



Full wwPDB X-ray Structure Validation Report ⓘ

Dec 17, 2023 – 01:31 PM EST

PDB ID : 4U24
Title : Crystal structure of the E. coli ribosome bound to dalfopristin.
Authors : Noeske, J.; Huang, J.; Olivier, N.B.; Giacobbe, R.A.; Zambrowski, M.; Cate, J.H.D.
Deposited on : 2014-07-16
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

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.36
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

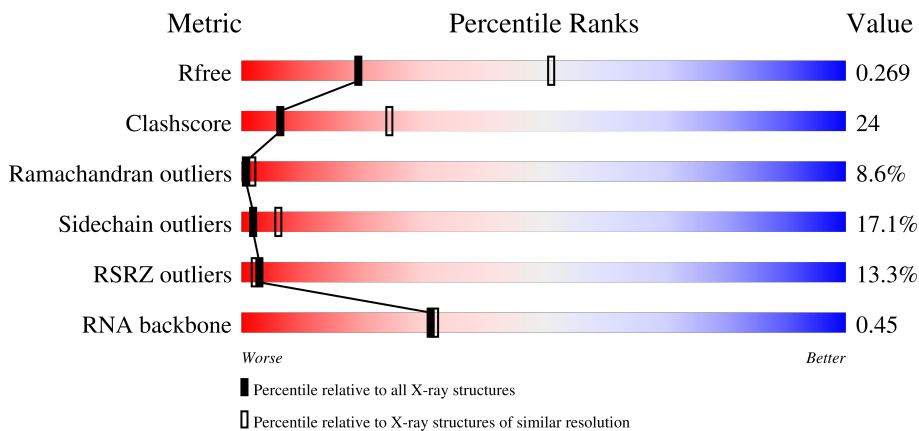
1 Overall quality at a glance i

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_{free}	130704	1957 (2.90-2.90)
Clashscore	141614	2172 (2.90-2.90)
Ramachandran outliers	138981	2115 (2.90-2.90)
Sidechain outliers	138945	2117 (2.90-2.90)
RSRZ outliers	127900	1906 (2.90-2.90)
RNA backbone	3102	1007 (3.16-2.64)

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 of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. 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 style="display: flex; align-items: center;"> <div style="width: 2%; height: 10px; background-color: red; margin-right: 2px;"></div> <div style="width: 30%; height: 10px; background-color: green; margin-right: 2px;"></div> <div style="width: 54%; height: 10px; background-color: yellow; margin-right: 2px;"></div> <div style="width: 16%; height: 10px; background-color: orange;"></div> </div> <div style="display: flex; justify-content: space-between; width: 100%;"> 2% 30% 54% 16% </div>
1	CA	1539	<div style="display: flex; align-items: center;"> <div style="width: 8%; height: 10px; background-color: red; margin-right: 2px;"></div> <div style="width: 30%; height: 10px; background-color: green; margin-right: 2px;"></div> <div style="width: 55%; height: 10px; background-color: yellow; margin-right: 2px;"></div> <div style="width: 15%; height: 10px; background-color: orange;"></div> </div> <div style="display: flex; justify-content: space-between; width: 100%;"> 8% 30% 55% 15% </div>
2	AB	218	<div style="display: flex; align-items: center;"> <div style="width: 17%; height: 10px; background-color: red; margin-right: 2px;"></div> <div style="width: 23%; height: 10px; background-color: green; margin-right: 2px;"></div> <div style="width: 51%; height: 10px; background-color: yellow; margin-right: 2px;"></div> <div style="width: 21%; height: 10px; background-color: orange; margin-right: 2px;"></div> <div style="width: 5%; height: 10px; background-color: red;"></div> </div> <div style="display: flex; justify-content: space-between; width: 100%;"> 17% 23% 51% 21% 5% </div>
2	CB	218	<div style="display: flex; align-items: center;"> <div style="width: 22%; height: 10px; background-color: red; margin-right: 2px;"></div> <div style="width: 31%; height: 10px; background-color: green; margin-right: 2px;"></div> <div style="width: 49%; height: 10px; background-color: yellow; margin-right: 2px;"></div> <div style="width: 18%; height: 10px; background-color: orange; margin-right: 2px;"></div> <div style="width: 1%; height: 10px; background-color: red;"></div> </div> <div style="display: flex; justify-content: space-between; width: 100%;"> 22% 31% 49% 18% 1% </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	

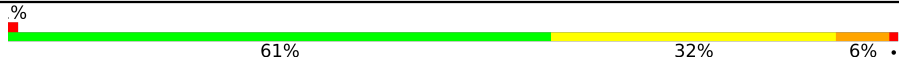

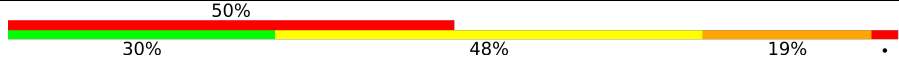


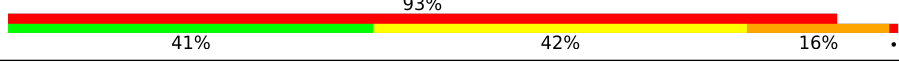
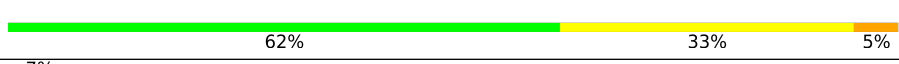
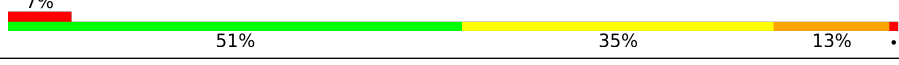
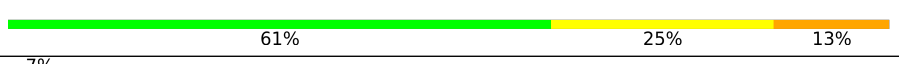


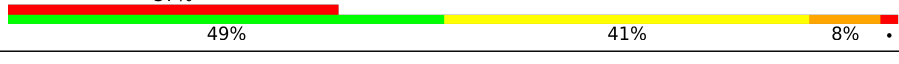

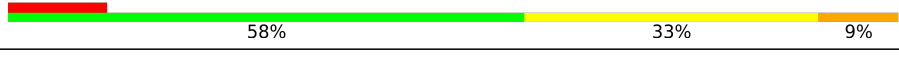
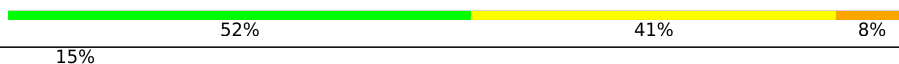
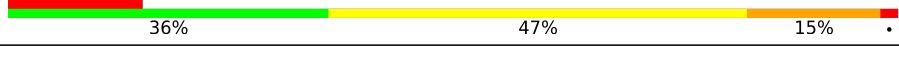









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Mol	Chain	Length	Quality of chain
15	CO	88	
16	AP	82	
16	CP	82	
17	AQ	80	
17	CQ	80	
18	AR	55	
18	CR	55	
19	AS	79	
19	CS	79	
20	AT	85	
20	CT	85	
21	AU	51	
21	CU	51	
22	BA	2903	
22	DA	2903	
23	BB	119	
23	DB	119	
24	BC	271	
24	DC	271	
25	BD	209	
25	DD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

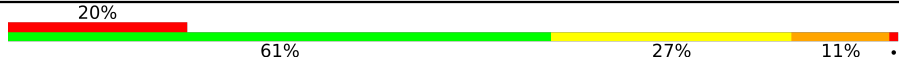


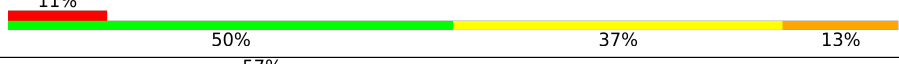

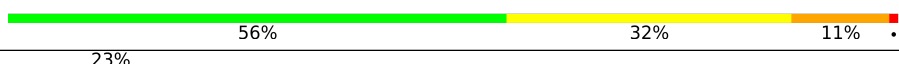
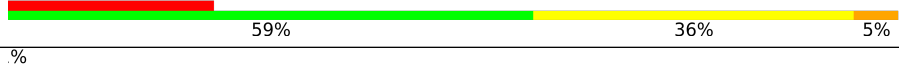

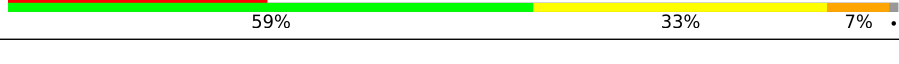



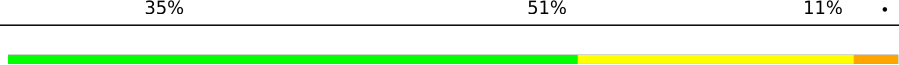
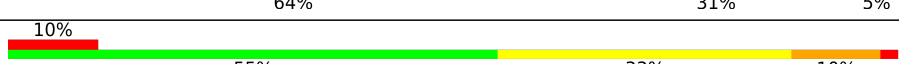


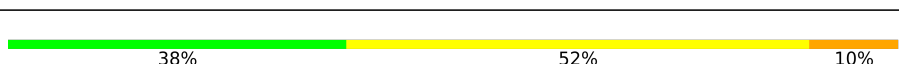
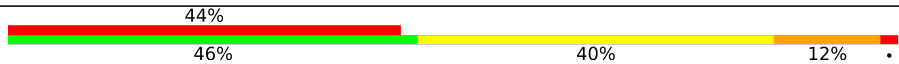
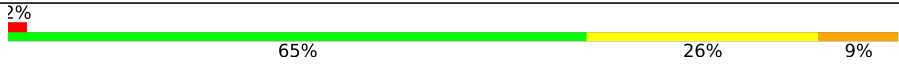


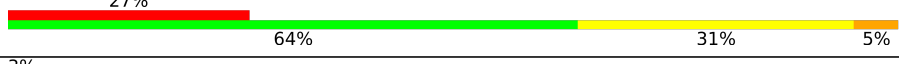
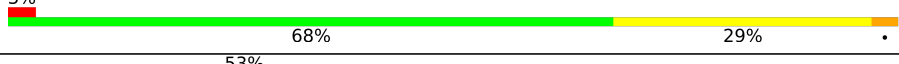


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Mol	Chain	Length	Quality of chain
28	BG	176	
28	DG	176	
29	BH	149	
29	DH	149	
30	BI	141	
30	DI	141	
31	BJ	142	
31	DJ	142	
32	BK	122	
32	DK	122	
33	BL	143	
33	DL	143	
34	BM	136	
34	DM	136	
35	BN	120	
35	DN	120	
36	BO	116	
36	DO	116	
37	BP	114	
37	DP	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	<p>82%</p> <p>42% 29% 13% 16%</p>

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	1656	-	-	-	X
54	MG	AA	1658	-	-	-	X
54	MG	AA	1662	-	-	-	X
54	MG	AA	1664	-	-	-	X
54	MG	AA	1668	-	-	-	X
54	MG	DA	3003	-	-	-	X
54	MG	DA	3005	-	-	-	X
54	MG	DA	3026	-	-	-	X
54	MG	DA	3028	-	-	-	X
54	MG	DA	3041	-	-	-	X
54	MG	DA	3044	-	-	-	X
54	MG	DA	3061	-	-	-	X
54	MG	DA	3062	-	-	-	X
54	MG	DA	3092	-	-	-	X
54	MG	DA	3100	-	-	-	X
54	MG	DA	3113	-	-	-	X
54	MG	DA	3119	-	-	-	X
54	MG	DA	3133	-	-	-	X
54	MG	DA	3135	-	-	-	X
54	MG	DA	3137	-	-	-	X
54	MG	DA	3151	-	-	-	X
54	MG	DA	3162	-	-	-	X
54	MG	DL	201	-	-	-	X
55	DOL	DA	3001	-	-	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
			Total	C	N	O	P			
1	AA	1538	Total 32995	C 14716	N 6050	O 10691	P 1538	0	0	0
1	CA	1539	Total 33015	C 14725	N 6052	O 10699	P 1539	0	0	0

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

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

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

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

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

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

- 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
			Total	C	N	O	S			
16	AP	82	Total 649	C 406	N 128	O 114	S 1	0	0	0
16	CP	82	Total 649	C 406	N 128	O 114	S 1	0	0	0

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

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

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

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

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

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

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

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

- 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
			Total	C	N	O	S			
26	DE	201	1552	974	283	290	5	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
27	BF	177	1411	899	249	257	6	0	0	0
27	DF	177	1411	899	249	257	6	0	0	0

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
29	BH	149	1110	699	197	213	1	0	0	0
29	DH	149	1110	699	197	213	1	0	0	0

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

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

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

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

- 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	0	0	0
			780	492	146	142			

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
44	BW	76	580	359	117	103	1	0	0	0
44	DW	75	569	353	113	102	1	0	0	0

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

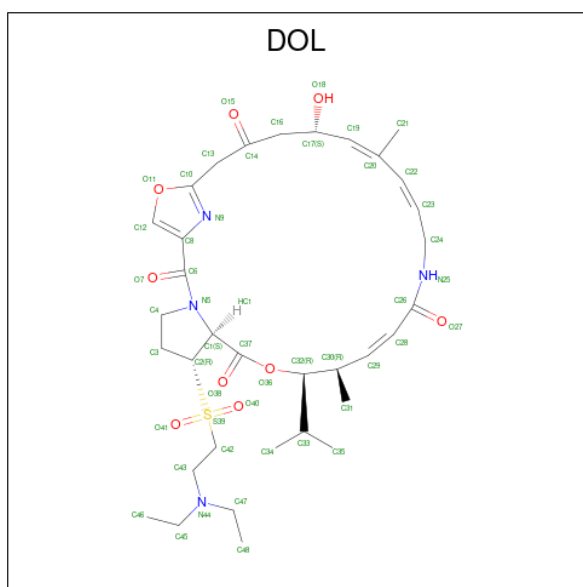
- Molecule 53 is a protein called 50S ribosomal protein L1.

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

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
54	AA	70	Total 70	Mg 70	0	0
54	AM	1	Total 1	Mg 1	0	0
54	AN	1	Total 1	Mg 1	0	0
54	BA	194	Total 194	Mg 194	0	0
54	BB	4	Total 4	Mg 4	0	0
54	BQ	1	Total 1	Mg 1	0	0
54	CA	56	Total 56	Mg 56	0	0
54	DA	164	Total 164	Mg 164	0	0
54	DB	3	Total 3	Mg 3	0	0
54	DL	1	Total 1	Mg 1	0	0
54	DQ	1	Total 1	Mg 1	0	0
54	D2	1	Total 1	Mg 1	0	0

- 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: C₃₄H₅₀N₄O₉S).



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 O 1 1	0	0
57	BA	615	Total O 615 615	0	0
57	BB	13	Total O 13 13	0	0
57	BC	8	Total O 8 8	0	0
57	BD	3	Total O 3 3	0	0
57	BE	2	Total O 2 2	0	0
57	BF	1	Total O 1 1	0	0
57	BL	7	Total O 7 7	0	0
57	BN	5	Total O 5 5	0	0
57	BQ	1	Total O 1 1	0	0
57	BS	1	Total O 1 1	0	0
57	BT	1	Total O 1 1	0	0
57	BU	1	Total O 1 1	0	0
57	BV	1	Total O 1 1	0	0
57	B2	1	Total O 1 1	0	0
57	B3	3	Total O 3 3	0	0
57	B4	2	Total O 2 2	0	0
57	CA	193	Total O 193 193	0	0
57	CL	1	Total O 1 1	0	0
57	CN	1	Total O 1 1	0	0
57	CT	2	Total O 2 2	0	0

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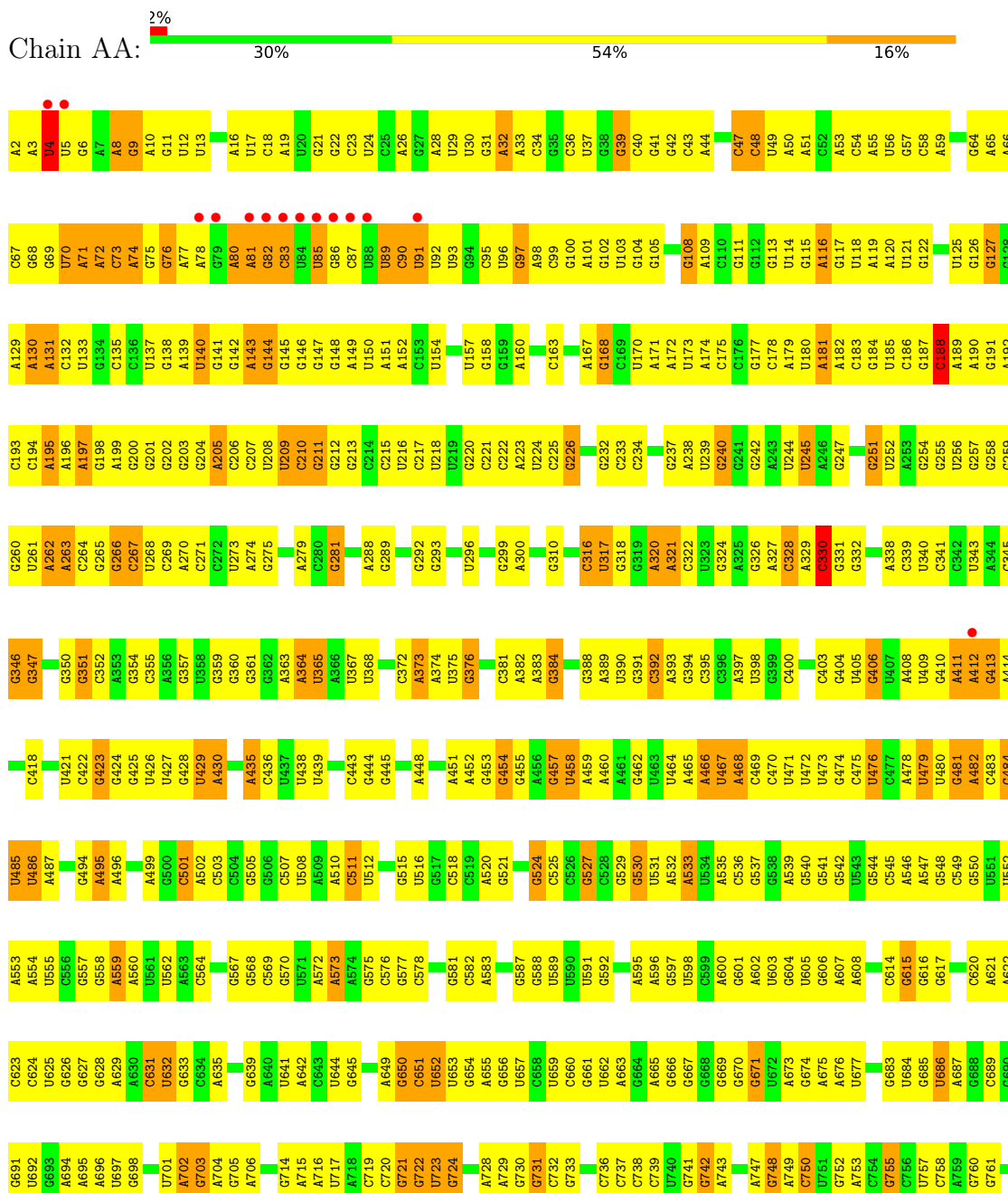
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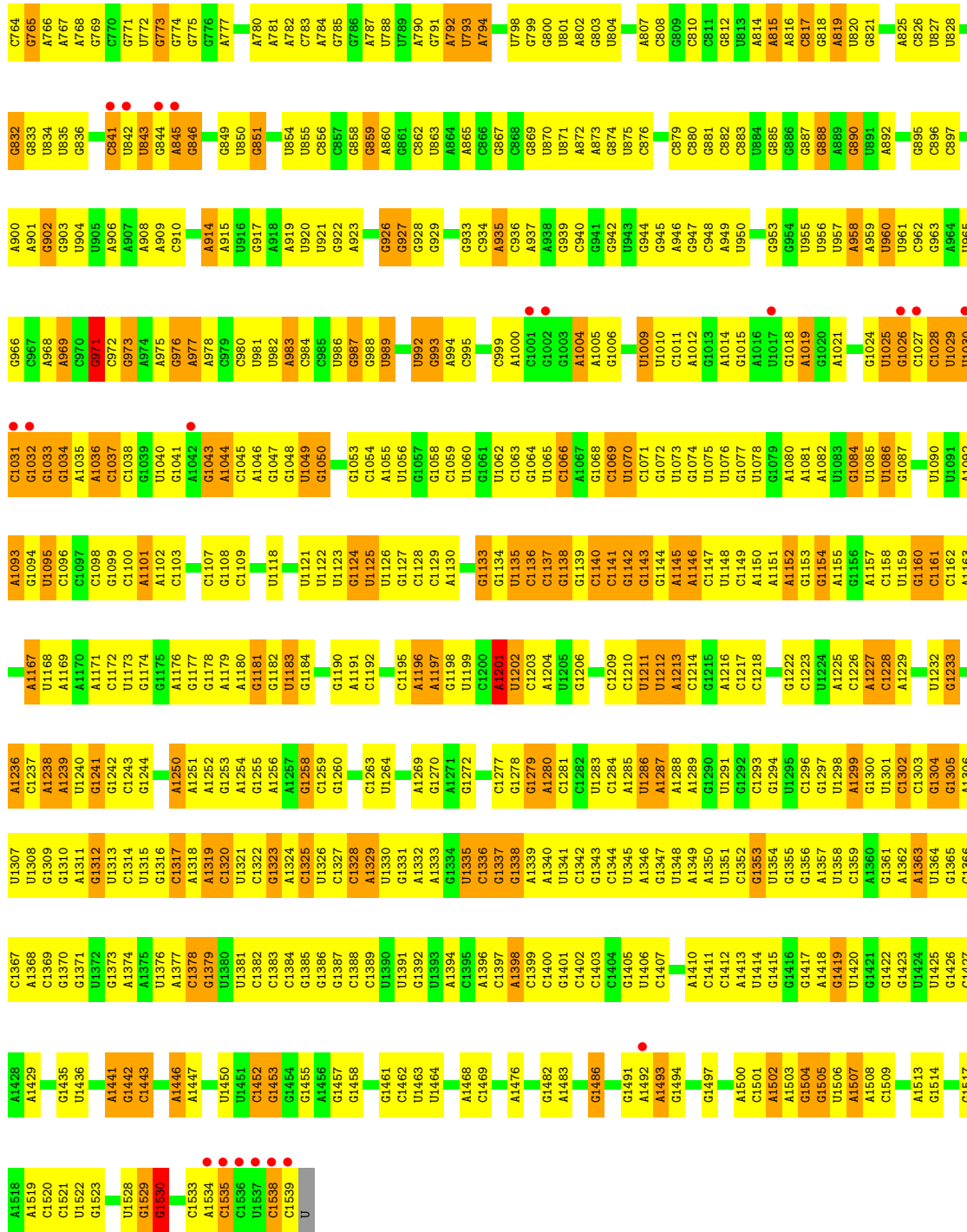
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57	DA	608	Total O 608 608	0	0
57	DB	13	Total O 13 13	0	0
57	DC	10	Total O 10 10	0	0
57	DD	4	Total O 4 4	0	0
57	DE	4	Total O 4 4	0	0
57	DJ	1	Total O 1 1	0	0
57	DL	4	Total O 4 4	0	0
57	DN	2	Total O 2 2	0	0
57	DS	2	Total O 2 2	0	0
57	DT	3	Total O 3 3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

3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes 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.

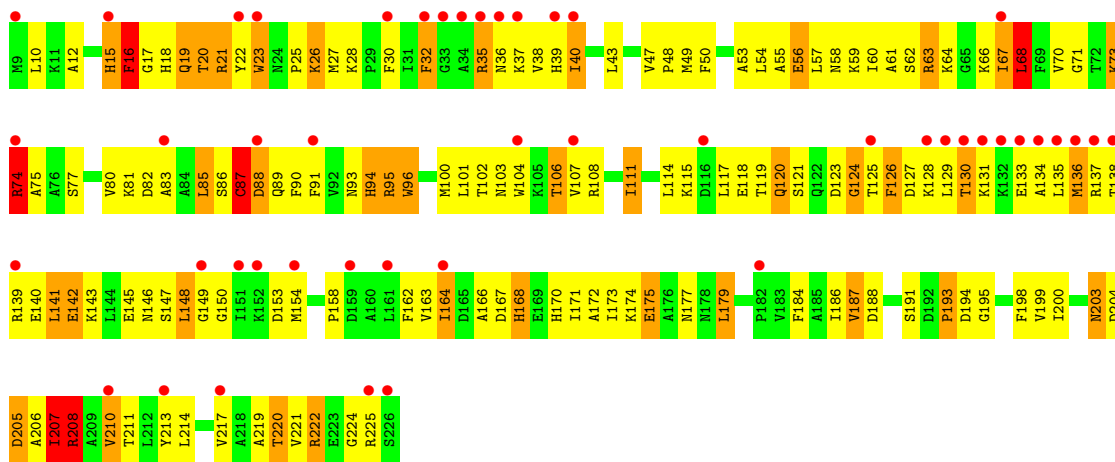
- Molecule 1: 16S rRNA



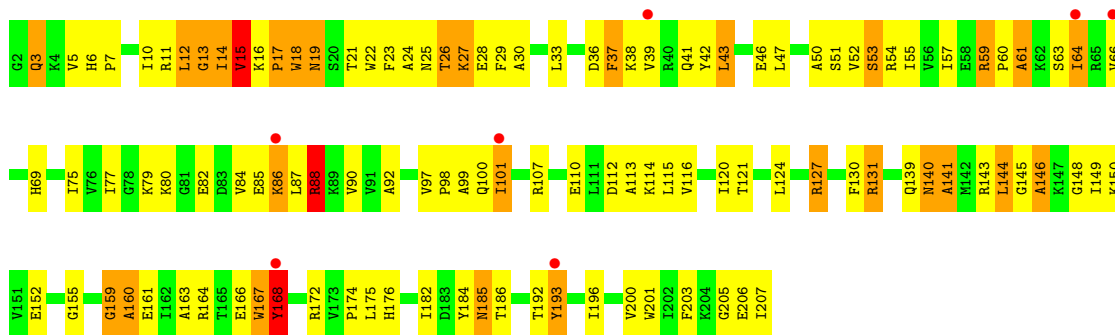
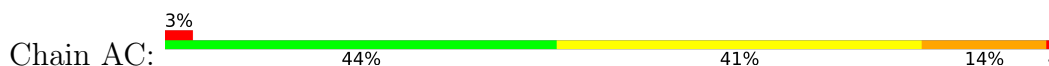


• Molecule 1: 16S rRNA

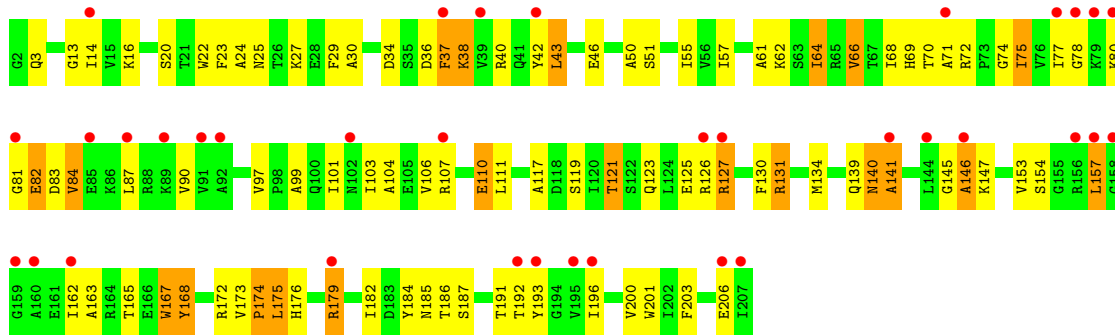




• Molecule 3: 30S ribosomal protein S3



• Molecule 3: 30S ribosomal protein S3

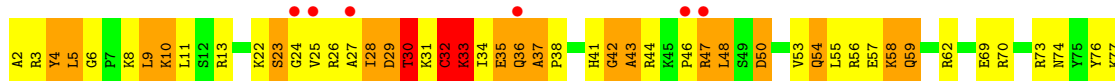


• Molecule 4: 30S ribosomal protein S4

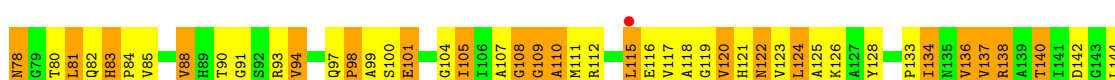




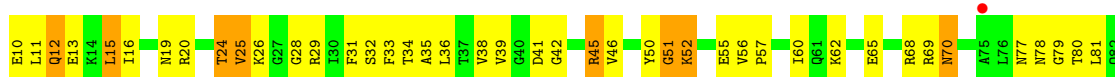
• Molecule 4: 30S ribosomal protein S4



• Molecule 5: 30S ribosomal protein S5

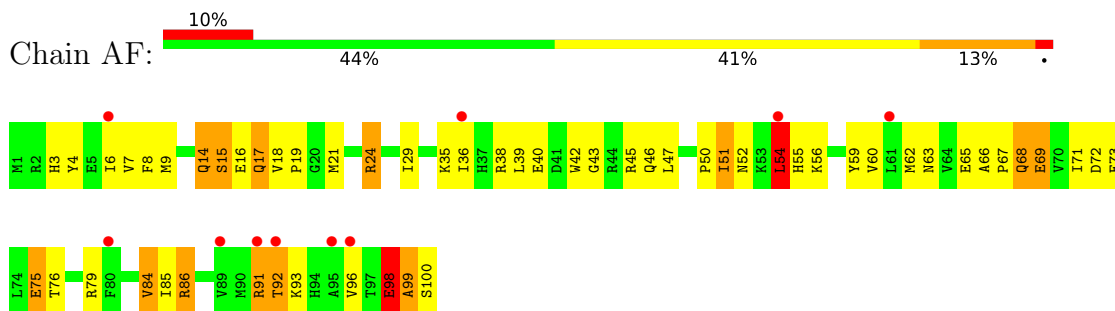


• Molecule 5: 30S ribosomal protein S5

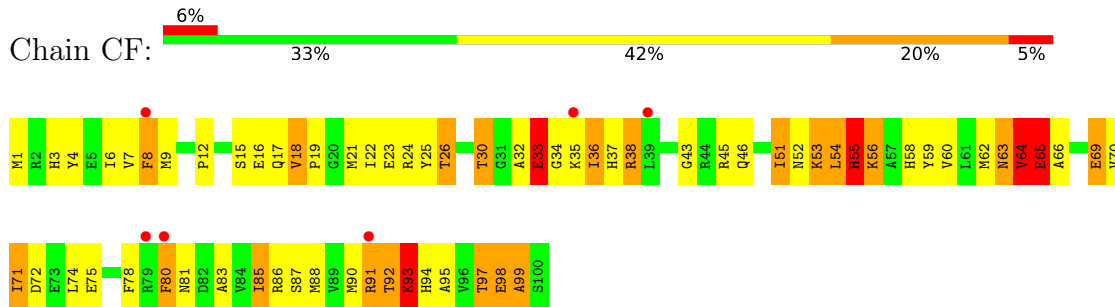


• Molecule 6: 30S ribosomal protein S6

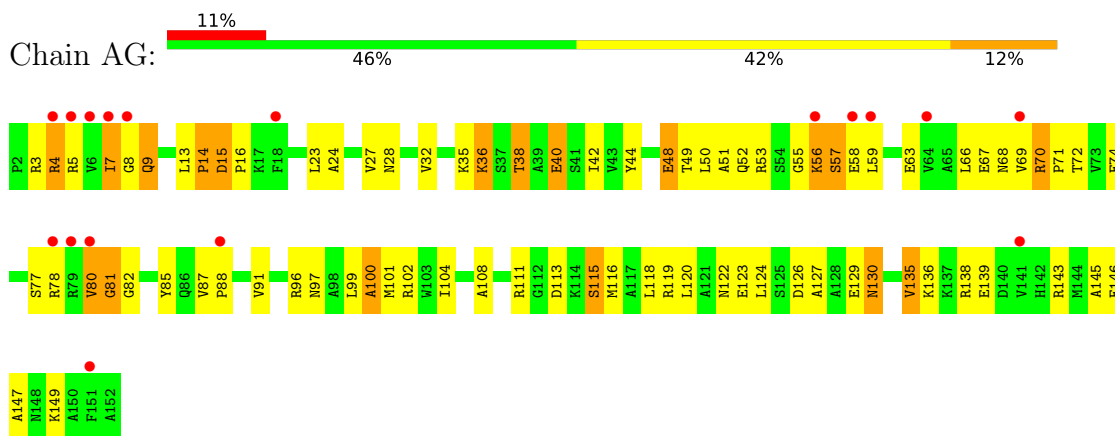




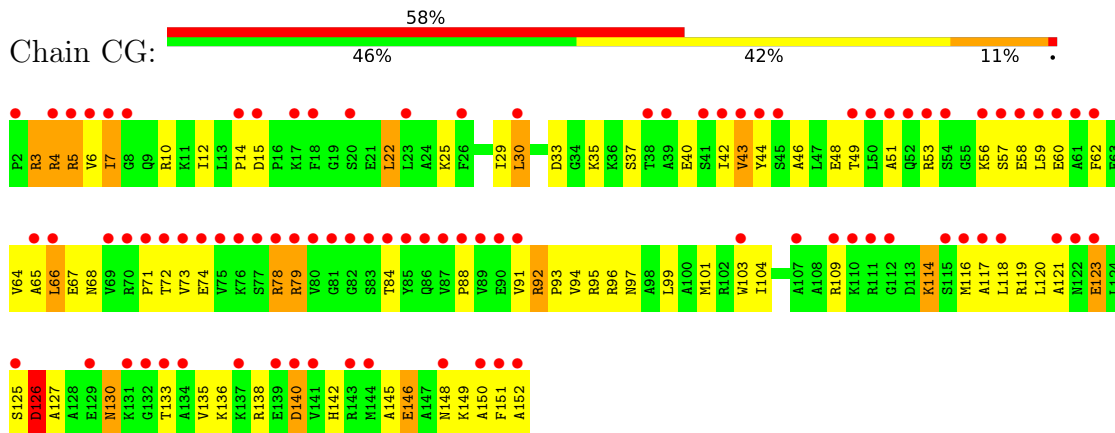
• Molecule 6: 30S ribosomal protein S6



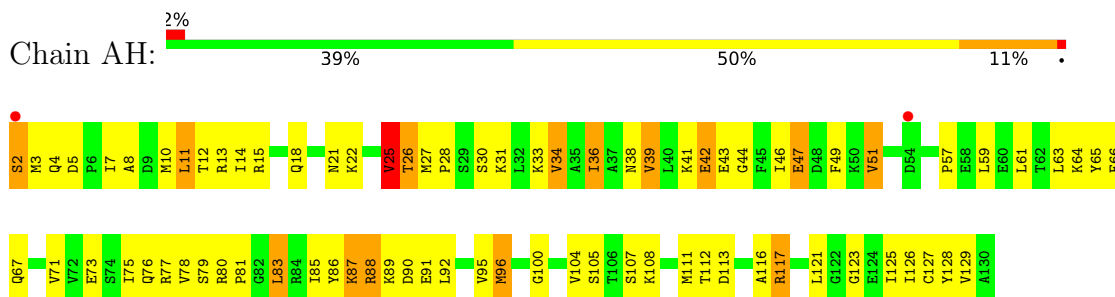
• Molecule 7: 30S ribosomal protein S7



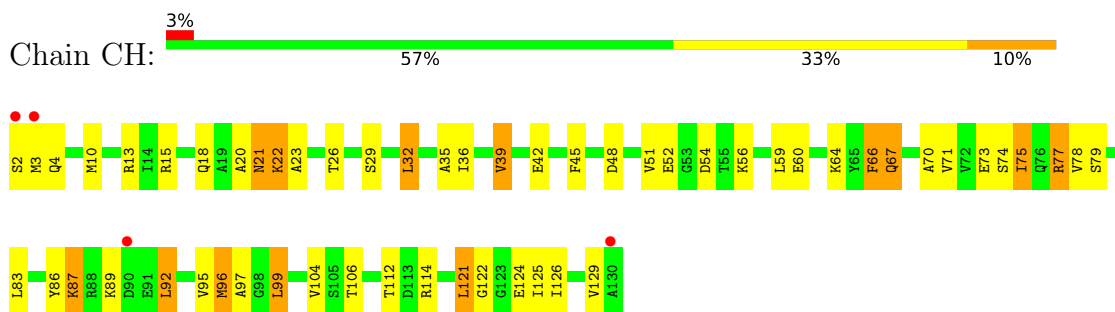
• Molecule 7: 30S ribosomal protein S7



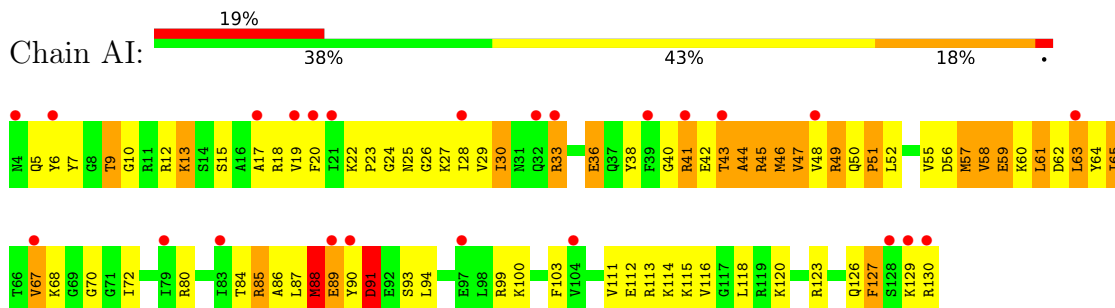
• Molecule 8: 30S ribosomal protein S8



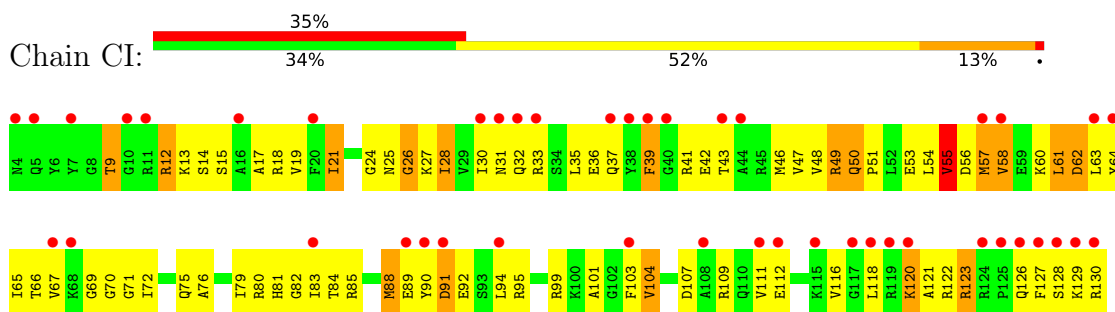
- Molecule 8: 30S ribosomal protein S8



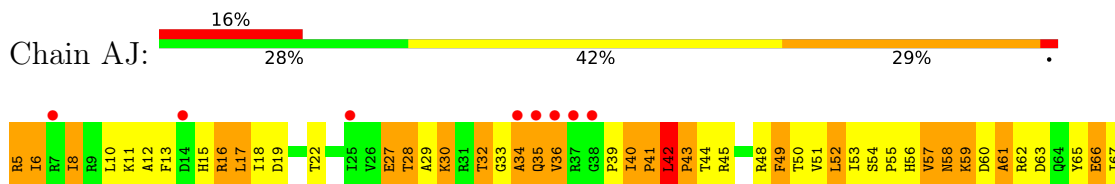
- Molecule 9: 30S ribosomal protein S9

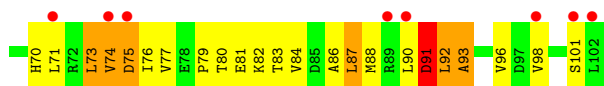


- Molecule 9: 30S ribosomal protein S9

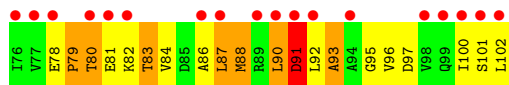
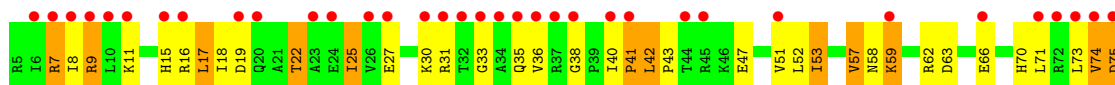
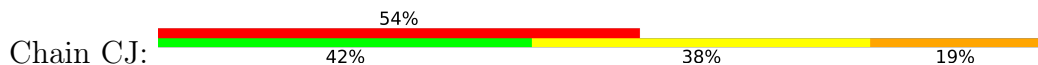


- Molecule 10: 30S ribosomal protein S10





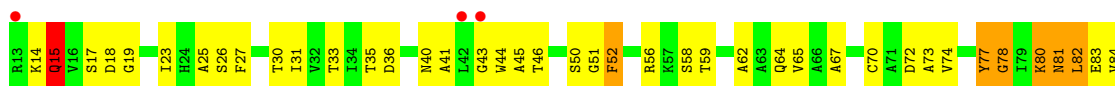
• Molecule 10: 30S ribosomal protein S10



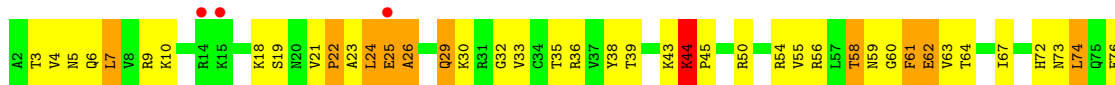
• Molecule 11: 30S ribosomal protein S11



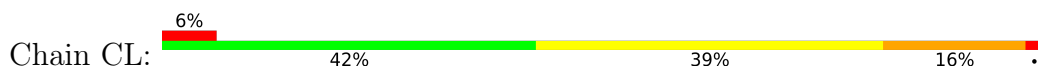
• Molecule 11: 30S ribosomal protein S11

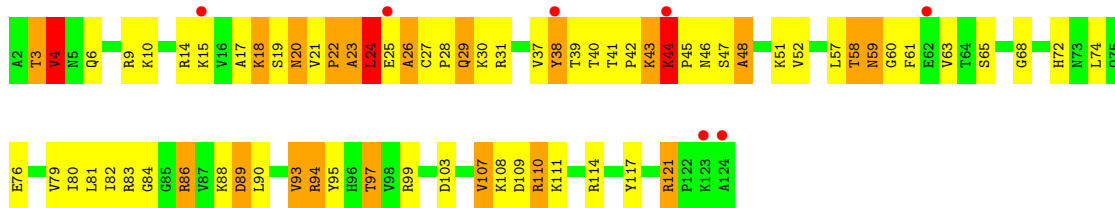


• Molecule 12: 30S ribosomal protein S12

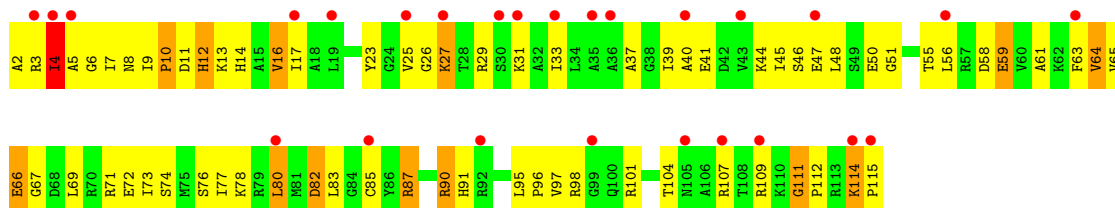


• Molecule 12: 30S ribosomal protein S12

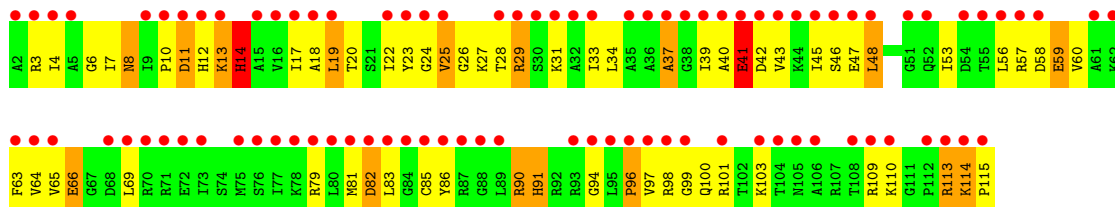
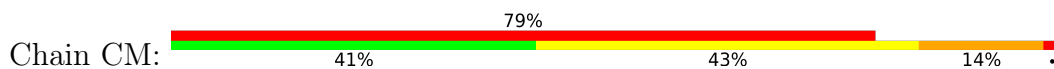




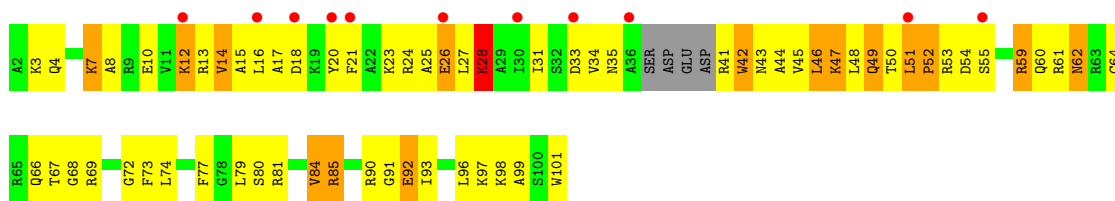
• Molecule 13: 30S ribosomal protein S13



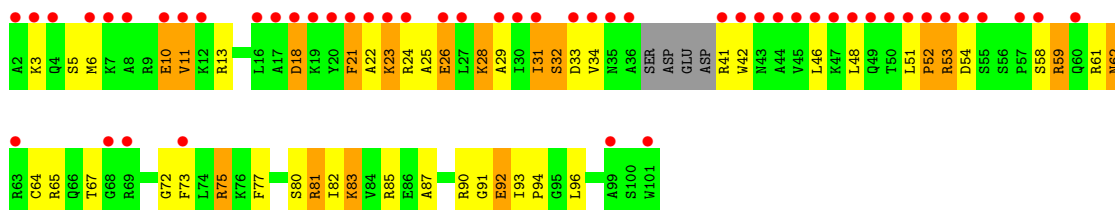
• Molecule 13: 30S ribosomal protein S13



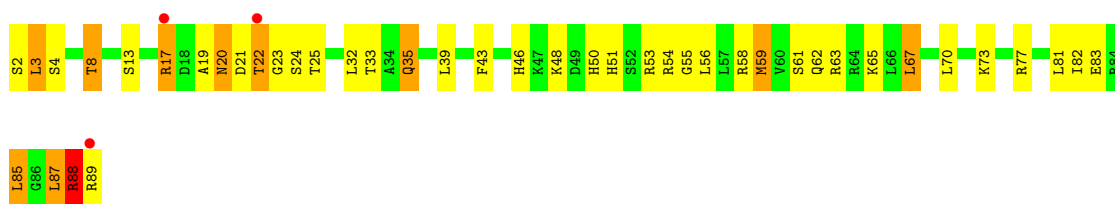
• Molecule 14: 30S ribosomal protein S14



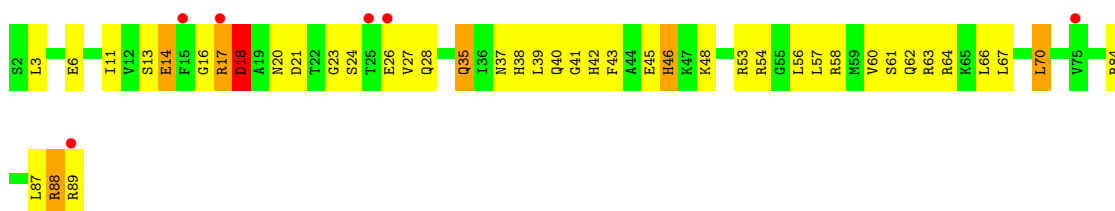
• Molecule 14: 30S ribosomal protein S14



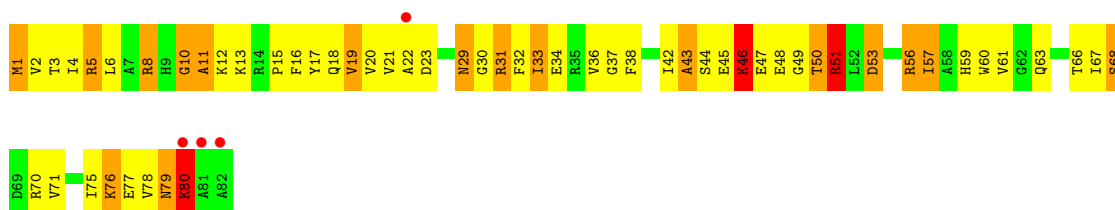
- Molecule 15: 30S ribosomal protein S15



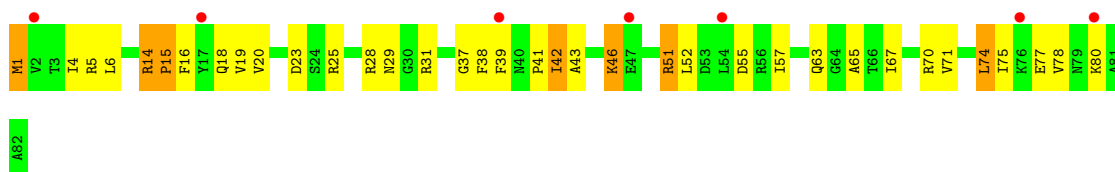
- Molecule 15: 30S ribosomal protein S15



- Molecule 16: 30S ribosomal protein S16



- Molecule 16: 30S ribosomal protein S16

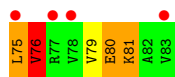
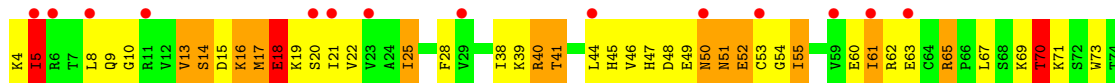


- Molecule 17: 30S ribosomal protein S17





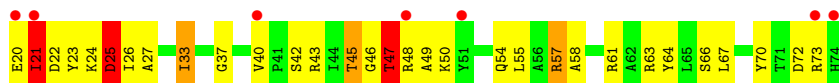
- Molecule 17: 30S ribosomal protein S17



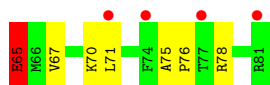
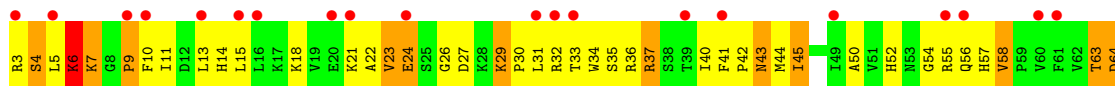
- Molecule 18: 30S ribosomal protein S18



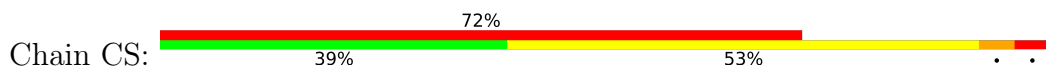
- Molecule 18: 30S ribosomal protein S18



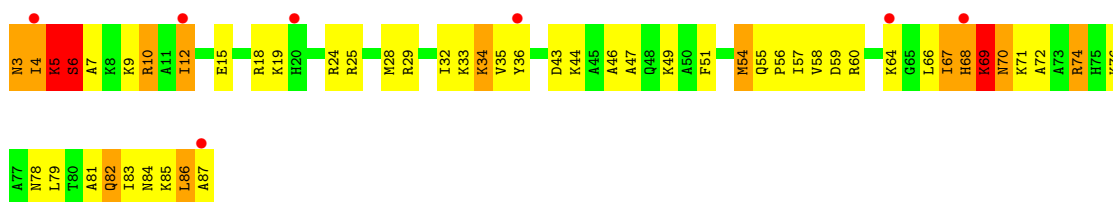
- Molecule 19: 30S ribosomal protein S19



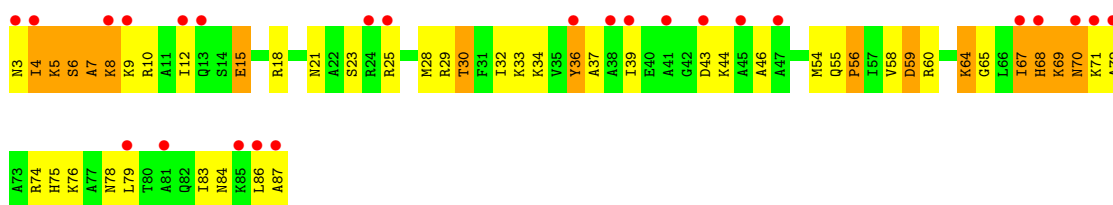
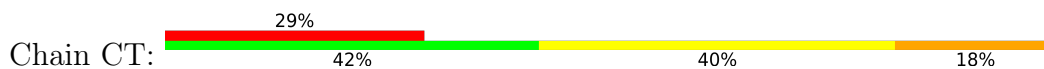
- Molecule 19: 30S ribosomal protein S19



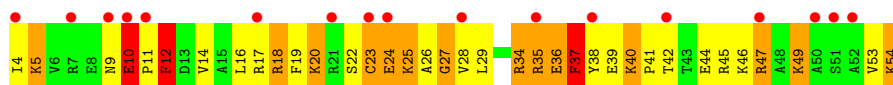
- Molecule 20: 30S ribosomal protein S20



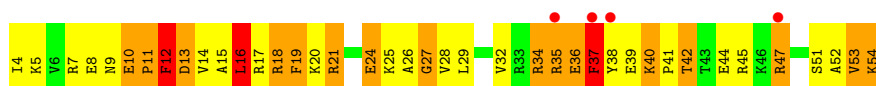
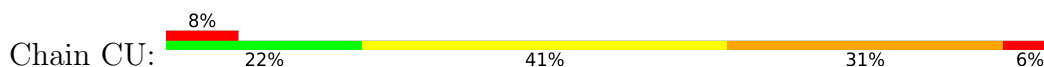
- Molecule 20: 30S ribosomal protein S20



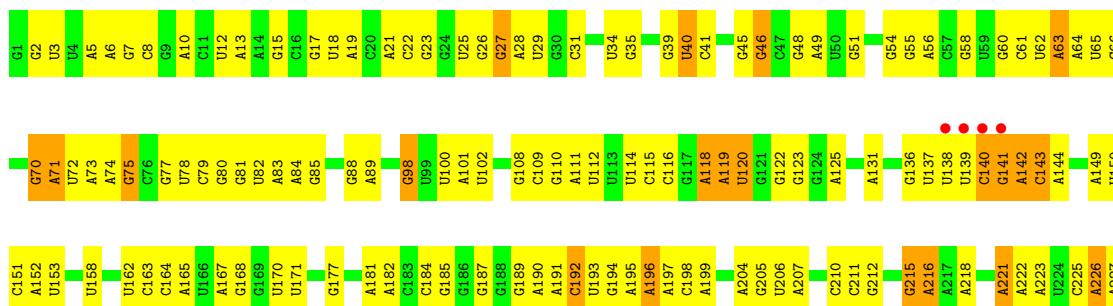
- Molecule 21: 30S ribosomal protein S21

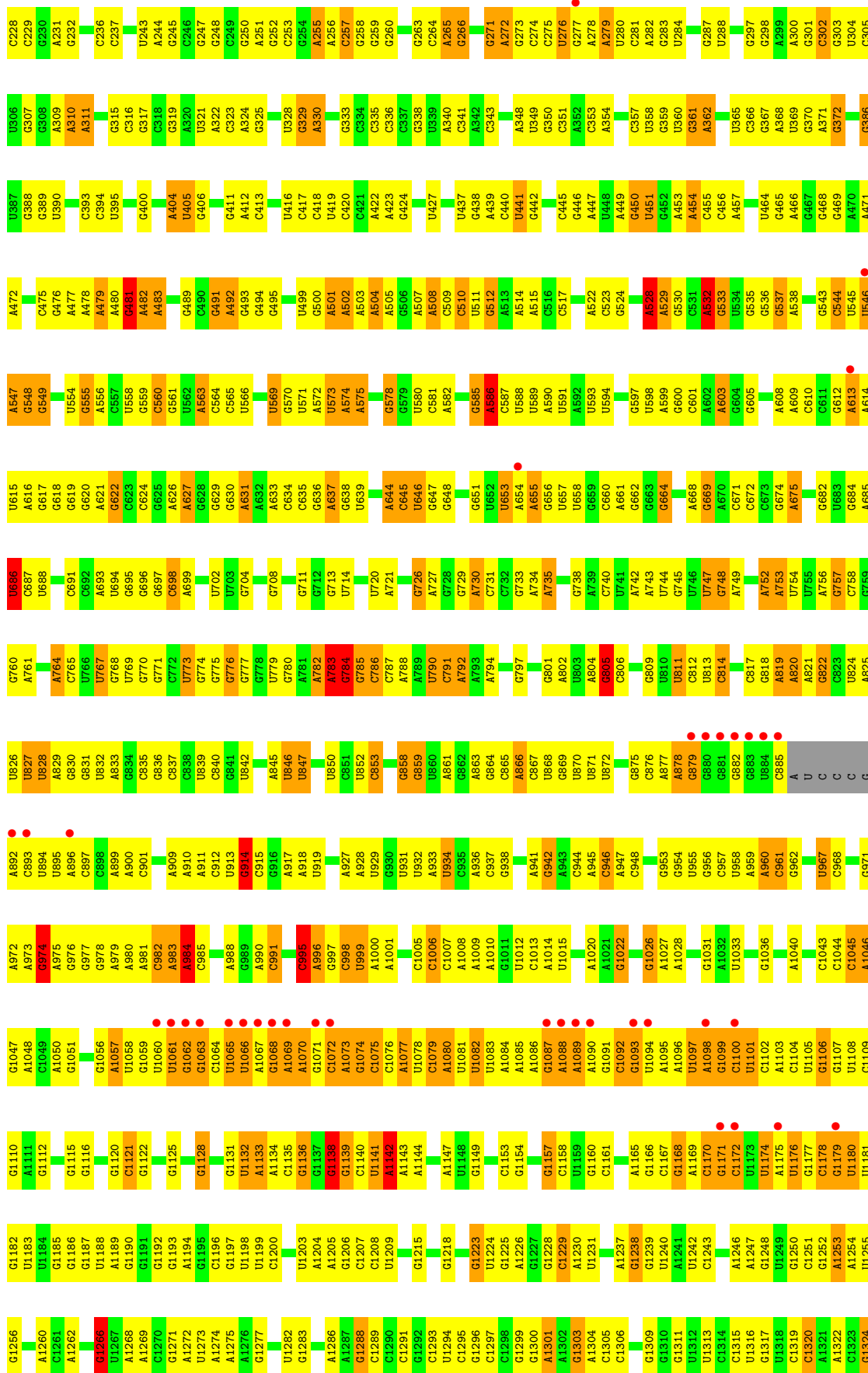


- Molecule 21: 30S ribosomal protein S21

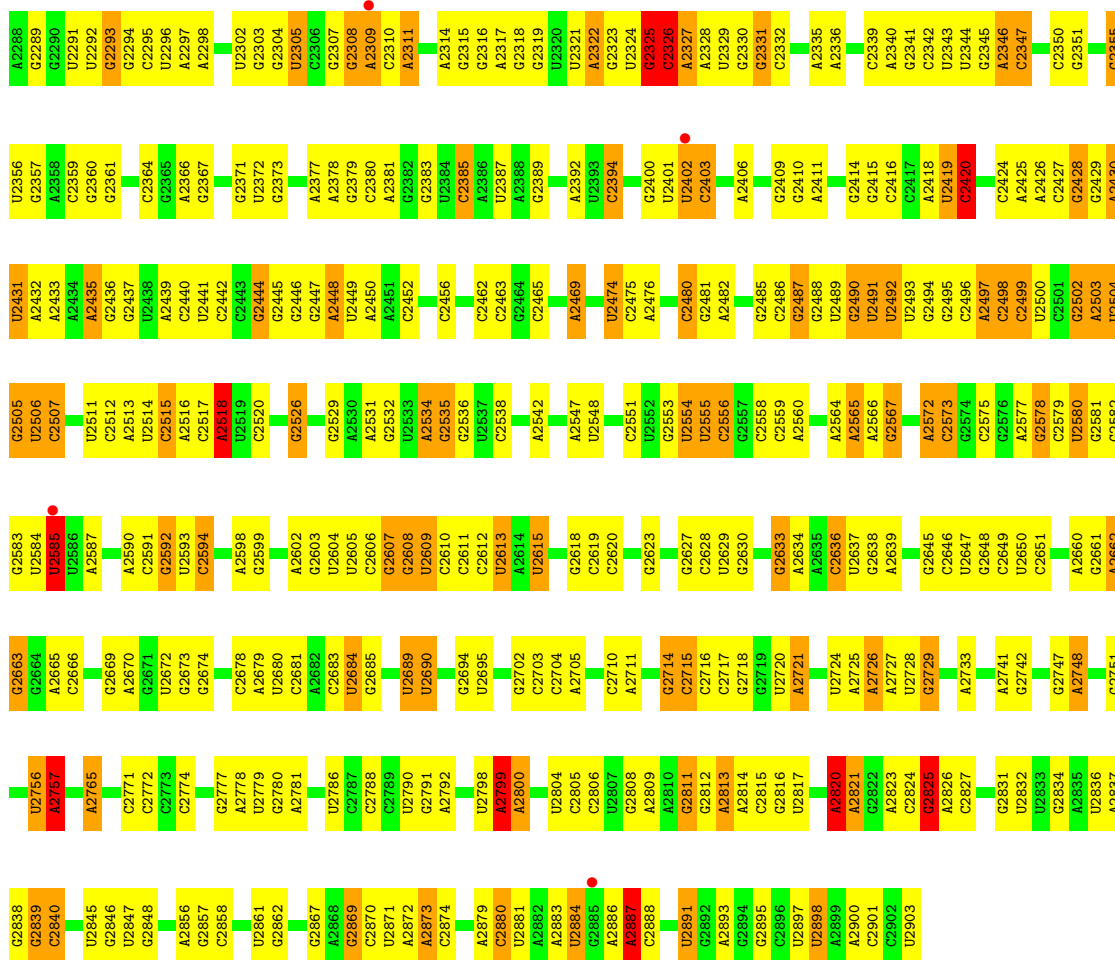


- Molecule 22: 23S rRNA

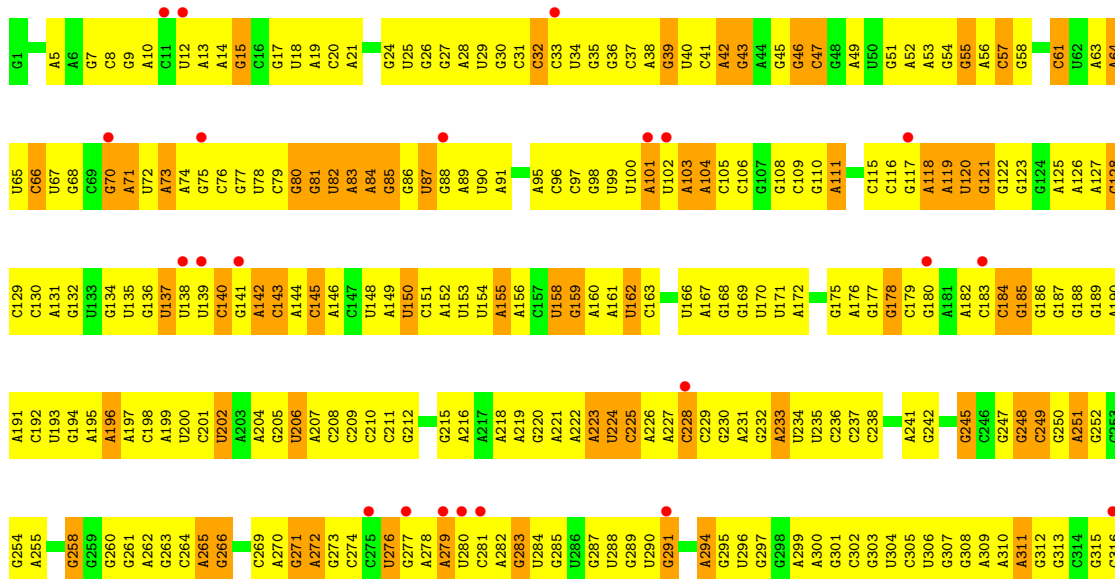


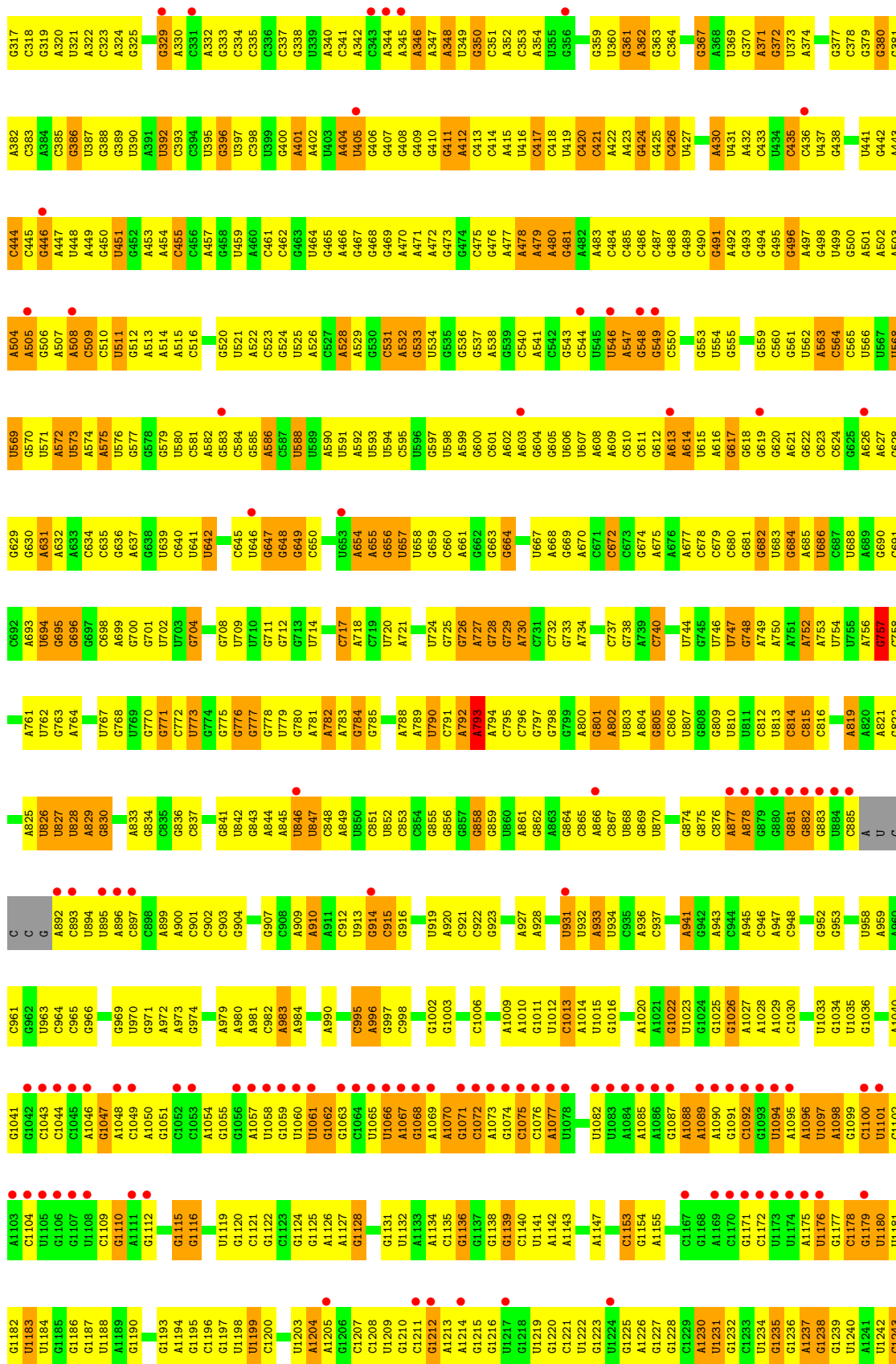


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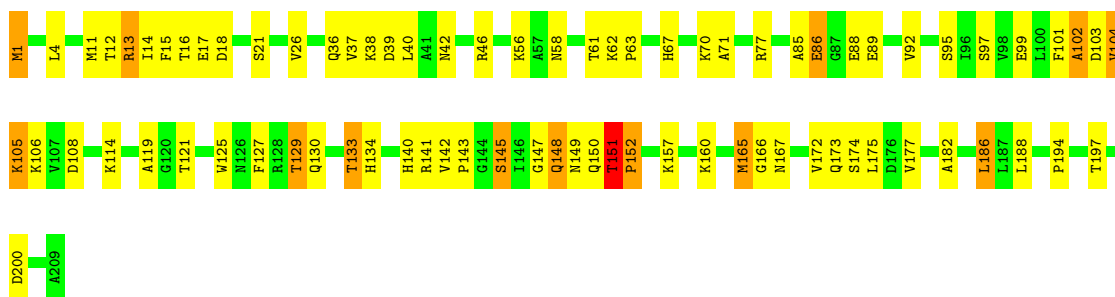


• Molecule 22: 23S rRNA

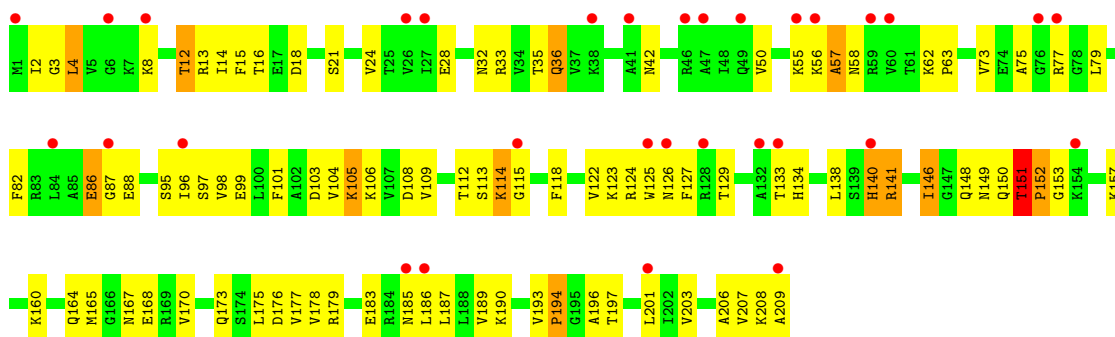




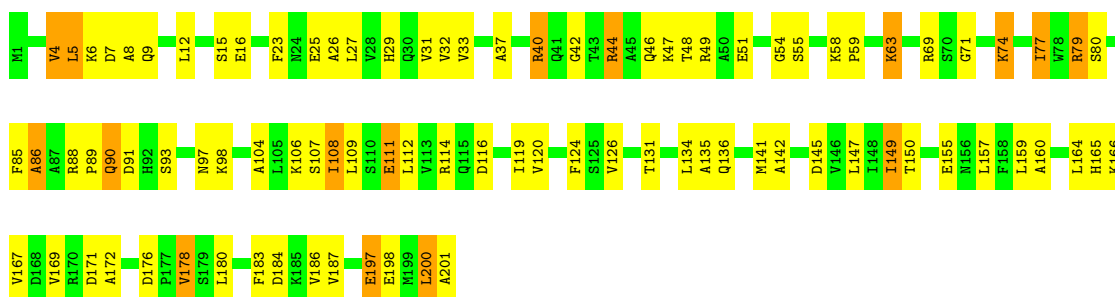
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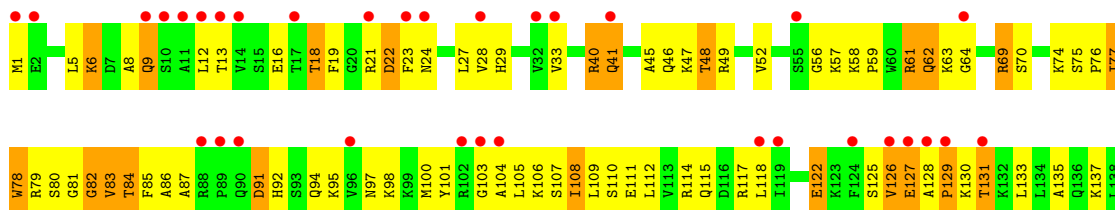
- Molecule 25: 50S ribosomal protein L3



- Molecule 26: 50S ribosomal protein L4

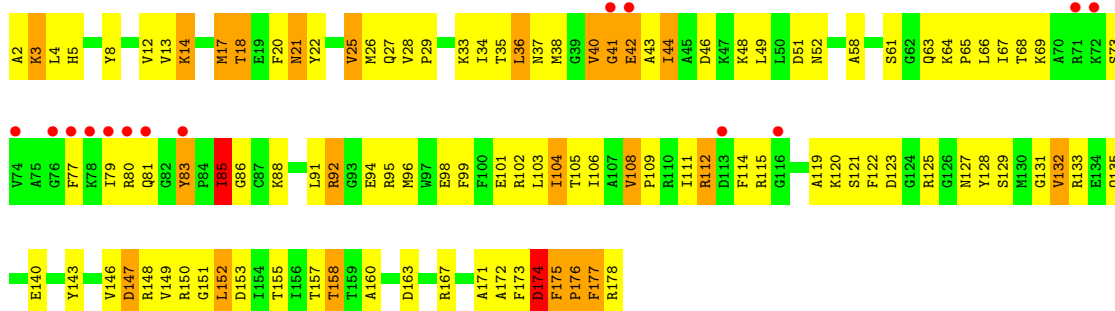


- Molecule 26: 50S ribosomal protein L4

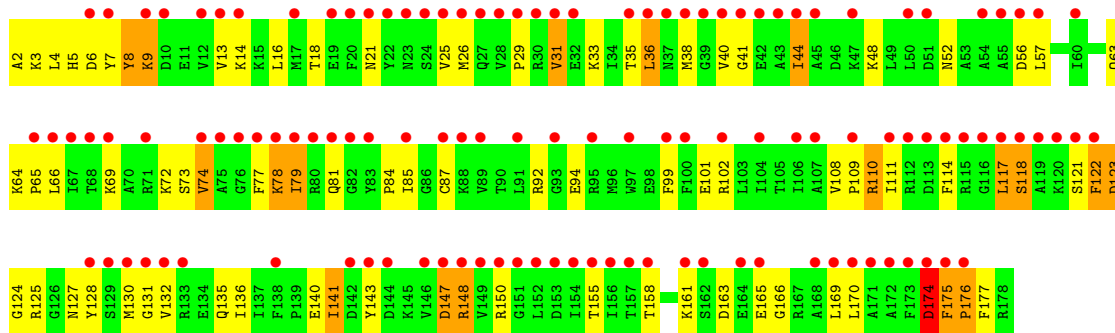




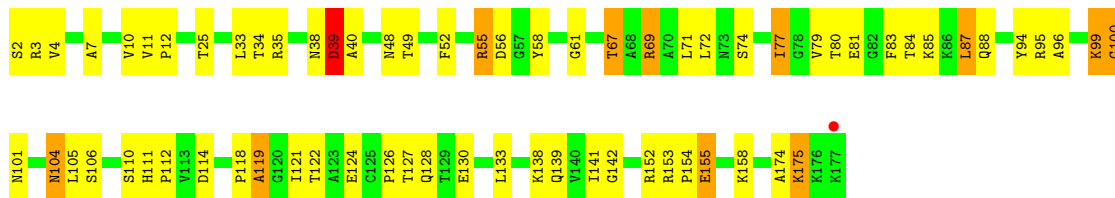
• Molecule 27: 50S ribosomal protein L5



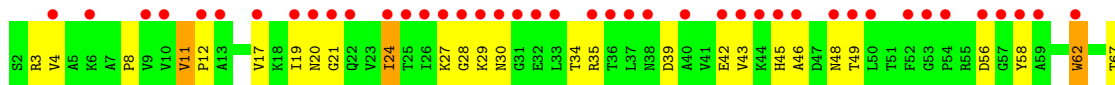
• Molecule 27: 50S ribosomal protein L5

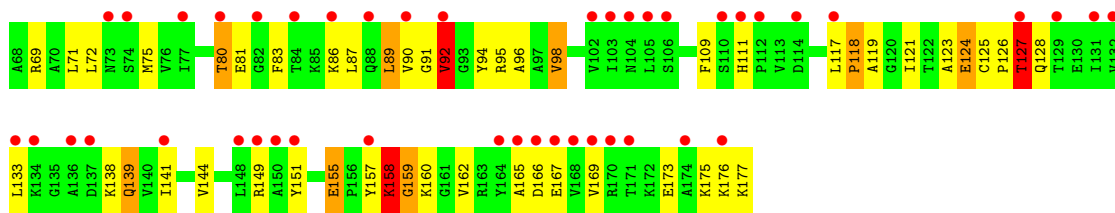


• Molecule 28: 50S ribosomal protein L6

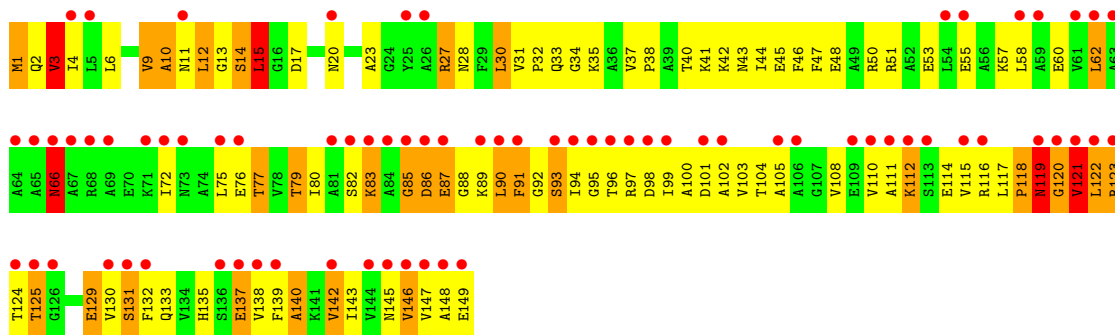


• Molecule 28: 50S ribosomal protein L6

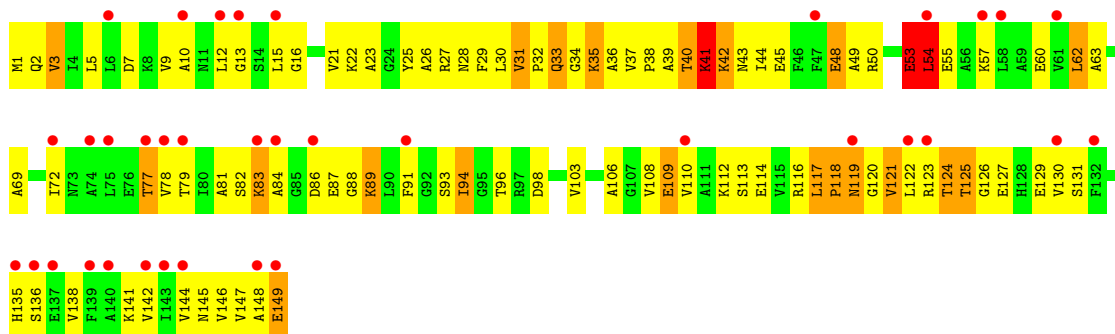




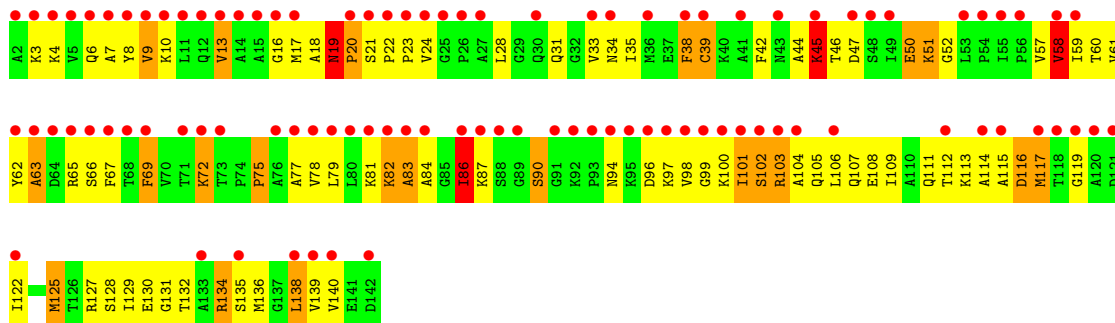
• Molecule 29: 50S ribosomal protein L9



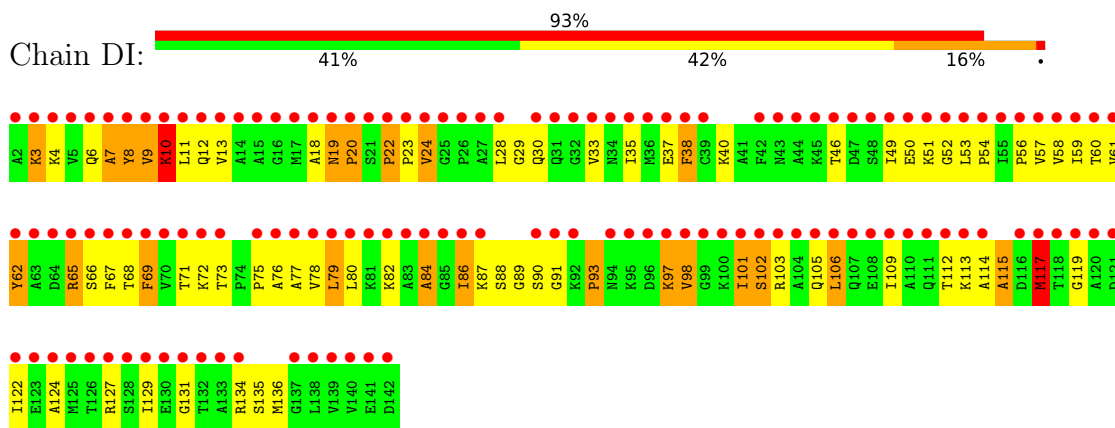
• Molecule 29: 50S ribosomal protein L9



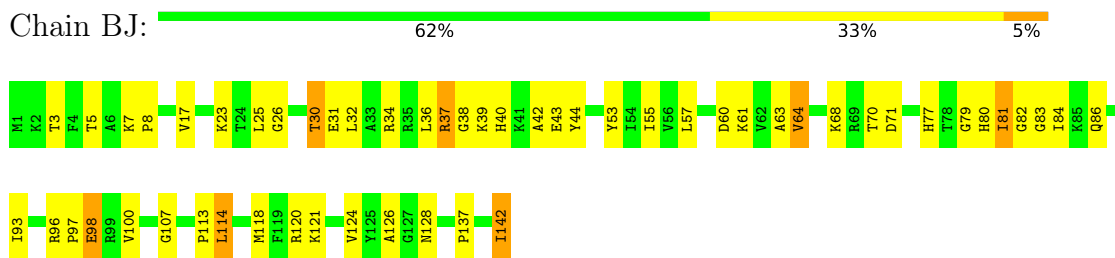
• Molecule 30: 50S ribosomal protein L11



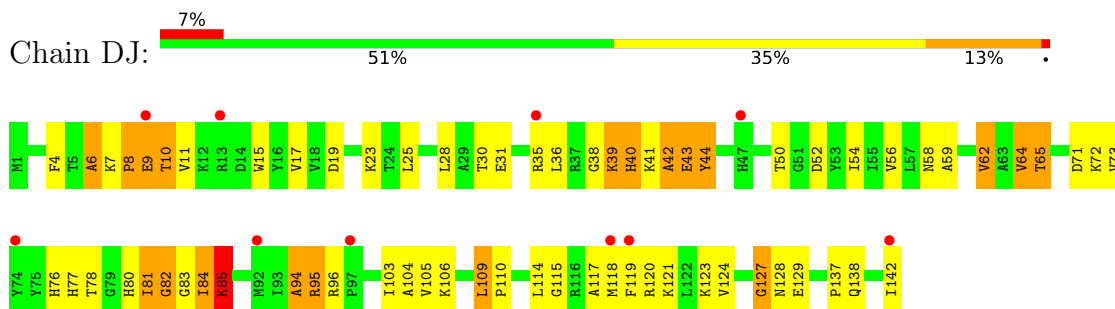
- Molecule 30: 50S ribosomal protein L11



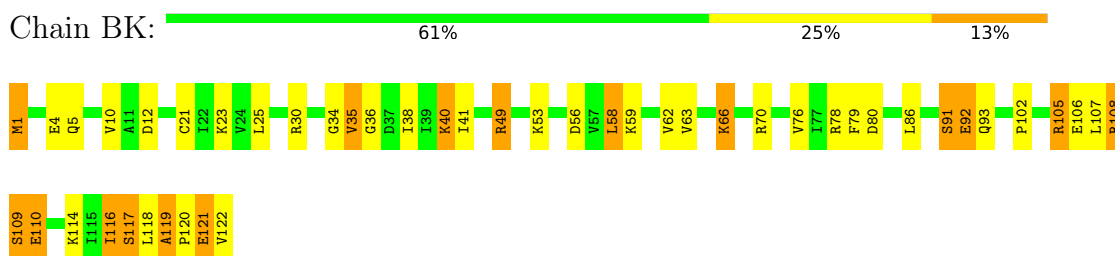
- Molecule 31: 50S ribosomal protein L13



- Molecule 31: 50S ribosomal protein L13

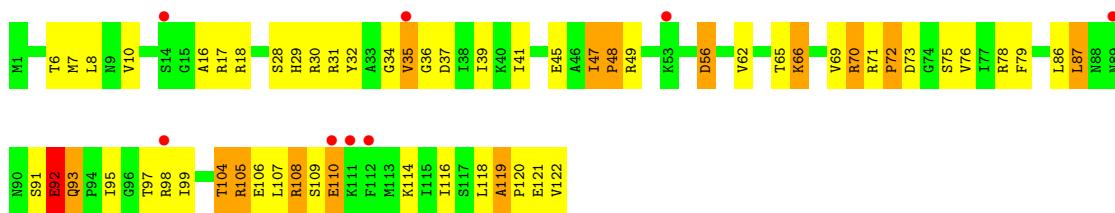


- Molecule 32: 50S ribosomal protein L14

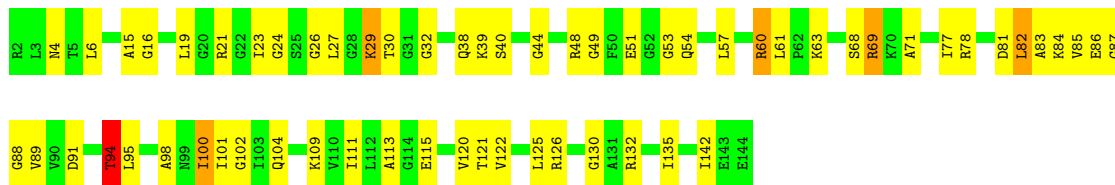


- Molecule 32: 50S ribosomal protein L14

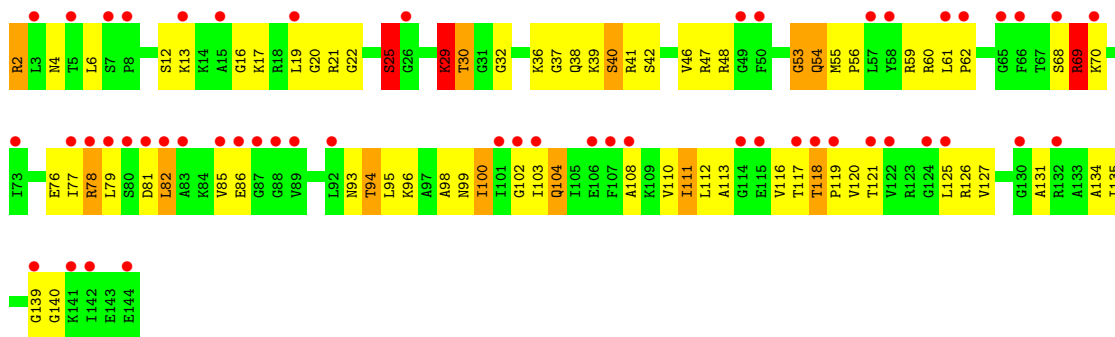
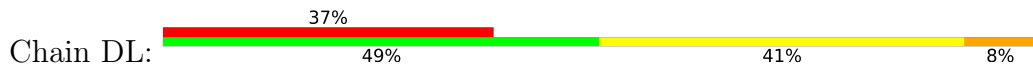




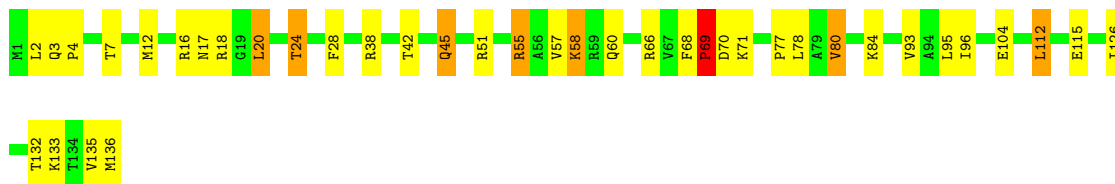
• Molecule 33: 50S ribosomal protein L15



• Molecule 33: 50S ribosomal protein L15

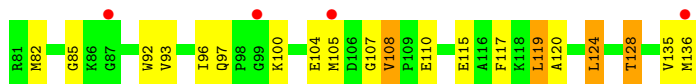


• Molecule 34: 50S ribosomal protein L16



• Molecule 34: 50S ribosomal protein L16

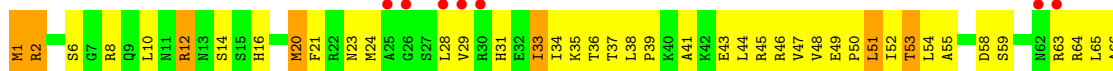




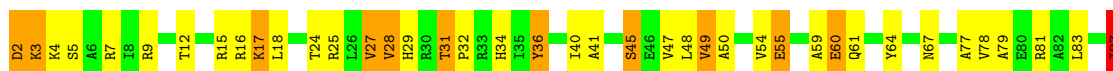
- Molecule 35: 50S ribosomal protein L17



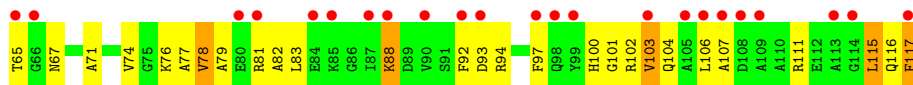
- Molecule 35: 50S ribosomal protein L17



- Molecule 36: 50S ribosomal protein L18

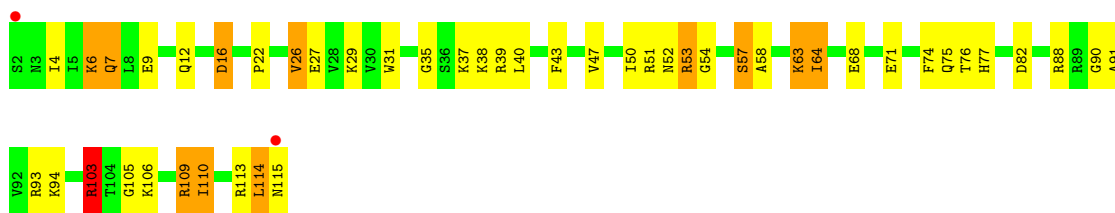


- Molecule 36: 50S ribosomal protein L18

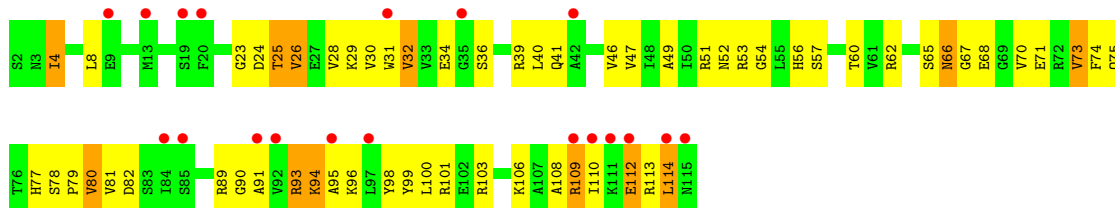


- Molecule 37: 50S ribosomal protein L19

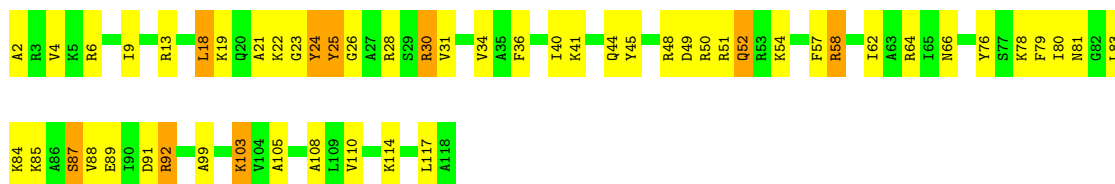




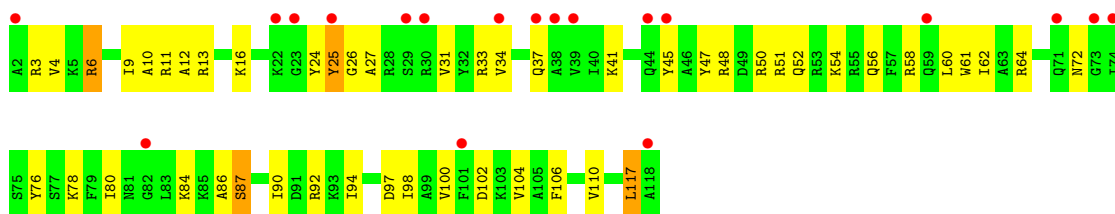
• Molecule 37: 50S ribosomal protein L19



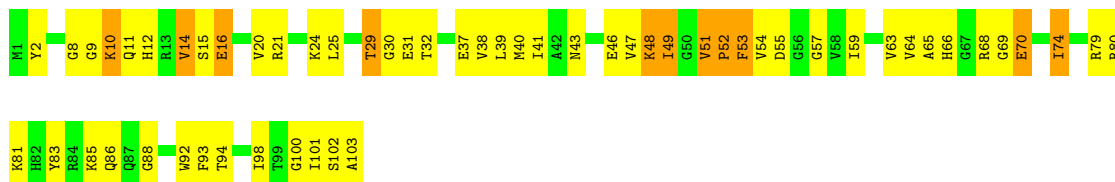
• Molecule 38: 50S ribosomal protein L20



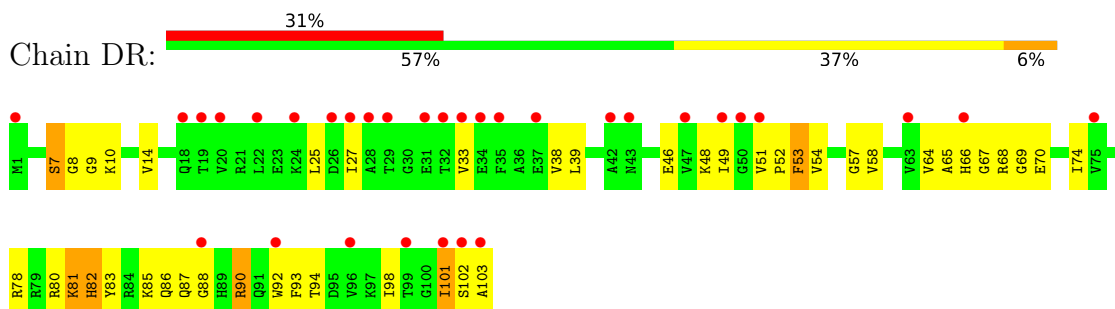
• Molecule 38: 50S ribosomal protein L20



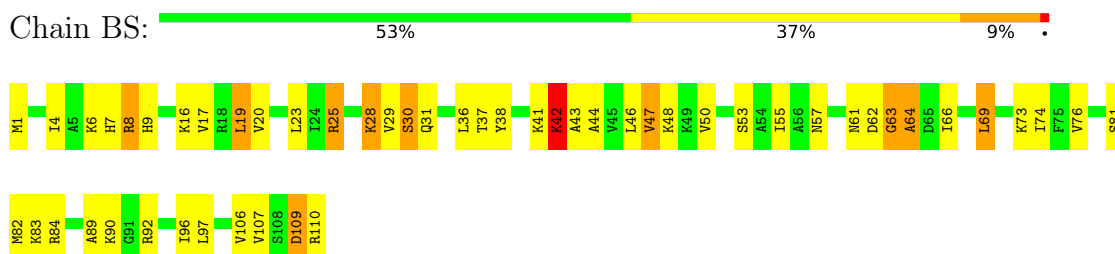
• Molecule 39: 50S ribosomal protein L21



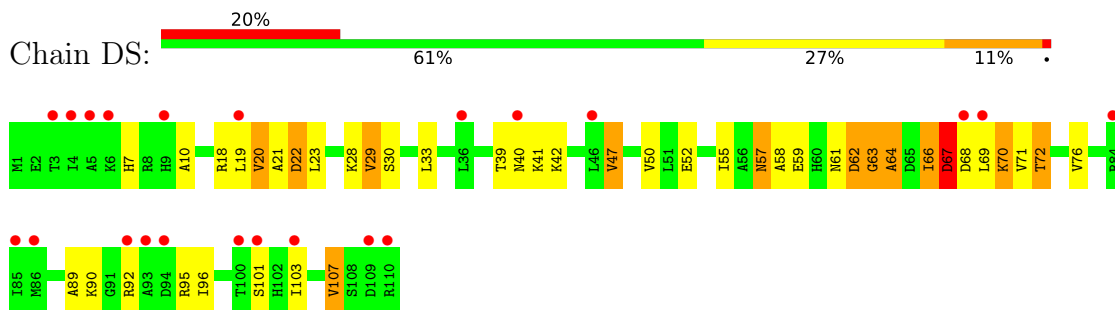
- Molecule 39: 50S ribosomal protein L21



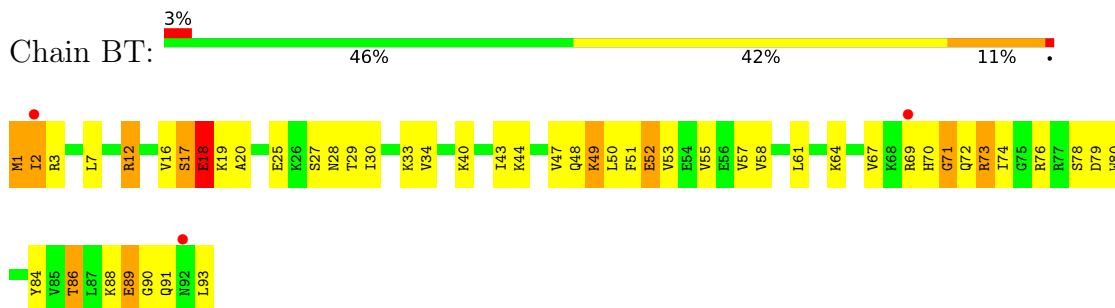
- Molecule 40: 50S ribosomal protein L22



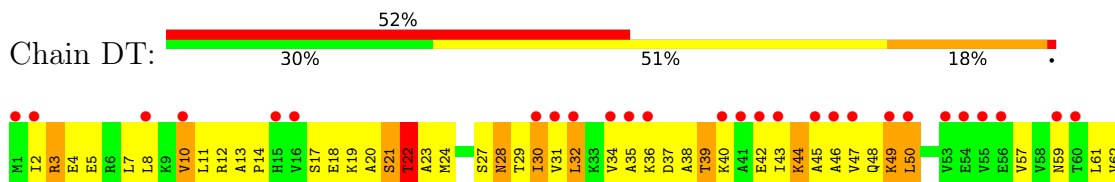
- Molecule 40: 50S ribosomal protein L22

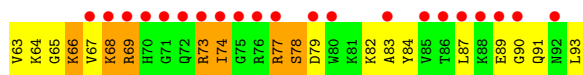


- Molecule 41: 50S ribosomal protein L23

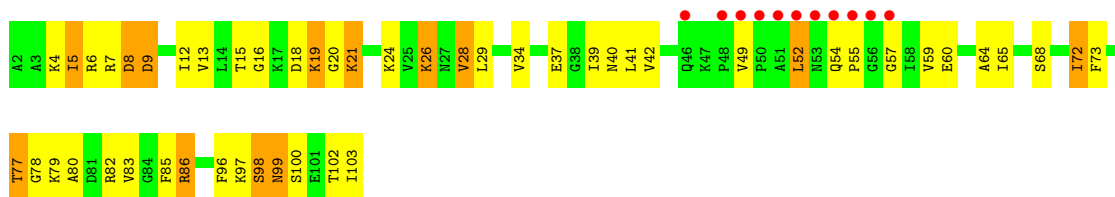


- Molecule 41: 50S ribosomal protein L23

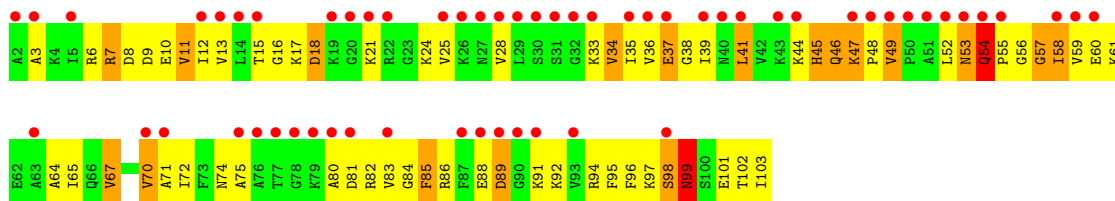




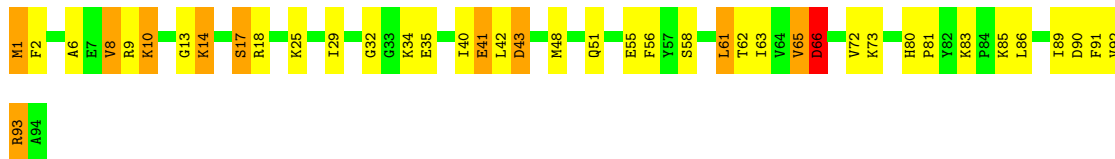
- Molecule 42: 50S ribosomal protein L24



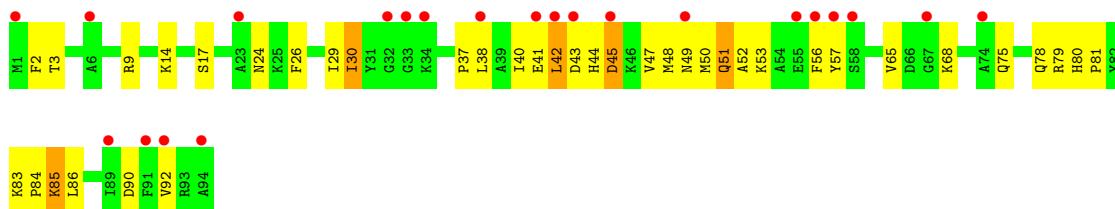
- Molecule 42: 50S ribosomal protein L24



- Molecule 43: 50S ribosomal protein L25

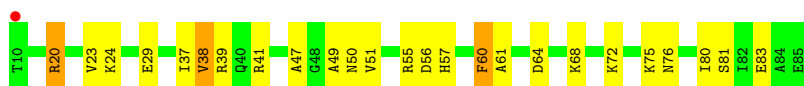


- Molecule 43: 50S ribosomal protein L25

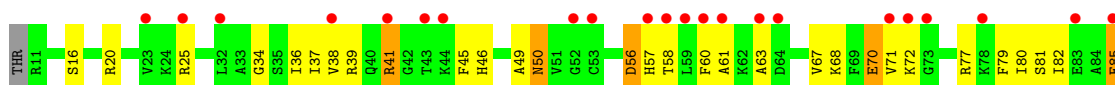


- Molecule 44: 50S ribosomal protein L27

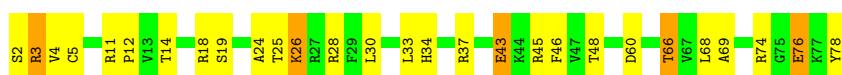




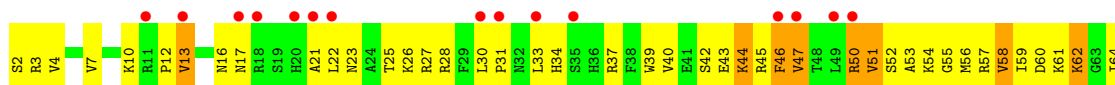
- Molecule 44: 50S ribosomal protein L27



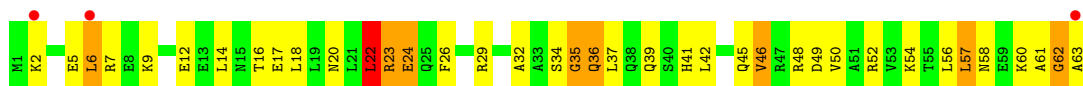
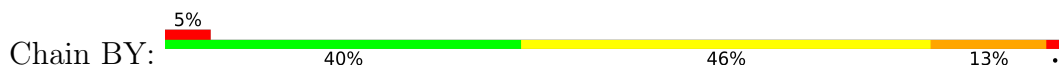
- Molecule 45: 50S ribosomal protein L28



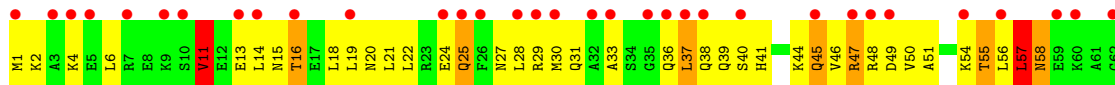
- Molecule 45: 50S ribosomal protein L28



- Molecule 46: 50S ribosomal protein L29



- Molecule 46: 50S ribosomal protein L29

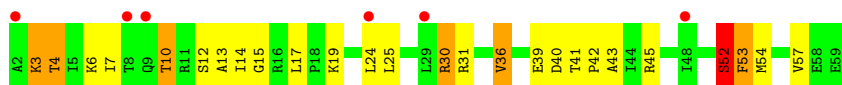


- Molecule 47: 50S ribosomal protein L30

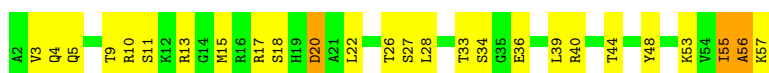




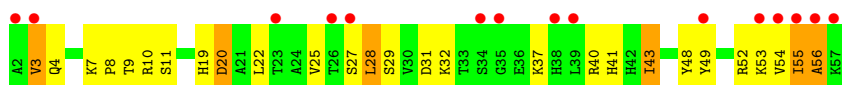
- Molecule 47: 50S ribosomal protein L30



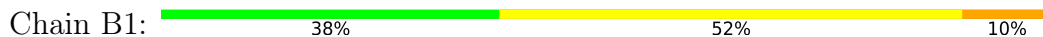
- Molecule 48: 50S ribosomal protein L32



- Molecule 48: 50S ribosomal protein L32



- Molecule 49: 50S ribosomal protein L33



- Molecule 49: 50S ribosomal protein L33

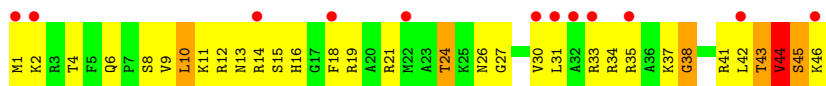


- Molecule 50: 50S ribosomal protein L34



- Molecule 50: 50S ribosomal protein L34

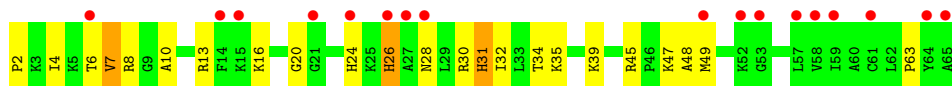




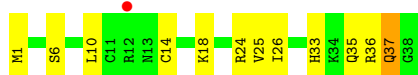
• Molecule 51: 50S ribosomal protein L35



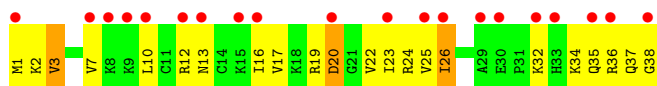
• Molecule 51: 50S ribosomal protein L35



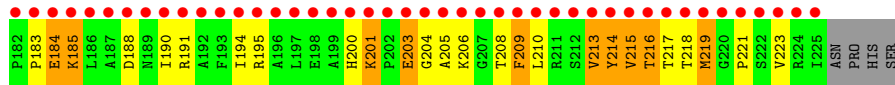
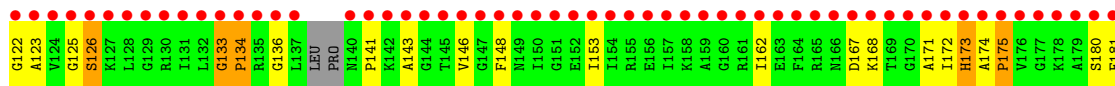
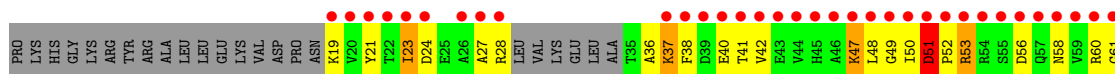
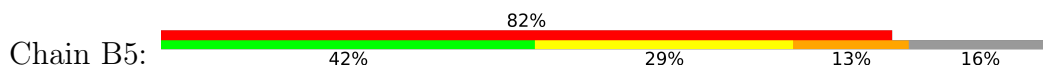
• Molecule 52: 50S ribosomal protein L36



• 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, α , β , γ	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
$\langle I/\sigma(I) \rangle$ ¹	1.40 (at 2.90Å)	Xtrriage
Refinement program	PHENIX (phenix.refine: 1.8.1_1168)	Depositor
R, R_{free}	0.220 , 0.264 0.225 , 0.269	Depositor DCC
R_{free} test set	4701 reflections (0.40%)	wwPDB-VP
Wilson B-factor (Å ²)	44.0	Xtrriage
Anisotropy	0.529	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.27 , 51.6	EDS
L-test for twinning ²	$\langle L \rangle = 0.45$, $\langle L^2 \rangle = 0.27$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.91	EDS
Total number of atoms	288276	wwPDB-VP
Average B, all atoms (Å ²)	62.0	wwPDB-VP

Xtrriage'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.*

¹Intensities estimated from amplitudes.

