	-	17,17,17,17	0
54	MG	BA	3091	1/1	0.96	0.09	-	4,4,4,4	0
54	MG	DA	3065	1/1	0.93	0.10	-	34,34,34,34	0
54	MG	AA	1651	1/1	0.84	0.20	-	51,51,51,51	0
54	MG	DQ	201	1/1	0.95	0.27	-	37,37,37,37	0
54	MG	CA	1641	1/1	0.94	0.26	-	66,66,66,66	0
54	MG	DA	3144	1/1	0.80	0.29	-	72,72,72,72	0
54	MG	DA	3101	1/1	0.88	0.13	-	63,63,63,63	0
54	MG	BA	3045	1/1	0.97	0.06	-	27,27,27,27	0
54	MG	BA	3080	1/1	0.95	0.07	-	42,42,42,42	0
54	MG	BA	3005	1/1	0.82	0.14	-	45,45,45,45	0
54	MG	BA	3125	1/1	0.86	0.29	-	39,39,39,39	0
54	MG	BA	3074	1/1	0.97	0.12	-	1,1,1,1	0
54	MG	AA	1667	1/1	0.90	0.16	-	30,30,30,30	0
54	MG	BA	3012	1/1	0.93	0.08	-	19,19,19,19	0
54	MG	CA	1637	1/1	0.82	0.23	-	64,64,64,64	0
54	MG	AA	1643	1/1	0.91	0.16	-	42,42,42,42	0
54	MG	AA	1637	1/1	0.69	0.14	-	81,81,81,81	0
54	MG	DA	3107	1/1	0.85	0.12	-	70,70,70,70	0
54	MG	DA	3127	1/1	0.73	0.20	-	74,74,74,74	0
54	MG	DA	3083	1/1	0.86	0.22	-	74,74,74,74	0
54	MG	AA	1620	1/1	0.97	0.06	-	30,30,30,30	0
54	MG	DL	201	1/1	0.60	0.52	-	68,68,68,68	0
54	MG	DA	3008	1/1	0.83	0.30	-	102,102,102,102	0
54	MG	DA	3095	1/1	0.74	0.28	-	91,91,91,91	0
54	MG	DA	3031	1/1	0.85	0.14	-	65,65,65,65	0
54	MG	AA	1655	1/1	0.98	0.12	-	44,44,44,44	0
54	MG	CA	1643	1/1	0.86	0.30	-	44,44,44,44	0
54	MG	DA	3125	1/1	0.81	0.17	-	59,59,59,59	0
54	MG	BA	3088	1/1	0.99	0.21	-	2,2,2,2	0
54	MG	CA	1631	1/1	0.59	0.23	-	101,101,101,101	0
54	MG	BA	3127	1/1	0.96	0.12	-	5,5,5,5	0
54	MG	BA	3134	1/1	0.81	0.42	-	54,54,54,54	0
54	MG	BA	3102	1/1	0.97	0.08	-	9,9,9,9	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	BA	3101	1/1	0.90	0.10	-	1,1,1,1	0
54	MG	BA	3071	1/1	0.95	0.19	-	66,66,66,66	0
54	MG	CA	1627	1/1	0.90	0.28	-	87,87,87,87	0
54	MG	BA	3040	1/1	0.93	0.13	-	2,2,2,2	0
54	MG	BA	3189	1/1	0.69	0.21	-	48,48,48,48	0
54	MG	DA	3039	1/1	0.96	0.07	-	57,57,57,57	0
54	MG	DA	3014	1/1	0.80	0.20	-	78,78,78,78	0
54	MG	CA	1647	1/1	0.96	0.09	-	36,36,36,36	0
54	MG	DA	3026	1/1	0.34	0.49	-	100,100,100,100	0
54	MG	BB	203	1/1	0.95	0.04	-	8,8,8,8	0
54	MG	BA	3161	1/1	0.94	0.16	-	33,33,33,33	0
54	MG	BA	3148	1/1	0.97	0.17	-	28,28,28,28	0
54	MG	DA	3092	1/1	0.71	0.78	-	117,117,117,117	0
54	MG	BA	3087	1/1	0.91	0.12	-	2,2,2,2	0
54	MG	BA	3047	1/1	0.92	0.17	-	4,4,4,4	0
54	MG	BA	3028	1/1	0.99	0.04	-	6,6,6,6	0
54	MG	DA	3155	1/1	0.96	0.32	-	42,42,42,42	0
54	MG	DA	3030	1/1	0.89	0.22	-	70,70,70,70	0
54	MG	AA	1663	1/1	0.91	0.11	-	45,45,45,45	0
54	MG	AA	1659	1/1	0.81	0.18	-	62,62,62,62	0
54	MG	DA	3114	1/1	0.92	0.14	-	66,66,66,66	0
54	MG	BA	3175	1/1	0.96	0.14	-	34,34,34,34	0
54	MG	CA	1656	1/1	0.90	0.26	-	50,50,50,50	0
54	MG	BA	3050	1/1	0.94	0.07	-	18,18,18,18	0
54	MG	AA	1626	1/1	0.79	0.27	-	53,53,53,53	0
54	MG	DA	3104	1/1	0.74	0.08	-	80,80,80,80	0
54	MG	BQ	201	1/1	0.98	0.14	-	7,7,7,7	0
54	MG	AA	1602	1/1	0.94	0.42	-	55,55,55,55	0
54	MG	BA	3007	1/1	0.95	0.10	-	24,24,24,24	0
54	MG	DA	3070	1/1	0.62	0.18	-	108,108,108,108	0

## 6.5 Other polymers

There are no such residues in this entry.