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

5 Model quality i

5.1 Standard geometry i

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

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:H483	55:DA:3001:DOL:H463	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:H431	55:DA:3001:DOL:HC1	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:H463	55:DA:3001:DOL:C48	1.91	0.99
22:DA:2504:U:C5	55:DA:3001:DOL:H161	1.98	0.98
22:BA:1509:A:O2'	22:BA:1510:G:OP2	1.81	0.98
55:DA:3001:DOL:H483	55:DA:3001:DOL:C46	1.92	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:858:G:N7	57:CA:1819:HOH:O	1.97	0.96
1:CA:912:C:OP1	12:CL:43:LYS:NZ	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:299:A:N3	22:DA:319:G:O2'	2.00	0.93
22:DA:2243:U:OP1	57:DA:3737:HOH:O	1.85	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
48:B0:20:ASP:OD2	48:B0:20:ASP:N	2.00	0.93
22:DA:1378:A:O2'	57:DA:3751:HOH:O	1.86	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
1:AA:537:G:OP1	12:AL:110:ARG:NH2	2.02	0.92
6:AF:91:ARG:O	6:AF:92:THR:OG1	1.86	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:BA:517:C:OP2	48:B0:10:ARG:NH2	2.03	0.91
22:DA:370:G:OP2	57:DA:3556:HOH:O	1.88	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
1:AA:880:C:OP1	12:AL:9:ARG:NH1	2.04	0.90
29:DH:83:LYS:HG3	29:DH:149:GLU:CG	2.02	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:BA:2728:U:O2'	22:BA:2729:G:OP2	1.90	0.90
22:DA:1995:U:OP1	57:DA:3805:HOH:O	1.89	0.90
7:AG:55:GLY:O	7:AG:57:SER:N	2.05	0.90
3:AC:36:ASP:OD1	3:AC:59:ARG:NH1	2.04	0.90
22:DA:2714:G:OP2	57:DA:3546:HOH:O	1.87	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
5:AE:157:ARG:O	5:AE:159:LYS:N	2.04	0.89
55:DA:3001:DOL:HC1	55:DA:3001:DOL:C43	2.00	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
1:CA:32:A:C2	1:CA:33:A:C5	2.60	0.88
22:DA:18:U:O4	57:DA:3205:HOH:O	1.92	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:2271:G:O6	57:DA:3508:HOH:O	1.89	0.88
22:DA:2627:G:O2'	22:DA:2781:A:N1	2.06	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
24:BC:70:ASN:O	24:BC:72:ASP:N	2.07	0.87
23:DB:43:C:O2	27:DF:92:ARG:NH2	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
1:AA:928:G:O2'	1:AA:1533:C:OP1	1.93	0.87
22:DA:1300:G:O6	22:DA:1626:A:O2'	1.91	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
1:AA:452:A:N6	1:AA:480:U:O2	2.08	0.86
1:AA:825:A:O2'	8:AH:13:ARG:NH1	2.07	0.86
22:BA:1001:A:OP2	57:BA:3736:HOH:O	1.93	0.86
22:DA:182:A:O2'	22:DA:433:C:O2'	1.91	0.86
1:AA:965:U:OP2	57:AA:1833:HOH:O	1.92	0.86
1:CA:484:G:H4'	1:CA:485:U:O5'	1.75	0.86
22:DA:613:A:O2'	22:DA:614:A:OP1	1.91	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:310:A:O2'	22:DA:311:A:OP2	1.92	0.86
9:CI:107:ASP:OD1	9:CI:109:ARG:NH1	2.09	0.86
22:DA:1359:A:OP1	57:DA:3610:HOH:O	1.92	0.86
22:BA:2116:G:O6	22:BA:2171:A:N6	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: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
22:DA:258:G:O2'	33:DL:104:GLN:OE1	1.93	0.85
47:DZ:52:SER:O	47:DZ:54:MET:N	2.08	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
17:AQ:17:MET:SD	17:AQ:17:MET:N	2.51	0.84
23:DB:22:U:O4	57:DB:302:HOH:O	1.94	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
34:DM:66:ARG:NH1	34:DM:104:GLU:OE1	2.11	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
10:CJ:63:ASP:OD1	14:CN:85:ARG:NH1	2.10	0.84
29:DH:82:SER:O	29:DH:84:ALA:N	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: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
22:DA:1344:U:O2'	22:DA:1345:C:OP2	1.96	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
1:CA:319:G:O6	57:CA:1735:HOH:O	1.95	0.83
22:DA:1667:G:O2'	22:DA:1991:U:O4	1.97	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
7:CG:93:PRO:O	7:CG:97:ASN:ND2	2.11	0.82
50:D2:11:LYS:NZ	57:D2:201:HOH:O	2.10	0.82
22:DA:1371:G:N7	57:DA:3399:HOH:O	2.11	0.82
9:AI:42:GLU:O	9:AI:45:ARG:NH1	2.13	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:120:GLY:C	29:BH:122:LEU:CA	2.47	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:495:A:C2	1:CA:496:A:C6	2.68	0.82
1:CA:992:U:O4'	1:CA:993:G:N2	2.13	0.82
1:CA:1046:A:N6	1:CA:1211:U:O2	2.13	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
1:CA:1007:U:O4	1:CA:1022:A:N6	2.14	0.81
22:DA:1269:A:OP2	57:DA:3385:HOH:O	1.98	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
41:BT:64:LYS:HA	41:BT:79:ASP:OD1	1.81	0.81
22:DA:1817:G:OP1	24:DC:62:TYR:OH	1.99	0.81
22:BA:974:G:H8	22:BA:990:A:H62	1.26	0.81
22:DA:443:A:N7	26:DE:40:ARG:HG3	1.96	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
1:AA:207:C:O2	1:AA:213:G:N2	2.14	0.80
7:AG:80:VAL:O	7:AG:82:GLY:N	2.14	0.80
22:BA:1061:U:O2'	22:BA:1062:G:O5'	1.98	0.80
25:BD:77:ARG:NH2	25:BD:200:ASP:OD1	2.14	0.80
1:CA:266:G:H3'	17:CQ:69:LYS:HB2	1.64	0.80
5:CE:99:ALA:O	5:CE:101:GLU:N	2.14	0.80
6:CF:91:ARG:O	6:CF:92:THR:OG1	1.98	0.80
55:DA:3001:DOL:C6	55:DA:3001:DOL:H432	2.11	0.79
55:DA:3001:DOL:H212	55:DA:3001:DOL:O15	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
20:AT:59:ASP:OD1	20:AT:76:LYS:NZ	2.15	0.79
22:BA:622:G:OP2	57:BA:3293:HOH:O	2.00	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:BA:58:G:OP1	41:BT:78:SER:CB	2.31	0.79
22:DA:374:A:N6	22:DA:400:G:O2'	2.16	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
14:AN:64:CYS:SG	14:AN:67:THR:OG1	2.38	0.79
22:BA:1925:C:H4'	22:BA:1926:U:OP1	1.81	0.79
22:DA:777:G:C2	22:DA:778:G:C8	2.71	0.79
22:DA:2199:A:OP1	45:DX:37:ARG:NH1	2.15	0.79
14:AN:90:ARG:NH1	14:AN:92:GLU:OE2	2.16	0.79
22:BA:1379:U:C6	22:BA:1379:U:OP1	2.36	0.79
22:DA:622:G:OP2	57:DA:3292:HOH:O	2.01	0.79
23:DB:29:A:O2'	23:DB:58:A:N1	2.16	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:404:A:O2'	22:BA:405:U:OP2	2.01	0.78
22:BA:1746:A:H2'	22:BA:1747:U:C6	2.18	0.78
1:AA:684:U:O2'	11:AK:40:ASN:O	2.01	0.78
22:DA:1141:U:OP2	31:DJ:65:THR:OG1	1.99	0.78
35:DN:1:MET:HE2	35:DN:1:MET:H1	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
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:1973:G:OP1	57:DA:3462:HOH:O	2.00	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
22:BA:481:G:C4	22:BA:507:A:C2	2.72	0.77
1:CA:1499:A:OP2	57:CA:1884:HOH:O	2.00	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
22:BA:2831:G:OP1	25:BD:56:LYS:NZ	2.17	0.77
1:CA:890:G:O2'	1:CA:906:A:N6	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
1:AA:1018:G:C2	1:AA:1019:A:C8	2.73	0.76
2:AB:50:PHE:HA	2:AB:213:TYR:OH	1.85	0.76
22:BA:2287:A:OP1	49:B1:30:LYS:NZ	2.18	0.76
22:DA:1515:A:O2'	22:DA:1556:C:O2'	2.02	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
1:AA:31:G:O2'	1:AA:48:C:N4	2.18	0.76
1:AA:993:G:O2'	1:AA:994:A:N7	2.18	0.76
22:BA:1922:G:N2	22:BA:1923:U:H1'	2.00	0.76
29:DH:53:GLU:O	29:DH:55:GLU:N	2.19	0.76
1:CA:718:A:C8	1:CA:719:C:C5	2.74	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
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
22:DA:2504:U:C4	55:DA:3001:DOL:H161	2.21	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:BA:276:U:O2'	22:BA:278:A:N7	2.19	0.76
22:BA:2271:G:O6	57:BA:3514:HOH:O	2.04	0.76
22:DA:444:C:OP1	26:DE:40:ARG:NH1	2.19	0.76
49:D1:15:ALA:O	49:D1:17:THR:N	2.19	0.76
1:AA:792:A:H4'	1:AA:793:U:O5'	1.85	0.76
1:CA:527:G:C2	1:CA:528:C:C6	2.74	0.76
1:CA:567:G:O2'	57:CA:1705:HOH:O	2.04	0.76
2:CB:193:PRO:O	2:CB:195:GLY:N	2.18	0.76
22:DA:1340:U:C5	22:DA:1603:A:C8	2.75	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
2:CB:58:ASN:ND2	2:CB:220:THR:O	2.19	0.75
13:CM:13:LYS:O	13:CM:14:HIS:ND1	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
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
1:CA:1124:G:O2'	1:CA:1145:A:N6	2.18	0.75
17:CQ:69:LYS:O	17:CQ:70:THR:OG1	2.04	0.75
22:DA:2286:G:H4'	22:DA:2287:A:O5'	1.86	0.75
24:DC:70:ASN:O	24:DC:72:ASP:N	2.20	0.75
29:DH:124:THR:OG1	29:DH:125:THR:N	2.17	0.75
2:AB:63:ARG:O	2:AB:64:LYS:HB2	1.87	0.75
22:BA:2448:A:OP2	57:BA:3686:HOH:O	2.03	0.75
6:AF:91:ARG:C	6:AF:92:THR:HG1	1.89	0.75
22:BA:653:U:OP2	22:BA:653:U:C6	2.38	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
4:AD:11:LEU:HD22	4:AD:63:ARG:HD3	1.69	0.75
22:BA:731:C:OP2	57:BA:3697:HOH:O	2.04	0.75
5:CE:41:ASP:OD1	5:CE:42:GLY:N	2.20	0.75
22:BA:1464:G:O6	57:BA:3642:HOH:O	2.05	0.75
1:CA:684:U:O2'	11:CK:40:ASN:O	2.04	0.75
1:CA:734:G:C2	1:CA:735:C:C6	2.74	0.75
22:DA:49:A:C8	22:DA:51:G:N2	2.55	0.75
22:DA:788:A:OP1	22:DA:791:C:N4	2.19	0.75
46:DY:11:VAL:O	46:DY:15:ASN:ND2	2.18	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
5:AE:104:GLY:O	5:AE:105:ILE:HG22	1.87	0.75
11:AK:13:ARG:NE	22:BA:2142:A:OP1	2.20	0.75
16:AP:42:ILE:O	16:AP:44:SER:N	2.20	0.75
22:BA:617:G:N7	57:BA:3291:HOH:O	2.19	0.75
53:B5:50:ILE:C	53:B5:52:PRO:HD3	2.06	0.75
1:AA:82:G:N2	1:AA:89:U:OP1	2.19	0.74
22:BA:2711:A:OP2	57:BA:3550:HOH:O	2.05	0.74
22:DA:225:C:N4	22:DA:419:U:O2'	2.18	0.74
22:DA:2407:A:OP1	57:DA:3560:HOH:O	2.04	0.74
1:AA:251:G:C6	1:AA:266:G:C6	2.75	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1266:G:O2'	22:DA:2012:G:O6	2.03	0.74
22:DA:2127:G:O2'	22:DA:2173:A:N3	2.20	0.74
1:AA:131:A:H2'	1:AA:132:C:C6	2.23	0.74
32:BK:78:ARG:NH1	37:BP:71:GLU:OE2	2.20	0.74
2:CB:87:CYS:O	2:CB:89:GLN:N	2.20	0.74
22:BA:1378:A:O2'	22:BA:1380:G:OP2	2.05	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:DA:2550:G:OP1	57:DA:3720:HOH:O	2.05	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:88:GLY:O	29:BH:125:THR:OG1	2.04	0.74
22:BA:1179:G:C6	22:BA:1180:U:C2	2.74	0.74
22:BA:1921:G:C2	22:BA:1922:G:C8	2.76	0.74
29:BH:123:ARG:C	29:BH:124:THR:HG23	2.06	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:306:U:O2	22:DA:312:G:N2	2.21	0.74
11:AK:29:ASN:OD1	11:AK:30:THR:N	2.21	0.74
22:DA:998:C:OP2	38:DQ:58:ARG:NH2	2.20	0.74
22:DA:2063:C:H4'	55:DA:3001:DOL:H343	1.69	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
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
35:DN:90:ARG:CZ	35:DN:116:VAL:HG11	2.18	0.73
17:AQ:81:LYS:O	17:AQ:83:VAL:N	2.22	0.73
22:BA:1179:G:C5	22:BA:1180:U:H1'	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
4:AD:11:LEU:CD2	4:AD:63:ARG:HD3	2.19	0.73
21:AU:36:GLU:O	21:AU:37:PHE:HB2	1.86	0.73
22:BA:997:G:OP1	38:BQ:92:ARG:HG2	1.88	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: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:1153:C:OP1	57:DA:3359:HOH:O	2.07	0.73
22:DA:1475:G:O2'	22:DA:1476:U:OP1	2.07	0.73
22:DA:1715:G:O2'	22:DA:1743:G:O6	2.07	0.73
22:BA:455:C:N3	22:BA:472:A:H2'	2.04	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
1:AA:844:G:C6	1:AA:846:G:O2'	2.42	0.73
22:BA:1061:U:HO2'	22:BA:1062:G:P	2.12	0.73
22:BA:2189:U:H2'	22:BA:2190:G:C8	2.24	0.73
22:DA:503:A:C2	22:DA:506:G:C4	2.77	0.73
22:DA:1342:A:OP2	57:DA:3711:HOH:O	2.05	0.73
22:DA:1604:C:OP1	57:DA:3403:HOH:O	2.07	0.73
14:AN:46:LEU:O	14:AN:48:LEU:N	2.22	0.72
17:AQ:16:LYS:C	17:AQ:17:MET:SD	2.68	0.72
22:BA:84:A:N1	22:BA:98:G:O2'	2.21	0.72
22:BA:730:A:P	57:BA:3695:HOH:O	2.38	0.72
39:BR:39:LEU:HA	39:BR:49:ILE:CG2	2.19	0.72
26:DE:21:ARG:NH1	26:DE:103:GLY:O	2.21	0.72
1:AA:1074:G:OP1	5:AE:69:ARG:NH2	2.22	0.72
1:CA:679:C:O2	1:CA:712:A:C2	2.42	0.72
1:CA:1525:G:O6	57:CA:1892:HOH:O	2.05	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
22:BA:245:G:O6	51:B3:8:ARG:HD3	1.88	0.72
1:CA:552:U:C4	1:CA:553:A:N7	2.57	0.72
42:DU:36:VAL:O	42:DU:38:GLY:N	2.22	0.72
1:AA:203:G:N2	1:AA:215:C:C2	2.58	0.72
22:BA:1182:G:H2'	22:BA:1183:U:O4'	1.89	0.72
23:BB:8:C:O3'	36:BO:25:ARG:NH1	2.21	0.72
22:DA:1935:G:H1'	22:DA:1964:G:N2	2.03	0.72
22:DA:2684:U:O4'	32:DK:70:ARG:NH1	2.22	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
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
35:DN:106:ASP:O	35:DN:108:ALA:N	2.22	0.72
1:CA:1385:G:N7	57:CA:1874:HOH:O	2.22	0.72
5:CE:80:THR:OG1	5:CE:122:ASN:ND2	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
22:DA:981:A:OP2	22:DA:982:C:N4	2.22	0.72
22:BA:193:U:OP2	57:BA:3741:HOH:O	2.08	0.72
22:BA:626:A:H2'	33:BL:78:ARG:NH1	2.03	0.72
41:BT:49:LYS:HD3	41:BT:49:LYS:N	2.05	0.72
1:CA:734:G:N3	1:CA:735:C:C6	2.57	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
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
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:BA:495:G:H1'	40:BS:57:ASN:OD1	1.90	0.72
5:CE:101:GLU:O	5:CE:101:GLU:CD	2.28	0.72
22:DA:79:C:O2'	22:DA:346:A:N3	2.21	0.72
22:DA:1469:A:H2'	22:DA:1470:A:C8	2.25	0.72
1:CA:1219:A:N6	1:CA:1220:G:O6	2.23	0.72
4:CD:100:ASN:OD1	4:CD:111:ARG:NH1	2.21	0.72
2:AB:82:ASP:O	2:AB:85:LEU:N	2.23	0.71
22:DA:616:A:H4'	26:DE:101:TYR:CZ	2.24	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
16:AP:50:THR:O	16:AP:50:THR:HG22	1.90	0.71
21:AU:34:ARG:CZ	21:AU:35:ARG:HB2	2.20	0.71
22:BA:1653:G:H3'	35:BN:2:ARG:HG3	1.72	0.71
37:BP:54:GLY:O	37:BP:57:SER:OG	2.07	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
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
1:AA:109:A:H2'	1:AA:326:G:N2	2.06	0.71
22:BA:500:G:N2	22:BA:502:A:H3'	2.06	0.71
22:BA:1917:U:C4	22:BA:1918:A:C6	2.78	0.71
49:D1:5:ILE:O	49:D1:28:ARG:NH1	2.23	0.71
1:AA:154:U:C2	1:AA:168:G:N2	2.58	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
22:DA:1259:G:H2'	22:DA:1260:A:C8	2.25	0.71
22:BA:1385:A:H1'	22:BA:1386:C:C6	2.26	0.71
39:BR:49:ILE:HG22	39:BR:53:PHE:CA	2.21	0.71
22:DA:58:G:N3	22:DA:70:G:N2	2.39	0.71
22:DA:1187:G:H5''	39:DR:83:TYR:CE2	2.26	0.71
22:DA:2061:G:O6	55:DA:3001:DOL:H162	1.90	0.71
2:AB:151:ILE:HD12	2:AB:154:MET:SD	2.31	0.70
22:BA:1779:U:C5	22:BA:1784:A:N7	2.58	0.70
39:BR:48:LYS:O	39:BR:48:LYS:HG2	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
4:CD:26:ARG:HG3	4:CD:27:ALA:N	2.06	0.70
22:DA:126:A:C2	50:D2:18:PHE:CE2	2.79	0.70
22:DA:300:A:HO2'	22:DA:318:C:HO2'	1.33	0.70
22:DA:1251:C:OP2	38:DQ:6:ARG:NH2	2.24	0.70
22:BA:2555:U:C5	22:BA:2556:C:C2	2.78	0.70
4:AD:174:ASP:OD2	4:AD:176:GLY:N	2.24	0.70
5:AE:82:GLN:NE2	5:AE:150:PRO:HD3	2.06	0.70
22:BA:2291:U:H2'	22:BA:2292:U:C6	2.26	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
11:AK:76:GLU:C	22:BA:2141:G:OP1	2.29	0.70
22:BA:265:A:N1	22:BA:427:U:O2'	2.24	0.70
22:BA:1604:C:OP2	57:BA:3414:HOH:O	2.08	0.70
22:BA:2189:U:H2'	22:BA:2190:G:C1'	2.21	0.70
1:CA:1124:G:N2	1:CA:1127:G:C2	2.60	0.70
1:CA:1302:C:C4	13:CM:17:ILE:HD13	2.26	0.70
12:CL:57:LEU:O	12:CL:60:GLY:N	2.23	0.70
1:AA:1406:U:C5	1:AA:1407:C:C5	2.79	0.70
31:BJ:114:LEU:HG	31:BJ:118:MET:HE3	1.72	0.70
42:BU:12:ILE:HG21	42:BU:80:ALA:HB2	1.73	0.70
22:DA:134:G:C2	22:DA:146:A:C2	2.79	0.70
22:BA:181:A:H2'	22:BA:182:A:C8	2.26	0.70
22:BA:620:G:H4'	22:BA:621:A:O5'	1.91	0.70
22:BA:2192:U:H2'	22:BA:2193:G:H5'	1.72	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
22:DA:2004:G:OP1	57:DA:3798:HOH:O	2.09	0.70
17:AQ:69:LYS:O	17:AQ:70:THR:CB	2.39	0.70
1:CA:811:C:O2'	1:CA:901:A:N1	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:18:ARG:O	21:CU:21:ARG:N	2.24	0.70
41:DT:17:SER:O	41:DT:19:LYS:N	2.24	0.70
43:DV:51:GLN:HB3	43:DV:56:PHE:CG	2.27	0.70
11:AK:26:SER:O	11:AK:28:ASN:N	2.24	0.70
22:BA:1923:U:C2'	22:BA:1924:C:H5'	2.19	0.70
22:BA:2258:C:O2'	22:BA:2427:C:OP2	2.10	0.70
29:BH:94:ILE:HG22	29:BH:99:ILE:HG13	1.72	0.70
1:CA:977:A:H3'	1:CA:977:A:N3	2.07	0.70
2:CB:15:HIS:O	2:CB:17:GLY:N	2.25	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
22:BA:2308:G:O6	22:BA:2311:A:N7	2.24	0.70
39:BR:49:ILE:HB	39:BR:52:PRO:C	2.11	0.70
22:DA:192:C:OP1	57:DA:3737:HOH:O	2.09	0.70
22:DA:526:A:N6	22:DA:2626:C:H4'	2.06	0.70
22:DA:1649:G:C6	22:DA:2009:A:C6	2.80	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:BA:1141:U:H4'	22:BA:1142:A:O4'	1.92	0.70
22:DA:2816:G:N3	22:DA:2883:A:O2'	2.22	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
22:BA:528:A:C2	22:BA:2043:C:H5'	2.27	0.69
32:DK:34:GLY:O	32:DK:36:GLY:N	2.25	0.69
39:DR:49:ILE:HG22	39:DR:54:VAL:N	2.07	0.69
1:AA:144:G:C4	1:AA:179:A:C2	2.79	0.69
11:AK:76:GLU:O	11:AK:77:TYR:CD1	2.45	0.69
35:BN:65:LEU:HD11	35:BN:69:ARG:NH2	2.05	0.69
1:CA:376:G:H5'	16:CP:5:ARG:HB3	1.74	0.69
1:CA:496:A:C2	1:CA:497:G:C5	2.80	0.69
1:CA:582:C:N3	1:CA:760:G:C6	2.60	0.69
5:CE:155:ALA:HB1	8:CH:66:PHE:CD2	2.26	0.69
22:DA:864:G:C6	22:DA:865:C:N4	2.60	0.69
22:DA:2134:A:OP2	22:DA:2157:G:N2	2.24	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: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
22:DA:1809:A:H2'	22:DA:1810:A:C8	2.27	0.69
11:AK:102:ALA:O	11:AK:104:GLY:N	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:CA:495:A:C2	1:CA:496:A:N6	2.60	0.69
22:DA:1509:A:O2'	22:DA:1510:G:P	2.51	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
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
28:DG:111:HIS:ND1	28:DG:111:HIS:O	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:46:G:C2	22:DA:47:C:C5	2.79	0.69
22:DA:1088:A:N6	30:DI:135:SER:OG	2.24	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
2:AB:21:ARG:HA	2:AB:21:ARG:CZ	2.22	0.69
4:AD:120:HIS:O	4:AD:122:ALA:N	2.26	0.69
33:BL:82:LEU:HD23	33:BL:83:ALA:N	2.07	0.69
1:CA:533:A:O2'	1:CA:535:A:OP2	2.11	0.69
1:CA:1348:U:H4'	9:CI:122:ARG:HG3	1.74	0.69
22:DA:1208:C:C4	22:DA:1209:U:C4	2.81	0.69
25:DD:151:THR:O	25:DD:152:PRO:C	2.30	0.69
22:BA:997:G:OP1	38:BQ:92:ARG:CG	2.41	0.69
1:CA:688:G:O2'	1:CA:704:A:N1	2.21	0.69
9:CI:12:ARG:NH1	9:CI:107:ASP:OD2	2.26	0.69
22:DA:39:G:C6	22:DA:40:U:C4	2.81	0.69
22:DA:152:A:C2	22:DA:175:G:C2	2.81	0.69
22:DA:608:A:H2'	22:DA:609:A:C8	2.27	0.69
22:DA:740:C:H5'	22:DA:1784:A:H3'	1.75	0.69
22:DA:763:G:OP1	57:DA:3691:HOH:O	2.11	0.69
22:DA:2115:G:O2'	22:DA:2117:A:N6	2.25	0.69
35:DN:1:MET:H1	35:DN:1:MET:CE	2.05	0.69
2:AB:87:CYS:O	2:AB:89:GLN:N	2.26	0.69
22:BA:2191:A:H2'	22:BA:2192:U:C6	2.28	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
1:CA:1095:U:OP2	57:CA:1858:HOH:O	2.09	0.69
22:DA:362:A:C5	22:DA:363:G:C8	2.81	0.69
22:DA:377:G:C6	22:DA:378:C:C4	2.81	0.69
1:AA:858:G:O6	57:AA:1824:HOH:O	2.09	0.69
22:BA:686:U:H2'	22:BA:788:A:N1	2.08	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1494:A:C2'	22:BA:1495:A:O5'	2.41	0.69
37:BP:52:ASN:O	37:BP:53:ARG:HG2	1.93	0.69
1:CA:8:A:C6	4:CD:206:LYS:HB3	2.28	0.69
22:DA:53:A:N7	22:DA:54:G:C4	2.61	0.69
22:DA:414:C:O2	22:DA:2410:G:N2	2.25	0.69
22:DA:2886:A:C2	22:DA:2887:A:H1'	2.28	0.69
11:AK:38:GLN:O	11:AK:40:ASN:ND2	2.26	0.68
12:AL:24:LEU:O	12:AL:25:GLU:C	2.30	0.68
13:AM:64:VAL:O	13:AM:64:VAL:HG12	1.93	0.68
1:CA:1004:A:O2'	1:CA:1036:A:N1	2.26	0.68
22:DA:732:C:OP2	57:DA:3297:HOH:O	2.11	0.68
22:DA:1773:A:N7	22:DA:1829:A:H1'	2.08	0.68
32:DK:76:VAL:HG12	37:DP:73:VAL:HG22	1.74	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
16:AP:46:LYS:HD3	16:AP:47:GLU:N	2.07	0.68
22:BA:752:A:C2	22:BA:1781:U:C2	2.82	0.68
22:BA:1433:A:O2'	22:BA:1434:A:H5'	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
29:BH:117:LEU:O	29:BH:121:VAL:HG22	1.93	0.68
1:CA:511:C:C2	1:CA:512:U:C5	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
1:AA:1093:A:N3	1:AA:1109:C:O2'	2.20	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
22:DA:1973:G:C6	22:DA:1974:C:C4	2.82	0.68
22:DA:2199:A:C6	22:DA:2200:C:C2	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: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: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:AA:1299:A:H2'	1:AA:1299:A:N3	2.09	0.68
16:AP:60:TRP:O	16:AP:63:GLN:N	2.27	0.68
12:CL:20:ASN:N	12:CL:20:ASN:OD1	2.26	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)
22:DA:2146:C:H5''	22:DA:2147:A:OP1	1.92	0.68
22:DA:2788:C:O2'	22:DA:2809:A:N3	2.23	0.68
22:BA:357:C:H2'	22:BA:358:U:C6	2.28	0.68
22:BA:2584:U:C5	22:BA:2585:U:C6	2.81	0.68
22:DA:590:A:C6	22:DA:591:U:C4	2.82	0.68
22:DA:1351:C:OP2	57:DA:3397:HOH:O	2.11	0.68
22:DA:1638:C:H5''	22:DA:2710:C:O2'	1.93	0.68
22:DA:2575:C:OP2	57:DA:3707:HOH:O	2.10	0.68
30:DI:80:LEU:HD13	30:DI:136:MET:SD	2.33	0.68
25:BD:62:LYS:HB2	25:BD:63:PRO:HD3	1.76	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
22:DA:1411:U:H2'	22:DA:1412:U:O4'	1.94	0.68
22:DA:2453:A:N7	57:DA:3525:HOH:O	2.25	0.68
35:DN:55:ALA:HA	35:DN:80:PHE:CE1	2.28	0.68
1:AA:81:A:H2'	1:AA:82:G:H5''	1.76	0.68
4:AD:3:ARG:CZ	4:AD:115:ARG:HD3	2.23	0.68
22:BA:618:G:N7	57:BA:3287:HOH:O	2.27	0.68
22:BA:792:A:N3	22:BA:2072:C:O2'	2.22	0.68
22:BA:2032:G:N7	57:BA:3537:HOH:O	2.25	0.68
22:DA:301:G:O4'	22:DA:317:G:N2	2.27	0.68
22:DA:593:U:H2'	22:DA:594:U:C6	2.29	0.68
22:DA:826:U:O2'	33:DL:53:GLY:HA3	1.94	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
1:CA:706:A:C5	1:CA:707:U:C5	2.82	0.68
1:CA:1297:G:O2'	7:CG:114:LYS:NZ	2.21	0.68
1:CA:1316:G:N1	1:CA:1319:A:OP2	2.27	0.68
22:DA:271:G:C2	22:DA:367:G:C2	2.82	0.68
22:DA:425:G:C2	22:DA:426:C:C4	2.81	0.68
19:AS:22:ALA:O	19:AS:26:GLY:N	2.27	0.67
22:BA:555:G:O2'	22:BA:556:A:OP2	2.11	0.67
22:BA:1435:G:O2'	22:BA:1436:G:H5'	1.93	0.67
42:BU:82:ARG:O	42:BU:97:LYS:HG2	1.93	0.67
1:CA:802:A:C2	1:CA:803:G:H1'	2.28	0.67
4:CD:105:MET:SD	4:CD:143:VAL:HG13	2.33	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
22:DA:2655:G:O2'	22:DA:2656:U:P	2.51	0.67
25:BD:125:TRP:CD2	25:BD:160:LYS:HD2	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:122:LEU:HD23	29:BH:123:ARG:N	2.10	0.67
1:CA:1490:U:H2'	1:CA:1491:G:O4'	1.93	0.67
22:DA:1638:C:O2	22:DA:2698:U:O2'	2.11	0.67
22:DA:2504:U:C5	55:DA:3001:DOL:C16	2.77	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
22:BA:1421:G:C2	22:BA:1422:G:C8	2.83	0.67
23:BB:116:G:H4'	36:BO:54:VAL:HG13	1.75	0.67
33:BL:68:SER:O	33:BL:69:ARG:HB2	1.94	0.67
22:DA:2874:C:H2'	22:DA:2875:C:C6	2.29	0.67
25:BD:101:PHE:O	25:BD:103:ASP:N	2.26	0.67
1:CA:499:A:C6	1:CA:547:A:C8	2.82	0.67
1:CA:718:A:C5	11:CK:118:HIS:CD2	2.83	0.67
1:CA:1279:G:H2'	1:CA:1279:G:N3	2.08	0.67
9:CI:19:VAL:HG21	9:CI:82:GLY:HA3	1.77	0.67
22:DA:2091:C:H3'	22:DA:2092:U:H5''	1.75	0.67
22:DA:2111:U:C5	22:DA:2145:C:H2'	2.29	0.67
14:AN:91:GLY:O	14:AN:93:ILE:N	2.27	0.67
22:BA:1494:A:C2	22:BA:1495:A:C4	2.83	0.67
12:CL:25:GLU:O	12:CL:27:CYS:N	2.27	0.67
22:DA:2171:A:O2'	22:DA:2173:A:OP1	2.12	0.67
23:DB:48:U:H4'	36:DO:100:HIS:CD2	2.30	0.67
25:DD:140:HIS:NE2	57:DD:303:HOH:O	2.28	0.67
22:BA:682:G:H5'	50:B2:26:ASN:OD1	1.95	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:21:ARG:HA	2:CB:21:ARG:CZ	2.25	0.67
2:CB:96:TRP:CE2	2:CB:172:ALA:HB2	2.29	0.67
4:CD:174:ASP:CG	4:CD:175:ALA:N	2.48	0.67
5:CE:146:ASN:N	5:CE:146:ASN:OD1	2.27	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: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:453:A:OP1	57:DA:3242:HOH:O	2.12	0.67
22:DA:846:U:O2'	22:DA:847:U:O5'	2.12	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
1:AA:258:G:O6	57:AA:1811:HOH:O	2.12	0.67
15:AO:63:ARG:HG2	15:AO:67:LEU:HD12	1.77	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)
26:BE:111:GLU:HG2	26:BE:114:ARG:NH1	2.10	0.67
22:DA:1138:G:O2'	31:DJ:104:ALA:O	2.12	0.67
22:DA:2707:U:O2	35:DN:71:ARG:NH1	2.28	0.67
22:BA:826:U:O2'	33:BL:53:GLY:HA3	1.94	0.67
22:BA:1057:A:N6	22:BA:1087:G:OP2	2.28	0.67
22:BA:1924:C:C2'	22:BA:1925:C:H5''	2.24	0.67
22:BA:2346:A:H4'	22:BA:2347:C:OP2	1.93	0.67
30:BI:39:CYS:HA	30:BI:42:PHE:CB	2.25	0.67
22:DA:247:G:H4'	22:DA:386:G:C4	2.30	0.67
28:DG:118:PRO:CG	28:DG:144:VAL:HG21	2.25	0.67
42:DU:38:GLY:HA2	42:DU:41:LEU:CD2	2.25	0.67
8:AH:111:MET:HE1	8:AH:116:ALA:HA	1.77	0.67
22:BA:2063:C:O2'	55:BA:3001:DOL:H343	1.95	0.67
22:BA:2886:A:C5	22:BA:2887:A:C8	2.83	0.67
29:BH:27:ARG:O	29:BH:28:ASN:HB2	1.95	0.67
40:BS:83:LYS:O	40:BS:84:ARG:HD3	1.95	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
1:CA:1381:U:C2'	1:CA:1382:C:O5'	2.43	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
1:AA:209:U:H4'	1:AA:210:C:OP2	1.94	0.66
22:BA:1277:G:H5'	35:BN:20:MET:CE	2.25	0.66
22:BA:1922:G:N3	22:BA:1922:G:H2'	2.10	0.66
22:BA:2499:C:OP2	57:BA:3687:HOH:O	2.13	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:DA:2603:G:C6	22:DA:2604:U:C4	2.83	0.66
55:DA:3001:DOL:C43	55:DA:3001:DOL:C1	2.73	0.66
32:DK:87:LEU:HD22	32:DK:92:GLU:HA	1.76	0.66
14:AN:51:LEU:O	14:AN:53:ARG:N	2.28	0.66
22:BA:1584:U:O2	22:BA:1584:U:H2'	1.95	0.66
22:BA:1838:C:C5	22:BA:1899:A:C6	2.83	0.66
29:BH:94:ILE:CG2	29:BH:99:ILE:HG13	2.26	0.66
1:CA:309:A:O2'	1:CA:607:A:N1	2.27	0.66
4:CD:105:MET:SD	4:CD:143:VAL:CG1	2.84	0.66
18:CR:20:GLU:N	18:CR:55:LEU:HD12	2.09	0.66
22:DA:2453:A:C2	57:DA:3529:HOH:O	2.48	0.66
1:AA:582:C:C2	1:AA:583:A:C8	2.83	0.66
1:AA:1018:G:N3	1:AA:1018:G:H2'	2.11	0.66
39:BR:24:LYS:HA	39:BR:94:THR:HG23	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1345:U:C2	1:CA:1377:A:C2	2.84	0.66
22:DA:1131:G:O6	22:DA:2024:G:O2'	2.13	0.66
22:DA:1525:A:C2	22:DA:1526:C:C2	2.82	0.66
22:DA:2594:C:N4	22:DA:2595:G:O6	2.28	0.66
22:DA:2843:G:N2	22:DA:2875:C:C2	2.64	0.66
42:DU:7:ARG:HG3	42:DU:8:ASP:N	2.11	0.66
1:AA:89:U:O2'	1:AA:90:C:C5'	2.44	0.66
1:AA:1204:A:OP1	57:AA:1782:HOH:O	2.13	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
25:BD:133:THR:CG2	25:BD:134:HIS:CD2	2.78	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
22:DA:2056:G:O6	22:DA:2612:C:N3	2.28	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
1:AA:1191:A:OP2	3:AC:3:GLN:NE2	2.29	0.66
22:BA:528:A:C2	22:BA:2043:C:H4'	2.30	0.66
22:BA:1924:C:H2'	22:BA:1925:C:C5'	2.26	0.66
11:CK:27:PHE:CZ	11:CK:89:PRO:HG2	2.30	0.66
22:DA:363:G:H2'	22:DA:364:C:C6	2.31	0.66
22:DA:674:G:H1'	26:DE:69:ARG:NE	2.11	0.66
22:DA:1509:A:O2'	22:DA:1510:G:OP2	2.14	0.66
22:DA:2580:U:OP2	57:DA:3540:HOH:O	2.13	0.66
20:AT:83:ILE:O	20:AT:87:ALA:HB3	1.95	0.66
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.30	0.66
6:CF:45:ARG:O	6:CF:56:LYS:HA	1.96	0.66
22:DA:1141:U:H4'	22:DA:1142:A:O4'	1.95	0.66
22:DA:2452:C:C4'	55:DA:3001:DOL:H461	2.25	0.66
26:DE:149:ILE:CD1	26:DE:172:ALA:HA	2.24	0.66
1:AA:859:G:H2'	1:AA:860:A:C8	2.30	0.66
15:AO:63:ARG:HG2	15:AO:67:LEU:CD1	2.26	0.66
22:BA:817:C:OP1	57:BA:3583:HOH:O	2.12	0.66
22:BA:933:A:H5'	22:BA:934:U:OP2	1.95	0.66
22:BA:2683:C:OP1	37:BP:51:ARG:NH2	2.28	0.66
24:BC:136:PRO:O	24:BC:139:SER:OG	2.09	0.66
1:CA:70:U:H2'	1:CA:94:G:N7	2.11	0.66
1:CA:1225:A:H2'	1:CA:1226:C:C5	2.29	0.66
8:CH:2:SER:O	8:CH:4:GLN:N	2.29	0.66
18:CR:22:ASP:OD1	18:CR:23:TYR:N	2.28	0.66
22:DA:226:A:N6	22:DA:227:A:N1	2.44	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:341:C:H2'	22:DA:342:A:C8	2.30	0.66
22:DA:1454:C:OP1	35:DN:63:ARG:NH2	2.29	0.66
22:DA:1475:G:O2'	22:DA:1476:U:P	2.53	0.66
22:DA:2838:G:O2'	35:DN:45:ARG:NH1	2.28	0.66
1:AA:1493:A:C8	1:AA:1493:A:OP2	2.49	0.66
30:BI:97:LYS:CG	30:BI:139:VAL:HG22	2.26	0.66
35:BN:73:ASN:HA	35:BN:76:VAL:HG12	1.78	0.66
4:CD:99:ASP:OD1	4:CD:100:ASN:N	2.29	0.66
6:CF:8:PHE:CZ	6:CF:60:VAL:HB	2.31	0.66
22:DA:1607:C:O2	22:DA:1621:U:C4	2.49	0.66
30:DI:69:PHE:N	30:DI:69:PHE:CD1	2.64	0.66
22:BA:622:G:OP2	57:BA:3294:HOH:O	2.14	0.65
22:BA:2189:U:H2'	22:BA:2190:G:N9	2.10	0.65
22:BA:2711:A:OP2	57:BA:3552:HOH:O	2.14	0.65
41:BT:2:ILE:CA	41:BT:3:ARG:HB2	2.26	0.65
1:CA:485:U:OP2	1:CA:485:U:H4'	1.96	0.65
1:CA:604:G:H2'	1:CA:605:U:O4'	1.96	0.65
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.30	0.65
5:CE:133:PRO:O	5:CE:137:VAL:HG12	1.95	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
22:DA:2550:G:O6	22:DA:2551:C:N4	2.28	0.65
1:AA:926:G:N2	1:AA:1505:G:H2'	2.12	0.65
16:AP:10:GLY:HA3	16:AP:15:PRO:HA	1.78	0.65
27:BF:132:VAL:HG22	27:BF:152:LEU:HB3	1.78	0.65
2:CB:206:ALA:O	2:CB:208:ARG:N	2.29	0.65
22:DA:1444:G:C2	22:DA:1548:A:C2	2.84	0.65
22:BA:1509:A:HO2'	22:BA:1510:G:P	2.16	0.65
29:BH:14:SER:O	29:BH:15:LEU:HB2	1.95	0.65
32:BK:70:ARG:HD3	32:BK:76:VAL:HG22	1.78	0.65
46:BY:35:GLY:O	46:BY:36:GLN:O	2.14	0.65
48:B0:55:ILE:O	48:B0:56:ALA:CB	2.44	0.65
1:CA:1105:A:C2	1:CA:1106:G:N7	2.65	0.65
22:DA:618:G:N7	57:DA:3289:HOH:O	2.28	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
22:BA:447:A:OP2	57:BA:3210:HOH:O	2.14	0.65
22:BA:1688:U:H1'	22:BA:1701:A:C6	2.32	0.65
26:BE:108:ILE:HD11	26:BE:180:LEU:HB3	1.79	0.65
42:BU:49:VAL:CG2	42:BU:49:VAL:O	2.44	0.65
22:DA:443:A:N7	26:DE:40:ARG:CG	2.59	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:564:C:O4'	38:DQ:37:GLN:NE2	2.29	0.65
22:DA:1203:U:H1'	33:DL:4:ASN:HB3	1.79	0.65
22:DA:2061:G:H2'	22:DA:2501:C:O2'	1.96	0.65
11:AK:13:ARG:N	22:BA:2141:G:H4'	2.11	0.65
22:BA:1439:A:C2	22:BA:1553:A:C5	2.85	0.65
27:BF:2:ALA:O	27:BF:4:LEU:N	2.30	0.65
29:BH:139:PHE:O	29:BH:140:ALA:CB	2.44	0.65
30:BI:19:ASN:N	30:BI:20:PRO:CD	2.60	0.65
48:B0:33:THR:HG22	48:B0:33:THR:O	1.97	0.65
1:CA:378:G:C2	1:CA:386:C:O2	2.50	0.65
1:CA:858:G:O6	1:CA:869:G:H3'	1.96	0.65
1:CA:1127:G:H5'	1:CA:1280:A:O2'	1.96	0.65
22:DA:192:C:N4	22:DA:193:U:O2	2.29	0.65
26:DE:108:ILE:HD13	26:DE:181:ILE:CG1	2.26	0.65
7:AG:111:ARG:NH1	7:AG:123:GLU:OE2	2.29	0.65
11:AK:34:ILE:HB	11:AK:74:VAL:HG11	1.77	0.65
17:AQ:12:VAL:HG12	17:AQ:13:VAL:N	2.10	0.65
17:AQ:53:CYS:SG	17:AQ:75:LEU:HD23	2.37	0.65
22:BA:636:G:N7	33:BL:109:LYS:NZ	2.39	0.65
22:BA:2043:C:OP1	22:BA:2777:G:O2'	2.12	0.65
25:BD:104:VAL:O	25:BD:105:LYS:HB2	1.97	0.65
29:BH:114:GLU:HB3	29:BH:133:GLN:O	1.97	0.65
1:CA:160:A:H2'	1:CA:161:A:O4'	1.97	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:866:A:O4'	22:DA:914:G:N2	2.30	0.65
22:DA:2164:C:H2'	22:DA:2165:C:C6	2.32	0.65
22:DA:2226:C:H2'	22:DA:2227:A:O4'	1.97	0.65
22:DA:2306:C:OP2	22:DA:2307:G:O2'	2.07	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
1:AA:89:U:O2'	1:AA:90:C:H5''	1.96	0.65
1:AA:1320:C:N3	19:AS:36:ARG:NH1	2.43	0.65
5:AE:90:THR:HG22	5:AE:91:GLY:N	2.11	0.65
22:BA:2063:C:O2	22:BA:2450:A:N1	2.29	0.65
22:BA:2269:G:OP1	57:BA:3513:HOH:O	2.14	0.65
48:B0:48:TYR:CE2	48:B0:53:LYS:HB2	2.32	0.65
1:CA:801:U:H2'	1:CA:802:A:H8	1.62	0.65
1:CA:1460:C:N4	1:CA:1461:G:C6	2.65	0.65
22:DA:70:G:N2	22:DA:71:A:N1	2.44	0.65
22:DA:2079:U:H2'	22:DA:2080:A:O4'	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2599:G:N7	24:DC:236:GLU:HB3	2.12	0.65
35:DN:107:ASN:ND2	35:DN:107:ASN:O	2.30	0.65
1:AA:657:U:O2	15:AO:22:THR:CG2	2.45	0.65
22:BA:747:U:C4	22:BA:2613:U:C5	2.84	0.65
22:BA:2800:A:C2	22:BA:2895:G:H1'	2.31	0.65
11:CK:88:GLY:N	11:CK:114:THR:HG22	2.11	0.65
22:DA:996:A:C2	22:DA:997:G:C8	2.85	0.65
34:DM:19:GLY:O	34:DM:38:ARG:NH1	2.29	0.65
22:BA:813:U:H2'	22:BA:814:C:C6	2.32	0.65
22:BA:1358:G:N7	57:BA:3406:HOH:O	2.30	0.65
39:BR:39:LEU:HA	39:BR:49:ILE:HG23	1.79	0.65
1:CA:17:U:H2'	1:CA:18:C:C6	2.31	0.65
1:CA:485:U:O2'	1:CA:486:U:OP1	2.14	0.65
22:DA:301:G:H1'	22:DA:302:C:C6	2.32	0.65
22:DA:757:G:N7	57:DA:3303:HOH:O	2.29	0.65
22:DA:1359:A:C8	22:DA:1373:A:N1	2.65	0.65
22:DA:2589:A:OP1	57:DA:3311:HOH:O	2.14	0.65
1:AA:597:G:C2	1:AA:644:U:C2	2.84	0.65
12:AL:21:VAL:HG23	12:AL:95:TYR:CE1	2.31	0.65
14:AN:54:ASP:OD1	14:AN:59:ARG:NH1	2.27	0.65
22:BA:858:G:H3'	22:BA:859:G:C8	2.32	0.65
22:BA:1078:U:H1'	22:BA:1088:A:C2	2.32	0.65
22:BA:2711:A:P	57:BA:3550:HOH:O	2.55	0.65
53:B5:121:MET:CB	53:B5:143:ALA:HB1	2.27	0.65
1:CA:64:G:C8	1:CA:99:C:N4	2.65	0.65
1:CA:154:U:C2	1:CA:168:G:N2	2.65	0.65
4:CD:174:ASP:O	4:CD:175:ALA:CB	2.44	0.65
19:CS:66:MET:SD	19:CS:74:PHE:CZ	2.90	0.65
22:DA:1237:A:H4'	22:DA:1238:G:OP1	1.96	0.65
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.32	0.64
5:AE:82:GLN:HG2	5:AE:150:PRO:HB3	1.78	0.64
7:AG:40:GLU:HB2	7:AG:44:TYR:CE2	2.32	0.64
16:AP:79:ASN:O	16:AP:80:LYS:HB2	1.96	0.64
22:BA:2637:U:C2'	22:BA:2638:G:H5'	2.27	0.64
1:CA:8:A:C5	4:CD:206:LYS:HB3	2.31	0.64
22:DA:54:G:C2	22:DA:55:G:C8	2.85	0.64
22:DA:290:U:C4	22:DA:291:G:N7	2.65	0.64
22:DA:1566:A:C2	24:DC:213:TRP:CD2	2.85	0.64
22:DA:2307:G:OP1	22:DA:2308:G:N2	2.29	0.64
34:DM:2:LEU:O	34:DM:3:GLN:HB3	1.96	0.64
35:DN:71:ARG:HH21	35:DN:71:ARG:CG	2.10	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:D2:35:ARG:O	50:D2:38:GLY:N	2.30	0.64
1:AA:11:G:C5	1:AA:12:U:C5	2.85	0.64
4:AD:130:VAL:HG11	4:AD:135:TYR:CD1	2.33	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
22:BA:1428:C:C5	22:BA:1569:A:H5''	2.32	0.64
29:BH:122:LEU:C	29:BH:123:ARG:HG2	2.17	0.64
51:B3:27:ALA:O	51:B3:28:ASN:HB2	1.98	0.64
4:CD:59:GLN:OE1	4:CD:59:GLN:HA	1.96	0.64
16:CP:39:PHE:CD1	16:CP:74:LEU:HD11	2.32	0.64
1:AA:1006:G:OP1	1:AA:1037:C:O2'	2.15	0.64
1:AA:1053:G:O5'	1:AA:1054:C:H3'	1.96	0.64
17:AQ:12:VAL:O	17:AQ:13:VAL:HG12	1.97	0.64
22:BA:1700:A:H5'	22:BA:1701:A:OP2	1.97	0.64
23:BB:30:C:H2'	23:BB:31:C:H5'	1.79	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
1:CA:1007:U:H2'	1:CA:1008:U:C5'	2.27	0.64
12:CL:57:LEU:O	12:CL:59:ASN:N	2.29	0.64
22:DA:694:U:C2'	22:DA:695:G:H5''	2.27	0.64
22:DA:878:A:N6	22:DA:899:A:O2'	2.31	0.64
22:DA:1416:G:C4	22:DA:1417:C:C5	2.86	0.64
22:DA:1603:A:OP1	57:DA:3409:HOH:O	2.14	0.64
22:DA:1802:A:C2	22:DA:1803:A:C4	2.85	0.64
22:DA:2199:A:C5	22:DA:2225:A:C6	2.85	0.64
22:DA:2824:C:N4	22:DA:2825:G:N7	2.45	0.64
1:AA:683:G:N2	11:AK:39:GLY:O	2.30	0.64
17:AQ:16:LYS:N	17:AQ:17:MET:SD	2.71	0.64
22:BA:747:U:C4	22:BA:2613:U:C4	2.86	0.64
22:BA:2591:C:OP1	24:BC:238:ARG:NH1	2.29	0.64
27:BF:176:PRO:O	27:BF:177:PHE:CG	2.51	0.64
1:CA:945:G:C2	1:CA:946:A:C8	2.85	0.64
1:CA:1211:U:O2'	1:CA:1212:U:OP2	2.15	0.64
1:CA:1255:G:C6	1:CA:1279:G:C8	2.86	0.64
2:CB:35:ARG:O	2:CB:37:LYS:N	2.31	0.64
10:CJ:91:ASP:N	10:CJ:91:ASP:OD1	2.30	0.64
22:DA:72:U:O2'	22:DA:73:A:O5'	2.14	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
1:AA:1310:G:OP2	13:AM:87:ARG:NH2	2.31	0.64
5:AE:81:LEU:HB3	5:AE:147:MET:HE3	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:21:PHE:HA	14:AN:25:ALA:HB3	1.78	0.64
22:BA:1153:C:P	57:BA:3364:HOH:O	2.54	0.64
22:BA:1474:U:C2'	22:BA:1475:G:H5'	2.27	0.64
24:BC:252:THR:O	24:BC:253:LYS:C	2.33	0.64
26:BE:155:GLU:OE1	26:BE:155:GLU:HA	1.97	0.64
39:BR:68:ARG:HD3	39:BR:92:TRP:CZ2	2.33	0.64
2:CB:119:THR:O	2:CB:120:GLN:HB2	1.98	0.64
9:CI:33:ARG:NE	9:CI:37:GLN:OE1	2.30	0.64
22:DA:2147:A:H2'	22:DA:2148:G:O4'	1.98	0.64
25:DD:12:THR:OG1	25:DD:13:ARG:N	2.30	0.64
31:DJ:41:LYS:NZ	31:DJ:52:ASP:OD2	2.19	0.64
33:DL:38:GLN:O	33:DL:40:SER:N	2.29	0.64
37:DP:103:ARG:HB3	37:DP:108:ALA:HB2	1.80	0.64
13:AM:114:LYS:CB	13:AM:115:PRO:HD3	2.26	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
22:DA:583:G:C5	22:DA:584:C:C5	2.86	0.64
22:DA:1027:A:C6	22:DA:1126:A:N3	2.66	0.64
10:AJ:35:GLN:CG	10:AJ:77:VAL:HB	2.27	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
23:BB:116:G:H4'	36:BO:54:VAL:O	1.97	0.64
35:BN:66:ALA:O	35:BN:69:ARG:O	2.15	0.64
48:B0:55:ILE:O	48:B0:56:ALA:HB3	1.98	0.64
1:CA:829:G:C5	1:CA:858:G:N2	2.66	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:DA:1907:G:C2	22:DA:1924:C:C2	2.85	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
1:AA:1500:A:OP2	57:AA:1872:HOH:O	2.14	0.64
22:BA:2419:U:O2'	22:BA:2420:C:H5'	1.97	0.64
1:CA:563:A:H2'	1:CA:567:G:C8	2.33	0.64
1:CA:706:A:O2'	11:CK:31:ILE:HD11	1.98	0.64
22:DA:144:A:C2	22:DA:145:C:C2	2.85	0.64
22:DA:388:G:N7	22:DA:390:U:H2'	2.12	0.64
22:DA:668:A:C2	22:DA:670:A:C5	2.86	0.64
1:AA:650:G:C2'	1:AA:651:C:H5'	2.28	0.64
3:AC:139:GLN:O	3:AC:141:ALA:N	2.29	0.64
22:BA:645:C:O2'	22:BA:646:U:H5''	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1246:A:H2'	22:BA:1247:A:O5'	1.98	0.64
22:BA:2343:U:HO2'	22:BA:2373:G:HO2'	1.43	0.64
42:BU:12:ILE:CG2	42:BU:80:ALA:HB2	2.28	0.64
1:CA:527:G:C6	1:CA:528:C:C5	2.86	0.64
22:DA:192:C:C5	22:DA:193:U:C2	2.86	0.64
22:DA:422:A:C2	22:DA:423:A:C4	2.86	0.64
25:DD:208:LYS:O	25:DD:209:ALA:CB	2.46	0.64
40:DS:66:ILE:O	40:DS:68:ASP:N	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
20:AT:81:ALA:O	20:AT:85:LYS:HG2	1.96	0.64
22:BA:265:A:H4'	22:BA:266:G:OP1	1.98	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
40:BS:73:LYS:HB2	40:BS:106:VAL:HB	1.79	0.64
17:CQ:21:ILE:N	17:CQ:48:ASP:OD1	2.30	0.64
22:DA:187:G:C2	22:DA:210:C:C2	2.86	0.64
22:DA:1359:A:C8	22:DA:1373:A:C2	2.86	0.64
26:DE:128:ALA:O	26:DE:130:LYS:N	2.31	0.64
34:DM:136:MET:O	43:DV:79:ARG:NH2	2.31	0.64
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
24:BC:8:PRO:HB3	24:BC:14:ARG:HB2	1.80	0.63
1:CA:664:G:N2	1:CA:666:G:C8	2.66	0.63
15:CO:18:ASP:OD1	15:CO:20:ASN:N	2.30	0.63
22:DA:200:U:O4	22:DA:248:G:C2	2.51	0.63
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
1:AA:663:A:N1	1:AA:743:A:C2	2.66	0.63
22:BA:2820:A:N1	25:BD:197:THR:HG22	2.13	0.63
38:BQ:79:PHE:CZ	38:BQ:83:LEU:HD11	2.34	0.63
43:BV:80:HIS:CE1	43:BV:83:LYS:CG	2.81	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
8:CH:2:SER:C	8:CH:4:GLN:H	2.01	0.63
22:DA:297:G:C8	57:DA:3229:HOH:O	2.49	0.63
22:DA:352:A:H2'	22:DA:353:C:O4'	1.99	0.63
22:DA:1097:U:C5	22:DA:1098:A:H1'	2.33	0.63
22:DA:1668:A:O4'	22:DA:1669:A:C2	2.51	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)
2:AB:123:ASP:N	2:AB:123:ASP:OD1	2.30	0.63
22:BA:58:G:OP1	41:BT:78:SER:HB2	1.98	0.63
22:BA:545:U:H3'	22:BA:546:U:H4'	1.80	0.63
22:BA:996:A:C2	22:BA:997:G:C8	2.85	0.63
24:BC:144:VAL:HG21	24:BC:162:VAL:HG21	1.79	0.63
37:BP:53:ARG:CG	37:BP:53:ARG:HH11	2.11	0.63
41:BT:1:MET:O	41:BT:2:ILE:HG13	1.97	0.63
16:CP:14:ARG:N	16:CP:15:PRO:CD	2.61	0.63
21:CU:21:ARG:N	21:CU:21:ARG:HD3	2.12	0.63
22:DA:276:U:O2	22:DA:276:U:H2'	1.98	0.63
22:DA:668:A:N6	22:DA:670:A:O2'	2.32	0.63
22:DA:727:A:H2'	22:DA:728:G:C8	2.34	0.63
22:DA:1363:C:O2	22:DA:1369:G:C2	2.51	0.63
39:DR:38:VAL:HG11	39:DR:57:GLY:HA3	1.79	0.63
11:AK:16:VAL:O	11:AK:17:SER:CB	2.46	0.63
22:BA:322:A:C5	22:BA:340:A:C2	2.86	0.63
39:BR:49:ILE:HB	39:BR:51:VAL:O	1.99	0.63
53:B5:87:ALA:HB2	53:B5:153:ILE:CB	2.28	0.63
1:CA:404:G:N7	4:CD:2:ALA:N	2.46	0.63
1:CA:1167:A:N7	1:CA:1169:A:C5	2.67	0.63
4:CD:34:ILE:O	4:CD:35:GLU:HB3	1.98	0.63
15:CO:17:ARG:O	15:CO:18:ASP:CB	2.46	0.63
22:DA:682:G:N2	22:DA:683:U:C2	2.66	0.63
22:DA:1096:A:H2'	22:DA:1097:U:O4'	1.97	0.63
22:DA:2048:G:OP1	57:DA:3380:HOH:O	2.15	0.63
22:DA:2408:U:O4	57:DA:3559:HOH:O	2.12	0.63
22:DA:2636:C:H2'	22:DA:2637:U:C6	2.34	0.63
25:DD:149:ASN:OD1	25:DD:150:GLN:N	2.31	0.63
29:DH:117:LEU:HG	29:DH:120:GLY:O	1.98	0.63
35:DN:87:PHE:O	35:DN:90:ARG:N	2.32	0.63
1:AA:77:A:N1	1:AA:91:U:O4	2.30	0.63
1:AA:373:A:C2	1:AA:374:A:C8	2.86	0.63
22:BA:572:A:OP2	39:BR:80:ARG:NH2	2.29	0.63
22:BA:1087:G:N2	22:BA:1090:A:C8	2.67	0.63
22:BA:1768:C:C4	22:BA:1769:U:C5	2.87	0.63
40:BS:38:TYR:CD2	48:B0:39:LEU:HD21	2.33	0.63
1:CA:1150:A:N6	1:CA:1151:A:H62	1.96	0.63
3:CC:139:GLN:O	3:CC:141:ALA:N	2.31	0.63
22:DA:945:A:C8	22:DA:2448:A:C2	2.86	0.63
22:DA:1094:U:H2'	22:DA:1096:A:OP2	1.99	0.63
22:DA:1805:A:C2	22:DA:1813:G:C2	2.86	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2563:U:O4'	22:DA:2566:A:N6	2.31	0.63
2:AB:219:ALA:O	2:AB:220:THR:HB	1.98	0.63
4:AD:120:HIS:O	4:AD:121:LYS:C	2.37	0.63
5:AE:65:GLU:OE1	5:AE:66:LYS:N	2.32	0.63
22:BA:1317:G:C2	22:BA:1336:A:C2	2.86	0.63
28:BG:80:THR:HG22	28:BG:81:GLU:N	2.12	0.63
36:BO:31:THR:HG22	36:BO:34:HIS:H	1.64	0.63
1:CA:1141:C:O2'	1:CA:1142:G:O5'	2.15	0.63
13:CM:98:ARG:O	13:CM:100:GLN:N	2.31	0.63
22:DA:53:A:C8	22:DA:54:G:C8	2.87	0.63
22:DA:1627:G:C2	22:DA:1628:G:C8	2.86	0.63
23:DB:44:G:N2	23:DB:48:U:O2	2.32	0.63
33:DL:93:ASN:OD1	33:DL:94:THR:N	2.31	0.63
1:AA:1161:C:H2'	1:AA:1162:C:C6	2.34	0.63
22:BA:1746:A:H2'	22:BA:1747:U:H6	1.62	0.63
22:BA:1917:U:C4	22:BA:1918:A:C5	2.87	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
22:DA:2652:C:C4	22:DA:2653:U:C4	2.86	0.63
24:DC:33:LEU:O	24:DC:64:ILE:HD12	1.99	0.63
25:DD:104:VAL:O	25:DD:105:LYS:CB	2.46	0.63
1:AA:1181:G:O2'	1:AA:1182:G:C5	2.51	0.63
23:BB:33:G:O2'	23:BB:34:A:H5'	1.99	0.63
24:BC:237:GLY:C	57:BC:407:HOH:O	2.36	0.63
25:BD:151:THR:HG22	25:BD:152:PRO:CD	2.29	0.63
30:BI:39:CYS:HA	30:BI:42:PHE:HB3	1.80	0.63
1:CA:1521:C:N3	1:CA:1522:U:C5	2.67	0.63
22:DA:333:G:C5	22:DA:334:C:C5	2.87	0.63
22:DA:980:A:C4	22:DA:1136:G:O4'	2.51	0.63
22:DA:1258:U:H2'	22:DA:1259:G:C8	2.33	0.63
22:DA:1313:U:H4'	22:DA:1332:G:H4'	1.79	0.63
22:DA:1390:U:H2'	22:DA:1391:U:H5'	1.81	0.63
22:DA:1447:C:H2'	22:DA:1448:G:C8	2.34	0.63
22:DA:1805:A:N3	22:DA:1813:G:C2	2.67	0.63
31:DJ:41:LYS:O	31:DJ:44:TYR:N	2.32	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
22:BA:1917:U:C2'	22:BA:1918:A:H5'	2.28	0.63
26:BE:145:ASP:HB3	26:BE:184:ASP:OD2	1.99	0.63
37:BP:64:ILE:HG22	37:BP:64:ILE:O	1.97	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)
22:DA:2121:G:N2	22:DA:2177:C:O2	2.31	0.63
1:AA:71:A:O2'	1:AA:72:A:OP2	2.16	0.62
1:AA:807:A:C5	1:AA:808:C:C5	2.86	0.62
14:AN:72:GLY:O	14:AN:80:SER:HA	1.99	0.62
22:BA:64:A:H2'	22:BA:65:U:C6	2.33	0.62
22:BA:2448:A:P	57:BA:3687:HOH:O	2.57	0.62
1:CA:183:C:O2'	1:CA:184:G:O5'	2.16	0.62
6:CF:32:ALA:O	6:CF:34:GLY:N	2.32	0.62
24:DC:237:GLY:O	24:DC:239:ASN:N	2.32	0.62
1:AA:381:C:H2'	1:AA:382:A:O4'	1.97	0.62
1:AA:1160:G:O6	1:AA:1181:G:C6	2.51	0.62
2:AB:73:LYS:O	2:AB:75:ALA:N	2.30	0.62
11:AK:69:ARG:HD3	22:BA:2146:C:N3	2.14	0.62
22:BA:731:C:P	57:BA:3695:HOH:O	2.52	0.62
41:BT:33:LYS:HG3	41:BT:80:TRP:CE3	2.34	0.62
1:CA:495:A:N1	1:CA:496:A:N6	2.46	0.62
1:CA:815:A:N7	1:CA:1509:C:O2'	2.25	0.62
22:DA:197:A:H62	22:DA:2430:A:H2'	1.64	0.62
22:DA:1707:G:N2	22:DA:1752:C:C2	2.67	0.62
22:DA:1993:U:H4'	25:DD:133:THR:CG2	2.29	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:2504:U:C6	55:DA:3001:DOL:H161	2.33	0.62
22:DA:2531:A:H5'	28:DG:157:TYR:CZ	2.35	0.62
1:AA:232:G:H2'	1:AA:233:C:O4'	2.00	0.62
1:AA:1226:C:OP2	13:AM:90:ARG:NH2	2.32	0.62
1:AA:1504:G:OP2	1:AA:1507:A:O2'	2.16	0.62
22:BA:757:G:N7	57:BA:3304:HOH:O	2.31	0.62
22:BA:2192:U:C2'	22:BA:2193:G:H5'	2.29	0.62
40:BS:84:ARG:HB2	40:BS:96:ILE:CG1	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:450:G:N1	22:DA:454:A:OP2	2.29	0.62
22:DA:2484:G:OP1	34:DM:44:ARG:NH2	2.32	0.62
22:DA:2550:G:C6	22:DA:2551:C:N4	2.68	0.62
30:DI:6:GLN:O	30:DI:7:ALA:CB	2.48	0.62
39:DR:52:PRO:O	39:DR:53:PHE:CG	2.52	0.62
1:AA:1493:A:O2'	1:AA:1494:G:OP2	2.17	0.62
4:AD:58:LYS:HG3	4:AD:59:GLN:N	2.13	0.62
10:AJ:48:ARG:NH1	10:AJ:66:GLU:OE1	2.31	0.62
22:BA:587:C:OP2	33:BL:21:ARG:NH1	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1073:A:H3'	22:BA:1074:G:H5''	1.80	0.62
1:CA:1364:U:O2	1:CA:1364:U:H2'	1.99	0.62
22:DA:669:G:N2	22:DA:670:A:C2	2.67	0.62
22:DA:1210:G:O6	22:DA:1237:A:O2'	2.11	0.62
22:DA:1623:G:C6	22:DA:1624:U:C5	2.88	0.62
2:AB:186:ILE:HA	2:AB:200:ILE:HB	1.81	0.62
22:BA:2188:U:H2'	22:BA:2189:U:C6	2.35	0.62
32:BK:34:GLY:O	32:BK:35:VAL:C	2.37	0.62
1:CA:409:U:OP1	4:CD:24:GLY:CA	2.46	0.62
3:CC:173:VAL:O	3:CC:175:LEU:N	2.32	0.62
18:CR:24:LYS:O	18:CR:26:ILE:N	2.32	0.62
22:DA:247:G:H4'	22:DA:386:G:C5	2.34	0.62
22:DA:511:U:H5''	22:DA:1235:G:H4'	1.81	0.62
22:DA:2142:A:C2	22:DA:2150:C:N3	2.67	0.62
22:DA:2407:A:OP2	57:DA:3558:HOH:O	2.15	0.62
22:DA:2800:A:C2	22:DA:2895:G:H1'	2.34	0.62
41:DT:69:ARG:NH1	57:DT:102:HOH:O	2.32	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
22:BA:2321:U:H5'	22:BA:2322:A:OP2	2.00	0.62
25:BD:133:THR:HG23	25:BD:134:HIS:N	2.15	0.62
33:BL:61:LEU:O	51:B3:13:ARG:HD3	1.99	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
1:AA:1446:A:H2'	1:AA:1447:A:H5'	1.81	0.62
2:AB:49:MET:O	2:AB:53:ALA:CB	2.47	0.62
22:BA:1246:A:C2'	22:BA:1247:A:O5'	2.48	0.62
46:BY:46:VAL:O	46:BY:50:VAL:HG23	2.00	0.62
1:CA:72:A:N6	1:CA:73:C:N4	2.48	0.62
1:CA:801:U:H2'	1:CA:802:A:C8	2.35	0.62
1:CA:1217:C:H2'	1:CA:1218:C:C6	2.35	0.62
22:DA:78:U:H2'	22:DA:79:C:O4'	1.99	0.62
36:DO:111:ARG:NH2	36:DO:117:PHE:O	2.33	0.62
2:AB:41:ILE:HG21	2:AB:202:GLY:HA2	1.82	0.62
7:AG:56:LYS:O	7:AG:57:SER:CB	2.48	0.62
15:AO:2:SER:O	15:AO:3:LEU:CB	2.48	0.62
22:BA:1802:A:N1	22:BA:1822:C:H1'	2.15	0.62
22:BA:1838:C:C5	22:BA:1899:A:C5	2.87	0.62
26:BE:106:LYS:HG3	26:BE:200:LEU:HG	1.82	0.62
38:BQ:49:ASP:HA	38:BQ:52:GLN:HB2	1.81	0.62
1:CA:1089:G:N2	1:CA:1090:U:H1'	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2133:G:H2'	22:DA:2157:G:N2	2.14	0.62
1:AA:411:A:C5	1:AA:429:U:C5	2.88	0.62
2:AB:75:ALA:O	2:AB:76:ALA:HB2	2.00	0.62
13:AM:64:VAL:O	13:AM:69:LEU:HB2	2.00	0.62
14:AN:14:VAL:HA	14:AN:60:GLN:OE1	1.99	0.62
22:BA:572:A:H5''	22:BA:573:U:OP2	2.00	0.62
22:BA:1078:U:H1'	22:BA:1088:A:N1	2.15	0.62
22:BA:2327:A:H2'	22:BA:2328:A:C8	2.34	0.62
25:BD:13:ARG:HD2	25:BD:15:PHE:CZ	2.35	0.62
28:BG:174:ALA:O	28:BG:175:LYS:CB	2.47	0.62
53:B5:213:VAL:O	53:B5:214:TYR:CB	2.46	0.62
1:CA:1521:C:C4	1:CA:1522:U:C5	2.87	0.62
15:CO:18:ASP:OD1	15:CO:20:ASN:HB2	1.99	0.62
22:DA:237:C:C4	22:DA:238:C:C5	2.87	0.62
22:DA:1582:C:O2'	22:DA:1585:C:N3	2.30	0.62
22:DA:2146:C:C5'	22:DA:2147:A:OP1	2.48	0.62
5:AE:101:GLU:HB3	5:AE:122:ASN:CB	2.30	0.62
20:AT:58:VAL:HG12	20:AT:59:ASP:N	2.14	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
2:CB:58:ASN:CG	2:CB:220:THR:O	2.37	0.62
7:CG:5:ARG:NE	7:CG:5:ARG:HA	2.15	0.62
9:CI:15:SER:OG	9:CI:69:GLY:O	2.10	0.62
22:DA:160:A:N3	22:DA:2208:C:O2'	2.32	0.62
22:DA:1544:A:C6	22:DA:1545:A:N1	2.68	0.62
22:DA:1827:U:O4'	22:DA:1970:A:O2'	2.17	0.62
24:DC:80:ARG:NE	24:DC:82:GLU:OE2	2.32	0.62
1:AA:723:U:H5'	1:AA:724:G:OP1	2.00	0.61
1:AA:1366:C:O2'	10:AJ:62:ARG:NH2	2.33	0.61
10:AJ:10:LEU:CD1	10:AJ:98:VAL:HG12	2.30	0.61
17:AQ:69:LYS:O	17:AQ:70:THR:HB	2.00	0.61
22:BA:253:C:OP2	51:B3:5:LYS:HE3	2.00	0.61
22:BA:2584:U:H2'	22:BA:2585:U:H5'	1.81	0.61
22:BA:2820:A:C6	25:BD:197:THR:HG22	2.35	0.61
27:BF:108:VAL:HG11	27:BF:176:PRO:HG2	1.81	0.61
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:46:G:C2	22:DA:47:C:C6	2.87	0.61
22:DA:129:C:H2'	22:DA:130:C:C6	2.35	0.61
22:DA:497:A:H2'	22:DA:498:G:O4'	2.00	0.61
22:DA:1060:U:O4'	22:DA:1062:G:H5'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1248:G:N7	26:DE:46:GLN:NE2	2.47	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
1:AA:263:A:OP2	20:AT:74:ARG:NH1	2.33	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
1:AA:1491:G:H2'	1:AA:1492:A:O4'	2.00	0.61
22:BA:1106:G:N2	22:BA:1107:G:H1'	2.15	0.61
22:BA:2820:A:N1	25:BD:197:THR:CG2	2.63	0.61
42:BU:18:ASP:O	42:BU:19:LYS:C	2.39	0.61
43:BV:48:MET:SD	43:BV:86:LEU:HD12	2.40	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
1:CA:1467:C:H2'	1:CA:1468:A:C8	2.35	0.61
4:CD:29:ASP:C	4:CD:31:LYS:H	2.04	0.61
7:CG:101:MET:HA	7:CG:104:ILE:HD12	1.81	0.61
20:CT:67:ILE:O	20:CT:67:ILE:CG2	2.49	0.61
22:DA:196:A:O2'	22:DA:805:G:O6	2.11	0.61
22:DA:200:U:C4	22:DA:248:G:C2	2.88	0.61
22:DA:1790:C:O2'	24:DC:208:ALA:HB2	2.00	0.61
22:DA:1855:U:C5	22:DA:1856:U:C5	2.88	0.61
22:DA:2590:A:O3'	24:DC:238:ARG:NH1	2.33	0.61
29:DH:32:PRO:O	29:DH:33:GLN:CB	2.48	0.61
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.33	0.61
5:AE:45:ARG:HG2	5:AE:73:ASN:HB3	1.82	0.61
22:BA:319:G:C4	22:BA:333:G:N2	2.67	0.61
22:BA:1450:G:C6	22:BA:1451:C:N4	2.68	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
42:BU:16:GLY:O	42:BU:18:ASP:N	2.33	0.61
1:CA:728:A:C8	15:CO:54:ARG:CZ	2.83	0.61
1:CA:1169:A:C2	1:CA:1170:A:C4	2.88	0.61
2:CB:21:ARG:HA	2:CB:21:ARG:NH1	2.16	0.61
7:CG:68:ASN:ND2	7:CG:130:ASN:OD1	2.34	0.61
12:CL:25:GLU:O	12:CL:26:ALA:C	2.37	0.61
22:DA:1430:G:H2'	22:DA:1431:A:O4'	1.99	0.61
28:DG:169:VAL:O	28:DG:169:VAL:HG12	2.00	0.61
4:AD:26:ARG:HD2	4:AD:31:LYS:HE3	1.82	0.61
19:AS:64:ASP:O	19:AS:65:GLU:HB3	2.00	0.61
20:AT:3:ASN:C	20:AT:3:ASN:OD1	2.39	0.61
22:BA:528:A:C8	22:BA:528:A:H3'	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:566:U:OP1	33:BL:29:LYS:HD2	2.00	0.61
22:BA:877:A:N6	22:BA:899:A:C6	2.69	0.61
22:BA:983:A:N6	22:BA:984:A:N1	2.49	0.61
22:BA:1028:A:N6	22:BA:1125:G:H2'	2.15	0.61
22:BA:1251:C:OP2	38:BQ:6:ARG:HD2	2.00	0.61
22:BA:1590:A:H2'	22:BA:1591:A:C8	2.35	0.61
27:BF:52:ASN:CB	27:BF:147:ASP:OD1	2.49	0.61
39:BR:14:VAL:CG1	39:BR:98:ILE:HG13	2.30	0.61
39:BR:49:ILE:HB	39:BR:52:PRO:O	1.99	0.61
1:CA:1345:U:N3	1:CA:1377:A:C2	2.68	0.61
4:CD:58:LYS:NZ	4:CD:59:GLN:OE1	2.30	0.61
16:CP:28:ARG:HG3	16:CP:29:ASN:OD1	2.01	0.61
22:DA:242:G:O2'	22:DA:254:G:O6	2.15	0.61
22:DA:425:G:N2	22:DA:426:C:C2	2.68	0.61
22:DA:740:C:H5'	22:DA:1784:A:C3'	2.30	0.61
22:DA:771:G:C2	22:DA:772:C:C6	2.89	0.61
22:DA:1674:G:N2	22:DA:1677:A:H61	1.98	0.61
22:DA:1951:U:H2'	22:DA:1953:A:OP2	2.01	0.61
23:DB:29:A:H2'	23:DB:30:C:C6	2.36	0.61
40:DS:67:ASP:OD1	40:DS:67:ASP:N	2.32	0.61
6:AF:3:HIS:N	6:AF:92:THR:HG23	2.15	0.61
22:BA:1132:U:H3'	22:BA:1133:A:H5''	1.81	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
40:BS:37:THR:HG22	40:BS:38:TYR:CD1	2.35	0.61
40:BS:63:GLY:O	40:BS:64:ALA:CB	2.48	0.61
41:BT:67:VAL:HG22	41:BT:76:ARG:HG2	1.82	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
6:CF:98:GLU:O	6:CF:99:ALA:HB3	2.00	0.61
12:CL:47:SER:O	12:CL:48:ALA:HB2	2.01	0.61
22:DA:749:A:C5	22:DA:750:A:N7	2.69	0.61
22:DA:2056:G:C2	22:DA:2057:G:C8	2.88	0.61
1:AA:64:G:C8	1:AA:99:C:C4	2.89	0.61
1:AA:119:A:OP2	1:AA:288:A:N6	2.30	0.61
1:AA:1151:A:C4	1:AA:1152:A:N7	2.69	0.61
9:AI:120:LYS:HG3	9:AI:123:ARG:CB	2.31	0.61
11:AK:69:ARG:CD	22:BA:2146:C:N3	2.64	0.61
13:AM:74:SER:O	13:AM:78:LYS:HG3	2.01	0.61
17:AQ:14:SER:HB3	17:AQ:22:VAL:CG1	2.30	0.61
22:BA:18:U:OP1	38:BQ:30:ARG:NH2	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B5:184:GLU:O	53:B5:185:LYS:CB	2.49	0.61
4:CD:57:GLU:OE2	4:CD:196:ASN:N	2.34	0.61
22:DA:136:G:N2	22:DA:144:A:N7	2.48	0.61
1:AA:1062:U:H2'	1:AA:1063:C:C5	2.36	0.61
4:AD:3:ARG:NE	4:AD:115:ARG:HD3	2.14	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
9:AI:91:ASP:OD2	9:AI:93:SER:N	2.34	0.61
10:AJ:80:THR:O	10:AJ:82:LYS:N	2.33	0.61
17:AQ:45:HIS:CD2	17:AQ:70:THR:HG23	2.36	0.61
22:BA:980:A:C6	22:BA:981:A:N1	2.68	0.61
22:BA:1563:U:H2'	22:BA:1564:C:C6	2.36	0.61
35:BN:73:ASN:HA	35:BN:76:VAL:CG1	2.30	0.61
38:BQ:76:TYR:OH	38:BQ:92:ARG:NH1	2.33	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:DA:724:U:H2'	22:DA:725:G:O4'	2.00	0.61
22:DA:1779:U:H5	22:DA:1784:A:N7	1.99	0.61
22:DA:1868:C:N4	22:DA:1869:G:O6	2.34	0.61
22:DA:2550:G:C6	22:DA:2551:C:C4	2.88	0.61
22:DA:2742:G:O6	57:DA:3787:HOH:O	2.12	0.61
29:DH:83:LYS:H	29:DH:149:GLU:HG2	1.64	0.61
33:DL:56:PRO:O	33:DL:60:ARG:HB2	2.00	0.61
1:AA:923:A:O4'	1:AA:1398:A:C2	2.54	0.61
5:AE:105:ILE:O	5:AE:112:ARG:NH1	2.33	0.61
13:AM:46:SER:O	13:AM:47:GLU:HB3	2.00	0.61
29:BH:97:ARG:NH1	1:CA:369:G:O2'	2.33	0.61
29:BH:97:ARG:HH11	1:CA:370:C:H5'	1.66	0.61
1:CA:570:G:H5''	1:CA:571:U:OP2	2.01	0.61
18:CR:33:ILE:HA	18:CR:40:VAL:HG23	1.82	0.61
24:DC:210:ALA:HA	24:DC:213:TRP:CE2	2.36	0.61
35:DN:69:ARG:O	35:DN:71:ARG:N	2.34	0.61
1:AA:448:A:C4	1:AA:487:A:C2	2.88	0.61
10:AJ:33:GLY:O	10:AJ:34:ALA:CB	2.49	0.61
11:AK:125:LYS:O	11:AK:126:LYS:O	2.19	0.61
22:BA:1131:G:OP1	31:BJ:82:GLY:HA2	2.00	0.61
22:BA:1187:G:H5''	39:BR:83:TYR:CE2	2.35	0.61
22:BA:1674:G:N2	22:BA:1677:A:N1	2.47	0.61
32:BK:107:LEU:O	32:BK:109:SER:N	2.33	0.61
49:B1:28:ARG:HG2	49:B1:28:ARG:O	2.01	0.61
1:CA:154:U:C2'	1:CA:155:A:H5'	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:518:C:H4'	1:CA:519:C:O5'	2.00	0.61
1:CA:811:C:N4	1:CA:812:G:C6	2.69	0.61
6:CF:9:MET:SD	6:CF:59:TYR:CE1	2.94	0.61
22:DA:38:A:H2'	22:DA:39:G:O4'	2.00	0.61
22:DA:467:G:OP1	50:D2:33:ARG:NH1	2.34	0.61
22:DA:2001:C:H4'	22:DA:2689:U:H2'	1.82	0.61
22:DA:2058:A:N6	22:DA:2059:A:N6	2.49	0.61
24:DC:16:VAL:HG22	24:DC:206:GLY:HA3	1.82	0.61
25:DD:35:THR:O	25:DD:36:GLN:CB	2.49	0.61
32:DK:18:ARG:HB2	32:DK:45:GLU:HB3	1.82	0.61
1:AA:1539:C:H5''	21:AU:18:ARG:CG	2.31	0.61
2:AB:118:GLU:O	2:AB:121:SER:N	2.32	0.61
5:AE:83:HIS:HB2	5:AE:84:PRO:HD2	1.83	0.61
22:BA:142:A:C5	22:BA:143:C:C4	2.89	0.61
22:BA:301:G:OP2	42:BU:82:ARG:NH1	2.34	0.61
22:BA:1014:A:C5	22:BA:1015:U:C5	2.88	0.61
43:BV:10:LYS:N	43:BV:10:LYS:HE2	2.15	0.61
46:BY:45:GLN:O	46:BY:46:VAL:HB	2.01	0.61
1:CA:577:G:C8	1:CA:816:A:C6	2.89	0.61
1:CA:791:G:C6	1:CA:792:A:N7	2.68	0.61
2:CB:167:ASP:O	2:CB:168:HIS:CB	2.48	0.61
5:CE:25:VAL:N	5:CE:28:GLY:O	2.34	0.61
6:CF:69:GLU:O	6:CF:72:ASP:HB3	2.00	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
22:DA:1360:G:C2	22:DA:1361:G:H1'	2.36	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
14:AN:43:ASN:OD1	14:AN:47:LYS:NZ	2.34	0.60
22:BA:1206:G:C5	22:BA:1207:C:C5	2.89	0.60
22:BA:2243:U:OP1	57:BA:3740:HOH:O	2.16	0.60
1:CA:718:A:N7	1:CA:719:C:C5	2.69	0.60
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
22:DA:200:U:C4	22:DA:248:G:N2	2.69	0.60
22:DA:353:C:H2'	22:DA:354:A:C8	2.35	0.60
22:DA:834:G:H1'	22:DA:2358:A:N3	2.16	0.60
22:DA:1914:C:H3'	22:DA:1915:U:C6	2.36	0.60
37:DP:103:ARG:CB	37:DP:108:ALA:HB2	2.31	0.60
1:AA:151:A:H2'	1:AA:152:A:O4'	2.01	0.60
1:AA:792:A:N3	1:AA:794:A:C5	2.69	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:33:GLY:HA3	2:AB:40:ILE:N	2.16	0.60
5:AE:101:GLU:CB	5:AE:122:ASN:HB2	2.31	0.60
22:BA:608:A:N1	22:BA:609:A:C2	2.68	0.60
22:BA:1798:U:OP2	24:BC:271:ARG:NH2	2.34	0.60
22:BA:1917:U:H2'	22:BA:1918:A:H5'	1.83	0.60
15:CO:17:ARG:O	15:CO:18:ASP:HB3	2.01	0.60
21:CU:12:PHE:O	21:CU:13:ASP:HB2	2.01	0.60
21:CU:14:VAL:HG12	21:CU:16:LEU:HG	1.83	0.60
22:DA:43:G:N2	22:DA:437:U:C6	2.70	0.60
22:DA:182:A:H2'	22:DA:183:C:C6	2.36	0.60
22:DA:2720:U:OP1	37:DP:53:ARG:NH2	2.35	0.60
22:DA:2790:U:H5'	22:DA:2893:A:N7	2.15	0.60
37:DP:54:GLY:O	37:DP:77:HIS:NE2	2.34	0.60
22:BA:756:A:N7	57:BA:3301:HOH:O	2.31	0.60
22:BA:1360:G:C6	22:BA:1372:U:C2	2.89	0.60
22:BA:1923:U:O2'	22:BA:1924:C:C5'	2.49	0.60
27:BF:2:ALA:O	27:BF:3:LYS:C	2.38	0.60
29:BH:121:VAL:N	29:BH:122:LEU:HB2	2.16	0.60
49:B1:29:THR:C	49:B1:31:PRO:HD3	2.22	0.60
53:B5:99:GLU:O	53:B5:103:LYS:CB	2.50	0.60
1:CA:717:U:O2'	1:CA:734:G:O4'	2.13	0.60
8:CH:10:MET:HE1	8:CH:36:ILE:HB	1.83	0.60
14:CN:52:PRO:O	14:CN:53:ARG:CB	2.49	0.60
22:DA:362:A:C4	22:DA:363:G:C8	2.90	0.60
22:DA:1361:G:C2	22:DA:1362:C:C6	2.88	0.60
37:DP:29:LYS:HB3	37:DP:40:LEU:HD21	1.83	0.60
1:AA:587:G:N2	1:AA:755:G:C5	2.69	0.60
4:AD:26:ARG:CD	4:AD:31:LYS:HD2	2.32	0.60
22:BA:1065:U:O4	22:BA:1074:G:O2'	2.17	0.60
22:BA:2318:G:C6	22:BA:2319:G:N1	2.70	0.60
29:BH:100:ALA:HB1	29:BH:112:LYS:HA	1.83	0.60
39:BR:29:THR:O	39:BR:63:VAL:HB	2.01	0.60
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.37	0.60
1:CA:1240:U:OP2	7:CG:116:MET:N	2.34	0.60
22:DA:528:A:N1	22:DA:2043:C:O5'	2.34	0.60
22:DA:1427:A:N6	22:DA:1571:A:OP2	2.35	0.60
22:DA:2645:G:H3'	22:DA:2646:C:H5'	1.83	0.60
29:DH:126:GLY:O	29:DH:146:VAL:HG23	2.00	0.60
1:AA:1528:U:O3'	1:AA:1529:G:H3'	2.02	0.60
22:BA:695:G:C2	22:BA:696:G:C8	2.89	0.60
22:BA:1485:U:H2'	22:BA:1486:U:C6	2.36	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
33:BL:68:SER:O	33:BL:69:ARG:CB	2.50	0.60
1:CA:73:C:O2'	1:CA:74:A:O5'	2.18	0.60
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.37	0.60
6:CF:36:ILE:HG12	6:CF:36:ILE:O	2.01	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
22:DA:1973:G:C5	22:DA:1974:C:C4	2.89	0.60
31:DJ:35:ARG:HG2	31:DJ:40:HIS:CD2	2.37	0.60
38:DQ:25:TYR:CD2	38:DQ:26:GLY:N	2.69	0.60
1:AA:67:C:O2'	1:AA:171:A:N3	2.26	0.60
1:AA:265:G:H4'	17:AQ:67:LEU:O	2.01	0.60
1:AA:719:C:O2'	18:AR:39:ILE:O	2.16	0.60
1:AA:781:A:C5	1:AA:802:A:C2	2.90	0.60
1:AA:1304:G:N1	1:AA:1305:G:N2	2.49	0.60
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.36	0.60
2:AB:154:MET:O	2:AB:156:GLY:N	2.34	0.60
13:AM:114:LYS:HB2	13:AM:115:PRO:HD3	1.82	0.60
22:BA:608:A:C6	22:BA:609:A:C6	2.90	0.60
22:BA:1585:C:C2'	22:BA:1586:A:H5'	2.31	0.60
45:BX:2:SER:O	45:BX:4:VAL:N	2.34	0.60
1:CA:1285:A:H4'	1:CA:1286:U:C5	2.37	0.60
5:CE:157:ARG:HD3	5:CE:158:GLY:N	2.16	0.60
20:CT:44:LYS:NZ	20:CT:86:LEU:O	2.31	0.60
22:DA:1055:G:O2'	22:DA:1085:A:N1	2.34	0.60
22:DA:1317:G:C2	22:DA:1336:A:C2	2.89	0.60
22:DA:2162:G:C4'	22:DA:2163:A:OP1	2.50	0.60
22:DA:2820:A:C8	25:DD:196:ALA:HB1	2.35	0.60
27:DF:122:PHE:O	27:DF:124:GLY:N	2.34	0.60
1:AA:1269:A:C2	1:AA:1313:U:O4'	2.54	0.60
9:AI:120:LYS:HG3	9:AI:123:ARG:HB3	1.84	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
29:BH:117:LEU:CD2	29:BH:121:VAL:HA	2.31	0.60
42:BU:49:VAL:O	42:BU:49:VAL:HG22	2.01	0.60
1:CA:716:A:N3	11:CK:119:ASN:O	2.35	0.60
5:CE:106:ILE:HD11	5:CE:124:LEU:HD23	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
39:DR:78:ARG:HB3	39:DR:83:TYR:CD1	2.37	0.60
1:AA:702:A:N6	22:BA:1846:G:O2'	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:136:G:N2	22:BA:144:A:C5	2.70	0.60
22:BA:1224:U:H4'	39:BR:88:GLY:O	2.00	0.60
24:BC:117:GLN:N	24:BC:128:ASN:OD1	2.33	0.60
52:B4:24:ARG:NH1	52:B4:36:ARG:HD2	2.17	0.60
5:CE:83:HIS:CD2	8:CH:96:MET:CE	2.84	0.60
5:CE:101:GLU:O	5:CE:103:THR:CA	2.50	0.60
14:CN:31:ILE:O	14:CN:33:ASP:N	2.35	0.60
22:DA:280:U:O4	22:DA:361:G:N2	2.35	0.60
22:DA:2563:U:H1'	22:DA:2566:A:C6	2.37	0.60
50:D2:10:LEU:O	50:D2:14:ARG:HG3	2.02	0.60
52:D4:19:ARG:O	52:D4:20:ASP:HB2	2.01	0.60
1:AA:1074:G:O2'	1:AA:1101:A:N1	2.29	0.60
1:AA:1123:U:O2'	10:AJ:39:PRO:O	2.17	0.60
1:AA:1202:U:C2	1:AA:1203:C:C6	2.90	0.60
4:AD:2:ALA:O	4:AD:68:LEU:HD21	2.02	0.60
4:AD:17:THR:CG2	4:AD:18:ASP:N	2.64	0.60
22:BA:273:G:N2	22:BA:365:U:C2	2.69	0.60
22:BA:278:A:C2	22:BA:362:A:C8	2.88	0.60
22:BA:686:U:H2'	22:BA:788:A:C2	2.36	0.60
22:BA:927:A:H2'	22:BA:928:A:C8	2.37	0.60
22:BA:2211:A:H1'	22:BA:2212:A:OP1	2.02	0.60
22:BA:2297:A:N1	22:BA:2321:U:C5	2.69	0.60
22:BA:2799:A:O2'	22:BA:2800:A:O5'	2.20	0.60
29:BH:97:ARG:NH1	1:CA:370:C:H5'	2.16	0.60
1:CA:268:U:H2'	1:CA:269:C:C6	2.36	0.60
1:CA:779:C:C2'	1:CA:780:A:H5'	2.32	0.60
4:CD:34:ILE:O	4:CD:35:GLU:CB	2.49	0.60
5:CE:137:VAL:O	5:CE:138:ARG:HG2	2.01	0.60
6:CF:36:ILE:O	6:CF:36:ILE:CG1	2.49	0.60
22:DA:537:G:N1	22:DA:555:G:C2	2.70	0.60
22:DA:2854:G:C2	22:DA:2864:G:C2	2.89	0.60
1:AA:890:G:O2'	1:AA:906:A:N6	2.34	0.60
10:AJ:33:GLY:O	10:AJ:34:ALA:HB3	2.02	0.60
10:AJ:53:ILE:HG22	10:AJ:61:ALA:HB1	1.84	0.60
22:BA:1439:A:C2	22:BA:1553:A:C4	2.90	0.60
22:BA:1997:C:OP2	25:BD:129:THR:HG22	2.02	0.60
22:BA:2318:G:C6	22:BA:2319:G:C6	2.89	0.60
1:CA:154:U:H2'	1:CA:155:A:H5'	1.84	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
1:CA:692:U:O2'	1:CA:694:A:N7	2.29	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1151:A:C2	1:CA:1152:A:C6	2.90	0.60
4:CD:4:TYR:O	4:CD:5:LEU:HB2	2.01	0.60
9:CI:57:MET:HB3	9:CI:61:LEU:CD2	2.32	0.60
12:CL:21:VAL:O	12:CL:23:ALA:N	2.35	0.60
22:DA:1006:C:OP2	57:DA:3779:HOH:O	2.17	0.60
42:DU:18:ASP:OD2	42:DU:18:ASP:N	2.35	0.60
1:AA:591:U:P	8:AH:31:LYS:HD2	2.42	0.59
9:AI:113:ARG:NH2	14:AN:101:TRP:CZ2	2.69	0.59
22:BA:1075:C:H2'	22:BA:1076:C:C2	2.37	0.59
22:BA:1322:A:O3'	40:BS:84:ARG:NH1	2.35	0.59
22:BA:1736:U:H2'	22:BA:1737:G:O4'	2.02	0.59
22:BA:2444:G:P	26:BE:63:LYS:HD3	2.41	0.59
29:BH:93:SER:O	1:CA:368:U:C5	2.55	0.59
32:BK:4:GLU:O	32:BK:5:GLN:HB2	2.02	0.59
1:CA:511:C:O2	1:CA:512:U:C6	2.55	0.59
1:CA:527:G:N1	1:CA:528:C:C5	2.70	0.59
22:DA:118:A:N7	22:DA:119:A:C8	2.70	0.59
22:DA:395:U:H4'	22:DA:396:G:OP1	2.02	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
31:DJ:77:HIS:HA	31:DJ:83:GLY:O	2.00	0.59
42:DU:53:ASN:O	42:DU:53:ASN:ND2	2.35	0.59
47:DZ:52:SER:OG	47:DZ:53:PHE:N	2.33	0.59
4:AD:25:VAL:HG12	4:AD:26:ARG:N	2.18	0.59
4:AD:191:LEU:O	4:AD:192:SER:HB3	2.02	0.59
6:AF:63:ASN:OD1	6:AF:96:VAL:CG2	2.50	0.59
24:BC:6:CYS:SG	24:BC:18:LYS:HD2	2.43	0.59
27:BF:83:TYR:O	27:BF:85:ILE:HG22	2.03	0.59
29:BH:99:ILE:HB	29:BH:115:VAL:HG11	1.84	0.59
35:BN:49:GLU:OE2	35:BN:95:THR:HG22	2.01	0.59
1:CA:577:G:C8	1:CA:816:A:N1	2.70	0.59
22:DA:1109:C:H5''	22:DA:1110:G:OP2	2.01	0.59
22:DA:1226:A:OP1	38:DQ:16:LYS:NZ	2.35	0.59
22:DA:1436:G:C2	22:DA:1437:C:H1'	2.37	0.59
22:DA:2551:C:OP2	57:DA:3719:HOH:O	2.16	0.59
22:DA:2840:C:H2'	22:DA:2841:C:C6	2.37	0.59
1:AA:131:A:O2'	1:AA:262:A:N3	2.32	0.59
1:AA:468:A:C2	1:AA:469:C:C4	2.90	0.59
10:AJ:35:GLN:HG2	10:AJ:77:VAL:HB	1.84	0.59
29:BH:94:ILE:HG22	29:BH:99:ILE:CG1	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:57:LEU:CD2	51:B3:54:ASP:HB3	2.33	0.59
33:BL:77:ILE:HG23	33:BL:100:ILE:HD11	1.84	0.59
1:CA:1072:G:C6	1:CA:1073:U:C4	2.90	0.59
22:DA:82:U:C2	22:DA:83:A:C8	2.90	0.59
22:DA:230:G:C2	22:DA:231:A:C8	2.90	0.59
22:DA:2159:G:H2'	22:DA:2160:C:C6	2.36	0.59
22:DA:2234:G:C6	22:DA:2235:G:N7	2.70	0.59
22:DA:2681:C:C2	22:DA:2724:U:O4	2.55	0.59
23:DB:37:C:C5	23:DB:38:C:C5	2.90	0.59
28:DG:176:LYS:O	28:DG:177:LYS:HB2	2.02	0.59
30:DI:76:ALA:CB	30:DI:129:ILE:HG23	2.33	0.59
39:DR:39:LEU:HA	39:DR:49:ILE:HG21	1.83	0.59
50:D2:44:VAL:HG13	50:D2:45:SER:N	2.17	0.59
1:AA:16:A:O2'	1:AA:17:U:H5'	2.03	0.59
1:AA:135:C:N3	16:AP:1:MET:N	2.41	0.59
22:BA:361:G:O2'	22:BA:362:A:O5'	2.17	0.59
22:BA:877:A:C6	22:BA:899:A:C6	2.90	0.59
22:BA:983:A:C6	22:BA:984:A:C2	2.90	0.59
22:BA:1794:A:H2'	22:BA:1795:C:H6	1.65	0.59
22:BA:2187:U:H2'	22:BA:2188:U:C1'	2.33	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
1:CA:1259:C:H3'	1:CA:1260:G:H5''	1.85	0.59
14:CN:61:ARG:O	14:CN:62:ASN:HB2	2.02	0.59
22:DA:1688:U:C4	22:DA:1698:A:C2	2.90	0.59
22:DA:2432:A:N1	45:DX:21:ALA:HA	2.17	0.59
22:DA:2811:G:H2'	22:DA:2812:G:O4'	2.02	0.59
23:DB:4:C:C2	23:DB:117:G:N2	2.70	0.59
1:AA:205:A:OP1	1:AA:205:A:H4'	2.01	0.59
1:AA:601:G:H2'	1:AA:602:A:C8	2.37	0.59
1:AA:1055:A:C6	1:AA:1206:G:C5	2.90	0.59
22:BA:1178:C:H2'	22:BA:1179:G:N7	2.17	0.59
22:BA:1190:G:OP1	33:BL:32:GLY:HA2	2.01	0.59
22:BA:1731:G:C2	22:BA:1733:G:C4	2.91	0.59
22:BA:1827:U:O4	57:BA:3786:HOH:O	2.16	0.59
22:BA:2017:U:H4'	48:B0:5:GLN:O	2.02	0.59
6:CF:26:THR:O	6:CF:30:THR:OG1	2.20	0.59
22:DA:396:G:C5'	45:DX:13:VAL:HG21	2.31	0.59
22:DA:484:C:N4	22:DA:497:A:C2	2.70	0.59
22:DA:1343:G:H1'	22:DA:1597:A:C4	2.37	0.59
22:DA:1869:G:H3'	22:DA:1870:C:H5'	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2199:A:O4'	29:DH:28:ASN:ND2	2.36	0.59
22:DA:2452:C:O4'	55:DA:3001:DOL:H461	2.03	0.59
30:DI:58:VAL:CG1	30:DI:59:ILE:N	2.65	0.59
52:D4:22:VAL:O	52:D4:24:ARG:N	2.35	0.59
1:AA:587:G:C2	1:AA:755:G:C5	2.90	0.59
1:AA:1378:C:C5	1:AA:1379:G:C8	2.91	0.59
9:AI:63:LEU:N	9:AI:63:LEU:HD23	2.17	0.59
18:AR:67:LEU:O	18:AR:68:LEU:HG	2.02	0.59
20:AT:70:ASN:OD1	20:AT:70:ASN:N	2.28	0.59
22:BA:947:A:HO2'	22:BA:984:A:H2	1.42	0.59
22:BA:1045:C:C3'	22:BA:1046:A:H5'	2.32	0.59
22:BA:1359:A:C8	22:BA:1373:A:C2	2.91	0.59
22:BA:2714:G:C2'	22:BA:2715:C:H5'	2.32	0.59
24:BC:204:VAL:O	24:BC:205:LEU:HB2	2.02	0.59
18:CR:63:ARG:HB3	18:CR:70:TYR:CE1	2.37	0.59
22:DA:424:G:C2	22:DA:425:G:C8	2.90	0.59
22:DA:861:A:H2'	22:DA:862:G:O4'	2.02	0.59
22:DA:1315:C:OP2	57:DA:3760:HOH:O	2.16	0.59
29:DH:126:GLY:O	29:DH:146:VAL:N	2.35	0.59
36:DO:64:TYR:O	36:DO:67:ASN:ND2	2.33	0.59
1:AA:345:C:O2'	32:BK:116:ILE:HD11	2.02	0.59
1:AA:1157:A:N6	1:AA:1180:A:N7	2.51	0.59
14:AN:41:ARG:O	14:AN:43:ASN:N	2.36	0.59
22:BA:1735:A:C2	22:BA:1736:U:C1'	2.86	0.59
22:BA:1867:G:O2'	22:BA:1868:C:H5'	2.02	0.59
29:BH:1:MET:O	29:BH:20:ASN:ND2	2.35	0.59
40:BS:29:VAL:CG1	40:BS:55:ILE:HD11	2.32	0.59
52:B4:36:ARG:HG2	52:B4:37:GLN:N	2.16	0.59
1:CA:518:C:H5''	1:CA:519:C:C6	2.37	0.59
1:CA:1309:G:C6	1:CA:1329:A:C2	2.90	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
22:DA:1364:G:H2'	22:DA:1365:A:H5'	1.84	0.59
42:DU:72:ILE:HD13	42:DU:83:VAL:CG2	2.32	0.59
1:AA:1134:G:C2	1:AA:1135:U:C2	2.90	0.59
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:BA:1768:C:C2	22:BA:1769:U:C6	2.90	0.59
22:BA:2191:A:C2	22:BA:2192:U:C4	2.91	0.59
34:BM:24:THR:HG23	34:BM:24:THR:O	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:33:A:H2'	1:CA:34:C:H6	1.67	0.59
1:CA:254:G:O2'	17:CQ:18:GLU:O	2.20	0.59
1:CA:411:A:C5	1:CA:429:U:C5	2.91	0.59
1:CA:1211:U:C2'	1:CA:1212:U:OP2	2.51	0.59
22:DA:1773:A:N3	22:DA:1978:A:C2	2.71	0.59
22:DA:2343:U:O2'	22:DA:2373:G:O2'	2.19	0.59
30:DI:58:VAL:O	30:DI:69:PHE:HB3	2.03	0.59
48:D0:55:ILE:O	48:D0:56:ALA:HB3	2.03	0.59
1:AA:328:C:O2	1:AA:328:C:H2'	2.01	0.59
1:AA:760:G:N7	1:AA:761:G:C8	2.71	0.59
20:AT:6:SER:OG	20:AT:7:ALA:N	2.36	0.59
22:BA:142:A:H2'	22:BA:143:C:C6	2.38	0.59
22:BA:1406:U:C2	22:BA:1407:G:C8	2.91	0.59
30:BI:117:MET:HE3	30:BI:129:ILE:HD11	1.84	0.59
32:BK:121:GLU:O	32:BK:122:VAL:O	2.21	0.59
39:BR:49:ILE:CG2	39:BR:53:PHE:N	2.65	0.59
1:CA:55:A:C6	1:CA:56:U:C2	2.91	0.59
12:CL:68:GLY:O	12:CL:99:ARG:NH1	2.36	0.59
21:CU:8:GLU:HB3	21:CU:12:PHE:CD2	2.38	0.59
22:DA:53:A:N7	22:DA:54:G:C5	2.71	0.59
22:DA:532:A:N1	22:DA:2020:A:H1'	2.18	0.59
22:DA:1753:G:C2	22:DA:1756:G:C2	2.90	0.59
1:AA:340:U:C2	1:AA:341:C:C5	2.91	0.59
1:AA:340:U:H2'	1:AA:341:C:H6	1.67	0.59
5:AE:46:VAL:CG2	5:AE:118:ALA:HA	2.33	0.59
16:AP:42:ILE:O	16:AP:43:ALA:C	2.41	0.59
22:BA:142:A:N7	22:BA:143:C:N4	2.51	0.59
22:BA:2495:G:C2'	22:BA:2496:C:H5'	2.33	0.59
27:BF:106:ILE:C	27:BF:109:PRO:HD2	2.22	0.59
40:BS:84:ARG:HB2	40:BS:96:ILE:HG13	1.85	0.59
1:CA:214:C:H2'	1:CA:215:C:C6	2.37	0.59
22:DA:1121:C:C2	22:DA:1122:G:C8	2.91	0.59
22:DA:2297:A:N1	22:DA:2321:U:C5	2.71	0.59
26:DE:47:LYS:O	26:DE:83:VAL:HB	2.03	0.59
31:DJ:9:GLU:O	31:DJ:10:THR:HG23	2.03	0.59
1:AA:68:G:C5	1:AA:69:G:H1'	2.38	0.58
5:AE:101:GLU:HB3	5:AE:122:ASN:HB2	1.84	0.58
10:AJ:53:ILE:HG22	10:AJ:61:ALA:CB	2.33	0.58
11:AK:16:VAL:HG22	11:AK:17:SER:N	2.18	0.58
22:BA:644:A:H2'	22:BA:645:C:O4'	2.03	0.58
22:BA:783:A:C8	22:BA:784:G:H4'	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
22:BA:1167:C:H2'	22:BA:1168:G:H5''	1.85	0.58
1:CA:152:A:N6	1:CA:170:U:C2	2.71	0.58
1:CA:1006:G:H2'	1:CA:1007:U:C6	2.38	0.58
2:CB:47:VAL:HB	2:CB:48:PRO:HD3	1.84	0.58
2:CB:134:ALA:O	2:CB:138:THR:OG1	2.08	0.58
9:CI:57:MET:SD	9:CI:58:VAL:N	2.76	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
22:DA:20:C:H2'	22:DA:21:A:C8	2.38	0.58
22:DA:454:A:H4'	22:DA:455:C:OP2	2.01	0.58
22:DA:777:G:N7	22:DA:793:A:H2	2.00	0.58
22:DA:856:G:C2	22:DA:922:C:N3	2.71	0.58
22:DA:1304:A:N1	22:DA:1305:C:C4	2.72	0.58
22:DA:2111:U:C4	22:DA:2145:C:H2'	2.39	0.58
23:DB:87:U:O2'	23:DB:88:C:H5'	2.02	0.58
1:AA:152:A:N6	1:AA:170:U:C2	2.70	0.58
1:AA:792:A:H1'	1:AA:794:A:N7	2.18	0.58
10:AJ:15:HIS:O	10:AJ:17:LEU:N	2.32	0.58
21:AU:4:ILE:N	21:AU:20:LYS:HZ1	2.01	0.58
22:BA:481:G:N3	22:BA:507:A:C2	2.71	0.58
24:BC:167:ARG:O	24:BC:168:ASP:HB2	2.03	0.58
36:BO:15:ARG:NE	36:BO:93:ASP:OD1	2.36	0.58
49:B1:4:GLY:O	49:B1:6:ARG:N	2.37	0.58
1:CA:570:G:H1'	1:CA:820:U:C4	2.38	0.58
1:CA:920:U:H2'	1:CA:921:U:C6	2.36	0.58
1:CA:994:A:N3	1:CA:994:A:H2'	2.17	0.58
1:CA:1499:A:H3'	57:CA:1884:HOH:O	2.02	0.58
2:CB:133:GLU:O	2:CB:137:ARG:HB3	2.03	0.58
5:CE:56:VAL:O	5:CE:60:ILE:HG23	2.03	0.58
17:CQ:47:HIS:HB2	17:CQ:67:LEU:HD12	1.85	0.58
20:CT:55:GLN:N	20:CT:56:PRO:CD	2.65	0.58
22:DA:307:G:N2	22:DA:310:A:C8	2.71	0.58
22:DA:308:G:N1	22:DA:309:A:C2	2.70	0.58
22:DA:319:G:O6	22:DA:323:C:N4	2.35	0.58
22:DA:1380:G:OP2	57:DA:3751:HOH:O	2.17	0.58
22:DA:2074:U:H2'	22:DA:2075:U:C6	2.38	0.58
22:DA:2746:U:H1'	28:DG:139:GLN:HG3	1.85	0.58
2:AB:147:SER:O	2:AB:148:LEU:CB	2.51	0.58
4:AD:68:LEU:HD22	4:AD:68:LEU:N	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:78:GLU:OE1	4:AD:81:ARG:NH1	2.37	0.58
14:AN:21:PHE:HA	14:AN:25:ALA:CB	2.33	0.58
22:BA:257:C:H5''	22:BA:258:G:OP2	2.03	0.58
22:BA:973:A:O4'	22:BA:1188:U:C6	2.56	0.58
22:BA:2578:G:N7	25:BD:145:SER:HB2	2.18	0.58
25:BD:133:THR:HG23	25:BD:134:HIS:CD2	2.38	0.58
25:BD:151:THR:HG22	25:BD:152:PRO:HD2	1.84	0.58
27:BF:143:TYR:O	27:BF:146:VAL:HG22	2.03	0.58
32:BK:116:ILE:O	32:BK:118:LEU:O	2.21	0.58
1:CA:692:U:H1'	1:CA:695:A:N7	2.19	0.58
1:CA:755:G:C2	1:CA:756:C:C5	2.91	0.58
1:CA:994:A:C8	1:CA:1216:A:H4'	2.39	0.58
1:CA:1108:G:H5''	3:CC:176:HIS:CD2	2.37	0.58
2:CB:90:PHE:CZ	2:CB:154:MET:HA	2.38	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
17:CQ:46:VAL:HG21	17:CQ:61:ILE:CD1	2.34	0.58
22:DA:120:U:H1'	22:DA:149:A:C8	2.37	0.58
22:DA:847:U:O2	22:DA:847:U:H2''	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
22:DA:2334:U:C4	36:DO:16:ARG:HD3	2.38	0.58
22:DA:2857:G:N2	22:DA:2860:A:OP2	2.34	0.58
27:DF:122:PHE:CE1	27:DF:166:GLY:HA3	2.38	0.58
46:DY:56:LEU:O	46:DY:57:LEU:HB2	2.04	0.58
1:AA:1107:C:C4	1:AA:1108:G:N7	2.72	0.58
1:AA:1171:A:C2	1:AA:1172:C:C2	2.92	0.58
2:AB:133:GLU:O	2:AB:137:ARG:HB2	2.03	0.58
5:AE:137:VAL:O	5:AE:138:ARG:CB	2.51	0.58
8:AH:113:ASP:OD2	8:AH:117:ARG:NH2	2.36	0.58
21:AU:4:ILE:N	21:AU:19:PHE:CD1	2.71	0.58
22:BA:1361:G:N7	57:BA:3618:HOH:O	2.32	0.58
22:BA:1696:G:C6	22:BA:1697:G:C4	2.91	0.58
27:BF:123:ASP:OD2	27:BF:127:ASN:HB2	2.02	0.58
1:CA:190:A:C8	1:CA:191:G:H1'	2.38	0.58
1:CA:257:G:C2	1:CA:270:A:N1	2.71	0.58
1:CA:681:A:C2	1:CA:710:G:C2	2.92	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
4:CD:30:THR:C	4:CD:31:LYS:HD3	2.23	0.58
5:CE:122:ASN:O	5:CE:123:VAL:O	2.22	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:546:U:O2'	22:DA:547:A:O4'	2.21	0.58
22:DA:1091:G:N3	22:DA:1092:C:C5	2.71	0.58
22:DA:1606:C:O2'	22:DA:1607:C:OP2	2.19	0.58
22:DA:2744:G:C6	22:DA:2761:A:N6	2.72	0.58
23:DB:7:G:H5'	36:DO:29:HIS:CE1	2.38	0.58
23:DB:78:A:C6	23:DB:99:A:C8	2.90	0.58
1:AA:524:G:H5''	1:AA:525:C:OP2	2.02	0.58
1:AA:596:A:C6	1:AA:645:G:C2	2.92	0.58
1:AA:1211:U:HO2'	1:AA:1212:U:P	2.26	0.58
2:AB:151:ILE:HG23	2:AB:152:LYS:N	2.18	0.58
3:AC:206:GLU:O	3:AC:207:ILE:HG22	2.03	0.58
14:AN:49:GLN:HA	14:AN:49:GLN:OE1	2.03	0.58
22:BA:871:U:H2'	22:BA:872:U:C6	2.38	0.58
22:BA:999:U:C5	22:BA:1154:G:C5	2.91	0.58
22:BA:1095:A:C6	22:BA:1096:A:N6	2.71	0.58
22:BA:1915:U:C2'	22:BA:1916:A:H5'	2.33	0.58
24:BC:70:ASN:O	24:BC:71:LYS:C	2.41	0.58
37:BP:90:GLY:O	37:BP:113:ARG:NH1	2.37	0.58
1:CA:373:A:C2	1:CA:374:A:C8	2.91	0.58
1:CA:728:A:H2'	1:CA:729:A:C8	2.38	0.58
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.39	0.58
2:CB:120:GLN:HG2	2:CB:125:THR:O	2.03	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:AA:4:U:O2	1:AA:4:U:H2'	2.04	0.58
1:AA:108:G:N3	1:AA:108:G:H5'	2.19	0.58
1:AA:212:G:C2	1:AA:213:G:C4	2.91	0.58
1:AA:1492:A:O2'	22:BA:1913:A:N1	2.27	0.58
11:AK:31:ILE:HB	11:AK:46:THR:HG22	1.85	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
22:BA:123:G:N7	57:BA:3213:HOH:O	2.32	0.58
22:BA:1916:A:H2'	22:BA:1917:U:O2'	2.04	0.58
22:BA:2564:A:C2	22:BA:2647:U:H4'	2.38	0.58
27:BF:171:ALA:O	27:BF:174:ASP:N	2.36	0.58
29:BH:31:VAL:N	29:BH:32:PRO:HD2	2.19	0.58
34:BM:12:MET:HE3	34:BM:71:LYS:HG3	1.86	0.58
47:BZ:11:ARG:NH1	47:BZ:53:PHE:O	2.37	0.58
1:CA:938:A:N6	1:CA:939:G:C6	2.71	0.58
2:CB:119:THR:O	2:CB:120:GLN:CB	2.52	0.58
22:DA:607:U:N3	22:DA:620:G:O4'	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1363:C:H2'	22:DA:1364:G:H8	1.69	0.58
22:DA:1640:A:H2'	22:DA:1641:A:C8	2.39	0.58
22:DA:2314:A:C2	22:DA:2315:G:C4	2.91	0.58
22:DA:2883:A:OP2	48:D0:49:TYR:OH	2.18	0.58
31:DJ:19:ASP:O	31:DJ:23:LYS:HE3	2.03	0.58
31:DJ:30:THR:HG22	31:DJ:31:GLU:N	2.18	0.58
31:DJ:110:PRO:O	31:DJ:115:GLY:HA3	2.03	0.58
1:AA:572:A:H5'	1:AA:573:A:OP2	2.02	0.58
1:AA:577:G:C8	1:AA:816:A:C6	2.91	0.58
1:AA:757:U:O2'	1:AA:879:C:O2	2.21	0.58
1:AA:1362:A:H5''	1:AA:1363:A:OP2	2.03	0.58
22:BA:1405:U:H2'	22:BA:1406:U:C6	2.39	0.58
22:BA:1423:G:O6	57:BA:3628:HOH:O	2.17	0.58
22:BA:1916:A:P	22:BA:1917:U:OP2	2.62	0.58
30:BI:62:TYR:O	30:BI:63:ALA:CB	2.51	0.58
1:CA:17:U:C2	1:CA:18:C:C5	2.92	0.58
1:CA:1381:U:H2'	1:CA:1382:C:O5'	2.04	0.58
4:CD:29:ASP:C	4:CD:31:LYS:N	2.56	0.58
12:CL:44:LYS:O	12:CL:46:ASN:N	2.37	0.58
22:DA:30:G:O2'	22:DA:1214:A:N3	2.36	0.58
22:DA:150:U:H2'	22:DA:151:C:C6	2.38	0.58
22:DA:453:A:H4'	22:DA:472:A:N6	2.17	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:DA:2563:U:C1'	22:DA:2566:A:N6	2.65	0.58
29:DH:34:GLY:O	29:DH:35:LYS:CB	2.51	0.58
17:AQ:45:HIS:CD2	17:AQ:70:THR:CG2	2.87	0.58
22:BA:580:U:O3'	38:BQ:31:VAL:HG13	2.04	0.58
22:BA:674:G:O2'	26:BE:69:ARG:HB3	2.03	0.58
22:BA:1206:G:C6	22:BA:1207:C:C4	2.92	0.58
22:BA:1253:A:N7	57:BA:3337:HOH:O	2.32	0.58
22:BA:1593:A:H2'	22:BA:1594:U:O4'	2.03	0.58
22:BA:1624:U:N3	22:BA:1625:C:C5	2.72	0.58
39:BR:9:GLY:C	39:BR:10:LYS:HG2	2.24	0.58
1:CA:649:A:H2'	1:CA:650:G:O4'	2.04	0.58
1:CA:1027:C:N4	1:CA:1034:G:C6	2.72	0.58
5:CE:109:GLY:O	5:CE:110:ALA:HB3	2.04	0.58
19:CS:31:LEU:O	19:CS:33:THR:N	2.36	0.58
22:DA:53:A:N3	22:DA:179:C:H4'	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:126:A:N7	22:DA:127:A:C2	2.72	0.58
22:DA:2330:G:N2	22:DA:2386:A:C2	2.71	0.58
24:DC:108:LYS:N	24:DC:194:GLU:O	2.36	0.58
25:DD:123:LYS:HG2	25:DD:165:MET:SD	2.44	0.58
28:DG:27:LYS:HG3	28:DG:27:LYS:O	2.03	0.58
31:DJ:78:THR:OG1	31:DJ:80:HIS:HB2	2.04	0.58
34:DM:76:LYS:NZ	34:DM:85:GLY:O	2.37	0.58
39:DR:14:VAL:HG21	39:DR:98:ILE:HG13	1.84	0.58
41:DT:82:LYS:HG2	41:DT:83:ALA:N	2.18	0.58
1:AA:568:G:C4	1:AA:569:C:C5	2.92	0.58
1:AA:684:U:HO2'	11:AK:40:ASN:C	2.05	0.58
1:AA:760:G:C5	1:AA:761:G:C8	2.92	0.58
1:AA:1306:A:C4	1:AA:1307:U:C6	2.92	0.58
5:AE:25:VAL:O	5:AE:27:GLY:N	2.37	0.58
30:BI:79:LEU:HD22	30:BI:109:ILE:CG2	2.34	0.58
30:BI:81:LYS:HA	30:BI:86:ILE:O	2.03	0.58
31:BJ:17:VAL:HG23	31:BJ:137:PRO:HB2	1.85	0.58
36:BO:100:HIS:O	36:BO:104:GLN:CB	2.52	0.58
46:BY:23:ARG:O	46:BY:24:GLU:C	2.42	0.58
48:B0:55:ILE:HG22	48:B0:56:ALA:N	2.18	0.58
1:CA:115:G:H4'	1:CA:116:A:O5'	2.04	0.58
1:CA:624:C:H2'	1:CA:625:U:O4'	2.04	0.58
1:CA:1167:A:N7	1:CA:1169:A:C6	2.71	0.58
4:CD:9:LEU:HD12	4:CD:32:CYS:SG	2.43	0.58
6:CF:97:THR:O	6:CF:98:GLU:HB3	2.04	0.58
20:CT:15:GLU:OE2	20:CT:18:ARG:NH2	2.35	0.58
20:CT:67:ILE:O	20:CT:67:ILE:HG22	2.03	0.58
22:DA:647:G:C5	22:DA:648:G:N7	2.71	0.58
22:DA:2328:A:H2'	22:DA:2329:U:C6	2.38	0.58
22:DA:2552:U:C2	22:DA:2554:U:H5'	2.39	0.58
42:DU:13:VAL:HG21	42:DU:39:ILE:CG2	2.33	0.58
1:AA:475:C:H2'	1:AA:476:U:O4'	2.04	0.58
1:AA:721:G:H4'	1:AA:722:G:O4'	2.03	0.58
8:AH:125:ILE:O	8:AH:125:ILE:HG13	2.04	0.58
21:AU:37:PHE:HB3	21:AU:41:PRO:CG	2.34	0.58
22:BA:65:U:H2'	22:BA:66:C:H6	1.68	0.58
22:BA:481:G:H1'	22:BA:507:A:N1	2.19	0.58
22:BA:603:A:C8	22:BA:655:A:C6	2.92	0.58
22:BA:846:U:O2'	22:BA:847:U:P	2.62	0.58
22:BA:1022:G:N2	22:BA:1142:A:C2	2.71	0.58
22:BA:1248:G:C6	26:BE:46:GLN:NE2	2.72	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1563:U:H2'	22:BA:1564:C:H6	1.69	0.58
22:BA:2192:U:C4	22:BA:2193:G:C8	2.92	0.58
22:BA:2584:U:O2'	55:BA:3001:DOL:H482	2.03	0.58
27:BF:108:VAL:N	27:BF:109:PRO:CD	2.66	0.58
39:BR:51:VAL:O	39:BR:52:PRO:O	2.22	0.58
41:BT:34:VAL:HG21	41:BT:43:ILE:HD11	1.85	0.58
3:CC:72:ARG:HB3	3:CC:75:ILE:HG23	1.85	0.58
6:CF:43:GLY:HA2	6:CF:58:HIS:NE2	2.19	0.58
10:CJ:84:VAL:O	10:CJ:88:MET:HB2	2.04	0.58
12:CL:21:VAL:N	12:CL:22:PRO:HD3	2.19	0.58
22:DA:1551:A:N6	57:DA:3628:HOH:O	2.35	0.58
22:DA:1806:C:C5	22:DA:1807:G:N7	2.72	0.58
22:DA:1817:G:H2'	22:DA:1818:U:H5'	1.86	0.58
22:DA:2061:G:C5	55:DA:3001:DOL:HC19	2.38	0.58
22:DA:2478:A:C8	22:DA:2529:G:C5	2.92	0.58
29:DH:108:VAL:O	29:DH:110:VAL:N	2.36	0.58
36:DO:7:ARG:HD2	36:DO:97:PHE:CE1	2.38	0.58
42:DU:41:LEU:HD12	42:DU:60:GLU:HG2	1.86	0.58
1:AA:251:G:C6	1:AA:266:G:O6	2.56	0.57
1:AA:673:A:H2'	1:AA:674:G:C8	2.39	0.57
5:AE:109:GLY:O	5:AE:110:ALA:HB2	2.04	0.57
22:BA:372:G:O2'	22:BA:400:G:O6	2.16	0.57
22:BA:1922:G:H22	22:BA:1923:U:H1'	1.67	0.57
22:BA:2190:G:C6	22:BA:2191:A:C5	2.91	0.57
22:BA:2474:U:H5''	22:BA:2475:C:OP2	2.04	0.57
22:BA:2520:C:C6	22:BA:2567:G:H1'	2.38	0.57
22:BA:2531:A:OP2	28:BG:174:ALA:O	2.22	0.57
30:BI:82:LYS:O	30:BI:83:ALA:HB2	2.04	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
4:CD:166:GLU:O	4:CD:167:LYS:HB2	2.04	0.57
9:CI:30:ILE:HA	9:CI:65:ILE:O	2.03	0.57
22:DA:13:A:N1	22:DA:525:U:H2'	2.19	0.57
22:DA:696:G:C2	22:DA:767:U:O2	2.57	0.57
22:DA:776:G:O2'	22:DA:2241:A:OP1	2.19	0.57
22:DA:1544:A:N6	22:DA:1545:A:N1	2.52	0.57
22:DA:1774:C:O2	24:DC:11:PRO:HB2	2.04	0.57
22:DA:2571:U:C4	22:DA:2574:G:C8	2.92	0.57
30:DI:79:LEU:HD13	30:DI:109:ILE:CG2	2.33	0.57
35:DN:49:GLU:N	35:DN:50:PRO:CD	2.67	0.57
1:AA:1157:A:N7	1:AA:1180:A:N6	2.51	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:92:LEU:O	10:AJ:93:ALA:CB	2.52	0.57
22:BA:742:A:H2'	22:BA:743:A:C8	2.39	0.57
22:BA:1008:A:N6	22:BA:1136:G:C6	2.71	0.57
22:BA:1061:U:O2'	22:BA:1062:G:C5'	2.52	0.57
22:BA:2009:A:OP1	40:BS:41:LYS:HE2	2.04	0.57
24:BC:125:LYS:HG2	24:BC:128:ASN:ND2	2.19	0.57
29:BH:91:PHE:O	1:CA:55:A:C5	2.56	0.57
53:B5:40:GLU:HA	53:B5:181:PHE:HA	1.85	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
1:CA:1245:C:C4	1:CA:1246:A:N7	2.72	0.57
2:CB:21:ARG:O	2:CB:23:TRP:N	2.37	0.57
12:CL:38:TYR:CB	12:CL:52:VAL:HG13	2.34	0.57
14:CN:54:ASP:HA	14:CN:59:ARG:HD3	1.86	0.57
14:CN:91:GLY:O	14:CN:93:ILE:N	2.37	0.57
17:CQ:50:ASN:O	17:CQ:52:GLU:N	2.37	0.57
22:DA:247:G:C8	22:DA:249:C:C6	2.91	0.57
22:DA:746:U:HO2'	22:DA:2611:C:HO2'	1.50	0.57
22:DA:1668:A:C4	22:DA:1674:G:N7	2.72	0.57
22:DA:1965:C:OP1	22:DA:1966:A:H2'	2.03	0.57
22:DA:2114:A:N6	22:DA:2119:A:N7	2.52	0.57
22:DA:2293:G:H2'	22:DA:2294:G:O4'	2.04	0.57
22:DA:2387:U:H1'	44:DW:41:ARG:CD	2.34	0.57
22:DA:2469:A:H4'	34:DM:55:ARG:HD3	1.84	0.57
29:DH:62:LEU:HD13	29:DH:62:LEU:C	2.25	0.57
33:DL:77:ILE:O	33:DL:110:VAL:O	2.21	0.57
42:DU:13:VAL:HG21	42:DU:39:ILE:HD12	1.86	0.57
1:AA:208:U:C5	1:AA:210:C:N3	2.72	0.57
4:AD:78:GLU:HG3	4:AD:93:LEU:HD21	1.86	0.57
22:BA:1414:C:C4	22:BA:1415:U:C5	2.91	0.57
24:BC:36:LYS:O	24:BC:37:ASN:CB	2.52	0.57
35:BN:58:ASP:OD1	35:BN:63:ARG:NH2	2.37	0.57
1:CA:927:G:O2'	1:CA:1503:A:N7	2.31	0.57
1:CA:1092:A:C6	1:CA:1183:U:O2	2.57	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
22:DA:1125:G:C6	22:DA:1126:A:N6	2.72	0.57
22:DA:1827:U:C2'	22:DA:1828:G:O5'	2.52	0.57
22:DA:1838:C:H4'	22:DA:1839:G:C8	2.39	0.57
22:DA:2110:G:O2'	22:DA:2120:G:OP2	2.17	0.57
22:DA:2267:A:H5''	22:DA:2268:A:H5'	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2499:C:N4	22:DA:2500:U:O4	2.37	0.57
22:DA:2537:U:H2'	22:DA:2538:C:C6	2.39	0.57
23:DB:32:U:C2	23:DB:51:G:N2	2.72	0.57
29:DH:117:LEU:HB3	29:DH:120:GLY:O	2.04	0.57
1:AA:90:C:C2	1:AA:91:U:C6	2.92	0.57
2:AB:222:ARG:HB3	2:AB:222:ARG:CZ	2.34	0.57
4:AD:58:LYS:NZ	4:AD:69:GLU:OE2	2.33	0.57
11:AK:52:PHE:CB	11:AK:56:ARG:HB3	2.35	0.57
16:AP:75:ILE:HG22	16:AP:80:LYS:HE2	1.86	0.57
22:BA:1179:G:C5	22:BA:1180:U:C1'	2.86	0.57
23:BB:48:U:H2'	23:BB:49:C:C6	2.39	0.57
1:CA:33:A:H2'	1:CA:34:C:C6	2.39	0.57
1:CA:206:C:H2'	1:CA:207:C:H5'	1.87	0.57
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.39	0.57
1:CA:1478:U:H2'	1:CA:1479:C:C6	2.39	0.57
4:CD:32:CYS:O	4:CD:33:LYS:CB	2.53	0.57
8:CH:89:LYS:HA	8:CH:92:LEU:CD1	2.34	0.57
22:DA:76:C:HO2'	46:DY:55:THR:HG1	1.51	0.57
22:DA:223:A:C4	22:DA:408:G:H1'	2.39	0.57
22:DA:1344:U:O2'	22:DA:1345:C:P	2.63	0.57
22:DA:1651:G:C2	22:DA:2007:U:O2	2.57	0.57
23:DB:81:G:C5	23:DB:82:U:C5	2.92	0.57
24:DC:9:THR:O	24:DC:10:SER:CB	2.52	0.57
39:DR:81:LYS:O	39:DR:82:HIS:C	2.42	0.57
1:AA:144:G:C2	1:AA:179:A:N3	2.72	0.57
1:AA:262:A:C6	1:AA:263:A:C6	2.93	0.57
1:AA:299:G:H2'	1:AA:300:A:C8	2.40	0.57
5:AE:13:GLU:CB	5:AE:39:VAL:HG12	2.34	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
22:BA:784:G:O2'	22:BA:785:G:H5''	2.04	0.57
22:BA:1079:C:C5	22:BA:1088:A:C2	2.93	0.57
22:BA:1795:C:C4	22:BA:1796:U:C4	2.92	0.57
22:BA:1958:C:O2'	22:BA:1959:G:H5'	2.04	0.57
22:BA:2615:U:C2	48:B0:4:GLN:HA	2.40	0.57
1:CA:455:G:N2	1:CA:478:A:C2	2.72	0.57
1:CA:577:G:C4	1:CA:816:A:C2	2.92	0.57
2:CB:210:VAL:O	2:CB:214:LEU:HB2	2.04	0.57
7:CG:125:SER:O	7:CG:127:ALA:N	2.37	0.57
9:CI:116:VAL:CG2	10:CJ:62:ARG:HD3	2.35	0.57
22:DA:247:G:OP2	22:DA:249:C:N4	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:411:G:OP1	57:DA:3558:HOH:O	2.17	0.57
22:DA:616:A:C2	22:DA:617:G:O4'	2.57	0.57
22:DA:634:C:H2'	22:DA:635:C:C6	2.40	0.57
22:DA:674:G:H1'	26:DE:69:ARG:HE	1.69	0.57
22:DA:2612:C:H5''	22:DA:2613:U:OP1	2.05	0.57
24:DC:31:ALA:N	24:DC:32:PRO:HD2	2.18	0.57
24:DC:34:LEU:O	24:DC:35:GLU:HB3	2.03	0.57
1:AA:32:A:C2	1:AA:33:A:C5	2.92	0.57
1:AA:316:C:C2	1:AA:317:U:C5	2.92	0.57
1:AA:620:C:H2'	1:AA:621:A:O4'	2.04	0.57
1:AA:1349:A:C2	1:AA:1374:A:C4	2.92	0.57
2:AB:147:SER:O	2:AB:148:LEU:HB2	2.04	0.57
9:AI:57:MET:O	9:AI:59:GLU:N	2.38	0.57
21:AU:10:GLU:CG	21:AU:11:PRO:HD3	2.35	0.57
22:BA:1066:U:O2	22:BA:1069:A:N7	2.37	0.57
22:BA:1712:U:OP2	22:BA:1713:A:O2'	2.20	0.57
22:BA:2182:U:O4	22:BA:2183:A:N6	2.38	0.57
24:BC:91:ILE:HD12	24:BC:103:TYR:CD1	2.40	0.57
24:BC:141:VAL:HG11	24:BC:190:ALA:HB1	1.87	0.57
43:BV:56:PHE:O	43:BV:61:LEU:HD11	2.04	0.57
1:CA:145:G:C2	1:CA:146:G:C8	2.92	0.57
1:CA:543:U:O2'	1:CA:544:G:H5'	2.03	0.57
22:DA:197:A:N6	22:DA:2430:A:H2'	2.18	0.57
22:DA:1355:G:H2'	22:DA:1356:G:H5'	1.86	0.57
22:DA:1446:C:H2'	22:DA:1447:C:O4'	2.04	0.57
22:DA:1917:U:H2'	22:DA:1918:A:H5'	1.87	0.57
22:DA:2586:U:C5	22:DA:2587:A:C8	2.92	0.57
48:D0:55:ILE:O	48:D0:56:ALA:CB	2.53	0.57
1:AA:65:A:C4	1:AA:381:C:C5	2.92	0.57
1:AA:81:A:C2'	1:AA:82:G:H5''	2.35	0.57
1:AA:1154:G:C2	1:AA:1155:A:C5	2.92	0.57
1:AA:1492:A:OP1	12:AL:44:LYS:N	2.37	0.57
2:AB:184:PHE:CZ	2:AB:198:PHE:CD2	2.92	0.57
5:AE:46:VAL:HG21	5:AE:118:ALA:HB2	1.87	0.57
10:AJ:52:LEU:HB2	14:AN:81:ARG:NE	2.20	0.57
17:AQ:48:ASP:C	17:AQ:48:ASP:OD2	2.43	0.57
22:BA:482:A:H5''	22:BA:483:A:OP1	2.04	0.57
22:BA:558:U:OP1	31:BJ:113:PRO:HD2	2.04	0.57
22:BA:686:U:O4	50:B2:12:ARG:HB2	2.04	0.57
22:BA:1853:A:N1	22:BA:2087:G:H1'	2.19	0.57
32:BK:21:CYS:HA	32:BK:41:ILE:HG22	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1178:G:N2	1:CA:1181:G:OP2	2.38	0.57
1:CA:1302:C:C5	13:CM:17:ILE:HD13	2.40	0.57
1:CA:1365:G:H2'	1:CA:1366:C:O4'	2.05	0.57
2:CB:100:MET:HA	2:CB:107:VAL:HG21	1.87	0.57
21:CU:10:GLU:HB2	21:CU:11:PRO:HD3	1.87	0.57
22:DA:498:G:C2	22:DA:499:U:C6	2.93	0.57
22:DA:841:G:N2	22:DA:937:C:O2	2.33	0.57
22:DA:2360:G:H1'	33:DL:60:ARG:HD3	1.86	0.57
22:DA:2504:U:C4	55:DA:3001:DOL:C16	2.88	0.57
22:DA:2888:C:H2'	22:DA:2889:C:C6	2.39	0.57
29:DH:21:VAL:HG22	29:DH:22:LYS:N	2.19	0.57
35:DN:1:MET:CE	35:DN:1:MET:N	2.67	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
1:AA:903:G:H2'	1:AA:904:U:H6	1.68	0.57
1:AA:1107:C:N3	1:AA:1108:G:C8	2.73	0.57
2:AB:187:VAL:HG23	2:AB:187:VAL:O	2.04	0.57
3:AC:64:ILE:HG23	3:AC:99:ALA:HB2	1.86	0.57
5:AE:46:VAL:HG21	5:AE:118:ALA:CB	2.35	0.57
10:AJ:53:ILE:CG2	10:AJ:61:ALA:HB1	2.35	0.57
19:AS:5:LEU:HD23	19:AS:9:PRO:HA	1.87	0.57
22:BA:2897:U:H2'	22:BA:2898:U:C6	2.38	0.57
29:BH:95:GLY:HA2	29:BH:117:LEU:HD22	1.87	0.57
29:BH:132:PHE:CE2	29:BH:142:VAL:HG21	2.40	0.57
31:BJ:81:ILE:HG23	31:BJ:82:GLY:H	1.69	0.57
41:BT:17:SER:O	41:BT:20:ALA:N	2.37	0.57
46:BY:18:LEU:O	46:BY:22:LEU:HB2	2.05	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
4:CD:32:CYS:O	4:CD:33:LYS:HB3	2.05	0.57
5:CE:154:ALA:HA	5:CE:157:ARG:HB3	1.86	0.57
6:CF:86:ARG:CG	6:CF:86:ARG:HH11	2.17	0.57
8:CH:96:MET:HB2	8:CH:99:LEU:O	2.03	0.57
14:CN:80:SER:O	14:CN:82:ILE:N	2.37	0.57
20:CT:28:MET:HE3	20:CT:58:VAL:HG22	1.87	0.57
22:DA:67:U:C2	22:DA:68:G:C8	2.93	0.57
22:DA:324:A:N6	22:DA:338:G:O2'	2.37	0.57
22:DA:747:U:O4'	40:DS:92:ARG:NH1	2.37	0.57
22:DA:2176:A:H2'	22:DA:2177:C:C6	2.39	0.57
22:DA:2266:A:C2	22:DA:2272:U:C5	2.92	0.57
22:DA:2697:G:C2	22:DA:2711:A:C2	2.92	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:154:U:O2	1:AA:168:G:N2	2.37	0.57
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.04	0.57
1:AA:1313:U:P	19:AS:6:LYS:HB3	2.45	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
22:BA:304:U:H2'	22:BA:305:C:C6	2.40	0.57
22:BA:1378:A:C4	22:BA:1380:G:N7	2.73	0.57
22:BA:2582:G:C2	22:BA:2583:G:C8	2.92	0.57
24:BC:15:HIS:O	24:BC:204:VAL:CG2	2.52	0.57
28:BG:87:LEU:N	28:BG:87:LEU:HD12	2.20	0.57
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
38:BQ:87:SER:HB3	39:BR:51:VAL:HA	1.87	0.57
1:CA:60:A:N3	1:CA:61:G:H1'	2.20	0.57
1:CA:636:U:H2'	1:CA:637:C:C6	2.39	0.57
1:CA:992:U:C4	1:CA:1043:G:N7	2.73	0.57
2:CB:210:VAL:HG22	2:CB:211:THR:N	2.18	0.57
5:CE:24:THR:HA	5:CE:29:ARG:HA	1.86	0.57
5:CE:104:GLY:O	5:CE:105:ILE:CG2	2.53	0.57
12:CL:80:ILE:HD12	12:CL:97:THR:HG21	1.87	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
20:CT:25:ARG:HD2	20:CT:29:ARG:NH1	2.19	0.57
22:DA:249:C:P	22:DA:2394:C:HO2'	2.27	0.57
22:DA:1826:G:C6	22:DA:1827:U:C4	2.92	0.57
22:DA:2019:A:H4'	38:DQ:34:VAL:CG2	2.35	0.57
22:DA:2148:G:C2	22:DA:2149:U:C5	2.93	0.57
22:DA:2308:G:C5'	22:DA:2309:A:OP2	2.51	0.57
30:DI:10:LYS:HB2	30:DI:56:PRO:CB	2.34	0.57
36:DO:33:ARG:O	36:DO:34:HIS:CB	2.52	0.57
1:AA:502:A:H2'	1:AA:503:C:O4'	2.05	0.57
5:AE:25:VAL:O	5:AE:26:LYS:C	2.43	0.57
22:BA:70:G:H4'	22:BA:71:A:OP1	2.04	0.57
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
22:BA:2153:C:H2'	22:BA:2154:A:O4'	2.05	0.57
22:BA:2485:G:OP1	34:BM:45:GLN:NE2	2.37	0.57
53:B5:51:ASP:N	53:B5:52:PRO:HD3	2.20	0.57
53:B5:180:SER:CB	53:B5:188:ASP:CB	2.83	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:55:ARG:CZ	19:CS:79:THR:HG22	2.34	0.57
22:DA:106:C:HO2'	22:DA:294:A:HO2'	0.58	0.57
22:DA:235:U:C4	22:DA:236:C:C5	2.92	0.57
22:DA:445:C:O2'	22:DA:449:A:N3	2.37	0.57
22:DA:807:U:OP2	33:DL:41:ARG:NH1	2.37	0.57
22:DA:1313:U:O2	22:DA:1313:U:H2'	2.05	0.57
22:DA:1570:A:H5'	24:DC:36:LYS:HB3	1.85	0.57
22:DA:1651:G:N2	22:DA:2007:U:O2	2.38	0.57
22:DA:2707:U:H2'	22:DA:2708:G:C8	2.39	0.57
1:AA:582:C:C4	1:AA:583:A:N7	2.73	0.56
9:AI:47:VAL:HA	9:AI:50:GLN:HB2	1.87	0.56
1:CA:575:G:C6	1:CA:821:G:N7	2.73	0.56
2:CB:184:PHE:CE1	2:CB:198:PHE:CD2	2.93	0.56
5:CE:98:PRO:O	5:CE:122:ASN:ND2	2.33	0.56
6:CF:45:ARG:HD2	6:CF:59:TYR:CE2	2.40	0.56
8:CH:126:ILE:N	8:CH:126:ILE:HD12	2.20	0.56
9:CI:32:GLN:NE2	9:CI:64:TYR:OH	2.38	0.56
15:CO:62:GLN:O	15:CO:66:LEU:HD23	2.05	0.56
22:DA:88:G:C2	22:DA:89:A:C8	2.93	0.56
22:DA:2429:G:N7	33:DL:55:MET:HE3	2.19	0.56
32:DK:104:THR:O	32:DK:106:GLU:N	2.38	0.56
40:DS:29:VAL:CG1	40:DS:55:ILE:HD11	2.35	0.56
42:DU:34:VAL:HG23	42:DU:65:ILE:O	2.04	0.56
1:AA:832:G:C2	1:AA:833:G:C8	2.93	0.56
1:AA:1520:C:C2	1:AA:1521:C:C5	2.93	0.56
2:AB:67:ILE:HG21	2:AB:69:PHE:CE2	2.40	0.56
2:AB:88:ASP:C	2:AB:89:GLN:HG3	2.25	0.56
20:AT:71:LYS:HD2	20:AT:74:ARG:NH2	2.20	0.56
22:BA:578:G:OP1	22:BA:1255:U:O2'	2.22	0.56
22:BA:1436:G:N2	22:BA:1557:C:C2	2.73	0.56
22:BA:2394:C:OP2	51:B3:30:ARG:HD3	2.04	0.56
40:BS:62:ASP:O	40:BS:63:GLY:O	2.23	0.56
2:CB:83:ALA:O	2:CB:86:SER:OG	2.22	0.56
12:CL:107:VAL:CG2	12:CL:117:TYR:HB3	2.35	0.56
22:DA:1068:G:H2'	22:DA:1068:G:N3	2.19	0.56
22:DA:1530:G:C2	22:DA:1542:U:O2	2.58	0.56
22:DA:1683:U:O5'	22:DA:1683:U:H6	1.87	0.56
22:DA:1826:G:C5	22:DA:1827:U:C5	2.93	0.56
25:DD:176:ASP:HB2	25:DD:190:LYS:HB3	1.87	0.56
31:DJ:41:LYS:O	31:DJ:42:ALA:C	2.44	0.56
33:DL:94:THR:O	33:DL:98:ALA:N	2.37	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:429:U:H1'	1:AA:430:A:H5''	1.88	0.56
1:AA:604:G:C2	1:AA:635:A:C2	2.93	0.56
1:AA:1367:C:OP2	9:AI:114:LYS:NZ	2.37	0.56
3:AC:12:LEU:O	3:AC:13:GLY:C	2.44	0.56
5:AE:157:ARG:C	5:AE:159:LYS:N	2.58	0.56
7:AG:99:LEU:O	7:AG:101:MET:N	2.38	0.56
10:AJ:34:ALA:O	10:AJ:35:GLN:CB	2.52	0.56
20:AT:44:LYS:CD	20:AT:87:ALA:HA	2.36	0.56
21:AU:44:GLU:OE2	21:AU:45:ARG:NH1	2.38	0.56
22:BA:45:G:H5''	22:BA:46:G:H5'	1.87	0.56
22:BA:894:U:H2'	22:BA:895:U:C6	2.39	0.56
22:BA:967:U:H2'	22:BA:968:C:C6	2.40	0.56
22:BA:1324:G:C4	22:BA:1328:A:N6	2.73	0.56
22:BA:1352:U:O2'	22:BA:1353:A:H5'	2.05	0.56
22:BA:1808:A:N1	45:BX:28:ARG:HD2	2.21	0.56
22:BA:1901:A:OP2	24:BC:253:LYS:NZ	2.33	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
23:BB:110:C:C4	23:BB:111:U:C5	2.94	0.56
27:BF:123:ASP:CG	27:BF:127:ASN:HB2	2.26	0.56
30:BI:18:ALA:C	30:BI:20:PRO:HD3	2.26	0.56
34:BM:51:ARG:O	34:BM:55:ARG:HG3	2.05	0.56
48:B0:15:MET:O	48:B0:18:SER:CB	2.53	0.56
1:CA:411:A:C6	1:CA:429:U:C5	2.93	0.56
1:CA:562:U:OP2	12:CL:14:ARG:NE	2.38	0.56
1:CA:1330:U:H4'	13:CM:23:TYR:CE1	2.39	0.56
1:CA:1394:A:C5	1:CA:1501:C:H4'	2.40	0.56
3:CC:77:ILE:HA	3:CC:84:VAL:CG2	2.35	0.56
5:CE:96:MET:HE3	5:CE:111:MET:CE	2.34	0.56
12:CL:44:LYS:CB	12:CL:45:PRO:CD	2.83	0.56
13:CM:91:HIS:CD2	13:CM:97:VAL:HG21	2.40	0.56
15:CO:37:ASN:O	15:CO:40:GLN:CB	2.52	0.56
22:DA:64:A:H2'	22:DA:65:U:O4'	2.05	0.56
22:DA:457:A:N1	22:DA:470:A:H5''	2.20	0.56
22:DA:491:G:C6	22:DA:492:A:C6	2.93	0.56
22:DA:783:A:O2'	22:DA:1779:U:O2	2.14	0.56
22:DA:971:G:H2'	22:DA:972:A:O4'	2.04	0.56
22:DA:1353:A:C8	22:DA:1378:A:N6	2.73	0.56
22:DA:1410:G:C2	22:DA:1411:U:C4	2.93	0.56
22:DA:1844:C:O3'	24:DC:256:LYS:NZ	2.38	0.56
22:DA:2093:G:O2'	22:DA:2094:A:H5'	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2310:C:C4	27:DF:77:PHE:CZ	2.94	0.56
22:DA:2379:G:H4'	36:DO:21:LEU:HD11	1.87	0.56
22:DA:2757:A:N1	28:DG:67:THR:HG21	2.20	0.56
28:DG:86:LYS:HB3	28:DG:165:ALA:HB2	1.87	0.56
37:DP:93:ARG:O	37:DP:94:LYS:CB	2.54	0.56
41:DT:21:SER:O	41:DT:22:THR:C	2.43	0.56
41:DT:89:GLU:O	41:DT:91:GLN:N	2.38	0.56
52:D4:36:ARG:HG2	52:D4:37:GLN:N	2.20	0.56
1:AA:1068:G:O2'	1:AA:1191:A:N1	2.24	0.56
1:AA:1135:U:C2'	1:AA:1136:C:O5'	2.54	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:BA:1073:A:C3'	22:BA:1074:G:H5''	2.35	0.56
23:BB:34:A:O2'	23:BB:35:C:H5''	2.05	0.56
37:BP:31:TRP:CE2	37:BP:40:LEU:CD1	2.88	0.56
39:BR:51:VAL:HG23	39:BR:52:PRO:HD2	1.87	0.56
1:CA:922:G:H4'	5:CE:25:VAL:HA	1.88	0.56
1:CA:972:C:H4'	10:CJ:59:LYS:HG2	1.88	0.56
1:CA:991:U:C4	1:CA:1212:U:O4'	2.58	0.56
21:CU:35:ARG:NH2	57:CU:101:HOH:O	2.38	0.56
22:DA:749:A:C4	22:DA:750:A:C8	2.94	0.56
22:DA:1181:U:H2'	22:DA:1182:G:C8	2.40	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
22:DA:2189:U:H2'	22:DA:2190:G:H5'	1.87	0.56
22:DA:2341:G:C6	22:DA:2342:C:C4	2.94	0.56
29:DH:83:LYS:N	29:DH:149:GLU:HG2	2.20	0.56
1:AA:631:C:C5'	1:AA:632:U:O5'	2.54	0.56
1:AA:880:C:O2'	1:AA:881:G:H5'	2.06	0.56
1:AA:1289:A:O3'	7:AG:35:LYS:NZ	2.37	0.56
9:AI:57:MET:CG	9:AI:58:VAL:H	2.18	0.56
13:AM:95:LEU:HB3	13:AM:96:PRO:HD2	1.87	0.56
18:AR:34:THR:OG1	18:AR:35:GLU:N	2.38	0.56
20:AT:54:MET:HE1	20:AT:58:VAL:HG21	1.87	0.56
22:BA:2191:A:N1	22:BA:2192:U:O4	2.39	0.56
30:BI:82:LYS:O	30:BI:83:ALA:CB	2.53	0.56
40:BS:57:ASN:O	40:BS:61:ASN:HB2	2.04	0.56
48:B0:55:ILE:HG22	48:B0:57:LYS:H	1.70	0.56
1:CA:32:A:H2'	1:CA:32:A:N3	2.20	0.56
1:CA:106:C:C2'	1:CA:107:G:H5'	2.35	0.56
1:CA:169:C:H2'	1:CA:170:U:C6	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1224:U:N3	1:CA:1322:C:O2	2.38	0.56
8:CH:64:LYS:HB3	8:CH:71:VAL:HG21	1.87	0.56
22:DA:858:G:C4	22:DA:2268:A:C2	2.94	0.56
22:DA:983:A:N6	22:DA:984:A:C2	2.73	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:AA:71:A:O2'	1:AA:72:A:P	2.62	0.56
1:AA:375:U:C4	1:AA:376:G:N7	2.74	0.56
10:AJ:43:PRO:O	10:AJ:71:LEU:HD23	2.06	0.56
22:BA:2502:G:C5'	22:BA:2503:A:H5''	2.36	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
1:CA:802:A:N3	1:CA:802:A:H2'	2.21	0.56
1:CA:1262:C:C4	1:CA:1263:C:C4	2.94	0.56
2:CB:143:LYS:O	2:CB:147:SER:OG	2.19	0.56
3:CC:61:ALA:O	3:CC:62:LYS:HB2	2.05	0.56
4:CD:62:ARG:NH1	4:CD:69:GLU:OE1	2.38	0.56
4:CD:70:ARG:O	4:CD:74:ASN:ND2	2.39	0.56
5:CE:34:THR:HB	5:CE:50:TYR:CZ	2.41	0.56
5:CE:98:PRO:O	5:CE:99:ALA:HB3	2.05	0.56
8:CH:21:ASN:O	8:CH:22:LYS:C	2.42	0.56
9:CI:55:VAL:O	9:CI:55:VAL:CG2	2.53	0.56
11:CK:25:ALA:HB3	11:CK:87:LYS:O	2.05	0.56
16:CP:70:ARG:O	16:CP:74:LEU:HD23	2.05	0.56
22:DA:12:U:O2	22:DA:12:U:H2'	2.06	0.56
22:DA:295:G:H2'	22:DA:295:G:N3	2.20	0.56
22:DA:571:U:C4	22:DA:575:A:C5	2.94	0.56
22:DA:696:G:N1	22:DA:767:U:C2	2.73	0.56
22:DA:936:A:C2	22:DA:937:C:C2	2.94	0.56
22:DA:1581:G:C5	22:DA:1582:C:C4	2.94	0.56
22:DA:2325:G:C6	22:DA:2326:C:N4	2.73	0.56
24:DC:18:LYS:O	24:DC:19:VAL:HB	2.04	0.56
28:DG:118:PRO:HG3	28:DG:144:VAL:HG21	1.87	0.56
38:DQ:50:ARG:O	38:DQ:54:LYS:NZ	2.36	0.56
5:AE:109:GLY:O	5:AE:110:ALA:CB	2.52	0.56
13:AM:4:ILE:O	13:AM:6:GLY:N	2.39	0.56
22:BA:77:G:N2	22:BA:110:G:H1'	2.21	0.56
22:BA:137:U:H2'	22:BA:140:C:C2	2.41	0.56
22:BA:523:C:O2'	22:BA:524:G:H5'	2.06	0.56
22:BA:563:A:C2	22:BA:564:C:C2	2.94	0.56
22:BA:1073:A:C3'	22:BA:1074:G:C5'	2.80	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1180:U:C2'	22:BA:1181:U:H5'	2.36	0.56
22:BA:1680:U:H2'	22:BA:1681:G:O4'	2.06	0.56
22:BA:2888:C:O2	22:BA:2888:C:H2'	2.06	0.56
29:BH:40:THR:OG1	29:BH:43:ASN:OD1	2.24	0.56
36:BO:41:ALA:HB2	36:BO:48:LEU:HD21	1.88	0.56
40:BS:8:ARG:O	40:BS:9:HIS:HB2	2.06	0.56
43:BV:6:ALA:HB1	43:BV:40:ILE:HG23	1.88	0.56
46:BY:34:SER:O	46:BY:36:GLN:N	2.39	0.56
1:CA:1069:C:C2'	1:CA:1070:U:O5'	2.54	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
21:CU:47:ARG:HA	21:CU:47:ARG:HE	1.70	0.56
22:DA:629:G:N3	22:DA:639:U:O2'	2.37	0.56
22:DA:686:U:H2'	22:DA:788:A:N1	2.21	0.56
22:DA:1310:G:C2'	22:DA:1311:G:H5'	2.35	0.56
22:DA:2216:G:H2'	22:DA:2217:G:C8	2.40	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
30:DI:101:ILE:O	30:DI:102:SER:HB3	2.05	0.56
34:DM:72:PRO:HB3	34:DM:92:TRP:CZ3	2.40	0.56
39:DR:52:PRO:O	39:DR:53:PHE:CB	2.53	0.56
1:AA:542:G:OP1	4:AD:10:LYS:CE	2.54	0.56
1:AA:821:G:H4'	57:AA:1741:HOH:O	2.05	0.56
5:AE:157:ARG:HD2	8:AH:43:GLU:O	2.05	0.56
8:AH:95:VAL:HG12	8:AH:96:MET:N	2.20	0.56
10:AJ:27:GLU:C	10:AJ:29:ALA:H	2.10	0.56
17:AQ:45:HIS:CG	17:AQ:70:THR:CG2	2.88	0.56
22:BA:936:A:H2'	22:BA:937:C:C6	2.41	0.56
22:BA:2120:G:N2	22:BA:2179:C:O2	2.39	0.56
22:BA:2820:A:C6	25:BD:197:THR:CG2	2.88	0.56
23:BB:30:C:OP1	36:BO:3:LYS:NZ	2.39	0.56
43:BV:58:SER:O	43:BV:73:LYS:HE2	2.06	0.56
1:CA:182:A:C5	1:CA:184:G:N7	2.74	0.56
1:CA:426:U:H5''	4:CD:37:ALA:HB1	1.87	0.56
1:CA:577:G:N9	1:CA:816:A:C2	2.74	0.56
1:CA:635:A:C6	1:CA:636:U:C4	2.93	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
1:CA:1394:A:N1	1:CA:1500:A:O2'	2.36	0.56
2:CB:54:LEU:HA	2:CB:57:LEU:HB3	1.86	0.56
4:CD:168:PRO:CB	4:CD:171:LEU:HD12	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:84:VAL:HG11	11:CK:97:ILE:HG22	1.88	0.56
16:CP:16:PHE:CE1	16:CP:38:PHE:HB2	2.41	0.56
22:DA:126:A:N7	22:DA:127:A:N1	2.53	0.56
22:DA:491:G:C6	22:DA:492:A:C5	2.93	0.56
22:DA:1315:C:O2'	22:DA:1392:A:N3	2.36	0.56
22:DA:1638:C:H4'	22:DA:2710:C:O2	2.05	0.56
22:DA:1843:C:H4'	24:DC:251:GLN:CD	2.25	0.56
32:DK:31:ARG:HB3	32:DK:32:TYR:CE2	2.41	0.56
35:DN:54:LEU:HD21	35:DN:66:ALA:HB2	1.87	0.56
1:AA:11:G:C6	1:AA:12:U:C4	2.94	0.56
1:AA:57:G:H2'	1:AA:58:C:C6	2.41	0.56
1:AA:205:A:H2'	1:AA:205:A:N3	2.21	0.56
1:AA:527:G:O2'	1:AA:535:A:N1	2.36	0.56
1:AA:858:G:O6	1:AA:869:G:C8	2.58	0.56
1:AA:1109:C:OP2	3:AC:176:HIS:ND1	2.32	0.56
4:AD:37:ALA:HA	4:AD:42:GLY:HA3	1.87	0.56
6:AF:91:ARG:HG3	6:AF:92:THR:N	2.19	0.56
22:BA:572:A:C2	22:BA:2033:A:C2	2.94	0.56
22:BA:1565:C:OP1	24:BC:18:LYS:NZ	2.39	0.56
22:BA:1838:C:C6	22:BA:1899:A:C6	2.94	0.56
24:BC:86:ASN:N	24:BC:86:ASN:OD1	2.37	0.56
25:BD:103:ASP:O	25:BD:104:VAL:HG22	2.06	0.56
32:BK:106:GLU:N	32:BK:106:GLU:OE2	2.38	0.56
46:BY:9:LYS:O	46:BY:12:GLU:N	2.38	0.56
1:CA:496:A:C2	1:CA:497:G:C6	2.93	0.56
1:CA:502:A:H2'	1:CA:503:C:O4'	2.06	0.56
2:CB:10:LEU:CD2	2:CB:12:ALA:O	2.54	0.56
2:CB:15:HIS:O	2:CB:15:HIS:CG	2.58	0.56
2:CB:162:PHE:HA	2:CB:184:PHE:O	2.06	0.56
3:CC:75:ILE:O	3:CC:75:ILE:HG13	2.05	0.56
5:CE:125:ALA:O	5:CE:126:LYS:HB3	2.05	0.56
22:DA:1153:C:H5'	38:DQ:62:ILE:HD13	1.87	0.56
22:DA:1351:C:H2'	22:DA:1352:U:O4'	2.06	0.56
22:DA:1973:G:C5	22:DA:1974:C:C5	2.94	0.56
22:DA:2262:U:H1'	22:DA:2328:A:H1'	1.87	0.56
31:DJ:105:VAL:HG12	31:DJ:109:LEU:HD12	1.88	0.56
47:DZ:40:ASP:OD2	47:DZ:45:ARG:NH1	2.38	0.56
49:D1:21:TYR:CD1	49:D1:38:LYS:HD2	2.41	0.56
1:AA:452:A:H2'	1:AA:453:G:C5'	2.36	0.56
4:AD:32:CYS:O	4:AD:33:LYS:CB	2.54	0.56
15:AO:19:ALA:O	15:AO:20:ASN:HB2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1115:G:N3	22:BA:1116:G:C8	2.73	0.56
22:BA:2286:G:O6	49:B1:23:THR:OG1	2.10	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
1:CA:898:G:N2	1:CA:901:A:OP2	2.36	0.56
2:CB:219:ALA:O	2:CB:220:THR:HB	2.05	0.56
12:CL:82:ILE:HD11	12:CL:95:TYR:HB2	1.88	0.56
22:DA:927:A:O2'	47:DZ:39:GLU:OE1	2.23	0.56
22:DA:1355:G:C2'	22:DA:1356:G:H5'	2.36	0.56
22:DA:1440:U:H2'	22:DA:1441:G:O4'	2.06	0.56
45:DX:31:PRO:HB2	45:DX:33:LEU:CD1	2.36	0.56
1:AA:764:C:H5''	15:AO:50:HIS:CD2	2.40	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:BA:1422:G:C4	22:BA:1423:G:C8	2.94	0.55
22:BA:2492:U:C2	22:BA:2493:U:C5	2.93	0.55
36:BO:25:ARG:HG3	36:BO:27:VAL:HG12	1.88	0.55
36:BO:31:THR:HG22	36:BO:34:HIS:N	2.20	0.55
38:BQ:9:ILE:O	38:BQ:13:ARG:HG3	2.07	0.55
49:B1:7:GLU:OE1	49:B1:53:LYS:O	2.24	0.55
51:B3:27:ALA:O	51:B3:28:ASN:CB	2.53	0.55
1:CA:1255:G:N1	1:CA:1279:G:C8	2.74	0.55
3:CC:74:GLY:O	3:CC:78:GLY:N	2.39	0.55
4:CD:107:PHE:CG	4:CD:145:ILE:HD11	2.41	0.55
20:CT:67:ILE:HD12	20:CT:71:LYS:HE3	1.87	0.55
21:CU:37:PHE:HA	21:CU:40:LYS:HE3	1.87	0.55
22:DA:948:C:O2	22:DA:984:A:O2'	2.21	0.55
44:DW:49:ALA:O	44:DW:50:ASN:HB2	2.06	0.55
1:AA:108:G:N3	1:AA:108:G:C5'	2.70	0.55
1:AA:554:A:H2'	1:AA:555:U:C6	2.41	0.55
1:AA:782:A:C2	1:AA:801:U:C2	2.95	0.55
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.41	0.55
2:AB:93:ASN:OD1	2:AB:94:HIS:ND1	2.38	0.55
3:AC:145:GLY:O	3:AC:146:ALA:C	2.44	0.55
5:AE:151:GLU:O	5:AE:153:VAL:N	2.38	0.55
6:AF:3:HIS:H	6:AF:92:THR:HG23	1.71	0.55
9:AI:9:THR:HG22	9:AI:10:GLY:N	2.21	0.55
22:BA:84:A:H4'	22:BA:85:G:O5'	2.06	0.55
22:BA:511:U:C5	22:BA:512:G:C5	2.95	0.55
22:BA:574:A:OP2	57:BA:3267:HOH:O	2.18	0.55
22:BA:588:U:H1'	26:BE:85:PHE:CD1	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1181:U:H2'	22:BA:1182:G:C8	2.41	0.55
22:BA:1327:A:N6	22:BA:1328:A:C2	2.74	0.55
22:BA:1385:A:C4	22:BA:1386:C:C5	2.95	0.55
22:BA:1832:C:C4	22:BA:1833:C:C5	2.94	0.55
22:BA:1857:G:N2	22:BA:1884:G:H1'	2.20	0.55
27:BF:108:VAL:HG13	27:BF:114:PHE:CE2	2.42	0.55
32:BK:109:SER:O	32:BK:110:GLU:C	2.44	0.55
40:BS:30:SER:OG	40:BS:31:GLN:N	2.36	0.55
43:BV:32:GLY:O	43:BV:93:ARG:NH1	2.38	0.55
1:CA:109:A:C6	1:CA:327:A:C6	2.94	0.55
1:CA:1041:G:H2'	1:CA:1042:A:C8	2.40	0.55
1:CA:1296:C:H4'	1:CA:1302:C:N4	2.21	0.55
1:CA:1439:G:C2	1:CA:1463:U:O2	2.59	0.55
4:CD:160:GLU:O	4:CD:163:GLU:HB2	2.06	0.55
22:DA:269:C:O2	22:DA:269:C:H2'	2.06	0.55
22:DA:319:G:C4	22:DA:333:G:N2	2.75	0.55
22:DA:694:U:H2'	22:DA:695:G:H5''	1.87	0.55
22:DA:770:G:H1'	22:DA:1379:U:C4	2.41	0.55
22:DA:842:U:N3	22:DA:843:G:N7	2.54	0.55
22:DA:1034:G:C6	22:DA:1035:U:N3	2.74	0.55
22:DA:1179:G:C5	22:DA:1180:U:H1'	2.41	0.55
22:DA:1754:A:C6	22:DA:1755:A:C6	2.94	0.55
22:DA:2202:U:H5''	22:DA:2203:U:OP1	2.06	0.55
22:DA:2725:A:C4	22:DA:2727:A:C8	2.93	0.55
55:DA:3001:DOL:N9	55:DA:3001:DOL:HC41	2.21	0.55
25:DD:151:THR:HG22	25:DD:152:PRO:N	2.22	0.55
36:DO:100:HIS:CD2	36:DO:101:GLY:N	2.75	0.55
1:AA:1064:G:O2'	1:AA:1190:G:N2	2.39	0.55
2:AB:24:ASN:O	2:AB:26:LYS:N	2.40	0.55
5:AE:97:GLN:HB3	5:AE:124:LEU:HD12	1.87	0.55
6:AF:98:GLU:CG	6:AF:99:ALA:N	2.69	0.55
22:BA:422:A:N1	22:BA:423:A:C2	2.74	0.55
22:BA:1916:A:C2	22:BA:1917:U:O2	2.59	0.55
22:BA:2845:U:H5''	37:BP:52:ASN:O	2.04	0.55
23:BB:15:A:O2'	23:BB:16:G:H5'	2.06	0.55
53:B5:19:LYS:HG3	53:B5:23:ILE:CG1	2.37	0.55
1:CA:466:A:C2	1:CA:468:A:C8	2.95	0.55
1:CA:798:U:H2'	1:CA:799:G:O5'	2.07	0.55
8:CH:18:GLN:NE2	8:CH:70:ALA:HB1	2.21	0.55
22:DA:1562:U:H2'	22:DA:1563:U:O4'	2.07	0.55
22:DA:2112:G:H2'	22:DA:2112:G:N3	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2805:C:H2'	22:DA:2806:C:C6	2.40	0.55
22:DA:2815:C:H2'	22:DA:2816:G:C8	2.42	0.55
31:DJ:36:LEU:O	31:DJ:121:LYS:NZ	2.39	0.55
52:D4:36:ARG:CG	52:D4:37:GLN:N	2.68	0.55
1:AA:872:A:C8	1:AA:874:G:C8	2.95	0.55
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.40	0.55
1:AA:1387:G:H2'	1:AA:1388:C:C6	2.41	0.55
2:AB:49:MET:O	2:AB:53:ALA:HB2	2.05	0.55
11:AK:25:ALA:HA	11:AK:30:THR:HG22	1.87	0.55
22:BA:142:A:C5	22:BA:143:C:N4	2.75	0.55
22:BA:528:A:H3'	22:BA:528:A:H8	1.71	0.55
22:BA:580:U:H2'	22:BA:581:C:C6	2.41	0.55
22:BA:1199:U:H1'	38:BQ:4:VAL:HG22	1.89	0.55
22:BA:1688:U:N3	22:BA:1698:A:C2	2.75	0.55
22:BA:1731:G:C6	22:BA:1733:G:C5	2.94	0.55
25:BD:71:ALA:HB1	25:BD:92:VAL:HG13	1.87	0.55
31:BJ:60:ASP:HA	31:BJ:97:PRO:HB3	1.89	0.55
41:BT:2:ILE:HA	41:BT:3:ARG:HB2	1.88	0.55
1:CA:734:G:C4	1:CA:735:C:C5	2.94	0.55
1:CA:1012:A:C2	1:CA:1018:G:C2	2.94	0.55
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.71	0.55
4:CD:161:LEU:HD23	4:CD:162:ALA:N	2.21	0.55
9:CI:25:ASN:O	9:CI:27:LYS:N	2.39	0.55
22:DA:406:G:H2'	22:DA:407:G:O4'	2.06	0.55
22:DA:449:A:C5	22:DA:450:G:C8	2.94	0.55
22:DA:526:A:C6	22:DA:2626:C:H4'	2.41	0.55
22:DA:584:C:N4	22:DA:585:G:C6	2.75	0.55
22:DA:1360:G:O6	22:DA:1372:U:C2	2.60	0.55
22:DA:1532:A:C2	22:DA:1540:G:C6	2.93	0.55
22:DA:1767:G:O6	22:DA:1986:C:N4	2.39	0.55
22:DA:1826:G:O2'	22:DA:1971:U:OP2	2.23	0.55
22:DA:2718:G:C6	22:DA:2719:G:C4	2.94	0.55
23:DB:39:A:H2'	23:DB:40:U:C6	2.41	0.55
30:DI:80:LEU:HA	30:DI:84:ALA:CB	2.35	0.55
41:DT:12:ARG:O	41:DT:13:ALA:HB2	2.05	0.55
1:AA:340:U:H2'	1:AA:341:C:C6	2.42	0.55
1:AA:403:C:OP1	4:AD:134:SER:OG	2.18	0.55
1:AA:781:A:H4'	1:AA:1522:U:O2'	2.06	0.55
1:AA:1441:A:H2'	1:AA:1442:G:O5'	2.05	0.55
2:AB:53:ALA:O	2:AB:57:LEU:HB2	2.06	0.55
4:AD:103:TYR:HB2	4:AD:114:ALA:CB	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
22:BA:1494:A:O2'	22:BA:1495:A:O5'	2.24	0.55
27:BF:175:PHE:HD1	27:BF:177:PHE:CE1	2.25	0.55
29:BH:91:PHE:CD1	1:CA:55:A:C8	2.94	0.55
36:BO:29:HIS:C	36:BO:29:HIS:CD2	2.79	0.55
44:BW:23:VAL:HA	44:BW:38:VAL:HG12	1.89	0.55
53:B5:56:ASP:OD2	53:B5:58:ASN:ND2	2.40	0.55
1:CA:328:C:O2	1:CA:328:C:C2'	2.54	0.55
1:CA:427:U:O2'	1:CA:541:G:OP1	2.17	0.55
3:CC:134:MET:SD	3:CC:153:VAL:CG1	2.95	0.55
4:CD:107:PHE:O	4:CD:117:LEU:HD11	2.07	0.55
9:CI:19:VAL:HG21	9:CI:82:GLY:CA	2.36	0.55
22:DA:483:A:C2	42:DU:58:ILE:HD11	2.41	0.55
22:DA:1360:G:N1	22:DA:1361:G:H1'	2.22	0.55
22:DA:1801:A:C5	24:DC:262:ARG:NH2	2.75	0.55
22:DA:1810:A:H5''	22:DA:1811:G:OP2	2.05	0.55
22:DA:2420:C:OP1	51:D3:34:THR:HB	2.06	0.55
25:DD:16:THR:OG1	25:DD:18:ASP:OD2	2.12	0.55
31:DJ:39:LYS:HZ3	31:DJ:39:LYS:HB2	1.72	0.55
36:DO:33:ARG:O	36:DO:34:HIS:HB2	2.06	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
4:AD:91:LEU:HD11	4:AD:195:ILE:HD11	1.89	0.55
4:AD:152:GLN:O	4:AD:153:SER:C	2.44	0.55
6:AF:17:GLN:OE1	6:AF:24:ARG:NH2	2.39	0.55
7:AG:120:LEU:HD13	7:AG:124:LEU:HD23	1.88	0.55
9:AI:6:TYR:HB3	9:AI:89:GLU:HG2	1.87	0.55
9:AI:114:LYS:HG2	9:AI:120:LYS:HA	1.86	0.55
12:AL:56:ARG:NH1	12:AL:62:GLU:HG3	2.21	0.55
18:AR:25:ASP:O	18:AR:27:ALA:N	2.39	0.55
22:BA:528:A:N1	22:BA:2043:C:H5'	2.22	0.55
22:BA:1268:A:C2	22:BA:2013:A:C4	2.94	0.55
22:BA:1915:U:C2	22:BA:1916:A:C8	2.94	0.55
22:BA:2286:G:H5''	22:BA:2287:A:O4'	2.06	0.55
22:BA:2318:G:C5	22:BA:2319:G:C6	2.95	0.55
22:BA:2820:A:C2'	22:BA:2821:A:OP1	2.55	0.55
27:BF:85:ILE:O	27:BF:85:ILE:CG1	2.55	0.55
29:BH:86:ASP:O	29:BH:87:GLU:CB	2.53	0.55
29:BH:98:ASP:O	29:BH:102:ALA:HB3	2.07	0.55
42:BU:13:VAL:HG12	42:BU:19:LYS:HA	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:137:U:H1'	1:CA:227:G:N2	2.21	0.55
1:CA:1000:A:C2	1:CA:1041:G:N2	2.74	0.55
1:CA:1255:G:C6	1:CA:1279:G:N7	2.74	0.55
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.21	0.55
5:CE:90:THR:HG22	5:CE:91:GLY:N	2.21	0.55
22:DA:95:A:O2'	46:DY:40:SER:N	2.39	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
22:DA:1323:C:C4	22:DA:1324:G:N7	2.74	0.55
22:DA:1645:G:OP1	22:DA:1646:C:H5'	2.06	0.55
22:DA:2353:G:H2'	22:DA:2354:C:O4'	2.06	0.55
26:DE:108:ILE:HD11	26:DE:180:LEU:HB2	1.87	0.55
28:DG:176:LYS:O	28:DG:177:LYS:CB	2.54	0.55
33:DL:55:MET:SD	33:DL:59:ARG:NH2	2.80	0.55
33:DL:81:ASP:O	33:DL:82:LEU:HB3	2.05	0.55
46:DY:27:ASN:HA	46:DY:30:MET:HB2	1.89	0.55
1:AA:957:U:H1'	1:AA:960:U:N3	2.22	0.55
1:AA:1144:G:H5''	1:AA:1145:A:OP2	2.07	0.55
1:AA:1418:A:C2	1:AA:1483:A:C2	2.94	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
5:AE:81:LEU:HA	5:AE:147:MET:HE1	1.88	0.55
11:AK:30:THR:HG21	11:AK:91:PRO:O	2.06	0.55
22:BA:1789:A:OP2	24:BC:221:ARG:NH1	2.40	0.55
1:CA:718:A:H5'	11:CK:119:ASN:CG	2.27	0.55
1:CA:1007:U:C4	1:CA:1008:U:C5	2.95	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
9:CI:12:ARG:CZ	9:CI:107:ASP:OD2	2.53	0.55
19:CS:80:TYR:O	19:CS:81:ARG:CB	2.54	0.55
22:DA:669:G:C2	22:DA:801:G:N1	2.74	0.55
22:DA:1510:G:H2'	22:DA:1511:G:O4'	2.06	0.55
22:DA:1606:C:C2'	22:DA:1607:C:OP2	2.55	0.55
22:DA:1917:U:C2'	22:DA:1918:A:H5'	2.37	0.55
22:DA:2395:C:H2'	22:DA:2396:G:O4'	2.06	0.55
50:D2:18:PHE:O	50:D2:21:ARG:N	2.40	0.55
1:AA:92:U:H2'	1:AA:93:U:C6	2.41	0.55
22:BA:350:G:H2'	22:BA:351:C:O4'	2.06	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2580:U:C5	22:BA:2581:G:C6	2.94	0.55
29:BH:120:GLY:CA	29:BH:122:LEU:HA	2.37	0.55
29:BH:121:VAL:N	29:BH:122:LEU:CA	2.69	0.55
39:BR:49:ILE:C	39:BR:51:VAL:O	2.45	0.55
1:CA:786:G:N2	1:CA:787:A:H1'	2.22	0.55
1:CA:840:C:N3	1:CA:842:U:H4'	2.22	0.55
1:CA:909:A:H2'	1:CA:910:C:O4'	2.07	0.55
1:CA:1521:C:C2	1:CA:1522:U:C6	2.94	0.55
22:DA:187:G:N2	22:DA:210:C:H1'	2.22	0.55
22:DA:320:A:H4'	22:DA:322:A:C8	2.42	0.55
22:DA:667:U:C4	22:DA:668:A:N7	2.75	0.55
22:DA:753:A:C2	22:DA:754:U:C2	2.94	0.55
22:DA:1020:A:C2	22:DA:1141:U:C2	2.95	0.55
22:DA:1395:A:O2'	22:DA:1397:U:C6	2.59	0.55
25:DD:151:THR:HG22	25:DD:152:PRO:CD	2.37	0.55
29:DH:31:VAL:HB	29:DH:32:PRO:HD3	1.89	0.55
46:DY:31:GLN:HG2	46:DY:36:GLN:HB2	1.89	0.55
1:AA:66:A:C6	1:AA:67:C:C5	2.95	0.55
1:AA:89:U:O2'	1:AA:90:C:H5'	2.07	0.55
1:AA:451:A:H61	1:AA:481:G:H5'	1.72	0.55
1:AA:995:C:N3	1:AA:1046:A:O2'	2.36	0.55
1:AA:1138:G:C2	1:AA:1140:C:C5	2.94	0.55
1:AA:1462:C:H2'	1:AA:1463:U:O4'	2.06	0.55
1:AA:1464:U:OP2	37:BP:109:ARG:NH1	2.40	0.55
4:AD:195:ILE:O	4:AD:195:ILE:HG13	2.04	0.55
12:AL:94:ARG:HB2	12:AL:95:TYR:CE2	2.42	0.55
13:AM:37:ALA:CB	13:AM:56:LEU:HD23	2.37	0.55
20:AT:28:MET:O	20:AT:32:ILE:HG13	2.06	0.55
22:BA:78:U:H2'	22:BA:79:C:C6	2.42	0.55
22:BA:1080:A:H2'	22:BA:1080:A:N3	2.22	0.55
22:BA:1309:G:H4'	50:B2:7:PRO:HB2	1.88	0.55
22:BA:1355:G:O2'	22:BA:1356:G:H5'	2.07	0.55
22:BA:1494:A:H2'	22:BA:1495:A:O5'	2.06	0.55
22:BA:1668:A:H4'	22:BA:1669:A:O5'	2.07	0.55
22:BA:2480:C:C2'	22:BA:2481:G:H5'	2.37	0.55
22:BA:2765:A:H2'	22:BA:2765:A:N3	2.22	0.55
22:BA:2846:G:OP2	37:BP:52:ASN:HB2	2.07	0.55
29:BH:121:VAL:N	29:BH:122:LEU:CB	2.70	0.55
2:CB:141:LEU:O	2:CB:145:GLU:N	2.37	0.55
6:CF:18:VAL:HG12	6:CF:19:PRO:N	2.22	0.55
6:CF:97:THR:O	6:CF:98:GLU:CB	2.55	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:2:SER:C	8:CH:4:GLN:N	2.60	0.55
12:CL:90:LEU:CB	12:CL:93:VAL:HG21	2.37	0.55
22:DA:411:G:OP2	22:DA:2406:A:O2'	2.20	0.55
22:DA:419:U:C4	22:DA:420:C:C5	2.95	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:DA:1127:A:H2'	22:DA:1128:G:H5''	1.89	0.55
22:DA:1808:A:N1	45:DX:28:ARG:HD2	2.21	0.55
22:DA:1992:G:N2	22:DA:1996:C:O2'	2.39	0.55
22:DA:2307:G:N2	22:DA:2312:U:N3	2.55	0.55
45:DX:43:GLU:O	45:DX:44:LYS:C	2.44	0.55
1:AA:66:A:H4'	1:AA:173:U:C5	2.42	0.55
1:AA:144:G:C5	1:AA:179:A:C2	2.95	0.55
4:AD:152:GLN:O	4:AD:155:VAL:HG12	2.06	0.55
13:AM:16:VAL:HG22	13:AM:41:GLU:HB2	1.88	0.55
22:BA:26:G:H1'	22:BA:514:A:N6	2.22	0.55
35:BN:79:LEU:O	35:BN:80:PHE:HB2	2.06	0.55
1:CA:31:G:O4'	1:CA:306:A:C2	2.60	0.55
1:CA:106:C:H2'	1:CA:107:G:H5'	1.89	0.55
1:CA:280:C:N3	17:CQ:40:ARG:HA	2.22	0.55
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.88	0.55
3:CC:172:ARG:HG3	3:CC:174:PRO:HD3	1.89	0.55
21:CU:8:GLU:HB3	21:CU:12:PHE:CE2	2.42	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
22:DA:1318:U:H2'	22:DA:1319:C:C6	2.42	0.55
22:DA:2107:G:C2	22:DA:2183:A:C2	2.95	0.55
22:DA:2261:C:C2	22:DA:2280:G:C2	2.95	0.55
23:DB:52:A:C4	36:DO:33:ARG:NH2	2.75	0.55
24:DC:141:VAL:HG11	24:DC:190:ALA:HB1	1.88	0.55
25:DD:125:TRP:CE3	25:DD:160:LYS:HD3	2.42	0.55
51:D3:4:ILE:HG21	51:D3:63:PRO:HG3	1.89	0.55
5:AE:81:LEU:HB3	5:AE:147:MET:CE	2.36	0.54
5:AE:149:SER:CB	5:AE:152:MET:HB2	2.37	0.54
12:AL:72:HIS:ND1	12:AL:72:HIS:O	2.40	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:2196:C:C2'	22:BA:2197:U:H5'	2.36	0.54
22:BA:2415:G:H2'	22:BA:2416:C:C6	2.42	0.54
22:BA:2506:U:C4	55:BA:3001:DOL:H422	2.41	0.54
22:BA:2694:G:H2'	22:BA:2695:U:C6	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:10:ALA:O	29:BH:12:LEU:N	2.40	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
1:CA:53:A:C2	1:CA:359:G:C6	2.95	0.54
1:CA:97:G:C5	1:CA:98:A:H1'	2.42	0.54
1:CA:466:A:N1	1:CA:468:A:N7	2.55	0.54
1:CA:939:G:C6	1:CA:940:C:N4	2.75	0.54
1:CA:1072:G:C5	1:CA:1073:U:C5	2.95	0.54
1:CA:1240:U:C5	7:CG:109:ARG:NH1	2.76	0.54
5:CE:36:LEU:HD21	5:CE:137:VAL:HG11	1.89	0.54
12:CL:3:THR:HB	12:CL:6:GLN:HG3	1.89	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
15:CO:27:VAL:HG12	15:CO:28:GLN:N	2.21	0.54
22:DA:565:C:H4'	22:DA:1253:A:N6	2.23	0.54
22:DA:581:C:OP2	38:DQ:33:ARG:CZ	2.54	0.54
22:DA:630:G:H3'	22:DA:631:A:C5'	2.37	0.54
22:DA:732:C:H2'	22:DA:733:G:O4'	2.06	0.54
22:DA:1027:A:N7	22:DA:1126:A:C2	2.74	0.54
22:DA:1352:U:C5	22:DA:1377:G:C6	2.95	0.54
42:DU:54:GLN:N	42:DU:55:PRO:CD	2.70	0.54
42:DU:96:PHE:CZ	42:DU:103:ILE:HG13	2.41	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
6:AF:84:VAL:HG22	6:AF:84:VAL:O	2.07	0.54
22:BA:2517:C:C6	22:BA:2542:A:N7	2.75	0.54
29:BH:90:LEU:CD2	29:BH:93:SER:HA	2.37	0.54
39:BR:49:ILE:CG2	39:BR:52:PRO:C	2.76	0.54
47:BZ:14:ILE:HG22	47:BZ:15:GLY:N	2.21	0.54
1:CA:577:G:H1'	1:CA:816:A:N3	2.23	0.54
1:CA:614:C:OP1	4:CD:83:LYS:NZ	2.39	0.54
1:CA:801:U:C2	1:CA:802:A:N7	2.75	0.54
2:CB:53:ALA:O	2:CB:57:LEU:HB2	2.07	0.54
4:CD:22:LYS:O	4:CD:23:SER:C	2.45	0.54
9:CI:54:LEU:O	9:CI:55:VAL:HG22	2.08	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
22:DA:919:U:H2'	22:DA:920:A:O4'	2.07	0.54
22:DA:1096:A:C5	22:DA:1097:U:C5	2.95	0.54
22:DA:1131:G:OP1	31:DJ:82:GLY:HA2	2.07	0.54
23:DB:78:A:C5	23:DB:99:A:C8	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:92:ALA:HB3	24:DC:104:ILE:CD1	2.37	0.54
26:DE:108:ILE:HD11	26:DE:180:LEU:CB	2.37	0.54
29:DH:79:THR:HA	29:DH:145:ASN:HB2	1.89	0.54
42:DU:44:LYS:HE3	42:DU:46:GLN:HB2	1.89	0.54
1:AA:616:G:C2	1:AA:617:G:C8	2.95	0.54
1:AA:1152:A:OP1	10:AJ:70:HIS:ND1	2.40	0.54
1:AA:1417:G:C6	1:AA:1482:G:C6	2.95	0.54
2:AB:27:MET:HG2	2:AB:189:THR:HA	1.89	0.54
4:AD:123:ILE:HD13	4:AD:123:ILE:N	2.22	0.54
4:AD:151:LYS:HB3	4:AD:178:MET:HE3	1.90	0.54
10:AJ:73:LEU:O	10:AJ:74:VAL:HB	2.08	0.54
13:AM:10:PRO:O	13:AM:11:ASP:HB3	2.07	0.54
22:BA:627:A:C6	22:BA:637:A:C8	2.95	0.54
22:BA:1441:G:H2'	22:BA:1442:U:C6	2.42	0.54
22:BA:2308:G:C5	27:BF:77:PHE:CE2	2.95	0.54
22:BA:2511:U:O4	22:BA:2575:C:N3	2.40	0.54
29:BH:90:LEU:HA	29:BH:125:THR:HG23	1.89	0.54
41:BT:17:SER:O	41:BT:18:GLU:C	2.45	0.54
53:B5:50:ILE:HB	53:B5:52:PRO:HD3	1.89	0.54
1:CA:66:A:H4'	1:CA:173:U:C5	2.42	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
21:CU:12:PHE:O	21:CU:13:ASP:CB	2.54	0.54
22:DA:792:A:H1'	22:DA:2072:C:O2'	2.07	0.54
22:DA:867:C:C5	22:DA:868:U:C5	2.96	0.54
22:DA:1011:G:O2'	22:DA:1013:C:H5''	2.07	0.54
22:DA:1316:U:C2	22:DA:1337:G:N2	2.76	0.54
22:DA:1343:G:C6	22:DA:1344:U:O4	2.60	0.54
22:DA:1428:C:O2'	22:DA:1569:A:OP2	2.20	0.54
22:DA:1847:A:C2'	22:DA:1848:A:OP2	2.55	0.54
22:DA:2267:A:H5''	22:DA:2268:A:C5'	2.38	0.54
24:DC:121:ASP:OD1	24:DC:121:ASP:N	2.41	0.54
42:DU:34:VAL:HG22	42:DU:67:VAL:HG23	1.88	0.54
1:AA:100:G:N7	1:AA:101:A:N7	2.55	0.54
1:AA:258:G:C4	1:AA:259:G:C8	2.95	0.54
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.89	0.54
1:AA:876:C:OP1	8:AH:76:GLN:NE2	2.40	0.54
14:AN:20:TYR:O	14:AN:24:ARG:N	2.40	0.54
15:AO:19:ALA:O	15:AO:20:ASN:CB	2.54	0.54
19:AS:5:LEU:O	19:AS:7:LYS:N	2.40	0.54
22:BA:1071:G:C8	22:BA:1089:A:N6	2.76	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1242:U:O2	33:BL:4:ASN:ND2	2.40	0.54
22:BA:1319:C:C2'	22:BA:1320:C:H5'	2.37	0.54
22:BA:1583:A:O2'	22:BA:1584:U:O5'	2.25	0.54
34:BM:20:LEU:HD12	43:BV:81:PRO:HG2	1.88	0.54
39:BR:14:VAL:HG11	39:BR:98:ILE:HG13	1.89	0.54
44:BW:47:ALA:HB1	44:BW:51:VAL:O	2.07	0.54
1:CA:203:G:N2	1:CA:215:C:N3	2.56	0.54
1:CA:748:G:H2'	1:CA:749:A:H8	1.71	0.54
1:CA:1027:C:N4	1:CA:1034:G:N1	2.56	0.54
1:CA:1296:C:C5'	1:CA:1297:G:OP2	2.55	0.54
2:CB:167:ASP:O	2:CB:168:HIS:HB3	2.07	0.54
3:CC:42:TYR:CE1	3:CC:90:VAL:HG21	2.42	0.54
4:CD:35:GLU:HG3	4:CD:36:GLN:N	2.22	0.54
17:CQ:69:LYS:O	17:CQ:69:LYS:HG2	2.07	0.54
21:CU:12:PHE:N	21:CU:12:PHE:CD1	2.74	0.54
22:DA:104:A:H2'	22:DA:105:C:O4'	2.07	0.54
22:DA:118:A:O4'	22:DA:178:G:O2'	2.24	0.54
22:DA:303:G:C6	22:DA:304:U:N3	2.76	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
22:DA:2019:A:H4'	38:DQ:34:VAL:HG21	1.90	0.54
22:DA:2365:G:H4'	44:DW:60:PHE:CE2	2.42	0.54
22:DA:2412:A:H3'	22:DA:2413:G:C8	2.43	0.54
24:DC:246:THR:C	24:DC:248:TRP:H	2.10	0.54
45:DX:33:LEU:HD23	45:DX:50:ARG:CZ	2.38	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:AA:971:G:C8	1:AA:1365:G:H4'	2.43	0.54
4:AD:174:ASP:O	4:AD:175:ALA:HB3	2.07	0.54
22:BA:538:A:H5''	31:BJ:7:LYS:HE3	1.89	0.54
22:BA:1098:A:C8	22:BA:1099:G:N7	2.76	0.54
22:BA:2831:G:P	25:BD:56:LYS:NZ	2.80	0.54
23:BB:54:G:H21	27:BF:26:MET:HE2	1.72	0.54
29:BH:14:SER:OG	29:BH:17:ASP:CG	2.46	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
1:CA:632:U:C2'	1:CA:632:U:O2	2.56	0.54
1:CA:743:A:C6	1:CA:744:C:C4	2.96	0.54
1:CA:1202:U:N3	14:CN:82:ILE:HG21	2.22	0.54
1:CA:1235:U:H2'	1:CA:1236:A:O4'	2.07	0.54
14:CN:87:ALA:O	14:CN:90:ARG:N	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:73:GLU:HB2	19:CS:74:PHE:CD1	2.42	0.54
20:CT:60:ARG:O	20:CT:64:LYS:N	2.38	0.54
22:DA:471:A:OP1	26:DE:79:ARG:NH1	2.41	0.54
22:DA:479:A:H4'	22:DA:480:A:OP1	2.08	0.54
22:DA:1027:A:C6	22:DA:1126:A:C4	2.95	0.54
22:DA:1343:G:N2	22:DA:1405:U:C2	2.76	0.54
22:DA:1693:U:OP2	22:DA:1694:C:N4	2.37	0.54
22:DA:2326:C:H1'	22:DA:2327:A:OP1	2.08	0.54
22:DA:2849:U:H4'	22:DA:2868:A:C2	2.43	0.54
27:DF:5:HIS:O	27:DF:9:LYS:HG3	2.07	0.54
33:DL:100:ILE:HG13	33:DL:100:ILE:O	2.07	0.54
38:DQ:72:ASN:HB3	38:DQ:110:VAL:HG11	1.89	0.54
51:D3:31:HIS:ND1	51:D3:32:ILE:HG13	2.22	0.54
1:AA:1118:U:H1'	1:AA:1179:A:C4	2.42	0.54
3:AC:79:LYS:O	3:AC:82:GLU:HG3	2.06	0.54
7:AG:15:ASP:OD2	7:AG:44:TYR:OH	2.26	0.54
7:AG:49:THR:O	7:AG:53:ARG:CB	2.56	0.54
7:AG:74:GLU:HG2	7:AG:91:VAL:HB	1.90	0.54
10:AJ:6:ILE:HD12	10:AJ:76:ILE:HB	1.90	0.54
10:AJ:28:THR:O	10:AJ:28:THR:HG22	2.07	0.54
16:AP:51:ARG:HG2	16:AP:51:ARG:HH11	1.71	0.54
22:BA:360:U:H3'	22:BA:361:G:C8	2.42	0.54
22:BA:813:U:H2'	22:BA:814:C:H6	1.72	0.54
22:BA:998:C:H2'	22:BA:999:U:O5'	2.07	0.54
22:BA:1355:G:C2'	22:BA:1356:G:H5'	2.38	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:BA:2869:G:H2'	22:BA:2870:C:O4'	2.08	0.54
29:BH:77:THR:O	29:BH:77:THR:CG2	2.56	0.54
29:BH:103:VAL:HG21	29:BH:132:PHE:CE1	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
51:B3:31:HIS:CD2	51:B3:31:HIS:C	2.80	0.54
1:CA:237:G:C6	1:CA:238:A:C5	2.95	0.54
1:CA:818:G:O2'	1:CA:819:A:H5'	2.07	0.54
1:CA:1386:G:C2	1:CA:1387:G:C8	2.96	0.54
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.43	0.54
4:CD:147:GLU:O	4:CD:150:LYS:HB3	2.07	0.54
9:CI:118:LEU:HD23	9:CI:121:ALA:O	2.08	0.54
22:DA:125:A:OP2	50:D2:19:ARG:NH2	2.41	0.54
22:DA:192:C:P	57:DA:3739:HOH:O	2.65	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1054:A:H2'	22:DA:1055:G:C8	2.43	0.54
22:DA:1364:G:C6	22:DA:1368:G:C6	2.95	0.54
22:DA:2038:G:H2'	22:DA:2039:U:O4'	2.07	0.54
22:DA:2297:A:N3	22:DA:2297:A:H2'	2.23	0.54
22:DA:2308:G:H5'	22:DA:2309:A:OP2	2.08	0.54
22:DA:2448:A:HO2'	22:DA:2449:U:H5	1.50	0.54
41:DT:61:LEU:HD12	41:DT:62:VAL:N	2.23	0.54
1:AA:259:G:N2	1:AA:260:G:H1'	2.22	0.54
1:AA:1452:C:O4'	1:AA:1453:G:C2	2.61	0.54
10:AJ:51:VAL:HB	14:AN:81:ARG:HB2	1.90	0.54
22:BA:1737:G:C6	22:BA:1738:G:N1	2.75	0.54
27:BF:25:VAL:O	27:BF:28:VAL:HG12	2.07	0.54
1:CA:252:U:O4	1:CA:253:A:N6	2.40	0.54
6:CF:81:ASN:C	6:CF:81:ASN:OD1	2.45	0.54
11:CK:107:ILE:HG23	11:CK:107:ILE:O	2.06	0.54
19:CS:22:ALA:CB	19:CS:47:LEU:HD13	2.37	0.54
22:DA:370:G:O2'	22:DA:423:A:H3'	2.06	0.54
22:DA:1529:G:O6	22:DA:1543:G:C2	2.60	0.54
22:DA:2563:U:H1'	22:DA:2566:A:N6	2.23	0.54
22:DA:2615:U:C2	48:D0:4:GLN:HA	2.43	0.54
22:DA:2688:G:N1	22:DA:2720:U:OP2	2.31	0.54
35:DN:12:ARG:HG2	35:DN:16:HIS:HB3	1.89	0.54
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.42	0.54
10:AJ:66:GLU:HB3	14:AN:99:ALA:CB	2.38	0.54
22:BA:63:A:C2	22:BA:64:A:C5	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
53:B5:100:ILE:HG22	53:B5:104:ILE:CB	2.38	0.54
1:CA:528:C:H2'	1:CA:528:C:O2	2.08	0.54
1:CA:749:A:O2'	1:CA:750:C:H5'	2.08	0.54
1:CA:779:C:H2'	1:CA:780:A:H5'	1.88	0.54
1:CA:853:C:C4	1:CA:854:U:C5	2.95	0.54
1:CA:890:G:N2	1:CA:906:A:H2'	2.23	0.54
1:CA:1000:A:H2'	1:CA:1001:C:O4'	2.08	0.54
2:CB:85:LEU:HG	2:CB:85:LEU:O	2.08	0.54
3:CC:43:LEU:HD21	3:CC:68:ILE:HD11	1.88	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
11:CK:18:ASP:HB3	11:CK:81:ASN:OD1	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:70:THR:O	17:CQ:71:LYS:C	2.46	0.54
20:CT:55:GLN:N	20:CT:56:PRO:HD2	2.23	0.54
21:CU:36:GLU:HG3	21:CU:37:PHE:H	1.72	0.54
22:DA:19:A:C2	22:DA:522:A:C2	2.96	0.54
22:DA:1230:A:H2'	22:DA:1231:U:C6	2.43	0.54
22:DA:1245:G:H4'	26:DE:33:VAL:HG11	1.88	0.54
22:DA:1345:C:H5'	22:DA:1396:U:O4	2.06	0.54
22:DA:1782:U:O4	22:DA:2586:U:H5	1.89	0.54
22:DA:2814:A:C6	22:DA:2815:C:C4	2.95	0.54
55:DA:3001:DOL:H432	55:DA:3001:DOL:N5	2.22	0.54
24:DC:43:ARG:NH2	24:DC:49:ILE:HD11	2.23	0.54
24:DC:108:LYS:HA	24:DC:196:GLY:HA3	1.89	0.54
24:DC:267:ILE:O	24:DC:267:ILE:HG22	2.06	0.54
39:DR:80:ARG:C	39:DR:82:HIS:H	2.11	0.54
1:AA:66:A:O4'	1:AA:173:U:C4	2.61	0.54
1:AA:705:G:C5	1:AA:706:A:C8	2.96	0.54
1:AA:723:U:H2'	1:AA:855:U:H4'	1.90	0.54
13:AM:73:ILE:O	13:AM:76:SER:OG	2.25	0.54
22:BA:283:G:N7	22:BA:284:U:C5	2.76	0.54
22:BA:560:C:O2	38:BQ:48:ARG:NH1	2.39	0.54
22:BA:1794:A:H2'	22:BA:1795:C:C6	2.42	0.54
23:BB:42:C:C6	27:BF:66:LEU:HD13	2.42	0.54
26:BE:119:ILE:HB	26:BE:187:VAL:HG22	1.88	0.54
27:BF:173:PHE:O	27:BF:175:PHE:N	2.40	0.54
30:BI:21:SER:N	30:BI:22:PRO:CD	2.71	0.54
1:CA:142:G:C2	1:CA:143:A:H1'	2.42	0.54
1:CA:780:A:C2	1:CA:803:G:N1	2.76	0.54
10:CJ:92:LEU:O	10:CJ:93:ALA:HB2	2.08	0.54
22:DA:289:G:N2	22:DA:352:A:C2	2.76	0.54
22:DA:586:A:H1'	22:DA:672:C:H1'	1.89	0.54
22:DA:588:U:H1'	26:DE:85:PHE:CD1	2.43	0.54
22:DA:1476:U:H1'	22:DA:1732:C:C2	2.43	0.54
22:DA:2214:C:H2'	22:DA:2215:C:O5'	2.08	0.54
22:DA:2552:U:C2	22:DA:2554:U:C5'	2.91	0.54
25:DD:187:LEU:CD2	25:DD:203:VAL:HG11	2.38	0.54
26:DE:77:ILE:HG13	26:DE:77:ILE:O	2.08	0.54
47:DZ:13:ALA:HB2	47:DZ:24:LEU:CD1	2.38	0.54
1:AA:826:C:H5'	8:AH:13:ARG:NH1	2.22	0.54
4:AD:29:ASP:C	4:AD:30:THR:O	2.43	0.54
5:AE:108:GLY:O	5:AE:109:GLY:C	2.47	0.54
5:AE:119:GLY:O	5:AE:121:HIS:ND1	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:58:VAL:O	9:AI:59:GLU:HG2	2.08	0.54
12:AL:76:GLU:O	12:AL:77:HIS:HB2	2.07	0.54
20:AT:83:ILE:HD12	20:AT:84:ASN:N	2.22	0.54
22:BA:388:G:N7	22:BA:390:U:H2'	2.22	0.54
22:BA:1413:A:H2'	22:BA:1414:C:O4'	2.08	0.54
22:BA:1474:U:C3'	22:BA:1475:G:H5'	2.38	0.54
22:BA:1607:C:N4	22:BA:1622:G:N7	2.57	0.54
22:BA:1782:U:OP1	57:BA:3693:HOH:O	2.19	0.54
22:BA:2532:G:N2	22:BA:2663:G:O2'	2.41	0.54
36:BO:100:HIS:O	36:BO:104:GLN:HB3	2.08	0.54
1:CA:1041:G:C6	1:CA:1042:A:N6	2.75	0.54
4:CD:168:PRO:HB2	4:CD:171:LEU:HD12	1.90	0.54
5:CE:137:VAL:O	5:CE:138:ARG:CB	2.56	0.54
16:CP:19:VAL:HG13	16:CP:37:GLY:N	2.22	0.54
17:CQ:8:LEU:HD13	17:CQ:73:TRP:CZ3	2.43	0.54
18:CR:22:ASP:OD2	18:CR:24:LYS:NZ	2.41	0.54
22:DA:71:A:H5'	22:DA:73:A:C4	2.43	0.54
22:DA:607:U:H5	22:DA:619:G:C5	2.26	0.54
22:DA:694:U:C3'	22:DA:695:G:H5''	2.38	0.54
22:DA:1182:G:H2'	22:DA:1183:U:O4'	2.08	0.54
22:DA:1445:G:C2	22:DA:1547:C:N3	2.76	0.54
22:DA:1566:A:C2	24:DC:213:TRP:CE3	2.95	0.54
22:DA:2480:C:N4	22:DA:2481:G:C6	2.76	0.54
22:DA:2751:G:OP1	28:DG:3:ARG:NH1	2.41	0.54
23:DB:80:U:H2'	23:DB:81:G:C8	2.43	0.54
35:DN:69:ARG:O	35:DN:70:THR:HG23	2.08	0.54
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
1:AA:858:G:C2'	1:AA:859:G:H5'	2.38	0.53
1:AA:874:G:C6	1:AA:875:U:C4	2.96	0.53
1:AA:1182:G:H4'	1:AA:1183:U:H5'	1.90	0.53
2:AB:51:ASN:O	2:AB:52:GLU:HB2	2.09	0.53
5:AE:155:ALA:HB1	8:AH:66:PHE:CZ	2.43	0.53
12:AL:39:THR:O	12:AL:39:THR:OG1	2.20	0.53
22:BA:528:A:H2'	22:BA:529:A:H5''	1.90	0.53
22:BA:974:G:H8	22:BA:990:A:N6	2.01	0.53
22:BA:1315:C:C2	22:BA:1338:G:N2	2.76	0.53
22:BA:1997:C:OP2	25:BD:129:THR:CG2	2.57	0.53
37:BP:22:PRO:HD3	37:BP:50:ILE:HD12	1.90	0.53
38:BQ:105:ALA:O	38:BQ:108:ALA:HB3	2.07	0.53
46:BY:9:LYS:HB3	46:BY:12:GLU:CG	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:425:G:H2'	1:CA:426:U:O4'	2.08	0.53
1:CA:562:U:H2'	12:CL:14:ARG:HD3	1.89	0.53
7:CG:92:ARG:NE	7:CG:93:PRO:CD	2.71	0.53
9:CI:21:ILE:HG12	9:CI:62:ASP:O	2.07	0.53
22:DA:359:G:H2'	22:DA:360:U:O4'	2.08	0.53
22:DA:630:G:C3'	22:DA:631:A:H5''	2.38	0.53
22:DA:813:U:H2'	22:DA:814:C:C6	2.42	0.53
22:DA:1715:G:O2'	22:DA:1716:U:OP2	2.25	0.53
22:DA:2058:A:C6	22:DA:2059:A:N6	2.76	0.53
22:DA:2742:G:H5''	52:D4:1:MET:HE1	1.89	0.53
25:DD:133:THR:HG23	25:DD:134:HIS:N	2.24	0.53
1:AA:58:C:O2'	1:AA:59:A:H5'	2.06	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
1:AA:1157:A:C5	1:AA:1180:A:C6	2.95	0.53
22:BA:589:U:H2'	22:BA:590:A:C8	2.43	0.53
34:BM:12:MET:CE	34:BM:71:LYS:HG3	2.38	0.53
38:BQ:36:PHE:CZ	38:BQ:40:ILE:HD11	2.43	0.53
1:CA:121:U:H3'	1:CA:122:G:H5'	1.91	0.53
1:CA:805:C:C2	1:CA:806:C:C5	2.96	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
12:CL:25:GLU:C	12:CL:27:CYS:N	2.59	0.53
19:CS:6:LYS:CB	19:CS:7:LYS:HE2	2.37	0.53
22:DA:291:G:N2	22:DA:350:G:C5	2.77	0.53
22:DA:1378:A:C2'	22:DA:1380:G:N7	2.71	0.53
22:DA:2146:C:H4'	22:DA:2147:A:OP1	2.07	0.53
22:DA:2214:C:C2'	22:DA:2215:C:O5'	2.56	0.53
22:DA:2747:G:O2'	28:DG:67:THR:HG22	2.08	0.53
23:DB:62:C:H2'	23:DB:63:C:C6	2.42	0.53
24:DC:251:GLN:NE2	24:DC:253:LYS:O	2.41	0.53
41:DT:10:VAL:HG12	41:DT:11:LEU:N	2.23	0.53
1:AA:195:A:H1'	1:AA:222:C:O2'	2.08	0.53
1:AA:1160:G:O2'	1:AA:1161:C:P	2.67	0.53
3:AC:7:PRO:HG2	3:AC:184:TYR:CG	2.43	0.53
11:AK:126:LYS:CA	21:AU:34:ARG:HH21	2.21	0.53
13:AM:3:ARG:O	13:AM:4:ILE:HG12	2.08	0.53
20:AT:44:LYS:CB	20:AT:87:ALA:HB1	2.39	0.53
22:BA:198:C:P	57:BA:3760:HOH:O	2.64	0.53
22:BA:228:C:H4'	22:BA:229:C:H5''	1.90	0.53
22:BA:585:G:N7	38:BQ:6:ARG:NH1	2.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1417:C:H2'	22:BA:1418:G:O4'	2.08	0.53
22:BA:1916:A:C6	22:BA:1917:U:C2	2.96	0.53
22:BA:2329:U:H2'	22:BA:2330:G:C8	2.43	0.53
22:BA:2683:C:H4'	25:BD:13:ARG:NH1	2.23	0.53
22:BA:2748:A:H1'	28:BG:67:THR:HG22	1.90	0.53
26:BE:149:ILE:C	26:BE:149:ILE:HD12	2.29	0.53
49:B1:52:ALA:O	49:B1:53:LYS:OXT	2.27	0.53
1:CA:242:G:N2	1:CA:285:C:C2	2.77	0.53
1:CA:1201:A:H4'	1:CA:1202:U:O5'	2.08	0.53
3:CC:162:ILE:HD12	3:CC:162:ILE:O	2.08	0.53
7:CG:78:ARG:O	7:CG:79:ARG:HB2	2.08	0.53
22:DA:185:G:N1	22:DA:212:G:C2	2.76	0.53
22:DA:548:G:H4'	22:DA:549:G:C2	2.43	0.53
22:DA:600:G:C5'	26:DE:27:LEU:HD22	2.37	0.53
22:DA:704:G:H1'	22:DA:726:G:H22	1.73	0.53
22:DA:776:G:C8	22:DA:793:A:C4	2.95	0.53
22:DA:852:U:H2'	22:DA:853:C:O4'	2.09	0.53
22:DA:1246:A:OP2	33:DL:13:LYS:NZ	2.41	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:DA:1605:C:H2'	22:DA:1606:C:H5'	1.89	0.53
22:DA:1814:G:C6	22:DA:1815:A:C6	2.96	0.53
22:DA:2815:C:O2'	48:D0:41:HIS:ND1	2.40	0.53
25:DD:32:ASN:HB3	25:DD:50:VAL:HB	1.90	0.53
30:DI:62:TYR:HB2	30:DI:66:SER:O	2.08	0.53
36:DO:49:VAL:HG21	36:DO:82:ALA:HA	1.91	0.53
47:DZ:7:ILE:N	47:DZ:36:VAL:O	2.40	0.53
1:AA:203:G:O2'	1:AA:465:A:N1	2.36	0.53
1:AA:659:U:C2	1:AA:660:C:C6	2.96	0.53
1:AA:1064:G:O4'	1:AA:1066:C:C6	2.61	0.53
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.44	0.53
17:AQ:16:LYS:HG3	17:AQ:16:LYS:O	2.07	0.53
22:BA:948:C:O2	22:BA:984:A:O2'	2.26	0.53
23:BB:14:U:O2	23:BB:107:G:H4'	2.09	0.53
26:BE:108:ILE:HD11	26:BE:180:LEU:HD13	1.90	0.53
1:CA:572:A:H5'	1:CA:573:A:OP2	2.08	0.53
1:CA:748:G:H2'	1:CA:749:A:C8	2.44	0.53
4:CD:35:GLU:HG3	4:CD:36:GLN:HG3	1.90	0.53
7:CG:5:ARG:HA	7:CG:5:ARG:HE	1.72	0.53
22:DA:30:G:H2'	22:DA:31:C:O4'	2.09	0.53
22:DA:392:U:H2'	22:DA:393:C:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:747:U:O2	22:DA:2014:A:H1'	2.07	0.53
22:DA:981:A:H5''	57:DA:3588:HOH:O	2.08	0.53
22:DA:2209:G:C5	22:DA:2210:U:C4	2.97	0.53
22:DA:2882:A:H5'	35:DN:96:ARG:HB2	1.90	0.53
38:DQ:10:ALA:O	38:DQ:13:ARG:HG3	2.08	0.53
51:D3:32:ILE:HG22	51:D3:32:ILE:O	2.07	0.53
1:AA:9:G:OP2	5:AE:126:LYS:HG3	2.09	0.53
1:AA:1031:C:H4'	1:AA:1032:G:O5'	2.08	0.53
4:AD:138:SER:HB2	4:AD:139:PRO:HD2	1.89	0.53
6:AF:4:TYR:CD2	6:AF:71:ILE:HD13	2.44	0.53
6:AF:15:SER:O	6:AF:18:VAL:HG23	2.09	0.53
6:AF:16:GLU:HB3	4:CD:189:SER:HA	1.91	0.53
6:AF:92:THR:O	6:AF:93:LYS:HG2	2.07	0.53
7:AG:13:LEU:HD22	7:AG:13:LEU:N	2.24	0.53
9:AI:30:ILE:O	9:AI:33:ARG:HB2	2.08	0.53
13:AM:27:LYS:O	13:AM:31:LYS:HG3	2.08	0.53
22:BA:630:G:N2	22:BA:633:A:OP2	2.40	0.53
22:BA:1288:G:C4	22:BA:1327:A:C2	2.96	0.53
22:BA:1464:G:H2'	22:BA:1465:G:C8	2.43	0.53
22:BA:1735:A:C2	22:BA:1736:U:H1'	2.43	0.53
26:BE:149:ILE:HD12	26:BE:150:THR:N	2.23	0.53
30:BI:69:PHE:O	30:BI:69:PHE:CD1	2.62	0.53
35:BN:2:ARG:HA	35:BN:5:LYS:HD2	1.91	0.53
35:BN:28:LEU:O	35:BN:32:GLU:N	2.42	0.53
38:BQ:24:TYR:O	38:BQ:25:TYR:CB	2.57	0.53
1:CA:374:A:C2	1:CA:375:U:C6	2.96	0.53
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.43	0.53
1:CA:1491:G:H3'	1:CA:1492:A:C8	2.44	0.53
5:CE:38:VAL:HG12	5:CE:117:VAL:HG21	1.91	0.53
9:CI:88:MET:O	9:CI:88:MET:HG2	2.08	0.53
11:CK:45:ALA:HB3	11:CK:70:CYS:HB2	1.90	0.53
13:CM:114:LYS:HB2	13:CM:115:PRO:HD3	1.90	0.53
22:DA:693:A:C5	22:DA:694:U:C4	2.97	0.53
22:DA:720:U:H2'	22:DA:721:A:C8	2.43	0.53
22:DA:1077:A:C2	22:DA:1088:A:C2	2.97	0.53
22:DA:1154:G:OP1	38:DQ:58:ARG:HD3	2.08	0.53
22:DA:1343:G:C5	22:DA:1344:U:C4	2.96	0.53
22:DA:1645:G:H5''	22:DA:1646:C:O5'	2.09	0.53
22:DA:2103:C:H2'	22:DA:2104:C:C6	2.43	0.53
22:DA:2831:G:OP1	25:DD:56:LYS:NZ	2.36	0.53
24:DC:147:LYS:HB2	24:DC:150:LYS:HB2	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:8:ALA:HB2	26:DE:122:GLU:HG3	1.91	0.53
1:AA:322:C:O2'	20:AT:18:ARG:HG3	2.08	0.53
1:AA:390:U:H2'	1:AA:391:G:C8	2.44	0.53
1:AA:771:G:O2'	1:AA:772:U:H5'	2.08	0.53
1:AA:872:A:C4	1:AA:874:G:N7	2.77	0.53
12:AL:44:LYS:HB2	12:AL:45:PRO:CD	2.38	0.53
18:AR:26:ILE:O	18:AR:30:LYS:HG3	2.08	0.53
20:AT:67:ILE:HG13	20:AT:71:LYS:HG2	1.89	0.53
22:BA:1224:U:C4	22:BA:1225:G:C6	2.96	0.53
22:BA:1584:U:O2	22:BA:1584:U:C2'	2.56	0.53
22:BA:1936:A:C2	22:BA:1945:G:C8	2.97	0.53
22:BA:2070:A:C2	22:BA:2442:C:C2	2.97	0.53
38:BQ:50:ARG:O	38:BQ:54:LYS:HE3	2.08	0.53
39:BR:21:ARG:CZ	39:BR:93:PHE:CE1	2.91	0.53
1:CA:256:U:H2'	1:CA:257:G:O4'	2.08	0.53
1:CA:355:C:C4	1:CA:356:A:N7	2.77	0.53
1:CA:632:U:H3'	1:CA:633:G:H5'	1.90	0.53
1:CA:664:G:H2'	1:CA:666:G:OP1	2.08	0.53
1:CA:892:A:C5	1:CA:893:C:C5	2.96	0.53
1:CA:1126:U:O4	10:CJ:73:LEU:HD12	2.09	0.53
2:CB:102:THR:HB	2:CB:175:GLU:HG3	1.91	0.53
10:CJ:83:THR:O	10:CJ:87:LEU:HD12	2.08	0.53
22:DA:626:A:C2	33:DL:78:ARG:HD3	2.43	0.53
22:DA:1223:G:N2	22:DA:1225:G:H3'	2.23	0.53
22:DA:1301:A:H2'	22:DA:1301:A:N3	2.24	0.53
22:DA:1330:C:C2'	22:DA:1331:G:O5'	2.57	0.53
22:DA:1362:C:C2'	22:DA:1363:C:H5'	2.38	0.53
22:DA:1566:A:C2	24:DC:213:TRP:CG	2.97	0.53
22:DA:2720:U:C6	22:DA:2872:A:N1	2.77	0.53
22:DA:2840:C:H5''	35:DN:53:THR:OG1	2.08	0.53
29:DH:2:GLN:O	29:DH:3:VAL:HG22	2.09	0.53
29:DH:32:PRO:O	29:DH:33:GLN:HB2	2.09	0.53
31:DJ:58:ASN:OD1	31:DJ:127:GLY:O	2.26	0.53
35:DN:20:MET:HG3	35:DN:21:PHE:CD1	2.43	0.53
35:DN:28:LEU:HG	35:DN:28:LEU:O	2.07	0.53
44:DW:50:ASN:OD1	44:DW:63:ALA:HB2	2.09	0.53
49:D1:50:LYS:O	49:D1:51:GLU:HB3	2.07	0.53
51:D3:31:HIS:CE1	51:D3:32:ILE:CD1	2.92	0.53
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.07	0.53
1:AA:1296:C:H4'	1:AA:1302:C:C4	2.43	0.53
1:AA:1446:A:C2'	1:AA:1447:A:H5'	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:41:ASP:OD1	5:AE:42:GLY:N	2.42	0.53
13:AM:83:LEU:HD21	19:AS:65:GLU:HG2	1.89	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
22:BA:544:C:H5'	22:BA:545:U:OP2	2.08	0.53
22:BA:1432:G:O2'	22:BA:1433:A:H5'	2.09	0.53
27:BF:121:SER:HB2	27:BF:128:TYR:CE1	2.44	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
40:BS:4:ILE:HG12	40:BS:106:VAL:HG22	1.90	0.53
53:B5:204:GLY:O	53:B5:205:ALA:HB3	2.08	0.53
1:CA:31:G:C5	1:CA:306:A:H1'	2.44	0.53
1:CA:451:A:H4'	1:CA:452:A:O4'	2.08	0.53
1:CA:991:U:N3	1:CA:1212:U:O4'	2.42	0.53
1:CA:1302:C:C4	13:CM:17:ILE:CD1	2.92	0.53
1:CA:1388:C:C2	1:CA:1389:C:C5	2.97	0.53
22:DA:511:U:O4	22:DA:512:G:N1	2.41	0.53
22:DA:613:A:O2'	22:DA:614:A:P	2.66	0.53
22:DA:864:G:O6	22:DA:865:C:N4	2.42	0.53
22:DA:2044:C:N3	22:DA:2045:C:C5	2.77	0.53
22:DA:2119:A:C6	22:DA:2170:A:C5	2.96	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
23:DB:11:C:C5	23:DB:12:C:C5	2.97	0.53
23:DB:25:U:C4	23:DB:26:C:C4	2.96	0.53
24:DC:240:PHE:CE1	24:DC:242:LYS:O	2.62	0.53
29:DH:37:VAL:CG2	29:DH:38:PRO:HD2	2.39	0.53
29:DH:103:VAL:HA	29:DH:106:ALA:HB3	1.89	0.53
33:DL:56:PRO:HD2	33:DL:59:ARG:HB2	1.91	0.53
1:AA:39:G:C2	1:AA:40:C:C6	2.97	0.53
1:AA:901:A:N7	1:AA:902:G:H1'	2.24	0.53
1:AA:1076:U:O2	1:AA:1082:A:C2	2.62	0.53
1:AA:1355:G:O2'	1:AA:1356:G:H5'	2.09	0.53
1:AA:1373:G:H5''	7:AG:36:LYS:HB2	1.91	0.53
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.09	0.53
4:AD:203:LEU:HD23	4:AD:204:TYR:CE2	2.44	0.53
6:AF:85:ILE:O	6:AF:86:ARG:HG2	2.09	0.53
9:AI:58:VAL:O	9:AI:58:VAL:HG12	2.08	0.53
9:AI:80:ARG:NH1	9:AI:103:PHE:CD1	2.77	0.53
22:BA:1713:A:C2	22:BA:1716:U:C6	2.96	0.53
22:BA:1734:G:C4	22:BA:1735:A:C8	2.95	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1923:U:C2'	22:BA:1924:C:C5'	2.86	0.53
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
38:BQ:89:GLU:H	39:BR:49:ILE:CD1	2.22	0.53
39:BR:59:ILE:HG12	39:BR:101:ILE:HD12	1.90	0.53
40:BS:1:MET:N	40:BS:109:ASP:OD1	2.41	0.53
41:BT:16:VAL:O	41:BT:17:SER:HB3	2.09	0.53
1:CA:350:G:C6	1:CA:351:G:C6	2.96	0.53
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.09	0.53
7:CG:65:ALA:O	7:CG:127:ALA:HB1	2.09	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
22:DA:513:A:C2	22:DA:514:A:C5	2.96	0.53
22:DA:563:A:C4	22:DA:2018:G:C2	2.97	0.53
22:DA:1695:G:H3'	22:DA:1695:G:N3	2.24	0.53
22:DA:1874:C:H3'	22:DA:1875:G:C8	2.44	0.53
22:DA:1938:A:C6	22:DA:2590:A:H1'	2.43	0.53
32:DK:66:LYS:NZ	32:DK:79:PHE:O	2.34	0.53
1:AA:269:C:H2'	1:AA:270:A:C8	2.44	0.53
1:AA:858:G:O2'	1:AA:859:G:H5'	2.08	0.53
1:AA:1425:U:O2'	1:AA:1426:G:H5'	2.08	0.53
2:AB:126:PHE:N	2:AB:126:PHE:HD2	2.07	0.53
2:AB:219:ALA:O	2:AB:220:THR:CB	2.56	0.53
3:AC:92:ALA:HB2	3:AC:99:ALA:HB3	1.91	0.53
8:AH:10:MET:O	8:AH:12:THR:N	2.42	0.53
8:AH:25:VAL:HG12	8:AH:61:LEU:HB2	1.90	0.53
9:AI:30:ILE:HD11	9:AI:38:TYR:CD2	2.43	0.53
22:BA:280:U:H2'	22:BA:281:C:O4'	2.08	0.53
22:BA:846:U:O2'	22:BA:847:U:OP2	2.27	0.53
22:BA:1319:C:H2'	22:BA:1320:C:H5'	1.91	0.53
22:BA:1667:G:O2'	22:BA:1991:U:O4	2.17	0.53
22:BA:2514:U:H2'	22:BA:2515:C:C6	2.44	0.53
22:BA:2673:G:C2	22:BA:2674:G:C8	2.97	0.53
22:BA:2685:G:OP1	32:BK:78:ARG:NH2	2.39	0.53
30:BI:127:ARG:HA	30:BI:130:GLU:CG	2.38	0.53
39:BR:16:GLU:OE1	39:BR:100:GLY:HA2	2.09	0.53
1:CA:891:U:C5	1:CA:906:A:C2	2.97	0.53
1:CA:1053:G:O5'	1:CA:1054:C:H3'	2.08	0.53
1:CA:1151:A:H1'	1:CA:1152:A:C8	2.43	0.53
1:CA:1228:C:H5'	13:CM:113:ARG:HB2	1.91	0.53
1:CA:1417:G:N2	1:CA:1484:C:C4	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1461:G:H2'	1:CA:1462:C:O4'	2.08	0.53
1:CA:1483:A:N1	22:DA:1959:G:O2'	2.41	0.53
13:CM:20:THR:HG22	13:CM:20:THR:O	2.09	0.53
22:DA:176:A:N7	22:DA:177:G:C6	2.77	0.53
22:DA:294:A:C6	22:DA:345:A:C4	2.97	0.53
22:DA:640:C:C4	22:DA:641:U:C5	2.97	0.53
22:DA:848:C:H2'	22:DA:849:A:C8	2.44	0.53
22:DA:1027:A:N6	22:DA:1126:A:N3	2.57	0.53
22:DA:1099:G:N7	22:DA:1100:C:N4	2.57	0.53
22:DA:1120:G:C6	22:DA:1121:C:C4	2.97	0.53
22:DA:1544:A:C6	22:DA:1545:A:C6	2.97	0.53
22:DA:1907:G:C2	22:DA:1924:C:O2	2.61	0.53
22:DA:2162:G:H4'	22:DA:2163:A:OP1	2.08	0.53
22:DA:2520:C:HO2'	22:DA:2565:A:HO2'	1.57	0.53
22:DA:2656:U:OP2	22:DA:2664:G:N1	2.42	0.53
22:DA:2820:A:C8	25:DD:196:ALA:CB	2.92	0.53
28:DG:67:THR:O	28:DG:71:LEU:N	2.42	0.53
30:DI:18:ALA:O	30:DI:19:ASN:CB	2.56	0.53
36:DO:100:HIS:CG	36:DO:101:GLY:N	2.77	0.53
42:DU:98:SER:O	42:DU:99:ASN:HB3	2.07	0.53
1:AA:33:A:H2'	1:AA:34:C:C6	2.44	0.53
1:AA:834:U:C4	1:AA:835:U:C4	2.97	0.53
1:AA:1508:A:H2'	1:AA:1509:C:O4'	2.09	0.53
3:AC:12:LEU:O	3:AC:14:ILE:N	2.42	0.53
8:AH:25:VAL:O	8:AH:25:VAL:CG1	2.57	0.53
9:AI:58:VAL:O	9:AI:59:GLU:CB	2.57	0.53
15:AO:35:GLN:HB3	15:AO:59:MET:CE	2.39	0.53
17:AQ:82:ALA:O	17:AQ:83:VAL:O	2.27	0.53
22:BA:475:C:C5	22:BA:481:G:O6	2.61	0.53
22:BA:1289:C:O2'	22:BA:1330:C:H4'	2.09	0.53
22:BA:1587:G:C4	22:BA:1588:G:C8	2.97	0.53
22:BA:1747:U:H2'	22:BA:1748:C:C6	2.44	0.53
22:BA:2314:A:O2'	22:BA:2315:G:H5'	2.09	0.53
29:BH:27:ARG:NH2	45:BX:60:ASP:CG	2.62	0.53
37:BP:106:LYS:O	37:BP:109:ARG:HD3	2.09	0.53
39:BR:51:VAL:HB	39:BR:52:PRO:CD	2.39	0.53
1:CA:106:C:O2	1:CA:379:C:H4'	2.09	0.53
1:CA:223:A:H2'	1:CA:224:U:C6	2.45	0.53
1:CA:619:U:H3	4:CD:131:ASN:HB3	1.74	0.53
1:CA:1161:C:O2	1:CA:1176:A:C2	2.62	0.53
22:DA:324:A:C2	22:DA:325:G:H1'	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:370:G:O2'	22:DA:424:G:OP1	2.22	0.53
22:DA:600:G:H1'	26:DE:100:MET:CG	2.39	0.53
22:DA:858:G:O2'	22:DA:2268:A:N3	2.23	0.53
22:DA:1438:U:C5	22:DA:1552:A:N1	2.76	0.53
22:DA:1779:U:C5	22:DA:1784:A:N7	2.76	0.53
24:DC:62:TYR:CE1	24:DC:63:ARG:O	2.62	0.53
27:DF:33:LYS:HD3	27:DF:92:ARG:NH1	2.24	0.53
28:DG:11:VAL:O	28:DG:48:ASN:ND2	2.42	0.53
30:DI:8:TYR:HA	30:DI:59:ILE:HB	1.91	0.53
30:DI:33:VAL:HG13	30:DI:67:PHE:CZ	2.44	0.53
37:DP:91:ALA:HB2	37:DP:113:ARG:HG3	1.91	0.53
1:AA:57:G:C5	1:AA:58:C:C4	2.96	0.52
1:AA:109:A:C6	1:AA:326:G:C6	2.96	0.52
1:AA:374:A:H5''	1:AA:452:A:C2	2.43	0.52
1:AA:1010:U:H2'	1:AA:1011:C:C6	2.44	0.52
1:AA:1157:A:C6	1:AA:1180:A:C5	2.98	0.52
5:AE:56:VAL:N	5:AE:57:PRO:HD2	2.24	0.52
10:AJ:80:THR:O	10:AJ:83:THR:N	2.41	0.52
12:AL:117:TYR:O	12:AL:119:VAL:HG23	2.09	0.52
13:AM:16:VAL:CG2	13:AM:41:GLU:HB2	2.38	0.52
22:BA:244:A:C2	22:BA:255:A:C4	2.97	0.52
22:BA:287:G:C2	22:BA:354:A:C2	2.97	0.52
22:BA:580:U:H2'	22:BA:581:C:H6	1.73	0.52
22:BA:929:U:H1'	47:BZ:26:GLY:O	2.10	0.52
22:BA:1179:G:O6	22:BA:1180:U:N3	2.43	0.52
22:BA:1346:G:O2'	22:BA:1347:A:H5'	2.10	0.52
22:BA:1467:U:C4	22:BA:1546:G:C2	2.98	0.52
22:BA:1916:A:OP2	22:BA:1917:U:OP2	2.27	0.52
22:BA:2000:C:O2'	22:BA:2001:C:H5'	2.09	0.52
22:BA:2061:G:C2	55:BA:3001:DOL:HC22	2.44	0.52
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
37:BP:31:TRP:CZ2	37:BP:40:LEU:CD1	2.92	0.52
49:B1:14:SER:HB3	49:B1:48:ILE:O	2.09	0.52
53:B5:83:LYS:HB3	53:B5:87:ALA:HB3	1.90	0.52
1:CA:119:A:H4'	1:CA:120:A:O5'	2.09	0.52
5:CE:96:MET:HE3	5:CE:111:MET:HE3	1.91	0.52
5:CE:153:VAL:O	5:CE:157:ARG:N	2.42	0.52
7:CG:68:ASN:O	7:CG:138:ARG:NH2	2.42	0.52
12:CL:90:LEU:CB	12:CL:93:VAL:CG2	2.87	0.52
13:CM:20:THR:HG23	13:CM:26:GLY:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:83:ILE:O	20:CT:87:ALA:HB3	2.09	0.52
22:DA:9:G:C6	22:DA:2629:U:C5	2.98	0.52
22:DA:450:G:H2'	22:DA:451:U:H5''	1.90	0.52
22:DA:1288:G:C4	22:DA:1327:A:C2	2.98	0.52
22:DA:1308:A:H2'	22:DA:1309:G:O4'	2.09	0.52
22:DA:1410:G:N1	22:DA:1411:U:O4	2.42	0.52
22:DA:2031:A:C6	22:DA:2498:C:H1'	2.44	0.52
22:DA:2575:C:H2'	22:DA:2578:G:O6	2.09	0.52
25:DD:208:LYS:O	25:DD:209:ALA:HB2	2.08	0.52
27:DF:108:VAL:HG11	27:DF:176:PRO:CG	2.39	0.52
46:DY:36:GLN:O	46:DY:37:LEU:C	2.48	0.52
1:AA:173:U:C6	1:AA:197:A:C2	2.97	0.52
1:AA:373:A:N3	1:AA:374:A:C8	2.78	0.52
1:AA:568:G:N3	1:AA:569:C:C5	2.78	0.52
1:AA:1028:C:O2	1:AA:1034:G:C6	2.62	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
1:AA:1277:C:HO2'	1:AA:1279:G:H8	1.54	0.52
4:AD:76:TYR:CD1	4:AD:76:TYR:C	2.83	0.52
4:AD:84:GLY:O	4:AD:89:ASN:ND2	2.42	0.52
8:AH:111:MET:HE2	8:AH:116:ALA:N	2.23	0.52
22:BA:744:U:P	57:BA:3655:HOH:O	2.67	0.52
22:BA:768:G:C5	22:BA:769:U:C5	2.97	0.52
22:BA:1384:A:H1'	22:BA:1405:U:H1'	1.91	0.52
22:BA:1754:A:C6	22:BA:1755:A:C6	2.97	0.52
22:BA:1857:G:C2	22:BA:1884:G:N3	2.77	0.52
22:BA:2314:A:OP1	27:BF:88:LYS:NZ	2.42	0.52
29:BH:77:THR:HA	29:BH:143:ILE:O	2.09	0.52
39:BR:52:PRO:O	39:BR:53:PHE:O	2.27	0.52
41:BT:88:LYS:O	41:BT:89:GLU:HG2	2.09	0.52
43:BV:8:VAL:HG23	43:BV:9:ARG:N	2.24	0.52
43:BV:48:MET:O	43:BV:51:GLN:HG3	2.09	0.52
1:CA:718:A:C8	1:CA:719:C:C6	2.97	0.52
1:CA:1068:G:C2'	1:CA:1069:C:H5'	2.38	0.52
4:CD:148:LYS:O	4:CD:149:ALA:HB3	2.07	0.52
7:CG:46:ALA:HA	7:CG:121:ALA:HB2	1.92	0.52
22:DA:971:G:O2'	22:DA:983:A:N3	2.41	0.52
22:DA:1009:A:O2'	22:DA:1153:C:H4'	2.09	0.52
22:DA:1071:G:O2'	22:DA:1072:C:O4'	2.21	0.52
22:DA:1127:A:C3'	22:DA:1128:G:H5''	2.38	0.52
29:DH:31:VAL:CB	29:DH:32:PRO:CD	2.86	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:40:THR:O	29:DH:41:LYS:C	2.48	0.52
35:DN:58:ASP:HA	35:DN:80:PHE:CD1	2.44	0.52
1:AA:76:G:H2'	1:AA:76:G:N3	2.23	0.52
1:AA:683:G:N2	11:AK:40:ASN:HA	2.24	0.52
1:AA:855:U:N3	1:AA:856:C:C5	2.78	0.52
1:AA:1108:G:H5'	3:AC:176:HIS:ND1	2.24	0.52
1:AA:1342:C:O2'	9:AI:126:GLN:HG3	2.09	0.52
2:AB:126:PHE:N	2:AB:126:PHE:CD2	2.76	0.52
9:AI:45:ARG:HG2	9:AI:46:MET:SD	2.49	0.52
10:AJ:36:VAL:HA	10:AJ:76:ILE:HA	1.90	0.52
22:BA:362:A:C8	22:BA:362:A:OP2	2.62	0.52
22:BA:479:A:N3	22:BA:481:G:H5''	2.25	0.52
22:BA:1083:U:O2	22:BA:1085:A:C8	2.62	0.52
22:BA:1508:A:O2'	22:BA:1509:A:O4'	2.25	0.52
22:BA:2590:A:C2	22:BA:2605:U:C2	2.98	0.52
23:BB:37:C:C5	23:BB:38:C:C4	2.98	0.52
26:BE:91:ASP:C	26:BE:91:ASP:OD1	2.48	0.52
45:BX:3:ARG:CD	45:BX:30:LEU:HD13	2.39	0.52
1:CA:669:G:N2	1:CA:738:C:C2	2.77	0.52
1:CA:718:A:C5'	11:CK:119:ASN:ND2	2.73	0.52
1:CA:978:A:O2'	1:CA:1322:C:C5	2.63	0.52
3:CC:130:PHE:CZ	3:CC:131:ARG:CD	2.92	0.52
4:CD:3:ARG:HD2	4:CD:115:ARG:NE	2.25	0.52
6:CF:93:LYS:O	6:CF:93:LYS:HG2	2.09	0.52
9:CI:120:LYS:CG	9:CI:123:ARG:HB3	2.38	0.52
14:CN:52:PRO:O	14:CN:53:ARG:HB3	2.09	0.52
22:DA:27:G:N2	22:DA:512:G:H1'	2.23	0.52
22:DA:32:C:H5''	22:DA:33:C:OP2	2.10	0.52
22:DA:237:C:N3	22:DA:238:C:C5	2.77	0.52
22:DA:1786:A:H1'	22:DA:1938:A:N6	2.24	0.52
22:DA:2111:U:C4	22:DA:2147:A:C2	2.97	0.52
22:DA:2562:U:C2'	22:DA:2563:U:H5'	2.40	0.52
22:DA:2586:U:C6	22:DA:2587:A:C8	2.98	0.52
25:DD:183:GLU:OE1	25:DD:183:GLU:N	2.42	0.52
29:DH:72:ILE:HG22	29:DH:72:ILE:O	2.09	0.52
36:DO:79:ALA:O	36:DO:83:LEU:HG	2.08	0.52
1:AA:602:A:C2	1:AA:603:U:O2	2.62	0.52
1:AA:832:G:N3	1:AA:833:G:C8	2.78	0.52
1:AA:1311:A:C2	1:AA:1327:C:N3	2.77	0.52
1:AA:1337:G:C5'	1:AA:1338:G:OP1	2.56	0.52
11:AK:126:LYS:O	21:AU:34:ARG:NE	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:4:SER:O	15:AO:8:THR:OG1	2.26	0.52
22:BA:686:U:H4'	22:BA:687:C:OP2	2.09	0.52
33:BL:48:ARG:HD2	51:B3:60:ALA:O	2.10	0.52
42:BU:86:ARG:NH1	42:BU:100:SER:O	2.41	0.52
53:B5:19:LYS:HG3	53:B5:23:ILE:HG12	1.92	0.52
1:CA:632:U:O2	1:CA:632:U:H2'	2.08	0.52
1:CA:747:A:C6	1:CA:748:G:C6	2.97	0.52
1:CA:1055:A:C6	1:CA:1206:G:C5	2.98	0.52
2:CB:167:ASP:OD2	2:CB:191:SER:HA	2.10	0.52
16:CP:28:ARG:CG	16:CP:29:ASN:OD1	2.56	0.52
22:DA:307:G:N1	22:DA:310:A:OP2	2.43	0.52
22:DA:498:G:C2	22:DA:499:U:C5	2.97	0.52
22:DA:830:G:C2	22:DA:2448:A:N7	2.77	0.52
22:DA:1390:U:C2'	22:DA:1391:U:H5'	2.40	0.52
22:DA:2372:U:O4'	49:D1:46:HIS:ND1	2.42	0.52
28:DG:19:ILE:O	28:DG:21:GLY:N	2.43	0.52
30:DI:80:LEU:HD23	30:DI:84:ALA:HB2	1.91	0.52
34:DM:31:PHE:CZ	34:DM:110:GLU:HA	2.45	0.52
36:DO:33:ARG:O	36:DO:34:HIS:CD2	2.62	0.52
40:DS:28:LYS:O	40:DS:29:VAL:C	2.48	0.52
1:AA:262:A:H2'	1:AA:263:A:C8	2.43	0.52
1:AA:268:U:H2'	1:AA:269:C:C6	2.44	0.52
1:AA:542:G:OP1	4:AD:10:LYS:HE2	2.10	0.52
1:AA:1076:U:C2	1:AA:1082:A:C2	2.97	0.52
1:AA:1167:A:N7	1:AA:1169:A:C5	2.78	0.52
1:AA:1260:G:OP1	1:AA:1284:C:O2'	2.27	0.52
4:AD:51:TYR:CE2	4:AD:55:LEU:HD12	2.45	0.52
5:AE:46:VAL:HG22	5:AE:118:ALA:HA	1.91	0.52
6:AF:3:HIS:O	6:AF:92:THR:HG23	2.09	0.52
6:AF:36:ILE:HG23	6:AF:36:ILE:O	2.09	0.52
9:AI:52:LEU:HD13	9:AI:57:MET:HG3	1.91	0.52
10:AJ:63:ASP:HB3	10:AJ:65:TYR:CE2	2.45	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
22:BA:573:U:O2'	22:BA:574:A:H3'	2.09	0.52
22:BA:998:C:C2'	22:BA:999:U:O5'	2.58	0.52
22:BA:2055:C:H5'	22:BA:2056:G:O5'	2.10	0.52
22:BA:2308:G:O6	22:BA:2311:A:C8	2.62	0.52
22:BA:2747:G:O2'	28:BG:67:THR:HB	2.09	0.52
22:BA:2771:C:H2'	22:BA:2772:C:C6	2.45	0.52
26:BE:15:SER:N	26:BE:197:GLU:OE2	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:121:ILE:CD1	28:BG:141:ILE:HG22	2.40	0.52
29:BH:51:ARG:NH1	29:BH:55:GLU:OE1	2.43	0.52
37:BP:31:TRP:CE2	37:BP:40:LEU:HD11	2.45	0.52
39:BR:49:ILE:CB	39:BR:52:PRO:O	2.57	0.52
39:BR:74:ILE:N	39:BR:74:ILE:CD1	2.71	0.52
1:CA:32:A:H2'	1:CA:33:A:C8	2.44	0.52
1:CA:73:C:C2	1:CA:74:A:C8	2.98	0.52
1:CA:519:C:H2'	1:CA:520:A:O4'	2.10	0.52
1:CA:644:U:H2'	1:CA:645:G:O4'	2.10	0.52
1:CA:1232:U:OP1	9:CI:126:GLN:HG2	2.10	0.52
17:CQ:48:ASP:N	17:CQ:48:ASP:OD2	2.41	0.52
22:DA:1567:G:C8	24:DC:83:TYR:CE1	2.98	0.52
22:DA:1645:G:H4'	22:DA:1646:C:C6	2.44	0.52
22:DA:1678:A:C5	22:DA:1679:A:C8	2.97	0.52
22:DA:1783:A:C6	22:DA:2587:A:C2	2.97	0.52
22:DA:1799:G:N1	22:DA:1819:A:OP2	2.40	0.52
22:DA:1800:C:OP1	24:DC:258:ARG:NH2	2.42	0.52
22:DA:2016:U:O2	48:D0:4:GLN:NE2	2.43	0.52
22:DA:2060:A:O4'	22:DA:2502:G:H1'	2.10	0.52
22:DA:2341:G:C5	22:DA:2342:C:C4	2.98	0.52
22:DA:2615:U:C4	48:D0:3:VAL:O	2.62	0.52
22:DA:2772:C:H5'	25:DD:173:GLN:NE2	2.25	0.52
22:DA:2842:G:C2	22:DA:2843:G:H1'	2.45	0.52
29:DH:34:GLY:O	29:DH:35:LYS:HD2	2.10	0.52
33:DL:29:LYS:HG3	33:DL:30:THR:HG23	1.91	0.52
34:DM:119:LEU:O	34:DM:119:LEU:HD13	2.10	0.52
40:DS:63:GLY:O	40:DS:64:ALA:HB3	2.10	0.52
1:AA:189:A:H2'	1:AA:190:A:O4'	2.10	0.52
1:AA:1014:A:H4'	19:AS:14:HIS:CE1	2.45	0.52
2:AB:20:THR:HA	2:AB:38:VAL:HA	1.90	0.52
2:AB:81:LYS:HG3	2:AB:91:PHE:CZ	2.45	0.52
4:AD:130:VAL:HG11	4:AD:135:TYR:CG	2.45	0.52
5:AE:94:VAL:CG2	5:AE:111:MET:SD	2.98	0.52
5:AE:104:GLY:HA3	5:AE:122:ASN:HA	1.91	0.52
10:AJ:57:VAL:O	10:AJ:58:ASN:HB2	2.09	0.52
20:AT:33:LYS:O	20:AT:34:LYS:C	2.48	0.52
22:BA:852:U:H2'	22:BA:853:C:C6	2.44	0.52
1:CA:151:A:H2'	1:CA:152:A:O4'	2.09	0.52
1:CA:542:G:C2	1:CA:543:U:C5	2.98	0.52
1:CA:1298:U:O2	1:CA:1298:U:C2'	2.57	0.52
2:CB:91:PHE:CD2	2:CB:150:GLY:HA3	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:22:LYS:O	4:CD:24:GLY:N	2.43	0.52
7:CG:74:GLU:O	7:CG:88:PRO:HA	2.10	0.52
15:CO:53:ARG:O	15:CO:56:LEU:HB3	2.09	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:481:G:C4	22:DA:507:A:C2	2.98	0.52
22:DA:881:G:N1	22:DA:895:U:O2	2.42	0.52
22:DA:1087:G:C2	22:DA:1089:A:C2	2.98	0.52
22:DA:1101:U:C5	22:DA:1102:C:C5	2.97	0.52
22:DA:1980:G:O2'	22:DA:1982:U:OP2	2.26	0.52
22:DA:2258:C:H4'	22:DA:2259:U:OP2	2.10	0.52
22:DA:2599:G:N7	24:DC:236:GLU:CB	2.73	0.52
22:DA:2747:G:O6	22:DA:2755:C:H5''	2.09	0.52
22:DA:2870:C:H5''	35:DN:65:LEU:HD21	1.90	0.52
25:DD:15:PHE:CD2	37:DP:78:SER:HA	2.45	0.52
30:DI:114:ALA:O	30:DI:115:ALA:HB2	2.10	0.52
32:DK:121:GLU:O	32:DK:122:VAL:O	2.28	0.52
34:DM:124:LEU:CD2	34:DM:124:LEU:N	2.72	0.52
37:DP:39:ARG:HA	37:DP:39:ARG:HE	1.73	0.52
1:AA:887:G:H2'	1:AA:888:G:H5'	1.91	0.52
1:AA:1070:U:C2	1:AA:1071:C:C5	2.98	0.52
2:AB:67:ILE:O	2:AB:68:LEU:CB	2.57	0.52
4:AD:107:PHE:CD1	4:AD:145:ILE:CD1	2.93	0.52
19:AS:64:ASP:HB3	27:BF:115:ARG:NH2	2.24	0.52
20:AT:68:HIS:HB3	20:AT:69:LYS:NZ	2.25	0.52
21:AU:17:ARG:NH1	21:AU:20:LYS:CG	2.73	0.52
22:BA:790:U:O2'	22:BA:791:C:O5'	2.26	0.52
22:BA:1288:G:C5	22:BA:1327:A:C2	2.98	0.52
22:BA:1923:U:HO2'	22:BA:1924:C:C5'	2.22	0.52
24:BC:123:ALA:O	24:BC:125:LYS:N	2.43	0.52
27:BF:36:LEU:HD22	27:BF:91:LEU:HD11	1.91	0.52
29:BH:94:ILE:HD12	29:BH:98:ASP:HB3	1.92	0.52
34:BM:78:LEU:N	34:BM:78:LEU:HD12	2.24	0.52
35:BN:21:PHE:HB3	35:BN:47:VAL:HG21	1.92	0.52
38:BQ:41:LYS:HG3	38:BQ:45:TYR:CE1	2.44	0.52
46:BY:14:LEU:HA	46:BY:17:GLU:HB3	1.92	0.52
53:B5:65:LEU:HD21	53:B5:191:ARG:CB	2.39	0.52
1:CA:71:A:C2	1:CA:72:A:C8	2.98	0.52
1:CA:421:U:O5'	1:CA:422:C:C5	2.62	0.52
1:CA:484:G:N7	1:CA:486:U:H1'	2.24	0.52
1:CA:518:C:OP2	1:CA:530:G:H1'	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:553:A:O2'	12:CL:26:ALA:O	2.27	0.52
1:CA:1296:C:H5''	1:CA:1297:G:OP2	2.09	0.52
1:CA:1306:A:H1'	1:CA:1332:A:C5	2.45	0.52
2:CB:15:HIS:C	2:CB:15:HIS:ND1	2.63	0.52
4:CD:46:PRO:O	4:CD:48:LEU:N	2.42	0.52
11:CK:40:ASN:O	11:CK:41:ALA:HB3	2.10	0.52
16:CP:23:ASP:OD2	16:CP:25:ARG:CG	2.58	0.52
20:CT:36:TYR:CD1	20:CT:36:TYR:C	2.83	0.52
22:DA:305:C:H1'	22:DA:313:G:N2	2.24	0.52
22:DA:574:A:H4'	22:DA:575:A:C5'	2.39	0.52
22:DA:621:A:C5	22:DA:622:G:H1'	2.44	0.52
22:DA:1327:A:H2'	22:DA:1328:A:O4'	2.10	0.52
22:DA:1726:C:H2'	22:DA:1727:C:C6	2.45	0.52
22:DA:1869:G:C2	22:DA:1873:G:N1	2.78	0.52
22:DA:1875:G:O2'	22:DA:1876:A:OP2	2.28	0.52
22:DA:1957:C:H5'	22:DA:1984:G:O2'	2.09	0.52
22:DA:2234:G:C5	22:DA:2235:G:C8	2.98	0.52
22:DA:2301:C:C2	22:DA:2316:G:N2	2.77	0.52
22:DA:2546:U:O4'	22:DA:2565:A:C2	2.62	0.52
22:DA:2810:A:C8	22:DA:2811:G:C8	2.98	0.52
29:DH:34:GLY:O	29:DH:35:LYS:HB2	2.08	0.52
33:DL:56:PRO:O	33:DL:60:ARG:CB	2.57	0.52
37:DP:91:ALA:HB2	37:DP:113:ARG:HA	1.90	0.52
1:AA:9:G:C6	1:AA:26:A:N6	2.78	0.52
1:AA:80:A:C2	1:AA:90:C:N3	2.77	0.52
1:AA:622:A:C8	1:AA:623:C:C6	2.98	0.52
1:AA:968:A:H4'	1:AA:969:A:OP2	2.10	0.52
1:AA:980:C:C5	1:AA:981:U:C5	2.97	0.52
1:AA:1425:U:O2	1:AA:1476:A:C2	2.62	0.52
2:AB:75:ALA:O	2:AB:76:ALA:CB	2.58	0.52
22:BA:226:A:C6	22:BA:227:A:C6	2.97	0.52
22:BA:264:C:O2'	22:BA:265:A:H2'	2.10	0.52
22:BA:591:U:HO2'	51:B3:2:PRO:N	2.07	0.52
22:BA:624:C:O2'	22:BA:657:U:H5''	2.09	0.52
22:BA:1142:A:C2	22:BA:1144:A:C1'	2.92	0.52
22:BA:1424:G:H2'	22:BA:1425:G:O4'	2.10	0.52
22:BA:2199:A:C8	22:BA:2200:C:C5	2.97	0.52
24:BC:141:VAL:HG13	24:BC:191:THR:O	2.10	0.52
29:BH:2:GLN:O	29:BH:3:VAL:HG22	2.10	0.52
32:BK:58:LEU:HD23	32:BK:59:LYS:O	2.10	0.52
40:BS:36:LEU:HD13	40:BS:48:LYS:CA	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:6:ARG:HG2	49:B1:24:THR:HB	1.92	0.52
1:CA:643:C:H5'	8:CH:32:LEU:HD22	1.92	0.52
1:CA:1416:G:N2	1:CA:1485:U:H1'	2.24	0.52
2:CB:62:SER:HA	2:CB:224:GLY:HA3	1.91	0.52
21:CU:14:VAL:C	21:CU:16:LEU:HG	2.29	0.52
22:DA:389:G:O4'	22:DA:2413:G:H5'	2.10	0.52
22:DA:1340:U:H4'	22:DA:1341:G:OP2	2.10	0.52
22:DA:1782:U:O4	22:DA:2586:U:C5	2.62	0.52
25:DD:86:GLU:HG3	25:DD:87:GLY:N	2.24	0.52
29:DH:25:TYR:CZ	29:DH:30:LEU:HD21	2.45	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
42:DU:41:LEU:HD12	42:DU:60:GLU:CG	2.40	0.52
1:AA:1004:A:H2'	1:AA:1005:A:O4'	2.10	0.52
1:AA:1080:A:O3'	5:AE:21:VAL:HG21	2.09	0.52
1:AA:1327:C:C2'	1:AA:1328:C:H5'	2.40	0.52
1:AA:1410:A:C4	1:AA:1491:G:N2	2.78	0.52
2:AB:68:LEU:HD21	2:AB:92:VAL:HG23	1.92	0.52
7:AG:42:ILE:HG21	7:AG:116:MET:HB3	1.92	0.52
9:AI:50:GLN:C	9:AI:52:LEU:H	2.12	0.52
22:BA:528:A:C8	22:BA:528:A:C3'	2.93	0.52
22:BA:1020:A:C2	22:BA:1141:U:C2	2.98	0.52
22:BA:1179:G:O6	22:BA:1180:U:C2	2.63	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
22:BA:2554:U:C4	22:BA:2555:U:O4	2.63	0.52
39:BR:47:VAL:HG12	39:BR:54:VAL:HG21	1.92	0.52
40:BS:17:VAL:HG12	40:BS:76:VAL:HG21	1.92	0.52
47:BZ:8:THR:OG1	47:BZ:35:THR:OG1	2.28	0.52
49:B1:34:LEU:H	49:B1:52:ALA:CB	2.23	0.52
1:CA:154:U:O2	1:CA:168:G:N2	2.43	0.52
1:CA:517:G:H5'	1:CA:519:C:O2	2.10	0.52
1:CA:609:A:N7	1:CA:610:U:C5	2.78	0.52
13:CM:10:PRO:O	13:CM:11:ASP:HB2	2.10	0.52
22:DA:228:C:N3	22:DA:418:C:O4'	2.43	0.52
22:DA:1858:A:C2	22:DA:1859:U:C2	2.98	0.52
25:DD:140:HIS:CE1	57:DD:303:HOH:O	2.63	0.52
26:DE:77:ILE:O	26:DE:77:ILE:CG1	2.57	0.52
27:DF:121:SER:O	27:DF:123:ASP:N	2.43	0.52
28:DG:87:LEU:HD12	28:DG:87:LEU:N	2.25	0.52
29:DH:23:ALA:O	29:DH:27:ARG:N	2.38	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DM:135:VAL:O	34:DM:136:MET:CB	2.57	0.52
36:DO:36:TYR:N	36:DO:36:TYR:CD1	2.77	0.52
1:AA:188:C:O2	1:AA:188:C:H2'	2.09	0.52
1:AA:1018:G:N2	1:AA:1019:A:C8	2.77	0.52
1:AA:1135:U:H2'	1:AA:1136:C:O5'	2.10	0.52
1:AA:1356:G:N2	1:AA:1357:A:C2	2.78	0.52
17:AQ:6:ARG:O	17:AQ:7:THR:HG23	2.09	0.52
22:BA:760:G:H2'	22:BA:761:A:O4'	2.09	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
22:BA:2534:A:H2'	22:BA:2535:G:O5'	2.10	0.52
22:BA:2684:U:C4	22:BA:2685:G:N7	2.78	0.52
23:BB:54:G:H21	27:BF:26:MET:CE	2.23	0.52
27:BF:108:VAL:HG12	27:BF:109:PRO:HD3	1.91	0.52
33:BL:95:LEU:HD22	33:BL:100:ILE:CD1	2.39	0.52
37:BP:75:GLN:O	37:BP:77:HIS:N	2.43	0.52
39:BR:66:HIS:CE1	39:BR:94:THR:CG2	2.92	0.52
45:BX:68:LEU:HD13	45:BX:78:TYR:CE1	2.45	0.52
49:B1:47:VAL:HG13	49:B1:48:ILE:N	2.24	0.52
1:CA:34:C:H2'	1:CA:35:G:C8	2.45	0.52
1:CA:885:G:O2'	1:CA:914:A:N1	2.32	0.52
3:CC:77:ILE:HA	3:CC:84:VAL:HG23	1.92	0.52
3:CC:111:LEU:CD1	3:CC:146:ALA:HB2	2.40	0.52
5:CE:105:ILE:H	5:CE:122:ASN:C	2.13	0.52
5:CE:153:VAL:HG23	5:CE:157:ARG:HB2	1.90	0.52
17:CQ:15:ASP:OD1	17:CQ:54:GLY:HA2	2.10	0.52
22:DA:396:G:OP2	45:DX:10:LYS:HG2	2.09	0.52
22:DA:582:A:N7	57:DA:3286:HOH:O	2.34	0.52
22:DA:621:A:C6	22:DA:622:G:H1'	2.45	0.52
22:DA:1293:C:H2'	22:DA:1294:U:O4'	2.10	0.52
22:DA:2061:G:C6	55:DA:3001:DOL:HC19	2.44	0.52
22:DA:2091:C:C3'	22:DA:2092:U:H5''	2.38	0.52
22:DA:2502:G:H5'	22:DA:2503:A:H5''	1.92	0.52
22:DA:2819:G:H2'	22:DA:2821:A:N7	2.25	0.52
31:DJ:117:ALA:HA	31:DJ:120:ARG:HD2	1.91	0.52
39:DR:82:HIS:O	39:DR:82:HIS:CG	2.63	0.52
40:DS:20:VAL:CG2	40:DS:39:THR:HG21	2.40	0.52
42:DU:54:GLN:N	42:DU:55:PRO:HD3	2.25	0.52
1:AA:208:U:C6	1:AA:210:C:C4	2.99	0.51
1:AA:560:A:C6	5:AE:128:TYR:CE1	2.98	0.51
1:AA:685:G:N1	1:AA:686:U:O4	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1010:U:O2	1:AA:1019:A:N1	2.43	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
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.45	0.51
3:AC:140:ASN:O	3:AC:141:ALA:HB2	2.11	0.51
4:AD:60:LYS:NZ	4:AD:194:ASP:O	2.43	0.51
9:AI:43:THR:O	9:AI:44:ALA:CB	2.57	0.51
10:AJ:56:HIS:ND1	10:AJ:57:VAL:HG12	2.25	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
15:AO:89:ARG:NH1	22:BA:714:U:C5	2.78	0.51
22:BA:988:A:OP2	47:BZ:12:SER:HB3	2.10	0.51
22:BA:1627:G:C2	22:BA:1628:G:C8	2.98	0.51
22:BA:2553:G:N1	22:BA:2554:U:O2	2.43	0.51
30:BI:75:PRO:O	30:BI:79:LEU:HD12	2.10	0.51
44:BW:56:ASP:OD1	44:BW:56:ASP:N	2.39	0.51
1:CA:179:A:H2'	1:CA:180:U:C6	2.45	0.51
1:CA:949:A:C2	1:CA:1233:G:N3	2.78	0.51
1:CA:957:U:O2	1:CA:959:A:C8	2.62	0.51
1:CA:1060:U:C5'	10:CJ:53:ILE:HG23	2.41	0.51
4:CD:192:SER:O	4:CD:193:ALA:HB3	2.10	0.51
5:CE:157:ARG:HD3	5:CE:158:GLY:H	1.75	0.51
11:CK:77:TYR:CD1	11:CK:77:TYR:N	2.78	0.51
11:CK:92:GLY:O	11:CK:93:ARG:C	2.49	0.51
22:DA:294:A:N6	22:DA:345:A:C4	2.78	0.51
22:DA:600:G:H1'	26:DE:100:MET:HG2	1.92	0.51
22:DA:607:U:O4	22:DA:619:G:H2'	2.08	0.51
22:DA:686:U:H6	22:DA:788:A:N1	2.08	0.51
22:DA:1050:A:C2	22:DA:2751:G:C4	2.98	0.51
22:DA:1362:C:H2'	22:DA:1363:C:H5'	1.91	0.51
22:DA:1649:G:O6	22:DA:2009:A:N6	2.43	0.51
22:DA:1874:C:C4	22:DA:1875:G:C6	2.99	0.51
22:DA:1906:G:OP1	22:DA:1930:G:C8	2.62	0.51
22:DA:2156:G:C6	22:DA:2157:G:C2	2.97	0.51
22:DA:2283:C:C2	22:DA:2389:G:C2	2.98	0.51
26:DE:149:ILE:HD12	26:DE:172:ALA:HA	1.92	0.51
39:DR:49:ILE:HD12	39:DR:52:PRO:HA	1.92	0.51
42:DU:82:ARG:O	42:DU:97:LYS:HB2	2.10	0.51
42:DU:88:GLU:O	42:DU:89:ASP:CB	2.59	0.51
1:AA:29:U:O2'	1:AA:30:U:H5'	2.10	0.51
1:AA:142:G:H3'	1:AA:143:A:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:34:ILE:O	4:AD:34:ILE:HD13	2.11	0.51
5:AE:136:VAL:O	5:AE:140:THR:HG23	2.10	0.51
8:AH:125:ILE:O	8:AH:125:ILE:CG1	2.59	0.51
20:AT:55:GLN:N	20:AT:56:PRO:HD2	2.25	0.51
22:BA:1028:A:H61	22:BA:1125:G:H2'	1.76	0.51
22:BA:1138:G:H5''	22:BA:1139:G:OP2	2.10	0.51
22:BA:1429:G:O2'	22:BA:1430:G:H5'	2.10	0.51
22:BA:1731:G:C6	22:BA:1733:G:C6	2.98	0.51
22:BA:1935:G:C6	22:BA:1962:C:C6	2.98	0.51
22:BA:2547:A:H2'	22:BA:2548:U:C6	2.45	0.51
25:BD:140:HIS:CE1	57:BD:302:HOH:O	2.57	0.51
29:BH:110:VAL:HG22	29:BH:114:GLU:HB2	1.90	0.51
37:BP:91:ALA:HB2	37:BP:113:ARG:HA	1.93	0.51
44:BW:56:ASP:O	44:BW:57:HIS:HB2	2.10	0.51
46:BY:26:PHE:CD1	46:BY:26:PHE:C	2.83	0.51
46:BY:45:GLN:O	46:BY:46:VAL:CB	2.58	0.51
53:B5:191:ARG:O	53:B5:195:ARG:CB	2.57	0.51
1:CA:575:G:C6	1:CA:821:G:C5	2.98	0.51
1:CA:1105:A:N3	1:CA:1106:G:C8	2.78	0.51
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.10	0.51
1:CA:1238:A:N3	1:CA:1241:G:O2'	2.35	0.51
19:CS:73:GLU:HB2	19:CS:74:PHE:CE1	2.45	0.51
22:DA:483:A:H4'	42:DU:47:LYS:HA	1.92	0.51
22:DA:777:G:N7	22:DA:793:A:C2	2.79	0.51
22:DA:1407:G:N2	22:DA:1596:A:N3	2.58	0.51
22:DA:2651:C:O2'	22:DA:2652:C:H5'	2.10	0.51
22:DA:2824:C:N4	22:DA:2825:G:C5	2.78	0.51
30:DI:86:ILE:HD13	30:DI:89:GLY:N	2.26	0.51
35:DN:90:ARG:NH2	35:DN:116:VAL:HG11	2.25	0.51
47:DZ:14:ILE:HG22	47:DZ:15:GLY:N	2.26	0.51
1:AA:1253:G:N1	1:AA:1285:A:N6	2.58	0.51
1:AA:1370:G:C5'	9:AI:111:VAL:HG21	2.40	0.51
3:AC:87:LEU:O	3:AC:88:ARG:C	2.48	0.51
11:AK:112:ASP:CB	21:AU:20:LYS:HD2	2.41	0.51
16:AP:29:ASN:N	16:AP:29:ASN:OD1	2.43	0.51
21:AU:12:PHE:N	21:AU:12:PHE:CD2	2.75	0.51
22:BA:136:G:H2'	22:BA:137:U:C6	2.46	0.51
22:BA:981:A:H5''	57:BA:3596:HOH:O	2.09	0.51
22:BA:1313:U:H2'	22:BA:1610:A:C2	2.45	0.51
22:BA:1394:U:P	57:BA:3410:HOH:O	2.68	0.51
22:BA:1820:U:H4'	22:BA:1821:A:OP2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:100:ILE:O	33:BL:100:ILE:HG13	2.10	0.51
1:CA:583:A:C2	1:CA:759:A:C5	2.98	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
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
10:CJ:7:ARG:HD3	10:CJ:75:ASP:OD1	2.11	0.51
22:DA:122:G:H2'	22:DA:123:G:O4'	2.10	0.51
22:DA:186:G:N2	22:DA:211:C:C2	2.78	0.51
22:DA:193:U:C5	22:DA:194:G:N7	2.79	0.51
22:DA:1068:G:H2'	22:DA:1096:A:C5'	2.40	0.51
22:DA:1344:U:HO2'	22:DA:1345:C:P	2.30	0.51
22:DA:1740:G:C2	22:DA:1741:C:C2	2.99	0.51
22:DA:1789:A:H5''	24:DC:219:THR:O	2.10	0.51
22:DA:1798:U:O2'	22:DA:1802:A:N3	2.41	0.51
22:DA:1853:A:N3	22:DA:2233:U:O2'	2.36	0.51
22:DA:2024:G:C4	22:DA:2040:G:N2	2.79	0.51
22:DA:2507:C:C4	22:DA:2508:G:C5	2.99	0.51
22:DA:2531:A:C5'	28:DG:157:TYR:CZ	2.92	0.51
22:DA:2624:G:H1'	48:D0:19:HIS:HE1	1.75	0.51
22:DA:2739:U:C5	22:DA:2763:G:C5	2.98	0.51
24:DC:34:LEU:O	24:DC:35:GLU:CB	2.58	0.51
27:DF:147:ASP:O	27:DF:148:ARG:HB2	2.10	0.51
29:DH:121:VAL:O	29:DH:122:LEU:HB2	2.11	0.51
37:DP:40:LEU:HD23	37:DP:41:GLN:N	2.25	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
46:DY:48:ARG:O	46:DY:51:ALA:HB3	2.11	0.51
1:AA:393:A:C2	1:AA:394:G:C8	2.99	0.51
1:AA:545:C:H5'	4:AD:69:GLU:CG	2.41	0.51
1:AA:701:U:H4'	1:AA:702:A:C5'	2.40	0.51
1:AA:957:U:C2	1:AA:959:A:OP2	2.63	0.51
1:AA:1238:A:C2	1:AA:1303:C:H4'	2.45	0.51
1:AA:1419:G:C6	1:AA:1420:U:C4	2.98	0.51
3:AC:25:ASN:O	3:AC:27:LYS:N	2.42	0.51
20:AT:44:LYS:HG2	20:AT:87:ALA:CB	2.40	0.51
21:AU:20:LYS:CE	21:AU:20:LYS:HA	2.40	0.51
22:BA:1586:A:N7	22:BA:1587:G:C8	2.78	0.51
22:BA:1850:G:C6	22:BA:1851:U:C4	2.98	0.51
22:BA:1880:U:H2'	22:BA:1881:C:C6	2.46	0.51
22:BA:1996:C:H4'	22:BA:1997:C:OP1	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2033:A:H4'	22:BA:2034:U:OP1	2.10	0.51
22:BA:2140:G:N3	22:BA:2140:G:H2'	2.25	0.51
22:BA:2558:C:C2'	22:BA:2559:C:H5'	2.41	0.51
22:BA:2703:C:H2'	22:BA:2704:C:H6	1.75	0.51
29:BH:85:GLY:HA2	29:BH:91:PHE:CE2	2.46	0.51
29:BH:99:ILE:O	29:BH:103:VAL:CG2	2.58	0.51
42:BU:72:ILE:HD12	42:BU:72:ILE:O	2.09	0.51
1:CA:474:G:H2'	1:CA:475:C:O4'	2.11	0.51
1:CA:597:G:H2'	1:CA:598:U:H5'	1.92	0.51
1:CA:1014:A:O4'	19:CS:34:TRP:CZ3	2.63	0.51
4:CD:29:ASP:O	4:CD:30:THR:C	2.49	0.51
10:CJ:52:LEU:HB2	14:CN:81:ARG:HD2	1.92	0.51
12:CL:38:TYR:HB2	12:CL:52:VAL:HG13	1.92	0.51
12:CL:40:THR:HG22	12:CL:41:THR:N	2.26	0.51
14:CN:80:SER:O	14:CN:83:LYS:N	2.43	0.51
22:DA:669:G:N2	22:DA:670:A:N1	2.58	0.51
22:DA:1178:C:C2	22:DA:1179:G:N7	2.79	0.51
22:DA:1213:A:N3	22:DA:1238:G:O2'	2.40	0.51
22:DA:1330:C:O2'	22:DA:1331:G:H5'	2.10	0.51
22:DA:1528:A:N6	22:DA:1543:G:O2'	2.44	0.51
22:DA:2461:A:C2	22:DA:2490:G:N2	2.78	0.51
29:DH:26:ALA:HA	29:DH:30:LEU:HB2	1.92	0.51
32:DK:28:SER:O	32:DK:29:HIS:HB2	2.09	0.51
1:AA:392:C:C2	1:AA:393:A:C8	2.99	0.51
1:AA:1350:A:OP1	9:AI:123:ARG:NE	2.44	0.51
12:AL:44:LYS:HB3	12:AL:45:PRO:CD	2.40	0.51
16:AP:51:ARG:HH11	16:AP:51:ARG:CG	2.24	0.51
16:AP:70:ARG:HG3	16:AP:70:ARG:O	2.09	0.51
16:AP:79:ASN:O	16:AP:80:LYS:HE3	2.10	0.51
17:AQ:45:HIS:CB	17:AQ:70:THR:HG22	2.41	0.51
22:BA:141:G:H5''	22:BA:142:A:C6	2.45	0.51
22:BA:2177:C:O2'	53:B5:47:LYS:NZ	2.39	0.51
22:BA:2266:A:H4'	22:BA:2267:A:O5'	2.11	0.51
22:BA:2267:A:H2	57:BA:3514:HOH:O	1.93	0.51
29:BH:94:ILE:CG2	29:BH:99:ILE:CG1	2.88	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
30:BI:86:ILE:N	30:BI:86:ILE:HD12	2.26	0.51
39:BR:37:GLU:OE2	39:BR:53:PHE:CE2	2.64	0.51
1:CA:409:U:H2'	1:CA:410:G:O4'	2.10	0.51
1:CA:1067:A:N1	1:CA:1108:G:O2'	2.28	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1068:G:H2'	1:CA:1069:C:H5'	1.92	0.51
1:CA:1133:G:H2'	1:CA:1133:G:N3	2.26	0.51
1:CA:1291:U:OP1	7:CG:37:SER:HB3	2.10	0.51
3:CC:62:LYS:O	3:CC:97:VAL:HB	2.10	0.51
12:CL:24:LEU:HD22	12:CL:59:ASN:OD1	2.11	0.51
12:CL:61:PHE:N	12:CL:61:PHE:CD1	2.75	0.51
20:CT:3:ASN:N	20:CT:8:LYS:HD3	2.26	0.51
22:DA:85:G:OP2	42:DU:28:VAL:HG12	2.11	0.51
22:DA:125:A:H3'	50:D2:19:ARG:HG3	1.93	0.51
22:DA:310:A:O2'	22:DA:311:A:P	2.67	0.51
22:DA:914:G:H5'	22:DA:915:C:OP2	2.10	0.51
22:DA:1519:G:C6	22:DA:1520:U:C2	2.99	0.51
22:DA:1827:U:H2'	22:DA:1828:G:O5'	2.10	0.51
24:DC:9:THR:O	24:DC:10:SER:HB3	2.10	0.51
25:DD:114:LYS:HE2	25:DD:196:ALA:CB	2.41	0.51
26:DE:108:ILE:HD13	26:DE:181:ILE:HG12	1.91	0.51
29:DH:53:GLU:O	29:DH:54:LEU:C	2.49	0.51
33:DL:135:ILE:O	33:DL:140:GLY:HA3	2.09	0.51
37:DP:39:ARG:HG3	37:DP:40:LEU:N	2.26	0.51
45:DX:54:LYS:O	45:DX:57:ARG:N	2.42	0.51
1:AA:130:A:N7	17:AQ:65:ARG:HB2	2.25	0.51
1:AA:887:G:C2'	1:AA:888:G:H5'	2.40	0.51
1:AA:1154:G:H2'	1:AA:1155:A:C8	2.46	0.51
2:AB:50:PHE:CA	2:AB:213:TYR:OH	2.58	0.51
3:AC:155:GLY:N	3:AC:164:ARG:O	2.43	0.51
10:AJ:15:HIS:CG	10:AJ:16:ARG:N	2.79	0.51
11:AK:88:GLY:H	11:AK:114:THR:HG22	1.76	0.51
16:AP:50:THR:O	16:AP:50:THR:CG2	2.57	0.51
22:BA:693:A:O2'	22:BA:694:U:H5'	2.11	0.51
22:BA:1274:A:N1	22:BA:1644:C:O2'	2.29	0.51
22:BA:1415:U:O2	22:BA:1415:U:H2'	2.11	0.51
22:BA:1949:G:C2	22:BA:1958:C:O2	2.64	0.51
22:BA:2019:A:H4'	38:BQ:34:VAL:HG21	1.93	0.51
33:BL:91:ASP:O	33:BL:94:THR:HB	2.11	0.51
53:B5:122:GLY:HA3	53:B5:146:VAL:CB	2.41	0.51
1:CA:402:G:H4'	1:CA:620:C:O2	2.11	0.51
1:CA:1084:G:C5	1:CA:1085:U:C4	2.98	0.51
1:CA:1089:G:C4	1:CA:1090:U:C6	2.99	0.51
3:CC:87:LEU:HA	3:CC:90:VAL:HG22	1.93	0.51
4:CD:173:VAL:HG13	4:CD:174:ASP:N	2.26	0.51
5:CE:19:ASN:O	5:CE:33:PHE:HA	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:17:LEU:HD23	10:CJ:18:ILE:N	2.25	0.51
16:CP:14:ARG:N	16:CP:15:PRO:HD2	2.25	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
22:DA:121:G:H1'	22:DA:131:A:C2	2.45	0.51
22:DA:207:A:H2'	22:DA:207:A:N3	2.25	0.51
22:DA:531:C:C5	22:DA:2035:G:C2	2.98	0.51
22:DA:647:G:N7	22:DA:648:G:N7	2.59	0.51
22:DA:681:G:C2	22:DA:797:G:C2	2.98	0.51
22:DA:762:U:N3	22:DA:1431:A:OP1	2.44	0.51
22:DA:1737:G:O6	22:DA:1738:G:N1	2.42	0.51
22:DA:2164:C:H2'	22:DA:2165:C:C5	2.45	0.51
22:DA:2645:G:H3'	22:DA:2646:C:C5'	2.38	0.51
30:DI:51:LYS:N	30:DI:51:LYS:HD3	2.25	0.51
33:DL:117:THR:HG22	33:DL:118:THR:N	2.25	0.51
1:AA:495:A:C2	1:AA:496:A:N6	2.79	0.51
1:AA:702:A:H3'	1:AA:703:G:C5'	2.40	0.51
1:AA:961:U:C4	1:AA:962:C:C5	2.98	0.51
4:AD:170:TRP:O	4:AD:183:LYS:HB3	2.10	0.51
5:AE:101:GLU:CB	5:AE:122:ASN:CB	2.87	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
22:BA:752:A:H3'	50:B2:1:MET:SD	2.51	0.51
22:BA:947:A:O2'	22:BA:984:A:C2	2.61	0.51
22:BA:1559:U:H4'	22:BA:1560:G:OP2	2.10	0.51
22:BA:2310:C:C4	27:BF:77:PHE:CZ	2.99	0.51
22:BA:2326:C:H1'	22:BA:2327:A:OP1	2.11	0.51
22:BA:2341:G:H2'	22:BA:2342:C:C6	2.46	0.51
22:BA:2526:G:C2'	52:B4:1:MET:H1	2.23	0.51
29:BH:100:ALA:CB	29:BH:112:LYS:HA	2.41	0.51
30:BI:62:TYR:O	30:BI:63:ALA:HB2	2.10	0.51
32:BK:116:ILE:HG13	32:BK:117:SER:N	2.26	0.51
36:BO:94:ARG:O	36:BO:96:GLY:N	2.43	0.51
40:BS:20:VAL:HA	40:BS:23:LEU:HD12	1.92	0.51
41:BT:51:PHE:O	41:BT:52:GLU:C	2.48	0.51
45:BX:43:GLU:OE2	45:BX:45:ARG:NH2	2.43	0.51
53:B5:52:PRO:O	53:B5:53:ARG:CB	2.59	0.51
1:CA:1004:A:C6	1:CA:1005:A:C6	2.98	0.51
2:CB:102:THR:HB	2:CB:175:GLU:CG	2.41	0.51
5:CE:78:ASN:OD1	5:CE:79:GLY:N	2.44	0.51
8:CH:86:TYR:CD2	8:CH:124:GLU:HB2	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:35:THR:OG1	11:CK:40:ASN:N	2.44	0.51
22:DA:635:C:O2'	22:DA:639:U:H5''	2.10	0.51
22:DA:1222:U:H1'	22:DA:1228:G:N2	2.26	0.51
22:DA:1567:G:C8	24:DC:83:TYR:CD1	2.98	0.51
22:DA:1671:U:H1'	25:DD:134:HIS:CE1	2.46	0.51
22:DA:1734:G:H2'	22:DA:1735:A:C8	2.46	0.51
22:DA:2145:C:H5''	22:DA:2146:C:P	2.51	0.51
22:DA:2324:U:O2	22:DA:2385:C:C5	2.64	0.51
22:DA:2531:A:H5'	28:DG:157:TYR:CE2	2.46	0.51
22:DA:2740:A:N6	22:DA:2764:A:C8	2.79	0.51
27:DF:2:ALA:N	27:DF:94:GLU:OE2	2.43	0.51
30:DI:54:PRO:HG2	30:DI:78:VAL:HB	1.92	0.51
31:DJ:42:ALA:O	38:DQ:64:ARG:HD3	2.10	0.51
38:DQ:86:ALA:O	38:DQ:87:SER:CB	2.59	0.51
1:AA:737:C:H2'	1:AA:738:C:H6	1.75	0.51
1:AA:858:G:O2'	1:AA:859:G:C5'	2.59	0.51
1:AA:1040:U:H2'	1:AA:1041:G:C8	2.46	0.51
2:AB:22:TYR:N	2:AB:22:TYR:CD1	2.78	0.51
5:AE:14:LYS:CE	5:AE:116:GLU:OE2	2.59	0.51
16:AP:75:ILE:HG22	16:AP:80:LYS:CE	2.40	0.51
19:AS:11:ILE:HG13	19:AS:15:LEU:HD23	1.91	0.51
20:AT:5:LYS:O	20:AT:6:SER:C	2.49	0.51
22:BA:662:G:O3'	33:BL:16:GLY:HA2	2.11	0.51
22:BA:869:G:H2'	22:BA:870:U:O4'	2.11	0.51
22:BA:1138:G:O2'	31:BJ:107:GLY:HA3	2.11	0.51
22:BA:1735:A:N3	22:BA:1735:A:H2'	2.25	0.51
22:BA:2555:U:C5	22:BA:2556:C:N1	2.79	0.51
29:BH:117:LEU:CD2	29:BH:121:VAL:CA	2.89	0.51
52:B4:37:GLN:HG2	52:B4:37:GLN:O	2.10	0.51
1:CA:32:A:C2	1:CA:33:A:C4	2.98	0.51
1:CA:72:A:C6	1:CA:73:C:C4	2.99	0.51
1:CA:121:U:H3'	1:CA:122:G:C5'	2.41	0.51
1:CA:211:G:N3	1:CA:211:G:H2'	2.25	0.51
1:CA:618:C:H5''	1:CA:619:U:H5''	1.92	0.51
1:CA:728:A:C8	15:CO:54:ARG:NH1	2.78	0.51
1:CA:840:C:C4	1:CA:842:U:H4'	2.46	0.51
1:CA:861:G:C5	1:CA:862:C:C5	2.98	0.51
2:CB:94:HIS:CD2	2:CB:146:ASN:HB2	2.45	0.51
4:CD:11:LEU:HD23	4:CD:11:LEU:N	2.25	0.51
4:CD:168:PRO:HB2	4:CD:171:LEU:CD1	2.41	0.51
21:CU:53:VAL:HG13	21:CU:54:LYS:N	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:677:A:O2'	22:DA:2071:A:H5'	2.11	0.51
22:DA:1109:C:C4	22:DA:1110:G:C6	2.99	0.51
22:DA:1413:A:C2	22:DA:1590:A:C2	2.98	0.51
22:DA:1601:G:C5	22:DA:1602:U:C4	2.99	0.51
22:DA:1651:G:H4'	35:DN:39:PRO:HG2	1.93	0.51
22:DA:1850:G:O6	22:DA:1892:C:N3	2.44	0.51
26:DE:23:PHE:CG	26:DE:111:GLU:HG3	2.46	0.51
29:DH:5:LEU:HA	29:DH:36:ALA:HA	1.93	0.51
30:DI:28:LEU:C	30:DI:28:LEU:HD12	2.31	0.51
35:DN:84:GLY:N	35:DN:85:PRO:CD	2.73	0.51
1:AA:575:G:C6	1:AA:821:G:N7	2.78	0.51
1:AA:760:G:N7	1:AA:761:G:N7	2.58	0.51
2:AB:68:LEU:HD22	2:AB:70:VAL:HG23	1.93	0.51
2:AB:79:ALA:O	2:AB:214:LEU:CD2	2.59	0.51
4:AD:26:ARG:HD2	4:AD:31:LYS:CD	2.41	0.51
6:AF:18:VAL:N	6:AF:19:PRO:HD2	2.26	0.51
8:AH:18:GLN:O	8:AH:21:ASN:N	2.44	0.51
9:AI:40:GLY:O	9:AI:41:ARG:CB	2.59	0.51
9:AI:86:ALA:C	9:AI:88:MET:N	2.63	0.51
19:AS:14:HIS:O	19:AS:18:LYS:HB2	2.11	0.51
22:BA:404:A:H1'	22:BA:405:U:OP2	2.10	0.51
22:BA:480:A:C2'	22:BA:481:G:OP1	2.59	0.51
22:BA:1411:U:H2'	22:BA:1412:U:O4'	2.10	0.51
22:BA:1824:G:N3	24:BC:252:THR:HG21	2.26	0.51
22:BA:2291:U:H2'	22:BA:2292:U:C5	2.45	0.51
22:BA:2507:C:H5''	22:BA:2573:C:N4	2.26	0.51
22:BA:2669:G:O2'	22:BA:2670:A:H5'	2.11	0.51
27:BF:122:PHE:HB3	27:BF:163:ASP:OD2	2.09	0.51
29:BH:83:LYS:HA	29:BH:148:ALA:HA	1.93	0.51
38:BQ:76:TYR:CZ	38:BQ:80:ILE:HG13	2.46	0.51
1:CA:913:A:H4'	1:CA:914:A:OP1	2.11	0.51
1:CA:1053:G:N7	1:CA:1200:C:H5'	2.26	0.51
1:CA:1105:A:C2	1:CA:1106:G:C8	2.99	0.51
2:CB:85:LEU:O	2:CB:85:LEU:CG	2.59	0.51
5:CE:83:HIS:NE2	8:CH:96:MET:HE3	2.26	0.51
6:CF:22:ILE:O	6:CF:26:THR:OG1	2.27	0.51
22:DA:17:G:H4'	38:DQ:25:TYR:CE1	2.46	0.51
22:DA:532:A:H2'	22:DA:532:A:N3	2.26	0.51
22:DA:1304:A:C6	22:DA:1305:C:C4	2.99	0.51
22:DA:1876:A:C8	22:DA:1877:A:N7	2.79	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)
22:DA:2843:G:N2	22:DA:2875:C:N3	2.59	0.51
27:DF:44:ILE:CG2	27:DF:79:ILE:HG22	2.41	0.51
32:DK:47:ILE:HB	32:DK:48:PRO:HD2	1.92	0.51
35:DN:51:LEU:N	35:DN:51:LEU:HD23	2.25	0.51
36:DO:7:ARG:CD	36:DO:97:PHE:CE1	2.93	0.51
38:DQ:61:TRP:HB3	38:DQ:92:ARG:O	2.11	0.51
1:AA:71:A:H3'	1:AA:71:A:OP2	2.10	0.51
1:AA:862:C:C2'	1:AA:863:U:H5'	2.40	0.51
1:AA:903:G:H2'	1:AA:904:U:C6	2.45	0.51
1:AA:949:A:C5	1:AA:950:U:C5	2.99	0.51
1:AA:1093:A:OP2	7:AG:4:ARG:NH2	2.44	0.51
2:AB:64:LYS:C	2:AB:64:LYS:HD3	2.31	0.51
3:AC:11:ARG:O	3:AC:12:LEU:C	2.48	0.51
7:AG:99:LEU:O	7:AG:100:ALA:C	2.49	0.51
8:AH:89:LYS:HG3	8:AH:90:ASP:N	2.26	0.51
14:AN:31:ILE:O	14:AN:31:ILE:CG2	2.58	0.51
14:AN:61:ARG:O	14:AN:62:ASN:CB	2.58	0.51
22:BA:636:G:C6	33:BL:111:ILE:HD11	2.45	0.51
22:BA:1088:A:N3	22:BA:1088:A:H5''	2.25	0.51
22:BA:1495:A:C6	22:BA:1496:A:C6	2.99	0.51
22:BA:1651:G:O6	57:BA:3798:HOH:O	2.20	0.51
24:BC:195:VAL:CG1	24:BC:196:GLY:N	2.73	0.51
36:BO:2:ASP:OD1	36:BO:3:LYS:N	2.44	0.51
36:BO:88:LYS:HA	36:BO:115:LEU:HD12	1.93	0.51
38:BQ:88:VAL:HG13	39:BR:49:ILE:HD11	1.93	0.51
43:BV:72:VAL:HG12	43:BV:93:ARG:HA	1.93	0.51
1:CA:4:U:O2	1:CA:4:U:H2'	2.10	0.51
1:CA:115:G:C2	1:CA:289:G:N7	2.78	0.51
1:CA:332:G:OP2	20:CT:5:LYS:HB3	2.11	0.51
1:CA:747:A:N6	1:CA:748:G:C6	2.79	0.51
1:CA:756:C:O2'	1:CA:757:U:H5'	2.11	0.51
1:CA:1463:U:H2'	1:CA:1464:U:C6	2.46	0.51
1:CA:1505:G:H4'	1:CA:1506:U:H5''	1.93	0.51
11:CK:31:ILE:HB	11:CK:46:THR:HG22	1.93	0.51
16:CP:75:ILE:HA	16:CP:78:VAL:HG12	1.92	0.51
21:CU:44:GLU:OE1	21:CU:45:ARG:NH1	2.44	0.51
22:DA:559:G:N3	38:DQ:56:GLN:NE2	2.59	0.51
22:DA:622:G:H2'	22:DA:623:C:C6	2.46	0.51
22:DA:675:A:H4'	26:DE:62:GLN:OE1	2.11	0.51
22:DA:836:G:C5	22:DA:837:C:C4	2.99	0.51
22:DA:1257:C:N4	22:DA:1258:U:O4	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1343:G:C5	22:DA:1344:U:O4	2.64	0.51
22:DA:1351:C:H2'	22:DA:1352:U:C1'	2.41	0.51
22:DA:1866:A:N3	22:DA:1876:A:C6	2.79	0.51
22:DA:2186:G:C5	22:DA:2187:U:C5	2.99	0.51
22:DA:2326:C:C1'	22:DA:2327:A:OP1	2.59	0.51
32:DK:41:ILE:HD11	32:DK:86:LEU:CD2	2.40	0.51
43:DV:80:HIS:CE1	43:DV:83:LYS:HB2	2.46	0.51
1:AA:947:G:C5	1:AA:948:C:C4	2.99	0.50
1:AA:1535:C:OP2	1:AA:1535:C:C6	2.64	0.50
10:AJ:30:LYS:HA	10:AJ:34:ALA:HA	1.92	0.50
22:BA:543:G:C2	22:BA:544:C:H1'	2.47	0.50
22:BA:1073:A:OP1	22:BA:1073:A:C8	2.64	0.50
22:BA:1098:A:N7	22:BA:1099:G:O6	2.44	0.50
22:BA:1439:A:C8	22:BA:1440:U:C6	2.98	0.50
22:BA:1606:C:HO2'	22:BA:1607:C:P	2.34	0.50
22:BA:1870:C:H4'	22:BA:1871:A:OP2	2.10	0.50
22:BA:1924:C:OP2	22:BA:1924:C:H3'	2.11	0.50
22:BA:2086:U:H2'	22:BA:2087:G:C8	2.46	0.50
23:BB:35:C:H2'	23:BB:36:C:H5'	1.93	0.50
23:BB:78:A:H2'	23:BB:79:G:O4'	2.10	0.50
24:BC:72:ASP:HA	24:BC:118:SER:O	2.11	0.50
25:BD:36:GLN:OE1	25:BD:67:HIS:HE1	1.94	0.50
30:BI:116:ASP:O	30:BI:117:MET:HB2	2.11	0.50
46:BY:42:LEU:O	46:BY:45:GLN:O	2.29	0.50
1:CA:653:U:C2	8:CH:56:LYS:HG2	2.46	0.50
2:CB:135:LEU:O	2:CB:139:ARG:HG3	2.11	0.50
4:CD:148:LYS:CD	4:CD:148:LYS:H	2.24	0.50
7:CG:46:ALA:HB2	7:CG:117:ALA:HA	1.92	0.50
8:CH:20:ALA:O	8:CH:22:LYS:N	2.44	0.50
17:CQ:61:ILE:HG23	17:CQ:73:TRP:CE3	2.45	0.50
22:DA:142:A:C5	22:DA:143:C:N4	2.79	0.50
22:DA:250:G:OP2	51:D3:13:ARG:NH1	2.44	0.50
22:DA:410:G:H2'	22:DA:2407:A:C8	2.46	0.50
22:DA:658:U:N3	22:DA:659:G:N7	2.59	0.50
22:DA:1076:C:H2'	22:DA:1077:A:O4'	2.12	0.50
22:DA:1317:G:C6	22:DA:1318:U:N3	2.79	0.50
22:DA:1607:C:O2	22:DA:1621:U:C5	2.64	0.50
22:DA:1616:A:H2	22:DA:1647:U:C5	2.28	0.50
30:DI:6:GLN:O	30:DI:7:ALA:HB3	2.10	0.50
37:DP:51:ARG:HG3	37:DP:51:ARG:O	2.11	0.50
44:DW:36:ILE:HG23	44:DW:58:THR:CG2	2.40	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DW:45:PHE:CD2	44:DW:80:ILE:CD1	2.94	0.50
1:AA:764:C:H2'	1:AA:765:G:O4'	2.12	0.50
1:AA:1037:C:H2'	1:AA:1038:C:C6	2.46	0.50
1:AA:1397:C:O2'	1:AA:1398:A:OP1	2.27	0.50
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.46	0.50
2:AB:21:ARG:HA	2:AB:21:ARG:NE	2.26	0.50
2:AB:59:LYS:O	2:AB:63:ARG:HG3	2.12	0.50
16:AP:10:GLY:O	16:AP:11:ALA:HB2	2.11	0.50
21:AU:18:ARG:N	21:AU:18:ARG:HD2	2.26	0.50
21:AU:35:ARG:O	21:AU:36:GLU:C	2.48	0.50
22:BA:1586:A:C8	22:BA:1587:G:C8	2.98	0.50
22:BA:1845:G:C6	22:BA:1896:G:C6	2.99	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
22:BA:2217:G:O2'	22:BA:2218:G:H5'	2.11	0.50
34:BM:28:PHE:HB2	34:BM:104:GLU:OE2	2.11	0.50
37:BP:114:LEU:O	37:BP:115:ASN:HB3	2.11	0.50
39:BR:49:ILE:O	39:BR:51:VAL:O	2.30	0.50
53:B5:68:GLY:O	53:B5:70:GLY:N	2.44	0.50
1:CA:518:C:H2'	1:CA:530:G:C8	2.46	0.50
1:CA:667:G:C2	1:CA:740:U:O2	2.64	0.50
1:CA:1010:U:C2	1:CA:1020:G:C2	3.00	0.50
2:CB:26:LYS:HB2	2:CB:193:PRO:HD2	1.94	0.50
2:CB:56:GLU:HG2	2:CB:198:PHE:CZ	2.47	0.50
7:CG:51:ALA:CB	7:CG:58:GLU:HA	2.41	0.50
13:CM:4:ILE:HA	13:CM:57:ARG:CZ	2.41	0.50
17:CQ:45:HIS:O	17:CQ:71:LYS:HA	2.11	0.50
22:DA:66:C:C4	22:DA:67:U:C5	2.99	0.50
22:DA:158:U:H2'	22:DA:159:G:H5'	1.93	0.50
22:DA:590:A:C5	22:DA:591:U:C5	2.99	0.50
22:DA:933:A:C5'	22:DA:934:U:OP2	2.59	0.50
22:DA:1314:C:OP1	22:DA:1332:G:OP1	2.29	0.50
22:DA:1596:A:N6	22:DA:1597:A:C6	2.80	0.50
22:DA:1605:C:H4'	22:DA:1610:A:C6	2.46	0.50
22:DA:1736:U:H2'	22:DA:1737:G:O4'	2.11	0.50
22:DA:1788:C:H2'	22:DA:1789:A:O4'	2.11	0.50
22:DA:2297:A:N1	22:DA:2321:U:H5	2.09	0.50
22:DA:2824:C:C4	22:DA:2825:G:C5	3.00	0.50
24:DC:51:THR:CG2	24:DC:54:ILE:HD11	2.41	0.50
30:DI:80:LEU:HD23	30:DI:84:ALA:CB	2.41	0.50
35:DN:106:ASP:O	35:DN:107:ASN:C	2.49	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:69:ARG:HB2	41:DT:74:ILE:HG22	1.92	0.50
45:DX:52:SER:OG	45:DX:55:GLY:N	2.40	0.50
1:AA:118:U:O4	1:AA:288:A:H2'	2.12	0.50
1:AA:405:U:OP1	1:AA:406:G:O2'	2.21	0.50
1:AA:625:U:H5''	16:AP:16:PHE:CD1	2.47	0.50
1:AA:1069:C:H4'	1:AA:1192:C:O2	2.11	0.50
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.92	0.50
12:AL:22:PRO:C	12:AL:24:LEU:H	2.14	0.50
12:AL:56:ARG:CZ	12:AL:62:GLU:HG3	2.41	0.50
12:AL:88:LYS:O	12:AL:88:LYS:HG3	2.11	0.50
17:AQ:52:GLU:CD	17:AQ:52:GLU:N	2.64	0.50
22:BA:492:A:H2'	22:BA:493:G:O4'	2.10	0.50
22:BA:1056:G:H5''	22:BA:1057:A:O4'	2.11	0.50
22:BA:1068:G:H2'	22:BA:1069:A:H5'	1.94	0.50
22:BA:1613:G:O2'	50:B2:3:ARG:HD3	2.11	0.50
22:BA:2196:C:O2'	22:BA:2197:U:H5'	2.10	0.50
22:BA:2243:U:P	57:BA:3740:HOH:O	2.70	0.50
22:BA:2649:C:H2'	22:BA:2650:U:C6	2.45	0.50
26:BE:145:ASP:CB	26:BE:184:ASP:OD2	2.60	0.50
27:BF:14:LYS:O	27:BF:18:THR:HG23	2.12	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
35:BN:24:MET:HE3	35:BN:44:LEU:HD22	1.94	0.50
42:BU:99:ASN:C	42:BU:99:ASN:OD1	2.50	0.50
49:B1:17:THR:HG21	49:B1:43:VAL:HG13	1.94	0.50
53:B5:40:GLU:O	53:B5:42:VAL:N	2.42	0.50
53:B5:50:ILE:HG22	53:B5:51:ASP:N	2.26	0.50
1:CA:134:G:H2'	1:CA:135:C:O4'	2.11	0.50
1:CA:412:A:HO2'	1:CA:413:G:P	2.33	0.50
1:CA:580:C:H2'	1:CA:581:G:O4'	2.12	0.50
4:CD:46:PRO:O	4:CD:47:ARG:C	2.49	0.50
7:CG:88:PRO:HD2	7:CG:152:ALA:HA	1.92	0.50
11:CK:72:ASP:OD1	11:CK:73:ALA:N	2.44	0.50
18:CR:58:ALA:O	18:CR:61:ARG:N	2.45	0.50
22:DA:833:A:H2'	22:DA:834:G:C8	2.46	0.50
22:DA:1363:C:H2'	22:DA:1364:G:C8	2.46	0.50
22:DA:1453:A:C2	35:DN:77:ALA:CB	2.95	0.50
22:DA:1754:A:N6	22:DA:1755:A:C6	2.79	0.50
22:DA:2091:C:H1'	45:DX:34:HIS:CD2	2.46	0.50
22:DA:2733:A:C2	22:DA:2734:A:C4	2.98	0.50
29:DH:32:PRO:HB3	45:DX:39:TRP:HB3	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:53:LEU:HG	30:DI:82:LYS:HE2	1.92	0.50
30:DI:57:VAL:CG2	30:DI:69:PHE:HB2	2.42	0.50
32:DK:6:THR:O	32:DK:8:LEU:HD12	2.11	0.50
39:DR:14:VAL:CG2	39:DR:98:ILE:HG13	2.42	0.50
49:D1:21:TYR:CE1	49:D1:38:LYS:HD2	2.46	0.50
5:AE:15:LEU:HB3	5:AE:37:THR:CG2	2.42	0.50
6:AF:91:ARG:CG	6:AF:92:THR:N	2.75	0.50
11:AK:89:PRO:HG3	21:AU:29:LEU:HD21	1.93	0.50
11:AK:128:ARG:HH11	11:AK:128:ARG:CG	2.24	0.50
18:AR:63:ARG:HB3	18:AR:70:TYR:CZ	2.46	0.50
20:AT:25:ARG:O	20:AT:29:ARG:HG2	2.11	0.50
22:BA:321:U:C1'	26:BE:159:LEU:HD12	2.41	0.50
22:BA:1356:G:C6	22:BA:1357:C:C4	3.00	0.50
22:BA:2131:U:OP2	22:BA:2132:U:C6	2.64	0.50
22:BA:2449:U:H4'	22:BA:2450:A:OP1	2.11	0.50
24:BC:71:LYS:HB3	24:BC:96:TYR:CE2	2.46	0.50
24:BC:107:PRO:HB3	24:BC:142:HIS:CE1	2.47	0.50
29:BH:66:ASN:OD1	29:BH:138:VAL:HG21	2.11	0.50
29:BH:80:ILE:O	29:BH:147:VAL:N	2.44	0.50
30:BI:117:MET:SD	30:BI:129:ILE:HD11	2.51	0.50
36:BO:36:TYR:N	36:BO:36:TYR:CD2	2.79	0.50
1:CA:218:U:H2'	1:CA:219:U:O4'	2.12	0.50
1:CA:369:G:OP2	1:CA:388:G:N2	2.43	0.50
1:CA:945:G:H2'	1:CA:945:G:N3	2.25	0.50
1:CA:1007:U:H2'	1:CA:1008:U:H5''	1.92	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
1:CA:1098:C:H2'	1:CA:1099:G:O4'	2.12	0.50
1:CA:1167:A:C8	1:CA:1169:A:C5	2.98	0.50
2:CB:139:ARG:HD2	2:CB:139:ARG:C	2.32	0.50
3:CC:145:GLY:O	3:CC:146:ALA:O	2.29	0.50
11:CK:51:GLY:O	11:CK:52:PHE:O	2.28	0.50
17:CQ:25:ILE:O	17:CQ:41:THR:HA	2.11	0.50
22:DA:204:A:O4'	22:DA:206:U:C6	2.64	0.50
22:DA:498:G:C4	22:DA:499:U:C5	2.99	0.50
22:DA:1203:U:OP2	22:DA:1204:A:H2'	2.11	0.50
22:DA:1439:A:N7	22:DA:1552:A:C2	2.79	0.50
22:DA:1529:G:O6	22:DA:1543:G:N2	2.44	0.50
22:DA:1791:A:H2'	22:DA:1792:G:H5'	1.94	0.50
22:DA:1838:C:C5	22:DA:1899:A:C5	3.00	0.50
22:DA:1881:C:H2'	22:DA:1882:U:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2013:A:N6	22:DA:2014:A:C6	2.79	0.50
22:DA:2195:U:O2'	22:DA:2196:C:H5'	2.12	0.50
26:DE:27:LEU:HG	26:DE:104:ALA:HB2	1.94	0.50
29:DH:5:LEU:HD11	29:DH:13:GLY:HA2	1.93	0.50
29:DH:44:ILE:O	29:DH:48:GLU:HB2	2.12	0.50
35:DN:38:LEU:HB3	35:DN:39:PRO:HD3	1.92	0.50
1:AA:197:A:N3	1:AA:198:G:H1'	2.26	0.50
1:AA:662:U:H2'	1:AA:663:A:C8	2.46	0.50
1:AA:737:C:H2'	1:AA:738:C:C6	2.46	0.50
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.47	0.50
2:AB:119:THR:O	2:AB:120:GLN:CB	2.58	0.50
2:AB:154:MET:O	2:AB:155:GLY:C	2.49	0.50
7:AG:71:PRO:HD2	7:AG:96:ARG:O	2.12	0.50
22:BA:136:G:C2	22:BA:144:A:C6	2.99	0.50
22:BA:585:G:H5''	22:BA:586:A:P	2.52	0.50
22:BA:876:C:H2'	22:BA:877:A:O4'	2.10	0.50
22:BA:1091:G:H2'	22:BA:1092:C:C5	2.45	0.50
24:BC:182:ARG:NH2	24:BC:266:PHE:HB3	2.26	0.50
26:BE:149:ILE:HD12	26:BE:150:THR:O	2.10	0.50
27:BF:41:GLY:HA2	27:BF:85:ILE:HG13	1.94	0.50
27:BF:52:ASN:HB3	27:BF:147:ASP:OD1	2.11	0.50
31:BJ:84:ILE:HG23	31:BJ:84:ILE:O	2.11	0.50
33:BL:63:LYS:HA	51:B3:13:ARG:HG3	1.93	0.50
38:BQ:76:TYR:C	38:BQ:76:TYR:CD2	2.85	0.50
42:BU:18:ASP:O	42:BU:20:GLY:N	2.45	0.50
43:BV:61:LEU:HD13	43:BV:61:LEU:N	2.26	0.50
53:B5:83:LYS:HB3	53:B5:87:ALA:CB	2.41	0.50
1:CA:81:A:C2	1:CA:89:U:C2	2.99	0.50
1:CA:546:A:P	4:CD:69:GLU:HB3	2.51	0.50
1:CA:846:G:OP2	18:CR:48:ARG:NH2	2.44	0.50
1:CA:1068:G:C6	1:CA:1069:C:C4	3.00	0.50
3:CC:69:HIS:HA	3:CC:104:ALA:HB3	1.93	0.50
12:CL:38:TYR:N	12:CL:52:VAL:O	2.44	0.50
20:CT:43:ASP:HB3	20:CT:46:ALA:HB3	1.92	0.50
22:DA:329:G:O4'	22:DA:477:A:H1'	2.12	0.50
22:DA:404:A:H1'	22:DA:405:U:OP2	2.12	0.50
22:DA:1176:U:H2'	22:DA:1177:G:C8	2.47	0.50
22:DA:1196:C:H1'	22:DA:1226:A:C4	2.47	0.50
22:DA:1262:A:N1	22:DA:1263:U:C2	2.79	0.50
22:DA:1364:G:C4	22:DA:1368:G:C2	2.99	0.50
22:DA:1806:C:O2	24:DC:44:ASN:ND2	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1831:G:C6	22:DA:1832:C:C4	3.00	0.50
22:DA:2201:G:C6	22:DA:2202:U:C4	3.00	0.50
22:DA:2513:A:C5	22:DA:2514:U:C4	2.99	0.50
22:DA:2718:G:C2	22:DA:2719:G:H1'	2.47	0.50
22:DA:2720:U:C5	22:DA:2872:A:N1	2.79	0.50
30:DI:28:LEU:HD13	30:DI:38:PHE:CD2	2.46	0.50
36:DO:33:ARG:O	36:DO:34:HIS:CG	2.64	0.50
1:AA:90:C:O2'	1:AA:91:U:P	2.70	0.50
1:AA:130:A:C8	17:AQ:65:ARG:HB2	2.46	0.50
1:AA:642:A:C5	8:AH:107:SER:HA	2.47	0.50
1:AA:1161:C:H2'	1:AA:1162:C:H6	1.76	0.50
2:AB:140:GLU:O	2:AB:144:LEU:HG	2.11	0.50
14:AN:10:GLU:OE2	14:AN:61:ARG:HB3	2.11	0.50
22:BA:276:U:O2	22:BA:276:U:H2'	2.11	0.50
22:BA:586:A:N1	22:BA:809:G:O2'	2.35	0.50
22:BA:675:A:OP1	26:BE:58:LYS:CE	2.60	0.50
22:BA:1071:G:O2'	22:BA:1072:C:O4'	2.30	0.50
22:BA:1168:G:C2	22:BA:1182:G:C4	2.99	0.50
22:BA:1389:G:H2'	22:BA:1390:U:O4'	2.12	0.50
22:BA:1786:A:C4	22:BA:1938:A:C6	3.00	0.50
22:BA:1794:A:C2'	22:BA:1795:C:O5'	2.59	0.50
22:BA:1883:U:O4	22:BA:1884:G:C6	2.65	0.50
22:BA:1963:U:H6	22:BA:1963:U:O5'	1.95	0.50
22:BA:2075:U:C4	22:BA:2238:G:C6	2.99	0.50
22:BA:2512:C:H2'	22:BA:2513:A:O4'	2.11	0.50
22:BA:2812:G:H2'	22:BA:2813:A:O4'	2.11	0.50
27:BF:158:THR:CG2	27:BF:160:ALA:H	2.25	0.50
36:BO:79:ALA:HB2	36:BO:110:ALA:HA	1.93	0.50
38:BQ:21:ALA:HA	38:BQ:24:TYR:CE1	2.46	0.50
1:CA:247:G:C6	1:CA:278:G:N1	2.78	0.50
1:CA:298:A:H2'	1:CA:299:G:O4'	2.11	0.50
1:CA:1474:U:H2'	1:CA:1475:G:H5''	1.93	0.50
1:CA:1490:U:C2'	1:CA:1491:G:O4'	2.60	0.50
12:CL:65:SER:OG	12:CL:97:THR:HG23	2.12	0.50
13:CM:79:ARG:HD2	19:CS:65:GLU:HG2	1.93	0.50
15:CO:42:HIS:O	15:CO:45:GLU:O	2.30	0.50
22:DA:24:G:C5	22:DA:25:U:C5	2.99	0.50
22:DA:54:G:N1	22:DA:55:G:N7	2.60	0.50
22:DA:219:A:N6	22:DA:220:G:C6	2.80	0.50
22:DA:301:G:N3	22:DA:302:C:C2	2.80	0.50
22:DA:547:A:H3'	22:DA:548:G:H5'	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:629:G:O6	22:DA:630:G:C6	2.65	0.50
22:DA:2083:G:N7	22:DA:2084:C:C5	2.80	0.50
22:DA:2122:U:H2'	22:DA:2123:G:O4'	2.12	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
27:DF:128:TYR:CG	27:DF:170:LEU:CD1	2.95	0.50
32:DK:71:ARG:HB3	32:DK:72:PRO:HD2	1.93	0.50
37:DP:75:GLN:O	37:DP:78:SER:HB3	2.11	0.50
37:DP:89:ARG:O	37:DP:112:GLU:HA	2.12	0.50
1:AA:149:A:C2	1:AA:150:U:C2	2.99	0.50
1:AA:484:G:C5	1:AA:486:U:H1'	2.47	0.50
1:AA:596:A:N6	1:AA:645:G:C6	2.80	0.50
1:AA:738:C:H2'	1:AA:739:C:H6	1.77	0.50
1:AA:1123:U:H4'	10:AJ:39:PRO:HD2	1.93	0.50
2:AB:151:ILE:O	2:AB:152:LYS:C	2.50	0.50
7:AG:42:ILE:HG21	7:AG:116:MET:CG	2.42	0.50
13:AM:11:ASP:OD1	13:AM:45:ILE:HB	2.11	0.50
22:BA:769:U:C2	22:BA:770:G:C8	3.00	0.50
22:BA:1070:A:H2'	22:BA:1097:U:OP1	2.12	0.50
22:BA:1714:U:O2	22:BA:1714:U:H2'	2.11	0.50
22:BA:1800:C:H3'	24:BC:146:MET:HE1	1.94	0.50
22:BA:2018:G:O2'	22:BA:2019:A:H5'	2.11	0.50
22:BA:2273:A:H2'	22:BA:2274:A:C8	2.46	0.50
22:BA:2297:A:N1	22:BA:2321:U:H5	2.07	0.50
30:BI:101:ILE:O	30:BI:102:SER:HB2	2.11	0.50
31:BJ:30:THR:HG22	31:BJ:31:GLU:N	2.26	0.50
31:BJ:114:LEU:O	31:BJ:114:LEU:HD12	2.12	0.50
36:BO:117:PHE:CD1	36:BO:117:PHE:O	2.65	0.50
1:CA:206:C:C2'	1:CA:207:C:H5'	2.40	0.50
1:CA:786:G:H2'	1:CA:786:G:N3	2.26	0.50
1:CA:821:G:H2'	1:CA:822:U:H6	1.76	0.50
3:CC:40:ARG:HG2	3:CC:55:ILE:HD11	1.94	0.50
9:CI:12:ARG:CD	9:CI:107:ASP:HB3	2.42	0.50
10:CJ:22:THR:HA	10:CJ:25:ILE:HG22	1.93	0.50
11:CK:23:ILE:HG21	11:CK:96:THR:HG21	1.94	0.50
14:CN:18:ASP:OD2	14:CN:18:ASP:N	2.45	0.50
22:DA:396:G:H5''	45:DX:13:VAL:HG21	1.93	0.50
22:DA:583:G:C5	22:DA:584:C:C4	3.00	0.50
22:DA:915:C:C4	22:DA:916:G:C5	3.00	0.50
22:DA:1524:G:H2'	22:DA:1524:G:N3	2.26	0.50
22:DA:2583:G:H2'	22:DA:2584:U:O4'	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
30:DI:77:ALA:HA	30:DI:80:LEU:HD12	1.93	0.50
32:DK:118:LEU:O	32:DK:119:ALA:HB3	2.12	0.50
33:DL:68:SER:O	33:DL:69:ARG:HB2	2.12	0.50
41:DT:3:ARG:CZ	41:DT:5:GLU:OE1	2.60	0.50
45:DX:17:ASN:HB2	45:DX:25:THR:HB	1.94	0.50
49:D1:5:ILE:HG22	49:D1:28:ARG:NH1	2.27	0.50
50:D2:43:THR:O	50:D2:44:VAL:HB	2.11	0.50
1:AA:988:G:C6	1:AA:989:U:C4	3.00	0.50
1:AA:1060:U:H4'	10:AJ:53:ILE:HG23	1.94	0.50
8:AH:51:VAL:O	8:AH:51:VAL:CG2	2.59	0.50
9:AI:57:MET:C	9:AI:59:GLU:H	2.15	0.50
17:AQ:16:LYS:O	17:AQ:17:MET:HE3	2.11	0.50
20:AT:56:PRO:O	20:AT:60:ARG:HB2	2.12	0.50
22:BA:274:C:C4	22:BA:275:C:C4	3.00	0.50
22:BA:1452:G:H2'	22:BA:1457:U:O4	2.12	0.50
22:BA:1717:A:H2'	22:BA:1718:G:O4'	2.12	0.50
22:BA:1829:A:O2'	24:BC:15:HIS:CD2	2.65	0.50
22:BA:1832:C:N4	22:BA:1833:C:C5	2.80	0.50
22:BA:2024:G:OP2	22:BA:2034:U:H4'	2.11	0.50
22:BA:2064:C:H2'	22:BA:2065:C:C6	2.47	0.50
22:BA:2414:G:C2'	22:BA:2415:G:H5'	2.42	0.50
24:BC:141:VAL:CG1	24:BC:190:ALA:HB1	2.42	0.50
25:BD:177:VAL:O	25:BD:177:VAL:CG2	2.60	0.50
29:BH:14:SER:HG	29:BH:17:ASP:CG	2.13	0.50
43:BV:1:MET:SD	43:BV:1:MET:C	2.91	0.50
1:CA:32:A:C2	1:CA:33:A:C6	2.99	0.50
1:CA:1197:A:H2'	1:CA:1198:G:H5'	1.92	0.50
1:CA:1364:U:O2	1:CA:1364:U:C2'	2.60	0.50
1:CA:1376:U:O4	7:CG:10:ARG:NH1	2.45	0.50
3:CC:64:ILE:HG12	3:CC:66:VAL:HG23	1.94	0.50
19:CS:40:ILE:HA	19:CS:44:MET:SD	2.52	0.50
20:CT:68:HIS:C	20:CT:69:LYS:HG3	2.32	0.50
20:CT:74:ARG:O	20:CT:78:ASN:ND2	2.44	0.50
22:DA:36:G:N1	22:DA:445:C:C4	2.79	0.50
22:DA:247:G:N7	22:DA:249:C:C2	2.80	0.50
22:DA:289:G:H2'	22:DA:290:U:O4'	2.12	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:DA:1257:C:C4	22:DA:1258:U:C4	2.99	0.50
22:DA:1288:G:C5	22:DA:1327:A:C2	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1378:A:C4'	22:DA:1379:U:OP1	2.59	0.50
22:DA:1662:U:O2	22:DA:2687:U:H5''	2.12	0.50
25:DD:15:PHE:CE2	37:DP:78:SER:HA	2.47	0.50
33:DL:78:ARG:HB3	33:DL:113:ALA:CB	2.42	0.50
38:DQ:98:ILE:HG22	38:DQ:106:PHE:HB2	1.94	0.50
39:DR:68:ARG:HB3	39:DR:90:ARG:HG2	1.93	0.50
48:D0:54:VAL:O	48:D0:55:ILE:HB	2.12	0.50
1:AA:233:C:H2'	1:AA:234:C:H6	1.77	0.50
1:AA:374:A:N1	1:AA:390:U:O2'	2.43	0.50
1:AA:1399:C:C4	1:AA:1502:A:N1	2.80	0.50
11:AK:16:VAL:O	11:AK:17:SER:OG	2.25	0.50
13:AM:11:ASP:O	13:AM:12:HIS:HB2	2.11	0.50
17:AQ:16:LYS:O	17:AQ:16:LYS:CG	2.59	0.50
21:AU:20:LYS:HE2	21:AU:20:LYS:N	2.27	0.50
22:BA:437:U:H2'	22:BA:438:G:C8	2.46	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
27:BF:8:TYR:HA	27:BF:12:VAL:CG2	2.41	0.50
27:BF:21:ASN:O	27:BF:21:ASN:CG	2.50	0.50
29:BH:43:ASN:O	29:BH:46:PHE:HB3	2.12	0.50
30:BI:105:GLN:O	30:BI:106:LEU:HB2	2.12	0.50
41:BT:1:MET:O	41:BT:2:ILE:CG1	2.60	0.50
42:BU:20:GLY:O	42:BU:21:LYS:O	2.29	0.50
1:CA:147:G:N2	1:CA:148:G:C6	2.80	0.50
1:CA:380:G:N2	1:CA:383:A:OP2	2.37	0.50
1:CA:963:G:C2'	1:CA:964:A:H5'	2.42	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
1:CA:1279:G:OP2	10:CJ:11:LYS:NZ	2.42	0.50
1:CA:1347:G:O2'	1:CA:1348:U:P	2.70	0.50
11:CK:110:ILE:HG22	21:CU:17:ARG:NH1	2.27	0.50
12:CL:3:THR:CB	12:CL:6:GLN:HG3	2.42	0.50
17:CQ:69:LYS:C	17:CQ:70:THR:OG1	2.49	0.50
20:CT:60:ARG:O	20:CT:64:LYS:HB2	2.12	0.50
22:DA:89:A:C2	22:DA:90:U:C2	3.00	0.50
22:DA:270:A:C2	22:DA:369:U:H4'	2.46	0.50
22:DA:419:U:N3	22:DA:420:C:C5	2.80	0.50
22:DA:533:G:H5'	38:DQ:24:TYR:CE2	2.47	0.50
22:DA:634:C:P	33:DL:70:LYS:HE2	2.52	0.50
22:DA:1026:G:H1'	22:DA:1134:A:C2	2.46	0.50
22:DA:1352:U:C5	22:DA:1377:G:C5	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1627:G:N2	22:DA:1628:G:C5	2.80	0.50
22:DA:1731:G:C6	22:DA:1733:G:C5	3.00	0.50
22:DA:1754:A:N6	22:DA:1755:A:N6	2.60	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
23:DB:37:C:C5	23:DB:38:C:C4	3.00	0.50
24:DC:18:LYS:O	24:DC:19:VAL:CB	2.59	0.50
25:DD:106:LYS:HA	25:DD:175:LEU:O	2.12	0.50
31:DJ:142:ILE:OXT	31:DJ:142:ILE:HG23	2.11	0.50
33:DL:68:SER:O	33:DL:69:ARG:CB	2.58	0.50
43:DV:9:ARG:HG2	43:DV:41:GLU:HB3	1.94	0.50
1:AA:223:A:C6	1:AA:224:U:C4	2.99	0.49
1:AA:453:G:H2'	1:AA:454:G:C8	2.47	0.49
1:AA:645:G:N7	57:AA:1749:HOH:O	2.35	0.49
1:AA:723:U:O5'	21:AU:49:LYS:HG2	2.11	0.49
1:AA:844:G:N3	1:AA:845:A:N7	2.60	0.49
1:AA:1315:U:C4	1:AA:1316:G:C6	3.00	0.49
3:AC:145:GLY:O	3:AC:146:ALA:O	2.30	0.49
5:AE:56:VAL:O	5:AE:60:ILE:HG23	2.11	0.49
6:AF:9:MET:HE2	18:AR:65:LEU:HD22	1.93	0.49
9:AI:30:ILE:HA	9:AI:65:ILE:O	2.12	0.49
10:AJ:35:GLN:HG3	10:AJ:77:VAL:HB	1.93	0.49
12:AL:107:VAL:HG23	12:AL:117:TYR:HB3	1.94	0.49
16:AP:38:PHE:CZ	16:AP:51:ARG:HB2	2.47	0.49
21:AU:40:LYS:N	21:AU:41:PRO:CD	2.75	0.49
22:BA:684:G:OP1	50:B2:21:ARG:NH1	2.45	0.49
22:BA:1297:C:OP1	22:BA:2710:C:H4'	2.12	0.49
22:BA:1316:U:C2	22:BA:1337:G:N2	2.80	0.49
22:BA:1439:A:N3	22:BA:1553:A:C6	2.80	0.49
22:BA:1926:U:O2	22:BA:1926:U:H2'	2.12	0.49
22:BA:2057:G:OP2	57:BA:3492:HOH:O	2.18	0.49
22:BA:2298:A:C4	22:BA:2321:U:C5	2.99	0.49
22:BA:2636:C:H2'	22:BA:2637:U:C6	2.47	0.49
22:BA:2771:C:H2'	22:BA:2772:C:H6	1.77	0.49
24:BC:247:PRO:HD2	24:BC:248:TRP:CZ3	2.47	0.49
25:BD:12:THR:CG2	37:BP:9:GLU:OE2	2.59	0.49
27:BF:63:GLN:OE1	27:BF:95:ARG:HD2	2.12	0.49
29:BH:99:ILE:O	29:BH:99:ILE:HG22	2.12	0.49
34:BM:66:ARG:NH1	34:BM:104:GLU:OE1	2.45	0.49
53:B5:50:ILE:HG22	53:B5:51:ASP:H	1.77	0.49
1:CA:74:A:C2	1:CA:75:G:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:109:A:C6	1:CA:327:A:C5	3.00	0.49
1:CA:844:G:H2'	1:CA:844:G:N3	2.27	0.49
2:CB:219:ALA:O	2:CB:220:THR:CB	2.60	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
9:CI:30:ILE:HA	9:CI:65:ILE:HG13	1.94	0.49
10:CJ:33:GLY:HA3	10:CJ:83:THR:HB	1.93	0.49
22:DA:132:G:N2	22:DA:148:U:C2	2.80	0.49
22:DA:158:U:C4	22:DA:159:G:C5	2.99	0.49
22:DA:532:A:N7	22:DA:2021:C:H2'	2.26	0.49
22:DA:681:G:C4	22:DA:682:G:C8	3.00	0.49
22:DA:695:G:C5	22:DA:768:G:C6	3.00	0.49
22:DA:1082:U:H5'	30:DI:119:GLY:HA2	1.94	0.49
22:DA:1667:G:N3	22:DA:1991:U:C5	2.80	0.49
22:DA:2478:A:N7	22:DA:2529:G:C6	2.80	0.49
23:DB:109:A:C6	23:DB:110:C:C4	2.99	0.49
24:DC:87:ARG:HB3	24:DC:87:ARG:NH1	2.27	0.49
24:DC:178:SER:O	24:DC:271:ARG:HB2	2.12	0.49
29:DH:127:GLU:HG3	29:DH:145:ASN:HA	1.93	0.49
30:DI:97:LYS:N	30:DI:97:LYS:HD2	2.27	0.49
34:DM:53:MET:HG3	34:DM:54:THR:N	2.27	0.49
37:DP:24:ASP:O	37:DP:25:THR:OG1	2.28	0.49
37:DP:99:TYR:CE2	37:DP:100:LEU:CD2	2.95	0.49
48:D0:31:ASP:OD1	48:D0:48:TYR:HB3	2.12	0.49
52:D4:20:ASP:OD2	57:D4:201:HOH:O	2.20	0.49
1:AA:22:G:H2'	1:AA:23:C:H6	1.77	0.49
1:AA:261:U:C5	20:AT:74:ARG:NH1	2.79	0.49
1:AA:451:A:H4'	1:AA:452:A:O4'	2.12	0.49
1:AA:1144:G:N1	1:AA:1145:A:C2	2.80	0.49
1:AA:1296:C:H4'	1:AA:1302:C:C5	2.47	0.49
2:AB:24:ASN:O	2:AB:27:MET:N	2.42	0.49
13:AM:14:HIS:HB2	13:AM:17:ILE:HD13	1.94	0.49
14:AN:43:ASN:C	14:AN:45:VAL:N	2.65	0.49
22:BA:348:A:H2'	22:BA:349:U:O4'	2.11	0.49
22:BA:510:C:OP1	22:BA:512:G:O6	2.30	0.49
22:BA:1734:G:H2'	22:BA:1735:A:C8	2.48	0.49
22:BA:1783:A:N1	22:BA:2587:A:H2'	2.27	0.49
22:BA:2415:G:H2'	22:BA:2416:C:H6	1.75	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
34:BM:57:VAL:HG12	34:BM:112:LEU:HD23	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:89:GLU:H	39:BR:49:ILE:HD12	1.76	0.49
45:BX:11:ARG:HB2	45:BX:12:PRO:CD	2.41	0.49
46:BY:20:ASN:O	46:BY:24:GLU:HB2	2.11	0.49
1:CA:29:U:H4'	1:CA:295:C:O3'	2.12	0.49
1:CA:183:C:O2'	1:CA:184:G:C5'	2.61	0.49
1:CA:216:U:H5''	1:CA:464:U:H4'	1.93	0.49
1:CA:1134:G:C6	1:CA:1135:U:C2	2.99	0.49
1:CA:1179:A:OP2	9:CI:99:ARG:NH2	2.45	0.49
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.12	0.49
4:CD:22:LYS:C	4:CD:24:GLY:N	2.64	0.49
6:CF:32:ALA:O	6:CF:33:GLU:C	2.51	0.49
6:CF:59:TYR:HE2	18:CR:67:LEU:CD2	2.25	0.49
6:CF:86:ARG:HH11	6:CF:86:ARG:HG2	1.77	0.49
8:CH:75:ILE:HD13	8:CH:129:VAL:HG22	1.94	0.49
9:CI:63:LEU:HG	9:CI:63:LEU:O	2.12	0.49
21:CU:4:ILE:O	21:CU:4:ILE:HG22	2.13	0.49
22:DA:86:G:O2'	22:DA:104:A:H4'	2.12	0.49
22:DA:591:U:H1'	51:D3:2:PRO:HD2	1.94	0.49
22:DA:776:G:N7	22:DA:793:A:C4	2.81	0.49
22:DA:1076:C:O2'	30:DI:93:PRO:HD2	2.12	0.49
22:DA:1299:G:H5''	22:DA:1300:G:H5''	1.93	0.49
22:DA:1355:G:C2	22:DA:1356:G:C8	3.00	0.49
22:DA:1476:U:H1'	22:DA:1732:C:O2	2.12	0.49
22:DA:1654:A:OP1	35:DN:1:MET:HA	2.11	0.49
22:DA:2127:G:N3	22:DA:2162:G:C8	2.80	0.49
24:DC:246:THR:O	24:DC:248:TRP:N	2.45	0.49
25:DD:148:GLN:OE1	25:DD:148:GLN:N	2.45	0.49
27:DF:16:LEU:HD11	27:DF:169:LEU:CD1	2.43	0.49
46:DY:50:VAL:O	46:DY:54:LYS:HG3	2.12	0.49
48:D0:20:ASP:N	48:D0:20:ASP:OD2	2.44	0.49
50:D2:15:SER:OG	50:D2:16:HIS:CE1	2.65	0.49
1:AA:49:U:C2	1:AA:361:G:N2	2.81	0.49
1:AA:142:G:H2'	1:AA:142:G:N3	2.27	0.49
1:AA:255:G:C6	1:AA:256:U:C4	3.01	0.49
1:AA:651:C:C2'	1:AA:652:U:O5'	2.60	0.49
1:AA:1255:G:O2'	1:AA:1258:G:N3	2.43	0.49
1:AA:1277:C:O2'	1:AA:1279:G:C8	2.63	0.49
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.27	0.49
3:AC:193:TYR:N	3:AC:193:TYR:CD2	2.79	0.49
5:AE:74:VAL:HG11	5:AE:144:LEU:HB3	1.93	0.49
19:AS:58:VAL:HG11	19:AS:75:ALA:HA	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:393:C:H2'	22:BA:394:C:H6	1.77	0.49
22:BA:478:A:C6	22:BA:480:A:C6	3.01	0.49
22:BA:674:G:H1'	26:BE:69:ARG:HD3	1.94	0.49
22:BA:1026:G:H2'	22:BA:1027:A:C8	2.46	0.49
22:BA:1209:U:O2'	22:BA:1237:A:N1	2.42	0.49
22:BA:2469:A:H4'	34:BM:55:ARG:HH12	1.76	0.49
22:BA:2662:A:H5''	22:BA:2663:G:OP2	2.12	0.49
26:BE:23:PHE:HB2	26:BE:111:GLU:HG3	1.94	0.49
29:BH:86:ASP:O	29:BH:87:GLU:HB2	2.11	0.49
31:BJ:23:LYS:O	31:BJ:63:ALA:HB3	2.12	0.49
37:BP:26:VAL:CG1	37:BP:47:VAL:HG23	2.43	0.49
40:BS:84:ARG:HB2	40:BS:96:ILE:HD11	1.94	0.49
53:B5:65:LEU:O	53:B5:67:HIS:N	2.44	0.49
1:CA:213:G:C8	1:CA:214:C:C5	3.00	0.49
1:CA:321:A:C8	1:CA:328:C:C2	3.00	0.49
1:CA:771:G:C4	1:CA:809:G:N2	2.80	0.49
1:CA:1000:A:C2	1:CA:1041:G:C2	3.00	0.49
1:CA:1002:G:C2	1:CA:1003:G:H1'	2.47	0.49
1:CA:1315:U:O2'	1:CA:1360:A:N3	2.34	0.49
1:CA:1409:C:H4'	22:DA:1915:U:O4	2.12	0.49
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.47	0.49
5:CE:150:PRO:HA	8:CH:99:LEU:CD2	2.41	0.49
9:CI:88:MET:HA	9:CI:92:GLU:OE2	2.12	0.49
22:DA:411:G:OP1	22:DA:2407:A:OP2	2.29	0.49
22:DA:547:A:H3'	22:DA:548:G:C5'	2.42	0.49
22:DA:579:G:N2	22:DA:1262:A:C4	2.80	0.49
22:DA:655:A:H4'	22:DA:656:G:OP1	2.11	0.49
22:DA:971:G:C2	22:DA:972:A:H1'	2.47	0.49
22:DA:1356:G:C2	22:DA:1357:C:H1'	2.47	0.49
22:DA:1530:G:N2	22:DA:1542:U:O2	2.45	0.49
22:DA:2454:G:H1'	57:DA:3531:HOH:O	2.12	0.49
24:DC:57:GLY:HA3	24:DC:213:TRP:HA	1.94	0.49
30:DI:22:PRO:HB2	30:DI:23:PRO:HD3	1.95	0.49
33:DL:108:ALA:HB3	33:DL:125:LEU:HG	1.94	0.49
35:DN:36:THR:HG23	35:DN:41:ALA:HB2	1.95	0.49
41:DT:14:PRO:HD2	46:DY:33:ALA:HB1	1.93	0.49
42:DU:7:ARG:CG	42:DU:8:ASP:N	2.75	0.49
47:DZ:3:LYS:O	47:DZ:4:THR:HG22	2.12	0.49
1:AA:254:G:OP1	17:AQ:69:LYS:O	2.30	0.49
1:AA:406:G:O5'	4:AD:5:LEU:HD11	2.13	0.49
4:AD:65:TYR:CG	4:AD:94:LEU:HD22	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:190:ASP:O	4:AD:191:LEU:O	2.30	0.49
9:AI:26:GLY:CA	9:AI:59:GLU:HA	2.42	0.49
9:AI:40:GLY:O	9:AI:41:ARG:HB2	2.10	0.49
12:AL:50:ARG:NH1	12:AL:89:ASP:OD1	2.35	0.49
13:AM:29:ARG:O	13:AM:33:ILE:HG12	2.12	0.49
19:AS:10:PHE:CG	19:AS:11:ILE:N	2.80	0.49
19:AS:34:TRP:O	19:AS:36:ARG:HG3	2.13	0.49
22:BA:236:C:O2'	22:BA:237:C:H5'	2.13	0.49
22:BA:601:C:O2	22:BA:605:G:H4'	2.13	0.49
22:BA:783:A:H8	22:BA:784:G:H4'	1.76	0.49
22:BA:825:A:H4'	22:BA:2428:G:C5	2.47	0.49
22:BA:1239:G:H2'	22:BA:1240:U:O4'	2.12	0.49
22:BA:1340:U:OP1	41:BT:19:LYS:NZ	2.45	0.49
22:BA:1377:G:H5''	22:BA:1378:A:OP2	2.12	0.49
22:BA:1487:U:C2	22:BA:1503:A:C2	2.99	0.49
22:BA:1791:A:O2'	24:BC:206:GLY:HA2	2.13	0.49
22:BA:1952:A:C6	22:BA:1953:A:N1	2.80	0.49
22:BA:2077:A:O2'	22:BA:2078:C:H5'	2.12	0.49
22:BA:2582:G:OP2	22:BA:2583:G:OP2	2.31	0.49
22:BA:2665:A:C2	22:BA:2666:C:C6	3.00	0.49
22:BA:2808:G:N2	22:BA:2891:U:C6	2.80	0.49
23:BB:2:G:C2	23:BB:119:A:C2	3.00	0.49
30:BI:106:LEU:HA	30:BI:109:ILE:HB	1.94	0.49
37:BP:51:ARG:O	37:BP:57:SER:HA	2.12	0.49
1:CA:101:A:C4	1:CA:102:G:C8	3.01	0.49
1:CA:145:G:N2	1:CA:146:G:C4	2.81	0.49
1:CA:666:G:C6	1:CA:741:G:C6	3.01	0.49
1:CA:927:G:N2	1:CA:1391:U:H1'	2.28	0.49
1:CA:1004:A:C2	1:CA:1026:G:N3	2.80	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
4:CD:9:LEU:HD11	4:CD:29:ASP:OD1	2.12	0.49
9:CI:50:GLN:N	9:CI:51:PRO:HD2	2.28	0.49
22:DA:810:U:C4	33:DL:30:THR:HA	2.47	0.49
22:DA:931:U:OP1	47:DZ:30:ARG:NH1	2.46	0.49
22:DA:1097:U:H1'	30:DI:9:VAL:HG11	1.94	0.49
22:DA:1187:G:N7	57:DA:3574:HOH:O	2.35	0.49
22:DA:1231:U:H2'	22:DA:1232:G:H8	1.76	0.49
22:DA:1317:G:H2'	22:DA:1318:U:O4'	2.12	0.49
22:DA:1464:G:C2	22:DA:1465:G:C4	3.01	0.49
22:DA:1627:G:N2	22:DA:1628:G:N7	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2223:G:C2'	22:DA:2224:G:H5'	2.41	0.49
22:DA:2331:G:N2	22:DA:2385:C:C2	2.80	0.49
22:DA:2518:A:N3	22:DA:2518:A:H2'	2.26	0.49
23:DB:40:U:C2	23:DB:44:G:OP2	2.65	0.49
23:DB:42:C:O2'	27:DF:63:GLN:NE2	2.45	0.49
23:DB:76:G:O2'	43:DV:78:GLN:OE1	2.16	0.49
26:DE:170:ARG:CZ	26:DE:176:ASP:OD1	2.61	0.49
29:DH:81:ALA:C	29:DH:149:GLU:HB3	2.33	0.49
39:DR:78:ARG:CB	39:DR:83:TYR:CD1	2.94	0.49
45:DX:40:VAL:HG22	45:DX:45:ARG:O	2.13	0.49
1:AA:32:A:H2'	1:AA:32:A:N3	2.27	0.49
1:AA:104:G:C2	1:AA:105:G:C5	3.01	0.49
1:AA:119:A:C2	1:AA:240:G:C8	3.01	0.49
1:AA:383:A:C5	1:AA:384:G:H1'	2.48	0.49
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.48	0.49
1:AA:1457:G:H2'	1:AA:1458:G:O4'	2.12	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
4:AD:99:ASP:OD2	4:AD:115:ARG:NH2	2.45	0.49
9:AI:112:GLU:OE2	9:AI:115:LYS:NZ	2.45	0.49
10:AJ:49:PHE:N	10:AJ:49:PHE:CD1	2.81	0.49
22:BA:108:G:C6	22:BA:109:C:C4	3.01	0.49
22:BA:1061:U:H3'	22:BA:1062:G:H5'	1.94	0.49
22:BA:1153:C:H2'	22:BA:1154:G:O4'	2.13	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
22:BA:2032:G:C8	57:BA:3537:HOH:O	2.64	0.49
22:BA:2302:U:O2'	22:BA:2303:G:H5'	2.12	0.49
26:BE:104:ALA:O	26:BE:108:ILE:HG23	2.13	0.49
27:BF:135:GLN:OE1	27:BF:135:GLN:N	2.43	0.49
27:BF:158:THR:HG22	27:BF:160:ALA:HB3	1.94	0.49
41:BT:28:ASN:HD21	41:BT:91:GLN:HB2	1.78	0.49
42:BU:96:PHE:O	42:BU:100:SER:HA	2.12	0.49
1:CA:307:C:H5''	1:CA:308:C:OP2	2.12	0.49
1:CA:1171:A:C2	1:CA:1172:C:C2	3.00	0.49
1:CA:1201:A:H1'	1:CA:1202:U:OP2	2.13	0.49
1:CA:1363:A:H2'	1:CA:1363:A:N3	2.27	0.49
1:CA:1502:A:H5'	1:CA:1504:G:N7	2.27	0.49
4:CD:168:PRO:O	4:CD:170:TRP:N	2.46	0.49
6:CF:4:TYR:CD2	6:CF:71:ILE:HG21	2.48	0.49
6:CF:78:PHE:CD2	6:CF:78:PHE:N	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:16:LYS:C	17:CQ:17:MET:SD	2.91	0.49
22:DA:189:G:C4	22:DA:205:G:N2	2.80	0.49
22:DA:503:A:C2	22:DA:506:G:C5	3.01	0.49
22:DA:536:G:C2'	22:DA:537:G:H5'	2.42	0.49
22:DA:646:U:H3'	22:DA:647:G:C4'	2.43	0.49
22:DA:654:A:H3'	22:DA:654:A:N3	2.26	0.49
22:DA:737:C:C2	22:DA:738:G:C8	3.00	0.49
22:DA:747:U:C5	22:DA:2613:U:C5	3.00	0.49
22:DA:1097:U:C4	22:DA:1098:A:H1'	2.48	0.49
22:DA:1262:A:C6	22:DA:1263:U:N3	2.80	0.49
22:DA:1330:C:H2'	22:DA:1331:G:O5'	2.11	0.49
22:DA:1343:G:C6	22:DA:1344:U:C4	3.01	0.49
22:DA:1360:G:C6	22:DA:1372:U:C2	3.00	0.49
22:DA:1366:A:OP1	45:DX:2:SER:OG	2.25	0.49
22:DA:1648:U:H2'	22:DA:1649:G:O4'	2.12	0.49
22:DA:1847:A:HO2'	22:DA:1848:A:P	2.35	0.49
22:DA:2066:C:H5''	57:DA:3504:HOH:O	2.12	0.49
22:DA:2300:C:C4	22:DA:2317:A:C2	3.00	0.49
22:DA:2335:A:C6	22:DA:2337:G:H1'	2.47	0.49
22:DA:2602:A:H4'	22:DA:2603:G:H5'	1.94	0.49
22:DA:2796:U:C4	22:DA:2798:U:O4	2.66	0.49
22:DA:2854:G:N2	22:DA:2864:G:C2	2.81	0.49
24:DC:146:MET:HE3	24:DC:182:ARG:NH2	2.27	0.49
29:DH:112:LYS:CG	29:DH:113:SER:N	2.76	0.49
30:DI:58:VAL:CG1	30:DI:59:ILE:H	2.26	0.49
33:DL:93:ASN:O	33:DL:95:LEU:N	2.42	0.49
36:DO:78:VAL:HA	36:DO:81:ARG:HB2	1.94	0.49
40:DS:70:LYS:O	40:DS:107:VAL:HG23	2.11	0.49
1:AA:157:U:O2'	1:AA:158:G:H5'	2.12	0.49
1:AA:346:G:P	32:BK:105:ARG:NH1	2.85	0.49
1:AA:474:G:C2	1:AA:475:C:C6	3.00	0.49
1:AA:720:C:H5''	18:AR:41:PRO:HA	1.95	0.49
1:AA:1014:A:H2'	1:AA:1015:G:O4'	2.12	0.49
2:AB:82:ASP:O	2:AB:84:ALA:N	2.46	0.49
2:AB:213:TYR:O	2:AB:217:VAL:HG23	2.12	0.49
4:AD:70:ARG:O	4:AD:74:ASN:ND2	2.45	0.49
5:AE:109:GLY:HA2	5:AE:112:ARG:HB3	1.94	0.49
6:AF:51:ILE:O	6:AF:52:ASN:HB2	2.11	0.49
6:AF:98:GLU:HG3	6:AF:99:ALA:N	2.28	0.49
14:AN:46:LEU:C	14:AN:46:LEU:HD12	2.33	0.49
19:AS:18:LYS:O	19:AS:31:LEU:HD21	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:528:A:H2	22:BA:2043:C:H5'	1.74	0.49
22:BA:570:G:H2'	22:BA:2030:A:N7	2.28	0.49
22:BA:570:G:H2'	22:BA:2030:A:C8	2.48	0.49
22:BA:1087:G:O2'	22:BA:1089:A:O4'	2.27	0.49
22:BA:1403:A:H2'	22:BA:1404:C:C6	2.48	0.49
22:BA:1408:G:C6	22:BA:1409:U:C4	3.01	0.49
22:BA:1489:C:C2	22:BA:1501:G:C2	3.00	0.49
22:BA:1886:U:C2'	22:BA:1887:C:H5'	2.43	0.49
26:BE:29:HIS:CE1	26:BE:33:VAL:HG21	2.47	0.49
43:BV:89:ILE:HG21	43:BV:91:PHE:CZ	2.47	0.49
1:CA:815:A:H4'	1:CA:817:C:C4	2.47	0.49
1:CA:1386:G:N3	1:CA:1387:G:C8	2.80	0.49
8:CH:86:TYR:CE2	8:CH:124:GLU:HB2	2.47	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
22:DA:39:G:C6	22:DA:40:U:O4	2.64	0.49
22:DA:273:G:H2'	22:DA:274:C:O4'	2.12	0.49
22:DA:320:A:H4'	22:DA:322:A:N7	2.28	0.49
22:DA:508:A:H3'	22:DA:509:C:H5'	1.94	0.49
22:DA:613:A:HO2'	22:DA:614:A:P	2.31	0.49
22:DA:1454:C:H5'	35:DN:63:ARG:HD3	1.94	0.49
22:DA:1965:C:OP1	22:DA:1966:A:C2'	2.61	0.49
22:DA:2322:A:H2'	22:DA:2323:G:O4'	2.12	0.49
22:DA:2461:A:H1'	22:DA:2492:U:C2	2.48	0.49
24:DC:141:VAL:CG1	24:DC:190:ALA:HB1	2.42	0.49
26:DE:146:VAL:O	26:DE:167:VAL:HA	2.12	0.49
27:DF:108:VAL:N	27:DF:109:PRO:CD	2.76	0.49
30:DI:9:VAL:HG23	30:DI:10:LYS:N	2.28	0.49
32:DK:31:ARG:CB	32:DK:32:TYR:CD2	2.96	0.49
33:DL:55:MET:SD	33:DL:59:ARG:CZ	3.01	0.49
33:DL:116:VAL:O	33:DL:116:VAL:HG13	2.12	0.49
50:D2:12:ARG:NH2	50:D2:44:VAL:CG1	2.75	0.49
1:AA:259:G:C2	1:AA:260:G:H1'	2.47	0.49
1:AA:929:G:N2	1:AA:1389:C:C2	2.81	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
2:AB:40:ILE:N	2:AB:40:ILE:HD13	2.27	0.49
6:AF:35:LYS:HD3	6:AF:35:LYS:N	2.27	0.49
6:AF:93:LYS:CG	6:AF:93:LYS:O	2.60	0.49
9:AI:17:ALA:CB	9:AI:67:VAL:HB	2.43	0.49
9:AI:84:THR:HG21	9:AI:103:PHE:CB	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:67:ALA:HB1	11:AK:100:LEU:HD22	1.94	0.49
22:BA:866:A:C8	22:BA:914:G:C6	3.00	0.49
22:BA:1412:U:H2'	22:BA:1413:A:C8	2.48	0.49
22:BA:2127:G:H4'	22:BA:2128:G:OP1	2.12	0.49
22:BA:2409:G:H2'	22:BA:2410:G:O4'	2.12	0.49
25:BD:38:LYS:O	25:BD:46:ARG:HA	2.13	0.49
27:BF:42:GLU:O	27:BF:42:GLU:HG2	2.13	0.49
30:BI:130:GLU:HB3	30:BI:134:ARG:NH2	2.27	0.49
34:BM:69:PRO:O	34:BM:70:ASP:CG	2.51	0.49
35:BN:51:LEU:O	35:BN:52:ILE:C	2.49	0.49
39:BR:49:ILE:CB	39:BR:52:PRO:C	2.78	0.49
42:BU:37:GLU:O	42:BU:39:ILE:HG12	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:246:A:C4	1:CA:279:A:C6	3.01	0.49
1:CA:728:A:H2'	1:CA:729:A:H8	1.77	0.49
1:CA:1048:G:P	57:CA:1849:HOH:O	2.70	0.49
1:CA:1152:A:C4	1:CA:1153:G:C8	3.00	0.49
1:CA:1321:U:C4	1:CA:1322:C:C5	3.00	0.49
1:CA:1380:U:C5	7:CG:3:ARG:HA	2.46	0.49
7:CG:114:LYS:HB2	7:CG:118:LEU:HD12	1.95	0.49
12:CL:61:PHE:N	12:CL:61:PHE:HD1	2.11	0.49
12:CL:90:LEU:HB3	12:CL:93:VAL:HG21	1.95	0.49
17:CQ:81:LYS:CD	17:CQ:81:LYS:N	2.75	0.49
22:DA:301:G:C2	22:DA:302:C:N3	2.81	0.49
22:DA:804:A:H5''	22:DA:805:G:OP1	2.13	0.49
22:DA:1029:A:N7	22:DA:1030:C:C2	2.81	0.49
22:DA:1097:U:O2	30:DI:9:VAL:CG1	2.61	0.49
22:DA:1178:C:N4	22:DA:1180:U:N3	2.61	0.49
22:DA:1230:A:C2	22:DA:1231:U:C2	2.99	0.49
22:DA:1357:C:N4	22:DA:1358:G:N1	2.61	0.49
22:DA:1394:U:H4'	22:DA:1603:A:H4'	1.95	0.49
22:DA:1403:A:C2	22:DA:1404:C:C2	3.00	0.49
22:DA:1465:G:C5	22:DA:1466:U:C4	3.00	0.49
22:DA:1488:C:N3	22:DA:1489:C:C5	2.81	0.49
22:DA:2234:G:C6	22:DA:2235:G:C5	3.01	0.49
22:DA:2428:G:H5''	22:DA:2429:G:OP1	2.13	0.49
24:DC:232:HIS:NE2	24:DC:244:PRO:HA	2.28	0.49
31:DJ:94:ALA:O	31:DJ:95:ARG:C	2.51	0.49
35:DN:28:LEU:O	35:DN:28:LEU:CG	2.61	0.49
41:DT:28:ASN:HB3	41:DT:87:LEU:HB2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:44:LYS:O	41:DT:48:GLN:HG2	2.12	0.49
45:DX:68:LEU:HD22	45:DX:78:TYR:CZ	2.47	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
1:AA:631:C:H5'	1:AA:632:U:O5'	2.13	0.49
1:AA:1124:G:H3'	1:AA:1145:A:N6	2.28	0.49
1:AA:1160:G:O2'	1:AA:1161:C:O5'	2.27	0.49
1:AA:1452:C:O4'	1:AA:1453:G:N2	2.46	0.49
2:AB:96:TRP:HZ2	2:AB:101:LEU:CD2	2.25	0.49
3:AC:59:ARG:HA	3:AC:63:SER:O	2.12	0.49
12:AL:23:ALA:O	12:AL:24:LEU:O	2.30	0.49
17:AQ:15:ASP:OD1	17:AQ:16:LYS:N	2.45	0.49
21:AU:37:PHE:HB3	21:AU:41:PRO:HG3	1.94	0.49
22:BA:26:G:C6	22:BA:27:G:N1	2.81	0.49
22:BA:65:U:H2'	22:BA:66:C:C6	2.47	0.49
22:BA:197:A:C6	22:BA:198:C:C2	3.01	0.49
22:BA:574:A:H4'	22:BA:575:A:O5'	2.13	0.49
22:BA:998:C:P	38:BQ:92:ARG:HH21	2.36	0.49
22:BA:1074:G:H2'	22:BA:1075:C:C6	2.47	0.49
22:BA:1583:A:HO2'	22:BA:1584:U:P	2.36	0.49
22:BA:2307:G:H4'	22:BA:2308:G:O5'	2.13	0.49
22:BA:2517:C:C5	22:BA:2542:A:C5	3.00	0.49
22:BA:2751:G:C4	28:BG:3:ARG:HD2	2.47	0.49
42:BU:42:VAL:O	42:BU:60:GLU:HA	2.13	0.49
1:CA:198:G:O2'	1:CA:199:A:H5'	2.12	0.49
1:CA:216:U:H2'	1:CA:217:C:C6	2.47	0.49
1:CA:718:A:H5''	11:CK:119:ASN:ND2	2.28	0.49
1:CA:881:G:C6	1:CA:882:C:C4	3.01	0.49
1:CA:1296:C:H4'	1:CA:1302:C:C4	2.47	0.49
3:CC:130:PHE:CE1	3:CC:157:LEU:HB3	2.48	0.49
14:CN:87:ALA:HB1	14:CN:92:GLU:HB2	1.95	0.49
21:CU:37:PHE:CD2	21:CU:41:PRO:HG3	2.48	0.49
22:DA:79:C:C2'	22:DA:346:A:N3	2.76	0.49
22:DA:301:G:C2	22:DA:302:C:C2	3.01	0.49
22:DA:581:C:OP2	38:DQ:33:ARG:NE	2.45	0.49
22:DA:631:A:N3	22:DA:2415:G:O2'	2.45	0.49
22:DA:749:A:C6	22:DA:1618:A:C2	3.01	0.49
22:DA:801:G:C8	26:DE:49:ARG:HG3	2.48	0.49
22:DA:846:U:O2'	22:DA:847:U:P	2.70	0.49
22:DA:969:G:H2'	22:DA:970:U:C6	2.48	0.49
22:DA:1096:A:OP2	22:DA:1096:A:C8	2.65	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1287:A:C2'	22:DA:1288:G:H5'	2.42	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:1439:A:N7	22:DA:1552:A:H2	2.10	0.49
22:DA:1819:A:H4'	22:DA:1820:U:H5''	1.93	0.49
22:DA:2098:U:H2'	22:DA:2099:U:C6	2.48	0.49
22:DA:2497:A:N3	22:DA:2498:C:N4	2.61	0.49
22:DA:2507:C:N4	22:DA:2508:G:C6	2.81	0.49
22:DA:2693:G:N2	22:DA:2717:C:C2	2.81	0.49
23:DB:30:C:OP1	36:DO:3:LYS:NZ	2.45	0.49
29:DH:72:ILE:O	29:DH:141:LYS:O	2.30	0.49
30:DI:28:LEU:HD13	30:DI:38:PHE:CE2	2.48	0.49
34:DM:69:PRO:O	34:DM:70:ASP:HB3	2.11	0.49
40:DS:61:ASN:O	40:DS:62:ASP:HB3	2.13	0.49
42:DU:86:ARG:NH2	42:DU:95:PHE:HB3	2.28	0.49
45:DX:71:LEU:HA	45:DX:74:ARG:HG2	1.94	0.49
1:AA:404:G:N7	4:AD:2:ALA:CB	2.76	0.49
1:AA:771:G:C2'	1:AA:772:U:H5'	2.43	0.49
1:AA:782:A:C8	1:AA:783:C:C5	3.01	0.49
1:AA:976:G:OP2	1:AA:1358:U:O2'	2.30	0.49
5:AE:13:GLU:HB3	5:AE:39:VAL:HG12	1.94	0.49
6:AF:54:LEU:O	6:AF:54:LEU:HD13	2.12	0.49
7:AG:115:SER:OG	7:AG:118:LEU:HG	2.12	0.49
12:AL:44:LYS:CB	12:AL:45:PRO:HD3	2.43	0.49
17:AQ:17:MET:HG2	17:AQ:20:SER:HB3	1.95	0.49
17:AQ:81:LYS:O	17:AQ:82:ALA:C	2.50	0.49
22:BA:88:G:C6	22:BA:89:A:N7	2.80	0.49
22:BA:477:A:H2'	22:BA:478:A:C8	2.47	0.49
22:BA:876:C:N3	22:BA:901:C:N4	2.61	0.49
22:BA:1914:C:C2	22:BA:1915:U:C6	3.00	0.49
22:BA:2356:U:O3'	44:BW:20:ARG:HD3	2.13	0.49
25:BD:62:LYS:N	25:BD:63:PRO:CD	2.75	0.49
30:BI:24:VAL:CG2	30:BI:28:LEU:HD23	2.43	0.49
33:BL:109:LYS:HG2	33:BL:126:ARG:CB	2.43	0.49
34:BM:77:PRO:HD2	34:BM:80:VAL:HG21	1.94	0.49
53:B5:24:ASP:HB3	53:B5:185:LYS:O	2.13	0.49
1:CA:16:A:C2'	1:CA:17:U:H5'	2.43	0.49
1:CA:161:A:H2'	1:CA:162:A:C8	2.48	0.49
1:CA:630:A:H2'	1:CA:631:C:O4'	2.13	0.49
1:CA:1337:G:H5''	1:CA:1338:G:OP1	2.13	0.49
2:CB:67:ILE:HG22	2:CB:68:LEU:N	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:146:ARG:O	4:CD:148:LYS:O	2.30	0.49
12:CL:42:PRO:HD3	12:CL:48:ALA:O	2.13	0.49
12:CL:94:ARG:O	12:CL:95:TYR:CD1	2.66	0.49
14:CN:46:LEU:HG	14:CN:46:LEU:O	2.13	0.49
22:DA:123:G:N2	22:DA:129:C:C2	2.80	0.49
22:DA:192:C:O2'	22:DA:802:A:N3	2.45	0.49
22:DA:308:G:C8	22:DA:501:A:H1'	2.48	0.49
22:DA:443:A:C8	26:DE:40:ARG:CG	2.96	0.49
22:DA:680:C:H2'	22:DA:681:G:C8	2.48	0.49
22:DA:846:U:HO2'	22:DA:847:U:P	2.36	0.49
22:DA:858:G:N2	22:DA:919:U:O4	2.43	0.49
22:DA:1267:U:N3	22:DA:2013:A:N7	2.60	0.49
22:DA:1312:U:H3'	57:DA:3387:HOH:O	2.13	0.49
22:DA:1566:A:N3	24:DC:213:TRP:CG	2.80	0.49
22:DA:1863:G:H2'	22:DA:1864:U:O4'	2.12	0.49
22:DA:2111:U:O4	22:DA:2147:A:C2	2.66	0.49
24:DC:80:ARG:NH1	24:DC:82:GLU:OE2	2.46	0.49
26:DE:18:THR:HG22	26:DE:19:PHE:CD2	2.47	0.49
32:DK:17:ARG:HG2	32:DK:47:ILE:CG2	2.43	0.49
32:DK:30:ARG:NH2	32:DK:37:ASP:OD1	2.46	0.49
40:DS:39:THR:O	40:DS:41:LYS:N	2.46	0.49
41:DT:30:ILE:HD13	41:DT:32:LEU:HG	1.93	0.49
1:AA:202:G:N2	1:AA:216:U:O2	2.46	0.49
1:AA:478:A:H2'	1:AA:479:U:C5'	2.42	0.49
1:AA:548:G:O2'	1:AA:549:C:H5'	2.13	0.49
1:AA:581:G:C5	1:AA:758:C:C5	3.01	0.49
1:AA:649:A:H2'	1:AA:650:G:O4'	2.13	0.49
3:AC:23:PHE:CD2	3:AC:24:ALA:N	2.81	0.49
4:AD:125:VAL:O	4:AD:126:ASN:C	2.52	0.49
9:AI:30:ILE:HD11	9:AI:38:TYR:HB3	1.94	0.49
13:AM:2:ALA:O	13:AM:9:ILE:HG23	2.13	0.49
16:AP:70:ARG:O	16:AP:70:ARG:CG	2.61	0.49
17:AQ:47:HIS:HB2	17:AQ:67:LEU:HD23	1.95	0.49
22:BA:205:G:O2'	22:BA:206:U:P	2.71	0.49
22:BA:319:G:C5	22:BA:333:G:C2	3.01	0.49
22:BA:475:C:N4	22:BA:476:G:C6	2.80	0.49
22:BA:545:U:H2'	22:BA:546:U:O3'	2.13	0.49
22:BA:861:A:C2	22:BA:917:A:C4	3.01	0.49
22:BA:996:A:N6	22:BA:1160:G:C6	2.81	0.49
22:BA:1513:U:H2'	22:BA:1514:G:O4'	2.13	0.49
22:BA:1686:C:H2'	22:BA:1687:G:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1915:U:H2'	22:BA:1916:A:H5'	1.94	0.49
22:BA:2480:C:H2'	22:BA:2481:G:H5'	1.95	0.49
22:BA:2780:G:OP2	31:BJ:120:ARG:HD3	2.13	0.49
23:BB:42:C:OP1	27:BF:64:LYS:HE2	2.13	0.49
24:BC:167:ARG:O	24:BC:168:ASP:CB	2.60	0.49
25:BD:103:ASP:O	25:BD:104:VAL:CG2	2.61	0.49
25:BD:129:THR:HG23	25:BD:130:GLN:O	2.12	0.49
31:BJ:64:VAL:CG1	31:BJ:68:LYS:HB2	2.43	0.49
34:BM:132:THR:CG2	34:BM:133:LYS:N	2.76	0.49
36:BO:100:HIS:O	36:BO:104:GLN:HB2	2.13	0.49
49:B1:19:HIS:HE1	49:B1:21:TYR:CE2	2.31	0.49
1:CA:157:U:O2'	1:CA:158:G:H5'	2.12	0.49
1:CA:215:C:H2'	1:CA:216:U:O4'	2.13	0.49
1:CA:620:C:H2'	1:CA:621:A:O4'	2.13	0.49
1:CA:757:U:OP1	1:CA:822:U:O2'	2.17	0.49
1:CA:786:G:C2	1:CA:787:A:H1'	2.47	0.49
1:CA:834:U:N3	1:CA:835:U:C4	2.81	0.49
1:CA:1074:G:H4'	2:CB:102:THR:O	2.12	0.49
1:CA:1082:A:C6	1:CA:1083:U:N3	2.81	0.49
1:CA:1361:G:C4	1:CA:1362:A:N7	2.81	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
5:CE:13:GLU:HB2	5:CE:39:VAL:HG12	1.95	0.49
8:CH:106:THR:HG21	8:CH:121:LEU:HD13	1.95	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:7:G:H4'	31:DJ:15:TRP:CH2	2.47	0.49
22:DA:38:A:H5'	26:DE:45:ALA:HB3	1.93	0.49
22:DA:204:A:H5'	22:DA:206:U:O4'	2.12	0.49
22:DA:362:A:N7	22:DA:363:G:N7	2.61	0.49
22:DA:475:C:N3	22:DA:481:G:C6	2.81	0.49
22:DA:1049:C:H2'	22:DA:1050:A:H5'	1.95	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
22:DA:1378:A:N3	22:DA:1379:U:H2'	2.28	0.49
22:DA:1574:C:N4	57:DA:3620:HOH:O	2.46	0.49
22:DA:1826:G:C4	22:DA:1827:U:C5	3.01	0.49
22:DA:1958:C:P	57:DA:3730:HOH:O	2.71	0.49
22:DA:2024:G:N2	22:DA:2040:G:H1'	2.28	0.49
22:DA:2734:A:C8	22:DA:2735:G:C8	3.01	0.49
22:DA:2791:G:O6	22:DA:2805:C:N3	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2873:A:H4'	57:DA:3802:HOH:O	2.11	0.49
24:DC:148:PRO:HD3	24:DC:185:GLU:OE2	2.13	0.49
25:DD:2:ILE:HG23	25:DD:88:GLU:OE2	2.12	0.49
36:DO:76:LYS:O	36:DO:79:ALA:HB3	2.12	0.49
41:DT:61:LEU:HD12	41:DT:61:LEU:C	2.32	0.49
41:DT:77:ARG:O	41:DT:78:SER:CB	2.60	0.49
43:DV:75:GLN:HB3	43:DV:90:ASP:O	2.12	0.49
1:AA:452:A:H2'	1:AA:453:G:H5'	1.95	0.48
1:AA:723:U:OP2	1:AA:723:U:H4'	2.11	0.48
1:AA:914:A:C4	1:AA:915:A:C8	3.01	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
2:AB:72:THR:O	2:AB:73:LYS:CB	2.60	0.48
8:AH:78:VAL:HG11	8:AH:125:ILE:CD1	2.43	0.48
12:AL:85:GLY:O	12:AL:96:HIS:ND1	2.45	0.48
13:AM:11:ASP:CG	13:AM:12:HIS:N	2.64	0.48
15:AO:81:LEU:CD1	15:AO:85:LEU:CD2	2.91	0.48
22:BA:580:U:O3'	38:BQ:31:VAL:CG1	2.61	0.48
22:BA:753:A:H2'	22:BA:754:U:H6	1.78	0.48
22:BA:1624:U:C2	22:BA:1625:C:C6	3.01	0.48
22:BA:2488:G:O2'	22:BA:2489:U:H5'	2.12	0.48
22:BA:2832:U:C2	22:BA:2834:G:C2	3.01	0.48
24:BC:235:GLY:HA3	24:BC:239:ASN:HB2	1.94	0.48
29:BH:139:PHE:O	29:BH:140:ALA:HB2	2.13	0.48
41:BT:19:LYS:NZ	41:BT:84:TYR:OH	2.46	0.48
1:CA:9:G:OP2	5:CE:126:LYS:NZ	2.44	0.48
1:CA:1211:U:O2'	1:CA:1212:U:P	2.70	0.48
1:CA:1240:U:OP2	7:CG:116:MET:HB3	2.12	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
7:CG:42:ILE:HG21	7:CG:116:MET:HG3	1.95	0.48
9:CI:13:LYS:O	9:CI:14:SER:HB3	2.12	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
22:DA:230:G:C2	22:DA:231:A:N7	2.81	0.48
22:DA:245:G:O6	51:D3:8:ARG:HD2	2.12	0.48
22:DA:279:A:N6	22:DA:361:G:C2'	2.75	0.48
22:DA:310:A:H5''	42:DU:15:THR:HB	1.95	0.48
22:DA:323:C:O2	22:DA:323:C:O4'	2.31	0.48
22:DA:649:G:H2'	22:DA:650:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:711:G:C2	22:DA:721:A:N3	2.81	0.48
22:DA:920:A:C6	22:DA:921:C:C4	3.01	0.48
22:DA:1338:G:H5''	41:DT:17:SER:HB2	1.94	0.48
22:DA:1352:U:H5	22:DA:1377:G:C5	2.31	0.48
22:DA:1400:U:H2'	22:DA:1401:G:O4'	2.12	0.48
22:DA:1792:G:C5	22:DA:1793:C:C5	3.01	0.48
22:DA:1916:A:H2'	22:DA:1917:U:O4'	2.13	0.48
22:DA:2272:U:H5''	22:DA:2273:A:OP1	2.12	0.48
22:DA:2446:G:C6	22:DA:2501:C:H2'	2.48	0.48
22:DA:2512:C:H2'	22:DA:2513:A:O4'	2.12	0.48
24:DC:62:TYR:CD1	24:DC:63:ARG:N	2.80	0.48
25:DD:186:LEU:CD1	37:DP:8:LEU:HD12	2.43	0.48
31:DJ:84:ILE:O	31:DJ:84:ILE:CG1	2.61	0.48
34:DM:1:MET:HE3	34:DM:43:ALA:HB3	1.95	0.48
42:DU:96:PHE:CZ	42:DU:103:ILE:CG1	2.96	0.48
50:D2:18:PHE:O	50:D2:19:ARG:C	2.51	0.48
1:AA:233:C:H2'	1:AA:234:C:C6	2.48	0.48
1:AA:747:A:C5'	1:AA:748:G:OP2	2.61	0.48
1:AA:1107:C:C4	1:AA:1108:G:C8	3.01	0.48
1:AA:1195:C:H5''	1:AA:1196:A:OP2	2.13	0.48
1:AA:1349:A:C2	1:AA:1374:A:C5	3.01	0.48
2:AB:133:GLU:OE2	2:AB:137:ARG:NH1	2.47	0.48
5:AE:16:ILE:CG2	5:AE:110:ALA:HA	2.43	0.48
5:AE:60:ILE:HD13	5:AE:61:GLN:N	2.28	0.48
6:AF:42:TRP:HB2	6:AF:59:TYR:HB2	1.95	0.48
11:AK:112:ASP:OD1	21:AU:24:GLU:OE2	2.31	0.48
12:AL:35:THR:HG21	12:AL:54:ARG:NH2	2.28	0.48
12:AL:43:LYS:O	12:AL:44:LYS:C	2.51	0.48
18:AR:28:THR:O	18:AR:31:ASN:ND2	2.45	0.48
19:AS:58:VAL:CG1	19:AS:75:ALA:HB1	2.43	0.48
21:AU:12:PHE:CD1	21:AU:16:LEU:CD1	2.96	0.48
22:BA:31:C:O3'	22:BA:1238:G:H5''	2.13	0.48
22:BA:150:U:H2'	22:BA:151:C:C6	2.48	0.48
22:BA:273:G:N2	22:BA:365:U:O2	2.46	0.48
22:BA:1176:U:H2'	22:BA:1177:G:C4	2.49	0.48
22:BA:2188:U:C4	22:BA:2189:U:C4	3.02	0.48
22:BA:2250:G:H8	22:BA:2250:G:O5'	1.96	0.48
22:BA:2271:G:H2'	22:BA:2272:U:O4'	2.13	0.48
22:BA:2371:G:C2	22:BA:2372:U:C6	3.01	0.48
22:BA:2377:A:O2'	22:BA:2378:A:H5'	2.14	0.48
22:BA:2861:U:C2	22:BA:2862:G:C8	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:42:GLY:HA3	26:BE:90:GLN:O	2.13	0.48
26:BE:77:ILE:O	26:BE:77:ILE:CG1	2.61	0.48
1:CA:8:A:N6	4:CD:54:GLN:OE1	2.46	0.48
1:CA:734:G:C4	1:CA:735:C:C6	3.01	0.48
2:CB:71:GLY:CA	2:CB:164:ILE:CG2	2.91	0.48
5:CE:33:PHE:O	5:CE:52:LYS:HB2	2.13	0.48
5:CE:96:MET:CE	5:CE:111:MET:CE	2.90	0.48
5:CE:149:SER:OG	5:CE:152:MET:HB2	2.13	0.48
6:CF:43:GLY:HA2	6:CF:58:HIS:CD2	2.48	0.48
6:CF:66:ALA:HB3	6:CF:71:ILE:HD11	1.93	0.48
10:CJ:73:LEU:CD2	10:CJ:75:ASP:HB2	2.42	0.48
10:CJ:82:LYS:O	10:CJ:86:ALA:HB3	2.13	0.48
14:CN:62:ASN:HB3	14:CN:73:PHE:CD1	2.48	0.48
22:DA:1577:C:H2'	22:DA:1578:U:O4'	2.13	0.48
22:DA:1731:G:N1	22:DA:1733:G:C4	2.81	0.48
22:DA:1751:U:H2'	22:DA:1752:C:C6	2.48	0.48
22:DA:1856:U:C4	22:DA:1857:G:C6	3.01	0.48
22:DA:1981:A:H5''	22:DA:1982:U:OP2	2.13	0.48
22:DA:2025:C:H2'	22:DA:2026:U:C6	2.48	0.48
22:DA:2174:C:H2'	22:DA:2175:C:O4'	2.12	0.48
22:DA:2543:G:N3	22:DA:2765:A:H2'	2.28	0.48
37:DP:99:TYR:CE2	37:DP:100:LEU:HD21	2.48	0.48
37:DP:106:LYS:O	37:DP:109:ARG:HD2	2.14	0.48
44:DW:46:HIS:CD2	44:DW:77:ARG:HD3	2.48	0.48
47:DZ:10:THR:HG23	47:DZ:54:MET:C	2.32	0.48
51:D3:16:LYS:HE3	51:D3:20:GLY:O	2.13	0.48
1:AA:43:C:H2'	1:AA:44:A:O4'	2.13	0.48
1:AA:781:A:C4	1:AA:802:A:C2	3.01	0.48
1:AA:926:G:C6	1:AA:1505:G:C5	3.01	0.48
1:AA:1149:C:O2'	1:AA:1150:A:H5''	2.14	0.48
1:AA:1349:A:OP1	9:AI:120:LYS:O	2.31	0.48
2:AB:49:MET:O	2:AB:51:ASN:O	2.31	0.48
2:AB:120:GLN:O	2:AB:120:GLN:HG2	2.13	0.48
5:AE:69:ARG:O	5:AE:70:ASN:C	2.50	0.48
5:AE:74:VAL:HG23	5:AE:76:LEU:CD1	2.43	0.48
9:AI:80:ARG:O	9:AI:80:ARG:HD2	2.13	0.48
10:AJ:59:LYS:N	10:AJ:59:LYS:HD2	2.27	0.48
22:BA:1528:A:H2'	22:BA:1529:G:O4'	2.13	0.48
22:BA:1832:C:N4	22:BA:1833:C:C4	2.80	0.48
22:BA:2310:C:H2'	22:BA:2311:A:C5'	2.42	0.48
22:BA:2435:A:C2'	22:BA:2436:G:O5'	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:31:VAL:HG21	26:BE:104:ALA:HB2	1.95	0.48
27:BF:122:PHE:HB3	27:BF:163:ASP:CG	2.33	0.48
29:BH:91:PHE:O	1:CA:55:A:N1	2.47	0.48
30:BI:97:LYS:HG2	30:BI:139:VAL:HG22	1.94	0.48
32:BK:35:VAL:CG1	32:BK:106:GLU:HG2	2.44	0.48
32:BK:86:LEU:N	32:BK:86:LEU:HD23	2.28	0.48
35:BN:70:THR:OG1	35:BN:71:ARG:N	2.46	0.48
39:BR:14:VAL:HG13	39:BR:98:ILE:HG13	1.95	0.48
39:BR:25:LEU:O	39:BR:94:THR:HG21	2.13	0.48
1:CA:3:A:O2'	1:CA:612:C:O2'	2.26	0.48
1:CA:158:G:C5	1:CA:164:G:C6	3.01	0.48
1:CA:728:A:C2	1:CA:729:A:C5	3.01	0.48
1:CA:1019:A:H2'	1:CA:1020:G:O4'	2.14	0.48
1:CA:1181:G:O2'	1:CA:1182:G:C5	2.64	0.48
2:CB:20:THR:OG1	2:CB:21:ARG:N	2.46	0.48
9:CI:116:VAL:HG23	10:CJ:62:ARG:HD3	1.96	0.48
12:CL:21:VAL:N	12:CL:22:PRO:CD	2.76	0.48
22:DA:78:U:OP2	46:DY:2:LYS:HD2	2.12	0.48
22:DA:135:U:H2'	22:DA:136:G:C8	2.48	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
22:DA:371:A:N6	22:DA:402:A:OP2	2.46	0.48
22:DA:410:G:C2	22:DA:2407:A:C5	3.01	0.48
22:DA:441:U:O2'	26:DE:41:GLN:OE1	2.27	0.48
22:DA:1153:C:H2'	22:DA:1154:G:O4'	2.14	0.48
22:DA:1211:C:H3'	22:DA:1212:G:H5'	1.94	0.48
22:DA:1524:G:C2	22:DA:1525:A:C8	3.01	0.48
22:DA:1791:A:O3'	24:DC:205:LEU:HB2	2.13	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
22:DA:2146:C:H4'	22:DA:2147:A:C8	2.47	0.48
22:DA:2321:U:H5'	22:DA:2322:A:OP2	2.13	0.48
24:DC:162:VAL:HG12	24:DC:163:GLN:N	2.27	0.48
29:DH:21:VAL:CG2	29:DH:22:LYS:N	2.76	0.48
29:DH:127:GLU:HG3	29:DH:144:VAL:O	2.13	0.48
30:DI:20:PRO:HB2	30:DI:23:PRO:HD2	1.95	0.48
31:DJ:71:ASP:O	31:DJ:73:VAL:HG23	2.14	0.48
33:DL:2:ARG:HD3	33:DL:2:ARG:N	2.29	0.48
38:DQ:78:LYS:HE2	38:DQ:117:LEU:HD21	1.95	0.48
39:DR:49:ILE:HG22	39:DR:53:PHE:C	2.33	0.48
42:DU:10:GLU:HG2	42:DU:11:VAL:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:13:VAL:HG21	42:DU:39:ILE:HG23	1.93	0.48
44:DW:34:GLY:N	44:DW:61:ALA:O	2.38	0.48
1:AA:69:G:O6	1:AA:98:A:N6	2.47	0.48
1:AA:292:G:N7	1:AA:293:G:H1'	2.29	0.48
1:AA:359:G:H2'	1:AA:360:G:O4'	2.13	0.48
1:AA:803:G:C6	1:AA:804:U:N3	2.82	0.48
1:AA:882:C:O2'	1:AA:883:C:H5'	2.12	0.48
1:AA:903:G:C5	1:AA:904:U:C5	3.01	0.48
1:AA:942:G:H2'	1:AA:942:G:N3	2.27	0.48
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.13	0.48
2:AB:82:ASP:C	2:AB:84:ALA:N	2.64	0.48
7:AG:139:GLU:OE1	7:AG:139:GLU:HA	2.13	0.48
16:AP:19:VAL:HG13	16:AP:37:GLY:C	2.34	0.48
19:AS:45:ILE:HG23	19:AS:63:THR:HA	1.94	0.48
22:BA:271:G:C4	22:BA:367:G:N2	2.82	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
22:BA:1075:C:H2'	22:BA:1076:C:C6	2.48	0.48
22:BA:1306:C:O2	22:BA:1306:C:H2'	2.13	0.48
22:BA:1682:G:C8	22:BA:1757:A:C2	3.00	0.48
22:BA:1789:A:P	24:BC:221:ARG:HH11	2.37	0.48
22:BA:1839:G:H2'	22:BA:1840:G:O5'	2.13	0.48
22:BA:2026:U:H2'	22:BA:2027:G:O4'	2.12	0.48
22:BA:2298:A:C6	22:BA:2321:U:O4	2.66	0.48
22:BA:2339:C:H2'	22:BA:2340:A:C8	2.48	0.48
22:BA:2502:G:H5'	22:BA:2503:A:H5''	1.94	0.48
24:BC:222:GLY:HA3	24:BC:230:HIS:CE1	2.48	0.48
27:BF:102:ARG:HD2	27:BF:140:GLU:OE2	2.14	0.48
29:BH:121:VAL:H	29:BH:122:LEU:HB2	1.77	0.48
42:BU:4:LYS:O	42:BU:5:ILE:HD12	2.13	0.48
51:B3:30:ARG:O	51:B3:31:HIS:HB3	2.13	0.48
1:CA:577:G:C2	1:CA:578:C:C6	3.02	0.48
1:CA:862:C:C4	1:CA:863:U:C5	3.01	0.48
1:CA:1513:A:H2'	1:CA:1514:G:H8	1.78	0.48
2:CB:186:ILE:HA	2:CB:200:ILE:HB	1.93	0.48
4:CD:73:ARG:O	4:CD:76:TYR:N	2.46	0.48
7:CG:30:LEU:HD11	7:CG:116:MET:HE2	1.96	0.48
7:CG:146:GLU:OE1	7:CG:149:LYS:CE	2.61	0.48
14:CN:54:ASP:HA	14:CN:59:ARG:CD	2.43	0.48
22:DA:12:U:O2	22:DA:12:U:C2'	2.61	0.48
22:DA:265:A:H4'	22:DA:266:G:OP1	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:693:A:C6	22:DA:694:U:C4	3.02	0.48
22:DA:931:U:H4'	22:DA:932:U:OP2	2.14	0.48
22:DA:1215:G:H2'	22:DA:1216:G:O4'	2.14	0.48
22:DA:1262:A:C6	22:DA:1263:U:C2	3.01	0.48
22:DA:1581:G:C6	22:DA:1582:C:C4	3.01	0.48
22:DA:2011:U:H2'	22:DA:2012:G:O4'	2.12	0.48
22:DA:2127:G:N3	22:DA:2162:G:N7	2.61	0.48
22:DA:2250:G:OP1	22:DA:2275:C:O2'	2.16	0.48
22:DA:2327:A:H2'	22:DA:2328:A:C8	2.48	0.48
22:DA:2330:G:N2	22:DA:2386:A:C4	2.81	0.48
22:DA:2603:G:C5	22:DA:2604:U:C5	3.02	0.48
22:DA:2624:G:H1'	48:D0:19:HIS:CE1	2.48	0.48
23:DB:58:A:H2'	23:DB:59:A:O4'	2.13	0.48
24:DC:144:VAL:HB	24:DC:154:LEU:HB2	1.96	0.48
24:DC:267:ILE:O	24:DC:267:ILE:CG2	2.61	0.48
25:DD:101:PHE:HA	25:DD:104:VAL:HG13	1.95	0.48
30:DI:80:LEU:HA	30:DI:84:ALA:HB2	1.94	0.48
31:DJ:84:ILE:O	31:DJ:84:ILE:HG13	2.13	0.48
31:DJ:109:LEU:HD23	31:DJ:110:PRO:HD2	1.95	0.48
33:DL:82:LEU:HA	33:DL:85:VAL:HG13	1.94	0.48
46:DY:46:VAL:O	46:DY:46:VAL:HG12	2.13	0.48
1:AA:104:G:C2	1:AA:105:G:C8	3.01	0.48
1:AA:220:G:C5	1:AA:221:C:C5	3.01	0.48
1:AA:455:G:C2	1:AA:478:A:C2	3.01	0.48
1:AA:524:G:C6	1:AA:525:C:N4	2.81	0.48
1:AA:999:C:H2'	1:AA:1000:A:C8	2.48	0.48
1:AA:1095:U:H2'	1:AA:1096:C:O4'	2.13	0.48
1:AA:1129:C:O2	1:AA:1130:A:N6	2.47	0.48
1:AA:1523:G:OP1	11:AK:128:ARG:NH2	2.46	0.48
14:AN:4:GLN:O	14:AN:7:LYS:N	2.47	0.48
14:AN:46:LEU:HG	14:AN:47:LYS:N	2.29	0.48
22:BA:1169:A:H2'	22:BA:1170:C:O4'	2.13	0.48
22:BA:1359:A:N7	22:BA:1373:A:C2	2.81	0.48
22:BA:1402:U:H2'	22:BA:1403:A:O5'	2.14	0.48
22:BA:2322:A:H2'	22:BA:2323:G:O4'	2.12	0.48
25:BD:108:ASP:OD1	25:BD:173:GLN:HG2	2.13	0.48
25:BD:133:THR:HG23	25:BD:134:HIS:CG	2.49	0.48
27:BF:28:VAL:HG13	27:BF:28:VAL:O	2.13	0.48
33:BL:77:ILE:HD11	33:BL:101:ILE:CG2	2.43	0.48
33:BL:109:LYS:HG2	33:BL:126:ARG:HB2	1.94	0.48
50:B2:43:THR:O	50:B2:44:VAL:HB	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:238:A:O2'	1:CA:239:U:H5'	2.13	0.48
1:CA:578:C:C2	1:CA:579:A:C8	3.01	0.48
1:CA:582:C:C4	1:CA:760:G:C6	3.01	0.48
1:CA:1029:U:O2	1:CA:1029:U:H2'	2.14	0.48
1:CA:1328:C:H5''	13:CM:28:THR:HG21	1.94	0.48
5:CE:16:ILE:HD11	5:CE:38:VAL:HG23	1.95	0.48
7:CG:92:ARG:NE	7:CG:93:PRO:HD2	2.28	0.48
8:CH:86:TYR:O	8:CH:87:LYS:HD2	2.13	0.48
10:CJ:47:GLU:O	10:CJ:66:GLU:HA	2.13	0.48
10:CJ:57:VAL:HG13	10:CJ:58:ASN:N	2.28	0.48
19:CS:34:TRP:HA	19:CS:52:HIS:HB2	1.96	0.48
22:DA:83:A:C2	22:DA:103:A:N7	2.82	0.48
22:DA:126:A:C8	22:DA:127:A:C2	3.01	0.48
22:DA:487:C:N4	22:DA:488:G:C6	2.82	0.48
22:DA:1369:G:C2	22:DA:1370:C:C6	3.01	0.48
22:DA:1475:G:H4'	22:DA:1732:C:C5	2.49	0.48
22:DA:1936:A:C8	22:DA:1945:G:C6	3.01	0.48
22:DA:2345:G:C6	22:DA:2347:C:N4	2.81	0.48
22:DA:2452:C:N4	22:DA:2453:A:C6	2.82	0.48
22:DA:2478:A:C8	22:DA:2529:G:C6	3.01	0.48
22:DA:2683:C:C5	22:DA:2684:U:C5	3.01	0.48
22:DA:2845:U:H5''	37:DP:52:ASN:O	2.14	0.48
24:DC:252:THR:HG22	24:DC:253:LYS:N	2.27	0.48
25:DD:148:GLN:N	25:DD:148:GLN:CD	2.67	0.48
26:DE:84:THR:O	26:DE:85:PHE:CG	2.67	0.48
30:DI:90:SER:HB3	30:DI:93:PRO:HG3	1.94	0.48
34:DM:120:ALA:O	34:DM:124:LEU:HD23	2.14	0.48
44:DW:45:PHE:CG	44:DW:80:ILE:HD11	2.48	0.48
1:AA:418:C:N4	57:AA:1718:HOH:O	2.46	0.48
1:AA:736:C:H2'	1:AA:737:C:C6	2.49	0.48
1:AA:1181:G:C2	1:AA:1182:G:N2	2.82	0.48
1:AA:1250:A:H4'	9:AI:70:GLY:N	2.28	0.48
1:AA:1350:A:C5	1:AA:1351:U:C4	3.02	0.48
2:AB:28:LYS:N	2:AB:29:PRO:CD	2.76	0.48
2:AB:173:ILE:HG23	2:AB:183:VAL:HG11	1.95	0.48
3:AC:60:PRO:O	3:AC:61:ALA:C	2.52	0.48
5:AE:81:LEU:HD13	5:AE:81:LEU:N	2.29	0.48
12:AL:86:ARG:HA	12:AL:94:ARG:HA	1.95	0.48
17:AQ:30:LYS:HG2	17:AQ:37:PHE:CZ	2.48	0.48
22:BA:102:U:C2	46:BY:2:LYS:HE3	2.49	0.48
22:BA:287:G:H2'	22:BA:288:U:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:499:U:C4	22:BA:500:G:C6	3.02	0.48
22:BA:657:U:H2'	22:BA:658:U:C6	2.48	0.48
22:BA:1413:A:O2'	22:BA:1414:C:H5'	2.14	0.48
22:BA:1916:A:N9	22:BA:1917:U:H1'	2.27	0.48
22:BA:2187:U:H2'	22:BA:2188:U:H1'	1.95	0.48
22:BA:2669:G:C2'	22:BA:2670:A:H5'	2.44	0.48
22:BA:2678:C:H2'	22:BA:2679:A:O4'	2.13	0.48
22:BA:2727:A:C2'	22:BA:2728:U:H5'	2.44	0.48
22:BA:2742:G:OP1	52:B4:36:ARG:HD3	2.13	0.48
57:BA:3778:HOH:O	31:BJ:39:LYS:HE3	2.14	0.48
23:BB:17:C:H2'	23:BB:18:G:O4'	2.14	0.48
32:BK:107:LEU:O	32:BK:108:ARG:C	2.52	0.48
34:BM:77:PRO:HG2	34:BM:80:VAL:CG2	2.44	0.48
43:BV:13:GLY:O	43:BV:17:SER:OG	2.32	0.48
1:CA:120:A:H2'	1:CA:120:A:OP2	2.13	0.48
1:CA:158:G:C6	1:CA:159:G:C5	3.02	0.48
1:CA:189:A:N6	1:CA:190:A:N1	2.61	0.48
1:CA:211:G:O2'	1:CA:212:G:C4'	2.62	0.48
1:CA:833:G:N2	1:CA:834:U:H1'	2.29	0.48
2:CB:81:LYS:HG3	2:CB:91:PHE:CZ	2.48	0.48
3:CC:121:THR:O	3:CC:125:GLU:OE2	2.31	0.48
4:CD:107:PHE:O	4:CD:117:LEU:CD1	2.60	0.48
7:CG:92:ARG:NE	7:CG:93:PRO:HD3	2.28	0.48
17:CQ:38:ILE:CG2	17:CQ:39:LYS:N	2.77	0.48
22:DA:250:G:H2'	22:DA:251:A:C8	2.49	0.48
22:DA:449:A:H2'	22:DA:450:G:H5'	1.96	0.48
22:DA:771:G:C6	22:DA:772:C:C5	3.02	0.48
22:DA:1076:C:H1'	30:DI:93:PRO:HG2	1.96	0.48
22:DA:1277:G:N3	35:DN:23:ASN:HB3	2.29	0.48
22:DA:1373:A:N6	22:DA:1374:G:C2	2.82	0.48
22:DA:1682:G:H2'	22:DA:1683:U:C6	2.48	0.48
22:DA:1936:A:H3'	22:DA:1937:A:H5'	1.96	0.48
22:DA:2209:G:C6	22:DA:2210:U:O4	2.67	0.48
23:DB:39:A:N6	23:DB:44:G:C6	2.81	0.48
24:DC:69:ARG:NH2	24:DC:116:ILE:CD1	2.76	0.48
24:DC:147:LYS:O	24:DC:150:LYS:HB3	2.13	0.48
25:DD:133:THR:HG23	25:DD:134:HIS:H	1.79	0.48
26:DE:52:VAL:HG21	26:DE:81:GLY:HA2	1.95	0.48
27:DF:122:PHE:CE1	27:DF:166:GLY:C	2.87	0.48
29:DH:27:ARG:HE	45:DX:60:ASP:CG	2.16	0.48
33:DL:102:GLY:N	57:DL:301:HOH:O	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:80:ARG:O	39:DR:82:HIS:N	2.42	0.48
1:AA:451:A:C5'	16:AP:70:ARG:HH22	2.27	0.48
1:AA:457:G:C5	1:AA:458:U:C5	3.02	0.48
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.49	0.48
1:AA:1492:A:OP1	12:AL:44:LYS:HA	2.14	0.48
4:AD:75:TYR:OH	4:AD:97:ARG:NH1	2.46	0.48
6:AF:66:ALA:HB1	6:AF:67:PRO:HD2	1.96	0.48
7:AG:49:THR:O	7:AG:53:ARG:HB3	2.13	0.48
11:AK:88:GLY:N	11:AK:114:THR:HG22	2.29	0.48
12:AL:86:ARG:CZ	12:AL:88:LYS:HB3	2.44	0.48
22:BA:277:G:C2'	22:BA:361:G:O6	2.61	0.48
22:BA:404:A:C2'	22:BA:405:U:OP2	2.62	0.48
22:BA:655:A:H4'	22:BA:656:G:OP1	2.12	0.48
22:BA:1079:C:C5	22:BA:1088:A:N1	2.82	0.48
22:BA:1180:U:H2'	22:BA:1181:U:H5'	1.95	0.48
22:BA:1248:G:OP1	38:BQ:2:ALA:HB3	2.13	0.48
22:BA:1352:U:C2'	22:BA:1353:A:H5'	2.44	0.48
22:BA:1796:U:H2'	22:BA:1797:G:H8	1.79	0.48
22:BA:2173:A:C8	22:BA:2174:C:C5	3.02	0.48
22:BA:2287:A:C5	22:BA:2289:G:C8	3.02	0.48
22:BA:2435:A:H2'	22:BA:2436:G:O5'	2.14	0.48
22:BA:2665:A:C2	22:BA:2666:C:N1	2.81	0.48
22:BA:2887:A:H3'	22:BA:2888:C:H6	1.77	0.48
27:BF:68:THR:N	27:BF:86:GLY:O	2.45	0.48
28:BG:69:ARG:C	28:BG:69:ARG:HD3	2.33	0.48
28:BG:141:ILE:C	28:BG:141:ILE:HD12	2.33	0.48
33:BL:132:ARG:HG3	33:BL:142:ILE:HD12	1.96	0.48
38:BQ:21:ALA:HB1	38:BQ:28:ARG:O	2.13	0.48
39:BR:48:LYS:O	39:BR:49:ILE:C	2.51	0.48
1:CA:32:A:N1	1:CA:33:A:C6	2.82	0.48
1:CA:811:C:H4'	1:CA:900:A:N6	2.29	0.48
1:CA:1160:G:O2'	1:CA:1161:C:P	2.72	0.48
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.48	0.48
4:CD:139:PRO:O	4:CD:140:ASN:HB2	2.14	0.48
4:CD:202:GLU:OE1	5:CE:105:ILE:HG23	2.13	0.48
11:CK:82:LEU:HD22	11:CK:105:PHE:HB3	1.95	0.48
22:DA:67:U:H2'	22:DA:68:G:O4'	2.14	0.48
22:DA:1095:A:C2	30:DI:30:GLN:HB3	2.49	0.48
22:DA:1262:A:N3	22:DA:1262:A:H2'	2.27	0.48
22:DA:1401:G:C6	22:DA:1402:U:C4	3.01	0.48
22:DA:1523:U:H3'	22:DA:1524:G:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1831:G:C5	22:DA:1832:C:C4	3.02	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
24:DC:157:SER:HB2	24:DC:160:THR:HG21	1.95	0.48
25:DD:146:ILE:HG13	25:DD:146:ILE:O	2.13	0.48
35:DN:114:GLU:OE2	35:DN:118:ARG:HD2	2.13	0.48
40:DS:61:ASN:O	40:DS:62:ASP:CB	2.61	0.48
1:AA:2:A:N6	1:AA:3:A:N1	2.61	0.48
1:AA:47:C:O2	1:AA:49:U:C5	2.66	0.48
1:AA:119:A:C4	1:AA:240:G:N7	2.81	0.48
1:AA:126:G:H2'	1:AA:127:G:O4'	2.14	0.48
1:AA:404:G:H4'	1:AA:439:U:O2	2.14	0.48
1:AA:702:A:H3'	1:AA:703:G:H5'	1.94	0.48
1:AA:1000:A:C2	1:AA:1041:G:C2	3.01	0.48
1:AA:1406:U:H2'	1:AA:1407:C:C5'	2.44	0.48
8:AH:10:MET:CE	8:AH:33:LYS:HD3	2.44	0.48
8:AH:83:LEU:C	8:AH:83:LEU:HD22	2.34	0.48
9:AI:50:GLN:O	9:AI:52:LEU:N	2.46	0.48
12:AL:63:VAL:HG21	12:AL:95:TYR:CE2	2.49	0.48
14:AN:16:LEU:N	14:AN:16:LEU:HD23	2.29	0.48
22:BA:64:A:C5	22:BA:65:U:C4	3.02	0.48
22:BA:613:A:C8	22:BA:616:A:C2	3.02	0.48
22:BA:1045:C:C4'	22:BA:1046:A:H5'	2.44	0.48
22:BA:1187:G:P	57:BA:3372:HOH:O	2.71	0.48
22:BA:1672:A:C2	22:BA:2582:G:H5'	2.49	0.48
22:BA:1876:A:C2	22:BA:1877:A:C4	3.02	0.48
22:BA:1912:A:C2	22:BA:1919:A:C5	3.01	0.48
22:BA:2052:A:H4'	25:BD:148:GLN:O	2.13	0.48
22:BA:2308:G:H5''	22:BA:2309:A:OP2	2.14	0.48
22:BA:2344:U:H4'	22:BA:2345:G:OP1	2.13	0.48
27:BF:174:ASP:O	27:BF:175:PHE:O	2.31	0.48
29:BH:103:VAL:HG21	29:BH:132:PHE:CZ	2.49	0.48
29:BH:135:HIS:CD2	29:BH:137:GLU:HG3	2.48	0.48
39:BR:49:ILE:HG22	39:BR:52:PRO:C	2.33	0.48
1:CA:17:U:H2'	1:CA:18:C:H6	1.76	0.48
1:CA:29:U:H5'	1:CA:296:U:OP1	2.14	0.48
1:CA:582:C:C2	1:CA:760:G:N1	2.81	0.48
1:CA:722:G:H3'	1:CA:722:G:N3	2.29	0.48
1:CA:756:C:H2'	1:CA:757:U:C5'	2.43	0.48
1:CA:756:C:C2	1:CA:757:U:C6	3.01	0.48
1:CA:829:G:C6	1:CA:858:G:C2	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1001:C:H2'	1:CA:1002:G:C8	2.49	0.48
1:CA:1104:G:C6	1:CA:1105:A:C5	3.02	0.48
1:CA:1298:U:O2	1:CA:1298:U:H2'	2.13	0.48
1:CA:1377:A:C6	7:CG:7:ILE:HD12	2.49	0.48
1:CA:1408:A:C2	1:CA:1494:G:N3	2.82	0.48
4:CD:53:VAL:HG23	4:CD:54:GLN:N	2.29	0.48
4:CD:151:LYS:C	4:CD:152:GLN:OE1	2.52	0.48
12:CL:44:LYS:HD3	12:CL:44:LYS:N	2.27	0.48
13:CM:27:LYS:O	13:CM:27:LYS:CD	2.62	0.48
14:CN:24:ARG:CZ	14:CN:51:LEU:HD11	2.44	0.48
17:CQ:52:GLU:HG2	17:CQ:53:CYS:N	2.29	0.48
22:DA:197:A:H2'	22:DA:197:A:N3	2.29	0.48
22:DA:228:C:N4	22:DA:417:C:O2	2.47	0.48
22:DA:477:A:H2'	22:DA:478:A:O5'	2.14	0.48
22:DA:920:A:OP1	47:DZ:19:LYS:HE3	2.14	0.48
22:DA:2519:U:C6	22:DA:2542:A:N6	2.82	0.48
22:DA:2562:U:H2'	22:DA:2563:U:H5'	1.95	0.48
22:DA:2736:A:C4	22:DA:2737:G:C8	3.01	0.48
24:DC:108:LYS:HA	24:DC:196:GLY:CA	2.44	0.48
24:DC:124:ILE:O	24:DC:124:ILE:HG22	2.14	0.48
26:DE:150:THR:O	26:DE:172:ALA:HB2	2.13	0.48
28:DG:158:LYS:C	28:DG:160:LYS:N	2.67	0.48
45:DX:51:VAL:HG23	45:DX:52:SER:N	2.29	0.48
48:D0:28:LEU:HD23	48:D0:37:LYS:HB3	1.96	0.48
1:AA:17:U:H2'	1:AA:18:C:C6	2.49	0.48
3:AC:7:PRO:HD2	3:AC:184:TYR:CD2	2.48	0.48
5:AE:144:LEU:O	5:AE:147:MET:HB3	2.13	0.48
7:AG:72:THR:HA	7:AG:96:ARG:NH1	2.29	0.48
21:AU:10:GLU:HG3	21:AU:11:PRO:HD3	1.96	0.48
21:AU:25:LYS:O	21:AU:29:LEU:HB3	2.14	0.48
22:BA:1009:A:H8	22:BA:1009:A:O5'	1.96	0.48
22:BA:1378:A:O2'	57:BA:3753:HOH:O	2.20	0.48
22:BA:2553:G:H5''	22:BA:2554:U:OP2	2.14	0.48
25:BD:101:PHE:O	25:BD:102:ALA:C	2.52	0.48
30:BI:108:GLU:OE2	30:BI:109:ILE:HG13	2.13	0.48
32:BK:63:VAL:HG12	32:BK:107:LEU:HD11	1.96	0.48
34:BM:77:PRO:HG2	34:BM:80:VAL:HG21	1.96	0.48
35:BN:49:GLU:N	35:BN:50:PRO:CD	2.77	0.48
45:BX:33:LEU:O	45:BX:34:HIS:CG	2.66	0.48
45:BX:78:TYR:CG	45:BX:78:TYR:OXT	2.67	0.48
1:CA:202:G:H2'	1:CA:203:G:O4'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:203:G:N2	1:CA:215:C:C2	2.82	0.48
1:CA:555:U:H2'	1:CA:556:C:C6	2.49	0.48
1:CA:671:G:N1	1:CA:672:U:C2	2.81	0.48
1:CA:1478:U:H2'	1:CA:1479:C:H6	1.79	0.48
5:CE:20:ARG:O	5:CE:20:ARG:HG2	2.14	0.48
17:CQ:19:LYS:CD	17:CQ:49:GLU:HA	2.44	0.48
22:DA:33:C:O2	22:DA:447:A:N6	2.46	0.48
22:DA:134:G:N2	22:DA:146:A:C2	2.82	0.48
22:DA:228:C:N3	22:DA:418:C:C4'	2.77	0.48
22:DA:284:U:H2'	22:DA:284:U:O2	2.12	0.48
22:DA:570:G:H2'	22:DA:571:U:H5'	1.94	0.48
22:DA:696:G:C6	22:DA:767:U:C2	3.02	0.48
22:DA:856:G:C2	22:DA:922:C:C2	3.01	0.48
22:DA:1198:U:O2	38:DQ:4:VAL:HG11	2.13	0.48
22:DA:1255:U:H2'	22:DA:1256:G:OP1	2.14	0.48
22:DA:1280:G:C6	22:DA:1281:G:C5	3.02	0.48
22:DA:1403:A:H2'	22:DA:1404:C:C6	2.48	0.48
22:DA:1869:G:C3'	22:DA:1870:C:H5'	2.44	0.48
22:DA:1931:U:C2	22:DA:1932:A:C8	3.02	0.48
22:DA:2283:C:C4	22:DA:2389:G:C4	3.02	0.48
22:DA:2308:G:O6	22:DA:2311:A:N7	2.47	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
25:DD:104:VAL:O	25:DD:105:LYS:HB2	2.13	0.48
26:DE:97:ASN:HB2	26:DE:100:MET:SD	2.54	0.48
33:DL:61:LEU:O	51:D3:13:ARG:NH2	2.44	0.48
42:DU:83:VAL:CG1	42:DU:84:GLY:N	2.77	0.48
51:D3:26:HIS:CE1	51:D3:48:ALA:HB2	2.48	0.48
1:AA:102:G:C2	1:AA:103:U:C5	3.01	0.48
1:AA:601:G:C6	1:AA:602:A:C6	3.02	0.48
1:AA:626:G:C6	1:AA:627:G:C5	3.02	0.48
1:AA:728:A:C6	1:AA:729:A:C6	3.02	0.48
1:AA:1163:A:C2	1:AA:1174:G:C2	3.02	0.48
1:AA:1190:G:P	3:AC:5:VAL:HG12	2.54	0.48
1:AA:1314:C:H41	19:AS:4:SER:HA	1.79	0.48
1:AA:1346:A:N1	1:AA:1374:A:H5''	2.28	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
4:AD:116:GLN:HG3	4:AD:120:HIS:CE1	2.48	0.48
7:AG:55:GLY:C	7:AG:57:SER:N	2.66	0.48
10:AJ:52:LEU:HB2	14:AN:81:ARG:CD	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:22:PRO:C	12:AL:24:LEU:N	2.68	0.48
13:AM:11:ASP:O	13:AM:12:HIS:CB	2.62	0.48
13:AM:83:LEU:HD21	19:AS:65:GLU:CG	2.44	0.48
18:AR:25:ASP:C	18:AR:27:ALA:N	2.67	0.48
22:BA:141:G:N1	41:BT:1:MET:HE1	2.28	0.48
22:BA:877:A:O2'	22:BA:900:A:N6	2.46	0.48
22:BA:998:C:OP1	57:BA:3363:HOH:O	2.20	0.48
22:BA:1501:G:O2'	22:BA:1502:A:H5'	2.14	0.48
22:BA:1805:A:H1'	24:BC:50:THR:O	2.14	0.48
22:BA:1916:A:H2'	22:BA:1917:U:C2'	2.44	0.48
22:BA:2339:C:H2'	22:BA:2340:A:H8	1.78	0.48
23:BB:14:U:OP2	23:BB:71:C:H5'	2.14	0.48
24:BC:162:VAL:HG11	24:BC:174:LEU:HB3	1.95	0.48
26:BE:111:GLU:CG	26:BE:114:ARG:NH1	2.77	0.48
27:BF:40:VAL:CG1	27:BF:43:ALA:HB3	2.43	0.48
27:BF:73:SER:HB2	27:BF:81:GLN:N	2.29	0.48
27:BF:103:LEU:O	27:BF:108:VAL:HB	2.13	0.48
31:BJ:17:VAL:HG22	31:BJ:55:ILE:HB	1.96	0.48
36:BO:83:LEU:N	36:BO:83:LEU:HD23	2.28	0.48
37:BP:31:TRP:CD2	37:BP:40:LEU:HD12	2.48	0.48
1:CA:577:G:C2	1:CA:578:C:C5	3.02	0.48
1:CA:643:C:C5'	8:CH:32:LEU:HD22	2.44	0.48
1:CA:690:G:H2'	1:CA:691:G:O4'	2.14	0.48
1:CA:1511:G:C5	1:CA:1512:U:C5	3.01	0.48
3:CC:36:ASP:O	3:CC:40:ARG:HG3	2.13	0.48
4:CD:107:PHE:N	4:CD:107:PHE:CD1	2.80	0.48
5:CE:83:HIS:NE2	8:CH:96:MET:CE	2.77	0.48
8:CH:21:ASN:O	8:CH:23:ALA:N	2.47	0.48
22:DA:241:A:C6	22:DA:255:A:H5'	2.49	0.48
22:DA:301:G:H5'	22:DA:334:C:O2	2.13	0.48
22:DA:382:A:N1	22:DA:383:C:C2	2.82	0.48
22:DA:389:G:C2	22:DA:2413:G:H1'	2.49	0.48
22:DA:426:C:H2'	22:DA:427:U:O4'	2.13	0.48
22:DA:585:G:C2	22:DA:1256:G:C6	3.01	0.48
22:DA:749:A:C5	22:DA:750:A:C8	3.02	0.48
22:DA:777:G:N2	22:DA:778:G:C8	2.82	0.48
22:DA:909:A:C6	22:DA:912:C:C2	3.02	0.48
22:DA:915:C:N4	22:DA:916:G:C6	2.82	0.48
22:DA:1250:G:C5'	38:DQ:6:ARG:HD2	2.44	0.48
22:DA:1356:G:N2	22:DA:1357:C:H1'	2.29	0.48
22:DA:1555:G:N2	22:DA:1556:C:H1'	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1665:A:H5''	32:DK:66:LYS:HG3	1.96	0.48
22:DA:2333:A:OP2	44:DW:77:ARG:NH2	2.39	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
22:DA:2808:G:N2	22:DA:2891:U:C6	2.82	0.48
22:DA:2842:G:H2'	22:DA:2843:G:O4'	2.13	0.48
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
52:D4:16:ILE:HD13	52:D4:25:VAL:HG22	1.96	0.48
1:AA:65:A:C5	1:AA:381:C:C4	3.01	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
1:AA:116:A:C4	1:AA:117:G:C8	3.02	0.47
1:AA:259:G:H2'	1:AA:260:G:O4'	2.15	0.47
1:AA:430:A:OP1	4:AD:9:LEU:HB2	2.13	0.47
1:AA:553:A:O2'	1:AA:554:A:H5'	2.13	0.47
1:AA:676:A:H5''	11:AK:115:PRO:HB3	1.96	0.47
4:AD:17:THR:HG23	4:AD:18:ASP:N	2.28	0.47
10:AJ:57:VAL:O	10:AJ:58:ASN:CB	2.63	0.47
10:AJ:59:LYS:HD2	10:AJ:60:ASP:N	2.29	0.47
13:AM:11:ASP:O	13:AM:12:HIS:ND1	2.47	0.47
17:AQ:12:VAL:O	17:AQ:13:VAL:CB	2.61	0.47
22:BA:197:A:N6	22:BA:2430:A:H2'	2.29	0.47
22:BA:1494:A:C2	22:BA:1495:A:N9	2.83	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
23:BB:39:A:C2	23:BB:44:G:C4	3.02	0.47
26:BE:176:ASP:OD1	26:BE:178:VAL:HG13	2.14	0.47
30:BI:28:LEU:HG	30:BI:35:ILE:HD12	1.95	0.47
31:BJ:57:LEU:HD22	31:BJ:128:ASN:HA	1.96	0.47
35:BN:82:GLU:O	35:BN:85:PRO:HG2	2.13	0.47
39:BR:14:VAL:HG13	39:BR:15:SER:N	2.29	0.47
53:B5:218:THR:O	53:B5:219:MET:CB	2.60	0.47
1:CA:407:U:H2'	1:CA:408:A:C8	2.49	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:673:A:H2'	1:CA:674:G:C8	2.48	0.47
1:CA:1040:U:H2'	1:CA:1041:G:C8	2.49	0.47
1:CA:1255:G:N1	1:CA:1279:G:N7	2.62	0.47
1:CA:1273:C:H2'	1:CA:1274:A:O4'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1307:U:C4	1:CA:1308:U:C5	3.02	0.47
1:CA:1423:G:H2'	1:CA:1424:U:O4'	2.14	0.47
2:CB:123:ASP:O	2:CB:124:GLY:C	2.51	0.47
6:CF:81:ASN:OD1	6:CF:83:ALA:N	2.45	0.47
10:CJ:91:ASP:O	10:CJ:92:LEU:HB2	2.14	0.47
11:CK:58:SER:O	11:CK:91:PRO:HG3	2.14	0.47
11:CK:107:ILE:C	11:CK:107:ILE:HD13	2.33	0.47
22:DA:45:G:H2'	22:DA:215:G:N7	2.29	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
22:DA:302:C:C2	22:DA:303:G:C8	3.01	0.47
22:DA:1208:C:C4	22:DA:1209:U:C5	3.02	0.47
22:DA:1324:G:O4'	22:DA:1616:A:N6	2.46	0.47
22:DA:1339:G:O4'	22:DA:1393:A:C2	2.67	0.47
22:DA:1682:G:C2	22:DA:1757:A:O4'	2.67	0.47
22:DA:1809:A:C6	22:DA:1810:A:C6	3.02	0.47
22:DA:1819:A:H5''	24:DC:157:SER:HB2	1.96	0.47
22:DA:2024:G:OP2	22:DA:2034:U:H4'	2.14	0.47
22:DA:2464:G:H2'	22:DA:2465:C:O4'	2.13	0.47
23:DB:81:G:C6	23:DB:82:U:C4	3.02	0.47
24:DC:3:VAL:HG11	24:DC:202:LEU:HD23	1.95	0.47
26:DE:149:ILE:HG21	26:DE:188:MET:SD	2.54	0.47
30:DI:101:ILE:O	30:DI:102:SER:CB	2.62	0.47
41:DT:35:ALA:O	41:DT:36:LYS:C	2.52	0.47
41:DT:64:LYS:HA	41:DT:79:ASP:OD1	2.14	0.47
42:DU:82:ARG:HB2	42:DU:82:ARG:CZ	2.43	0.47
51:D3:24:HIS:CE1	51:D3:48:ALA:HB3	2.49	0.47
1:AA:411:A:C6	1:AA:429:U:C4	3.02	0.47
1:AA:518:C:H5	1:AA:530:G:OP2	1.97	0.47
1:AA:791:G:C5	1:AA:792:A:N7	2.82	0.47
1:AA:1157:A:N7	1:AA:1180:A:C6	2.82	0.47
1:AA:1306:A:C5	1:AA:1307:U:C5	3.02	0.47
1:AA:1406:U:H2'	1:AA:1407:C:H5'	1.96	0.47
4:AD:170:TRP:CD2	4:AD:186:PRO:HG3	2.49	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
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
17:AQ:60:GLU:OE1	17:AQ:77:ARG:HD3	2.14	0.47
22:BA:416:U:C4	22:BA:417:C:C4	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:609:A:H2'	22:BA:610:C:O4'	2.14	0.47
22:BA:1932:A:H5''	22:BA:1933:G:OP2	2.14	0.47
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
28:BG:126:PRO:HG2	28:BG:130:GLU:HB3	1.95	0.47
29:BH:116:ARG:O	29:BH:118:PRO:HD3	2.14	0.47
47:BZ:45:ARG:NH1	47:BZ:59:GLU:OE1	2.46	0.47
1:CA:38:G:C2	1:CA:397:A:C2	3.02	0.47
1:CA:143:A:H5'	1:CA:144:G:C5'	2.44	0.47
1:CA:374:A:N3	1:CA:375:U:C6	2.83	0.47
1:CA:476:U:O2'	1:CA:477:C:H5'	2.13	0.47
1:CA:609:A:H2'	1:CA:610:U:H5'	1.96	0.47
1:CA:704:A:C6	1:CA:705:G:C4	3.03	0.47
1:CA:755:G:C2	1:CA:756:C:C6	3.02	0.47
1:CA:933:G:OP2	7:CG:3:ARG:HB3	2.14	0.47
1:CA:983:A:C2'	1:CA:983:A:N3	2.78	0.47
1:CA:992:U:C2	1:CA:1043:G:N7	2.83	0.47
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.14	0.47
1:CA:1216:A:OP1	14:CN:5:SER:CB	2.63	0.47
1:CA:1388:C:N3	1:CA:1389:C:C5	2.83	0.47
1:CA:1460:C:C4	1:CA:1461:G:C5	3.02	0.47
2:CB:15:HIS:O	2:CB:16:PHE:C	2.52	0.47
2:CB:35:ARG:O	2:CB:38:VAL:N	2.45	0.47
7:CG:92:ARG:CZ	7:CG:93:PRO:HD3	2.45	0.47
9:CI:81:HIS:O	9:CI:85:ARG:HB2	2.13	0.47
22:DA:85:G:OP2	42:DU:7:ARG:HB2	2.15	0.47
22:DA:218:A:C2	22:DA:219:A:C4	3.02	0.47
22:DA:400:G:N7	45:DX:57:ARG:NH1	2.62	0.47
22:DA:415:A:C2	22:DA:2409:G:C6	3.02	0.47
22:DA:430:A:H2'	22:DA:431:U:H5'	1.96	0.47
22:DA:508:A:C3'	22:DA:509:C:H5'	2.43	0.47
22:DA:681:G:C2	22:DA:682:G:C8	3.02	0.47
22:DA:748:G:C8	40:DS:89:ALA:HB1	2.49	0.47
22:DA:1138:G:H2'	22:DA:1139:G:O4'	2.14	0.47
22:DA:1365:A:N3	22:DA:1365:A:H2'	2.27	0.47
22:DA:1668:A:C4	22:DA:1674:G:C8	3.01	0.47
22:DA:1692:U:O2'	22:DA:1693:U:H2'	2.14	0.47
22:DA:1735:A:N1	22:DA:1736:U:C2	2.82	0.47
22:DA:2123:G:C2	22:DA:2176:A:C2	3.02	0.47
22:DA:2282:G:C5	22:DA:2425:A:N1	2.82	0.47
22:DA:2305:U:C4	22:DA:2306:C:C4	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2513:A:C6	22:DA:2514:U:C4	3.02	0.47
24:DC:243:HIS:O	24:DC:245:VAL:HG13	2.14	0.47
26:DE:61:ARG:HD2	26:DE:63:LYS:O	2.13	0.47
27:DF:128:TYR:CG	27:DF:170:LEU:HD13	2.49	0.47
28:DG:98:VAL:HG22	28:DG:125:CYS:SG	2.54	0.47
30:DI:59:ILE:HG22	30:DI:60:THR:N	2.29	0.47
36:DO:71:ALA:HB2	36:DO:102:ARG:HB2	1.96	0.47
42:DU:98:SER:O	42:DU:99:ASN:CB	2.62	0.47
1:AA:115:G:H1'	1:AA:116:A:N7	2.30	0.47
1:AA:172:A:N7	1:AA:174:A:N7	2.62	0.47
1:AA:212:G:N2	1:AA:213:G:C4	2.82	0.47
1:AA:939:G:H2'	1:AA:940:C:C6	2.49	0.47
1:AA:1108:G:H2'	1:AA:1108:G:N3	2.30	0.47
1:AA:1154:G:H2'	1:AA:1154:G:N3	2.28	0.47
2:AB:91:PHE:CD2	2:AB:150:GLY:HA3	2.49	0.47
10:AJ:91:ASP:OD2	10:AJ:91:ASP:N	2.47	0.47
16:AP:5:ARG:HA	16:AP:68:SER:OG	2.15	0.47
16:AP:61:VAL:HG22	16:AP:67:ILE:HD11	1.94	0.47
22:BA:335:C:O2'	22:BA:336:C:H5'	2.14	0.47
22:BA:481:G:C2	22:BA:507:A:C4	3.02	0.47
22:BA:1045:C:H3'	22:BA:1046:A:H5'	1.96	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:BA:1416:G:O2'	22:BA:1417:C:OP2	2.26	0.47
22:BA:1866:A:N1	22:BA:1876:A:C8	2.82	0.47
22:BA:2502:G:OP2	57:BA:3497:HOH:O	2.20	0.47
43:BV:65:VAL:O	43:BV:66:ASP:C	2.53	0.47
53:B5:50:ILE:CB	53:B5:52:PRO:HD3	2.45	0.47
1:CA:106:C:O2	1:CA:379:C:C5'	2.62	0.47
1:CA:414:A:H2'	1:CA:415:A:O4'	2.14	0.47
1:CA:811:C:C5	1:CA:812:G:C6	3.02	0.47
1:CA:824:G:H1'	8:CH:2:SER:N	2.29	0.47
1:CA:859:G:H2'	1:CA:860:A:C8	2.49	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:CA:1262:C:C2'	1:CA:1263:C:H5'	2.45	0.47
1:CA:1479:C:C2	1:CA:1480:A:C8	3.02	0.47
3:CC:42:TYR:CZ	3:CC:46:GLU:HG3	2.49	0.47
5:CE:13:GLU:OE1	5:CE:68:ARG:NH1	2.45	0.47
9:CI:17:ALA:HA	9:CI:67:VAL:HA	1.95	0.47
12:CL:38:TYR:HB3	12:CL:52:VAL:HG13	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:23:LYS:O	14:CN:26:GLU:HG3	2.15	0.47
15:CO:13:SER:O	15:CO:14:GLU:HG3	2.14	0.47
22:DA:170:U:C2	22:DA:171:U:C5	3.02	0.47
22:DA:397:U:OP1	45:DX:31:PRO:HA	2.15	0.47
22:DA:790:U:OP2	57:DA:3755:HOH:O	2.20	0.47
22:DA:1027:A:C5	22:DA:1126:A:C2	3.02	0.47
22:DA:1043:C:C4	22:DA:1044:C:C4	3.03	0.47
22:DA:1063:G:C4'	30:DI:77:ALA:HB1	2.44	0.47
22:DA:1274:A:N3	22:DA:1297:C:H1'	2.30	0.47
22:DA:1514:G:H5''	22:DA:1515:A:P	2.55	0.47
22:DA:2093:G:N7	22:DA:2225:A:H2'	2.29	0.47
22:DA:2120:G:C2	22:DA:2121:G:C8	3.02	0.47
22:DA:2186:G:C6	22:DA:2187:U:C4	3.02	0.47
22:DA:2244:U:H2'	22:DA:2245:U:O4'	2.15	0.47
26:DE:149:ILE:HG23	26:DE:188:MET:HA	1.95	0.47
29:DH:62:LEU:O	29:DH:62:LEU:HD22	2.14	0.47
29:DH:117:LEU:HD11	29:DH:130:VAL:HG22	1.95	0.47
32:DK:99:ILE:CG2	32:DK:119:ALA:HB2	2.44	0.47
38:DQ:84:LYS:O	38:DQ:87:SER:N	2.39	0.47
41:DT:59:ASN:O	41:DT:84:TYR:N	2.47	0.47
43:DV:38:LEU:HD23	43:DV:40:ILE:HD11	1.96	0.47
1:AA:624:C:H4'	16:AP:11:ALA:HB2	1.97	0.47
1:AA:771:G:H2'	1:AA:772:U:H6	1.78	0.47
1:AA:977:A:H1'	1:AA:982:U:O4	2.14	0.47
1:AA:1371:G:OP1	9:AI:13:LYS:HD3	2.15	0.47
2:AB:54:LEU:HD12	2:AB:220:THR:HG21	1.96	0.47
2:AB:82:ASP:OD1	2:AB:84:ALA:HB3	2.13	0.47
3:AC:53:SER:HB2	3:AC:115:LEU:HG	1.95	0.47
4:AD:109:ALA:N	4:AD:113:GLU:OE2	2.44	0.47
7:AG:97:ASN:HA	7:AG:100:ALA:HB3	1.96	0.47
10:AJ:11:LYS:HA	10:AJ:70:HIS:O	2.14	0.47
11:AK:76:GLU:HA	22:BA:2141:G:P	2.55	0.47
19:AS:42:PRO:HD3	19:AS:67:VAL:CG1	2.45	0.47
20:AT:5:LYS:O	20:AT:7:ALA:N	2.47	0.47
21:AU:16:LEU:HA	21:AU:18:ARG:CZ	2.43	0.47
22:BA:85:G:P	42:BU:28:VAL:HG11	2.54	0.47
22:BA:1064:C:H4'	30:BI:90:SER:HB2	1.95	0.47
22:BA:2297:A:C2	22:BA:2298:A:C8	3.02	0.47
22:BA:2502:G:H5''	22:BA:2503:A:H5''	1.94	0.47
23:BB:53:A:C2	23:BB:54:G:C8	3.01	0.47
24:BC:24:LEU:HD12	24:BC:24:LEU:HA	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:108:ILE:CD1	26:BE:180:LEU:HB3	2.44	0.47
31:BJ:23:LYS:HE2	31:BJ:142:ILE:OXT	2.14	0.47
32:BK:53:LYS:NZ	32:BK:56:ASP:OD2	2.40	0.47
33:BL:77:ILE:HD11	33:BL:101:ILE:HG21	1.97	0.47
39:BR:74:ILE:O	39:BR:86:GLN:HA	2.15	0.47
43:BV:48:MET:SD	43:BV:86:LEU:CD1	3.02	0.47
1:CA:485:U:HO2'	1:CA:486:U:P	2.38	0.47
1:CA:775:G:C2'	1:CA:776:G:H5'	2.44	0.47
1:CA:951:G:N3	1:CA:970:C:O2'	2.34	0.47
1:CA:1107:C:C2	1:CA:1108:G:C8	3.03	0.47
11:CK:112:ASP:HB3	21:CU:4:ILE:CG2	2.44	0.47
14:CN:67:THR:HG23	14:CN:83:LYS:CE	2.45	0.47
22:DA:218:A:N7	57:DA:3226:HOH:O	2.36	0.47
22:DA:228:C:C2	22:DA:418:C:H4'	2.50	0.47
22:DA:478:A:C2	22:DA:480:A:C4	3.02	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:1115:G:O2'	22:DA:1116:G:OP2	2.25	0.47
22:DA:1139:G:O2'	22:DA:1140:C:H5'	2.14	0.47
22:DA:1178:C:H2'	22:DA:1179:G:C8	2.49	0.47
22:DA:1204:A:C2	22:DA:1240:U:N3	2.82	0.47
22:DA:1462:C:N3	22:DA:1463:C:C5	2.83	0.47
22:DA:2221:G:C2'	22:DA:2222:C:H5'	2.45	0.47
22:DA:2499:C:C4	22:DA:2500:U:C4	3.02	0.47
24:DC:57:GLY:O	24:DC:58:HIS:O	2.32	0.47
24:DC:67:PHE:CE2	24:DC:156:ARG:NH2	2.82	0.47
26:DE:130:LYS:HB2	26:DE:133:LEU:CB	2.45	0.47
34:DM:69:PRO:O	34:DM:93:VAL:O	2.33	0.47
45:DX:25:THR:O	45:DX:25:THR:HG22	2.13	0.47
47:DZ:41:THR:HB	47:DZ:42:PRO:HD2	1.95	0.47
49:D1:39:PHE:CD2	49:D1:40:ASP:N	2.82	0.47
1:AA:408:A:C2	1:AA:435:A:C2	3.03	0.47
1:AA:654:G:C2'	1:AA:655:A:H5'	2.45	0.47
1:AA:667:G:H4'	15:AO:51:HIS:CE1	2.50	0.47
1:AA:741:G:H2'	1:AA:742:G:O4'	2.15	0.47
1:AA:880:C:C2'	1:AA:881:G:H5'	2.44	0.47
1:AA:1130:A:N3	1:AA:1146:A:C4	2.82	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
2:AB:64:LYS:HE2	2:AB:64:LYS:HA	1.95	0.47
2:AB:166:ALA:HB2	2:AB:187:VAL:HG12	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:130:VAL:CG1	4:AD:135:TYR:CD1	2.98	0.47
7:AG:145:ALA:O	7:AG:146:GLU:HB3	2.15	0.47
9:AI:23:PRO:HA	9:AI:61:LEU:HA	1.95	0.47
9:AI:44:ALA:H	9:AI:46:MET:HE1	1.80	0.47
17:AQ:61:ILE:HG22	17:AQ:73:TRP:CE3	2.50	0.47
22:BA:368:A:N6	22:BA:369:U:O4	2.48	0.47
22:BA:684:G:C6	22:BA:774:G:C4	3.03	0.47
22:BA:1072:C:C2	22:BA:1093:G:O6	2.68	0.47
22:BA:1171:G:C6	22:BA:1172:C:N3	2.82	0.47
22:BA:1392:A:C6	22:BA:1393:A:C6	3.02	0.47
22:BA:1789:A:H5''	24:BC:219:THR:O	2.14	0.47
22:BA:2038:G:H2'	22:BA:2039:U:O4'	2.13	0.47
22:BA:2495:G:H2'	22:BA:2496:C:H5'	1.96	0.47
23:BB:91:C:OP2	34:BM:18:ARG:NH2	2.46	0.47
28:BG:83:PHE:CE2	28:BG:138:LYS:HB2	2.49	0.47
28:BG:101:ASN:CG	28:BG:101:ASN:O	2.53	0.47
29:BH:111:ALA:O	29:BH:114:GLU:HB2	2.13	0.47
29:BH:117:LEU:HD23	29:BH:121:VAL:HA	1.95	0.47
39:BR:102:SER:O	39:BR:103:ALA:O	2.33	0.47
42:BU:98:SER:C	42:BU:100:SER:H	2.18	0.47
49:B1:39:PHE:HB2	49:B1:46:HIS:CE1	2.49	0.47
1:CA:302:G:O2'	1:CA:556:C:H5''	2.15	0.47
1:CA:330:C:O2	1:CA:330:C:H2'	2.13	0.47
1:CA:350:G:C6	1:CA:351:G:O6	2.67	0.47
1:CA:375:U:N3	1:CA:376:G:N7	2.63	0.47
1:CA:651:C:N4	1:CA:652:U:O4	2.47	0.47
1:CA:771:G:C2	1:CA:809:G:C2	3.03	0.47
1:CA:976:G:H1'	1:CA:1363:A:N6	2.30	0.47
1:CA:1343:G:O2'	9:CI:123:ARG:HD2	2.15	0.47
2:CB:71:GLY:HA2	2:CB:164:ILE:CG2	2.45	0.47
2:CB:186:ILE:HG13	2:CB:200:ILE:O	2.15	0.47
3:CC:168:TYR:OH	5:CE:55:GLU:OE1	2.31	0.47
5:CE:16:ILE:CD1	5:CE:38:VAL:HG23	2.44	0.47
9:CI:101:ALA:HB1	9:CI:103:PHE:CZ	2.50	0.47
10:CJ:7:ARG:HD2	10:CJ:73:LEU:HD21	1.97	0.47
12:CL:3:THR:O	12:CL:4:VAL:C	2.53	0.47
20:CT:67:ILE:CD1	20:CT:71:LYS:HE3	2.44	0.47
22:DA:241:A:N1	22:DA:255:A:H5''	2.29	0.47
22:DA:288:U:H2'	22:DA:289:G:O4'	2.14	0.47
22:DA:537:G:C6	22:DA:555:G:C2	3.02	0.47
22:DA:591:U:C2	22:DA:592:A:C8	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:658:U:C2	22:DA:659:G:C8	3.02	0.47
22:DA:945:A:N7	22:DA:2448:A:C2	2.83	0.47
22:DA:1245:G:H4'	26:DE:33:VAL:CG1	2.44	0.47
22:DA:1409:U:H2'	22:DA:1410:G:O4'	2.14	0.47
22:DA:1649:G:C6	22:DA:2009:A:N6	2.82	0.47
22:DA:1855:U:C4	22:DA:1856:U:C4	3.03	0.47
22:DA:2586:U:H2'	22:DA:2587:A:O4'	2.14	0.47
23:DB:109:A:C5	23:DB:110:C:C4	3.02	0.47
33:DL:116:VAL:HG21	33:DL:134:ALA:C	2.35	0.47
36:DO:58:ILE:HG22	36:DO:58:ILE:O	2.14	0.47
1:AA:507:C:C4	1:AA:508:U:C4	3.03	0.47
1:AA:520:A:N1	1:AA:536:C:H1'	2.30	0.47
1:AA:820:U:H4'	1:AA:821:G:OP2	2.14	0.47
1:AA:1269:A:N1	1:AA:1313:U:O4'	2.48	0.47
2:AB:216:ALA:O	2:AB:219:ALA:O	2.33	0.47
5:AE:98:PRO:O	5:AE:99:ALA:HB3	2.14	0.47
7:AG:68:ASN:O	7:AG:138:ARG:HD3	2.15	0.47
7:AG:129:GLU:O	7:AG:130:ASN:C	2.53	0.47
11:AK:128:ARG:HH11	11:AK:128:ARG:HG2	1.79	0.47
15:AO:81:LEU:HD12	15:AO:85:LEU:CD2	2.44	0.47
19:AS:63:THR:O	19:AS:65:GLU:N	2.47	0.47
21:AU:11:PRO:O	21:AU:12:PHE:CB	2.63	0.47
22:BA:547:A:H3'	22:BA:548:G:C5'	2.44	0.47
22:BA:618:G:C6	22:BA:619:G:C4	3.03	0.47
22:BA:801:G:C4	26:BE:49:ARG:HD3	2.50	0.47
22:BA:811:U:C2	22:BA:1251:C:C5	3.02	0.47
22:BA:997:G:O2'	22:BA:998:C:H5'	2.15	0.47
22:BA:1059:G:O2'	30:BI:129:ILE:HA	2.14	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
22:BA:1386:C:H2'	22:BA:1387:A:C8	2.49	0.47
22:BA:1914:C:O2	22:BA:1914:C:H2'	2.14	0.47
22:BA:2213:U:H4'	22:BA:2214:C:OP2	2.15	0.47
27:BF:5:HIS:O	27:BF:8:TYR:HB3	2.15	0.47
30:BI:108:GLU:HA	30:BI:111:GLN:HB3	1.96	0.47
32:BK:91:SER:O	32:BK:92:GLU:C	2.53	0.47
33:BL:94:THR:HG22	33:BL:95:LEU:N	2.29	0.47
39:BR:64:VAL:HG23	39:BR:65:ALA:N	2.29	0.47
41:BT:18:GLU:CD	41:BT:18:GLU:N	2.68	0.47
1:CA:211:G:O2'	1:CA:212:G:H4'	2.15	0.47
1:CA:455:G:C6	1:CA:456:A:C6	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:484:G:C5	1:CA:486:U:H1'	2.49	0.47
1:CA:784:A:H2'	1:CA:785:G:C8	2.50	0.47
1:CA:1272:G:H2'	1:CA:1273:C:O4'	2.15	0.47
2:CB:68:LEU:HD22	2:CB:70:VAL:HG23	1.94	0.47
2:CB:187:VAL:HG23	2:CB:188:ASP:O	2.14	0.47
5:CE:83:HIS:CD2	8:CH:96:MET:HE2	2.50	0.47
5:CE:105:ILE:HG13	5:CE:105:ILE:O	2.14	0.47
7:CG:42:ILE:CG2	7:CG:42:ILE:O	2.63	0.47
10:CJ:15:HIS:HB3	10:CJ:70:HIS:NE2	2.29	0.47
10:CJ:15:HIS:HB3	10:CJ:70:HIS:CD2	2.50	0.47
11:CK:50:SER:HB3	11:CK:65:VAL:CG2	2.45	0.47
12:CL:59:ASN:N	12:CL:59:ASN:HD22	2.13	0.47
14:CN:3:LYS:HD3	14:CN:6:MET:HG2	1.97	0.47
20:CT:67:ILE:O	20:CT:68:HIS:C	2.52	0.47
22:DA:39:G:C5	22:DA:40:U:C5	3.01	0.47
22:DA:46:G:N1	22:DA:47:C:C4	2.83	0.47
22:DA:260:G:C6	22:DA:261:G:N7	2.82	0.47
22:DA:371:A:N3	45:DX:61:LYS:NZ	2.62	0.47
22:DA:396:G:H2'	22:DA:397:U:O5'	2.15	0.47
22:DA:1248:G:C5	26:DE:46:GLN:NE2	2.83	0.47
22:DA:1310:G:H2'	22:DA:1311:G:H5'	1.95	0.47
22:DA:1428:C:C5	22:DA:1569:A:H5''	2.50	0.47
22:DA:1577:C:H2'	22:DA:1578:U:C1'	2.45	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
22:DA:2385:C:H2'	22:DA:2386:A:C8	2.49	0.47
22:DA:2531:A:C4	22:DA:2532:G:C8	3.02	0.47
22:DA:2822:G:H2'	22:DA:2823:A:H5''	1.97	0.47
23:DB:109:A:C6	23:DB:110:C:N3	2.82	0.47
24:DC:125:LYS:O	24:DC:192:LEU:HB2	2.15	0.47
26:DE:8:ALA:O	26:DE:9:GLN:HB2	2.15	0.47
27:DF:72:LYS:HG3	27:DF:74:VAL:HG13	1.96	0.47
28:DG:158:LYS:O	28:DG:159:GLY:C	2.52	0.47
33:DL:82:LEU:O	33:DL:82:LEU:HG	2.15	0.47
43:DV:9:ARG:NH2	43:DV:17:SER:OG	2.48	0.47
43:DV:48:MET:SD	43:DV:86:LEU:HG	2.54	0.47
1:AA:200:G:N2	1:AA:218:U:C2	2.82	0.47
1:AA:261:U:P	20:AT:71:LYS:HE2	2.55	0.47
1:AA:443:C:O2'	1:AA:444:G:H5'	2.15	0.47
1:AA:469:C:C5	1:AA:470:C:C4	3.03	0.47
1:AA:568:G:C4	1:AA:569:C:H5	2.31	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:667:G:OP1	1:AA:732:C:O2'	2.26	0.47
1:AA:803:G:C5	1:AA:804:U:C4	3.02	0.47
1:AA:872:A:C4	1:AA:874:G:C8	3.03	0.47
1:AA:1126:U:O2	1:AA:1280:A:H5'	2.15	0.47
1:AA:1330:U:C4	1:AA:1331:G:C6	3.03	0.47
1:AA:1493:A:O2'	1:AA:1494:G:P	2.73	0.47
2:AB:12:ALA:HB1	2:AB:15:HIS:HB3	1.97	0.47
2:AB:94:HIS:O	2:AB:95:ARG:C	2.52	0.47
3:AC:112:ASP:O	3:AC:116:VAL:HG23	2.14	0.47
4:AD:32:CYS:SG	4:AD:33:LYS:N	2.88	0.47
6:AF:3:HIS:CE1	6:AF:65:GLU:OE2	2.67	0.47
6:AF:29:ILE:HG23	6:AF:66:ALA:HB2	1.97	0.47
6:AF:91:ARG:HG2	6:AF:93:LYS:CE	2.44	0.47
8:AH:80:ARG:HB2	8:AH:81:PRO:HD2	1.96	0.47
9:AI:36:GLU:HA	9:AI:40:GLY:HA3	1.96	0.47
10:AJ:17:LEU:HD21	10:AJ:96:VAL:HG22	1.97	0.47
10:AJ:36:VAL:HG22	10:AJ:76:ILE:HG12	1.97	0.47
13:AM:91:HIS:CE1	13:AM:97:VAL:HG21	2.49	0.47
14:AN:73:PHE:CD1	14:AN:74:LEU:N	2.83	0.47
15:AO:70:LEU:HD21	15:AO:77:ARG:HB2	1.97	0.47
21:AU:10:GLU:CB	21:AU:11:PRO:HD3	2.45	0.47
22:BA:120:U:H5''	22:BA:122:G:OP2	2.14	0.47
22:BA:181:A:C2	22:BA:182:A:C4	3.02	0.47
22:BA:204:A:O4'	22:BA:206:U:C6	2.67	0.47
22:BA:211:C:O2'	22:BA:212:G:H5'	2.14	0.47
22:BA:279:A:N6	22:BA:361:G:O2'	2.46	0.47
22:BA:569:U:H1'	22:BA:947:A:O4'	2.14	0.47
22:BA:748:G:C8	40:BS:89:ALA:HB1	2.49	0.47
22:BA:819:A:C4	22:BA:1189:A:C2	3.03	0.47
22:BA:975:A:C2	22:BA:990:A:C8	3.03	0.47
22:BA:1696:G:O6	22:BA:1697:G:C2	2.68	0.47
22:BA:2076:U:O2	22:BA:2076:U:O4'	2.30	0.47
22:BA:2469:A:C2	22:BA:2482:A:C4	3.01	0.47
22:BA:2492:U:H2'	22:BA:2493:U:H6	1.80	0.47
22:BA:2593:U:H2'	22:BA:2594:C:O5'	2.14	0.47
22:BA:2756:U:H1'	22:BA:2757:A:H5''	1.97	0.47
22:BA:2839:G:H4'	35:BN:49:GLU:OE1	2.15	0.47
25:BD:85:ALA:O	25:BD:86:GLU:C	2.53	0.47
26:BE:37:ALA:O	26:BE:40:ARG:HB2	2.14	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:14:SER:O	29:BH:15:LEU:CB	2.61	0.47
29:BH:97:ARG:HH11	1:CA:370:C:C5'	2.28	0.47
30:BI:6:GLN:O	30:BI:7:ALA:HB3	2.15	0.47
30:BI:39:CYS:HA	30:BI:42:PHE:HB2	1.96	0.47
31:BJ:17:VAL:HG23	31:BJ:137:PRO:CB	2.45	0.47
37:BP:37:LYS:HD3	37:BP:39:ARG:NH1	2.30	0.47
40:BS:46:LEU:O	40:BS:50:VAL:HG23	2.15	0.47
47:BZ:24:LEU:HD11	47:BZ:54:MET:HE1	1.97	0.47
51:B3:26:HIS:HB2	51:B3:44:LEU:O	2.15	0.47
52:B4:25:VAL:HB	52:B4:35:GLN:HB2	1.96	0.47
53:B5:28:ARG:O	53:B5:28:ARG:CG	2.63	0.47
1:CA:421:U:O5'	1:CA:422:C:H5	1.96	0.47
1:CA:505:G:C6	1:CA:535:A:C2	3.03	0.47
1:CA:642:A:H2'	1:CA:643:C:C6	2.50	0.47
1:CA:939:G:C6	1:CA:940:C:C4	3.03	0.47
1:CA:991:U:H4'	1:CA:992:U:H5''	1.96	0.47
1:CA:1014:A:N7	1:CA:1015:G:C6	2.82	0.47
1:CA:1129:C:C6	1:CA:1139:G:C8	3.02	0.47
1:CA:1152:A:H4'	10:CJ:15:HIS:CD2	2.50	0.47
1:CA:1299:A:H2'	1:CA:1299:A:N3	2.30	0.47
2:CB:57:LEU:HD11	2:CB:221:VAL:CG2	2.45	0.47
3:CC:71:ALA:HA	3:CC:106:VAL:HB	1.96	0.47
4:CD:174:ASP:O	4:CD:175:ALA:HB2	2.14	0.47
5:CE:111:MET:HG3	5:CE:140:THR:HG21	1.96	0.47
7:CG:66:LEU:HG	7:CG:66:LEU:O	2.15	0.47
9:CI:26:GLY:N	9:CI:61:LEU:O	2.47	0.47
10:CJ:57:VAL:HG22	10:CJ:58:ASN:H	1.79	0.47
17:CQ:14:SER:CB	17:CQ:22:VAL:HG12	2.45	0.47
19:CS:6:LYS:HB2	19:CS:7:LYS:HE2	1.95	0.47
22:DA:143:C:H2'	22:DA:144:A:H5'	1.96	0.47
22:DA:195:A:C6	22:DA:198:C:C5	3.03	0.47
22:DA:248:G:H5'	22:DA:250:G:N7	2.28	0.47
22:DA:408:G:C6	22:DA:409:G:C5	3.03	0.47
22:DA:453:A:H4'	22:DA:472:A:H62	1.78	0.47
22:DA:526:A:P	57:DA:3247:HOH:O	2.72	0.47
22:DA:892:A:H3'	22:DA:892:A:N3	2.30	0.47
22:DA:965:C:H4'	22:DA:2273:A:H1'	1.96	0.47
22:DA:1343:G:H4'	22:DA:1598:A:OP2	2.15	0.47
22:DA:1357:C:N4	22:DA:1358:G:C6	2.83	0.47
22:DA:1563:U:H2'	22:DA:1564:C:C6	2.49	0.47
22:DA:1596:A:C6	22:DA:1597:A:C6	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1652:A:C2	22:DA:2006:C:N3	2.82	0.47
22:DA:1724:G:O6	22:DA:1736:U:C2	2.68	0.47
22:DA:1730:C:O2'	22:DA:1731:G:C2	2.67	0.47
22:DA:1776:G:N2	22:DA:1789:A:H1'	2.30	0.47
22:DA:1791:A:C2'	22:DA:1792:G:H5'	2.45	0.47
22:DA:1797:G:O3'	24:DC:256:LYS:HA	2.15	0.47
22:DA:1835:G:C4	22:DA:1836:C:C6	3.02	0.47
22:DA:2054:A:OP1	22:DA:2055:C:O2'	2.29	0.47
22:DA:2115:G:H2'	22:DA:2117:A:N7	2.30	0.47
22:DA:2121:G:C2	22:DA:2177:C:O2	2.68	0.47
22:DA:2387:U:H1'	44:DW:41:ARG:HD2	1.97	0.47
22:DA:2415:G:C2	22:DA:2416:C:C2	3.03	0.47
22:DA:2449:U:H4'	22:DA:2450:A:OP1	2.15	0.47
22:DA:2511:U:C5	22:DA:2512:C:C5	3.03	0.47
22:DA:2603:G:C6	22:DA:2604:U:C5	3.02	0.47
22:DA:2752:C:C5	22:DA:2753:A:N7	2.82	0.47
22:DA:2796:U:N3	22:DA:2798:U:C4	2.83	0.47
22:DA:2829:A:H2'	22:DA:2830:C:H5'	1.96	0.47
25:DD:3:GLY:O	25:DD:82:PHE:CE1	2.68	0.47
25:DD:13:ARG:HD3	25:DD:21:SER:OG	2.14	0.47
25:DD:35:THR:O	25:DD:36:GLN:HB2	2.14	0.47
26:DE:106:LYS:HG3	26:DE:200:LEU:HD23	1.95	0.47
28:DG:83:PHE:CD2	28:DG:138:LYS:HB2	2.50	0.47
29:DH:5:LEU:HD13	29:DH:13:GLY:HA3	1.96	0.47
30:DI:56:PRO:HD2	30:DI:75:PRO:HD3	1.97	0.47
31:DJ:19:ASP:O	31:DJ:23:LYS:CE	2.63	0.47
32:DK:108:ARG:HB2	32:DK:116:ILE:HD13	1.95	0.47
36:DO:104:GLN:O	36:DO:107:ALA:N	2.47	0.47
36:DO:117:PHE:CD1	36:DO:117:PHE:C	2.88	0.47
40:DS:55:ILE:CG2	40:DS:66:ILE:CD1	2.93	0.47
40:DS:55:ILE:HG21	40:DS:66:ILE:CD1	2.44	0.47
41:DT:7:LEU:HD22	41:DT:46:ALA:CA	2.45	0.47
41:DT:27:SER:O	41:DT:29:THR:N	2.48	0.47
45:DX:12:PRO:HB3	45:DX:28:ARG:NH2	2.29	0.47
45:DX:56:MET:O	45:DX:60:ASP:N	2.44	0.47
1:AA:192:A:C6	1:AA:193:C:C4	3.03	0.47
1:AA:263:A:P	20:AT:74:ARG:NH1	2.88	0.47
1:AA:642:A:N7	8:AH:107:SER:HA	2.29	0.47
1:AA:689:C:O2'	1:AA:705:G:O2'	2.24	0.47
1:AA:901:A:C5	1:AA:902:G:H1'	2.50	0.47
1:AA:1049:U:O4'	1:AA:1201:A:C8	2.67	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:106:THR:O	2:AB:107:VAL:HG23	2.14	0.47
3:AC:174:PRO:C	3:AC:176:HIS:H	2.18	0.47
6:AF:63:ASN:OD1	6:AF:96:VAL:HG21	2.13	0.47
10:AJ:6:ILE:CD1	10:AJ:76:ILE:HB	2.45	0.47
14:AN:43:ASN:C	14:AN:45:VAL:H	2.17	0.47
22:BA:26:G:C2'	22:BA:27:G:O5'	2.63	0.47
22:BA:1006:C:P	57:BA:3780:HOH:O	2.72	0.47
22:BA:1107:G:C5	22:BA:1108:U:C5	3.03	0.47
22:BA:1503:A:N6	22:BA:1504:A:N6	2.63	0.47
22:BA:1730:C:O2'	22:BA:1731:G:C4	2.60	0.47
22:BA:2304:G:H4'	27:BF:129:SER:O	2.14	0.47
22:BA:2681:C:C2	22:BA:2724:U:O4	2.68	0.47
25:BD:125:TRP:CE3	25:BD:160:LYS:HD2	2.49	0.47
29:BH:97:ARG:NH1	1:CA:370:C:C5'	2.77	0.47
36:BO:49:VAL:HG13	36:BO:50:ALA:N	2.30	0.47
41:BT:2:ILE:HG12	41:BT:7:LEU:HD11	1.97	0.47
53:B5:52:PRO:O	53:B5:53:ARG:HB2	2.15	0.47
1:CA:570:G:H2'	1:CA:570:G:N3	2.28	0.47
1:CA:1410:A:H2'	1:CA:1411:C:C6	2.50	0.47
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.14	0.47
5:CE:56:VAL:N	5:CE:57:PRO:CD	2.77	0.47
13:CM:86:TYR:O	13:CM:90:ARG:CG	2.63	0.47
16:CP:19:VAL:CG1	16:CP:37:GLY:N	2.78	0.47
21:CU:32:VAL:O	21:CU:32:VAL:HG12	2.15	0.47
22:DA:104:A:C5	22:DA:105:C:N3	2.83	0.47
22:DA:178:G:C5	22:DA:179:C:C5	3.03	0.47
22:DA:504:A:C2	22:DA:1234:U:H4'	2.50	0.47
22:DA:1308:A:N6	22:DA:1309:G:C2	2.83	0.47
22:DA:1357:C:O2'	22:DA:1358:G:H5'	2.15	0.47
22:DA:1588:G:C5	22:DA:1589:U:C4	3.02	0.47
22:DA:1965:C:H3'	22:DA:1966:A:H8	1.80	0.47
22:DA:2111:U:O2	22:DA:2111:U:O4'	2.32	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
26:DE:47:LYS:O	26:DE:83:VAL:CB	2.63	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
40:DS:41:LYS:O	40:DS:42:LYS:C	2.51	0.47
42:DU:74:ASN:ND2	42:DU:96:PHE:CD1	2.82	0.47
1:AA:104:G:N2	1:AA:105:G:C4	2.82	0.47
1:AA:237:G:OP1	17:AQ:42:THR:OG1	2.33	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:704:A:C6	1:AA:705:G:C5	3.02	0.47
1:AA:1053:G:N2	1:AA:1056:U:C5	2.83	0.47
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.15	0.47
5:AE:35:ALA:CB	5:AE:60:ILE:HA	2.45	0.47
9:AI:36:GLU:HA	9:AI:40:GLY:CA	2.45	0.47
19:AS:29:LYS:HB3	19:AS:30:PRO:HD2	1.97	0.47
19:AS:42:PRO:O	19:AS:45:ILE:HG13	2.15	0.47
22:BA:322:A:C6	22:BA:340:A:N1	2.83	0.47
22:BA:508:A:H4'	22:BA:509:C:OP2	2.15	0.47
22:BA:744:U:OP1	57:BA:3655:HOH:O	2.20	0.47
22:BA:954:G:C5	22:BA:955:U:C5	3.02	0.47
22:BA:1178:C:H2'	22:BA:1179:G:C8	2.50	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
23:BB:104:A:H2'	23:BB:105:G:O4'	2.14	0.47
24:BC:162:VAL:CG1	24:BC:174:LEU:HB3	2.45	0.47
25:BD:172:VAL:HG21	25:BD:194:PRO:HD3	1.96	0.47
27:BF:152:LEU:HD12	27:BF:153:ASP:N	2.29	0.47
28:BG:111:HIS:CD2	28:BG:112:PRO:O	2.68	0.47
31:BJ:81:ILE:HG12	31:BJ:82:GLY:H	1.80	0.47
35:BN:32:GLU:OE1	35:BN:86:ARG:NH2	2.41	0.47
35:BN:106:ASP:C	35:BN:106:ASP:OD1	2.52	0.47
36:BO:31:THR:HG23	36:BO:32:PRO:N	2.30	0.47
39:BR:21:ARG:NE	39:BR:93:PHE:CD1	2.83	0.47
44:BW:51:VAL:HG13	44:BW:60:PHE:O	2.15	0.47
53:B5:50:ILE:C	53:B5:52:PRO:CD	2.82	0.47
1:CA:162:A:H2'	1:CA:163:C:O4'	2.15	0.47
1:CA:459:A:OP2	1:CA:459:A:C8	2.68	0.47
1:CA:846:G:C2	1:CA:847:G:C8	3.03	0.47
1:CA:1034:G:H5'	1:CA:1035:A:OP2	2.15	0.47
1:CA:1092:A:N1	1:CA:1183:U:O2	2.48	0.47
1:CA:1381:U:O2'	1:CA:1382:C:O5'	2.33	0.47
3:CC:30:ALA:HB1	14:CN:65:ARG:NH2	2.30	0.47
10:CJ:19:ASP:HA	10:CJ:22:THR:HB	1.97	0.47
10:CJ:41:PRO:O	10:CJ:42:LEU:HB2	2.14	0.47
13:CM:37:ALA:CB	13:CM:56:LEU:HG	2.44	0.47
22:DA:40:U:C4	22:DA:41:C:N4	2.83	0.47
22:DA:116:C:O2'	22:DA:126:A:C2'	2.62	0.47
22:DA:152:A:C2	22:DA:175:G:N3	2.82	0.47
22:DA:160:A:N6	22:DA:161:A:N6	2.63	0.47
22:DA:187:G:N1	22:DA:210:C:C2	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:619:G:O6	26:DE:98:LYS:HE3	2.15	0.47
22:DA:668:A:H3'	22:DA:669:G:H5''	1.96	0.47
22:DA:1264:A:C8	22:DA:1265:A:C8	3.03	0.47
22:DA:1431:A:C6	22:DA:1432:G:C5	3.03	0.47
22:DA:1805:A:C2	22:DA:1813:G:C6	3.03	0.47
22:DA:1896:G:H2'	22:DA:1897:G:O4'	2.15	0.47
22:DA:2403:C:O2	22:DA:2403:C:H2'	2.15	0.47
55:DA:3001:DOL:H432	55:DA:3001:DOL:O7	2.13	0.47
28:DG:98:VAL:HG11	28:DG:124:GLU:HA	1.96	0.47
32:DK:31:ARG:HB3	32:DK:32:TYR:CD2	2.49	0.47
33:DL:77:ILE:CG2	33:DL:81:ASP:OD2	2.63	0.47
35:DN:24:MET:HE3	35:DN:44:LEU:HD22	1.97	0.47
41:DT:23:ALA:O	41:DT:27:SER:N	2.48	0.47
45:DX:40:VAL:CG2	45:DX:45:ARG:O	2.63	0.47
1:AA:65:A:C2	1:AA:381:C:C6	3.03	0.47
1:AA:186:C:H4'	20:AT:76:LYS:HB2	1.96	0.47
1:AA:1027:C:C5	1:AA:1028:C:N4	2.82	0.47
1:AA:1305:G:HO2'	1:AA:1306:A:H8	1.60	0.47
1:AA:1381:U:C5	1:AA:1382:C:C5	3.03	0.47
2:AB:94:HIS:ND1	2:AB:146:ASN:HB2	2.30	0.47
2:AB:160:ALA:O	2:AB:161:LEU:HB2	2.15	0.47
2:AB:206:ALA:O	2:AB:210:VAL:HG22	2.14	0.47
7:AG:127:ALA:O	7:AG:130:ASN:N	2.46	0.47
16:AP:22:ALA:HA	16:AP:33:ILE:CG1	2.43	0.47
22:BA:205:G:O2'	22:BA:206:U:OP2	2.33	0.47
22:BA:309:A:C5	22:BA:330:A:C6	3.03	0.47
22:BA:1384:A:H1'	22:BA:1405:U:C1'	2.45	0.47
22:BA:1668:A:O2'	22:BA:1674:G:N7	2.36	0.47
22:BA:1959:G:C2'	22:BA:1960:A:O5'	2.62	0.47
23:BB:7:G:H5''	36:BO:29:HIS:CE1	2.50	0.47
28:BG:85:LYS:CG	28:BG:141:ILE:HD13	2.45	0.47
34:BM:2:LEU:O	34:BM:3:GLN:HB3	2.15	0.47
46:BY:6:LEU:HD22	46:BY:56:LEU:HD21	1.97	0.47
48:B0:44:THR:HG23	48:B0:48:TYR:O	2.15	0.47
50:B2:43:THR:O	50:B2:44:VAL:CB	2.62	0.47
53:B5:122:GLY:CA	53:B5:146:VAL:CB	2.93	0.47
1:CA:16:A:C6	1:CA:17:U:C5	3.02	0.47
1:CA:427:U:P	4:CD:13:ARG:HH22	2.38	0.47
1:CA:581:G:N2	1:CA:761:G:C6	2.83	0.47
1:CA:991:U:H4'	1:CA:992:U:OP1	2.15	0.47
1:CA:1052:U:H5''	1:CA:1053:G:OP2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1311:A:C2	1:CA:1327:C:N3	2.83	0.47
1:CA:1348:U:H4'	9:CI:122:ARG:CG	2.45	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
17:CQ:8:LEU:N	17:CQ:8:LEU:HD12	2.29	0.47
17:CQ:81:LYS:N	17:CQ:81:LYS:HD2	2.30	0.47
22:DA:5:A:C2	22:DA:2899:A:C2	3.03	0.47
22:DA:35:G:C5	22:DA:454:A:C2	3.03	0.47
22:DA:200:U:C5	22:DA:201:C:C4	3.02	0.47
22:DA:1335:C:H2'	22:DA:1336:A:C8	2.50	0.47
22:DA:1434:A:H2'	22:DA:1435:G:C8	2.50	0.47
22:DA:1726:C:H2'	22:DA:1727:C:H6	1.79	0.47
22:DA:1855:U:C5	22:DA:1856:U:C4	3.03	0.47
22:DA:1891:G:H2'	22:DA:1892:C:O4'	2.14	0.47
22:DA:2043:C:H2'	22:DA:2043:C:O2	2.14	0.47
22:DA:2148:G:C2	22:DA:2149:U:C4	3.03	0.47
22:DA:2652:C:N4	22:DA:2653:U:O4	2.48	0.47
22:DA:2732:G:O2'	22:DA:2733:A:H5'	2.15	0.47
25:DD:175:LEU:HD11	25:DD:193:VAL:HG12	1.97	0.47
33:DL:55:MET:SD	33:DL:59:ARG:HB3	2.55	0.47
33:DL:116:VAL:HG21	33:DL:134:ALA:O	2.15	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
1:AA:819:A:H4'	1:AA:820:U:OP2	2.15	0.46
1:AA:1009:U:H2'	1:AA:1010:U:C6	2.50	0.46
1:AA:1163:A:C2	1:AA:1174:G:N1	2.82	0.46
1:AA:1203:C:H4'	14:AN:67:THR:HG22	1.97	0.46
1:AA:1377:A:C4	7:AG:7:ILE:HD11	2.49	0.46
2:AB:63:ARG:O	2:AB:64:LYS:CB	2.60	0.46
2:AB:66:LYS:N	2:AB:66:LYS:HD3	2.30	0.46
2:AB:164:ILE:O	2:AB:186:ILE:HG12	2.15	0.46
3:AC:143:ARG:CG	3:AC:144:LEU:HD13	2.44	0.46
4:AD:107:PHE:CD1	4:AD:145:ILE:HD11	2.49	0.46
5:AE:155:ALA:HB1	8:AH:66:PHE:CE2	2.50	0.46
10:AJ:54:SER:OG	10:AJ:55:PRO:HD2	2.14	0.46
10:AJ:57:VAL:HG22	10:AJ:58:ASN:N	2.30	0.46
12:AL:44:LYS:HB3	12:AL:45:PRO:HD3	1.96	0.46
16:AP:4:ILE:HG13	16:AP:21:VAL:HG22	1.97	0.46
17:AQ:46:VAL:HG13	17:AQ:73:TRP:C	2.35	0.46
19:AS:40:ILE:CG1	19:AS:71:LEU:HD22	2.45	0.46
22:BA:39:G:H2'	22:BA:40:U:C6	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:190:A:C4	22:BA:207:A:C2	3.03	0.46
22:BA:465:G:H2'	22:BA:466:A:C8	2.50	0.46
22:BA:784:G:C5'	24:BC:226:ASN:OD1	2.63	0.46
22:BA:827:U:H2'	22:BA:2068:U:C2	2.50	0.46
22:BA:1084:A:C5	22:BA:1085:A:C6	3.03	0.46
22:BA:1855:U:C5	22:BA:1856:U:C5	3.04	0.46
22:BA:2786:U:OP1	25:BD:70:LYS:NZ	2.36	0.46
22:BA:2804:U:H2'	22:BA:2805:C:H6	1.80	0.46
22:BA:2847:U:H2'	22:BA:2848:G:H5'	1.96	0.46
23:BB:35:C:C2'	23:BB:36:C:H5'	2.44	0.46
23:BB:53:A:H2'	23:BB:53:A:N3	2.31	0.46
25:BD:61:THR:CB	25:BD:63:PRO:HD2	2.45	0.46
29:BH:91:PHE:O	1:CA:55:A:C2	2.68	0.46
50:B2:43:THR:C	50:B2:44:VAL:HG12	2.35	0.46
52:B4:1:MET:SD	52:B4:36:ARG:HB2	2.55	0.46
53:B5:79:ALA:HB1	53:B5:83:LYS:HB2	1.97	0.46
1:CA:157:U:O2	1:CA:165:G:C2	2.68	0.46
1:CA:872:A:C4	1:CA:874:G:C8	3.02	0.46
2:CB:85:LEU:O	2:CB:85:LEU:HD12	2.15	0.46
11:CK:44:TRP:HA	11:CK:70:CYS:SG	2.55	0.46
22:DA:42:A:C2	22:DA:438:G:C2	3.03	0.46
22:DA:249:C:O5'	22:DA:2394:C:O2'	2.34	0.46
22:DA:362:A:C8	22:DA:363:G:C8	3.04	0.46
22:DA:487:C:C2	22:DA:494:G:N2	2.83	0.46
22:DA:708:G:H2'	22:DA:709:U:C6	2.50	0.46
22:DA:727:A:C6	22:DA:728:G:C6	3.03	0.46
22:DA:740:C:H5'	22:DA:1784:A:C2'	2.44	0.46
22:DA:877:A:H2'	22:DA:878:A:OP2	2.14	0.46
22:DA:1200:C:O2	22:DA:1246:A:C2	2.68	0.46
22:DA:1207:C:N3	22:DA:1208:C:C5	2.83	0.46
22:DA:1350:C:C2	22:DA:1382:G:C2	3.03	0.46
22:DA:1682:G:N3	22:DA:1757:A:H1'	2.30	0.46
22:DA:1833:C:N3	22:DA:1834:U:C4	2.83	0.46
22:DA:2322:A:C6	22:DA:2323:G:C4	3.03	0.46
25:DD:150:GLN:C	25:DD:151:THR:O	2.52	0.46
26:DE:1:MET:HB2	26:DE:16:GLU:HA	1.96	0.46
34:DM:56:ALA:C	34:DM:58:LYS:H	2.18	0.46
43:DV:38:LEU:HD23	43:DV:40:ILE:CD1	2.45	0.46
50:D2:44:VAL:O	50:D2:45:SER:OG	2.21	0.46
50:D2:46:LYS:C	50:D2:46:LYS:HD3	2.36	0.46
1:AA:2:A:C6	1:AA:3:A:N1	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:8:A:N6	4:AD:202:GLU:O	2.46	0.46
1:AA:145:G:N2	1:AA:178:C:C2	2.82	0.46
1:AA:404:G:N7	4:AD:2:ALA:HB3	2.30	0.46
1:AA:572:A:H5'	1:AA:573:A:P	2.56	0.46
1:AA:1133:G:N2	1:AA:1142:G:C4	2.83	0.46
1:AA:1145:A:O2'	1:AA:1146:A:O5'	2.31	0.46
3:AC:7:PRO:HG2	3:AC:184:TYR:CD1	2.50	0.46
4:AD:62:ARG:HG3	4:AD:72:PHE:CD2	2.50	0.46
7:AG:130:ASN:HA	7:AG:135:VAL:HG11	1.96	0.46
8:AH:87:LYS:HG2	8:AH:91:GLU:O	2.16	0.46
10:AJ:32:THR:OG1	10:AJ:33:GLY:N	2.46	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
14:AN:46:LEU:O	14:AN:47:LYS:C	2.54	0.46
20:AT:54:MET:HA	20:AT:57:ILE:HG22	1.96	0.46
22:BA:271:G:H4'	22:BA:272:A:OP1	2.16	0.46
22:BA:477:A:C6	22:BA:478:A:C6	3.03	0.46
22:BA:697:G:H2'	22:BA:698:C:C6	2.50	0.46
22:BA:1006:C:C2	22:BA:1138:G:N2	2.83	0.46
22:BA:1635:A:C6	22:BA:1636:U:C2	3.02	0.46
22:BA:1734:G:H2'	22:BA:1735:A:H8	1.80	0.46
22:BA:1911:U:C4	22:BA:1918:A:C5	3.02	0.46
22:BA:2558:C:O2'	22:BA:2559:C:H5'	2.15	0.46
22:BA:2790:U:H5'	22:BA:2893:A:N7	2.30	0.46
24:BC:209:GLY:O	24:BC:210:ALA:C	2.53	0.46
27:BF:17:MET:SD	27:BF:25:VAL:HA	2.55	0.46
38:BQ:62:ILE:HG23	38:BQ:76:TYR:CE1	2.50	0.46
45:BX:37:ARG:NH1	45:BX:46:PHE:CE1	2.83	0.46
1:CA:681:A:C2	1:CA:710:G:N3	2.83	0.46
1:CA:731:G:H5'	1:CA:766:A:H4'	1.97	0.46
1:CA:774:G:C6	1:CA:775:G:C5	3.03	0.46
1:CA:1060:U:H5'	10:CJ:53:ILE:HG23	1.98	0.46
1:CA:1202:U:H2'	1:CA:1203:C:O4'	2.15	0.46
5:CE:77:ASN:O	5:CE:80:THR:HG22	2.15	0.46
6:CF:62:MET:O	6:CF:63:ASN:HB2	2.15	0.46
7:CG:116:MET:HA	7:CG:119:ARG:HD3	1.97	0.46
8:CH:66:PHE:CE2	8:CH:67:GLN:OE1	2.67	0.46
13:CM:3:ARG:HA	13:CM:8:ASN:O	2.15	0.46
13:CM:85:CYS:HB3	19:CS:74:PHE:CZ	2.50	0.46
15:CO:3:LEU:HD13	15:CO:35:GLN:HG2	1.96	0.46
22:DA:54:G:C6	22:DA:55:G:N7	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:276:U:O2'	22:DA:278:A:N7	2.49	0.46
22:DA:609:A:C6	22:DA:610:C:O2	2.68	0.46
22:DA:618:G:C2	22:DA:619:G:H1'	2.50	0.46
22:DA:1364:G:H2'	22:DA:1365:A:C5'	2.46	0.46
22:DA:2064:C:H2'	22:DA:2065:C:C6	2.50	0.46
22:DA:2079:U:C2'	22:DA:2080:A:O4'	2.62	0.46
22:DA:2331:G:N2	22:DA:2385:C:N1	2.64	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
25:DD:56:LYS:O	25:DD:57:ALA:C	2.53	0.46
27:DF:117:LEU:HB3	27:DF:130:MET:SD	2.56	0.46
31:DJ:4:PHE:CD2	38:DQ:100:VAL:HG11	2.50	0.46
32:DK:105:ARG:N	32:DK:122:VAL:OXT	2.48	0.46
33:DL:54:GLN:HG2	33:DL:55:MET:N	2.30	0.46
34:DM:136:MET:HE2	43:DV:57:TYR:CD2	2.49	0.46
41:DT:7:LEU:HD21	41:DT:45:ALA:HB3	1.98	0.46
42:DU:96:PHE:CE1	42:DU:103:ILE:HG13	2.51	0.46
1:AA:553:A:C2'	1:AA:554:A:H5'	2.45	0.46
1:AA:559:A:H2'	1:AA:559:A:N3	2.29	0.46
1:AA:652:U:C4	1:AA:752:G:N3	2.83	0.46
1:AA:896:C:O2'	1:AA:897:C:H5'	2.15	0.46
1:AA:983:A:H5''	1:AA:984:C:OP2	2.14	0.46
2:AB:34:ALA:O	2:AB:35:ARG:C	2.53	0.46
2:AB:132:LYS:O	2:AB:136:MET:HB2	2.15	0.46
2:AB:200:ILE:O	2:AB:201:PRO:O	2.33	0.46
3:AC:113:ALA:HA	3:AC:200:VAL:HG21	1.98	0.46
4:AD:107:PHE:CD1	4:AD:145:ILE:HD13	2.51	0.46
4:AD:122:ALA:O	4:AD:123:ILE:CG2	2.62	0.46
5:AE:116:GLU:HG2	5:AE:117:VAL:N	2.31	0.46
8:AH:11:LEU:HD11	8:AH:127:CYS:CB	2.45	0.46
8:AH:105:SER:O	8:AH:123:GLY:HA3	2.15	0.46
14:AN:93:ILE:HD12	14:AN:96:LEU:HD23	1.96	0.46
15:AO:56:LEU:HD12	15:AO:56:LEU:O	2.15	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
21:AU:34:ARG:NE	21:AU:35:ARG:HB2	2.30	0.46
22:BA:720:U:H2'	22:BA:721:A:C8	2.51	0.46
22:BA:826:U:O2'	33:BL:53:GLY:CA	2.60	0.46
22:BA:927:A:O2'	47:BZ:39:GLU:OE2	2.25	0.46
22:BA:973:A:H5''	39:BR:81:LYS:HE3	1.97	0.46
22:BA:974:G:C8	22:BA:990:A:N6	2.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1192:G:O2'	22:BA:1193:G:H5'	2.16	0.46
22:BA:1886:U:O2'	22:BA:1887:C:H5'	2.15	0.46
22:BA:1958:C:C2'	22:BA:1959:G:H5'	2.45	0.46
22:BA:2076:U:O2	22:BA:2076:U:C4'	2.63	0.46
22:BA:2154:A:H2'	22:BA:2155:U:C5	2.51	0.46
22:BA:2310:C:C5	27:BF:77:PHE:CZ	3.03	0.46
22:BA:2584:U:C2'	22:BA:2585:U:H5'	2.43	0.46
23:BB:75:G:H2'	23:BB:76:G:O4'	2.15	0.46
26:BE:7:ASP:O	26:BE:9:GLN:N	2.48	0.46
29:BH:80:ILE:HG21	29:BH:94:ILE:CG1	2.45	0.46
29:BH:132:PHE:CD2	29:BH:142:VAL:CG2	2.99	0.46
53:B5:28:ARG:O	53:B5:28:ARG:HG3	2.15	0.46
53:B5:73:VAL:CG2	53:B5:162:ILE:CB	2.93	0.46
53:B5:78:ILE:HG22	53:B5:123:ALA:HA	1.96	0.46
1:CA:999:C:H2'	1:CA:1000:A:C8	2.50	0.46
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
3:CC:110:GLU:C	3:CC:111:LEU:HD22	2.35	0.46
3:CC:126:ARG:O	3:CC:127:ARG:CB	2.63	0.46
5:CE:109:GLY:O	5:CE:110:ALA:CB	2.63	0.46
6:CF:80:PHE:CG	6:CF:80:PHE:O	2.68	0.46
7:CG:14:PRO:O	7:CG:15:ASP:C	2.54	0.46
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.98	0.46
19:CS:55:ARG:NE	19:CS:79:THR:CG2	2.79	0.46
22:DA:52:A:C2	22:DA:178:G:N3	2.83	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
22:DA:593:U:C2	22:DA:594:U:C5	3.03	0.46
22:DA:784:G:H5''	24:DC:226:ASN:OD1	2.14	0.46
22:DA:864:G:N2	22:DA:913:U:C2	2.83	0.46
22:DA:1362:C:H2'	22:DA:1363:C:C5'	2.46	0.46
22:DA:1544:A:N6	22:DA:1545:A:C6	2.83	0.46
22:DA:2063:C:C4'	55:DA:3001:DOL:H343	2.43	0.46
22:DA:2370:G:O2'	49:D1:44:ARG:NH1	2.49	0.46
22:DA:2892:G:H5''	22:DA:2894:G:N2	2.31	0.46
24:DC:76:ALA:HB2	24:DC:96:TYR:CD2	2.49	0.46
35:DN:31:HIS:O	35:DN:33:ILE:HG22	2.16	0.46
37:DP:53:ARG:N	37:DP:57:SER:OG	2.48	0.46
44:DW:70:GLU:O	44:DW:79:PHE:N	2.46	0.46
46:DY:45:GLN:O	46:DY:47:ARG:N	2.48	0.46
49:D1:39:PHE:CG	49:D1:40:ASP:N	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:73:C:HO2'	1:AA:74:A:C5'	2.28	0.46
1:AA:199:A:C2	1:AA:200:G:C4	3.04	0.46
1:AA:501:C:H2'	1:AA:502:A:C8	2.49	0.46
1:AA:582:C:N3	1:AA:583:A:C8	2.84	0.46
1:AA:867:G:O2'	1:AA:873:A:N1	2.38	0.46
1:AA:994:A:N1	1:AA:1047:G:H4'	2.30	0.46
1:AA:1026:G:N1	1:AA:1035:A:C2	2.84	0.46
8:AH:47:GLU:N	8:AH:64:LYS:HG3	2.31	0.46
10:AJ:41:PRO:O	10:AJ:71:LEU:O	2.33	0.46
10:AJ:52:LEU:CB	14:AN:81:ARG:HE	2.28	0.46
11:AK:23:ILE:HD11	11:AK:86:VAL:HG13	1.97	0.46
11:AK:112:ASP:HB2	21:AU:20:LYS:HD2	1.97	0.46
20:AT:68:HIS:C	20:AT:69:LYS:HG3	2.34	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
22:BA:118:A:C8	22:BA:119:A:C8	3.03	0.46
22:BA:307:G:N2	22:BA:309:A:H3'	2.30	0.46
22:BA:713:G:C6	22:BA:714:U:C4	3.03	0.46
22:BA:776:G:H4'	22:BA:777:G:O5'	2.15	0.46
22:BA:1087:G:C2'	22:BA:1089:A:H1'	2.45	0.46
22:BA:1293:C:H2'	22:BA:1294:U:O4'	2.15	0.46
22:BA:1533:C:H5'	22:BA:1534:U:OP2	2.15	0.46
22:BA:1606:C:O2'	22:BA:1607:C:O5'	2.31	0.46
22:BA:1871:A:C8	22:BA:1872:A:C6	3.03	0.46
22:BA:2233:U:H2'	22:BA:2234:G:C8	2.50	0.46
22:BA:2410:G:C2	22:BA:2411:A:H1'	2.50	0.46
24:BC:195:VAL:HG12	24:BC:196:GLY:N	2.29	0.46
25:BD:61:THR:HB	25:BD:63:PRO:HD2	1.97	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
27:BF:58:ALA:O	27:BF:61:SER:O	2.34	0.46
33:BL:57:LEU:HD22	51:B3:54:ASP:HB3	1.98	0.46
42:BU:4:LYS:O	42:BU:83:VAL:HG21	2.16	0.46
42:BU:73:PHE:CZ	42:BU:78:GLY:HA2	2.50	0.46
1:CA:155:A:C2	1:CA:167:A:C5	3.03	0.46
1:CA:955:U:H2'	1:CA:956:U:O4'	2.14	0.46
1:CA:957:U:O3'	19:CS:79:THR:OG1	2.33	0.46
1:CA:1279:G:H5''	10:CJ:9:ARG:NH2	2.30	0.46
1:CA:1521:C:C2	1:CA:1522:U:C5	3.03	0.46
2:CB:167:ASP:HA	2:CB:170:HIS:HB3	1.97	0.46
4:CD:142:VAL:HG12	4:CD:181:THR:OG1	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:40:ALA:O	13:CM:41:GLU:C	2.54	0.46
13:CM:91:HIS:O	13:CM:109:ARG:NH2	2.49	0.46
15:CO:39:LEU:O	15:CO:42:HIS:HB3	2.16	0.46
20:CT:21:ASN:O	20:CT:25:ARG:HB3	2.15	0.46
22:DA:311:A:OP1	22:DA:332:A:C2	2.69	0.46
22:DA:349:U:C2'	22:DA:350:G:H5'	2.45	0.46
22:DA:398:C:OP2	45:DX:53:ALA:HB3	2.16	0.46
22:DA:528:A:N1	22:DA:2042:A:H2'	2.30	0.46
22:DA:630:G:H3'	22:DA:631:A:H5''	1.97	0.46
22:DA:883:G:N2	22:DA:894:U:O2	2.49	0.46
22:DA:1208:C:C5	22:DA:1209:U:C5	3.03	0.46
22:DA:1248:G:C4	38:DQ:3:ARG:HG3	2.50	0.46
22:DA:1347:A:C5	22:DA:1348:C:C5	3.03	0.46
22:DA:1351:C:C2	22:DA:1381:G:C2	3.04	0.46
22:DA:1678:A:C4	22:DA:1679:A:C8	3.03	0.46
22:DA:1753:G:N1	22:DA:1756:G:C2	2.84	0.46
22:DA:2056:G:H2'	22:DA:2056:G:N3	2.30	0.46
22:DA:2209:G:C2	22:DA:2216:G:C2	3.04	0.46
22:DA:2741:A:H2'	22:DA:2742:G:H5'	1.98	0.46
22:DA:2748:A:C2	22:DA:2757:A:C5	3.03	0.46
24:DC:72:ASP:OD1	24:DC:189:ARG:NH1	2.48	0.46
24:DC:246:THR:C	24:DC:248:TRP:N	2.69	0.46
29:DH:41:LYS:O	29:DH:44:ILE:HG12	2.15	0.46
30:DI:49:ILE:O	30:DI:50:GLU:HB2	2.16	0.46
33:DL:95:LEU:O	33:DL:100:ILE:HG23	2.16	0.46
35:DN:29:VAL:HG13	35:DN:83:LEU:HD11	1.96	0.46
37:DP:65:SER:O	37:DP:66:ASN:C	2.53	0.46
46:DY:18:LEU:O	46:DY:22:LEU:HB3	2.15	0.46
1:AA:36:C:H2'	1:AA:37:U:O4'	2.15	0.46
1:AA:67:C:O2'	1:AA:171:A:H1'	2.15	0.46
1:AA:832:G:C4	1:AA:833:G:C8	3.03	0.46
1:AA:859:G:H2'	1:AA:860:A:H8	1.76	0.46
1:AA:919:A:O2'	1:AA:920:U:H5'	2.15	0.46
1:AA:1253:G:C4	1:AA:1254:A:C8	3.03	0.46
2:AB:50:PHE:CD2	2:AB:51:ASN:OD1	2.69	0.46
2:AB:163:VAL:HG22	2:AB:185:ALA:HB1	1.98	0.46
3:AC:84:VAL:HG13	3:AC:101:ILE:HG21	1.98	0.46
3:AC:130:PHE:CZ	3:AC:131:ARG:HD3	2.51	0.46
4:AD:124:MET:HG3	4:AD:146:ARG:HG2	1.97	0.46
5:AE:136:VAL:HG22	5:AE:137:VAL:N	2.30	0.46
6:AF:45:ARG:HG2	6:AF:46:GLN:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:71:PRO:O	7:AG:96:ARG:HG3	2.16	0.46
11:AK:35:THR:OG1	11:AK:41:ALA:N	2.48	0.46
12:AL:29:GLN:HB2	12:AL:82:ILE:O	2.15	0.46
17:AQ:17:MET:CG	17:AQ:20:SER:HB3	2.46	0.46
22:BA:197:A:H62	22:BA:2430:A:H2'	1.81	0.46
22:BA:198:C:O5'	22:BA:198:C:H6	1.98	0.46
22:BA:422:A:C2	22:BA:423:A:C4	3.04	0.46
22:BA:548:G:O2'	22:BA:549:G:C2	2.67	0.46
22:BA:616:A:H2'	22:BA:617:G:O4'	2.16	0.46
22:BA:780:G:H2'	22:BA:782:A:N7	2.31	0.46
22:BA:1190:G:OP1	33:BL:32:GLY:CA	2.62	0.46
22:BA:1820:U:O2	24:BC:200:HIS:HB3	2.15	0.46
22:BA:2551:C:OP1	57:BA:3434:HOH:O	2.21	0.46
23:BB:116:G:H4'	36:BO:54:VAL:CG1	2.44	0.46
25:BD:103:ASP:OD2	25:BD:104:VAL:N	2.49	0.46
27:BF:104:ILE:HG22	27:BF:176:PRO:CD	2.46	0.46
29:BH:37:VAL:CG2	29:BH:38:PRO:HD2	2.45	0.46
48:B0:13:ARG:O	48:B0:17:ARG:HG3	2.15	0.46
1:CA:295:C:C4	1:CA:296:U:C5	3.03	0.46
1:CA:373:A:O2'	1:CA:374:A:H5'	2.16	0.46
1:CA:414:A:C2	1:CA:415:A:C4	3.03	0.46
1:CA:421:U:OP1	1:CA:421:U:C4'	2.63	0.46
1:CA:674:G:OP1	6:CF:86:ARG:NH2	2.44	0.46
1:CA:756:C:H2'	1:CA:757:U:O5'	2.16	0.46
1:CA:1157:A:H5'	1:CA:1158:C:C6	2.50	0.46
3:CC:36:ASP:C	3:CC:38:LYS:H	2.19	0.46
9:CI:56:ASP:C	9:CI:57:MET:HG3	2.36	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
22:DA:777:G:N3	22:DA:778:G:C8	2.83	0.46
22:DA:1268:A:H2'	22:DA:1269:A:O4'	2.16	0.46
22:DA:1289:C:O2'	22:DA:1330:C:H4'	2.15	0.46
22:DA:1438:U:C4	22:DA:1552:A:C2	3.04	0.46
22:DA:1799:G:O2'	24:DC:180:GLU:OE2	2.26	0.46
22:DA:1833:C:C4	22:DA:1834:U:C4	3.04	0.46
22:DA:2199:A:C5	22:DA:2225:A:N1	2.84	0.46
22:DA:2201:G:H2'	22:DA:2202:U:C6	2.51	0.46
23:DB:100:G:H2'	23:DB:101:A:O4'	2.15	0.46
24:DC:68:LYS:HG2	24:DC:151:GLY:HA2	1.97	0.46
24:DC:260:ASN:OD1	24:DC:263:THR:N	2.45	0.46
25:DD:18:ASP:OD2	25:DD:18:ASP:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DF:163:ASP:N	27:DF:163:ASP:OD1	2.49	0.46
32:DK:121:GLU:HG2	32:DK:122:VAL:HG23	1.97	0.46
33:DL:59:ARG:CZ	33:DL:59:ARG:HB3	2.44	0.46
36:DO:27:VAL:HG21	36:DO:40:ILE:HD12	1.98	0.46
36:DO:51:ALA:HB1	36:DO:77:ALA:CB	2.45	0.46
42:DU:9:ASP:OD2	42:DU:10:GLU:O	2.34	0.46
46:DY:1:MET:HA	46:DY:4:LYS:HB2	1.97	0.46
46:DY:21:LEU:HA	46:DY:25:GLN:HB3	1.98	0.46
49:D1:4:GLY:O	49:D1:6:ARG:N	2.48	0.46
1:AA:345:C:O2'	32:BK:116:ILE:CD1	2.63	0.46
1:AA:515:G:O6	57:AA:1847:HOH:O	2.21	0.46
1:AA:529:G:H4'	1:AA:533:A:C2	2.50	0.46
1:AA:1084:G:C5	1:AA:1085:U:C4	3.02	0.46
1:AA:1107:C:C2	1:AA:1108:G:C8	3.04	0.46
5:AE:14:LYS:NZ	5:AE:116:GLU:OE2	2.48	0.46
9:AI:20:PHE:O	9:AI:63:LEU:HA	2.15	0.46
9:AI:127:PHE:O	9:AI:127:PHE:CD2	2.69	0.46
16:AP:20:VAL:HG21	16:AP:32:PHE:CG	2.51	0.46
22:BA:140:C:O4'	22:BA:140:C:O2	2.34	0.46
22:BA:445:C:OP1	38:BQ:2:ALA:N	2.48	0.46
22:BA:528:A:H2	22:BA:2043:C:C5'	2.28	0.46
22:BA:1062:G:OP1	22:BA:1070:A:H4'	2.16	0.46
22:BA:1916:A:O3'	22:BA:1917:U:H4'	2.16	0.46
22:BA:1925:C:C4'	22:BA:1926:U:OP1	2.55	0.46
22:BA:2080:A:H5'	45:BX:19:SER:HB2	1.97	0.46
22:BA:2190:G:N1	22:BA:2191:A:C4	2.84	0.46
22:BA:2284:A:C5	22:BA:2285:C:C5	3.03	0.46
22:BA:2518:A:H2'	22:BA:2518:A:N3	2.30	0.46
22:BA:2637:U:H2'	22:BA:2638:G:H5'	1.97	0.46
24:BC:88:SER:HB2	24:BC:200:HIS:CD2	2.51	0.46
26:BE:134:LEU:O	26:BE:135:ALA:C	2.53	0.46
30:BI:57:VAL:HG22	30:BI:58:VAL:N	2.30	0.46
31:BJ:31:GLU:HG3	31:BJ:142:ILE:HD11	1.97	0.46
37:BP:58:ALA:HB1	37:BP:74:PHE:O	2.15	0.46
40:BS:36:LEU:CD1	40:BS:47:VAL:HG12	2.46	0.46
53:B5:36:ALA:O	53:B5:37:LYS:HB2	2.15	0.46
1:CA:146:G:N2	1:CA:147:G:H1'	2.30	0.46
1:CA:577:G:C8	1:CA:816:A:C2	3.03	0.46
7:CG:123:GLU:OE1	7:CG:123:GLU:HA	2.16	0.46
9:CI:90:TYR:O	9:CI:91:ASP:O	2.34	0.46
10:CJ:53:ILE:HD11	14:CN:85:ARG:NH1	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:100:LEU:O	11:CK:103:ALA:N	2.48	0.46
14:CN:61:ARG:O	14:CN:62:ASN:CB	2.64	0.46
22:DA:40:U:C5	22:DA:41:C:N4	2.83	0.46
22:DA:744:U:H4'	22:DA:1658:C:H4'	1.98	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
22:DA:1281:G:C2'	22:DA:1282:U:H5'	2.45	0.46
22:DA:1306:C:C2	22:DA:1307:A:C8	3.03	0.46
22:DA:1593:A:O2'	22:DA:1594:U:H5'	2.15	0.46
22:DA:1662:U:O2	22:DA:2687:U:C5'	2.64	0.46
22:DA:1709:U:H2'	22:DA:1710:G:C8	2.51	0.46
22:DA:1926:U:H1'	22:DA:1929:G:C6	2.51	0.46
22:DA:2170:A:C2	22:DA:2171:A:C6	3.03	0.46
22:DA:2477:U:O4	52:D4:10:LEU:HD21	2.16	0.46
22:DA:2503:A:H5'	22:DA:2503:A:N3	2.31	0.46
22:DA:2511:U:C4	22:DA:2512:C:C5	3.04	0.46
22:DA:2848:G:OP2	37:DP:95:ALA:N	2.48	0.46
22:DA:2852:G:H2'	22:DA:2853:C:O4'	2.15	0.46
24:DC:87:ARG:HB3	24:DC:87:ARG:CZ	2.44	0.46
24:DC:107:PRO:HB3	24:DC:142:HIS:CE1	2.49	0.46
27:DF:4:LEU:O	27:DF:8:TYR:HB3	2.15	0.46
35:DN:85:PRO:O	35:DN:86:ARG:C	2.52	0.46
40:DS:29:VAL:HG11	40:DS:55:ILE:HD11	1.97	0.46
49:D1:19:HIS:C	49:D1:19:HIS:CD2	2.89	0.46
1:AA:670:G:C2'	1:AA:671:G:O5'	2.63	0.46
1:AA:849:G:C6	1:AA:850:U:N3	2.84	0.46
1:AA:1070:U:O2	1:AA:1071:C:C6	2.68	0.46
1:AA:1075:U:OP1	2:AB:102:THR:HG21	2.15	0.46
1:AA:1311:A:H2'	1:AA:1312:G:O5'	2.16	0.46
2:AB:222:ARG:HB3	2:AB:222:ARG:NH1	2.31	0.46
3:AC:149:ILE:HG12	3:AC:150:LYS:N	2.30	0.46
5:AE:82:GLN:OE1	5:AE:148:ASN:O	2.33	0.46
12:AL:3:THR:HG22	12:AL:4:VAL:N	2.30	0.46
21:AU:29:LEU:HD23	21:AU:29:LEU:O	2.16	0.46
21:AU:53:VAL:O	21:AU:54:LYS:HB2	2.15	0.46
22:BA:170:U:H2'	22:BA:171:U:H6	1.79	0.46
22:BA:323:C:C4	22:BA:333:G:C8	3.04	0.46
22:BA:481:G:C2	22:BA:507:A:N3	2.83	0.46
22:BA:637:A:H4'	22:BA:638:G:O5'	2.15	0.46
22:BA:783:A:H2'	22:BA:784:G:O5'	2.15	0.46
22:BA:1107:G:H2'	22:BA:1108:U:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1157:G:N2	22:BA:1158:C:C2	2.84	0.46
22:BA:1188:U:C2'	22:BA:1189:A:H5'	2.46	0.46
22:BA:1956:U:H2'	22:BA:1957:C:H5'	1.98	0.46
23:BB:34:A:N3	23:BB:36:C:N4	2.61	0.46
24:BC:142:HIS:CD2	24:BC:142:HIS:C	2.89	0.46
24:BC:161:TYR:CD2	24:BC:194:GLU:HG2	2.51	0.46
25:BD:186:LEU:HD21	37:BP:4:ILE:HG21	1.97	0.46
29:BH:94:ILE:HG23	29:BH:98:ASP:HB2	1.98	0.46
32:BK:66:LYS:HE3	32:BK:66:LYS:O	2.16	0.46
35:BN:32:GLU:OE1	35:BN:118:ARG:HA	2.14	0.46
37:BP:29:LYS:HD3	37:BP:40:LEU:HD23	1.98	0.46
52:B4:10:LEU:HD12	52:B4:33:HIS:CD2	2.51	0.46
53:B5:200:HIS:O	53:B5:201:LYS:C	2.54	0.46
1:CA:505:G:C2	1:CA:506:G:C5	3.04	0.46
1:CA:718:A:C4	11:CK:118:HIS:CD2	3.03	0.46
1:CA:862:C:N3	1:CA:863:U:C5	2.83	0.46
1:CA:1009:U:C2	1:CA:1021:A:N6	2.84	0.46
1:CA:1105:A:C2	1:CA:1106:G:C5	3.04	0.46
1:CA:1259:C:N4	1:CA:1260:G:C4	2.84	0.46
2:CB:166:ALA:HB2	2:CB:187:VAL:HB	1.98	0.46
5:CE:137:VAL:O	5:CE:138:ARG:CG	2.64	0.46
6:CF:93:LYS:HD3	6:CF:93:LYS:N	2.31	0.46
9:CI:57:MET:HA	9:CI:60:LYS:HB3	1.98	0.46
14:CN:46:LEU:HG	19:CS:10:PHE:CD2	2.51	0.46
16:CP:6:LEU:CD1	16:CP:71:VAL:CG2	2.93	0.46
16:CP:23:ASP:OD2	16:CP:25:ARG:HG3	2.16	0.46
22:DA:27:G:HO2'	22:DA:28:A:P	2.34	0.46
22:DA:58:G:C4	22:DA:70:G:N2	2.83	0.46
22:DA:337:C:C2	22:DA:338:G:H1'	2.51	0.46
22:DA:412:A:H2'	22:DA:413:C:H5'	1.97	0.46
22:DA:600:G:C5	22:DA:601:C:C4	3.04	0.46
22:DA:1332:G:C6	22:DA:1609:A:N7	2.84	0.46
22:DA:1361:G:C6	22:DA:1362:C:C5	3.04	0.46
22:DA:1677:A:N6	22:DA:1678:A:C6	2.83	0.46
22:DA:1845:G:OP1	24:DC:256:LYS:NZ	2.43	0.46
22:DA:2010:G:C6	22:DA:2011:U:N3	2.84	0.46
22:DA:2209:G:C6	22:DA:2210:U:C4	3.03	0.46
22:DA:2318:G:C6	22:DA:2319:G:C6	3.04	0.46
23:DB:52:A:C5	36:DO:33:ARG:NH2	2.83	0.46
28:DG:167:GLU:CG	28:DG:169:VAL:HG23	2.45	0.46
29:DH:34:GLY:O	29:DH:35:LYS:CG	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:60:GLU:HA	29:DH:60:GLU:OE2	2.15	0.46
30:DI:37:GLU:OE1	30:DI:65:ARG:NH2	2.49	0.46
42:DU:12:ILE:CG2	42:DU:80:ALA:HB2	2.46	0.46
42:DU:33:LYS:HB3	42:DU:64:ALA:HB1	1.97	0.46
47:DZ:7:ILE:O	47:DZ:36:VAL:N	2.49	0.46
51:D3:31:HIS:CE1	51:D3:32:ILE:HD12	2.50	0.46
1:AA:102:G:N1	1:AA:103:U:C4	2.84	0.46
1:AA:188:C:O2	1:AA:188:C:C2'	2.63	0.46
1:AA:207:C:H2'	1:AA:208:U:O2	2.16	0.46
1:AA:275:G:O3'	17:AQ:17:MET:HE2	2.15	0.46
1:AA:546:A:P	4:AD:69:GLU:HB2	2.56	0.46
1:AA:1053:G:H4'	1:AA:1054:C:H5''	1.98	0.46
1:AA:1190:G:OP2	3:AC:5:VAL:HB	2.16	0.46
3:AC:64:ILE:CG2	3:AC:99:ALA:HB2	2.46	0.46
4:AD:26:ARG:HD2	4:AD:31:LYS:CE	2.46	0.46
5:AE:45:ARG:HA	5:AE:72:ILE:O	2.16	0.46
5:AE:148:ASN:ND2	8:AH:73:GLU:OE2	2.49	0.46
9:AI:120:LYS:HG3	9:AI:123:ARG:HB2	1.97	0.46
10:AJ:73:LEU:O	10:AJ:74:VAL:CB	2.64	0.46
11:AK:102:ALA:O	11:AK:103:ALA:C	2.54	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
16:AP:23:ASP:OD1	16:AP:23:ASP:C	2.54	0.46
17:AQ:48:ASP:OD2	17:AQ:48:ASP:O	2.34	0.46
17:AQ:80:GLU:C	17:AQ:81:LYS:HD3	2.36	0.46
19:AS:3:ARG:O	19:AS:4:SER:HB2	2.15	0.46
21:AU:12:PHE:CD1	21:AU:16:LEU:HD11	2.50	0.46
21:AU:47:ARG:HA	21:AU:47:ARG:HE	1.81	0.46
22:BA:25:U:C2'	22:BA:26:G:H5'	2.46	0.46
22:BA:189:G:P	45:BX:26:LYS:HD2	2.55	0.46
22:BA:251:A:H2'	22:BA:252:G:O4'	2.16	0.46
22:BA:310:A:O2'	22:BA:311:A:P	2.73	0.46
22:BA:340:A:H2'	22:BA:341:C:O4'	2.15	0.46
22:BA:947:A:O2'	22:BA:984:A:H2	1.97	0.46
22:BA:1174:U:O2	22:BA:1174:U:O4'	2.33	0.46
22:BA:1266:G:OP2	48:B0:17:ARG:NE	2.45	0.46
22:BA:1381:G:H1'	22:BA:1571:A:N1	2.31	0.46
22:BA:2256:G:O2'	22:BA:2257:U:H5'	2.15	0.46
27:BF:2:ALA:HB2	27:BF:94:GLU:OE1	2.15	0.46
29:BH:90:LEU:HD23	29:BH:93:SER:HA	1.97	0.46
30:BI:79:LEU:HD22	30:BI:109:ILE:HG23	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:101:ILE:HG13	33:BL:102:GLY:N	2.30	0.46
39:BR:39:LEU:CA	39:BR:49:ILE:HG23	2.45	0.46
1:CA:110:C:H2'	1:CA:111:G:O4'	2.16	0.46
1:CA:170:U:O2'	1:CA:171:A:H5'	2.15	0.46
1:CA:461:A:H2'	1:CA:462:G:O4'	2.16	0.46
1:CA:513:C:H2'	1:CA:514:C:C6	2.51	0.46
1:CA:731:G:O2'	1:CA:732:C:H5'	2.16	0.46
1:CA:802:A:C2	1:CA:803:G:C1'	2.98	0.46
1:CA:811:C:C4	1:CA:812:G:C6	3.04	0.46
1:CA:1157:A:C5	1:CA:1180:A:C6	3.03	0.46
1:CA:1386:G:C2	1:CA:1387:G:N7	2.84	0.46
2:CB:175:GLU:O	2:CB:179:LEU:HD22	2.15	0.46
4:CD:36:GLN:O	4:CD:37:ALA:HB2	2.15	0.46
14:CN:46:LEU:CD2	19:CS:10:PHE:CD2	2.99	0.46
22:DA:36:G:H4'	22:DA:451:U:C2	2.51	0.46
22:DA:160:A:C6	22:DA:161:A:C6	3.04	0.46
22:DA:349:U:O2'	22:DA:350:G:H5'	2.15	0.46
22:DA:500:G:N2	22:DA:502:A:C8	2.83	0.46
22:DA:579:G:C2	22:DA:1262:A:C5	3.04	0.46
22:DA:695:G:C6	22:DA:768:G:C5	3.04	0.46
22:DA:1545:A:H2'	22:DA:1546:G:O4'	2.15	0.46
22:DA:1712:U:O4	22:DA:1713:A:C2	2.69	0.46
22:DA:1870:C:C3'	22:DA:1871:A:H5'	2.46	0.46
22:DA:1936:A:H2	22:DA:1943:U:H3	1.63	0.46
22:DA:2345:G:N3	22:DA:2381:A:H2'	2.30	0.46
22:DA:2412:A:H3'	22:DA:2413:G:H8	1.80	0.46
22:DA:2715:C:C4	22:DA:2716:C:C5	3.04	0.46
22:DA:2804:U:C4	22:DA:2805:C:C4	3.03	0.46
35:DN:71:ARG:HH21	35:DN:71:ARG:HG3	1.81	0.46
37:DP:75:GLN:HB2	37:DP:78:SER:HB2	1.98	0.46
38:DQ:90:ILE:CG2	38:DQ:94:ILE:CG2	2.94	0.46
40:DS:66:ILE:O	40:DS:69:LEU:HB2	2.16	0.46
1:AA:202:G:C2	1:AA:216:U:O2	2.69	0.46
1:AA:258:G:C5	1:AA:259:G:C8	3.03	0.46
1:AA:273:U:H2'	1:AA:274:A:H5'	1.97	0.46
1:AA:464:U:N3	1:AA:466:A:H5''	2.31	0.46
1:AA:587:G:N2	1:AA:755:G:C8	2.84	0.46
1:AA:731:G:OP1	1:AA:766:A:H1'	2.15	0.46
1:AA:773:G:H2'	1:AA:774:G:O4'	2.15	0.46
1:AA:787:A:C5	1:AA:788:U:C5	3.04	0.46
1:AA:1048:G:N3	1:AA:1050:G:C8	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1080:A:OP1	5:AE:52:LYS:HE3	2.16	0.46
4:AD:34:ILE:HG12	4:AD:35:GLU:N	2.30	0.46
7:AG:13:LEU:HA	7:AG:14:PRO:HD2	1.86	0.46
7:AG:48:GLU:O	7:AG:51:ALA:HB3	2.15	0.46
8:AH:10:MET:HE1	8:AH:33:LYS:CB	2.45	0.46
10:AJ:91:ASP:O	10:AJ:92:LEU:HD12	2.15	0.46
11:AK:55:SER:O	11:AK:58:SER:N	2.48	0.46
20:AT:35:VAL:CG1	20:AT:79:LEU:HD22	2.46	0.46
22:BA:2516:A:O2'	22:BA:2517:C:H5'	2.15	0.46
22:BA:2609:U:O2'	22:BA:2610:C:H5'	2.16	0.46
23:BB:37:C:C5	23:BB:38:C:C5	3.04	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
27:BF:17:MET:HA	27:BF:17:MET:HE3	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
34:BM:135:VAL:HG23	34:BM:135:VAL:O	2.16	0.46
35:BN:31:HIS:C	35:BN:33:ILE:H	2.19	0.46
35:BN:65:LEU:HD11	35:BN:69:ARG:HH21	1.78	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
1:CA:620:C:N1	4:CD:132:ILE:HD13	2.30	0.46
1:CA:684:U:C2'	11:CK:40:ASN:O	2.64	0.46
1:CA:728:A:N1	1:CA:729:A:C6	2.84	0.46
1:CA:798:U:C2'	1:CA:799:G:O5'	2.64	0.46
1:CA:1227:A:OP2	13:CM:110:LYS:HD2	2.15	0.46
3:CC:111:LEU:HD22	3:CC:111:LEU:N	2.31	0.46
4:CD:26:ARG:CG	4:CD:27:ALA:N	2.74	0.46
4:CD:58:LYS:CB	4:CD:200:ILE:HB	2.46	0.46
4:CD:146:ARG:O	4:CD:150:LYS:HB2	2.16	0.46
6:CF:86:ARG:CG	6:CF:86:ARG:NH1	2.77	0.46
7:CG:99:LEU:HB3	7:CG:103:TRP:CZ2	2.50	0.46
13:CM:23:TYR:CD2	13:CM:23:TYR:O	2.69	0.46
22:DA:38:A:C2	22:DA:442:G:O6	2.68	0.46
22:DA:477:A:C2'	22:DA:478:A:O5'	2.63	0.46
22:DA:488:G:N1	22:DA:491:G:OP2	2.49	0.46
22:DA:583:G:N2	22:DA:1258:U:C2	2.84	0.46
22:DA:601:C:H2'	22:DA:602:A:O4'	2.16	0.46
22:DA:704:G:H1'	22:DA:726:G:N2	2.31	0.46
22:DA:973:A:O4'	22:DA:1188:U:C6	2.69	0.46
22:DA:1062:G:C6	22:DA:1063:G:O6	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1364:G:N7	45:DX:2:SER:N	2.64	0.46
22:DA:1425:G:H2'	22:DA:1426:G:O4'	2.16	0.46
22:DA:1585:C:C5	22:DA:1586:A:N7	2.84	0.46
22:DA:1861:G:N1	22:DA:1882:U:O2	2.48	0.46
22:DA:2499:C:C4	22:DA:2500:U:O4	2.69	0.46
22:DA:2584:U:OP2	22:DA:2585:U:C5	2.68	0.46
22:DA:2853:C:H2'	22:DA:2854:G:C8	2.51	0.46
22:DA:2893:A:O4'	22:DA:2894:G:C2	2.68	0.46
25:DD:177:VAL:CG2	25:DD:187:LEU:HD11	2.46	0.46
28:DG:96:ALA:O	28:DG:128:GLN:HA	2.16	0.46
28:DG:123:ALA:HB2	28:DG:133:LEU:HA	1.98	0.46
34:DM:97:GLN:OE1	34:DM:97:GLN:N	2.49	0.46
35:DN:43:GLU:OE1	35:DN:43:GLU:HA	2.15	0.46
42:DU:12:ILE:HG21	42:DU:80:ALA:HB2	1.96	0.46
42:DU:57:GLY:O	42:DU:59:VAL:HG23	2.16	0.46
42:DU:85:PHE:N	42:DU:85:PHE:CD1	2.84	0.46
52:D4:25:VAL:HB	52:D4:35:GLN:HB2	1.98	0.46
1:AA:23:C:C4	1:AA:24:U:C5	3.04	0.46
1:AA:459:A:N6	1:AA:460:A:N6	2.63	0.46
1:AA:730:G:H2'	1:AA:730:G:N3	2.30	0.46
1:AA:826:C:H5'	8:AH:13:ARG:CZ	2.46	0.46
1:AA:850:U:H2'	1:AA:851:G:O5'	2.16	0.46
1:AA:935:A:C2	1:AA:936:C:C2	3.04	0.46
1:AA:1005:A:H4'	1:AA:1037:C:H1'	1.98	0.46
1:AA:1063:C:H2'	1:AA:1064:G:C8	2.51	0.46
2:AB:43:LEU:O	2:AB:46:THR:OG1	2.34	0.46
2:AB:149:GLY:O	2:AB:151:ILE:N	2.49	0.46
3:AC:167:TRP:C	3:AC:167:TRP:CE3	2.90	0.46
4:AD:107:PHE:CG	4:AD:145:ILE:HD11	2.50	0.46
5:AE:107:ALA:HB1	5:AE:125:ALA:HB3	1.98	0.46
9:AI:13:LYS:O	9:AI:15:SER:N	2.44	0.46
14:AN:12:LYS:O	14:AN:16:LEU:HG	2.15	0.46
14:AN:41:ARG:O	14:AN:42:TRP:C	2.55	0.46
16:AP:30:GLY:O	16:AP:31:ARG:C	2.54	0.46
17:AQ:12:VAL:O	17:AQ:22:VAL:O	2.34	0.46
22:BA:5:A:H2'	22:BA:6:A:C8	2.51	0.46
22:BA:422:A:C2	22:BA:423:A:N3	2.84	0.46
22:BA:493:G:H2'	22:BA:494:G:O4'	2.16	0.46
22:BA:790:U:O2'	22:BA:791:C:P	2.74	0.46
22:BA:945:A:H4'	22:BA:946:C:OP2	2.16	0.46
22:BA:1000:A:C6	22:BA:1001:A:C6	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1510:G:H2'	22:BA:1511:G:O4'	2.16	0.46
22:BA:1688:U:C5'	22:BA:1689:A:OP1	2.64	0.46
22:BA:1818:U:OP2	24:BC:156:ARG:NH1	2.49	0.46
22:BA:1946:U:H2'	22:BA:1947:C:C6	2.51	0.46
22:BA:2164:C:H3'	22:BA:2165:C:H5''	1.98	0.46
22:BA:2725:A:C4	22:BA:2727:A:C8	3.04	0.46
25:BD:104:VAL:HG23	25:BD:105:LYS:N	2.31	0.46
28:BG:94:TYR:C	28:BG:95:ARG:HG2	2.36	0.46
30:BI:65:ARG:NH1	30:BI:66:SER:OG	2.48	0.46
33:BL:132:ARG:HG3	33:BL:142:ILE:CD1	2.46	0.46
35:BN:117:ASP:O	35:BN:119:SER:N	2.49	0.46
1:CA:9:G:H5'	5:CE:108:GLY:HA3	1.97	0.46
1:CA:71:A:C6	1:CA:72:A:N7	2.84	0.46
1:CA:139:A:O2'	1:CA:140:U:H5'	2.16	0.46
1:CA:441:A:C2	1:CA:497:G:C6	3.04	0.46
1:CA:819:A:H4'	1:CA:820:U:OP2	2.16	0.46
1:CA:1056:U:H4'	3:CC:163:ALA:HB2	1.98	0.46
1:CA:1260:G:OP1	1:CA:1284:C:O2'	2.19	0.46
1:CA:1315:U:C5	1:CA:1316:G:C5	3.04	0.46
1:CA:1388:C:H2'	1:CA:1389:C:H6	1.81	0.46
2:CB:207:ILE:HD13	2:CB:207:ILE:N	2.30	0.46
3:CC:184:TYR:CD1	3:CC:201:TRP:CD1	3.04	0.46
4:CD:9:LEU:HG	4:CD:32:CYS:HB2	1.98	0.46
4:CD:33:LYS:HB2	4:CD:33:LYS:NZ	2.31	0.46
5:CE:104:GLY:O	5:CE:105:ILE:HG22	2.16	0.46
8:CH:35:ALA:O	8:CH:39:VAL:HG23	2.16	0.46
9:CI:116:VAL:HG21	10:CJ:62:ARG:HD3	1.97	0.46
12:CL:18:LYS:HD2	12:CL:18:LYS:O	2.16	0.46
14:CN:62:ASN:OD1	14:CN:73:PHE:CE1	2.69	0.46
15:CO:37:ASN:O	15:CO:40:GLN:HB2	2.16	0.46
22:DA:200:U:C6	22:DA:201:C:C5	3.04	0.46
22:DA:523:C:H2'	22:DA:524:G:C8	2.51	0.46
22:DA:528:A:C2	22:DA:2043:C:H4'	2.51	0.46
22:DA:1068:G:H2'	22:DA:1096:A:H5'	1.98	0.46
22:DA:1568:G:N3	24:DC:58:HIS:CE1	2.84	0.46
22:DA:1652:A:H3'	22:DA:1653:G:C8	2.51	0.46
22:DA:1783:A:C2	22:DA:2588:G:O4'	2.68	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
22:DA:2439:A:H4'	22:DA:2440:C:H5''	1.98	0.46
22:DA:2473:U:O2	22:DA:2473:U:H2'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2650:U:H2'	22:DA:2651:C:C6	2.51	0.46
22:DA:2885:G:N2	48:D0:32:LYS:HA	2.30	0.46
24:DC:107:PRO:HD2	24:DC:110:LEU:HD22	1.98	0.46
28:DG:126:PRO:C	28:DG:127:THR:OG1	2.53	0.46
30:DI:76:ALA:HB2	30:DI:129:ILE:HG23	1.96	0.46
30:DI:80:LEU:HA	30:DI:84:ALA:HB3	1.98	0.46
37:DP:51:ARG:O	37:DP:57:SER:HA	2.16	0.46
39:DR:39:LEU:C	39:DR:49:ILE:HG23	2.36	0.46
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
1:AA:186:C:H2'	1:AA:187:G:O4'	2.15	0.45
1:AA:242:G:C2	1:AA:245:U:C4	3.05	0.45
1:AA:614:C:H2'	1:AA:615:G:O4'	2.15	0.45
1:AA:1227:A:H2'	1:AA:1228:C:O5'	2.17	0.45
1:AA:1319:A:C8	1:AA:1323:G:C5	3.04	0.45
4:AD:68:LEU:N	4:AD:68:LEU:CD2	2.79	0.45
9:AI:85:ARG:O	9:AI:88:MET:CB	2.64	0.45
12:AL:63:VAL:HG22	12:AL:64:THR:N	2.31	0.45
14:AN:28:LYS:N	14:AN:31:ILE:HB	2.32	0.45
15:AO:61:SER:O	15:AO:65:LYS:HG3	2.16	0.45
16:AP:77:GLU:C	16:AP:79:ASN:H	2.19	0.45
20:AT:3:ASN:O	20:AT:4:ILE:C	2.54	0.45
22:BA:868:U:C4	22:BA:869:G:N7	2.84	0.45
22:BA:1106:G:C2	22:BA:1107:G:C8	3.04	0.45
22:BA:1665:A:H5''	32:BK:66:LYS:HB3	1.98	0.45
22:BA:1936:A:H2	22:BA:1943:U:N3	2.11	0.45
22:BA:1949:G:N2	22:BA:1958:C:C2	2.84	0.45
22:BA:1964:G:O2'	22:BA:1967:C:OP2	2.21	0.45
22:BA:2305:U:H5''	27:BF:131:GLY:HA3	1.97	0.45
25:BD:16:THR:O	25:BD:17:GLU:C	2.54	0.45
27:BF:38:MET:HE2	27:BF:152:LEU:HD22	1.98	0.45
28:BG:40:ALA:HB2	28:BG:58:TYR:CD2	2.51	0.45
29:BH:90:LEU:HD21	29:BH:93:SER:HA	1.97	0.45
31:BJ:81:ILE:CG2	31:BJ:82:GLY:N	2.72	0.45
33:BL:122:VAL:HG21	33:BL:135:ILE:HD13	1.98	0.45
35:BN:24:MET:CE	35:BN:44:LEU:HD13	2.46	0.45
39:BR:39:LEU:HA	39:BR:49:ILE:HG21	1.96	0.45
47:BZ:10:THR:HG23	47:BZ:11:ARG:HG3	1.99	0.45
1:CA:18:C:C2	1:CA:19:A:C8	3.04	0.45
1:CA:1007:U:C2'	1:CA:1008:U:H5'	2.45	0.45
1:CA:1055:A:N7	1:CA:1206:G:C6	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1244:G:C6	1:CA:1245:C:N4	2.84	0.45
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.15	0.45
1:CA:1457:G:H2'	1:CA:1458:G:O4'	2.16	0.45
4:CD:42:GLY:C	4:CD:44:ARG:H	2.19	0.45
8:CH:77:ARG:HD3	8:CH:78:VAL:N	2.31	0.45
8:CH:89:LYS:HA	8:CH:92:LEU:HD13	1.98	0.45
10:CJ:40:ILE:HG22	10:CJ:42:LEU:HG	1.96	0.45
11:CK:97:ILE:HG13	11:CK:98:ARG:N	2.30	0.45
13:CM:22:ILE:HD12	13:CM:22:ILE:N	2.31	0.45
14:CN:48:LEU:O	14:CN:48:LEU:HD23	2.16	0.45
17:CQ:14:SER:HB3	17:CQ:22:VAL:CG1	2.46	0.45
21:CU:34:ARG:HE	21:CU:35:ARG:HB2	1.82	0.45
22:DA:118:A:N3	22:DA:178:G:H1'	2.31	0.45
22:DA:126:A:N3	50:D2:18:PHE:CE2	2.84	0.45
22:DA:170:U:N3	22:DA:171:U:C5	2.84	0.45
22:DA:449:A:N7	22:DA:450:G:N7	2.64	0.45
22:DA:609:A:C5	22:DA:610:C:O2	2.70	0.45
22:DA:609:A:H2'	22:DA:610:C:O4'	2.16	0.45
22:DA:712:G:N2	22:DA:720:U:H1'	2.31	0.45
22:DA:982:C:H5''	22:DA:983:A:OP1	2.15	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
22:DA:1459:G:C2	22:DA:1461:C:C2	3.04	0.45
22:DA:1651:G:N2	22:DA:2007:U:C2	2.84	0.45
22:DA:2291:U:H2'	22:DA:2292:U:C6	2.51	0.45
22:DA:2373:G:C6	22:DA:2381:A:N1	2.84	0.45
22:DA:2725:A:C5	22:DA:2727:A:C8	3.04	0.45
22:DA:2734:A:N7	22:DA:2735:G:N7	2.64	0.45
26:DE:40:ARG:NH2	26:DE:92:HIS:CE1	2.85	0.45
27:DF:111:ILE:HB	27:DF:114:PHE:HB2	1.97	0.45
29:DH:39:ALA:O	29:DH:41:LYS:N	2.47	0.45
29:DH:112:LYS:HG2	29:DH:113:SER:N	2.32	0.45
37:DP:103:ARG:HB3	37:DP:108:ALA:CB	2.46	0.45
41:DT:32:LEU:HD12	41:DT:32:LEU:O	2.16	0.45
46:DY:14:LEU:HD21	46:DY:57:LEU:HD21	1.98	0.45
47:DZ:3:LYS:CD	47:DZ:3:LYS:N	2.78	0.45
49:D1:11:LEU:HB2	49:D1:21:TYR:HB2	1.98	0.45
1:AA:181:A:H1'	1:AA:194:C:N4	2.31	0.45
1:AA:427:U:C4	1:AA:428:G:C6	3.04	0.45
1:AA:1024:G:C2'	1:AA:1025:U:O5'	2.65	0.45
1:AA:1144:G:N1	1:AA:1145:A:H2	2.14	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1423:G:P	32:BK:49:ARG:HH22	2.39	0.45
2:AB:72:THR:O	2:AB:73:LYS:HG2	2.16	0.45
2:AB:84:ALA:O	2:AB:89:GLN:HB2	2.16	0.45
8:AH:42:GLU:OE1	8:AH:42:GLU:N	2.49	0.45
9:AI:50:GLN:N	9:AI:51:PRO:HD2	2.31	0.45
10:AJ:17:LEU:HD23	10:AJ:18:ILE:N	2.32	0.45
12:AL:110:ARG:NH1	12:AL:113:ALA:HB3	2.30	0.45
13:AM:29:ARG:NH2	13:AM:63:PHE:HB2	2.31	0.45
16:AP:67:ILE:HG23	16:AP:71:VAL:CG1	2.46	0.45
17:AQ:10:GLY:HA3	17:AQ:24:ALA:O	2.17	0.45
21:AU:19:PHE:O	21:AU:22:SER:HB3	2.16	0.45
22:BA:54:G:C5	22:BA:55:G:C8	3.05	0.45
22:BA:536:G:C6	22:BA:537:G:C4	3.04	0.45
22:BA:784:G:H5'	24:BC:226:ASN:OD1	2.16	0.45
22:BA:1161:C:H1'	39:BR:8:GLY:O	2.17	0.45
22:BA:1333:G:C2	22:BA:1334:G:C8	3.04	0.45
22:BA:1385:A:N3	22:BA:1386:C:C6	2.84	0.45
22:BA:1570:A:C6	22:BA:1571:A:C6	3.05	0.45
22:BA:2293:G:H2'	22:BA:2294:G:O4'	2.17	0.45
24:BC:77:VAL:HA	24:BC:114:ASP:O	2.16	0.45
26:BE:79:ARG:O	26:BE:80:SER:CB	2.63	0.45
29:BH:79:THR:HG23	29:BH:147:VAL:HB	1.98	0.45
30:BI:50:GLU:OE2	30:BI:52:GLY:N	2.50	0.45
30:BI:75:PRO:O	30:BI:78:VAL:HG22	2.16	0.45
30:BI:105:GLN:O	30:BI:106:LEU:CB	2.65	0.45
35:BN:38:LEU:HB3	35:BN:39:PRO:HD3	1.99	0.45
41:BT:57:VAL:HG22	41:BT:58:VAL:N	2.30	0.45
42:BU:85:PHE:N	42:BU:85:PHE:CD1	2.83	0.45
1:CA:81:A:H2'	1:CA:82:G:C8	2.51	0.45
1:CA:124:C:N3	1:CA:125:U:C4	2.84	0.45
1:CA:429:U:H3'	4:CD:9:LEU:HD23	1.98	0.45
1:CA:442:G:C6	1:CA:443:C:C4	3.04	0.45
1:CA:510:A:H5''	1:CA:511:C:P	2.56	0.45
1:CA:525:C:N4	1:CA:526:C:N4	2.63	0.45
1:CA:669:G:N2	1:CA:738:C:O2	2.48	0.45
1:CA:701:U:H4'	1:CA:703:G:C8	2.51	0.45
1:CA:756:C:C2'	1:CA:757:U:H5'	2.46	0.45
1:CA:952:U:O4	13:CM:103:LYS:HD3	2.15	0.45
1:CA:968:A:C8	1:CA:1062:U:H4'	2.51	0.45
1:CA:992:U:O4'	1:CA:993:G:C2	2.68	0.45
1:CA:1073:U:H5'	1:CA:1074:G:OP2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1310:G:N2	1:CA:1328:C:O2	2.49	0.45
1:CA:1426:G:C4	1:CA:1475:G:C2	3.05	0.45
2:CB:90:PHE:HB3	2:CB:150:GLY:O	2.16	0.45
2:CB:186:ILE:HA	2:CB:200:ILE:O	2.16	0.45
4:CD:74:ASN:HA	4:CD:77:LYS:HB2	1.98	0.45
4:CD:78:GLU:CG	4:CD:93:LEU:HD11	2.46	0.45
5:CE:150:PRO:HA	8:CH:99:LEU:HD21	1.98	0.45
6:CF:51:ILE:O	6:CF:51:ILE:CG1	2.63	0.45
12:CL:9:ARG:HB2	12:CL:9:ARG:CZ	2.46	0.45
13:CM:96:PRO:CB	13:CM:100:GLN:OE1	2.65	0.45
15:CO:11:ILE:O	15:CO:14:GLU:HB2	2.16	0.45
17:CQ:13:VAL:HG13	17:CQ:22:VAL:HG13	1.98	0.45
17:CQ:14:SER:OG	17:CQ:22:VAL:HG12	2.16	0.45
20:CT:54:MET:HE2	20:CT:58:VAL:CG2	2.47	0.45
21:CU:29:LEU:C	21:CU:29:LEU:HD23	2.37	0.45
22:DA:58:G:C2	22:DA:70:G:C2	3.04	0.45
22:DA:142:A:C6	22:DA:143:C:N4	2.84	0.45
22:DA:609:A:N7	22:DA:610:C:C2	2.85	0.45
22:DA:1066:U:C2'	22:DA:1067:A:OP1	2.64	0.45
22:DA:1345:C:H5'	22:DA:1396:U:C4	2.51	0.45
22:DA:1949:G:C6	22:DA:1950:G:C6	3.04	0.45
22:DA:2051:A:C2	22:DA:2052:A:N6	2.84	0.45
22:DA:2163:A:H2'	22:DA:2164:C:H4'	1.98	0.45
22:DA:2361:G:H2'	22:DA:2362:C:O4'	2.17	0.45
22:DA:2571:U:N3	22:DA:2574:G:C8	2.85	0.45
22:DA:2643:G:C2'	22:DA:2644:G:H5'	2.47	0.45
23:DB:20:G:C2	23:DB:64:G:C2	3.05	0.45
23:DB:84:G:N2	23:DB:93:C:O2	2.49	0.45
24:DC:120:VAL:O	24:DC:120:VAL:HG12	2.15	0.45
24:DC:148:PRO:CD	24:DC:185:GLU:OE2	2.64	0.45
33:DL:62:PRO:HG3	51:D3:26:HIS:O	2.17	0.45
1:AA:29:U:H5'	1:AA:296:U:OP1	2.16	0.45
1:AA:55:A:C6	1:AA:56:U:C2	3.05	0.45
1:AA:72:A:C2'	1:AA:73:C:H5'	2.46	0.45
1:AA:597:G:C2	1:AA:644:U:O2	2.69	0.45
1:AA:785:G:N2	1:AA:798:U:C2	2.83	0.45
1:AA:1027:C:C2	1:AA:1034:G:O6	2.69	0.45
1:AA:1086:U:O2'	1:AA:1087:G:H5'	2.17	0.45
2:AB:21:ARG:HA	2:AB:21:ARG:NH1	2.30	0.45
3:AC:22:TRP:CD1	3:AC:59:ARG:CD	2.99	0.45
4:AD:3:ARG:CZ	4:AD:115:ARG:CD	2.92	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:7:ILE:HD12	8:AH:7:ILE:N	2.31	0.45
8:AH:79:SER:HA	8:AH:85:ILE:HG12	1.98	0.45
9:AI:22:LYS:HD2	9:AI:23:PRO:O	2.17	0.45
9:AI:57:MET:CG	9:AI:58:VAL:N	2.79	0.45
10:AJ:44:THR:HG22	10:AJ:70:HIS:HA	1.99	0.45
13:AM:51:GLY:O	13:AM:55:THR:HG23	2.17	0.45
20:AT:67:ILE:CG1	20:AT:71:LYS:HG2	2.45	0.45
21:AU:11:PRO:O	21:AU:12:PHE:CG	2.69	0.45
21:AU:37:PHE:HA	21:AU:40:LYS:HE3	1.99	0.45
22:BA:271:G:C5	22:BA:367:G:C2	3.04	0.45
22:BA:360:U:C4	22:BA:361:G:C6	3.04	0.45
22:BA:365:U:H2'	22:BA:366:C:C6	2.51	0.45
22:BA:593:U:H2'	22:BA:594:U:C6	2.51	0.45
22:BA:675:A:OP1	26:BE:58:LYS:HE3	2.16	0.45
22:BA:979:A:H2'	22:BA:982:C:H42	1.82	0.45
22:BA:1056:G:C2	22:BA:1102:C:C5	3.04	0.45
22:BA:1139:G:O3'	31:BJ:26:GLY:HA3	2.16	0.45
22:BA:1402:U:C2'	22:BA:1403:A:O5'	2.64	0.45
22:BA:1768:C:N3	22:BA:1769:U:C5	2.84	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
25:BD:166:GLY:O	25:BD:167:ASN:HB3	2.16	0.45
29:BH:94:ILE:HG23	29:BH:98:ASP:CB	2.47	0.45
35:BN:22:ARG:HG3	35:BN:70:THR:H	1.80	0.45
35:BN:78:LYS:C	35:BN:79:LEU:O	2.49	0.45
53:B5:79:ALA:CB	53:B5:83:LYS:HB2	2.46	0.45
1:CA:22:G:O2'	1:CA:913:A:N1	2.43	0.45
1:CA:1015:G:H2'	1:CA:1016:A:O4'	2.17	0.45
1:CA:1137:C:H1'	1:CA:1138:G:N2	2.31	0.45
5:CE:95:PHE:CG	5:CE:96:MET:N	2.84	0.45
5:CE:96:MET:CE	5:CE:111:MET:HE3	2.46	0.45
5:CE:126:LYS:HA	5:CE:126:LYS:HE3	1.97	0.45
5:CE:154:ALA:C	5:CE:156:LYS:N	2.70	0.45
12:CL:57:LEU:O	12:CL:58:THR:C	2.54	0.45
14:CN:80:SER:O	14:CN:81:ARG:C	2.55	0.45
22:DA:7:G:H2'	22:DA:8:C:O4'	2.17	0.45
22:DA:104:A:C8	22:DA:105:C:C4	3.04	0.45
22:DA:195:A:C4	22:DA:198:C:N4	2.84	0.45
22:DA:617:G:H2'	22:DA:618:G:O4'	2.16	0.45
22:DA:647:G:C6	22:DA:648:G:C5	3.04	0.45
22:DA:752:A:O2'	22:DA:753:A:P	2.74	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:806:C:H2'	22:DA:807:U:C6	2.50	0.45
22:DA:1361:G:C5	22:DA:1362:C:C5	3.04	0.45
22:DA:1649:G:N1	22:DA:2009:A:C6	2.84	0.45
22:DA:1722:A:C2	22:DA:1739:A:H1'	2.51	0.45
22:DA:1926:U:H2'	22:DA:1928:A:N7	2.31	0.45
22:DA:2043:C:C2	22:DA:2044:C:C5	3.05	0.45
22:DA:2281:A:C2'	22:DA:2282:G:H5'	2.47	0.45
22:DA:2283:C:N3	22:DA:2389:G:C2	2.84	0.45
22:DA:2347:C:C2	22:DA:2371:G:N2	2.84	0.45
22:DA:2405:G:N2	22:DA:2411:A:C8	2.83	0.45
22:DA:2532:G:N2	22:DA:2663:G:O2'	2.50	0.45
22:DA:2694:G:C4	22:DA:2695:U:C6	3.04	0.45
22:DA:2747:G:C2	22:DA:2756:U:C5	3.04	0.45
22:DA:2817:U:O2	22:DA:2836:U:H1'	2.15	0.45
23:DB:50:A:H2'	23:DB:51:G:O4'	2.16	0.45
29:DH:34:GLY:O	29:DH:35:LYS:CD	2.65	0.45
33:DL:37:GLY:O	33:DL:40:SER:OG	2.34	0.45
41:DT:49:LYS:HD3	41:DT:49:LYS:N	2.31	0.45
41:DT:67:VAL:HG12	41:DT:68:LYS:N	2.32	0.45
1:AA:933:G:OP2	7:AG:3:ARG:HB3	2.16	0.45
1:AA:1048:G:OP1	14:AN:3:LYS:HA	2.15	0.45
1:AA:1202:U:C5	1:AA:1203:C:C5	3.04	0.45
2:AB:33:GLY:HA3	2:AB:40:ILE:H	1.80	0.45
3:AC:88:ARG:HG3	3:AC:99:ALA:O	2.15	0.45
6:AF:8:PHE:CZ	6:AF:60:VAL:HB	2.52	0.45
13:AM:48:LEU:HD23	13:AM:48:LEU:C	2.37	0.45
13:AM:85:CYS:SG	13:AM:87:ARG:HG3	2.56	0.45
17:AQ:59:VAL:HG23	17:AQ:77:ARG:O	2.17	0.45
20:AT:7:ALA:HB1	20:AT:10:ARG:HB2	1.98	0.45
22:BA:19:A:C2	22:BA:522:A:C2	3.04	0.45
22:BA:581:C:H2'	22:BA:582:A:C8	2.51	0.45
22:BA:1045:C:H3'	22:BA:1046:A:C5'	2.45	0.45
22:BA:1084:A:HO2'	22:BA:1105:U:HO2'	1.64	0.45
22:BA:1098:A:H5'	22:BA:1099:G:OP2	2.16	0.45
22:BA:1153:C:N4	22:BA:1154:G:C6	2.84	0.45
22:BA:1228:G:H2'	22:BA:1229:C:C6	2.52	0.45
22:BA:1366:A:C2	22:BA:1367:A:H1'	2.51	0.45
22:BA:1385:A:H1'	22:BA:1386:C:H6	1.75	0.45
22:BA:1385:A:C2	22:BA:1386:C:C2	3.05	0.45
22:BA:1570:A:H2'	22:BA:1571:A:C8	2.51	0.45
22:BA:1832:C:C4	22:BA:1833:C:C6	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1887:C:C2'	22:BA:1888:G:O5'	2.64	0.45
22:BA:1917:U:O4	22:BA:1918:A:C6	2.69	0.45
22:BA:2575:C:O2'	25:BD:145:SER:HB2	2.16	0.45
23:BB:65:U:O4	23:BB:108:A:H1'	2.17	0.45
27:BF:43:ALA:O	27:BF:46:ASP:C	2.55	0.45
27:BF:111:ILE:O	27:BF:114:PHE:HB2	2.17	0.45
28:BG:127:THR:HG22	28:BG:128:GLN:N	2.32	0.45
30:BI:97:LYS:HG3	30:BI:139:VAL:HG22	1.95	0.45
31:BJ:77:HIS:CD2	31:BJ:79:GLY:H	2.34	0.45
33:BL:49:GLY:O	33:BL:51:GLU:HG3	2.16	0.45
33:BL:77:ILE:CD1	33:BL:95:LEU:HD13	2.47	0.45
34:BM:24:THR:O	34:BM:24:THR:CG2	2.61	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
1:CA:186:C:O2'	1:CA:187:G:H5'	2.16	0.45
1:CA:569:C:H1'	1:CA:574:A:C4	2.51	0.45
1:CA:784:A:H2'	1:CA:785:G:O4'	2.15	0.45
1:CA:892:A:C6	1:CA:893:C:C4	3.04	0.45
1:CA:1088:G:C6	1:CA:1089:G:N7	2.84	0.45
1:CA:1134:G:H2'	1:CA:1135:U:O4'	2.16	0.45
1:CA:1297:G:HO2'	7:CG:114:LYS:HZ3	1.54	0.45
1:CA:1491:G:C5	1:CA:1492:A:C6	3.04	0.45
5:CE:99:ALA:HB2	5:CE:124:LEU:HG	1.99	0.45
7:CG:53:ARG:NH2	7:CG:125:SER:OG	2.49	0.45
8:CH:64:LYS:HE2	8:CH:71:VAL:HG21	1.98	0.45
9:CI:19:VAL:HG22	9:CI:65:ILE:HG22	1.97	0.45
9:CI:88:MET:HB2	9:CI:92:GLU:CD	2.37	0.45
11:CK:127:ARG:HB2	21:CU:34:ARG:NH1	2.31	0.45
13:CM:18:ALA:CB	13:CM:45:ILE:HD11	2.47	0.45
13:CM:27:LYS:O	13:CM:27:LYS:HD2	2.17	0.45
16:CP:19:VAL:HG12	16:CP:37:GLY:C	2.36	0.45
17:CQ:10:GLY:HA3	17:CQ:25:ILE:HD13	1.99	0.45
21:CU:14:VAL:O	21:CU:16:LEU:CD1	2.65	0.45
22:DA:14:A:H5''	22:DA:15:G:OP2	2.16	0.45
22:DA:155:A:H2'	22:DA:156:A:C8	2.50	0.45
22:DA:236:C:H2'	22:DA:237:C:H6	1.82	0.45
22:DA:263:G:N2	22:DA:264:C:H1'	2.32	0.45
22:DA:322:A:O4'	22:DA:340:A:H1'	2.17	0.45
22:DA:372:G:P	45:DX:62:LYS:NZ	2.89	0.45
22:DA:419:U:C2	22:DA:420:C:C6	3.04	0.45
22:DA:663:G:C6	22:DA:664:G:C5	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:696:G:C6	22:DA:767:U:O2	2.70	0.45
22:DA:902:C:H2'	22:DA:903:C:C6	2.51	0.45
22:DA:1036:G:C6	22:DA:1120:G:C5	3.05	0.45
22:DA:1250:G:H5'	38:DQ:6:ARG:HD3	1.99	0.45
22:DA:1263:U:O4	40:DS:95:ARG:NH1	2.49	0.45
22:DA:1464:G:N1	22:DA:1465:G:C5	2.84	0.45
22:DA:1858:A:N1	22:DA:1859:U:C2	2.84	0.45
22:DA:2199:A:C5	22:DA:2200:C:C2	3.05	0.45
22:DA:2204:G:C4	22:DA:2205:A:C8	3.04	0.45
22:DA:2344:U:H4'	22:DA:2345:G:OP1	2.16	0.45
22:DA:2803:G:N2	22:DA:2804:U:C2	2.85	0.45
22:DA:2870:C:H5''	35:DN:65:LEU:CD2	2.45	0.45
24:DC:171:TYR:CD2	24:DC:185:GLU:HA	2.51	0.45
26:DE:23:PHE:CD1	26:DE:111:GLU:HG3	2.51	0.45
35:DN:71:ARG:HH21	35:DN:71:ARG:HG2	1.80	0.45
43:DV:44:HIS:O	43:DV:45:ASP:C	2.54	0.45
50:D2:1:MET:O	50:D2:2:LYS:C	2.54	0.45
1:AA:21:G:N2	1:AA:22:G:C6	2.85	0.45
1:AA:129:A:H1'	1:AA:130:A:C8	2.51	0.45
1:AA:184:G:C6	1:AA:185:U:C4	3.04	0.45
1:AA:221:C:O2	1:AA:222:C:C6	2.69	0.45
1:AA:374:A:C6	1:AA:375:U:C4	3.05	0.45
1:AA:972:C:H4'	10:AJ:59:LYS:HE3	1.98	0.45
1:AA:1034:G:C6	1:AA:1035:A:C2	3.04	0.45
1:AA:1122:U:C4	1:AA:1123:U:C5	3.05	0.45
1:AA:1406:U:C2'	1:AA:1407:C:H5'	2.46	0.45
2:AB:57:LEU:CD1	2:AB:221:VAL:HG22	2.46	0.45
3:AC:16:LYS:HG3	3:AC:17:PRO:HD2	1.99	0.45
4:AD:58:LYS:HG2	4:AD:203:LEU:HD22	1.97	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
10:AJ:80:THR:C	10:AJ:82:LYS:N	2.67	0.45
17:AQ:48:ASP:OD2	17:AQ:51:ASN:HA	2.17	0.45
22:BA:686:U:C4'	22:BA:687:C:OP2	2.61	0.45
22:BA:1109:C:C4	22:BA:1110:G:C6	3.05	0.45
22:BA:1277:G:H5'	35:BN:20:MET:HE2	1.98	0.45
22:BA:1374:G:O2'	22:BA:1375:U:H5'	2.16	0.45
22:BA:1806:C:H2'	22:BA:1807:G:O5'	2.16	0.45
30:BI:97:LYS:HB3	30:BI:139:VAL:CG2	2.47	0.45
35:BN:67:PHE:CE2	35:BN:71:ARG:NH1	2.84	0.45
39:BR:29:THR:O	39:BR:30:GLY:C	2.54	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:CA:289:G:C2	1:CA:290:C:C5	3.05	0.45
1:CA:517:G:H4'	1:CA:519:C:C2	2.52	0.45
1:CA:1006:G:OP1	1:CA:1038:C:H5''	2.16	0.45
1:CA:1053:G:N7	1:CA:1200:C:C5'	2.79	0.45
1:CA:1377:A:C5	7:CG:7:ILE:HD12	2.51	0.45
1:CA:1418:A:O4'	22:DA:1959:G:H4'	2.16	0.45
3:CC:20:SER:HB2	14:CN:92:GLU:O	2.17	0.45
3:CC:172:ARG:C	3:CC:174:PRO:HD3	2.36	0.45
5:CE:15:LEU:C	5:CE:15:LEU:HD12	2.37	0.45
5:CE:102:GLY:C	5:CE:104:GLY:N	2.69	0.45
6:CF:6:ILE:HG22	6:CF:7:VAL:N	2.31	0.45
10:CJ:74:VAL:HG12	10:CJ:75:ASP:N	2.30	0.45
12:CL:107:VAL:HG23	12:CL:117:TYR:HB3	1.97	0.45
20:CT:9:LYS:O	20:CT:12:ILE:HG12	2.16	0.45
20:CT:69:LYS:O	20:CT:71:LYS:N	2.49	0.45
22:DA:333:G:C6	22:DA:334:C:C5	3.05	0.45
22:DA:349:U:H2'	22:DA:350:G:H8	1.81	0.45
22:DA:466:A:C2	22:DA:796:C:O4'	2.70	0.45
22:DA:467:G:C2	22:DA:468:G:C8	3.05	0.45
22:DA:483:A:C1'	42:DU:45:HIS:HB2	2.47	0.45
22:DA:498:G:N3	22:DA:499:U:C6	2.85	0.45
22:DA:595:C:O2	22:DA:663:G:C2	2.69	0.45
22:DA:611:C:H2'	22:DA:612:G:O4'	2.16	0.45
22:DA:1250:G:H5'	38:DQ:6:ARG:CD	2.47	0.45
22:DA:1260:A:N6	57:DA:3277:HOH:O	2.50	0.45
22:DA:1398:C:H2'	22:DA:1399:C:O5'	2.17	0.45
22:DA:1437:C:N4	22:DA:1438:U:O4	2.50	0.45
22:DA:1645:G:H4'	22:DA:1646:C:C5	2.51	0.45
22:DA:1740:G:H2'	22:DA:1741:C:C6	2.52	0.45
22:DA:1817:G:O2'	22:DA:1818:U:H5'	2.16	0.45
22:DA:2306:C:OP2	22:DA:2307:G:C2'	2.64	0.45
22:DA:2332:C:H4'	22:DA:2336:A:N6	2.31	0.45
22:DA:2799:A:C6	22:DA:2801:G:C4	3.05	0.45
27:DF:9:LYS:O	27:DF:13:VAL:CG2	2.64	0.45
29:DH:147:VAL:HG12	29:DH:148:ALA:N	2.32	0.45
39:DR:39:LEU:O	39:DR:49:ILE:HG23	2.16	0.45
41:DT:20:ALA:O	41:DT:24:MET:SD	2.74	0.45
41:DT:48:GLN:HB2	41:DT:49:LYS:CE	2.47	0.45
42:DU:61:LYS:HD2	42:DU:61:LYS:HA	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DY:18:LEU:O	46:DY:22:LEU:CB	2.63	0.45
1:AA:113:G:O2'	1:AA:114:U:H5'	2.17	0.45
1:AA:652:U:C2	1:AA:752:G:N2	2.85	0.45
1:AA:654:G:H2'	1:AA:655:A:H5'	1.98	0.45
1:AA:657:U:O2	15:AO:22:THR:HG22	2.16	0.45
1:AA:1054:C:C5	1:AA:1196:A:H2'	2.51	0.45
1:AA:1108:G:H5'	3:AC:176:HIS:CE1	2.51	0.45
1:AA:1308:U:OP1	13:AM:96:PRO:HA	2.16	0.45
1:AA:1335:U:H5'	1:AA:1336:C:O5'	2.17	0.45
1:AA:1368:A:OP2	9:AI:114:LYS:HD2	2.17	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
3:AC:23:PHE:CE1	10:AJ:13:PHE:CE2	3.04	0.45
4:AD:27:ALA:O	4:AD:28:ILE:C	2.55	0.45
4:AD:122:ALA:C	4:AD:123:ILE:HG23	2.36	0.45
5:AE:151:GLU:HG2	5:AE:152:MET:H	1.82	0.45
10:AJ:83:THR:HA	10:AJ:86:ALA:HB3	1.98	0.45
11:AK:35:THR:OG1	11:AK:40:ASN:N	2.50	0.45
11:AK:108:THR:HG22	11:AK:109:ASN:ND2	2.31	0.45
17:AQ:47:HIS:CB	17:AQ:67:LEU:HD23	2.47	0.45
22:BA:250:G:C6	22:BA:251:A:C6	3.05	0.45
22:BA:699:A:H4'	22:BA:1634:A:N7	2.30	0.45
22:BA:1857:G:C4	22:BA:1884:G:C2	3.04	0.45
22:BA:1935:G:C6	22:BA:1962:C:C5	3.04	0.45
23:BB:15:A:O2'	23:BB:16:G:P	2.74	0.45
24:BC:84:ASP:C	24:BC:84:ASP:OD1	2.55	0.45
27:BF:148:ARG:CG	27:BF:149:VAL:H	2.29	0.45
29:BH:40:THR:O	29:BH:42:LYS:N	2.48	0.45
29:BH:72:ILE:HG23	29:BH:142:VAL:HG22	1.99	0.45
30:BI:77:ALA:HB2	30:BI:132:THR:CG2	2.47	0.45
31:BJ:98:GLU:OE2	31:BJ:126:ALA:HB2	2.16	0.45
41:BT:91:GLN:HG3	41:BT:91:GLN:O	2.17	0.45
49:B1:10:LYS:HE3	49:B1:53:LYS:NZ	2.32	0.45
53:B5:64:SER:O	53:B5:65:LEU:CB	2.65	0.45
53:B5:78:ILE:HG23	53:B5:78:ILE:O	2.17	0.45
1:CA:97:G:C6	1:CA:98:A:H1'	2.52	0.45
1:CA:505:G:OP2	1:CA:534:U:H2'	2.17	0.45
1:CA:517:G:C8	1:CA:531:U:C4	3.04	0.45
1:CA:681:A:C2	1:CA:710:G:C4	3.05	0.45
1:CA:706:A:O2'	11:CK:31:ILE:CD1	2.64	0.45
1:CA:1091:U:H2'	1:CA:1093:A:OP2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1408:A:N1	1:CA:1494:G:C5	2.85	0.45
2:CB:87:CYS:HB3	2:CB:222:ARG:HA	1.99	0.45
2:CB:117:LEU:HB3	2:CB:141:LEU:HG	1.98	0.45
6:CF:6:ILE:HD12	6:CF:6:ILE:N	2.31	0.45
7:CG:126:ASP:N	7:CG:126:ASP:OD1	2.50	0.45
18:CR:25:ASP:OD1	18:CR:25:ASP:N	2.50	0.45
22:DA:38:A:H4'	26:DE:45:ALA:HB2	1.97	0.45
22:DA:49:A:N6	22:DA:177:G:C5	2.84	0.45
22:DA:134:G:N2	22:DA:146:A:N3	2.64	0.45
22:DA:142:A:H2'	22:DA:143:C:C6	2.51	0.45
22:DA:445:C:H3'	22:DA:446:G:C8	2.52	0.45
22:DA:553:G:H2'	22:DA:554:U:O4'	2.17	0.45
22:DA:684:G:OP1	50:D2:16:HIS:ND1	2.49	0.45
22:DA:693:A:H2'	22:DA:694:U:C6	2.50	0.45
22:DA:1184:U:OP1	47:DZ:30:ARG:NH2	2.50	0.45
22:DA:1243:C:H2'	22:DA:1244:A:O4'	2.16	0.45
22:DA:1432:G:O2'	22:DA:1433:A:H5'	2.15	0.45
22:DA:1801:A:C8	24:DC:262:ARG:NH2	2.85	0.45
22:DA:1847:A:H2'	22:DA:1848:A:OP2	2.16	0.45
22:DA:2054:A:C2	22:DA:2616:C:C2	3.04	0.45
22:DA:2141:G:N2	22:DA:2151:U:O2	2.50	0.45
22:DA:2250:G:C8	22:DA:2250:G:O5'	2.70	0.45
22:DA:2415:G:C6	22:DA:2416:C:N4	2.85	0.45
22:DA:2574:G:N1	22:DA:2575:C:C2	2.85	0.45
24:DC:158:ALA:HA	24:DC:195:VAL:HG22	1.99	0.45
26:DE:5:LEU:O	26:DE:6:LYS:C	2.55	0.45
26:DE:146:VAL:HG12	26:DE:185:LYS:HB2	1.99	0.45
27:DF:3:LYS:HD3	27:DF:101:GLU:OE2	2.17	0.45
27:DF:29:PRO:HB2	27:DF:169:LEU:HD22	1.98	0.45
27:DF:44:ILE:HG21	27:DF:79:ILE:HG22	1.98	0.45
30:DI:76:ALA:HA	30:DI:79:LEU:HB2	1.98	0.45
30:DI:101:ILE:HG22	30:DI:102:SER:N	2.31	0.45
36:DO:28:VAL:CG1	36:DO:94:ARG:HA	2.47	0.45
36:DO:53:THR:HB	36:DO:65:THR:CG2	2.46	0.45
40:DS:20:VAL:HG23	40:DS:39:THR:HG21	1.97	0.45
40:DS:89:ALA:O	40:DS:90:LYS:HB2	2.16	0.45
46:DY:28:LEU:CD2	46:DY:37:LEU:HD11	2.46	0.45
49:D1:9:ILE:CG2	49:D1:25:LYS:HB3	2.46	0.45
1:AA:6:G:H3'	1:AA:6:G:N3	2.31	0.45
1:AA:96:U:O2'	1:AA:97:G:P	2.75	0.45
1:AA:438:U:C2	1:AA:494:G:C6	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:AB:55:ALA:O	2:AB:59:LYS:N	2.44	0.45
2:AB:151:ILE:CG2	2:AB:152:LYS:N	2.79	0.45
5:AE:80:THR:HB	5:AE:122:ASN:OD1	2.16	0.45
6:AF:9:MET:CE	18:AR:65:LEU:HD22	2.47	0.45
16:AP:4:ILE:HG13	16:AP:21:VAL:CG2	2.47	0.45
17:AQ:50:ASN:O	17:AQ:51:ASN:C	2.53	0.45
21:AU:41:PRO:O	21:AU:45:ARG:HD3	2.16	0.45
22:BA:58:G:N2	22:BA:70:G:C4	2.85	0.45
22:BA:60:G:C8	22:BA:62:U:C6	3.04	0.45
22:BA:142:A:N7	22:BA:143:C:C4	2.85	0.45
22:BA:152:A:H2'	22:BA:153:U:C6	2.52	0.45
22:BA:223:A:C4	22:BA:422:A:C8	3.05	0.45
22:BA:587:C:C6	22:BA:671:C:H1'	2.52	0.45
22:BA:626:A:H2'	33:BL:78:ARG:CZ	2.47	0.45
22:BA:909:A:O2'	22:BA:911:A:OP2	2.25	0.45
22:BA:975:A:C4	22:BA:990:A:C5	3.05	0.45
22:BA:2315:G:H2'	22:BA:2316:G:C8	2.51	0.45
22:BA:2419:U:OP1	51:B3:41:LYS:HE2	2.16	0.45
24:BC:220:VAL:HB	24:BC:225:MET:CE	2.47	0.45
25:BD:101:PHE:C	25:BD:103:ASP:N	2.68	0.45
26:BE:26:ALA:O	26:BE:27:LEU:C	2.54	0.45
26:BE:31:VAL:HG21	26:BE:104:ALA:CB	2.47	0.45
53:B5:67:HIS:CD2	53:B5:188:ASP:HA	2.52	0.45
1:CA:757:U:C2'	1:CA:758:C:O5'	2.65	0.45
1:CA:764:C:C4	1:CA:765:G:C5	3.04	0.45
1:CA:793:U:O2'	1:CA:1516:G:H1'	2.17	0.45
1:CA:803:G:C5	1:CA:804:U:C4	3.05	0.45
1:CA:1039:G:C6	1:CA:1040:U:N3	2.85	0.45
1:CA:1070:U:C2	1:CA:1071:C:C5	3.04	0.45
1:CA:1113:C:H4'	3:CC:14:ILE:HD12	1.99	0.45
1:CA:1206:G:C6	1:CA:1207:G:C5	3.04	0.45
2:CB:16:PHE:CD2	2:CB:16:PHE:N	2.85	0.45
3:CC:182:ILE:HD13	3:CC:203:PHE:HA	1.99	0.45
5:CE:115:LEU:CD2	5:CE:123:VAL:HG21	2.47	0.45
7:CG:37:SER:OG	9:CI:43:THR:HG23	2.16	0.45
7:CG:145:ALA:O	7:CG:146:GLU:HB2	2.15	0.45
12:CL:22:PRO:O	12:CL:24:LEU:N	2.45	0.45
13:CM:33:ILE:HG22	13:CM:56:LEU:HD23	1.98	0.45
16:CP:23:ASP:OD2	16:CP:25:ARG:HG2	2.17	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
22:DA:30:G:C6	22:DA:31:C:N3	2.85	0.45
22:DA:344:A:C2	22:DA:345:A:N7	2.85	0.45
22:DA:663:G:O6	22:DA:664:G:C6	2.70	0.45
22:DA:1016:G:C2	22:DA:1147:A:C2	3.04	0.45
22:DA:1087:G:N1	22:DA:1089:A:C2	2.84	0.45
22:DA:1140:C:C2'	22:DA:1141:U:H5'	2.47	0.45
22:DA:1177:G:H2'	22:DA:1178:C:H4'	1.99	0.45
22:DA:1286:A:N6	22:DA:1329:U:C2	2.85	0.45
22:DA:1358:G:H2'	22:DA:1359:A:OP2	2.16	0.45
22:DA:1818:U:H2'	24:DC:156:ARG:HD3	1.99	0.45
22:DA:1998:A:H2'	22:DA:1999:C:O4'	2.16	0.45
22:DA:2156:G:C6	22:DA:2157:G:N2	2.85	0.45
23:DB:21:G:N2	23:DB:63:C:O2	2.50	0.45
26:DE:148:ILE:HG21	26:DE:157:LEU:HD21	1.99	0.45
29:DH:31:VAL:CG1	29:DH:32:PRO:HD3	2.47	0.45
32:DK:39:ILE:HG13	32:DK:39:ILE:O	2.16	0.45
32:DK:41:ILE:HD11	32:DK:86:LEU:HD22	1.98	0.45
34:DM:124:LEU:N	34:DM:124:LEU:HD23	2.31	0.45
39:DR:68:ARG:HD3	39:DR:92:TRP:CZ2	2.52	0.45
41:DT:30:ILE:HD13	41:DT:32:LEU:CG	2.47	0.45
1:AA:9:G:C2	1:AA:10:A:C8	3.05	0.45
1:AA:343:U:H2'	1:AA:345:C:C5	2.52	0.45
1:AA:373:A:O2'	1:AA:374:A:H5'	2.15	0.45
1:AA:624:C:C5	1:AA:625:U:C5	3.04	0.45
1:AA:631:C:H5''	1:AA:632:U:H5'	1.98	0.45
1:AA:659:U:N3	1:AA:660:C:C5	2.85	0.45
1:AA:695:A:N1	1:AA:696:A:C2	2.85	0.45
1:AA:908:A:C2	1:AA:909:A:C4	3.04	0.45
1:AA:914:A:C5	1:AA:915:A:N7	2.84	0.45
1:AA:1160:G:O6	1:AA:1181:G:C5	2.70	0.45
2:AB:148:LEU:C	2:AB:151:ILE:HG22	2.36	0.45
2:AB:167:ASP:OD1	2:AB:168:HIS:N	2.50	0.45
3:AC:19:ASN:OD1	3:AC:19:ASN:N	2.49	0.45
3:AC:150:LYS:HG3	3:AC:201:TRP:CE3	2.52	0.45
4:AD:105:MET:CG	4:AD:171:LEU:HD22	2.47	0.45
4:AD:160:GLU:O	4:AD:162:ALA:N	2.49	0.45
5:AE:153:VAL:O	5:AE:156:LYS:HB2	2.17	0.45
8:AH:88:ARG:O	8:AH:92:LEU:HG	2.17	0.45
13:AM:80:LEU:CD2	13:AM:87:ARG:HB2	2.46	0.45
14:AN:64:CYS:SG	14:AN:80:SER:HB3	2.57	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:16:LYS:CA	17:AQ:17:MET:SD	3.05	0.45
22:BA:7:G:C6	22:BA:8:C:C4	3.05	0.45
22:BA:559:G:H2'	22:BA:560:C:O4'	2.17	0.45
22:BA:858:G:C4	22:BA:2268:A:C2	3.05	0.45
22:BA:997:G:OP1	38:BQ:92:ARG:HG3	2.15	0.45
22:BA:1109:C:C5	22:BA:1110:G:C6	3.05	0.45
22:BA:1324:G:H1'	22:BA:1616:A:N6	2.32	0.45
22:BA:1434:A:C2	22:BA:1435:G:C5	3.04	0.45
22:BA:1851:U:O2'	22:BA:1852:U:H5'	2.17	0.45
22:BA:1857:G:N3	22:BA:1884:G:C2	2.85	0.45
22:BA:1921:G:N2	22:BA:1922:G:C8	2.84	0.45
22:BA:2177:C:N4	22:BA:2178:C:O2	2.50	0.45
22:BA:2192:U:C5	22:BA:2193:G:C8	3.05	0.45
22:BA:2311:A:C2	27:BF:41:GLY:CA	3.00	0.45
23:BB:78:A:C2	23:BB:99:A:C4	3.05	0.45
24:BC:28:LYS:HD3	24:BC:28:LYS:N	2.32	0.45
28:BG:94:TYR:HA	28:BG:106:SER:O	2.16	0.45
29:BH:14:SER:OG	29:BH:17:ASP:OD1	2.29	0.45
30:BI:44:ALA:O	30:BI:45:LYS:HG3	2.17	0.45
32:BK:23:LYS:HB3	32:BK:40:LYS:HB3	1.98	0.45
34:BM:20:LEU:HD12	43:BV:81:PRO:CG	2.46	0.45
39:BR:66:HIS:ND1	39:BR:94:THR:CG2	2.80	0.45
1:CA:9:G:OP2	5:CE:126:LYS:CE	2.65	0.45
1:CA:920:U:C2	1:CA:921:U:C5	3.05	0.45
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.51	0.45
1:CA:1291:U:OP1	7:CG:37:SER:CB	2.65	0.45
5:CE:16:ILE:N	5:CE:16:ILE:HD12	2.32	0.45
5:CE:101:GLU:HA	5:CE:122:ASN:CB	2.46	0.45
6:CF:37:HIS:O	6:CF:38:ARG:HB3	2.17	0.45
9:CI:49:ARG:C	9:CI:49:ARG:HD3	2.37	0.45
9:CI:88:MET:O	9:CI:88:MET:CG	2.65	0.45
11:CK:82:LEU:HD23	11:CK:82:LEU:O	2.17	0.45
14:CN:51:LEU:O	14:CN:53:ARG:N	2.50	0.45
19:CS:51:VAL:O	19:CS:58:VAL:HG13	2.17	0.45
22:DA:82:U:O2	22:DA:83:A:C8	2.69	0.45
22:DA:136:G:N2	22:DA:144:A:C5	2.85	0.45
22:DA:186:G:C2	22:DA:211:C:O2	2.70	0.45
22:DA:192:C:H2'	22:DA:193:U:H5'	1.99	0.45
22:DA:515:A:H2'	22:DA:516:C:H5'	1.98	0.45
22:DA:533:G:C5	22:DA:534:U:C4	3.04	0.45
22:DA:1623:G:C6	22:DA:1624:U:C4	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2284:A:O2'	22:DA:2288:A:N1	2.37	0.45
22:DA:2751:G:N3	22:DA:2751:G:H2'	2.32	0.45
29:DH:86:ASP:C	29:DH:88:GLY:H	2.19	0.45
29:DH:93:SER:HB3	29:DH:123:ARG:HG3	1.99	0.45
30:DI:57:VAL:HG23	30:DI:71:THR:CA	2.47	0.45
1:AA:126:G:O2'	1:AA:635:A:H4'	2.17	0.45
1:AA:221:C:C2	1:AA:222:C:C5	3.05	0.45
1:AA:224:U:H2'	1:AA:225:C:C6	2.51	0.45
1:AA:457:G:C6	1:AA:458:U:C4	3.05	0.45
1:AA:691:G:O6	11:AK:57:LYS:NZ	2.50	0.45
1:AA:765:G:C6	1:AA:812:G:C4	3.05	0.45
1:AA:1118:U:C1'	1:AA:1179:A:C4	3.00	0.45
3:AC:39:VAL:O	3:AC:43:LEU:HB2	2.16	0.45
3:AC:42:TYR:CZ	3:AC:90:VAL:HG21	2.52	0.45
4:AD:58:LYS:HE2	4:AD:69:GLU:OE2	2.17	0.45
5:AE:13:GLU:HB2	5:AE:39:VAL:HG12	1.99	0.45
10:AJ:57:VAL:CG2	10:AJ:58:ASN:N	2.79	0.45
10:AJ:65:TYR:OH	14:AN:85:ARG:HD2	2.17	0.45
22:BA:55:G:N2	22:BA:56:A:C4	2.85	0.45
22:BA:441:U:H2'	22:BA:442:G:C8	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
22:BA:1242:U:H2'	22:BA:1243:C:C6	2.52	0.45
22:BA:1795:C:C4	22:BA:1796:U:C5	3.05	0.45
22:BA:2094:A:C2	22:BA:2196:C:C2	3.05	0.45
22:BA:2258:C:H4'	22:BA:2259:U:OP2	2.17	0.45
22:BA:2694:G:C5	22:BA:2695:U:C4	3.05	0.45
22:BA:2804:U:H2'	22:BA:2805:C:C6	2.52	0.45
22:BA:2888:C:O2	22:BA:2888:C:C2'	2.64	0.45
24:BC:264:ASP:O	24:BC:265:LYS:C	2.55	0.45
29:BH:76:GLU:HA	29:BH:142:VAL:CG1	2.46	0.45
35:BN:72:ASP:O	35:BN:76:VAL:HG12	2.17	0.45
38:BQ:49:ASP:OD2	38:BQ:52:GLN:OE1	2.35	0.45
45:BX:78:TYR:OXT	45:BX:78:TYR:CD1	2.70	0.45
1:CA:16:A:C2	1:CA:17:U:C6	3.05	0.45
1:CA:218:U:C2'	1:CA:219:U:H5'	2.47	0.45
1:CA:240:G:H4'	1:CA:240:G:OP1	2.16	0.45
1:CA:421:U:OP1	1:CA:421:U:H4'	2.17	0.45
1:CA:444:G:C6	1:CA:445:G:N7	2.85	0.45
1:CA:541:G:H2'	1:CA:542:G:O4'	2.17	0.45
1:CA:745:G:H5''	1:CA:851:G:O2'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:CA:1027:C:N4	1:CA:1034:G:O6	2.50	0.45
2:CB:10:LEU:HD23	2:CB:12:ALA:O	2.17	0.45
2:CB:71:GLY:HA3	2:CB:164:ILE:HG21	1.99	0.45
4:CD:35:GLU:O	4:CD:37:ALA:N	2.45	0.45
6:CF:17:GLN:O	6:CF:21:MET:HG3	2.17	0.45
22:DA:185:G:C6	22:DA:212:G:N2	2.85	0.45
22:DA:351:C:H2'	22:DA:352:A:C8	2.52	0.45
22:DA:810:U:O4	33:DL:30:THR:HG22	2.17	0.45
22:DA:1062:G:C2	22:DA:1063:G:N1	2.85	0.45
22:DA:1194:A:C2'	22:DA:1195:G:O5'	2.64	0.45
22:DA:1265:A:N6	22:DA:2014:A:OP2	2.40	0.45
22:DA:1448:G:C4	22:DA:1449:G:C8	3.05	0.45
22:DA:1526:C:N4	22:DA:1527:G:C6	2.85	0.45
22:DA:1598:A:H2'	22:DA:1599:U:C6	2.52	0.45
22:DA:1965:C:H3'	22:DA:1966:A:C8	2.51	0.45
22:DA:2059:A:H4'	26:DE:64:GLY:O	2.16	0.45
22:DA:2195:U:C2	22:DA:2196:C:C6	3.04	0.45
22:DA:2345:G:C5	22:DA:2381:A:C2	3.05	0.45
22:DA:2729:G:H2'	22:DA:2730:C:O4'	2.16	0.45
57:DA:3238:HOH:O	26:DE:47:LYS:HD2	2.17	0.45
23:DB:66:A:N6	23:DB:107:G:H2'	2.32	0.45
28:DG:121:ILE:HD12	28:DG:141:ILE:HG22	1.99	0.45
29:DH:83:LYS:HG3	29:DH:149:GLU:HG3	1.94	0.45
30:DI:24:VAL:HB	30:DI:28:LEU:HD23	1.99	0.45
31:DJ:59:ALA:O	31:DJ:62:VAL:HG12	2.16	0.45
33:DL:119:PRO:HB3	33:DL:139:GLY:HA3	1.98	0.45
35:DN:36:THR:OG1	35:DN:37:THR:N	2.49	0.45
37:DP:39:ARG:HG3	37:DP:40:LEU:H	1.80	0.45
41:DT:69:ARG:HA	41:DT:74:ILE:HG22	1.99	0.45
41:DT:73:ARG:HA	41:DT:73:ARG:NH2	2.32	0.45
1:AA:114:U:H2'	1:AA:115:G:C8	2.52	0.45
1:AA:203:G:C2	1:AA:215:C:C2	3.05	0.45
1:AA:310:G:H5''	16:AP:31:ARG:HB2	1.97	0.45
1:AA:716:A:C6	1:AA:717:U:N3	2.85	0.45
1:AA:1243:C:H2'	1:AA:1244:G:C8	2.52	0.45
2:AB:72:THR:O	2:AB:73:LYS:HB3	2.16	0.45
4:AD:147:GLU:O	4:AD:150:LYS:N	2.50	0.45
4:AD:160:GLU:C	4:AD:162:ALA:H	2.20	0.45
8:AH:34:VAL:O	8:AH:36:ILE:N	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:30:ILE:HD11	9:AI:38:TYR:CB	2.47	0.45
9:AI:114:LYS:NZ	9:AI:118:LEU:O	2.44	0.45
10:AJ:52:LEU:HB2	14:AN:81:ARG:HD2	1.99	0.45
13:AM:12:HIS:HA	13:AM:44:LYS:HE3	1.99	0.45
17:AQ:12:VAL:CG1	17:AQ:13:VAL:N	2.80	0.45
20:AT:44:LYS:NZ	20:AT:86:LEU:O	2.43	0.45
22:BA:187:G:C2	22:BA:210:C:C2	3.05	0.45
22:BA:982:C:H5'	22:BA:983:A:P	2.57	0.45
22:BA:1922:G:N3	22:BA:1922:G:C2'	2.80	0.45
22:BA:1972:G:C2	22:BA:1973:G:C5	3.05	0.45
22:BA:2061:G:O6	55:BA:3001:DOL:H132	2.16	0.45
28:BG:99:LYS:O	28:BG:100:GLY:C	2.55	0.45
29:BH:12:LEU:HG	29:BH:13:GLY:N	2.31	0.45
30:BI:116:ASP:OD2	30:BI:117:MET:N	2.50	0.45
32:BK:107:LEU:C	32:BK:109:SER:N	2.70	0.45
34:BM:132:THR:HG22	34:BM:133:LYS:N	2.31	0.45
38:BQ:41:LYS:HA	38:BQ:44:GLN:OE1	2.16	0.45
46:BY:56:LEU:O	46:BY:57:LEU:C	2.54	0.45
53:B5:64:SER:O	53:B5:65:LEU:HB3	2.17	0.45
1:CA:33:A:C4	1:CA:34:C:C5	3.04	0.45
1:CA:355:C:H2'	1:CA:356:A:O4'	2.17	0.45
1:CA:714:G:H2'	1:CA:715:A:C8	2.52	0.45
1:CA:1166:G:N1	1:CA:1169:A:OP2	2.45	0.45
5:CE:101:GLU:HA	5:CE:122:ASN:HB3	1.99	0.45
5:CE:131:THR:O	5:CE:132:ASN:C	2.54	0.45
12:CL:86:ARG:NH1	12:CL:88:LYS:HA	2.32	0.45
13:CM:96:PRO:HB2	13:CM:100:GLN:OE1	2.16	0.45
19:CS:40:ILE:HD13	19:CS:66:MET:HB3	1.97	0.45
21:CU:34:ARG:CD	21:CU:35:ARG:HB2	2.47	0.45
22:DA:84:A:N6	22:DA:99:U:H4'	2.32	0.45
22:DA:207:A:C4	22:DA:208:C:C6	3.05	0.45
22:DA:372:G:N2	22:DA:401:A:OP2	2.43	0.45
22:DA:416:U:H2'	22:DA:417:C:O4'	2.17	0.45
22:DA:469:G:O6	50:D2:37:LYS:NZ	2.48	0.45
22:DA:1095:A:C2	22:DA:1096:A:C2	3.05	0.45
22:DA:1345:C:H5'	22:DA:1396:U:C5	2.52	0.45
22:DA:1364:G:OP1	45:DX:3:ARG:CG	2.65	0.45
22:DA:1477:A:N6	22:DA:1514:G:H1'	2.30	0.45
22:DA:1509:A:O2'	22:DA:1510:G:O5'	2.34	0.45
22:DA:1559:U:H4'	22:DA:1560:G:OP2	2.17	0.45
22:DA:1567:G:H2'	24:DC:85:PRO:HG3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1731:G:C6	22:DA:1733:G:N7	2.85	0.45
22:DA:1767:G:N1	22:DA:1986:C:C4	2.85	0.45
22:DA:1830:C:H5'	24:DC:15:HIS:CD2	2.52	0.45
22:DA:2252:G:H2'	22:DA:2253:G:O4'	2.16	0.45
22:DA:2425:A:H4'	22:DA:2426:A:O5'	2.17	0.45
22:DA:2513:A:C4	22:DA:2514:U:C5	3.05	0.45
25:DD:125:TRP:O	25:DD:126:ASN:HB2	2.17	0.45
29:DH:15:LEU:HD22	29:DH:15:LEU:N	2.32	0.45
37:DP:106:LYS:HA	37:DP:109:ARG:HD2	1.98	0.45
41:DT:62:VAL:HG12	41:DT:63:VAL:N	2.32	0.45
42:DU:7:ARG:HG3	42:DU:8:ASP:H	1.82	0.45
1:AA:196:A:OP1	20:AT:64:LYS:CE	2.66	0.44
1:AA:202:G:O2'	1:AA:468:A:H2'	2.17	0.44
1:AA:631:C:H5''	1:AA:632:U:C5'	2.46	0.44
1:AA:854:U:C6	1:AA:871:U:O4	2.69	0.44
1:AA:858:G:C6	1:AA:869:G:C8	3.05	0.44
1:AA:992:U:O2	1:AA:1043:G:N7	2.50	0.44
1:AA:1410:A:H2'	1:AA:1411:C:C6	2.52	0.44
2:AB:84:ALA:O	2:AB:89:GLN:CB	2.65	0.44
3:AC:84:VAL:CG1	3:AC:101:ILE:HG21	2.47	0.44
4:AD:50:ASP:C	4:AD:50:ASP:OD2	2.55	0.44
6:AF:45:ARG:O	6:AF:56:LYS:HA	2.17	0.44
8:AH:10:MET:HE2	8:AH:33:LYS:HD3	1.99	0.44
8:AH:95:VAL:CG1	8:AH:96:MET:N	2.80	0.44
12:AL:50:ARG:HG3	12:AL:90:LEU:HD11	1.99	0.44
13:AM:114:LYS:CB	13:AM:115:PRO:CD	2.94	0.44
17:AQ:12:VAL:O	17:AQ:13:VAL:CG1	2.63	0.44
21:AU:11:PRO:C	21:AU:12:PHE:CD2	2.90	0.44
22:BA:55:G:C2	22:BA:56:A:C5	3.06	0.44
22:BA:271:G:C4'	22:BA:272:A:OP1	2.65	0.44
22:BA:532:A:N3	22:BA:532:A:H2'	2.32	0.44
22:BA:747:U:N3	22:BA:2613:U:C4	2.85	0.44
22:BA:1022:G:C5	22:BA:1140:C:C4	3.05	0.44
22:BA:1360:G:O6	22:BA:1372:U:C2	2.70	0.44
22:BA:1386:C:H5''	22:BA:1396:U:O2	2.17	0.44
22:BA:2714:G:C5	22:BA:2715:C:C5	3.05	0.44
28:BG:118:PRO:O	28:BG:119:ALA:C	2.55	0.44
30:BI:19:ASN:ND2	30:BI:35:ILE:O	2.51	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
37:BP:113:ARG:O	37:BP:114:LEU:O	2.35	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:197:A:C6	1:CA:221:C:H4'	2.52	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
1:CA:1287:A:C6	1:CA:1288:A:C6	3.05	0.44
1:CA:1411:C:H2'	1:CA:1412:C:H6	1.81	0.44
2:CB:118:GLU:HA	2:CB:121:SER:OG	2.17	0.44
4:CD:5:LEU:CD1	4:CD:5:LEU:N	2.80	0.44
6:CF:37:HIS:CD2	6:CF:65:GLU:HB2	2.52	0.44
8:CH:59:LEU:HD12	8:CH:60:GLU:N	2.32	0.44
11:CK:19:GLY:O	11:CK:82:LEU:HA	2.17	0.44
12:CL:72:HIS:ND1	12:CL:74:LEU:HB2	2.32	0.44
14:CN:51:LEU:HB3	14:CN:52:PRO:HD2	1.99	0.44
15:CO:35:GLN:NE2	15:CO:39:LEU:HD21	2.32	0.44
20:CT:3:ASN:O	20:CT:4:ILE:C	2.55	0.44
22:DA:81:G:N7	22:DA:82:U:C4	2.85	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:546:U:O2	22:DA:546:U:H2'	2.17	0.44
22:DA:682:G:N3	22:DA:682:G:H2'	2.31	0.44
22:DA:868:U:C4	22:DA:869:G:N7	2.85	0.44
22:DA:1246:A:O2'	26:DE:40:ARG:NH2	2.51	0.44
22:DA:1401:G:C5	22:DA:1402:U:C5	3.05	0.44
22:DA:1428:C:C4	22:DA:1569:A:H5''	2.52	0.44
22:DA:1444:G:N2	22:DA:1548:A:N3	2.65	0.44
22:DA:1480:C:C4	22:DA:1481:U:C4	3.05	0.44
22:DA:1773:A:C2	22:DA:1978:A:C2	3.05	0.44
22:DA:1827:U:C4'	22:DA:1970:A:HO2'	2.29	0.44
22:DA:2112:G:H5'	22:DA:2113:U:OP2	2.17	0.44
22:DA:2307:G:N2	22:DA:2312:U:C4	2.85	0.44
22:DA:2683:C:H4'	25:DD:13:ARG:NH1	2.31	0.44
57:DB:307:HOH:O	43:DV:14:LYS:HD2	2.17	0.44
25:DD:151:THR:HB	25:DD:152:PRO:HD2	1.98	0.44
29:DH:5:LEU:CD1	29:DH:13:GLY:CA	2.95	0.44
32:DK:32:TYR:CD2	32:DK:32:TYR:N	2.85	0.44
34:DM:67:VAL:HG11	34:DM:96:ILE:HD12	1.99	0.44
35:DN:84:GLY:N	35:DN:85:PRO:HD2	2.32	0.44
37:DP:30:VAL:HG12	37:DP:31:TRP:O	2.18	0.44
40:DS:22:ASP:OD2	40:DS:22:ASP:N	2.50	0.44
51:D3:32:ILE:HG22	51:D3:35:LYS:HD2	1.99	0.44
1:AA:102:G:C4	1:AA:103:U:C5	3.06	0.44
1:AA:412:A:H4'	1:AA:413:G:OP1	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:423:G:H2'	1:AA:424:G:O4'	2.17	0.44
1:AA:472:U:C4	1:AA:473:U:O4	2.70	0.44
1:AA:549:C:C2	1:AA:550:G:C8	3.05	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
1:AA:598:U:H4'	8:AH:86:TYR:CG	2.52	0.44
1:AA:800:G:C6	57:AA:1814:HOH:O	2.54	0.44
1:AA:1081:A:P	5:AE:21:VAL:HG21	2.57	0.44
1:AA:1130:A:H1'	1:AA:1146:A:C2	2.53	0.44
1:AA:1263:C:H2'	1:AA:1264:U:C6	2.52	0.44
1:AA:1309:G:C6	1:AA:1310:G:C5	3.05	0.44
1:AA:1322:C:O2	1:AA:1322:C:O4'	2.35	0.44
1:AA:1329:A:H5''	13:AM:26:GLY:N	2.33	0.44
1:AA:1353:G:C2	1:AA:1354:U:C6	3.05	0.44
3:AC:26:THR:O	3:AC:27:LYS:C	2.53	0.44
3:AC:60:PRO:O	3:AC:61:ALA:O	2.35	0.44
3:AC:85:GLU:HA	3:AC:88:ARG:CZ	2.48	0.44
5:AE:20:ARG:HG3	5:AE:21:VAL:N	2.32	0.44
5:AE:84:PRO:HA	5:AE:98:PRO:HD3	1.99	0.44
5:AE:115:LEU:CD2	5:AE:123:VAL:HG21	2.47	0.44
10:AJ:36:VAL:HA	10:AJ:75:ASP:O	2.17	0.44
11:AK:56:ARG:O	11:AK:59:THR:HG23	2.17	0.44
11:AK:72:ASP:O	11:AK:73:ALA:HB2	2.18	0.44
12:AL:59:ASN:C	12:AL:59:ASN:OD1	2.54	0.44
19:AS:3:ARG:O	19:AS:4:SER:CB	2.65	0.44
22:BA:468:G:O6	22:BA:469:G:C2	2.71	0.44
22:BA:864:G:O2'	22:BA:865:C:H5'	2.16	0.44
22:BA:1092:C:N4	22:BA:1098:A:H62	2.14	0.44
22:BA:1350:C:C2	22:BA:1382:G:C2	3.06	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
22:BA:2267:A:H5''	22:BA:2268:A:H5'	1.99	0.44
22:BA:2720:U:C2	22:BA:2872:A:C6	3.05	0.44
24:BC:141:VAL:HG11	24:BC:190:ALA:CB	2.47	0.44
25:BD:13:ARG:HD2	25:BD:15:PHE:CE1	2.51	0.44
25:BD:177:VAL:O	25:BD:177:VAL:HG23	2.18	0.44
26:BE:48:THR:HG22	26:BE:86:ALA:HB3	1.99	0.44
27:BF:17:MET:CE	27:BF:22:TYR:HB2	2.47	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
31:BJ:42:ALA:O	38:BQ:64:ARG:HG2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:31:HIS:O	35:BN:33:ILE:N	2.50	0.44
36:BO:59:ALA:O	36:BO:60:GLU:C	2.55	0.44
53:B5:65:LEU:HD21	53:B5:195:ARG:CB	2.48	0.44
1:CA:178:C:H2'	1:CA:179:A:O4'	2.17	0.44
1:CA:251:G:N1	1:CA:266:G:C6	2.85	0.44
1:CA:517:G:H5'	1:CA:519:C:C2	2.51	0.44
1:CA:540:G:C6	1:CA:541:G:C5	3.05	0.44
1:CA:632:U:H2'	1:CA:633:G:OP1	2.17	0.44
1:CA:937:A:C2	1:CA:1379:G:O6	2.69	0.44
2:CB:148:LEU:HD12	2:CB:148:LEU:N	2.33	0.44
3:CC:117:ALA:HB1	3:CC:187:SER:HB2	1.98	0.44
4:CD:155:VAL:HA	4:CD:158:ALA:HB3	2.00	0.44
5:CE:104:GLY:O	5:CE:105:ILE:HG23	2.17	0.44
5:CE:155:ALA:C	5:CE:156:LYS:HG3	2.36	0.44
9:CI:30:ILE:HD13	9:CI:39:PHE:CE2	2.52	0.44
9:CI:46:MET:O	9:CI:49:ARG:HB3	2.17	0.44
11:CK:25:ALA:O	11:CK:89:PRO:O	2.36	0.44
11:CK:43:GLY:HA3	11:CK:74:VAL:HG12	1.99	0.44
14:CN:41:ARG:HG2	14:CN:42:TRP:N	2.31	0.44
19:CS:36:ARG:NH1	19:CS:72:GLY:HA3	2.32	0.44
22:DA:235:U:C4	22:DA:430:A:C2	3.05	0.44
22:DA:465:G:N2	22:DA:684:G:H1'	2.32	0.44
22:DA:613:A:OP2	22:DA:614:A:N7	2.51	0.44
22:DA:728:G:C2	22:DA:730:A:C4	3.06	0.44
22:DA:881:G:C2	22:DA:882:G:N7	2.85	0.44
22:DA:1569:A:C6	22:DA:1570:A:C2	3.05	0.44
22:DA:2103:C:H2'	22:DA:2104:C:C5	2.53	0.44
22:DA:2211:A:C4'	22:DA:2212:A:OP1	2.65	0.44
22:DA:2297:A:N7	22:DA:2320:U:C4	2.85	0.44
22:DA:2412:A:H5''	22:DA:2413:G:OP2	2.17	0.44
22:DA:2478:A:C8	22:DA:2529:G:N7	2.85	0.44
26:DE:76:PRO:HA	26:DE:82:GLY:HA2	1.98	0.44
30:DI:93:PRO:HB3	30:DI:136:MET:HA	1.99	0.44
31:DJ:6:ALA:O	31:DJ:7:LYS:CG	2.65	0.44
33:DL:96:LYS:HD3	33:DL:103:ILE:HA	1.98	0.44
33:DL:116:VAL:HG21	33:DL:135:ILE:HA	1.99	0.44
35:DN:48:VAL:N	35:DN:50:PRO:HD2	2.33	0.44
42:DU:44:LYS:HE3	42:DU:46:GLN:CB	2.48	0.44
44:DW:45:PHE:HB3	44:DW:80:ILE:CD1	2.47	0.44
45:DX:21:ALA:O	45:DX:22:LEU:HB2	2.17	0.44
48:D0:48:TYR:CE2	48:D0:53:LYS:HD3	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:D2:30:VAL:O	50:D2:34:ARG:HG3	2.17	0.44
1:AA:394:G:C5	1:AA:395:C:C5	3.05	0.44
1:AA:815:A:N7	1:AA:1509:C:O2'	2.49	0.44
1:AA:844:G:N3	1:AA:845:A:C8	2.85	0.44
1:AA:980:C:O3'	14:AN:13:ARG:NH2	2.50	0.44
1:AA:1050:G:C2	1:AA:1209:C:O2	2.69	0.44
1:AA:1500:A:OP2	1:AA:1505:G:OP1	2.35	0.44
2:AB:15:HIS:O	2:AB:16:PHE:C	2.55	0.44
2:AB:70:VAL:O	2:AB:163:VAL:HA	2.17	0.44
4:AD:122:ALA:O	4:AD:123:ILE:HG23	2.16	0.44
7:AG:8:GLY:O	7:AG:9:GLN:HB3	2.17	0.44
9:AI:25:ASN:HB2	9:AI:27:LYS:HG2	1.98	0.44
11:AK:29:ASN:OD1	11:AK:47:ALA:HB3	2.18	0.44
14:AN:26:GLU:HG2	14:AN:27:LEU:N	2.30	0.44
14:AN:47:LYS:HD2	19:AS:13:LEU:HD21	1.99	0.44
15:AO:55:GLY:O	15:AO:58:ARG:HB3	2.17	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
22:BA:878:A:H5'	22:BA:879:G:OP2	2.17	0.44
22:BA:1071:G:P	22:BA:1071:G:H8	2.39	0.44
22:BA:1073:A:C2'	22:BA:1074:G:H5''	2.47	0.44
22:BA:1503:A:C6	22:BA:1504:A:C5	3.05	0.44
22:BA:1709:U:C2	22:BA:1750:G:N2	2.85	0.44
22:BA:1718:G:C2	22:BA:1719:G:C8	3.06	0.44
22:BA:1988:G:H2'	22:BA:1989:G:O4'	2.17	0.44
22:BA:2627:G:C6	22:BA:2628:C:C4	3.06	0.44
25:BD:142:VAL:HB	25:BD:143:PRO:CD	2.47	0.44
26:BE:197:GLU:O	26:BE:201:ALA:N	2.50	0.44
29:BH:62:LEU:HD12	29:BH:62:LEU:O	2.17	0.44
29:BH:100:ALA:HB2	29:BH:115:VAL:HG21	1.98	0.44
35:BN:55:ALA:HA	35:BN:80:PHE:CE1	2.53	0.44
36:BO:12:THR:HG22	36:BO:12:THR:O	2.16	0.44
36:BO:79:ALA:CB	36:BO:113:ALA:HB3	2.47	0.44
40:BS:55:ILE:CG2	40:BS:66:ILE:HG12	2.48	0.44
44:BW:37:ILE:HD11	44:BW:61:ALA:HB2	1.98	0.44
49:B1:17:THR:HG21	49:B1:42:VAL:HB	1.98	0.44
49:B1:40:ASP:OD1	49:B1:40:ASP:C	2.55	0.44
53:B5:65:LEU:CD2	53:B5:195:ARG:CB	2.95	0.44
1:CA:734:G:C5	1:CA:735:C:C5	3.05	0.44
1:CA:1142:G:H5'	1:CA:1143:G:OP2	2.17	0.44
1:CA:1491:G:C6	1:CA:1492:A:C6	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:18:HIS:O	2:CB:19:GLN:CB	2.65	0.44
3:CC:196:ILE:O	3:CC:196:ILE:HG22	2.17	0.44
4:CD:160:GLU:O	4:CD:163:GLU:CB	2.65	0.44
5:CE:70:ASN:N	5:CE:70:ASN:OD1	2.49	0.44
6:CF:45:ARG:HG2	6:CF:46:GLN:N	2.32	0.44
9:CI:54:LEU:O	9:CI:55:VAL:HG13	2.18	0.44
9:CI:95:ARG:HG2	9:CI:104:VAL:HG11	1.99	0.44
10:CJ:52:LEU:HD23	10:CJ:62:ARG:HG2	1.99	0.44
17:CQ:55:ILE:C	17:CQ:55:ILE:HD13	2.37	0.44
22:DA:167:A:C2	22:DA:168:G:H1'	2.52	0.44
22:DA:607:U:H5	22:DA:619:G:C4	2.35	0.44
22:DA:771:G:N3	22:DA:771:G:H2'	2.32	0.44
22:DA:777:G:N2	22:DA:778:G:N9	2.66	0.44
22:DA:997:G:OP1	38:DQ:92:ARG:NE	2.50	0.44
22:DA:1070:A:H2'	22:DA:1097:U:O5'	2.17	0.44
22:DA:1395:A:H2'	22:DA:1397:U:OP2	2.17	0.44
22:DA:1435:G:O2'	22:DA:1436:G:H5'	2.17	0.44
22:DA:1582:C:H2'	22:DA:1583:A:O4'	2.17	0.44
22:DA:1663:G:C6	22:DA:1992:G:N7	2.86	0.44
22:DA:1668:A:N3	22:DA:1674:G:C8	2.85	0.44
22:DA:1797:G:H4'	24:DC:255:LYS:O	2.18	0.44
22:DA:2038:G:N7	22:DA:2039:U:C5	2.86	0.44
22:DA:2053:G:H2'	22:DA:2054:A:O4'	2.17	0.44
22:DA:2114:A:C4	22:DA:2167:U:H4'	2.53	0.44
22:DA:2334:U:O3'	36:DO:13:ARG:HD3	2.17	0.44
22:DA:2440:C:N3	22:DA:2441:U:H1'	2.33	0.44
22:DA:2695:U:O2	22:DA:2696:U:C5	2.71	0.44
27:DF:169:LEU:HG	27:DF:169:LEU:O	2.16	0.44
29:DH:1:MET:CE	29:DH:27:ARG:NH1	2.80	0.44
29:DH:37:VAL:HG22	29:DH:38:PRO:HD2	1.98	0.44
32:DK:34:GLY:O	32:DK:35:VAL:C	2.54	0.44
38:DQ:10:ALA:C	38:DQ:12:ALA:N	2.71	0.44
1:AA:189:A:C6	1:AA:190:A:N1	2.85	0.44
1:AA:510:A:H5''	1:AA:511:C:OP1	2.18	0.44
1:AA:750:C:O2'	15:AO:21:ASP:HA	2.17	0.44
1:AA:833:G:N2	1:AA:834:U:H1'	2.32	0.44
1:AA:1154:G:C2	1:AA:1155:A:N7	2.85	0.44
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.53	0.44
2:AB:32:PHE:CD1	2:AB:32:PHE:C	2.90	0.44
3:AC:84:VAL:CG1	3:AC:101:ILE:CG2	2.95	0.44
4:AD:90:LEU:C	4:AD:90:LEU:HD12	2.38	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:126:ASN:HA	4:AD:142:VAL:HG23	2.00	0.44
7:AG:56:LYS:O	7:AG:57:SER:OG	2.29	0.44
7:AG:80:VAL:O	7:AG:81:GLY:C	2.56	0.44
10:AJ:5:ARG:HG2	10:AJ:79:PRO:HG3	1.99	0.44
12:AL:44:LYS:O	12:AL:45:PRO:C	2.55	0.44
12:AL:73:ASN:O	12:AL:74:LEU:CD2	2.65	0.44
18:AR:35:GLU:OE2	21:AU:5:LYS:HE3	2.18	0.44
18:AR:71:THR:OG1	18:AR:73:ARG:HB2	2.18	0.44
19:AS:29:LYS:CB	19:AS:30:PRO:HD2	2.47	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
22:BA:225:C:H2'	22:BA:226:A:O4'	2.17	0.44
22:BA:482:A:C5'	22:BA:483:A:OP1	2.66	0.44
22:BA:612:G:H2'	22:BA:614:A:C8	2.51	0.44
22:BA:1128:G:O4'	22:BA:2516:A:O2'	2.35	0.44
22:BA:1421:G:N2	22:BA:1495:A:N1	2.65	0.44
22:BA:1501:G:C2'	22:BA:1502:A:H5'	2.48	0.44
22:BA:1846:G:N2	22:BA:1895:C:C2	2.86	0.44
22:BA:2779:U:C6	22:BA:2781:A:C2	3.06	0.44
22:BA:2846:G:H2'	22:BA:2847:U:O4'	2.18	0.44
22:BA:2856:A:N6	22:BA:2857:G:C6	2.85	0.44
28:BG:85:LYS:HG3	28:BG:141:ILE:CD1	2.47	0.44
28:BG:121:ILE:HG22	28:BG:122:THR:N	2.32	0.44
29:BH:31:VAL:N	29:BH:32:PRO:CD	2.80	0.44
30:BI:62:TYR:CD2	30:BI:62:TYR:N	2.84	0.44
35:BN:32:GLU:CD	35:BN:86:ARG:HH22	2.20	0.44
36:BO:78:VAL:HG23	36:BO:79:ALA:N	2.32	0.44
37:BP:53:ARG:HG2	37:BP:53:ARG:HH11	1.81	0.44
40:BS:37:THR:HG22	40:BS:38:TYR:CE1	2.53	0.44
47:BZ:24:LEU:HD11	47:BZ:54:MET:CE	2.48	0.44
49:B1:29:THR:O	49:B1:31:PRO:CD	2.66	0.44
49:B1:34:LEU:H	49:B1:52:ALA:HB2	1.82	0.44
1:CA:68:G:C5	1:CA:69:G:H1'	2.52	0.44
1:CA:130:A:OP1	17:CQ:65:ARG:HD2	2.18	0.44
1:CA:144:G:C5	1:CA:179:A:C2	3.06	0.44
1:CA:174:A:C4	1:CA:175:C:C6	3.05	0.44
1:CA:505:G:H5'	1:CA:534:U:C2	2.53	0.44
1:CA:747:A:C5	1:CA:748:G:C5	3.05	0.44
1:CA:765:G:H5''	1:CA:766:A:OP1	2.17	0.44
1:CA:824:G:H1'	8:CH:2:SER:HA	2.00	0.44
1:CA:853:C:H2'	1:CA:854:U:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:862:C:C2	1:CA:863:U:C5	3.05	0.44
1:CA:888:G:H4'	1:CA:1488:G:O2'	2.17	0.44
1:CA:1029:U:O2	1:CA:1031:C:H1'	2.18	0.44
1:CA:1138:G:C2	1:CA:1140:C:C4	3.06	0.44
1:CA:1160:G:O6	1:CA:1181:G:C6	2.70	0.44
5:CE:103:THR:O	5:CE:122:ASN:HA	2.18	0.44
14:CN:93:ILE:HG21	14:CN:96:LEU:HD22	1.99	0.44
15:CO:58:ARG:O	15:CO:62:GLN:HB2	2.18	0.44
16:CP:5:ARG:O	16:CP:19:VAL:HA	2.17	0.44
20:CT:67:ILE:O	20:CT:68:HIS:O	2.34	0.44
20:CT:72:ALA:O	20:CT:75:HIS:HB2	2.18	0.44
21:CU:34:ARG:HD3	21:CU:35:ARG:CB	2.48	0.44
22:DA:41:C:H2'	22:DA:42:A:C8	2.52	0.44
22:DA:158:U:C2'	22:DA:159:G:H5'	2.46	0.44
22:DA:248:G:O2'	22:DA:2432:A:OP1	2.23	0.44
22:DA:425:G:N1	22:DA:426:C:C4	2.85	0.44
22:DA:503:A:C6	22:DA:506:G:C6	3.05	0.44
22:DA:580:U:H4'	38:DQ:31:VAL:HG11	2.00	0.44
22:DA:841:G:H2'	22:DA:842:U:O4'	2.18	0.44
22:DA:1194:A:H2'	22:DA:1195:G:O5'	2.18	0.44
22:DA:1655:A:C6	22:DA:1656:C:C2	3.05	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
22:DA:2238:G:H4'	22:DA:2239:G:OP1	2.17	0.44
22:DA:2652:C:N4	22:DA:2653:U:C4	2.85	0.44
22:DA:2854:G:N2	22:DA:2864:G:N3	2.66	0.44
23:DB:48:U:H2'	23:DB:49:C:C6	2.52	0.44
25:DD:112:THR:O	25:DD:112:THR:HG22	2.16	0.44
25:DD:148:GLN:HB2	25:DD:152:PRO:HG2	2.00	0.44
26:DE:48:THR:OG1	26:DE:49:ARG:N	2.50	0.44
28:DG:167:GLU:HG3	28:DG:169:VAL:HG23	1.98	0.44
29:DH:25:TYR:O	29:DH:29:PHE:HB3	2.18	0.44
31:DJ:35:ARG:HB3	31:DJ:54:ILE:HD11	1.99	0.44
33:DL:17:LYS:HB3	33:DL:19:LEU:HD12	1.98	0.44
33:DL:29:LYS:O	33:DL:30:THR:CB	2.64	0.44
33:DL:78:ARG:CZ	33:DL:113:ALA:HB1	2.48	0.44
36:DO:18:LEU:O	36:DO:22:GLY:N	2.50	0.44
42:DU:83:VAL:HG11	42:DU:94:ARG:HD2	1.99	0.44
42:DU:103:ILE:O	42:DU:103:ILE:HG22	2.16	0.44
48:D0:7:LYS:HE2	48:D0:8:PRO:O	2.17	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)
1:AA:223:A:C4	1:AA:224:U:C5	3.05	0.44
1:AA:471:U:H2'	1:AA:472:U:O4'	2.18	0.44
1:AA:568:G:N3	1:AA:569:C:C6	2.85	0.44
2:AB:125:THR:O	2:AB:126:PHE:HB3	2.17	0.44
2:AB:132:LYS:HA	2:AB:132:LYS:HE3	1.99	0.44
4:AD:105:MET:HG2	4:AD:171:LEU:HD22	1.98	0.44
5:AE:80:THR:OG1	5:AE:81:LEU:N	2.51	0.44
6:AF:38:ARG:HD2	6:AF:40:GLU:OE2	2.17	0.44
10:AJ:35:GLN:OE1	10:AJ:35:GLN:HA	2.17	0.44
11:AK:22:HIS:N	11:AK:33:THR:O	2.50	0.44
12:AL:74:LEU:HD11	12:AL:80:ILE:HG21	2.00	0.44
14:AN:7:LYS:O	14:AN:10:GLU:N	2.50	0.44
15:AO:43:PHE:HB3	15:AO:53:ARG:NH2	2.31	0.44
20:AT:67:ILE:CD1	20:AT:71:LYS:HG2	2.47	0.44
21:AU:40:LYS:N	21:AU:41:PRO:HD2	2.32	0.44
21:AU:53:VAL:O	21:AU:54:LYS:CB	2.66	0.44
22:BA:55:G:N3	22:BA:56:A:C8	2.86	0.44
22:BA:412:A:H2'	22:BA:413:C:H5'	1.99	0.44
22:BA:581:C:H2'	22:BA:582:A:H8	1.83	0.44
22:BA:599:A:O2'	22:BA:600:G:H5'	2.18	0.44
22:BA:1050:A:H2'	22:BA:1051:G:O4'	2.17	0.44
22:BA:1223:G:OP2	39:BR:68:ARG:NH1	2.50	0.44
22:BA:1444:G:H2'	22:BA:1445:G:C8	2.52	0.44
22:BA:1793:C:O2'	22:BA:1794:A:H5'	2.18	0.44
22:BA:1858:A:H1'	22:BA:1885:A:C2	2.53	0.44
22:BA:1883:U:O4	22:BA:1884:G:N1	2.51	0.44
22:BA:2311:A:H1'	27:BF:85:ILE:HD11	1.99	0.44
22:BA:2345:G:H4'	22:BA:2346:A:H5''	1.99	0.44
22:BA:2379:G:O3'	36:BO:17:LYS:NZ	2.49	0.44
23:BB:3:C:C4	23:BB:4:C:C5	3.05	0.44
23:BB:15:A:O2'	23:BB:16:G:OP1	2.35	0.44
23:BB:112:G:H2'	23:BB:113:C:C6	2.52	0.44
24:BC:124:ILE:O	24:BC:124:ILE:HG22	2.17	0.44
25:BD:85:ALA:O	25:BD:86:GLU:O	2.36	0.44
25:BD:106:LYS:HA	25:BD:175:LEU:O	2.18	0.44
33:BL:142:ILE:O	33:BL:142:ILE:HG22	2.17	0.44
35:BN:33:ILE:HG23	35:BN:33:ILE:O	2.18	0.44
36:BO:48:LEU:HD12	36:BO:87:ILE:CD1	2.46	0.44
41:BT:16:VAL:O	41:BT:17:SER:CB	2.65	0.44
48:B0:27:SER:O	48:B0:28:LEU:C	2.56	0.44
1:CA:66:A:N6	1:CA:67:C:N4	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:73:C:HO2'	1:CA:74:A:P	2.39	0.44
1:CA:159:G:H5'	1:CA:160:A:OP2	2.18	0.44
1:CA:230:G:H2'	1:CA:231:U:O4'	2.17	0.44
1:CA:1007:U:C2'	1:CA:1008:U:C5'	2.95	0.44
1:CA:1361:G:H3'	1:CA:1362:A:H5''	2.00	0.44
4:CD:148:LYS:H	4:CD:148:LYS:CE	2.31	0.44
6:CF:91:ARG:HG2	6:CF:93:LYS:NZ	2.32	0.44
7:CG:51:ALA:HB1	7:CG:57:SER:O	2.18	0.44
7:CG:117:ALA:O	7:CG:121:ALA:CB	2.66	0.44
8:CH:20:ALA:C	8:CH:22:LYS:H	2.21	0.44
11:CK:89:PRO:HD3	21:CU:29:LEU:HD11	1.97	0.44
13:CM:6:GLY:O	13:CM:8:ASN:N	2.51	0.44
14:CN:10:GLU:O	14:CN:13:ARG:N	2.51	0.44
15:CO:37:ASN:O	15:CO:40:GLN:HB3	2.17	0.44
17:CQ:46:VAL:HG12	17:CQ:47:HIS:N	2.33	0.44
17:CQ:60:GLU:HB3	17:CQ:76:VAL:HG23	1.98	0.44
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
22:DA:749:A:C6	22:DA:750:A:N7	2.85	0.44
22:DA:933:A:H5'	22:DA:934:U:OP2	2.18	0.44
22:DA:1584:U:O2	22:DA:1584:U:H3'	2.17	0.44
22:DA:2073:C:H5''	24:DC:228:VAL:CB	2.48	0.44
22:DA:2199:A:C1'	29:DH:28:ASN:ND2	2.80	0.44
22:DA:2502:G:H5'	22:DA:2503:A:C5'	2.47	0.44
22:DA:2822:G:OP1	25:DD:164:GLN:NE2	2.48	0.44
28:DG:133:LEU:CD1	28:DG:141:ILE:HB	2.47	0.44
37:DP:60:THR:HA	37:DP:73:VAL:HA	1.99	0.44
38:DQ:47:TYR:C	38:DQ:47:TYR:CD2	2.90	0.44
44:DW:56:ASP:O	44:DW:57:HIS:HB2	2.16	0.44
1:AA:279:A:H5''	1:AA:281:G:O4'	2.18	0.44
1:AA:355:C:O2'	1:AA:388:G:N3	2.38	0.44
1:AA:451:A:N6	1:AA:481:G:H5'	2.33	0.44
1:AA:767:A:H2'	1:AA:768:A:O4'	2.17	0.44
1:AA:946:A:C2	1:AA:1236:A:C2	3.06	0.44
2:AB:67:ILE:O	2:AB:68:LEU:HB3	2.17	0.44
3:AC:114:LYS:HD3	3:AC:185:ASN:OD1	2.17	0.44
3:AC:167:TRP:O	3:AC:168:TYR:HB2	2.16	0.44
4:AD:58:LYS:HD3	4:AD:203:LEU:CD2	2.48	0.44
7:AG:69:VAL:HG23	7:AG:100:ALA:HB1	2.00	0.44
9:AI:19:VAL:HA	9:AI:65:ILE:HG22	2.00	0.44
14:AN:49:GLN:OE1	14:AN:49:GLN:CA	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:515:A:H1'	22:BA:581:C:H1'	2.00	0.44
22:BA:548:G:H4'	22:BA:549:G:N2	2.32	0.44
22:BA:826:U:O2'	33:BL:53:GLY:N	2.50	0.44
22:BA:1075:C:N3	22:BA:1076:C:N4	2.66	0.44
22:BA:1356:G:C5	22:BA:1357:C:C5	3.05	0.44
22:BA:1469:A:C2	22:BA:1470:A:C4	3.05	0.44
22:BA:1811:G:C5	22:BA:1812:U:C5	3.06	0.44
22:BA:1866:A:C6	22:BA:1876:A:N7	2.86	0.44
22:BA:2040:G:H2'	22:BA:2041:U:O4'	2.17	0.44
22:BA:2128:G:OP2	53:B5:37:LYS:HB2	2.18	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
22:BA:2218:G:C2'	22:BA:2219:U:H5'	2.48	0.44
22:BA:2366:A:H2'	22:BA:2367:G:O4'	2.17	0.44
22:BA:2400:G:C2'	22:BA:2401:U:H5'	2.48	0.44
22:BA:2503:A:N3	22:BA:2503:A:H5'	2.32	0.44
29:BH:57:LYS:HG3	29:BH:58:LEU:N	2.33	0.44
29:BH:97:ARG:O	29:BH:101:ASP:HB2	2.17	0.44
36:BO:40:ILE:HG22	36:BO:41:ALA:O	2.17	0.44
36:BO:92:PHE:HB2	36:BO:117:PHE:CE1	2.52	0.44
41:BT:48:GLN:HG2	41:BT:53:VAL:O	2.18	0.44
43:BV:63:ILE:HD12	43:BV:72:VAL:HG21	1.98	0.44
44:BW:56:ASP:O	44:BW:57:HIS:CB	2.65	0.44
1:CA:110:C:C4	1:CA:111:G:C5	3.06	0.44
1:CA:862:C:H2'	1:CA:863:U:C6	2.52	0.44
1:CA:954:G:N2	1:CA:1228:C:N3	2.65	0.44
1:CA:1004:A:H2'	1:CA:1005:A:C8	2.52	0.44
1:CA:1347:G:HO2'	1:CA:1348:U:P	2.38	0.44
5:CE:11:LEU:HG	5:CE:12:GLN:N	2.33	0.44
8:CH:104:VAL:HA	8:CH:126:ILE:CD1	2.48	0.44
13:CM:81:MET:O	13:CM:82:ASP:C	2.56	0.44
20:CT:67:ILE:HD13	20:CT:67:ILE:HA	1.84	0.44
22:DA:116:C:H5'	22:DA:128:C:C5	2.53	0.44
22:DA:117:G:N1	22:DA:119:A:N6	2.66	0.44
22:DA:153:U:H2'	22:DA:154:U:C6	2.52	0.44
22:DA:389:G:N9	22:DA:2413:G:H4'	2.32	0.44
22:DA:874:G:C2	22:DA:904:G:C2	3.05	0.44
22:DA:1355:G:C6	22:DA:1356:G:N7	2.85	0.44
22:DA:1677:A:H5''	57:DA:3436:HOH:O	2.17	0.44
22:DA:1734:G:C2	22:DA:1735:A:C5	3.06	0.44
22:DA:2073:C:H5''	24:DC:228:VAL:HB	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2121:G:C2	22:DA:2122:U:C2	3.06	0.44
22:DA:2127:G:H1'	22:DA:2162:G:N7	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
22:DA:2392:A:OP2	51:D3:31:HIS:CE1	2.70	0.44
22:DA:2539:C:H4'	52:D4:3:VAL:HG11	1.99	0.44
22:DA:2540:C:H2'	22:DA:2541:A:O4'	2.18	0.44
24:DC:3:VAL:CG1	24:DC:202:LEU:HD23	2.47	0.44
31:DJ:35:ARG:HG2	31:DJ:40:HIS:NE2	2.33	0.44
35:DN:65:LEU:HD11	35:DN:69:ARG:NH2	2.33	0.44
36:DO:51:ALA:HB1	36:DO:77:ALA:HB1	2.00	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
41:DT:73:ARG:HA	41:DT:73:ARG:CZ	2.47	0.44
44:DW:81:SER:O	44:DW:82:ILE:HG13	2.18	0.44
46:DY:16:THR:O	46:DY:19:LEU:HB2	2.18	0.44
47:DZ:52:SER:C	47:DZ:54:MET:H	2.20	0.44
1:AA:239:U:H5''	1:AA:240:G:OP2	2.18	0.44
1:AA:949:A:C4	1:AA:950:U:C6	3.06	0.44
1:AA:963:G:H2'	1:AA:963:G:N3	2.33	0.44
1:AA:973:G:H1'	10:AJ:56:HIS:CD2	2.52	0.44
1:AA:978:A:C4	1:AA:1319:A:C2	3.06	0.44
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.53	0.44
1:AA:1291:U:OP1	7:AG:38:THR:HG22	2.18	0.44
2:AB:46:THR:CG2	2:AB:201:PRO:HB2	2.47	0.44
7:AG:146:GLU:O	7:AG:149:LYS:HB2	2.16	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
11:AK:60:PRO:N	11:AK:91:PRO:HB2	2.33	0.44
15:AO:2:SER:O	15:AO:3:LEU:HB3	2.18	0.44
19:AS:42:PRO:C	19:AS:44:MET:H	2.20	0.44
22:BA:162:U:H4'	22:BA:163:C:OP1	2.17	0.44
22:BA:223:A:C5	22:BA:422:A:C8	3.06	0.44
22:BA:630:G:H5''	22:BA:631:A:OP2	2.17	0.44
22:BA:1082:U:H5'	30:BI:119:GLY:N	2.33	0.44
22:BA:1401:G:C6	22:BA:1402:U:C4	3.06	0.44
22:BA:1536:C:O4'	22:BA:1537:G:C2	2.70	0.44
22:BA:1664:A:H1'	22:BA:2726:A:N1	2.33	0.44
22:BA:1676:A:H2'	22:BA:1677:A:O4'	2.18	0.44
22:BA:1734:G:H2'	22:BA:1735:A:O4'	2.18	0.44
22:BA:2259:U:H1'	22:BA:2427:C:C2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2880:C:N3	22:BA:2881:U:C5	2.86	0.44
55:BA:3001:DOL:C37	55:BA:3001:DOL:C29	2.96	0.44
28:BG:7:ALA:O	28:BG:69:ARG:NE	2.46	0.44
29:BH:4:ILE:HG23	29:BH:17:ASP:O	2.17	0.44
29:BH:89:LYS:CE	29:BH:124:THR:HG22	2.48	0.44
36:BO:54:VAL:HG13	36:BO:54:VAL:O	2.17	0.44
39:BR:14:VAL:CG1	39:BR:15:SER:N	2.80	0.44
41:BT:2:ILE:N	41:BT:3:ARG:HB2	2.33	0.44
42:BU:102:THR:HG22	42:BU:103:ILE:N	2.31	0.44
43:BV:14:LYS:CD	43:BV:18:ARG:NH1	2.81	0.44
43:BV:58:SER:O	43:BV:73:LYS:CE	2.66	0.44
53:B5:61:GLY:O	53:B5:62:THR:C	2.55	0.44
53:B5:214:TYR:O	53:B5:215:VAL:CB	2.65	0.44
1:CA:121:U:C3'	1:CA:122:G:H5'	2.48	0.44
1:CA:260:G:C6	1:CA:261:U:C4	3.06	0.44
1:CA:455:G:C2	1:CA:478:A:N1	2.86	0.44
1:CA:483:C:H5''	1:CA:484:G:OP2	2.17	0.44
1:CA:715:A:H1'	1:CA:777:A:C2	2.52	0.44
1:CA:756:C:H2'	1:CA:757:U:H5'	2.00	0.44
1:CA:791:G:C5	1:CA:792:A:N7	2.85	0.44
1:CA:797:C:O2'	1:CA:798:U:H5'	2.18	0.44
1:CA:803:G:C6	1:CA:804:U:N3	2.86	0.44
1:CA:811:C:C5	1:CA:812:G:C5	3.06	0.44
1:CA:834:U:C2	1:CA:835:U:C5	3.06	0.44
1:CA:978:A:OP1	1:CA:1361:G:N2	2.42	0.44
1:CA:1073:U:O2	1:CA:1073:U:H2'	2.17	0.44
1:CA:1119:C:O2	1:CA:1155:A:C2	2.71	0.44
1:CA:1126:U:N1	1:CA:1281:C:C5	2.86	0.44
1:CA:1149:C:C4	1:CA:1150:A:C6	3.05	0.44
1:CA:1157:A:N6	1:CA:1178:G:H1'	2.32	0.44
1:CA:1288:A:N6	1:CA:1289:A:N6	2.66	0.44
1:CA:1304:G:O2'	1:CA:1333:A:N6	2.33	0.44
1:CA:1492:A:N7	1:CA:1493:A:C2	2.86	0.44
6:CF:70:VAL:HG23	6:CF:71:ILE:CD1	2.48	0.44
7:CG:88:PRO:HD2	7:CG:151:PHE:O	2.17	0.44
11:CK:30:THR:HG21	11:CK:92:GLY:HA3	1.99	0.44
11:CK:56:ARG:O	11:CK:59:THR:HG23	2.17	0.44
13:CM:43:VAL:HG23	13:CM:43:VAL:O	2.18	0.44
15:CO:88:ARG:HG3	15:CO:88:ARG:O	2.18	0.44
17:CQ:4:LYS:HG2	17:CQ:5:ILE:N	2.32	0.44
22:DA:479:A:N3	22:DA:481:G:H5''	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:489:G:C2	22:DA:491:G:H1'	2.53	0.44
22:DA:851:C:H2'	22:DA:852:U:C6	2.53	0.44
22:DA:1255:U:C2'	22:DA:1256:G:OP1	2.66	0.44
22:DA:1324:G:C1'	22:DA:1616:A:N6	2.80	0.44
22:DA:1420:A:C2	22:DA:2211:A:C4	3.05	0.44
22:DA:1512:C:C4	22:DA:1513:U:C4	3.06	0.44
22:DA:1638:C:C5'	22:DA:2710:C:O2'	2.63	0.44
22:DA:1768:C:H2'	22:DA:1769:U:O4'	2.18	0.44
22:DA:1926:U:H2'	22:DA:1928:A:C8	2.53	0.44
22:DA:1957:C:O2'	22:DA:1985:C:H1'	2.18	0.44
22:DA:2128:G:H1'	22:DA:2173:A:O2'	2.17	0.44
22:DA:2230:G:H5'	45:DX:30:LEU:HD13	2.00	0.44
22:DA:2341:G:C6	22:DA:2342:C:N3	2.86	0.44
22:DA:2452:C:N4	22:DA:2453:A:N1	2.66	0.44
22:DA:2602:A:H4'	22:DA:2603:G:C5'	2.48	0.44
22:DA:2744:G:N2	22:DA:2745:C:C2	2.86	0.44
22:DA:2751:G:H4'	28:DG:4:VAL:HG23	1.99	0.44
24:DC:65:VAL:O	24:DC:67:PHE:CD1	2.71	0.44
26:DE:8:ALA:HB2	26:DE:122:GLU:CG	2.48	0.44
29:DH:31:VAL:CB	29:DH:32:PRO:HD3	2.47	0.44
31:DJ:71:ASP:O	31:DJ:73:VAL:CG2	2.66	0.44
32:DK:56:ASP:OD2	32:DK:56:ASP:N	2.51	0.44
38:DQ:13:ARG:O	38:DQ:16:LYS:HB3	2.17	0.44
39:DR:52:PRO:O	39:DR:53:PHE:HB2	2.18	0.44
41:DT:37:ASP:CG	41:DT:38:ALA:N	2.70	0.44
41:DT:91:GLN:CG	41:DT:91:GLN:O	2.66	0.44
44:DW:45:PHE:HB3	44:DW:80:ILE:HD12	1.98	0.44
1:AA:85:U:O2	1:AA:85:U:O4'	2.36	0.44
1:AA:194:C:C2'	1:AA:195:A:H5'	2.48	0.44
1:AA:552:U:O2'	1:AA:553:A:H5'	2.17	0.44
1:AA:569:C:O2	1:AA:569:C:H2'	2.17	0.44
1:AA:981:U:C2	1:AA:982:U:C5	3.06	0.44
1:AA:1030:U:OP2	1:AA:1031:C:C5	2.71	0.44
1:AA:1244:G:C2	1:AA:1294:G:C2	3.06	0.44
1:AA:1342:C:O2'	9:AI:126:GLN:CG	2.66	0.44
2:AB:27:MET:CE	2:AB:193:PRO:HG3	2.48	0.44
3:AC:77:ILE:HA	3:AC:84:VAL:CG2	2.48	0.44
6:AF:17:GLN:O	6:AF:21:MET:HG3	2.18	0.44
7:AG:55:GLY:C	7:AG:57:SER:H	2.21	0.44
11:AK:63:ALA:CB	11:AK:92:GLY:HA3	2.48	0.44
11:AK:126:LYS:HA	21:AU:34:ARG:HH21	1.82	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
17:AQ:14:SER:CB	17:AQ:22:VAL:CG1	2.94	0.44
20:AT:44:LYS:HB3	20:AT:87:ALA:HB1	2.00	0.44
20:AT:66:LEU:HD12	20:AT:66:LEU:C	2.38	0.44
22:BA:136:G:C6	22:BA:137:U:O4	2.71	0.44
22:BA:263:G:C2'	22:BA:264:C:H5'	2.48	0.44
22:BA:368:A:C6	22:BA:369:U:N3	2.86	0.44
22:BA:616:A:C2	22:BA:617:G:H1'	2.52	0.44
22:BA:863:A:O2'	22:BA:864:G:H5'	2.18	0.44
22:BA:1050:A:C2	22:BA:2751:G:C4	3.06	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
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:1479:G:H2'	22:BA:1480:C:O4'	2.17	0.44
22:BA:1492:G:C6	22:BA:1499:C:N3	2.86	0.44
22:BA:1644:C:O2	22:BA:1644:C:H2'	2.17	0.44
22:BA:1744:A:H2'	22:BA:1745:A:O4'	2.17	0.44
22:BA:2191:A:C2	22:BA:2192:U:N3	2.86	0.44
26:BE:164:LEU:HB3	26:BE:167:VAL:HB	1.99	0.44
27:BF:108:VAL:N	27:BF:109:PRO:HD2	2.33	0.44
28:BG:153:ARG:O	28:BG:154:PRO:C	2.57	0.44
36:BO:7:ARG:HG3	36:BO:96:GLY:HA3	1.99	0.44
39:BR:66:HIS:CE1	39:BR:94:THR:HG22	2.53	0.44
41:BT:1:MET:C	41:BT:2:ILE:HD12	2.38	0.44
47:BZ:35:THR:HG22	47:BZ:36:VAL:N	2.32	0.44
50:B2:35:ARG:NE	50:B2:42:LEU:HD21	2.33	0.44
53:B5:66:PRO:HG3	53:B5:194:ILE:CB	2.48	0.44
1:CA:147:G:C2	1:CA:148:G:C6	3.06	0.44
1:CA:173:U:H3'	1:CA:174:A:H5'	1.99	0.44
1:CA:327:A:C2	1:CA:329:A:C4	3.05	0.44
1:CA:438:U:C2	1:CA:494:G:C6	3.06	0.44
1:CA:711:G:N2	1:CA:712:A:C4	2.86	0.44
1:CA:774:G:C5	1:CA:775:G:C8	3.06	0.44
1:CA:960:U:O2'	1:CA:1223:C:H4'	2.17	0.44
1:CA:1004:A:C6	1:CA:1005:A:N1	2.86	0.44
1:CA:1077:G:N2	1:CA:1080:A:OP2	2.50	0.44
1:CA:1197:A:C2'	1:CA:1198:G:H5'	2.47	0.44
2:CB:93:ASN:OD1	2:CB:94:HIS:N	2.50	0.44
2:CB:104:TRP:CH2	2:CB:108:ARG:HD3	2.53	0.44
2:CB:173:ILE:HG22	2:CB:177:ASN:ND2	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:30:ALA:O	3:CC:34:ASP:HB2	2.18	0.44
4:CD:3:ARG:O	4:CD:5:LEU:HD13	2.18	0.44
4:CD:188:ARG:NH2	4:CD:197:GLU:OE2	2.49	0.44
5:CE:156:LYS:O	5:CE:159:LYS:NZ	2.48	0.44
6:CF:8:PHE:N	6:CF:8:PHE:CD2	2.86	0.44
7:CG:71:PRO:HD2	7:CG:96:ARG:O	2.18	0.44
9:CI:55:VAL:O	9:CI:55:VAL:HG23	2.17	0.44
11:CK:126:LYS:O	21:CU:34:ARG:CZ	2.66	0.44
12:CL:51:LYS:N	12:CL:51:LYS:HD2	2.33	0.44
13:CM:25:VAL:HG13	13:CM:25:VAL:O	2.18	0.44
13:CM:53:ILE:O	13:CM:57:ARG:HB2	2.17	0.44
18:CR:37:GLY:O	18:CR:63:ARG:NH2	2.47	0.44
19:CS:55:ARG:CZ	19:CS:79:THR:CG2	2.95	0.44
20:CT:32:ILE:CG1	20:CT:54:MET:HE3	2.48	0.44
21:CU:37:PHE:O	21:CU:39:GLU:N	2.44	0.44
22:DA:8:C:O2'	22:DA:9:G:H5'	2.18	0.44
22:DA:13:A:N3	22:DA:14:A:N6	2.61	0.44
22:DA:79:C:H2'	22:DA:346:A:N3	2.32	0.44
22:DA:117:G:C6	22:DA:119:A:N1	2.86	0.44
22:DA:137:U:H2'	22:DA:140:C:C2	2.53	0.44
22:DA:478:A:C6	22:DA:480:A:C6	3.06	0.44
22:DA:560:C:O2	38:DQ:48:ARG:NH1	2.48	0.44
22:DA:568:U:H2'	22:DA:570:G:OP2	2.17	0.44
22:DA:772:C:N3	22:DA:773:U:C5	2.86	0.44
22:DA:810:U:OP1	57:DA:3333:HOH:O	2.21	0.44
22:DA:855:G:C2	22:DA:923:G:N3	2.86	0.44
22:DA:1287:A:H2'	22:DA:1288:G:H5'	2.00	0.44
22:DA:1754:A:C6	22:DA:1755:A:C5	3.05	0.44
22:DA:1809:A:H2'	22:DA:1810:A:H8	1.78	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:DA:2106:U:H2'	22:DA:2107:G:C8	2.53	0.44
22:DA:2163:A:OP2	22:DA:2171:A:C8	2.71	0.44
22:DA:2431:U:H2'	22:DA:2433:A:OP2	2.17	0.44
22:DA:2544:G:H5'	22:DA:2645:G:C2	2.53	0.44
22:DA:2837:A:H2'	22:DA:2838:G:O4'	2.18	0.44
26:DE:109:LEU:O	26:DE:112:LEU:HB2	2.17	0.44
33:DL:22:GLY:O	33:DL:25:SER:OG	2.36	0.44
34:DM:2:LEU:HD12	34:DM:2:LEU:N	2.33	0.44
1:AA:125:U:H2'	1:AA:126:G:O4'	2.17	0.44
1:AA:815:A:H4'	1:AA:817:C:C4	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:933:G:OP2	7:AG:3:ARG:CB	2.66	0.44
1:AA:1014:A:C2	19:AS:34:TRP:CZ2	3.06	0.44
1:AA:1539:C:H5''	21:AU:18:ARG:HG3	1.99	0.44
2:AB:10:LEU:C	2:AB:10:LEU:HD23	2.38	0.44
2:AB:101:LEU:CD1	2:AB:158:PRO:HG2	2.48	0.44
4:AD:197:GLU:O	4:AD:199:LEU:N	2.50	0.44
8:AH:39:VAL:CG1	8:AH:112:THR:HG22	2.48	0.44
8:AH:49:PHE:HB3	8:AH:61:LEU:CD2	2.47	0.44
8:AH:111:MET:CE	8:AH:116:ALA:HA	2.44	0.44
9:AI:127:PHE:CD2	9:AI:127:PHE:C	2.91	0.44
10:AJ:65:TYR:CB	14:AN:96:LEU:HD11	2.48	0.44
10:AJ:66:GLU:HB3	14:AN:99:ALA:HB2	2.00	0.44
14:AN:41:ARG:HD3	14:AN:42:TRP:CH2	2.53	0.44
16:AP:56:ARG:O	16:AP:59:HIS:HB3	2.18	0.44
17:AQ:5:ILE:N	17:AQ:5:ILE:HD12	2.33	0.44
17:AQ:48:ASP:CG	17:AQ:52:GLU:OE1	2.56	0.44
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.99	0.44
22:BA:108:G:C5	22:BA:109:C:C5	3.06	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:BA:1688:U:H1'	22:BA:1701:A:C5	2.52	0.44
22:BA:1716:U:O2'	22:BA:1717:A:H5'	2.18	0.44
22:BA:1951:U:H2'	22:BA:1953:A:OP2	2.18	0.44
27:BF:36:LEU:HD11	27:BF:99:PHE:CZ	2.53	0.44
27:BF:73:SER:OG	27:BF:80:ARG:HA	2.18	0.44
29:BH:99:ILE:CD1	29:BH:117:LEU:HD13	2.48	0.44
30:BI:58:VAL:HG12	30:BI:59:ILE:H	1.82	0.44
35:BN:52:ILE:HG21	35:BN:94:TYR:CG	2.53	0.44
40:BS:36:LEU:CD1	40:BS:48:LYS:HA	2.48	0.44
40:BS:41:LYS:O	40:BS:43:ALA:N	2.50	0.44
41:BT:49:LYS:HD3	41:BT:49:LYS:H	1.82	0.44
42:BU:12:ILE:HG13	42:BU:21:LYS:O	2.18	0.44
43:BV:10:LYS:CE	43:BV:10:LYS:H	2.31	0.44
49:B1:51:GLU:OE2	49:B1:53:LYS:HD3	2.18	0.44
51:B3:32:ILE:O	51:B3:32:ILE:HG22	2.18	0.44
1:CA:73:C:O2'	1:CA:74:A:P	2.76	0.44
1:CA:237:G:C4	1:CA:238:A:C8	3.06	0.44
1:CA:246:A:N3	1:CA:279:A:N6	2.65	0.44
1:CA:552:U:C2	1:CA:553:A:C8	3.05	0.44
1:CA:781:A:OP2	57:CA:1812:HOH:O	2.21	0.44
1:CA:1213:A:C5	1:CA:1215:G:C4	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1345:U:H4'	1:CA:1346:A:H5'	1.99	0.44
1:CA:1462:C:H2'	1:CA:1463:U:C6	2.53	0.44
1:CA:1480:A:H2'	1:CA:1481:U:O4'	2.18	0.44
4:CD:149:ALA:O	4:CD:152:GLN:HB2	2.17	0.44
8:CH:51:VAL:O	8:CH:51:VAL:HG22	2.18	0.44
11:CK:67:ALA:HB1	11:CK:100:LEU:HD13	2.00	0.44
11:CK:118:HIS:O	11:CK:119:ASN:HB2	2.18	0.44
12:CL:51:LYS:N	12:CL:51:LYS:CD	2.81	0.44
13:CM:85:CYS:HB3	19:CS:74:PHE:CE2	2.52	0.44
22:DA:39:G:N2	22:DA:441:U:C2	2.86	0.44
22:DA:110:G:H2'	22:DA:110:G:N3	2.33	0.44
22:DA:483:A:O2'	42:DU:56:GLY:HA3	2.18	0.44
22:DA:546:U:O2	22:DA:546:U:C2'	2.65	0.44
22:DA:1780:A:OP1	57:DA:3687:HOH:O	2.20	0.44
22:DA:1829:A:H2'	24:DC:15:HIS:NE2	2.33	0.44
22:DA:2199:A:C4	22:DA:2225:A:N1	2.86	0.44
22:DA:2728:U:C2	22:DA:2729:G:C8	3.06	0.44
22:DA:2784:U:H4'	25:DD:42:ASN:O	2.18	0.44
23:DB:21:G:N2	23:DB:63:C:C2	2.86	0.44
23:DB:34:A:N6	23:DB:44:G:O2'	2.48	0.44
24:DC:247:PRO:HG2	24:DC:248:TRP:CZ3	2.53	0.44
25:DD:105:LYS:O	25:DD:177:VAL:HG12	2.18	0.44
35:DN:51:LEU:N	35:DN:51:LEU:CD2	2.79	0.44
35:DN:80:PHE:O	35:DN:85:PRO:HD3	2.18	0.44
42:DU:71:ALA:HB3	42:DU:80:ALA:HB1	1.98	0.44
44:DW:71:VAL:HA	44:DW:77:ARG:O	2.17	0.44
1:AA:126:G:OP1	1:AA:605:U:O2'	2.28	0.43
1:AA:263:A:H2'	1:AA:264:C:C5	2.53	0.43
1:AA:495:A:C2	1:AA:496:A:C6	3.05	0.43
1:AA:1014:A:H5''	19:AS:14:HIS:CG	2.53	0.43
1:AA:1048:G:N3	1:AA:1050:G:N7	2.65	0.43
1:AA:1077:G:N1	1:AA:1081:A:C6	2.85	0.43
1:AA:1130:A:C2	1:AA:1146:A:C5	3.06	0.43
1:AA:1136:C:OP2	1:AA:1137:C:C5	2.71	0.43
1:AA:1197:A:OP1	1:AA:1198:G:OP2	2.36	0.43
2:AB:78:GLU:HA	2:AB:81:LYS:HB3	2.00	0.43
2:AB:99:GLY:O	2:AB:103:ASN:N	2.48	0.43
2:AB:144:LEU:N	2:AB:144:LEU:HD23	2.32	0.43
4:AD:112:ALA:O	4:AD:115:ARG:N	2.50	0.43
4:AD:145:ILE:N	4:AD:145:ILE:HD12	2.33	0.43
8:AH:46:ILE:HG22	8:AH:63:LEU:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:49:PHE:CB	8:AH:61:LEU:HD23	2.48	0.43
9:AI:80:ARG:HD2	9:AI:80:ARG:C	2.37	0.43
10:AJ:49:PHE:CD2	14:AN:77:PHE:CE1	3.05	0.43
11:AK:34:ILE:HG13	11:AK:70:CYS:SG	2.58	0.43
17:AQ:4:LYS:HD2	17:AQ:4:LYS:C	2.39	0.43
17:AQ:81:LYS:C	17:AQ:83:VAL:N	2.69	0.43
22:BA:22:C:C2'	22:BA:23:G:O5'	2.66	0.43
22:BA:996:A:N3	22:BA:997:G:C8	2.86	0.43
22:BA:1303:G:O2'	22:BA:1304:A:H5'	2.17	0.43
22:BA:1355:G:C2	22:BA:1356:G:C8	3.06	0.43
22:BA:1813:G:H1'	24:BC:50:THR:OG1	2.18	0.43
22:BA:1851:U:C4	22:BA:1852:U:C4	3.06	0.43
22:BA:1899:A:O2'	22:BA:1900:A:H5''	2.19	0.43
22:BA:1949:G:C2	22:BA:1958:C:C2	3.05	0.43
22:BA:2009:A:C4'	35:BN:107:ASN:HD22	2.30	0.43
22:BA:2020:A:C2	22:BA:2022:U:O4'	2.70	0.43
22:BA:2076:U:O2	22:BA:2076:U:O5'	2.36	0.43
22:BA:2506:U:C6	55:BA:3001:DOL:H422	2.52	0.43
23:BB:109:A:C5	23:BB:110:C:C4	3.06	0.43
24:BC:107:PRO:HB3	24:BC:142:HIS:HE1	1.82	0.43
24:BC:125:LYS:HB2	24:BC:126:PRO:HD2	2.00	0.43
27:BF:69:LYS:N	27:BF:69:LYS:HD2	2.33	0.43
27:BF:146:VAL:HG23	27:BF:146:VAL:O	2.18	0.43
28:BG:74:SER:HA	28:BG:77:ILE:CG1	2.48	0.43
29:BH:89:LYS:HE3	29:BH:124:THR:HG22	1.99	0.43
30:BI:38:PHE:O	30:BI:39:CYS:SG	2.76	0.43
39:BR:39:LEU:C	39:BR:49:ILE:HG23	2.39	0.43
42:BU:102:THR:CG2	42:BU:103:ILE:N	2.81	0.43
43:BV:40:ILE:CG2	43:BV:41:GLU:N	2.81	0.43
1:CA:8:A:N6	4:CD:206:LYS:HG2	2.33	0.43
1:CA:35:G:C2	1:CA:550:G:C2	3.06	0.43
1:CA:57:G:C5	1:CA:58:C:C4	3.05	0.43
1:CA:376:G:N3	1:CA:389:A:C2	2.86	0.43
1:CA:378:G:N2	1:CA:386:C:O2	2.50	0.43
1:CA:414:A:C6	1:CA:415:A:C5	3.05	0.43
1:CA:458:U:H2'	1:CA:459:A:C8	2.53	0.43
1:CA:635:A:C5	1:CA:636:U:C5	3.06	0.43
1:CA:971:G:N2	1:CA:1363:A:C8	2.86	0.43
1:CA:1077:G:N2	1:CA:1081:A:C4	2.86	0.43
1:CA:1238:A:H2'	1:CA:1241:G:H1'	1.99	0.43
1:CA:1345:U:C2	1:CA:1377:A:N1	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1493:A:H4'	22:DA:1913:A:N1	2.33	0.43
1:CA:1537:U:C4	1:CA:1538:C:C4	3.06	0.43
2:CB:60:ILE:HA	2:CB:63:ARG:HB2	2.00	0.43
2:CB:68:LEU:C	2:CB:68:LEU:CD2	2.86	0.43
3:CC:23:PHE:CG	3:CC:24:ALA:N	2.85	0.43
3:CC:173:VAL:O	3:CC:173:VAL:HG12	2.18	0.43
4:CD:129:VAL:O	4:CD:129:VAL:HG13	2.17	0.43
13:CM:14:HIS:HB2	13:CM:17:ILE:CD1	2.48	0.43
15:CO:23:GLY:O	15:CO:24:SER:C	2.57	0.43
16:CP:19:VAL:HG12	16:CP:37:GLY:CA	2.48	0.43
22:DA:162:U:H4'	22:DA:163:C:OP1	2.18	0.43
22:DA:185:G:C5	22:DA:212:G:N2	2.85	0.43
22:DA:466:A:N1	22:DA:795:C:O2'	2.44	0.43
22:DA:704:G:O2'	22:DA:725:G:O6	2.36	0.43
22:DA:1317:G:C5	22:DA:1318:U:C4	3.05	0.43
22:DA:1693:U:H4'	22:DA:1694:C:OP2	2.18	0.43
22:DA:1801:A:N7	24:DC:262:ARG:NH2	2.66	0.43
22:DA:2093:G:C2	22:DA:2094:A:C8	3.06	0.43
22:DA:2716:C:H2'	22:DA:2717:C:C6	2.52	0.43
25:DD:104:VAL:HG23	25:DD:105:LYS:N	2.33	0.43
28:DG:24:ILE:HD13	28:DG:72:LEU:HD21	2.00	0.43
29:DH:127:GLU:CG	29:DH:144:VAL:O	2.65	0.43
32:DK:91:SER:O	32:DK:92:GLU:C	2.56	0.43
34:DM:57:VAL:HG11	34:DM:105:MET:SD	2.57	0.43
34:DM:97:GLN:O	34:DM:100:LYS:HB2	2.18	0.43
35:DN:1:MET:N	35:DN:1:MET:HE3	2.31	0.43
39:DR:69:GLY:O	39:DR:70:GLU:C	2.56	0.43
41:DT:61:LEU:CD1	41:DT:62:VAL:N	2.81	0.43
1:AA:69:G:H2'	1:AA:69:G:N3	2.33	0.43
1:AA:174:A:C2	1:AA:175:C:H1'	2.54	0.43
1:AA:531:U:H5''	3:AC:161:GLU:OE2	2.18	0.43
1:AA:1129:C:H4'	1:AA:1130:A:OP1	2.18	0.43
1:AA:1298:U:O4'	1:AA:1299:A:C2	2.71	0.43
4:AD:191:LEU:O	4:AD:192:SER:CB	2.66	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
9:AI:57:MET:SD	9:AI:58:VAL:N	2.84	0.43
10:AJ:12:ALA:HB2	10:AJ:96:VAL:HA	2.00	0.43
14:AN:17:ALA:HA	14:AN:55:SER:O	2.18	0.43
15:AO:48:LYS:O	15:AO:50:HIS:N	2.49	0.43
17:AQ:16:LYS:C	17:AQ:17:MET:CE	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:451:U:H4'	26:BE:47:LYS:NZ	2.32	0.43
22:BA:479:A:H4'	22:BA:480:A:OP1	2.19	0.43
22:BA:501:A:H5''	22:BA:502:A:OP2	2.18	0.43
22:BA:927:A:H2'	22:BA:928:A:O4'	2.18	0.43
22:BA:1010:A:N3	22:BA:1153:C:H1'	2.33	0.43
22:BA:1340:U:H4'	22:BA:1341:G:OP2	2.18	0.43
22:BA:1419:A:C4	22:BA:1421:G:C8	3.06	0.43
22:BA:1449:G:C4	22:BA:1450:G:C8	3.06	0.43
22:BA:2364:C:OP1	44:BW:55:ARG:NH1	2.50	0.43
22:BA:2788:C:O2'	22:BA:2809:A:N3	2.38	0.43
24:BC:21:ASN:O	24:BC:24:LEU:HB2	2.18	0.43
25:BD:12:THR:HG21	37:BP:9:GLU:OE2	2.19	0.43
26:BE:124:PHE:CD1	26:BE:124:PHE:C	2.92	0.43
29:BH:1:MET:HE3	29:BH:23:ALA:HA	2.00	0.43
31:BJ:32:LEU:O	31:BJ:36:LEU:HG	2.18	0.43
40:BS:29:VAL:HG21	40:BS:69:LEU:HB3	2.00	0.43
41:BT:12:ARG:HB2	41:BT:33:LYS:O	2.18	0.43
1:CA:32:A:N3	1:CA:33:A:C8	2.87	0.43
1:CA:57:G:C6	1:CA:58:C:C4	3.06	0.43
1:CA:135:C:O2	16:CP:1:MET:HB2	2.18	0.43
1:CA:206:C:H2'	1:CA:207:C:C5'	2.46	0.43
1:CA:436:C:C2	1:CA:437:U:C5	3.06	0.43
1:CA:651:C:C4	1:CA:652:U:O4	2.72	0.43
1:CA:847:G:C2	1:CA:848:C:C2	3.06	0.43
1:CA:934:C:C5'	57:CA:1827:HOH:O	2.65	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
1:CA:1494:G:C6	1:CA:1495:U:C4	3.07	0.43
4:CD:32:CYS:SG	4:CD:33:LYS:N	2.91	0.43
8:CH:29:SER:HB2	8:CH:59:LEU:HB2	2.00	0.43
8:CH:78:VAL:HG12	8:CH:79:SER:N	2.33	0.43
12:CL:37:VAL:O	12:CL:37:VAL:HG12	2.18	0.43
14:CN:87:ALA:HA	14:CN:92:GLU:HG3	2.00	0.43
17:CQ:21:ILE:O	17:CQ:21:ILE:HG23	2.18	0.43
17:CQ:75:LEU:CD1	17:CQ:75:LEU:C	2.87	0.43
22:DA:379:G:H4'	22:DA:2232:C:H5''	2.00	0.43
22:DA:538:A:O2'	31:DJ:8:PRO:CG	2.65	0.43
22:DA:579:G:C5'	22:DA:2018:G:OP2	2.66	0.43
22:DA:678:C:H2'	22:DA:679:C:C6	2.54	0.43
22:DA:1002:G:H2'	22:DA:1003:G:O5'	2.18	0.43
22:DA:1176:U:N3	22:DA:1177:G:C6	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1230:A:C6	22:DA:1231:U:N3	2.86	0.43
22:DA:1257:C:C4	22:DA:1258:U:O4	2.71	0.43
22:DA:1270:C:O2	22:DA:1325:U:O2'	2.36	0.43
22:DA:1930:G:O2'	22:DA:1931:U:P	2.76	0.43
22:DA:1980:G:C2	22:DA:1982:U:C4	3.06	0.43
22:DA:2264:C:C2	22:DA:2277:G:N2	2.86	0.43
22:DA:2283:C:C2'	22:DA:2284:A:H5'	2.49	0.43
22:DA:2311:A:H3'	22:DA:2312:U:C6	2.53	0.43
22:DA:2370:G:C6	22:DA:2371:G:C6	3.07	0.43
22:DA:2386:A:H2'	22:DA:2387:U:C6	2.53	0.43
22:DA:2727:A:N1	22:DA:2728:U:C4	2.86	0.43
25:DD:127:PHE:CE2	25:DD:160:LYS:HD2	2.53	0.43
26:DE:24:ASN:O	26:DE:28:VAL:HG23	2.17	0.43
45:DX:47:VAL:CG1	45:DX:47:VAL:O	2.65	0.43
47:DZ:24:LEU:HD11	47:DZ:54:MET:HE2	1.99	0.43
1:AA:641:U:H4'	8:AH:107:SER:O	2.18	0.43
1:AA:723:U:H5'	1:AA:724:G:P	2.59	0.43
1:AA:1319:A:C8	1:AA:1323:G:C6	3.06	0.43
1:AA:1337:G:H5''	1:AA:1338:G:OP1	2.17	0.43
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.53	0.43
2:AB:24:ASN:HA	2:AB:25:PRO:HD2	1.78	0.43
2:AB:79:ALA:O	2:AB:80:VAL:HG23	2.18	0.43
4:AD:103:TYR:HB2	4:AD:114:ALA:HB2	2.00	0.43
4:AD:121:LYS:HB3	4:AD:129:VAL:HG21	1.99	0.43
4:AD:190:ASP:C	4:AD:191:LEU:HG	2.38	0.43
6:AF:47:LEU:HD13	6:AF:51:ILE:HG23	1.99	0.43
7:AG:66:LEU:O	7:AG:70:ARG:HD3	2.18	0.43
7:AG:145:ALA:C	7:AG:147:ALA:H	2.22	0.43
14:AN:15:ALA:O	14:AN:18:ASP:OD2	2.36	0.43
16:AP:8:ARG:HG3	16:AP:17:TYR:CE2	2.53	0.43
16:AP:12:LYS:HG2	16:AP:13:LYS:HG2	2.00	0.43
19:AS:4:SER:HB2	19:AS:5:LEU:HD12	1.99	0.43
20:AT:54:MET:CE	20:AT:58:VAL:HG21	2.48	0.43
22:BA:255:A:H2'	22:BA:256:A:O4'	2.18	0.43
22:BA:975:A:C8	22:BA:990:A:N6	2.86	0.43
22:BA:1063:G:C6	22:BA:1064:C:H1'	2.54	0.43
22:BA:1142:A:C2	22:BA:1144:A:N9	2.86	0.43
22:BA:1165:A:C2	22:BA:1185:G:C2	3.06	0.43
22:BA:1168:G:N2	22:BA:1182:G:C4	2.86	0.43
22:BA:1193:G:O2'	22:BA:1194:A:H5'	2.18	0.43
22:BA:1347:A:C2	22:BA:1348:C:H1'	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1881:C:H2'	22:BA:1882:U:O4'	2.18	0.43
22:BA:2001:C:C2	22:BA:2002:G:C8	3.06	0.43
22:BA:2275:C:O2	34:BM:84:LYS:CD	2.66	0.43
23:BB:99:A:N3	23:BB:99:A:H2'	2.33	0.43
24:BC:209:GLY:O	24:BC:212:ARG:N	2.51	0.43
25:BD:104:VAL:O	25:BD:105:LYS:CB	2.65	0.43
26:BE:149:ILE:HD11	26:BE:172:ALA:CA	2.48	0.43
29:BH:9:VAL:O	29:BH:10:ALA:O	2.36	0.43
29:BH:27:ARG:O	29:BH:28:ASN:CB	2.66	0.43
29:BH:80:ILE:HG21	29:BH:94:ILE:HG13	2.00	0.43
29:BH:96:THR:O	29:BH:100:ALA:N	2.50	0.43
30:BI:19:ASN:N	30:BI:20:PRO:HD2	2.33	0.43
30:BI:42:PHE:O	30:BI:46:THR:OG1	2.32	0.43
39:BR:79:ARG:O	39:BR:80:ARG:HB3	2.18	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
41:BT:57:VAL:HG13	41:BT:86:THR:OG1	2.18	0.43
43:BV:14:LYS:HD2	43:BV:18:ARG:NH1	2.33	0.43
49:B1:34:LEU:HB3	49:B1:52:ALA:HB2	2.01	0.43
53:B5:84:ILE:O	53:B5:84:ILE:HG22	2.18	0.43
1:CA:184:G:N2	1:CA:185:U:C2	2.87	0.43
1:CA:420:U:O2'	1:CA:421:U:H5''	2.18	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
1:CA:1005:A:N7	1:CA:1006:G:C4	2.86	0.43
1:CA:1018:G:O6	1:CA:1019:A:N6	2.51	0.43
1:CA:1158:C:O2	1:CA:1158:C:C2'	2.66	0.43
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.53	0.43
1:CA:1496:C:H2'	1:CA:1497:G:C1'	2.48	0.43
2:CB:206:ALA:O	2:CB:207:ILE:C	2.56	0.43
5:CE:12:GLN:OE1	5:CE:12:GLN:HA	2.17	0.43
5:CE:104:GLY:HA3	5:CE:122:ASN:O	2.18	0.43
5:CE:133:PRO:HA	5:CE:136:VAL:HG13	2.00	0.43
8:CH:95:VAL:O	8:CH:99:LEU:O	2.36	0.43
20:CT:32:ILE:HG12	20:CT:54:MET:CE	2.47	0.43
22:DA:53:A:C2	22:DA:179:C:H4'	2.52	0.43
22:DA:520:G:H2'	22:DA:521:U:C6	2.54	0.43
22:DA:590:A:H2'	22:DA:591:U:O4'	2.19	0.43
22:DA:623:C:H2'	22:DA:624:C:O4'	2.19	0.43
22:DA:1249:U:H4'	38:DQ:4:VAL:HB	1.99	0.43
22:DA:1456:G:C6	22:DA:1457:U:C4	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1783:A:H5'	22:DA:2608:G:H4'	1.99	0.43
22:DA:1905:C:O2'	22:DA:1929:G:H1'	2.18	0.43
22:DA:2116:G:C6	22:DA:2171:A:N6	2.86	0.43
22:DA:2128:G:C6	22:DA:2129:C:C4	3.06	0.43
22:DA:2234:G:C5	22:DA:2235:G:N7	2.86	0.43
22:DA:2467:C:H41	22:DA:2468:A:N6	2.16	0.43
22:DA:2712:C:C2	22:DA:2715:C:OP1	2.71	0.43
22:DA:2834:G:O6	22:DA:2879:A:C2'	2.65	0.43
24:DC:251:GLN:HG2	24:DC:255:LYS:HB2	2.00	0.43
26:DE:131:THR:HB	26:DE:164:LEU:HD22	1.99	0.43
27:DF:123:ASP:N	27:DF:127:ASN:O	2.51	0.43
37:DP:62:ARG:CZ	37:DP:101:ARG:HA	2.48	0.43
38:DQ:27:ALA:HB1	38:DQ:31:VAL:CG2	2.48	0.43
41:DT:20:ALA:HA	41:DT:31:VAL:HG21	2.00	0.43
1:AA:32:A:C2	1:AA:33:A:C4	3.06	0.43
1:AA:174:A:C2'	1:AA:175:C:H5'	2.48	0.43
1:AA:192:A:C2	1:AA:193:C:C2	3.06	0.43
1:AA:346:G:P	32:BK:105:ARG:HH12	2.41	0.43
1:AA:900:A:N1	1:AA:901:A:C2	2.87	0.43
1:AA:947:G:C6	1:AA:948:C:C4	3.07	0.43
1:AA:980:C:C5	1:AA:981:U:C4	3.06	0.43
1:AA:1182:G:C4'	1:AA:1183:U:H5'	2.48	0.43
1:AA:1251:A:H2'	1:AA:1252:A:O4'	2.18	0.43
1:AA:1332:A:C8	1:AA:1333:A:C8	3.07	0.43
1:AA:1415:G:C6	1:AA:1486:G:C6	3.07	0.43
2:AB:115:LYS:NZ	2:AB:153:ASP:OD1	2.43	0.43
5:AE:83:HIS:HB2	5:AE:84:PRO:CD	2.49	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
6:AF:76:THR:O	6:AF:79:ARG:N	2.44	0.43
7:AG:16:PRO:HB2	9:AI:46:MET:HE3	2.00	0.43
9:AI:29:VAL:O	9:AI:30:ILE:HG22	2.18	0.43
10:AJ:19:ASP:HA	10:AJ:22:THR:HB	2.00	0.43
15:AO:24:SER:O	15:AO:25:THR:C	2.56	0.43
17:AQ:41:THR:HG22	17:AQ:42:THR:N	2.33	0.43
22:BA:226:A:N6	22:BA:227:A:C6	2.86	0.43
22:BA:315:G:H2'	22:BA:316:C:C6	2.53	0.43
22:BA:999:U:C5	22:BA:1154:G:C6	3.06	0.43
22:BA:1059:G:C5	22:BA:1080:A:C2	3.06	0.43
22:BA:1059:G:C6	22:BA:1060:U:C4	3.07	0.43
22:BA:1064:C:O2	22:BA:1064:C:H2'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1864:U:C5	22:BA:1865:U:C4	3.06	0.43
22:BA:1941:C:C4	22:BA:1942:C:C4	3.05	0.43
22:BA:2694:G:H2'	22:BA:2695:U:H6	1.82	0.43
23:BB:29:A:H2'	23:BB:30:C:O4'	2.18	0.43
24:BC:53:HIS:CD2	24:BC:219:THR:HA	2.54	0.43
29:BH:76:GLU:HA	29:BH:142:VAL:HG12	2.00	0.43
29:BH:91:PHE:HB3	1:CA:55:A:C4	2.54	0.43
30:BI:28:LEU:HG	30:BI:35:ILE:CD1	2.48	0.43
32:BK:10:VAL:CG1	32:BK:12:ASP:OD1	2.67	0.43
33:BL:81:ASP:CB	33:BL:100:ILE:HD12	2.48	0.43
37:BP:103:ARG:HH11	37:BP:103:ARG:HG3	1.81	0.43
38:BQ:76:TYR:CE2	38:BQ:80:ILE:HG13	2.53	0.43
1:CA:195:A:C6	1:CA:196:A:N1	2.86	0.43
1:CA:256:U:OP1	17:CQ:19:LYS:NZ	2.40	0.43
1:CA:409:U:H5'	4:CD:25:VAL:HG23	2.00	0.43
1:CA:583:A:C6	1:CA:759:A:N7	2.86	0.43
1:CA:718:A:H5'	11:CK:119:ASN:ND2	2.33	0.43
1:CA:718:A:OP2	1:CA:720:C:N4	2.50	0.43
1:CA:764:C:N4	1:CA:765:G:C5	2.87	0.43
1:CA:919:A:N1	1:CA:920:U:C4	2.86	0.43
1:CA:938:A:N6	1:CA:939:G:C5	2.86	0.43
1:CA:983:A:N3	1:CA:983:A:H2'	2.33	0.43
1:CA:1105:A:H2'	1:CA:1106:G:H8	1.83	0.43
1:CA:1211:U:H1'	1:CA:1213:A:C2	2.53	0.43
1:CA:1318:A:O2'	19:CS:37:ARG:HD2	2.19	0.43
10:CJ:80:THR:O	10:CJ:84:VAL:HG12	2.18	0.43
16:CP:67:ILE:HG23	16:CP:71:VAL:CG1	2.49	0.43
20:CT:36:TYR:CG	20:CT:37:ALA:N	2.87	0.43
22:DA:64:A:H2'	22:DA:65:U:C6	2.53	0.43
22:DA:207:A:C2	22:DA:208:C:H1'	2.53	0.43
22:DA:225:C:H2'	22:DA:226:A:O4'	2.18	0.43
22:DA:305:C:C2	22:DA:313:G:N1	2.86	0.43
22:DA:487:C:N4	22:DA:488:G:N1	2.67	0.43
22:DA:538:A:O2'	31:DJ:8:PRO:HG3	2.18	0.43
22:DA:599:A:H1'	22:DA:659:G:N2	2.34	0.43
22:DA:647:G:C4	22:DA:648:G:C8	3.07	0.43
22:DA:679:C:H2'	22:DA:680:C:H6	1.82	0.43
22:DA:717:C:N4	22:DA:718:A:N3	2.65	0.43
22:DA:776:G:C8	22:DA:793:A:C5	3.07	0.43
22:DA:1272:A:C2	22:DA:1618:A:C4	3.06	0.43
22:DA:1364:G:C5	22:DA:1368:G:N1	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1470:A:H2'	22:DA:1471:G:H5'	2.00	0.43
22:DA:1486:U:N3	22:DA:1504:A:C2	2.86	0.43
22:DA:1524:G:N3	22:DA:1525:A:C8	2.86	0.43
22:DA:1595:C:H2'	22:DA:1596:A:O4'	2.19	0.43
23:DB:13:G:O2'	23:DB:15:A:H5'	2.18	0.43
23:DB:114:C:O2'	23:DB:115:A:H5'	2.18	0.43
24:DC:64:ILE:O	24:DC:103:TYR:HB2	2.18	0.43
25:DD:108:ASP:OD1	25:DD:207:VAL:HG12	2.18	0.43
26:DE:130:LYS:CB	26:DE:133:LEU:HB2	2.48	0.43
27:DF:9:LYS:O	27:DF:13:VAL:HG23	2.18	0.43
27:DF:158:THR:OG1	27:DF:169:LEU:CD2	2.67	0.43
28:DG:91:GLY:HA3	28:DG:160:LYS:HG3	2.00	0.43
31:DJ:56:VAL:HB	31:DJ:124:VAL:HG12	2.00	0.43
32:DK:7:MET:C	32:DK:8:LEU:HD12	2.38	0.43
34:DM:78:LEU:O	34:DM:79:ALA:HB3	2.19	0.43
37:DP:93:ARG:O	37:DP:94:LYS:HB2	2.18	0.43
43:DV:42:LEU:HD12	43:DV:47:VAL:HG21	2.00	0.43
45:DX:30:LEU:HB3	45:DX:31:PRO:CD	2.48	0.43
45:DX:68:LEU:HD22	45:DX:78:TYR:CE1	2.53	0.43
50:D2:43:THR:O	50:D2:44:VAL:CB	2.66	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:AA:780:A:C8	1:AA:800:G:O6	2.71	0.43
1:AA:841:C:C2	1:AA:843:U:H5'	2.54	0.43
1:AA:895:G:C6	1:AA:896:C:C4	3.06	0.43
1:AA:1406:U:C6	1:AA:1407:C:C5	3.06	0.43
1:AA:1529:G:H4'	1:AA:1530:G:OP2	2.18	0.43
2:AB:106:THR:O	2:AB:107:VAL:CB	2.66	0.43
3:AC:159:GLY:O	3:AC:160:ALA:C	2.57	0.43
4:AD:26:ARG:HD3	4:AD:31:LYS:HD2	2.01	0.43
4:AD:88:GLU:O	4:AD:91:LEU:N	2.51	0.43
4:AD:145:ILE:CD1	4:AD:145:ILE:N	2.81	0.43
9:AI:22:LYS:O	9:AI:62:ASP:HB2	2.18	0.43
10:AJ:40:ILE:HB	10:AJ:73:LEU:HB2	2.00	0.43
10:AJ:92:LEU:O	10:AJ:93:ALA:HB2	2.19	0.43
17:AQ:17:MET:HB2	17:AQ:20:SER:HB3	2.01	0.43
18:AR:52:GLN:OE1	18:AR:52:GLN:HA	2.17	0.43
20:AT:54:MET:CE	20:AT:58:VAL:CG2	2.97	0.43
21:AU:34:ARG:O	21:AU:36:GLU:N	2.52	0.43
22:BA:141:G:N1	41:BT:1:MET:CE	2.82	0.43
22:BA:231:A:C6	22:BA:232:G:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:996:A:H4'	38:BQ:91:ASP:OD1	2.19	0.43
22:BA:1043:C:N4	22:BA:1044:C:N4	2.65	0.43
22:BA:1189:A:H2'	22:BA:1190:G:O4'	2.18	0.43
22:BA:1404:C:N3	22:BA:1405:U:C5	2.86	0.43
22:BA:2309:A:C6	22:BA:2310:C:C4	3.06	0.43
22:BA:2880:C:C2	22:BA:2881:U:C5	3.07	0.43
24:BC:77:VAL:HG22	24:BC:78:VAL:N	2.34	0.43
24:BC:174:LEU:N	24:BC:174:LEU:CD1	2.82	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
26:BE:88:ARG:HB3	26:BE:89:PRO:HD2	2.01	0.43
29:BH:41:LYS:HA	29:BH:44:ILE:HG12	2.01	0.43
29:BH:94:ILE:CD1	29:BH:98:ASP:HB3	2.48	0.43
30:BI:67:PHE:CD2	30:BI:67:PHE:N	2.86	0.43
30:BI:108:GLU:OE2	30:BI:109:ILE:CG1	2.67	0.43
31:BJ:93:ILE:CD1	31:BJ:100:VAL:HG21	2.49	0.43
36:BO:107:ALA:O	36:BO:111:ARG:HG3	2.17	0.43
46:BY:54:LYS:HA	46:BY:57:LEU:HD23	2.00	0.43
1:CA:635:A:C5	1:CA:636:U:C4	3.07	0.43
1:CA:678:U:H2'	1:CA:679:C:O4'	2.19	0.43
1:CA:790:A:N6	1:CA:791:G:C6	2.87	0.43
1:CA:947:G:N2	1:CA:1235:U:O2	2.52	0.43
1:CA:1032:G:H2'	1:CA:1032:G:N3	2.34	0.43
1:CA:1126:U:O4	10:CJ:73:LEU:CD1	2.66	0.43
1:CA:1141:C:HO2'	1:CA:1142:G:C5'	2.30	0.43
1:CA:1255:G:C6	1:CA:1279:G:C5	3.06	0.43
1:CA:1424:U:H2'	1:CA:1425:U:O4'	2.17	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
2:CB:141:LEU:O	2:CB:142:GLU:C	2.57	0.43
4:CD:192:SER:HB2	4:CD:195:ILE:HG12	2.01	0.43
9:CI:24:GLY:N	9:CI:61:LEU:HA	2.34	0.43
12:CL:74:LEU:HD11	12:CL:80:ILE:HG21	2.01	0.43
16:CP:52:LEU:HD22	16:CP:57:ILE:HD11	2.01	0.43
18:CR:25:ASP:C	18:CR:27:ALA:N	2.71	0.43
20:CT:33:LYS:O	20:CT:36:TYR:CE2	2.71	0.43
22:DA:186:G:C2	22:DA:211:C:C2	3.06	0.43
22:DA:208:C:H2'	22:DA:209:C:C6	2.53	0.43
22:DA:605:G:C6	22:DA:606:U:C4	3.07	0.43
22:DA:605:G:C5	22:DA:606:U:C5	3.07	0.43
22:DA:616:A:N3	22:DA:616:A:H2'	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:661:A:H1'	33:DL:12:SER:O	2.17	0.43
22:DA:830:G:C4	22:DA:2448:A:C5	3.06	0.43
22:DA:870:U:OP1	34:DM:6:ARG:CD	2.66	0.43
22:DA:1203:U:O4	22:DA:1204:A:C6	2.72	0.43
22:DA:1248:G:C5	38:DQ:3:ARG:HB2	2.53	0.43
22:DA:1370:C:H2'	22:DA:1371:G:C8	2.54	0.43
22:DA:1838:C:C6	22:DA:1899:A:C6	3.07	0.43
22:DA:2415:G:C5	22:DA:2416:C:C5	3.07	0.43
22:DA:2720:U:C6	22:DA:2872:A:C6	3.07	0.43
22:DA:2749:A:C8	22:DA:2750:A:H2'	2.52	0.43
22:DA:2823:A:C5	22:DA:2824:C:C5	3.06	0.43
23:DB:71:C:C2	23:DB:106:G:N2	2.86	0.43
23:DB:94:A:H2'	23:DB:95:U:O4'	2.18	0.43
24:DC:69:ARG:NH2	24:DC:116:ILE:HD11	2.33	0.43
24:DC:147:LYS:HB2	24:DC:150:LYS:CB	2.49	0.43
24:DC:221:ARG:NH2	57:DC:306:HOH:O	2.51	0.43
25:DD:167:ASN:O	25:DD:168:GLU:HB3	2.18	0.43
25:DD:193:VAL:HB	25:DD:194:PRO:CD	2.49	0.43
27:DF:40:VAL:HG13	27:DF:41:GLY:N	2.34	0.43
30:DI:67:PHE:N	30:DI:67:PHE:CD2	2.86	0.43
32:DK:92:GLU:N	32:DK:92:GLU:OE2	2.49	0.43
37:DP:100:LEU:HD22	37:DP:108:ALA:HB1	2.00	0.43
40:DS:33:LEU:CD2	40:DS:52:GLU:HG3	2.48	0.43
50:D2:31:LEU:CD2	50:D2:42:LEU:HB3	2.48	0.43
1:AA:39:G:N3	1:AA:40:C:C6	2.87	0.43
1:AA:130:A:N1	1:AA:233:C:O2'	2.42	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
1:AA:692:U:O2	1:AA:694:A:C8	2.70	0.43
1:AA:810:C:O2	1:AA:810:C:H2'	2.18	0.43
1:AA:849:G:C5	1:AA:850:U:C4	3.06	0.43
1:AA:927:G:N1	1:AA:1391:U:C2	2.86	0.43
1:AA:1081:A:H5'	5:AE:23:LYS:HG3	2.01	0.43
1:AA:1109:C:P	3:AC:176:HIS:CE1	3.12	0.43
1:AA:1158:C:N3	1:AA:1160:G:N7	2.67	0.43
1:AA:1176:A:H3'	1:AA:1177:G:C8	2.54	0.43
2:AB:83:ALA:O	2:AB:86:SER:OG	2.35	0.43
2:AB:119:THR:O	2:AB:120:GLN:HB2	2.18	0.43
3:AC:203:PHE:CE1	3:AC:205:GLY:O	2.72	0.43
4:AD:3:ARG:NH2	4:AD:115:ARG:HD3	2.33	0.43
4:AD:161:LEU:HD22	4:AD:161:LEU:N	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:156:LYS:HB3	8:AH:71:VAL:HG13	2.01	0.43
8:AH:21:ASN:HA	8:AH:65:TYR:CE1	2.53	0.43
9:AI:30:ILE:O	9:AI:33:ARG:N	2.52	0.43
12:AL:38:TYR:O	12:AL:39:THR:HG22	2.18	0.43
22:BA:191:A:H2'	22:BA:192:C:C6	2.53	0.43
22:BA:417:C:H2'	22:BA:418:C:H6	1.82	0.43
22:BA:773:U:O2'	24:BC:48:ARG:HD3	2.19	0.43
22:BA:1086:A:O2'	22:BA:1087:G:N7	2.49	0.43
22:BA:1496:A:N3	22:BA:1577:C:O2'	2.46	0.43
22:BA:1607:C:N4	22:BA:1622:G:C5	2.86	0.43
22:BA:1712:U:C4	22:BA:1713:A:C5	3.07	0.43
22:BA:1867:G:C2'	22:BA:1868:C:H5'	2.49	0.43
22:BA:1923:U:H2'	22:BA:1923:U:O2	2.17	0.43
22:BA:2078:C:O2'	22:BA:2079:U:H5'	2.18	0.43
22:BA:2117:A:N1	22:BA:2170:A:N1	2.66	0.43
22:BA:2190:G:N2	22:BA:2191:A:H1'	2.33	0.43
22:BA:2360:G:H4'	33:BL:61:LEU:HD21	2.00	0.43
23:BB:90:C:H5'	34:BM:18:ARG:HG3	2.00	0.43
24:BC:30:PHE:CZ	24:BC:32:PRO:HG2	2.53	0.43
25:BD:13:ARG:HD3	25:BD:21:SER:OG	2.19	0.43
26:BE:59:PRO:HD3	26:BE:71:GLY:O	2.19	0.43
27:BF:64:LYS:HA	27:BF:65:PRO:HD3	1.90	0.43
27:BF:158:THR:CG2	27:BF:160:ALA:HB3	2.48	0.43
28:BG:38:ASN:O	28:BG:39:ASP:HB2	2.19	0.43
29:BH:103:VAL:O	29:BH:108:VAL:O	2.37	0.43
33:BL:68:SER:HB3	33:BL:71:ALA:CB	2.49	0.43
33:BL:81:ASP:O	33:BL:82:LEU:HB3	2.18	0.43
33:BL:82:LEU:HD23	33:BL:82:LEU:C	2.38	0.43
41:BT:29:THR:OG1	41:BT:86:THR:HG22	2.19	0.43
41:BT:89:GLU:O	41:BT:91:GLN:N	2.52	0.43
42:BU:54:GLN:N	42:BU:55:PRO:CD	2.81	0.43
45:BX:74:ARG:NH2	45:BX:76:GLU:HG3	2.33	0.43
49:B1:29:THR:C	49:B1:31:PRO:CD	2.85	0.43
1:CA:38:G:N2	1:CA:397:A:C4	2.86	0.43
1:CA:104:G:C2	1:CA:105:G:C8	3.06	0.43
1:CA:129:A:H1'	1:CA:130:A:C8	2.54	0.43
1:CA:216:U:C5'	1:CA:464:U:H4'	2.47	0.43
1:CA:258:G:H2'	1:CA:259:G:O4'	2.18	0.43
1:CA:632:U:H5''	1:CA:633:G:C8	2.54	0.43
1:CA:671:G:C6	1:CA:672:U:N3	2.86	0.43
1:CA:794:A:H2'	1:CA:795:C:C6	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1306:A:H1'	1:CA:1332:A:N7	2.34	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
2:CB:68:LEU:HG	2:CB:154:MET:HE1	2.01	0.43
2:CB:87:CYS:SG	2:CB:89:GLN:OE1	2.76	0.43
4:CD:138:SER:HB3	4:CD:139:PRO:CD	2.48	0.43
5:CE:133:PRO:HG2	5:CE:134:ILE:HD12	2.00	0.43
7:CG:42:ILE:CG2	7:CG:116:MET:HG3	2.49	0.43
7:CG:95:ARG:O	7:CG:99:LEU:HG	2.19	0.43
10:CJ:8:ILE:CD1	10:CJ:25:ILE:HD11	2.48	0.43
22:DA:443:A:C8	26:DE:40:ARG:HD3	2.54	0.43
22:DA:485:C:C2	22:DA:496:G:C2	3.07	0.43
22:DA:586:A:OP2	22:DA:586:A:C8	2.72	0.43
22:DA:621:A:OP2	33:DL:99:ASN:ND2	2.51	0.43
22:DA:1208:C:N4	22:DA:1209:U:O4	2.52	0.43
22:DA:1277:G:H5'	35:DN:20:MET:HE1	1.99	0.43
22:DA:1365:A:H3'	22:DA:1366:A:C8	2.54	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
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:1829:A:HO2'	24:DC:15:HIS:CD2	2.36	0.43
22:DA:1851:U:H2'	22:DA:1852:U:O4'	2.19	0.43
22:DA:1989:G:H2'	22:DA:1990:C:H5'	2.00	0.43
22:DA:2057:G:H2'	22:DA:2058:A:O4'	2.19	0.43
22:DA:2201:G:C4	22:DA:2202:U:C5	3.06	0.43
22:DA:2335:A:N6	22:DA:2337:G:H1'	2.34	0.43
22:DA:2409:G:H2'	22:DA:2410:G:O4'	2.17	0.43
22:DA:2547:A:C8	22:DA:2566:A:C8	3.06	0.43
23:DB:34:A:N6	23:DB:44:G:H1'	2.33	0.43
24:DC:183:LYS:O	24:DC:184:VAL:HG23	2.18	0.43
25:DD:28:GLU:HA	25:DD:185:ASN:O	2.19	0.43
26:DE:170:ARG:NH1	26:DE:176:ASP:OD1	2.52	0.43
27:DF:31:VAL:O	27:DF:31:VAL:HG13	2.19	0.43
28:DG:91:GLY:O	28:DG:94:TYR:CD1	2.72	0.43
31:DJ:106:LYS:HD2	31:DJ:119:PHE:CZ	2.54	0.43
32:DK:10:VAL:HB	32:DK:16:ALA:O	2.19	0.43
36:DO:49:VAL:HG12	36:DO:50:ALA:N	2.33	0.43
37:DP:79:PRO:O	37:DP:80:VAL:C	2.57	0.43
39:DR:68:ARG:HD3	39:DR:92:TRP:CE2	2.54	0.43
41:DT:67:VAL:CG1	41:DT:68:LYS:N	2.80	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:3:ALA:O	42:DU:6:ARG:NH1	2.52	0.43
47:DZ:13:ALA:HB2	47:DZ:24:LEU:HD12	1.99	0.43
1:AA:202:G:O2'	1:AA:468:A:C8	2.67	0.43
1:AA:264:C:O2'	17:AQ:66:PRO:O	2.25	0.43
1:AA:607:A:C6	1:AA:608:A:C6	3.06	0.43
1:AA:686:U:O4	1:AA:703:G:O2'	2.30	0.43
1:AA:895:G:C5	1:AA:896:C:C5	3.07	0.43
1:AA:949:A:C2'	1:AA:950:U:H5'	2.48	0.43
1:AA:986:U:C2	1:AA:987:G:C8	3.07	0.43
1:AA:1173:U:H2'	1:AA:1174:G:C8	2.54	0.43
1:AA:1492:A:OP1	12:AL:44:LYS:CA	2.66	0.43
2:AB:57:LEU:HD11	2:AB:221:VAL:CG2	2.49	0.43
9:AI:6:TYR:CB	9:AI:89:GLU:OE2	2.67	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
15:AO:87:LEU:N	15:AO:87:LEU:CD2	2.81	0.43
19:AS:40:ILE:HG13	19:AS:71:LEU:HD22	2.00	0.43
22:BA:820:A:H2'	22:BA:821:A:O4'	2.17	0.43
22:BA:832:U:H5'	33:BL:38:GLN:OE1	2.19	0.43
22:BA:1075:C:H2'	22:BA:1076:C:N1	2.34	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:BA:1587:G:C5	22:BA:1588:G:N7	2.87	0.43
22:BA:2006:C:O2'	22:BA:2823:A:O2'	2.21	0.43
22:BA:2201:G:C4	22:BA:2223:G:N2	2.87	0.43
22:BA:2555:U:H5''	22:BA:2556:C:OP2	2.19	0.43
22:BA:2598:A:N7	22:BA:2599:G:H1'	2.34	0.43
22:BA:2607:G:H2'	22:BA:2608:G:O4'	2.17	0.43
22:BA:2847:U:C2'	22:BA:2848:G:H5'	2.49	0.43
23:BB:22:U:H2'	23:BB:23:G:C8	2.54	0.43
24:BC:76:ALA:HB2	24:BC:96:TYR:CG	2.54	0.43
27:BF:158:THR:HG22	27:BF:160:ALA:H	1.83	0.43
36:BO:12:THR:O	36:BO:16:ARG:HG3	2.19	0.43
40:BS:42:LYS:O	40:BS:42:LYS:HG2	2.18	0.43
41:BT:47:VAL:HG12	41:BT:55:VAL:CG2	2.48	0.43
43:BV:40:ILE:HG21	43:BV:42:LEU:HD21	1.99	0.43
43:BV:83:LYS:O	43:BV:85:LYS:N	2.52	0.43
46:BY:49:ASP:O	46:BY:52:ARG:HB2	2.19	0.43
49:B1:17:THR:CG2	49:B1:43:VAL:HG13	2.48	0.43
49:B1:23:THR:OG1	49:B1:24:THR:N	2.51	0.43
1:CA:68:G:O4'	1:CA:171:A:H1'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:110:C:N4	1:CA:111:G:C6	2.86	0.43
1:CA:322:C:O2	1:CA:332:G:N2	2.43	0.43
1:CA:538:G:H2'	1:CA:539:A:O4'	2.18	0.43
1:CA:643:C:C5'	8:CH:32:LEU:CD2	2.97	0.43
1:CA:924:C:O2'	1:CA:1502:A:N1	2.44	0.43
1:CA:963:G:C2	1:CA:973:G:C6	3.06	0.43
1:CA:1006:G:OP1	1:CA:1038:C:C5'	2.66	0.43
1:CA:1151:A:C2	1:CA:1152:A:C4	3.07	0.43
1:CA:1359:C:H2'	1:CA:1361:G:OP2	2.18	0.43
2:CB:16:PHE:CE1	2:CB:18:HIS:CE1	3.06	0.43
3:CC:34:ASP:CG	14:CN:65:ARG:HG2	2.39	0.43
3:CC:111:LEU:N	3:CC:111:LEU:CD2	2.82	0.43
6:CF:52:ASN:O	6:CF:53:LYS:HB2	2.19	0.43
9:CI:25:ASN:O	9:CI:27:LYS:HG2	2.18	0.43
11:CK:18:ASP:CB	11:CK:81:ASN:OD1	2.66	0.43
12:CL:14:ARG:NH1	12:CL:15:LYS:HG3	2.33	0.43
21:CU:39:GLU:HA	21:CU:42:THR:OG1	2.19	0.43
22:DA:41:C:O2	22:DA:438:G:N2	2.48	0.43
22:DA:55:G:H2'	22:DA:55:G:N3	2.34	0.43
22:DA:108:G:H1'	22:DA:347:A:N3	2.33	0.43
22:DA:668:A:C2	22:DA:670:A:C6	3.07	0.43
22:DA:772:C:C2	22:DA:773:U:C6	3.07	0.43
22:DA:828:U:H2'	22:DA:829:A:C8	2.54	0.43
22:DA:963:U:H2'	22:DA:964:C:C6	2.53	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:1356:G:C2	22:DA:1376:C:O2	2.72	0.43
22:DA:1671:U:O2'	22:DA:1673:G:N7	2.35	0.43
22:DA:1717:A:H2'	22:DA:1718:G:O4'	2.19	0.43
22:DA:1805:A:N3	22:DA:1813:G:N2	2.66	0.43
22:DA:2320:U:H5'	22:DA:2321:U:C5	2.53	0.43
22:DA:2408:U:H2'	22:DA:2409:G:C8	2.54	0.43
22:DA:2683:C:OP1	37:DP:56:HIS:HB3	2.18	0.43
22:DA:2815:C:HO2'	48:D0:41:HIS:CE1	2.36	0.43
24:DC:67:PHE:CE2	24:DC:156:ARG:CZ	3.02	0.43
24:DC:126:PRO:HA	24:DC:192:LEU:O	2.19	0.43
24:DC:141:VAL:HG13	24:DC:191:THR:O	2.18	0.43
27:DF:29:PRO:CB	27:DF:169:LEU:HD22	2.49	0.43
30:DI:8:TYR:CB	30:DI:59:ILE:H	2.32	0.43
31:DJ:114:LEU:O	31:DJ:118:MET:HG2	2.18	0.43
43:DV:41:GLU:C	43:DV:42:LEU:HD23	2.39	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:D2:34:ARG:HD3	50:D2:42:LEU:O	2.18	0.43
1:AA:41:G:H2'	1:AA:42:G:C8	2.54	0.43
1:AA:482:A:H2'	1:AA:483:C:O4'	2.19	0.43
1:AA:704:A:N6	1:AA:705:G:C6	2.86	0.43
1:AA:946:A:C6	1:AA:947:G:C6	3.06	0.43
1:AA:1014:A:C2	19:AS:34:TRP:CE2	3.07	0.43
1:AA:1501:C:C4	1:AA:1504:G:C5	3.07	0.43
5:AE:74:VAL:HG23	5:AE:76:LEU:HD12	1.99	0.43
7:AG:67:GLU:HA	7:AG:70:ARG:HE	1.84	0.43
8:AH:78:VAL:HG21	8:AH:128:TYR:CD1	2.53	0.43
12:AL:5:ASN:HB3	12:AL:9:ARG:NH1	2.34	0.43
16:AP:67:ILE:CG2	16:AP:71:VAL:HG12	2.49	0.43
19:AS:58:VAL:CG1	19:AS:75:ALA:CB	2.97	0.43
20:AT:9:LYS:O	20:AT:12:ILE:HG12	2.19	0.43
22:BA:528:A:C2	22:BA:2043:C:C5'	2.97	0.43
22:BA:538:A:H4'	31:BJ:7:LYS:HG2	2.01	0.43
22:BA:829:A:N7	22:BA:2247:A:O2'	2.49	0.43
22:BA:912:C:C2'	22:BA:913:U:H5'	2.48	0.43
22:BA:1115:G:C2	22:BA:1116:G:C5	3.07	0.43
22:BA:1250:G:OP2	33:BL:21:ARG:NH2	2.52	0.43
22:BA:1467:U:C5	22:BA:1546:G:N3	2.87	0.43
22:BA:1603:A:H5''	57:BA:3414:HOH:O	2.18	0.43
22:BA:1717:A:C2	22:BA:1718:G:H1'	2.54	0.43
22:BA:1731:G:C4	22:BA:1733:G:C8	3.07	0.43
22:BA:2190:G:C6	22:BA:2191:A:C4	3.06	0.43
22:BA:2633:G:H2'	22:BA:2634:A:O4'	2.19	0.43
22:BA:2650:U:C2'	22:BA:2651:C:H5'	2.49	0.43
23:BB:91:C:H2'	23:BB:92:C:H6	1.84	0.43
24:BC:157:SER:O	24:BC:158:ALA:C	2.56	0.43
29:BH:45:GLU:HA	29:BH:48:GLU:HB2	2.01	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
34:BM:57:VAL:O	34:BM:58:LYS:HG3	2.19	0.43
40:BS:69:LEU:HG	40:BS:107:VAL:HG22	2.01	0.43
1:CA:32:A:C2	1:CA:33:A:N7	2.86	0.43
1:CA:280:C:H4'	1:CA:281:G:OP2	2.19	0.43
1:CA:794:A:C5	1:CA:795:C:C4	3.06	0.43
1:CA:860:A:N6	1:CA:861:G:C2	2.86	0.43
1:CA:996:A:H2'	1:CA:997:U:C5	2.54	0.43
1:CA:1124:G:C2'	1:CA:1145:A:H62	2.32	0.43
1:CA:1375:A:C5	1:CA:1376:U:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1412:C:O2	1:CA:1413:A:C8	2.72	0.43
3:CC:22:TRP:CH2	14:CN:94:PRO:HG2	2.53	0.43
7:CG:49:THR:O	7:CG:53:ARG:HD3	2.18	0.43
14:CN:54:ASP:OD1	14:CN:59:ARG:NH1	2.52	0.43
17:CQ:14:SER:HB3	17:CQ:22:VAL:HG12	2.01	0.43
19:CS:16:LEU:O	19:CS:20:GLU:HG2	2.17	0.43
22:DA:77:G:C2	22:DA:78:U:C2	3.06	0.43
22:DA:149:A:C2'	22:DA:150:U:H5'	2.49	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
22:DA:618:G:C6	22:DA:619:G:C4	3.07	0.43
22:DA:632:A:H4'	33:DL:68:SER:HB2	2.00	0.43
22:DA:819:A:C8	22:DA:1188:U:O4	2.71	0.43
22:DA:1207:C:O2	22:DA:1239:G:N2	2.42	0.43
22:DA:1219:U:H2'	22:DA:1220:G:C8	2.54	0.43
22:DA:1668:A:H4'	22:DA:1669:A:O5'	2.18	0.43
22:DA:1670:C:C5	22:DA:1671:U:C4	3.07	0.43
22:DA:1722:A:C6	22:DA:1739:A:C8	3.06	0.43
22:DA:2185:U:H2'	22:DA:2186:G:C8	2.54	0.43
22:DA:2282:G:H1'	22:DA:2390:U:C4	2.54	0.43
22:DA:2350:C:H2'	22:DA:2351:G:O4'	2.18	0.43
22:DA:2418:A:OP1	51:D3:45:ARG:NH1	2.52	0.43
22:DA:2786:U:H2'	22:DA:2787:C:C6	2.54	0.43
22:DA:2868:A:C6	22:DA:2869:G:C6	3.06	0.43
22:DA:2898:U:H2'	22:DA:2899:A:C8	2.54	0.43
24:DC:226:ASN:HB3	24:DC:227:PRO:CD	2.49	0.43
25:DD:178:VAL:HG12	25:DD:179:ARG:HG3	2.01	0.43
26:DE:52:VAL:HG21	26:DE:81:GLY:CA	2.48	0.43
27:DF:161:LYS:HB2	27:DF:165:GLU:OE1	2.19	0.43
29:DH:62:LEU:HD13	29:DH:63:ALA:N	2.34	0.43
39:DR:27:ILE:HG13	39:DR:33:VAL:HG11	2.01	0.43
41:DT:11:LEU:CD2	41:DT:34:VAL:HG12	2.49	0.43
1:AA:425:G:H2'	1:AA:426:U:O4'	2.19	0.43
1:AA:539:A:N6	1:AA:540:G:O6	2.52	0.43
1:AA:722:G:C2'	1:AA:723:U:OP2	2.67	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
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)
1:AA:1405:G:H1'	1:AA:1519:A:O4'	2.18	0.43
2:AB:50:PHE:CE2	2:AB:51:ASN:OD1	2.72	0.43
2:AB:164:ILE:HD12	2:AB:210:VAL:CG1	2.49	0.43
4:AD:26:ARG:NH1	4:AD:31:LYS:HB3	2.34	0.43
9:AI:84:THR:HG21	9:AI:103:PHE:HB2	2.00	0.43
11:AK:23:ILE:C	11:AK:23:ILE:HD12	2.39	0.43
12:AL:107:VAL:CG2	12:AL:117:TYR:HB3	2.48	0.43
17:AQ:9:GLN:HA	17:AQ:59:VAL:O	2.19	0.43
19:AS:23:VAL:HG12	19:AS:24:GLU:N	2.34	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:BA:1179:G:C8	22:BA:1180:U:O4'	2.72	0.43
22:BA:1208:C:C4	22:BA:1209:U:C4	3.07	0.43
22:BA:1248:G:O6	26:BE:46:GLN:NE2	2.48	0.43
22:BA:1286:A:N6	22:BA:1329:U:C2	2.87	0.43
22:BA:2185:U:C2'	22:BA:2186:G:H5'	2.49	0.43
22:BA:2187:U:H2'	22:BA:2188:U:O4'	2.19	0.43
22:BA:2323:G:C2'	22:BA:2324:U:H5'	2.49	0.43
22:BA:2871:U:OP1	35:BN:69:ARG:NH1	2.50	0.43
23:BB:43:C:H5''	23:BB:44:G:OP2	2.19	0.43
23:BB:112:G:H2'	23:BB:113:C:H6	1.84	0.43
25:BD:149:ASN:OD1	25:BD:150:GLN:N	2.52	0.43
28:BG:52:PHE:CZ	28:BG:72:LEU:HD22	2.54	0.43
28:BG:174:ALA:O	28:BG:175:LYS:HB3	2.18	0.43
36:BO:55:GLU:OE1	36:BO:81:ARG:NH1	2.50	0.43
36:BO:94:ARG:HD2	36:BO:97:PHE:O	2.19	0.43
43:BV:35:GLU:HB2	43:BV:93:ARG:CZ	2.49	0.43
46:BY:6:LEU:HD13	46:BY:56:LEU:HD22	2.00	0.43
1:CA:84:U:O2'	1:CA:85:U:H5'	2.18	0.43
1:CA:206:C:H2'	1:CA:207:C:C4'	2.49	0.43
1:CA:439:U:H4'	4:CD:121:LYS:HE3	2.01	0.43
1:CA:1244:G:C2	1:CA:1294:G:C2	3.07	0.43
1:CA:1362:A:OP1	1:CA:1362:A:H4'	2.19	0.43
1:CA:1402:C:H2'	1:CA:1403:C:O4'	2.19	0.43
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.54	0.43
1:CA:1520:C:H2'	1:CA:1521:C:C6	2.54	0.43
2:CB:21:ARG:HH12	2:CB:39:HIS:CD2	2.37	0.43
2:CB:32:PHE:N	2:CB:40:ILE:O	2.46	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
7:CG:33:ASP:HB3	7:CG:35:LYS:HE3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:54:LEU:C	9:CI:55:VAL:HG13	2.39	0.43
15:CO:46:HIS:O	15:CO:48:LYS:N	2.41	0.43
22:DA:8:C:C2'	22:DA:9:G:H5'	2.49	0.43
22:DA:170:U:C2	22:DA:171:U:C6	3.07	0.43
22:DA:729:G:C4	22:DA:1775:U:O2	2.72	0.43
22:DA:815:C:H2'	22:DA:816:C:C6	2.54	0.43
22:DA:973:A:OP2	39:DR:81:LYS:HD2	2.19	0.43
22:DA:980:A:N6	22:DA:2027:G:O2'	2.52	0.43
22:DA:1131:G:N7	22:DA:2025:C:H4'	2.34	0.43
22:DA:1358:G:C2'	22:DA:1359:A:OP2	2.67	0.43
22:DA:1506:U:H2'	22:DA:1507:C:C6	2.54	0.43
22:DA:1829:A:C8	22:DA:1830:C:C5	3.07	0.43
22:DA:1914:C:O2	22:DA:1914:C:O4'	2.35	0.43
22:DA:2143:C:H2'	22:DA:2144:G:O4'	2.19	0.43
22:DA:2215:C:O2'	22:DA:2216:G:H5'	2.19	0.43
22:DA:2314:A:N1	22:DA:2315:G:C5	2.87	0.43
22:DA:2379:G:H2'	22:DA:2380:C:C6	2.54	0.43
22:DA:2388:A:H5'	22:DA:2389:G:OP2	2.19	0.43
22:DA:2473:U:O4	28:DG:176:LYS:NZ	2.47	0.43
22:DA:2648:G:C4	22:DA:2673:G:C2	3.06	0.43
22:DA:2655:G:O2'	22:DA:2656:U:OP1	2.30	0.43
22:DA:2677:G:C4	22:DA:2731:G:N2	2.87	0.43
22:DA:2736:A:C2	22:DA:2769:U:O2	2.71	0.43
22:DA:2740:A:C6	22:DA:2764:A:C8	3.07	0.43
22:DA:2873:A:O4'	35:DN:6:SER:HB2	2.18	0.43
23:DB:2:G:P	23:DB:2:G:H8	2.41	0.43
25:DD:56:LYS:C	25:DD:58:ASN:N	2.72	0.43
27:DF:36:LEU:HD23	27:DF:57:LEU:HD22	2.01	0.43
29:DH:82:SER:O	29:DH:83:LYS:C	2.57	0.43
30:DI:8:TYR:HB2	30:DI:59:ILE:H	1.84	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
30:DI:65:ARG:HG3	30:DI:66:SER:N	2.32	0.43
34:DM:107:GLY:C	34:DM:108:VAL:HG22	2.39	0.43
37:DP:23:GLY:O	37:DP:90:GLY:HA3	2.19	0.43
39:DR:83:TYR:CD1	39:DR:83:TYR:C	2.92	0.43
45:DX:25:THR:O	45:DX:27:ARG:N	2.52	0.43
50:D2:9:VAL:HG12	50:D2:13:ASN:OD1	2.18	0.43
1:AA:82:G:O6	1:AA:87:C:N4	2.52	0.43
1:AA:591:U:OP2	8:AH:31:LYS:HD2	2.18	0.43
1:AA:639:G:N3	1:AA:639:G:H2'	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:947:G:H2'	1:AA:948:C:C6	2.54	0.43
1:AA:1150:A:H2'	1:AA:1151:A:H5'	2.01	0.43
1:AA:1225:A:H2'	1:AA:1226:C:C6	2.53	0.43
1:AA:1368:A:OP2	9:AI:114:LYS:CD	2.66	0.43
2:AB:47:VAL:C	2:AB:49:MET:H	2.22	0.43
6:AF:38:ARG:CG	6:AF:39:LEU:N	2.82	0.43
8:AH:30:SER:O	8:AH:31:LYS:C	2.58	0.43
8:AH:126:ILE:HG22	8:AH:127:CYS:N	2.34	0.43
14:AN:13:ARG:O	14:AN:17:ALA:HB2	2.19	0.43
14:AN:41:ARG:HB2	14:AN:42:TRP:CZ3	2.54	0.43
15:AO:35:GLN:HB3	15:AO:59:MET:HE2	1.99	0.43
21:AU:18:ARG:HD2	21:AU:18:ARG:H	1.84	0.43
22:BA:18:U:O3'	38:BQ:23:GLY:HA2	2.18	0.43
22:BA:100:U:H4'	22:BA:101:A:C5'	2.49	0.43
22:BA:108:G:C2'	22:BA:109:C:H5'	2.49	0.43
22:BA:111:A:N1	22:BA:112:U:C2	2.87	0.43
22:BA:278:A:C6	22:BA:362:A:N7	2.87	0.43
22:BA:297:G:H2'	22:BA:298:G:O4'	2.19	0.43
22:BA:626:A:C2'	33:BL:78:ARG:NH1	2.77	0.43
22:BA:638:G:C5	22:BA:651:G:C2	3.07	0.43
22:BA:830:G:H4'	22:BA:831:G:OP2	2.19	0.43
22:BA:1073:A:H2'	22:BA:1074:G:H5''	2.00	0.43
22:BA:1097:U:H3'	22:BA:1098:A:H4'	2.01	0.43
22:BA:1406:U:C2'	22:BA:1407:G:O5'	2.66	0.43
22:BA:1507:C:H2'	22:BA:1508:A:C4'	2.49	0.43
22:BA:1839:G:C2'	22:BA:1840:G:O5'	2.66	0.43
22:BA:1972:G:C2	22:BA:1973:G:N7	2.86	0.43
22:BA:2192:U:H2'	22:BA:2193:G:C5'	2.43	0.43
22:BA:2258:C:O2'	22:BA:2426:A:H4'	2.19	0.43
22:BA:2356:U:O3'	44:BW:20:ARG:CD	2.67	0.43
22:BA:2564:A:C6	22:BA:2565:A:N1	2.87	0.43
22:BA:2684:U:O4'	32:BK:70:ARG:NH2	2.51	0.43
22:BA:2838:G:C2'	22:BA:2839:G:H5'	2.48	0.43
24:BC:22:PRO:C	24:BC:24:LEU:H	2.23	0.43
28:BG:141:ILE:HD12	28:BG:142:GLY:N	2.34	0.43
31:BJ:30:THR:CG2	31:BJ:31:GLU:N	2.82	0.43
33:BL:81:ASP:O	33:BL:83:ALA:N	2.43	0.43
36:BO:64:TYR:HB3	36:BO:67:ASN:ND2	2.34	0.43
39:BR:49:ILE:HG22	39:BR:53:PHE:C	2.38	0.43
1:CA:179:A:C5	1:CA:180:U:C4	3.06	0.43
1:CA:302:G:C6	1:CA:303:A:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:314:C:N4	1:CA:315:A:N6	2.66	0.43
1:CA:320:A:C2	1:CA:334:C:N3	2.87	0.43
1:CA:328:C:O2	1:CA:328:C:O2'	2.34	0.43
1:CA:363:A:OP1	12:CL:31:ARG:N	2.51	0.43
1:CA:484:G:N7	1:CA:486:U:C1'	2.82	0.43
1:CA:957:U:H4'	19:CS:79:THR:O	2.19	0.43
1:CA:978:A:C6	1:CA:1318:A:N6	2.86	0.43
1:CA:992:U:O4	1:CA:1044:A:C8	2.72	0.43
1:CA:1074:G:O2'	2:CB:102:THR:HG23	2.18	0.43
1:CA:1112:C:O2	3:CC:179:ARG:HG3	2.19	0.43
1:CA:1262:C:N4	1:CA:1263:C:N4	2.67	0.43
3:CC:25:ASN:O	3:CC:29:PHE:HB2	2.18	0.43
3:CC:119:SER:O	3:CC:123:GLN:HG3	2.19	0.43
4:CD:9:LEU:HD22	4:CD:22:LYS:HD2	2.01	0.43
5:CE:20:ARG:NH2	5:CE:31:PHE:CZ	2.87	0.43
5:CE:154:ALA:O	5:CE:156:LYS:N	2.52	0.43
6:CF:37:HIS:O	6:CF:97:THR:HG23	2.19	0.43
9:CI:28:ILE:HB	9:CI:35:LEU:HB2	2.01	0.43
9:CI:49:ARG:C	9:CI:51:PRO:HD2	2.38	0.43
10:CJ:27:GLU:O	10:CJ:31:ARG:HB3	2.18	0.43
12:CL:44:LYS:HB3	12:CL:45:PRO:CD	2.48	0.43
13:CM:48:LEU:HD22	13:CM:53:ILE:HG13	2.01	0.43
13:CM:64:VAL:O	13:CM:69:LEU:HB2	2.18	0.43
14:CN:25:ALA:O	14:CN:28:LYS:HG2	2.19	0.43
14:CN:64:CYS:SG	14:CN:83:LYS:HG3	2.59	0.43
16:CP:6:LEU:CD1	16:CP:71:VAL:HG23	2.49	0.43
21:CU:34:ARG:HD3	21:CU:35:ARG:HB3	2.00	0.43
22:DA:192:C:C4	22:DA:193:U:C2	3.07	0.43
22:DA:232:G:N2	22:DA:420:C:OP1	2.51	0.43
22:DA:290:U:N3	22:DA:291:G:N7	2.67	0.43
22:DA:303:G:C2	22:DA:315:G:C6	3.07	0.43
22:DA:753:A:H2'	22:DA:754:U:C6	2.54	0.43
22:DA:1304:A:C6	22:DA:1305:C:N4	2.87	0.43
22:DA:1357:C:C2'	22:DA:1358:G:H5'	2.49	0.43
22:DA:1662:U:O2	22:DA:2687:U:H4'	2.19	0.43
22:DA:1765:U:O2'	22:DA:1766:G:H5'	2.19	0.43
22:DA:1884:G:O2'	22:DA:1885:A:OP2	2.34	0.43
22:DA:2021:C:OP1	48:D0:9:THR:HG21	2.19	0.43
22:DA:2332:C:H4'	22:DA:2336:A:H62	1.84	0.43
22:DA:2511:U:C4	22:DA:2512:C:C4	3.07	0.43
25:DD:14:ILE:HG12	25:DD:24:VAL:CG2	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:122:VAL:HG21	25:DD:141:ARG:NH1	2.34	0.43
27:DF:66:LEU:O	27:DF:87:CYS:HA	2.19	0.43
30:DI:91:GLY:O	30:DI:93:PRO:HD3	2.19	0.43
31:DJ:59:ALA:O	31:DJ:62:VAL:CG1	2.67	0.43
35:DN:38:LEU:N	35:DN:39:PRO:CD	2.82	0.43
40:DS:61:ASN:O	40:DS:62:ASP:OD1	2.37	0.43
42:DU:74:ASN:O	42:DU:75:ALA:HB3	2.18	0.43
45:DX:27:ARG:NE	45:DX:28:ARG:O	2.50	0.43
1:AA:83:C:H2'	1:AA:85:U:OP2	2.18	0.42
1:AA:131:A:C2	1:AA:132:C:C4	3.07	0.42
1:AA:160:A:N6	1:AA:347:G:H1'	2.34	0.42
1:AA:448:A:C5	1:AA:487:A:C2	3.07	0.42
1:AA:670:G:H2'	1:AA:671:G:O5'	2.18	0.42
1:AA:958:A:C6	1:AA:959:A:N1	2.87	0.42
1:AA:1031:C:O2'	1:AA:1032:G:P	2.77	0.42
1:AA:1181:G:H4'	1:AA:1182:G:OP1	2.18	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
2:AB:147:SER:O	2:AB:148:LEU:CG	2.67	0.42
3:AC:110:GLU:HG2	3:AC:140:ASN:HB3	2.01	0.42
4:AD:157:ALA:O	4:AD:161:LEU:HD22	2.19	0.42
4:AD:167:LYS:O	4:AD:168:PRO:O	2.37	0.42
6:AF:71:ILE:HG23	6:AF:72:ASP:N	2.33	0.42
12:AL:67:ILE:HG21	12:AL:72:HIS:CD2	2.54	0.42
13:AM:80:LEU:HD21	13:AM:87:ARG:NE	2.34	0.42
15:AO:62:GLN:O	15:AO:63:ARG:C	2.57	0.42
19:AS:34:TRP:O	19:AS:36:ARG:N	2.52	0.42
20:AT:44:LYS:HD3	20:AT:87:ALA:HA	2.01	0.42
22:BA:2:G:H2'	22:BA:3:U:C6	2.54	0.42
22:BA:164:C:H2'	22:BA:165:A:O4'	2.18	0.42
22:BA:263:G:H2'	22:BA:264:C:C5'	2.49	0.42
22:BA:471:A:H5''	26:BE:79:ARG:NH2	2.34	0.42
22:BA:685:A:H1'	22:BA:688:U:O4	2.19	0.42
22:BA:846:U:HO2'	22:BA:847:U:P	2.39	0.42
22:BA:1253:A:C8	57:BA:3337:HOH:O	2.72	0.42
22:BA:1515:A:H2'	22:BA:1516:G:O4'	2.19	0.42
22:BA:1535:A:H5'	22:BA:1536:C:C5	2.55	0.42
22:BA:2308:G:C6	22:BA:2311:A:N7	2.87	0.42
22:BA:2436:G:C2	22:BA:2437:G:C8	3.07	0.42
22:BA:2577:A:C2'	22:BA:2578:G:OP1	2.67	0.42
24:BC:201:MET:HG3	24:BC:202:LEU:CD1	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:119:ALA:HB2	25:BD:165:MET:HG2	2.00	0.42
26:BE:77:ILE:O	26:BE:77:ILE:HG13	2.19	0.42
29:BH:79:THR:CG2	29:BH:147:VAL:CG2	2.97	0.42
30:BI:39:CYS:O	30:BI:42:PHE:HB3	2.19	0.42
33:BL:82:LEU:C	33:BL:84:LYS:H	2.22	0.42
39:BR:51:VAL:CG2	39:BR:52:PRO:HD2	2.49	0.42
39:BR:74:ILE:N	39:BR:74:ILE:HD13	2.34	0.42
53:B5:208:THR:O	53:B5:209:PHE:CB	2.67	0.42
1:CA:81:A:N1	1:CA:88:U:O4	2.52	0.42
1:CA:108:G:C6	20:CT:10:ARG:HG2	2.54	0.42
1:CA:124:C:N4	1:CA:125:U:O4	2.52	0.42
1:CA:392:C:C2	1:CA:393:A:C8	3.07	0.42
1:CA:411:A:H4'	1:CA:412:A:O5'	2.18	0.42
1:CA:793:U:HO2'	1:CA:1516:G:C2'	2.29	0.42
1:CA:1134:G:C6	1:CA:1141:C:N4	2.87	0.42
1:CA:1317:C:H2'	1:CA:1318:A:O5'	2.19	0.42
1:CA:1537:U:C5	1:CA:1538:C:N4	2.87	0.42
2:CB:140:GLU:O	2:CB:141:LEU:C	2.56	0.42
4:CD:90:LEU:CD2	4:CD:200:ILE:HD11	2.49	0.42
4:CD:142:VAL:CG1	4:CD:181:THR:OG1	2.67	0.42
4:CD:170:TRP:O	4:CD:183:LYS:HB2	2.19	0.42
7:CG:51:ALA:HB2	7:CG:58:GLU:HA	2.00	0.42
10:CJ:17:LEU:HD21	10:CJ:96:VAL:HG22	2.00	0.42
14:CN:21:PHE:CD2	14:CN:25:ALA:HB2	2.54	0.42
17:CQ:21:ILE:HB	17:CQ:48:ASP:OD1	2.18	0.42
18:CR:33:ILE:CA	18:CR:40:VAL:HG23	2.47	0.42
21:CU:26:ALA:O	21:CU:27:GLY:C	2.56	0.42
22:DA:109:C:H5'	22:DA:348:A:C4'	2.49	0.42
22:DA:158:U:O4	22:DA:159:G:C6	2.72	0.42
22:DA:324:A:C6	22:DA:325:G:C4	3.06	0.42
22:DA:447:A:O2'	22:DA:473:G:N7	2.40	0.42
22:DA:597:G:C6	22:DA:598:U:C2	3.07	0.42
22:DA:600:G:OP1	26:DE:24:ASN:ND2	2.48	0.42
22:DA:683:U:OP1	50:D2:26:ASN:CB	2.67	0.42
22:DA:779:U:OP1	24:DC:49:ILE:HG13	2.19	0.42
22:DA:1462:C:C2	22:DA:1463:C:C5	3.07	0.42
22:DA:2311:A:H2	27:DF:79:ILE:CG2	2.31	0.42
25:DD:109:VAL:CG1	25:DD:201:LEU:HD22	2.48	0.42
26:DE:131:THR:O	26:DE:135:ALA:HB2	2.19	0.42
27:DF:110:ARG:HB3	27:DF:110:ARG:CZ	2.49	0.42
30:DI:10:LYS:HB2	30:DI:56:PRO:HB2	2.01	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
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
52:D4:7:VAL:HG13	52:D4:38:GLY:CA	2.49	0.42
1:AA:28:A:C6	1:AA:29:U:N3	2.87	0.42
1:AA:209:U:C4'	1:AA:210:C:OP2	2.64	0.42
1:AA:292:G:O2'	1:AA:608:A:N6	2.52	0.42
1:AA:760:G:C8	1:AA:761:G:C8	3.07	0.42
1:AA:812:G:OP1	1:AA:903:G:H1'	2.18	0.42
1:AA:959:A:N7	1:AA:960:U:C6	2.87	0.42
1:AA:1012:A:C2	1:AA:1018:G:N7	2.87	0.42
1:AA:1182:G:C3'	1:AA:1183:U:H5'	2.49	0.42
1:AA:1264:U:O2	1:AA:1272:G:C2	2.71	0.42
1:AA:1359:C:P	14:AN:62:ASN:HD22	2.43	0.42
1:AA:1418:A:N6	1:AA:1482:G:O2'	2.46	0.42
3:AC:141:ALA:O	3:AC:146:ALA:HB3	2.18	0.42
4:AD:76:TYR:O	4:AD:77:LYS:C	2.57	0.42
4:AD:97:ARG:HB3	4:AD:99:ASP:OD1	2.19	0.42
4:AD:188:ARG:O	4:AD:190:ASP:O	2.37	0.42
5:AE:39:VAL:HG22	5:AE:67:ALA:HB1	2.00	0.42
5:AE:115:LEU:HG	5:AE:120:VAL:HG21	2.01	0.42
8:AH:64:LYS:HB3	8:AH:71:VAL:HG21	2.01	0.42
16:AP:53:ASP:OD1	16:AP:53:ASP:O	2.37	0.42
19:AS:37:ARG:O	19:AS:70:LYS:HD2	2.18	0.42
22:BA:102:U:C4	46:BY:2:LYS:HD2	2.55	0.42
22:BA:418:C:H2'	22:BA:419:U:O4'	2.19	0.42
22:BA:511:U:O4	22:BA:512:G:N1	2.52	0.42
22:BA:734:A:C5	22:BA:735:A:C8	3.07	0.42
22:BA:866:A:N7	22:BA:914:G:C6	2.88	0.42
22:BA:991:C:C2	22:BA:1185:G:N1	2.87	0.42
22:BA:1070:A:C2	22:BA:1097:U:O2'	2.68	0.42
22:BA:1140:C:OP2	31:BJ:68:LYS:NZ	2.45	0.42
22:BA:1299:G:O2'	22:BA:1301:A:N7	2.50	0.42
22:BA:2190:G:C2'	22:BA:2191:A:H5'	2.49	0.42
22:BA:2298:A:N6	22:BA:2318:G:H1'	2.34	0.42
22:BA:2500:U:O2	22:BA:2504:U:C4	2.72	0.42
22:BA:2727:A:C6	22:BA:2728:U:O4	2.72	0.42
27:BF:3:LYS:HB3	27:BF:101:GLU:OE1	2.19	0.42
27:BF:105:THR:HG23	27:BF:106:ILE:HG12	2.01	0.42
30:BI:72:LYS:CD	30:BI:72:LYS:N	2.82	0.42
33:BL:26:GLY:C	33:BL:27:LEU:HD23	2.40	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:29:LYS:HB3	33:BL:30:THR:H	1.70	0.42
35:BN:77:ALA:O	35:BN:81:ASN:HB2	2.19	0.42
40:BS:28:LYS:O	40:BS:29:VAL:C	2.57	0.42
53:B5:66:PRO:O	53:B5:190:ILE:CB	2.67	0.42
1:CA:6:G:H4'	1:CA:298:A:H4'	2.01	0.42
1:CA:158:G:C6	1:CA:164:G:C5	3.07	0.42
1:CA:297:G:N2	1:CA:300:A:OP2	2.47	0.42
1:CA:405:U:OP2	4:CD:3:ARG:NH1	2.52	0.42
1:CA:466:A:C2	1:CA:468:A:N7	2.88	0.42
1:CA:519:C:C4	1:CA:520:A:C6	3.07	0.42
1:CA:542:G:C2	1:CA:543:U:C6	3.08	0.42
1:CA:552:U:N3	1:CA:553:A:N7	2.67	0.42
1:CA:671:G:C2	1:CA:672:U:C2	3.07	0.42
1:CA:866:C:C4	1:CA:867:G:H1'	2.54	0.42
1:CA:954:G:C2	1:CA:1228:C:N3	2.87	0.42
1:CA:959:A:C2	1:CA:1222:G:O4'	2.72	0.42
1:CA:978:A:P	1:CA:1362:A:N6	2.92	0.42
1:CA:1115:U:O2	1:CA:1186:G:C2	2.72	0.42
1:CA:1179:A:H2'	1:CA:1180:A:O4'	2.19	0.42
2:CB:25:PRO:O	2:CB:28:LYS:HB2	2.19	0.42
3:CC:40:ARG:NH1	3:CC:55:ILE:HG13	2.34	0.42
6:CF:92:THR:HG22	6:CF:93:LYS:N	2.34	0.42
9:CI:47:VAL:O	9:CI:80:ARG:HG3	2.19	0.42
13:CM:22:ILE:HB	13:CM:25:VAL:HG12	2.00	0.42
14:CN:31:ILE:N	14:CN:31:ILE:HD12	2.34	0.42
15:CO:67:LEU:O	15:CO:70:LEU:N	2.52	0.42
17:CQ:15:ASP:HA	17:CQ:21:ILE:HD12	2.01	0.42
19:CS:66:MET:O	19:CS:68:GLY:N	2.53	0.42
22:DA:237:C:C4	22:DA:238:C:H5	2.36	0.42
22:DA:249:C:P	22:DA:2394:C:O2'	2.77	0.42
22:DA:426:C:C4	22:DA:427:U:C5	3.07	0.42
22:DA:965:C:C4'	22:DA:2273:A:H1'	2.49	0.42
22:DA:1250:G:H4'	38:DQ:6:ARG:HD2	2.01	0.42
22:DA:1264:A:N7	22:DA:1265:A:C5	2.87	0.42
22:DA:1361:G:C6	22:DA:1371:G:C2	3.07	0.42
22:DA:1394:U:H6	22:DA:1394:U:H3'	1.84	0.42
22:DA:1525:A:H2'	22:DA:1526:C:O4'	2.19	0.42
22:DA:1680:U:H2'	22:DA:1681:G:O4'	2.19	0.42
22:DA:1857:G:N2	22:DA:1884:G:C4	2.87	0.42
22:DA:1875:G:H2'	22:DA:1876:A:OP2	2.19	0.42
22:DA:2013:A:N1	22:DA:2014:A:C2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2098:U:C4	22:DA:2099:U:O4	2.72	0.42
22:DA:2289:G:O2'	22:DA:2383:G:O2'	2.32	0.42
22:DA:2587:A:H5''	22:DA:2588:G:OP2	2.20	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
24:DC:17:VAL:N	24:DC:204:VAL:HG22	2.34	0.42
26:DE:149:ILE:HG22	26:DE:186:VAL:HG12	2.00	0.42
30:DI:54:PRO:O	30:DI:75:PRO:HD2	2.18	0.42
35:DN:2:ARG:O	35:DN:2:ARG:CD	2.68	0.42
35:DN:47:VAL:O	35:DN:47:VAL:HG12	2.19	0.42
37:DP:114:LEU:O	37:DP:114:LEU:HG	2.20	0.42
39:DR:80:ARG:C	39:DR:82:HIS:N	2.72	0.42
41:DT:24:MET:HG2	41:DT:29:THR:O	2.19	0.42
42:DU:49:VAL:HG13	42:DU:53:ASN:O	2.19	0.42
1:AA:172:A:C5	1:AA:174:A:C8	3.08	0.42
1:AA:457:G:H2'	1:AA:457:G:N3	2.34	0.42
1:AA:939:G:C2	1:AA:940:C:C2	3.07	0.42
1:AA:1538:C:O2'	1:AA:1539:C:H5'	2.19	0.42
2:AB:20:THR:O	2:AB:21:ARG:NH2	2.53	0.42
3:AC:85:GLU:O	3:AC:87:LEU:N	2.52	0.42
5:AE:94:VAL:HG21	5:AE:140:THR:HG22	2.00	0.42
6:AF:99:ALA:O	6:AF:100:SER:CB	2.67	0.42
8:AH:78:VAL:HG11	8:AH:125:ILE:HD11	2.00	0.42
11:AK:35:THR:CG2	11:AK:39:GLY:HA2	2.49	0.42
13:AM:6:GLY:C	13:AM:8:ASN:N	2.70	0.42
22:BA:122:G:H2'	22:BA:123:G:O4'	2.19	0.42
22:BA:301:G:C6	22:BA:317:G:C6	3.07	0.42
22:BA:476:G:C2	22:BA:479:A:C8	3.07	0.42
22:BA:644:A:H5''	22:BA:645:C:OP2	2.18	0.42
22:BA:1064:C:H4'	30:BI:90:SER:CB	2.48	0.42
22:BA:1277:G:C5'	35:BN:20:MET:CE	2.97	0.42
22:BA:1283:G:N1	22:BA:1286:A:OP2	2.53	0.42
22:BA:1353:A:C8	22:BA:1378:A:N6	2.88	0.42
22:BA:1449:G:C6	22:BA:1450:G:N7	2.88	0.42
22:BA:1738:G:HO2'	22:BA:1739:A:P	2.43	0.42
22:BA:1805:A:N3	24:BC:50:THR:HB	2.33	0.42
22:BA:1847:A:C8	22:BA:1847:A:OP2	2.73	0.42
22:BA:2214:C:H2'	22:BA:2215:C:O4'	2.19	0.42
22:BA:2748:A:C2	22:BA:2757:A:C4	3.07	0.42
23:BB:116:G:C4'	36:BO:54:VAL:HG13	2.46	0.42
24:BC:75:PRO:HA	24:BC:117:GLN:HG2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:96:ALA:HB2	28:BG:105:LEU:HD23	2.02	0.42
30:BI:16:GLY:CA	30:BI:51:LYS:HB3	2.49	0.42
35:BN:36:THR:HG23	35:BN:37:THR:O	2.19	0.42
37:BP:103:ARG:HH11	37:BP:103:ARG:HG2	1.83	0.42
39:BR:2:TYR:HA	39:BR:14:VAL:O	2.20	0.42
40:BS:109:ASP:O	40:BS:110:ARG:O	2.37	0.42
42:BU:39:ILE:HG22	42:BU:40:ASN:N	2.34	0.42
49:B1:12:VAL:HG12	49:B1:13:SER:N	2.34	0.42
52:B4:10:LEU:N	52:B4:14:CYS:SG	2.80	0.42
1:CA:189:A:N7	1:CA:190:A:C5	2.88	0.42
1:CA:244:U:O4	1:CA:906:A:H1'	2.18	0.42
1:CA:270:A:H2'	1:CA:271:C:C6	2.54	0.42
1:CA:456:A:H2'	1:CA:457:G:O4'	2.19	0.42
1:CA:623:C:C4	1:CA:624:C:C5	3.07	0.42
1:CA:662:U:H2'	1:CA:663:A:C8	2.55	0.42
1:CA:853:C:C2	1:CA:854:U:C6	3.06	0.42
1:CA:1000:A:N3	1:CA:1041:G:N2	2.67	0.42
1:CA:1087:G:N2	1:CA:1099:G:H1'	2.35	0.42
1:CA:1144:G:N2	1:CA:1145:A:C2	2.87	0.42
1:CA:1362:A:OP1	1:CA:1362:A:C4'	2.67	0.42
2:CB:21:ARG:HA	2:CB:21:ARG:NE	2.32	0.42
6:CF:3:HIS:O	6:CF:92:THR:HA	2.19	0.42
11:CK:116:ILE:O	11:CK:116:ILE:HG22	2.19	0.42
13:CM:4:ILE:HG22	13:CM:53:ILE:CG2	2.48	0.42
14:CN:87:ALA:HB1	14:CN:92:GLU:CB	2.49	0.42
16:CP:42:ILE:O	16:CP:43:ALA:HB3	2.19	0.42
20:CT:84:ASN:O	20:CT:84:ASN:ND2	2.53	0.42
21:CU:14:VAL:CG1	21:CU:15:ALA:N	2.82	0.42
22:DA:110:G:N2	22:DA:111:A:H1'	2.35	0.42
22:DA:121:G:N2	22:DA:131:A:C4	2.88	0.42
22:DA:538:A:H5''	31:DJ:7:LYS:NZ	2.35	0.42
22:DA:927:A:H2'	22:DA:928:A:O4'	2.19	0.42
22:DA:1267:U:C5	22:DA:2012:G:N2	2.88	0.42
22:DA:1298:C:N4	22:DA:1299:G:C6	2.87	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:1553:A:N7	22:DA:1555:G:C5	2.87	0.42
22:DA:1607:C:H4'	22:DA:1608:A:C5'	2.49	0.42
22:DA:1858:A:C6	22:DA:1859:U:N3	2.87	0.42
22:DA:2096:C:H2'	22:DA:2097:A:C8	2.54	0.42
22:DA:2225:A:H1'	22:DA:2226:C:OP2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2393:U:H2'	22:DA:2394:C:O4'	2.20	0.42
23:DB:94:A:C2'	23:DB:95:U:H5'	2.49	0.42
25:DD:14:ILE:HG12	25:DD:24:VAL:HG21	2.01	0.42
30:DI:46:THR:HG22	30:DI:51:LYS:HG3	2.01	0.42
35:DN:76:VAL:HA	35:DN:79:LEU:HD12	2.01	0.42
43:DV:80:HIS:CG	43:DV:81:PRO:HD2	2.55	0.42
46:DY:29:ARG:C	46:DY:31:GLN:H	2.22	0.42
1:AA:328:C:O2	1:AA:328:C:C2'	2.68	0.42
1:AA:694:A:N1	1:AA:787:A:O2'	2.52	0.42
1:AA:764:C:O2'	1:AA:765:G:H5'	2.19	0.42
1:AA:1178:G:C8	9:AI:99:ARG:NH2	2.87	0.42
1:AA:1270:G:O3'	1:AA:1314:C:H5'	2.19	0.42
1:AA:1359:C:H2'	1:AA:1361:G:OP2	2.20	0.42
1:AA:1468:A:O2'	1:AA:1469:C:H5'	2.19	0.42
7:AG:49:THR:O	7:AG:53:ARG:HB2	2.18	0.42
7:AG:91:VAL:O	7:AG:96:ARG:NH2	2.53	0.42
10:AJ:67:ILE:O	10:AJ:67:ILE:HG22	2.19	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
13:AM:45:ILE:HG13	13:AM:48:LEU:HD13	2.01	0.42
18:AR:71:THR:OG1	18:AR:73:ARG:N	2.50	0.42
20:AT:79:LEU:O	20:AT:82:GLN:HB2	2.19	0.42
22:BA:82:U:H2'	22:BA:83:A:O4'	2.19	0.42
22:BA:141:G:C6	41:BT:1:MET:HE1	2.54	0.42
22:BA:189:G:H2'	22:BA:205:G:N2	2.35	0.42
22:BA:196:A:N3	22:BA:196:A:H2'	2.34	0.42
22:BA:464:U:C5	22:BA:788:A:C4	3.08	0.42
22:BA:996:A:C5	22:BA:1160:G:C2	3.08	0.42
22:BA:1122:G:H2'	22:BA:1122:G:N3	2.33	0.42
22:BA:1439:A:C2	22:BA:1553:A:C6	3.07	0.42
22:BA:1447:C:H1'	22:BA:1545:A:H1'	2.01	0.42
22:BA:1692:U:H2'	22:BA:1694:C:C5	2.54	0.42
22:BA:2271:G:H2'	22:BA:2272:U:C6	2.55	0.42
22:BA:2315:G:H2'	22:BA:2316:G:H8	1.83	0.42
22:BA:2674:G:H4'	32:BK:30:ARG:HD2	2.02	0.42
24:BC:78:VAL:HG21	24:BC:110:LEU:CD2	2.49	0.42
24:BC:237:GLY:HA3	57:BC:407:HOH:O	2.19	0.42
26:BE:141:MET:O	26:BE:142:ALA:HB3	2.19	0.42
27:BF:95:ARG:HA	27:BF:98:GLU:HB2	2.02	0.42
31:BJ:53:TYR:CD1	31:BJ:121:LYS:HB3	2.55	0.42
32:BK:25:LEU:HD12	32:BK:38:ILE:HG22	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:116:VAL:O	35:BN:116:VAL:HG13	2.19	0.42
38:BQ:25:TYR:O	38:BQ:26:GLY:C	2.57	0.42
41:BT:44:LYS:HG3	41:BT:55:VAL:CG1	2.50	0.42
42:BU:97:LYS:O	42:BU:98:SER:CB	2.67	0.42
46:BY:7:ARG:O	46:BY:7:ARG:HG3	2.20	0.42
46:BY:22:LEU:O	46:BY:23:ARG:O	2.37	0.42
53:B5:23:ILE:O	53:B5:23:ILE:HG22	2.20	0.42
1:CA:47:C:H4'	1:CA:48:C:OP1	2.20	0.42
1:CA:57:G:H2'	1:CA:58:C:C6	2.55	0.42
1:CA:1317:C:C4	14:CN:53:ARG:HD2	2.54	0.42
2:CB:86:SER:O	2:CB:87:CYS:O	2.36	0.42
3:CC:141:ALA:O	3:CC:146:ALA:HB3	2.18	0.42
3:CC:147:LYS:HB2	3:CC:203:PHE:CD2	2.54	0.42
4:CD:145:ILE:HG22	4:CD:146:ARG:O	2.19	0.42
7:CG:40:GLU:HA	7:CG:43:VAL:HB	2.01	0.42
7:CG:130:ASN:HA	7:CG:135:VAL:HG11	2.00	0.42
11:CK:127:ARG:O	21:CU:34:ARG:NH1	2.40	0.42
12:CL:30:LYS:O	12:CL:81:LEU:HD12	2.19	0.42
17:CQ:46:VAL:HG11	17:CQ:61:ILE:CG1	2.49	0.42
18:CR:57:ARG:HG2	18:CR:58:ALA:N	2.34	0.42
19:CS:44:MET:HE1	19:CS:71:LEU:HD21	2.00	0.42
20:CT:58:VAL:CG1	20:CT:72:ALA:HB1	2.49	0.42
20:CT:69:LYS:HD2	20:CT:70:ASN:OD1	2.19	0.42
21:CU:11:PRO:C	21:CU:12:PHE:CG	2.93	0.42
22:DA:116:C:H4'	22:DA:127:A:H5'	2.02	0.42
22:DA:230:G:N3	22:DA:231:A:C8	2.88	0.42
22:DA:308:G:C2	22:DA:309:A:N3	2.86	0.42
22:DA:822:G:O6	22:DA:943:A:H2	2.03	0.42
22:DA:1027:A:C5	22:DA:1126:A:N3	2.88	0.42
22:DA:1121:C:N3	22:DA:1122:G:C8	2.88	0.42
22:DA:1140:C:O4'	22:DA:1143:A:C2	2.72	0.42
22:DA:1744:A:C5	22:DA:1745:A:C5	3.07	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
22:DA:1946:U:H2'	22:DA:1947:C:C6	2.54	0.42
22:DA:1973:G:O6	22:DA:1974:C:N4	2.52	0.42
22:DA:2038:G:C5	22:DA:2039:U:C5	3.07	0.42
22:DA:2056:G:N2	22:DA:2057:G:C1'	2.83	0.42
22:DA:2119:A:N1	22:DA:2169:A:H2'	2.34	0.42
22:DA:2366:A:H2'	22:DA:2367:G:H5'	2.01	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)
22:DA:2776:A:O4'	22:DA:2778:A:C8	2.72	0.42
22:DA:2836:U:H2'	22:DA:2837:A:C8	2.54	0.42
24:DC:228:VAL:HG13	24:DC:229:ASP:N	2.34	0.42
25:DD:3:GLY:C	25:DD:82:PHE:CE1	2.93	0.42
25:DD:105:LYS:O	25:DD:177:VAL:CG1	2.68	0.42
25:DD:127:PHE:CZ	25:DD:160:LYS:HD2	2.54	0.42
30:DI:19:ASN:OD1	30:DI:35:ILE:HG22	2.18	0.42
31:DJ:42:ALA:C	31:DJ:44:TYR:H	2.23	0.42
33:DL:120:VAL:CG1	33:DL:121:THR:N	2.83	0.42
34:DM:62:LYS:HD3	34:DM:64:TRP:CZ2	2.55	0.42
34:DM:67:VAL:CG1	34:DM:100:LYS:HD2	2.50	0.42
35:DN:103:ARG:HB2	35:DN:110:MET:HE3	2.02	0.42
37:DP:26:VAL:CG1	37:DP:28:VAL:HG22	2.49	0.42
37:DP:46:VAL:HG12	37:DP:47:VAL:N	2.34	0.42
40:DS:29:VAL:HG22	40:DS:71:VAL:HG22	2.01	0.42
50:D2:9:VAL:O	50:D2:10:LEU:C	2.58	0.42
1:AA:19:A:C2	1:AA:917:G:C4	3.07	0.42
1:AA:22:G:H4'	1:AA:885:G:C8	2.55	0.42
1:AA:223:A:C6	1:AA:224:U:O4	2.72	0.42
1:AA:466:A:H5'	1:AA:467:U:OP2	2.19	0.42
1:AA:628:G:H2'	1:AA:629:A:O4'	2.20	0.42
1:AA:702:A:N6	22:BA:1846:G:HO2'	2.17	0.42
1:AA:1241:G:C2	1:AA:1242:G:C5	3.08	0.42
1:AA:1521:C:C2	1:AA:1522:U:C6	3.08	0.42
2:AB:32:PHE:O	2:AB:32:PHE:CG	2.72	0.42
2:AB:118:GLU:O	2:AB:121:SER:HB3	2.19	0.42
2:AB:176:ALA:CB	2:AB:183:VAL:CG2	2.97	0.42
4:AD:123:ILE:N	4:AD:123:ILE:CD1	2.83	0.42
4:AD:173:VAL:HG13	4:AD:174:ASP:N	2.34	0.42
5:AE:30:ILE:HD11	5:AE:54:ARG:NH1	2.34	0.42
5:AE:72:ILE:CD1	5:AE:145:GLU:OE2	2.67	0.42
8:AH:10:MET:O	8:AH:11:LEU:C	2.57	0.42
9:AI:84:THR:HG21	9:AI:103:PHE:HB3	2.00	0.42
15:AO:32:LEU:O	15:AO:33:THR:C	2.58	0.42
15:AO:85:LEU:HD13	15:AO:85:LEU:HA	1.83	0.42
15:AO:87:LEU:N	15:AO:87:LEU:HD23	2.34	0.42
18:AR:25:ASP:O	18:AR:26:ILE:C	2.58	0.42
22:BA:278:A:N1	22:BA:362:A:C8	2.87	0.42
22:BA:548:G:O2'	22:BA:549:G:N1	2.52	0.42
22:BA:1091:G:H2'	22:BA:1092:C:C6	2.54	0.42
22:BA:1197:G:H2'	22:BA:1198:U:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1449:G:C2	22:BA:1450:G:C8	3.07	0.42
22:BA:1812:U:H2'	22:BA:1813:G:H8	1.84	0.42
22:BA:2199:A:N7	22:BA:2200:C:C5	2.87	0.42
22:BA:2553:G:C5'	22:BA:2554:U:OP2	2.67	0.42
22:BA:2665:A:C2	22:BA:2666:C:C2	3.08	0.42
27:BF:92:ARG:CA	27:BF:96:MET:HB2	2.49	0.42
29:BH:45:GLU:C	29:BH:47:PHE:N	2.72	0.42
33:BL:78:ARG:HG2	33:BL:113:ALA:HB3	2.02	0.42
41:BT:40:LYS:HD3	41:BT:58:VAL:O	2.19	0.42
45:BX:68:LEU:HD22	45:BX:78:TYR:CD1	2.55	0.42
46:BY:9:LYS:O	46:BY:12:GLU:HB2	2.20	0.42
49:B1:29:THR:O	49:B1:31:PRO:HD2	2.20	0.42
1:CA:135:C:O2	16:CP:1:MET:CB	2.68	0.42
1:CA:532:A:N6	3:CC:192:THR:OG1	2.53	0.42
1:CA:756:C:N3	1:CA:757:U:C6	2.88	0.42
1:CA:1300:G:C6	1:CA:1335:U:C5	3.07	0.42
2:CB:62:SER:C	2:CB:64:LYS:N	2.73	0.42
2:CB:131:LYS:HE2	2:CB:131:LYS:HA	2.02	0.42
5:CE:122:ASN:ND2	5:CE:123:VAL:N	2.68	0.42
6:CF:18:VAL:HB	6:CF:19:PRO:HD3	2.01	0.42
8:CH:104:VAL:HA	8:CH:126:ILE:HD12	2.01	0.42
11:CK:126:LYS:O	11:CK:127:ARG:CB	2.68	0.42
12:CL:108:LYS:O	12:CL:109:ASP:HB2	2.20	0.42
22:DA:117:G:C2	22:DA:119:A:N6	2.87	0.42
22:DA:201:C:C5	22:DA:202:U:C5	3.08	0.42
22:DA:282:A:H2'	22:DA:283:G:C8	2.54	0.42
22:DA:332:A:HO2'	22:DA:334:C:P	2.35	0.42
22:DA:606:U:O2'	26:DE:95:LYS:NZ	2.52	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:972:A:C6	22:DA:973:A:C6	3.08	0.42
22:DA:1310:G:N2	22:DA:1605:C:C2	2.88	0.42
22:DA:1500:G:C6	22:DA:1501:G:N7	2.87	0.42
22:DA:1519:G:H3'	22:DA:1520:U:C6	2.53	0.42
22:DA:1603:A:P	22:DA:1604:C:OP2	2.77	0.42
22:DA:1793:C:H5''	22:DA:1794:A:OP2	2.19	0.42
22:DA:2233:U:H2'	22:DA:2234:G:C8	2.54	0.42
22:DA:2306:C:C5	22:DA:2307:G:C8	3.08	0.42
22:DA:2409:G:C6	22:DA:2410:G:C6	3.07	0.42
22:DA:2452:C:C4	22:DA:2453:A:C6	3.07	0.42
22:DA:2521:C:C2	22:DA:2545:G:N2	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2685:G:C4	22:DA:2686:G:C8	3.07	0.42
22:DA:2714:G:C5	22:DA:2715:C:C5	3.07	0.42
22:DA:2879:A:H8	22:DA:2881:U:O4	2.03	0.42
25:DD:113:SER:O	25:DD:167:ASN:HA	2.19	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
30:DI:73:THR:HG21	30:DI:113:LYS:HE3	2.01	0.42
32:DK:62:VAL:HG11	32:DK:65:THR:CG2	2.48	0.42
32:DK:105:ARG:NH1	32:DK:122:VAL:O	2.53	0.42
33:DL:29:LYS:C	33:DL:30:THR:HG23	2.39	0.42
34:DM:33:LEU:HB2	34:DM:117:PHE:CD2	2.54	0.42
35:DN:34:ILE:HD11	35:DN:44:LEU:CD2	2.50	0.42
35:DN:87:PHE:O	35:DN:88:ALA:C	2.58	0.42
36:DO:74:VAL:HG12	36:DO:106:LEU:HD11	2.01	0.42
39:DR:7:SER:O	39:DR:9:GLY:N	2.47	0.42
40:DS:59:GLU:HG2	40:DS:64:ALA:HA	2.01	0.42
45:DX:65:ASP:O	45:DX:66:THR:C	2.57	0.42
1:AA:251:G:H4'	1:AA:252:U:O5'	2.20	0.42
1:AA:340:U:N3	1:AA:341:C:C5	2.88	0.42
1:AA:363:A:O2'	1:AA:364:A:H5'	2.18	0.42
1:AA:575:G:C6	1:AA:821:G:C8	3.07	0.42
1:AA:651:C:H2'	1:AA:652:U:O5'	2.20	0.42
1:AA:764:C:C2'	1:AA:765:G:H5'	2.49	0.42
1:AA:1277:C:O2'	1:AA:1279:G:H8	1.99	0.42
1:AA:1317:C:H2'	1:AA:1318:A:H5'	2.02	0.42
2:AB:35:ARG:HB3	2:AB:40:ILE:HD11	1.99	0.42
3:AC:47:LEU:HB3	3:AC:50:ALA:HB3	2.00	0.42
8:AH:7:ILE:O	8:AH:11:LEU:HG	2.20	0.42
9:AI:63:LEU:N	9:AI:63:LEU:CD2	2.82	0.42
10:AJ:34:ALA:O	10:AJ:35:GLN:HB3	2.19	0.42
11:AK:55:SER:O	11:AK:57:LYS:N	2.52	0.42
12:AL:18:LYS:O	12:AL:18:LYS:HG3	2.19	0.42
12:AL:21:VAL:O	12:AL:21:VAL:HG13	2.20	0.42
16:AP:76:LYS:HG3	16:AP:76:LYS:O	2.20	0.42
19:AS:15:LEU:CD1	19:AS:33:THR:HG21	2.50	0.42
22:BA:26:G:H1'	22:BA:514:A:H61	1.83	0.42
22:BA:301:G:H1'	22:BA:302:C:C6	2.55	0.42
22:BA:773:U:H5'	24:BC:47:GLY:HA3	2.01	0.42
22:BA:998:C:P	38:BQ:92:ARG:NH2	2.92	0.42
22:BA:1177:G:H2'	22:BA:1178:C:O4'	2.20	0.42
22:BA:1564:C:O2'	22:BA:1565:C:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1730:C:H4'	22:BA:1730:C:OP1	2.19	0.42
22:BA:2015:A:C6	48:B0:3:VAL:HG23	2.54	0.42
22:BA:2020:A:H5'	48:B0:9:THR:HG22	2.01	0.42
22:BA:2208:C:O2'	22:BA:2209:G:H5'	2.20	0.42
22:BA:2236:U:H2'	22:BA:2237:G:O4'	2.20	0.42
22:BA:2394:C:P	51:B3:30:ARG:HH21	2.43	0.42
22:BA:2660:A:H2'	22:BA:2661:G:O4'	2.18	0.42
23:BB:90:C:H2'	23:BB:91:C:O4'	2.20	0.42
23:BB:97:C:H2'	23:BB:98:G:H5'	2.02	0.42
24:BC:7:LYS:HB3	24:BC:8:PRO:HD2	2.02	0.42
26:BE:54:GLY:O	26:BE:74:LYS:HE2	2.20	0.42
27:BF:119:ALA:HB2	27:BF:177:PHE:CD2	2.54	0.42
27:BF:158:THR:CG2	27:BF:160:ALA:CB	2.98	0.42
29:BH:114:GLU:CB	29:BH:133:GLN:O	2.66	0.42
31:BJ:38:GLY:O	31:BJ:44:TYR:HB2	2.20	0.42
31:BJ:64:VAL:HG11	31:BJ:68:LYS:HB2	2.01	0.42
36:BO:28:VAL:CG2	36:BO:29:HIS:N	2.83	0.42
40:BS:19:LEU:HB3	48:B0:22:LEU:HD11	2.02	0.42
1:CA:41:G:H2'	1:CA:42:G:C8	2.55	0.42
1:CA:72:A:N6	1:CA:73:C:H42	2.18	0.42
1:CA:411:A:C6	1:CA:429:U:C4	3.07	0.42
1:CA:445:G:C2	1:CA:490:C:C2	3.07	0.42
1:CA:689:C:H2'	1:CA:690:G:O4'	2.19	0.42
1:CA:833:G:O2'	1:CA:834:U:H5'	2.19	0.42
1:CA:899:C:H6	1:CA:899:C:OP1	2.02	0.42
1:CA:1036:A:H3'	1:CA:1037:C:C6	2.54	0.42
1:CA:1139:G:O6	1:CA:1143:G:N2	2.52	0.42
1:CA:1175:G:O6	1:CA:1182:G:O6	2.37	0.42
1:CA:1349:A:OP1	9:CI:123:ARG:N	2.52	0.42
4:CD:4:TYR:CZ	4:CD:6:GLY:HA3	2.54	0.42
4:CD:53:VAL:CG2	4:CD:54:GLN:N	2.82	0.42
4:CD:198:HIS:CE1	4:CD:199:LEU:CD2	3.03	0.42
5:CE:57:PRO:O	5:CE:60:ILE:HG13	2.18	0.42
5:CE:122:ASN:ND2	5:CE:123:VAL:H	2.17	0.42
6:CF:64:VAL:HG12	6:CF:65:GLU:H	1.85	0.42
6:CF:86:ARG:HD3	18:CR:64:TYR:CE1	2.54	0.42
9:CI:130:ARG:HD2	9:CI:130:ARG:HA	1.82	0.42
13:CM:45:ILE:O	13:CM:45:ILE:HG22	2.20	0.42
14:CN:46:LEU:HD23	19:CS:10:PHE:HB2	2.02	0.42
21:CU:14:VAL:O	21:CU:16:LEU:CG	2.66	0.42
22:DA:87:U:O2	46:DY:44:LYS:NZ	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:503:A:N6	22:DA:505:A:N6	2.67	0.42
22:DA:618:G:N2	22:DA:619:G:H1'	2.35	0.42
22:DA:790:U:C4	22:DA:794:A:O2'	2.73	0.42
22:DA:864:G:C6	22:DA:865:C:C4	3.07	0.42
22:DA:1869:G:C2	22:DA:1873:G:C6	3.07	0.42
22:DA:2305:U:O4'	27:DF:131:GLY:HA3	2.18	0.42
22:DA:2322:A:C5	22:DA:2323:G:C5	3.07	0.42
22:DA:2446:G:H3'	22:DA:2447:G:H5''	2.01	0.42
22:DA:2560:A:H2'	22:DA:2561:U:O4'	2.19	0.42
22:DA:2702:G:N7	22:DA:2703:C:C5	2.87	0.42
22:DA:2736:A:C2	22:DA:2737:G:C8	3.08	0.42
22:DA:2861:U:C2	22:DA:2862:G:C8	3.07	0.42
24:DC:166:ALA:HB3	24:DC:173:THR:HB	1.99	0.42
27:DF:77:PHE:C	27:DF:78:LYS:HG3	2.40	0.42
27:DF:122:PHE:CE1	27:DF:166:GLY:CA	3.02	0.42
29:DH:69:ALA:HB2	29:DH:138:VAL:HG12	2.02	0.42
35:DN:52:ILE:HD12	35:DN:94:TYR:HB2	2.02	0.42
36:DO:88:LYS:HA	36:DO:88:LYS:HE3	2.02	0.42
41:DT:65:GLY:O	41:DT:66:LYS:C	2.57	0.42
42:DU:13:VAL:CG2	42:DU:39:ILE:HG21	2.50	0.42
49:D1:19:HIS:CD2	49:D1:49:TYR:OH	2.72	0.42
1:AA:19:A:H1'	1:AA:917:G:N2	2.34	0.42
1:AA:244:U:O4	1:AA:906:A:H1'	2.19	0.42
1:AA:350:G:O2'	1:AA:351:G:H5'	2.20	0.42
1:AA:596:A:N6	1:AA:645:G:N1	2.68	0.42
1:AA:616:G:C2'	1:AA:617:G:H5'	2.50	0.42
1:AA:844:G:H2'	1:AA:845:A:H5''	2.02	0.42
1:AA:1033:G:O2'	1:AA:1034:G:H5'	2.19	0.42
1:AA:1100:C:O2'	1:AA:1102:A:OP1	2.32	0.42
1:AA:1151:A:C4	1:AA:1152:A:C8	3.08	0.42
2:AB:148:LEU:HD22	2:AB:148:LEU:HA	1.92	0.42
2:AB:186:ILE:HD11	2:AB:204:ASP:CB	2.50	0.42
9:AI:6:TYR:HB2	9:AI:89:GLU:OE2	2.19	0.42
9:AI:30:ILE:CG2	9:AI:65:ILE:HD11	2.50	0.42
10:AJ:86:ALA:O	10:AJ:90:LEU:HB2	2.20	0.42
10:AJ:87:LEU:HD13	10:AJ:88:MET:N	2.34	0.42
11:AK:52:PHE:O	11:AK:57:LYS:HB3	2.20	0.42
11:AK:102:ALA:C	11:AK:104:GLY:N	2.73	0.42
15:AO:87:LEU:O	15:AO:88:ARG:HB2	2.19	0.42
22:BA:80:G:N2	22:BA:81:G:H1'	2.35	0.42
22:BA:136:G:H8	22:BA:136:G:O5'	2.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:158:U:O2	22:BA:158:U:H2'	2.18	0.42
22:BA:451:U:C2	22:BA:453:A:N7	2.88	0.42
22:BA:637:A:OP1	33:BL:130:GLY:HA3	2.20	0.42
22:BA:875:G:C2'	22:BA:876:C:H5'	2.49	0.42
22:BA:959:A:N1	22:BA:960:A:C2	2.87	0.42
22:BA:1299:G:H8	22:BA:1299:G:O5'	2.03	0.42
22:BA:1366:A:C6	22:BA:1367:A:C4	3.08	0.42
22:BA:1539:U:H2'	22:BA:1540:G:C8	2.53	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
22:BA:2805:C:C4	22:BA:2806:C:C4	3.07	0.42
27:BF:108:VAL:HG13	27:BF:114:PHE:CZ	2.54	0.42
29:BH:89:LYS:O	29:BH:90:LEU:C	2.58	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
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
31:BJ:70:THR:OG1	31:BJ:71:ASP:OD2	2.35	0.42
34:BM:4:PRO:HB2	34:BM:7:THR:CG2	2.49	0.42
34:BM:68:PHE:C	34:BM:68:PHE:CD2	2.93	0.42
37:BP:53:ARG:HH11	37:BP:53:ARG:HG3	1.82	0.42
41:BT:2:ILE:HA	41:BT:3:ARG:CB	2.47	0.42
41:BT:71:GLY:O	41:BT:73:ARG:N	2.52	0.42
49:B1:25:LYS:HE3	49:B1:30:LYS:O	2.20	0.42
51:B3:7:VAL:HB	51:B3:61:CYS:HB3	2.00	0.42
1:CA:210:C:OP1	1:CA:211:G:OP1	2.37	0.42
1:CA:408:A:H2'	1:CA:409:U:O4'	2.19	0.42
1:CA:509:A:N3	1:CA:543:U:O2'	2.46	0.42
1:CA:599:C:H4'	8:CH:122:GLY:C	2.40	0.42
1:CA:609:A:C5	1:CA:610:U:C6	3.07	0.42
1:CA:927:G:OP2	1:CA:927:G:H4'	2.20	0.42
1:CA:994:A:C2	1:CA:995:C:C1'	3.02	0.42
1:CA:1261:A:C6	1:CA:1275:A:C4	3.08	0.42
1:CA:1286:U:O2	1:CA:1286:U:H2'	2.18	0.42
1:CA:1291:U:H4'	9:CI:42:GLU:HG2	2.01	0.42
1:CA:1377:A:C4	7:CG:7:ILE:HD11	2.54	0.42
2:CB:71:GLY:HA3	2:CB:164:ILE:CG2	2.50	0.42
2:CB:217:VAL:O	2:CB:220:THR:HG22	2.20	0.42
3:CC:75:ILE:O	3:CC:75:ILE:CG1	2.68	0.42
3:CC:179:ARG:HD2	3:CC:179:ARG:C	2.40	0.42
5:CE:126:LYS:HA	5:CE:126:LYS:CE	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:43:VAL:HG12	7:CG:44:TYR:CD1	2.55	0.42
11:CK:15:GLN:OE1	11:CK:17:SER:N	2.53	0.42
11:CK:77:TYR:O	11:CK:78:GLY:C	2.58	0.42
12:CL:110:ARG:NE	12:CL:117:TYR:CD2	2.88	0.42
13:CM:14:HIS:HB2	13:CM:17:ILE:HD12	2.01	0.42
22:DA:7:G:HO2'	31:DJ:15:TRP:HZ2	1.64	0.42
22:DA:77:G:H2'	22:DA:78:U:O4'	2.19	0.42
22:DA:84:A:C2	22:DA:103:A:C5	3.08	0.42
22:DA:233:A:C2	22:DA:234:U:H1'	2.54	0.42
22:DA:563:A:C6	22:DA:2018:G:C4	3.08	0.42
22:DA:572:A:H5''	22:DA:573:U:OP2	2.19	0.42
22:DA:656:G:O2'	22:DA:657:U:H5'	2.20	0.42
22:DA:660:C:H5''	26:DE:94:GLN:OE1	2.20	0.42
22:DA:717:C:N4	22:DA:718:A:C2	2.87	0.42
22:DA:927:A:C2	47:DZ:43:ALA:HB1	2.55	0.42
22:DA:941:A:O2'	22:DA:1190:G:O3'	2.37	0.42
22:DA:1262:A:N1	22:DA:1263:U:O2	2.52	0.42
22:DA:1263:U:C4'	48:D0:7:LYS:HE3	2.49	0.42
22:DA:1562:U:C4	22:DA:1563:U:C4	3.07	0.42
22:DA:1663:G:C6	22:DA:1992:G:C8	3.08	0.42
22:DA:1714:U:O5'	22:DA:1715:G:H5'	2.19	0.42
22:DA:1824:G:O3'	24:DC:247:PRO:CD	2.67	0.42
22:DA:1838:C:H4'	22:DA:1839:G:H8	1.85	0.42
22:DA:2057:G:P	57:DA:3665:HOH:O	2.77	0.42
22:DA:2371:G:C2	22:DA:2372:U:C5	3.07	0.42
22:DA:2461:A:H1'	22:DA:2492:U:N3	2.35	0.42
22:DA:2718:G:O2'	37:DP:96:LYS:HG3	2.20	0.42
22:DA:2735:G:H2'	22:DA:2736:A:H8	1.84	0.42
23:DB:68:C:H2'	23:DB:69:G:O4'	2.19	0.42
24:DC:82:GLU:OE1	24:DC:103:TYR:OH	2.31	0.42
24:DC:130:LEU:HD11	24:DC:135:ILE:HG12	2.02	0.42
25:DD:187:LEU:HD21	25:DD:203:VAL:HG11	2.01	0.42
26:DE:129:PRO:HG3	26:DE:156:ASN:OD1	2.20	0.42
27:DF:117:LEU:O	27:DF:118:SER:C	2.57	0.42
27:DF:174:ASP:O	27:DF:175:PHE:O	2.37	0.42
28:DG:155:GLU:OE1	28:DG:158:LYS:HG3	2.20	0.42
29:DH:41:LYS:HE2	29:DH:44:ILE:CD1	2.50	0.42
29:DH:72:ILE:O	29:DH:72:ILE:CG2	2.67	0.42
31:DJ:6:ALA:O	31:DJ:7:LYS:CB	2.68	0.42
34:DM:22:GLN:O	34:DM:24:THR:N	2.53	0.42
35:DN:108:ALA:HB3	35:DN:110:MET:HE3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:76:VAL:HG13	40:DS:103:ILE:HG12	2.02	0.42
41:DT:39:THR:HG23	41:DT:42:GLU:HB2	2.02	0.42
1:AA:21:G:H2'	1:AA:22:G:C8	2.55	0.42
1:AA:53:A:H2'	1:AA:54:C:O5'	2.20	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
1:AA:714:G:O2'	1:AA:715:A:H5'	2.19	0.42
1:AA:721:G:H4'	1:AA:722:G:C5'	2.50	0.42
1:AA:958:A:N1	19:AS:54:GLY:HA3	2.34	0.42
1:AA:1053:G:C6	1:AA:1199:U:C2	3.07	0.42
1:AA:1152:A:H5'	10:AJ:15:HIS:CD2	2.55	0.42
1:AA:1217:C:H2'	1:AA:1218:C:H6	1.83	0.42
2:AB:19:GLN:O	2:AB:38:VAL:HG23	2.19	0.42
2:AB:151:ILE:O	2:AB:153:ASP:N	2.53	0.42
3:AC:120:ILE:O	3:AC:124:LEU:HG	2.20	0.42
5:AE:133:PRO:HA	5:AE:136:VAL:CG1	2.49	0.42
9:AI:91:ASP:OD2	9:AI:91:ASP:C	2.58	0.42
12:AL:55:VAL:HG21	12:AL:80:ILE:HD11	2.00	0.42
15:AO:2:SER:O	15:AO:3:LEU:HB2	2.19	0.42
16:AP:78:VAL:O	16:AP:79:ASN:HB2	2.20	0.42
18:AR:55:LEU:HD22	18:AR:55:LEU:HA	1.91	0.42
22:BA:275:C:H3'	22:BA:276:U:H5''	2.01	0.42
22:BA:971:G:OP2	22:BA:974:G:N2	2.53	0.42
22:BA:1735:A:C2'	22:BA:1736:U:H5'	2.50	0.42
22:BA:2076:U:O2	22:BA:2076:U:C5'	2.68	0.42
22:BA:2884:U:O2	22:BA:2884:U:O4'	2.37	0.42
24:BC:125:LYS:CG	24:BC:128:ASN:ND2	2.83	0.42
24:BC:197:ASN:CG	24:BC:197:ASN:O	2.57	0.42
30:BI:96:ASP:OD1	30:BI:97:LYS:N	2.53	0.42
33:BL:53:GLY:O	33:BL:54:GLN:C	2.58	0.42
38:BQ:19:LYS:O	38:BQ:22:LYS:HG3	2.20	0.42
41:BT:50:LEU:N	41:BT:50:LEU:CD1	2.83	0.42
42:BU:41:LEU:HD13	42:BU:60:GLU:OE2	2.20	0.42
46:BY:32:ALA:HB2	46:BY:37:LEU:CD2	2.50	0.42
1:CA:155:A:C2	1:CA:167:A:C4	3.08	0.42
1:CA:337:G:H2'	1:CA:338:A:C8	2.55	0.42
1:CA:409:U:C4	1:CA:410:G:C5	3.08	0.42
1:CA:728:A:C2	1:CA:729:A:C4	3.08	0.42
1:CA:1130:A:C8	1:CA:1146:A:N1	2.88	0.42
1:CA:1132:C:H2'	1:CA:1133:G:C1'	2.50	0.42
1:CA:1269:A:H1'	1:CA:1326:U:H1'	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:59:GLN:OE1	4:CD:59:GLN:CA	2.64	0.42
4:CD:119:SER:O	4:CD:131:ASN:OD1	2.38	0.42
4:CD:169:THR:HG22	4:CD:184:ARG:NH2	2.34	0.42
5:CE:157:ARG:C	5:CE:159:LYS:N	2.72	0.42
6:CF:12:PRO:O	6:CF:15:SER:OG	2.23	0.42
7:CG:4:ARG:HG3	7:CG:5:ARG:N	2.35	0.42
18:CR:42:SER:HB2	18:CR:46:GLY:O	2.19	0.42
19:CS:44:MET:CB	19:CS:62:VAL:HG11	2.50	0.42
22:DA:83:A:H4'	22:DA:83:A:OP1	2.19	0.42
22:DA:120:U:O4	22:DA:177:G:C8	2.73	0.42
22:DA:161:A:P	22:DA:162:U:H3'	2.60	0.42
22:DA:295:G:N2	22:DA:296:U:C6	2.88	0.42
22:DA:1047:G:H4'	22:DA:1048:A:H5'	2.02	0.42
22:DA:1082:U:OP1	30:DI:124:ALA:HB2	2.19	0.42
22:DA:1190:G:OP1	33:DL:32:GLY:CA	2.68	0.42
22:DA:1598:A:C6	22:DA:1599:U:N3	2.88	0.42
22:DA:1654:A:N7	22:DA:2005:A:C2	2.88	0.42
22:DA:1802:A:C2	22:DA:1803:A:N3	2.88	0.42
22:DA:2166:U:H2'	22:DA:2167:U:H5'	2.02	0.42
22:DA:2186:G:C5	22:DA:2187:U:C4	3.08	0.42
22:DA:2216:G:H2'	22:DA:2217:G:H8	1.83	0.42
22:DA:2320:U:H4'	22:DA:2321:U:C6	2.55	0.42
22:DA:2360:G:H1'	33:DL:60:ARG:CD	2.49	0.42
22:DA:2663:G:H3'	22:DA:2664:G:C8	2.54	0.42
22:DA:2734:A:N7	22:DA:2735:G:C8	2.88	0.42
23:DB:7:G:C5'	36:DO:29:HIS:CE1	3.01	0.42
57:DB:307:HOH:O	43:DV:14:LYS:CE	2.68	0.42
26:DE:91:ASP:O	26:DE:91:ASP:CG	2.58	0.42
27:DF:128:TYR:CB	27:DF:170:LEU:CD1	2.98	0.42
28:DG:144:VAL:O	28:DG:144:VAL:CG1	2.68	0.42
29:DH:31:VAL:HG12	29:DH:32:PRO:HD3	2.02	0.42
29:DH:127:GLU:HA	29:DH:144:VAL:O	2.19	0.42
33:DL:86:GLU:HG3	33:DL:86:GLU:O	2.19	0.42
35:DN:24:MET:HE3	35:DN:44:LEU:HB2	2.02	0.42
35:DN:33:ILE:HD12	35:DN:118:ARG:NH1	2.34	0.42
35:DN:46:ARG:O	35:DN:50:PRO:HG2	2.20	0.42
38:DQ:47:TYR:HD1	39:DR:74:ILE:HG23	1.84	0.42
38:DQ:58:ARG:NH2	38:DQ:92:ARG:NH1	2.68	0.42
39:DR:66:HIS:CD2	39:DR:94:THR:HG23	2.55	0.42
51:D3:7:VAL:O	51:D3:10:ALA:HB3	2.19	0.42
1:AA:198:G:C5	1:AA:220:G:C2	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:200:G:N2	1:AA:218:U:O2	2.52	0.42
1:AA:596:A:C5	1:AA:645:G:C2	3.08	0.42
1:AA:1118:U:O2	1:AA:1179:A:C6	2.73	0.42
2:AB:14:VAL:HG23	2:AB:208:ARG:NH2	2.35	0.42
3:AC:37:PHE:O	3:AC:41:GLN:HB2	2.20	0.42
3:AC:42:TYR:CZ	3:AC:46:GLU:HG3	2.54	0.42
3:AC:152:GLU:HA	3:AC:167:TRP:HA	2.02	0.42
6:AF:91:ARG:HG2	6:AF:93:LYS:HD3	2.01	0.42
6:AF:92:THR:HG22	6:AF:93:LYS:N	2.34	0.42
8:AH:10:MET:C	8:AH:12:THR:N	2.73	0.42
8:AH:105:SER:HB2	8:AH:126:ILE:HD11	2.01	0.42
10:AJ:61:ALA:O	10:AJ:62:ARG:HB2	2.18	0.42
12:AL:60:GLY:O	12:AL:61:PHE:C	2.58	0.42
19:AS:29:LYS:HG2	19:AS:30:PRO:HD2	2.02	0.42
22:BA:83:A:C6	22:BA:101:A:C4	3.08	0.42
22:BA:184:C:H2'	22:BA:185:G:H8	1.85	0.42
22:BA:503:A:H4'	22:BA:504:A:O5'	2.19	0.42
22:BA:622:G:H5''	57:BA:3294:HOH:O	2.20	0.42
22:BA:1046:A:OP2	22:BA:1046:A:H4'	2.19	0.42
22:BA:1131:G:O2'	22:BA:2026:U:H5'	2.20	0.42
22:BA:1454:C:H5'	35:BN:63:ARG:CD	2.49	0.42
22:BA:1495:A:O2'	22:BA:1496:A:H5'	2.20	0.42
22:BA:1745:A:C2	22:BA:1746:A:C8	3.08	0.42
22:BA:2151:U:H2'	22:BA:2152:G:N7	2.35	0.42
22:BA:2193:G:C2'	22:BA:2194:U:H5'	2.49	0.42
22:BA:2218:G:O2'	22:BA:2219:U:H5'	2.19	0.42
22:BA:2489:U:O2	22:BA:2491:U:C4	2.72	0.42
23:BB:60:C:N4	57:BB:303:HOH:O	2.52	0.42
26:BE:29:HIS:O	26:BE:33:VAL:HG23	2.20	0.42
27:BF:27:GLN:O	27:BF:29:PRO:HD3	2.20	0.42
28:BG:35:ARG:HD3	28:BG:71:LEU:HD13	2.01	0.42
29:BH:82:SER:HG	29:BH:90:LEU:HG	1.85	0.42
30:BI:131:GLY:O	30:BI:135:SER:N	2.53	0.42
33:BL:85:VAL:HB	33:BL:94:THR:HG23	2.01	0.42
1:CA:345:C:OP1	37:DP:39:ARG:HD3	2.20	0.42
1:CA:373:A:N3	1:CA:374:A:C8	2.88	0.42
1:CA:780:A:N3	1:CA:803:G:C2	2.88	0.42
1:CA:1070:U:O2	1:CA:1071:C:C6	2.73	0.42
1:CA:1130:A:N9	1:CA:1146:A:C2	2.87	0.42
1:CA:1221:G:O3'	19:CS:77:THR:HB	2.20	0.42
1:CA:1530:G:H2'	1:CA:1531:A:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:30:PHE:CD1	2:CB:30:PHE:N	2.85	0.42
2:CB:82:ASP:N	2:CB:85:LEU:HB3	2.35	0.42
6:CF:59:TYR:CE2	18:CR:67:LEU:CD2	3.03	0.42
10:CJ:73:LEU:C	10:CJ:73:LEU:HD23	2.40	0.42
18:CR:45:THR:OG1	18:CR:47:THR:HG23	2.20	0.42
20:CT:79:LEU:O	20:CT:83:ILE:HG23	2.20	0.42
22:DA:85:G:OP2	42:DU:28:VAL:CG1	2.68	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
22:DA:324:A:H2'	22:DA:325:G:O4'	2.20	0.42
22:DA:681:G:C6	22:DA:682:G:N7	2.88	0.42
22:DA:728:G:HO2'	22:DA:730:A:H8	1.66	0.42
22:DA:966:G:H4'	22:DA:2272:U:O2	2.19	0.42
22:DA:1126:A:H4'	22:DA:1127:A:O5'	2.20	0.42
22:DA:1190:G:OP1	33:DL:32:GLY:HA2	2.20	0.42
22:DA:1340:U:H5	22:DA:1603:A:C8	2.34	0.42
22:DA:1355:G:C6	22:DA:1356:G:C8	3.08	0.42
22:DA:1461:C:N3	22:DA:1462:C:C5	2.88	0.42
22:DA:1874:C:C5'	22:DA:1875:G:OP2	2.68	0.42
22:DA:2005:A:H5''	57:DA:3382:HOH:O	2.19	0.42
22:DA:2118:U:O4	22:DA:2149:U:C1'	2.68	0.42
22:DA:2191:A:C6	22:DA:2192:U:C4	3.07	0.42
22:DA:2276:G:O2'	22:DA:2277:G:H5'	2.19	0.42
22:DA:2283:C:H2'	22:DA:2284:A:H5'	2.02	0.42
22:DA:2330:G:C2	22:DA:2386:A:C2	3.08	0.42
22:DA:2371:G:C2	22:DA:2372:U:C6	3.07	0.42
26:DE:155:GLU:O	26:DE:159:LEU:HG	2.20	0.42
28:DG:95:ARG:HA	28:DG:128:GLN:O	2.19	0.42
29:DH:121:VAL:O	29:DH:122:LEU:CB	2.67	0.42
35:DN:72:ASP:OD2	35:DN:75:ILE:HG12	2.20	0.42
35:DN:116:VAL:HG13	35:DN:117:ASP:OD1	2.19	0.42
42:DU:83:VAL:HG11	42:DU:94:ARG:HB3	2.02	0.42
43:DV:48:MET:SD	43:DV:85:LYS:HA	2.59	0.42
46:DY:2:LYS:O	46:DY:6:LEU:HB2	2.19	0.42
49:D1:26:ASN:O	49:D1:27:LYS:C	2.58	0.42
1:AA:73:C:O2'	1:AA:74:A:P	2.78	0.42
1:AA:144:G:C4	1:AA:179:A:H2	2.36	0.42
1:AA:167:A:H2'	1:AA:168:G:O4'	2.20	0.42
1:AA:607:A:H2'	1:AA:608:A:C8	2.55	0.42
1:AA:787:A:C6	1:AA:788:U:C4	3.08	0.42
1:AA:921:U:H2'	1:AA:922:G:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:944:G:O2'	1:AA:1339:A:N6	2.53	0.42
2:AB:80:VAL:HA	2:AB:214:LEU:HD21	2.01	0.42
2:AB:131:LYS:HA	2:AB:131:LYS:HE2	2.02	0.42
3:AC:22:TRP:HB3	3:AC:59:ARG:H	1.85	0.42
4:AD:13:ARG:HD2	4:AD:34:ILE:HA	2.02	0.42
4:AD:150:LYS:O	4:AD:151:LYS:C	2.57	0.42
5:AE:105:ILE:O	5:AE:105:ILE:HG13	2.19	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
6:AF:98:GLU:O	6:AF:99:ALA:O	2.38	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
9:AI:57:MET:C	9:AI:59:GLU:N	2.73	0.42
10:AJ:10:LEU:O	10:AJ:71:LEU:HA	2.19	0.42
10:AJ:63:ASP:OD1	14:AN:85:ARG:HD2	2.19	0.42
14:AN:7:LYS:O	14:AN:8:ALA:C	2.58	0.42
14:AN:93:ILE:HG21	14:AN:96:LEU:HD22	2.02	0.42
22:BA:17:G:H2'	22:BA:18:U:C6	2.54	0.42
22:BA:54:G:H2'	22:BA:55:G:O5'	2.20	0.42
22:BA:1171:G:C2	22:BA:1179:G:N1	2.88	0.42
22:BA:1442:U:H2'	22:BA:1443:U:C6	2.55	0.42
22:BA:1483:G:C6	22:BA:1484:U:C4	3.08	0.42
22:BA:1850:G:C2	22:BA:1893:C:O2	2.73	0.42
22:BA:2311:A:C5	27:BF:77:PHE:HB3	2.55	0.42
22:BA:2672:U:C2'	22:BA:2673:G:O5'	2.68	0.42
22:BA:2717:C:H2'	22:BA:2718:G:O4'	2.19	0.42
22:BA:2808:G:C2	22:BA:2891:U:C6	3.07	0.42
22:BA:2839:G:C5	22:BA:2840:C:C5	3.07	0.42
55:BA:3001:DOL:C29	55:BA:3001:DOL:O38	2.68	0.42
26:BE:48:THR:HG23	26:BE:51:GLU:OE1	2.20	0.42
33:BL:23:ILE:O	33:BL:24:GLY:C	2.58	0.42
36:BO:87:ILE:HG22	36:BO:88:LYS:N	2.34	0.42
38:BQ:57:PHE:O	38:BQ:58:ARG:C	2.56	0.42
40:BS:41:LYS:O	40:BS:44:ALA:N	2.52	0.42
41:BT:57:VAL:CG2	41:BT:58:VAL:N	2.83	0.42
43:BV:25:LYS:HE2	43:BV:43:ASP:CA	2.49	0.42
45:BX:66:THR:O	45:BX:69:ALA:HB3	2.19	0.42
46:BY:39:GLN:HB3	46:BY:41:HIS:CE1	2.54	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
53:B5:65:LEU:HD13	53:B5:65:LEU:C	2.40	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:CA:457:G:C5	1:CA:458:U:C4	3.08	0.42
1:CA:801:U:N3	1:CA:802:A:N7	2.68	0.42
1:CA:990:C:C4	1:CA:991:U:O4	2.73	0.42
1:CA:1240:U:O4	7:CG:30:LEU:HG	2.20	0.42
1:CA:1280:A:O4'	10:CJ:43:PRO:HG3	2.19	0.42
1:CA:1359:C:OP2	14:CN:75:ARG:NH1	2.53	0.42
2:CB:68:LEU:HD12	2:CB:158:PRO:CG	2.50	0.42
2:CB:73:LYS:O	2:CB:74:ARG:C	2.57	0.42
2:CB:187:VAL:O	2:CB:187:VAL:HG22	2.20	0.42
2:CB:207:ILE:HG12	2:CB:208:ARG:N	2.35	0.42
3:CC:167:TRP:C	3:CC:167:TRP:HE3	2.23	0.42
6:CF:45:ARG:HD2	6:CF:59:TYR:CD2	2.54	0.42
9:CI:21:ILE:O	9:CI:21:ILE:HG22	2.20	0.42
19:CS:74:PHE:CD1	19:CS:74:PHE:N	2.87	0.42
22:DA:54:G:C4	22:DA:55:G:C8	3.08	0.42
22:DA:495:G:O4'	40:DS:57:ASN:ND2	2.53	0.42
22:DA:570:G:C2'	22:DA:571:U:H5'	2.49	0.42
22:DA:584:C:N4	22:DA:585:G:O6	2.52	0.42
22:DA:782:A:H4'	22:DA:783:A:O5'	2.19	0.42
22:DA:796:C:H2'	22:DA:797:G:C8	2.55	0.42
22:DA:1051:G:H4'	22:DA:2752:C:O2'	2.19	0.42
22:DA:1221:C:H2'	22:DA:1222:U:O4'	2.20	0.42
22:DA:1312:U:C2	22:DA:1603:A:N1	2.88	0.42
22:DA:1435:G:H2'	22:DA:1436:G:H5'	2.02	0.42
22:DA:1926:U:H5''	22:DA:1927:A:OP2	2.19	0.42
22:DA:2167:U:O2	22:DA:2170:A:OP2	2.38	0.42
22:DA:2553:G:H2'	22:DA:2554:U:H4'	2.02	0.42
22:DA:2800:A:H3'	22:DA:2801:G:H5'	2.02	0.42
22:DA:2839:G:N2	22:DA:2880:C:C2	2.87	0.42
22:DA:2864:G:C2'	22:DA:2865:U:H5'	2.50	0.42
22:DA:2885:G:O6	48:D0:29:SER:HB3	2.20	0.42
26:DE:47:LYS:O	26:DE:83:VAL:HG11	2.20	0.42
26:DE:192:ALA:O	26:DE:196:VAL:HG23	2.20	0.42
28:DG:91:GLY:O	28:DG:92:VAL:O	2.37	0.42
28:DG:121:ILE:HD12	28:DG:141:ILE:CG2	2.50	0.42
28:DG:133:LEU:HD13	28:DG:141:ILE:HB	2.02	0.42
30:DI:33:VAL:O	30:DI:33:VAL:HG12	2.19	0.42
30:DI:86:ILE:HD11	30:DI:89:GLY:HA2	2.01	0.42
32:DK:31:ARG:CB	32:DK:32:TYR:CE2	3.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:30:VAL:HG22	37:DP:81:VAL:HA	2.01	0.42
37:DP:70:VAL:HG12	37:DP:71:GLU:N	2.35	0.42
40:DS:30:SER:HA	40:DS:33:LEU:HD12	2.01	0.42
43:DV:51:GLN:HB3	43:DV:56:PHE:CD2	2.55	0.42
45:DX:52:SER:O	45:DX:55:GLY:N	2.53	0.42
1:AA:11:G:O2'	1:AA:12:U:H5'	2.20	0.41
1:AA:501:C:H2'	1:AA:502:A:H8	1.84	0.41
1:AA:588:G:C6	1:AA:589:U:N3	2.88	0.41
1:AA:588:G:N1	1:AA:589:U:C2	2.88	0.41
1:AA:606:G:N3	1:AA:633:G:C6	2.88	0.41
1:AA:945:G:C6	1:AA:1337:G:C5	3.08	0.41
1:AA:1128:C:H4'	1:AA:1148:U:O2	2.20	0.41
1:AA:1130:A:C4	1:AA:1146:A:C2	3.08	0.41
1:AA:1237:C:C4	1:AA:1336:C:N3	2.87	0.41
1:AA:1348:U:C5	1:AA:1373:G:N2	2.88	0.41
2:AB:118:GLU:O	2:AB:121:SER:CB	2.68	0.41
2:AB:151:ILE:CD1	2:AB:154:MET:SD	3.06	0.41
3:AC:6:HIS:CD2	3:AC:7:PRO:HD2	2.56	0.41
4:AD:58:LYS:CE	4:AD:69:GLU:OE2	2.67	0.41
5:AE:159:LYS:OXT	8:AH:64:LYS:NZ	2.51	0.41
9:AI:44:ALA:O	9:AI:47:VAL:HG22	2.20	0.41
9:AI:61:LEU:HD23	9:AI:61:LEU:H	1.85	0.41
10:AJ:42:LEU:HA	10:AJ:43:PRO:HD2	1.83	0.41
13:AM:39:ILE:HG22	13:AM:40:ALA:N	2.34	0.41
13:AM:111:GLY:O	13:AM:112:PRO:C	2.58	0.41
16:AP:45:GLU:O	16:AP:46:LYS:C	2.58	0.41
19:AS:52:HIS:CD2	19:AS:54:GLY:N	2.88	0.41
22:BA:137:U:H2'	22:BA:140:C:N1	2.35	0.41
22:BA:303:G:C5	22:BA:304:U:C5	3.07	0.41
22:BA:545:U:C3'	22:BA:546:U:H4'	2.49	0.41
22:BA:804:A:H5''	22:BA:805:G:OP1	2.20	0.41
22:BA:825:A:H2'	22:BA:826:U:O4'	2.20	0.41
22:BA:918:A:H4'	23:BB:97:C:O2	2.19	0.41
22:BA:971:G:H2'	22:BA:972:A:O4'	2.20	0.41
22:BA:983:A:C6	22:BA:984:A:N1	2.88	0.41
22:BA:1243:C:H1'	33:BL:4:ASN:O	2.20	0.41
22:BA:1266:G:N7	40:BS:16:LYS:HE3	2.35	0.41
22:BA:1320:C:N3	22:BA:1331:G:O6	2.53	0.41
22:BA:1357:C:O2	22:BA:1357:C:H2'	2.20	0.41
22:BA:1491:G:N2	22:BA:1500:G:H1'	2.35	0.41
22:BA:1922:G:C2	22:BA:1923:U:C6	3.07	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2043:C:N3	22:BA:2777:G:C2	2.88	0.41
22:BA:2070:A:H2'	22:BA:2071:A:O4'	2.20	0.41
22:BA:2402:U:C2'	22:BA:2403:C:OP2	2.68	0.41
22:BA:2526:G:N3	52:B4:1:MET:N	2.68	0.41
22:BA:2584:U:O2'	55:BA:3001:DOL:C48	2.66	0.41
23:BB:33:G:C2'	23:BB:34:A:H5'	2.50	0.41
24:BC:209:GLY:O	24:BC:212:ARG:HB2	2.20	0.41
24:BC:237:GLY:CA	57:BC:407:HOH:O	2.66	0.41
25:BD:37:VAL:HG12	25:BD:38:LYS:N	2.35	0.41
25:BD:157:LYS:HE3	25:BD:157:LYS:HB2	1.86	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
29:BH:104:THR:CG2	29:BH:110:VAL:O	2.68	0.41
35:BN:55:ALA:HB2	35:BN:79:LEU:HB3	2.01	0.41
1:CA:247:G:C6	1:CA:278:G:C2	3.08	0.41
1:CA:451:A:OP2	16:CP:70:ARG:NH2	2.48	0.41
1:CA:459:A:C2	1:CA:460:A:C5	3.08	0.41
1:CA:570:G:C4	1:CA:571:U:C5	3.08	0.41
1:CA:919:A:C2	1:CA:920:U:C6	3.08	0.41
1:CA:978:A:O5'	1:CA:1362:A:N6	2.51	0.41
1:CA:1022:A:C5	1:CA:1023:U:C5	3.08	0.41
1:CA:1144:G:C2	1:CA:1145:A:C2	3.07	0.41
1:CA:1225:A:N3	1:CA:1225:A:C2'	2.83	0.41
1:CA:1298:U:H4'	1:CA:1299:A:C4	2.54	0.41
2:CB:55:ALA:O	2:CB:59:LYS:HB2	2.20	0.41
6:CF:25:TYR:N	6:CF:25:TYR:CD2	2.84	0.41
9:CI:26:GLY:CA	9:CI:61:LEU:O	2.68	0.41
10:CJ:81:GLU:HA	10:CJ:84:VAL:HG12	2.02	0.41
13:CM:46:SER:O	13:CM:47:GLU:HB3	2.19	0.41
14:CN:58:SER:O	14:CN:59:ARG:HG3	2.20	0.41
15:CO:89:ARG:CZ	22:DA:714:U:C5	3.03	0.41
16:CP:71:VAL:O	16:CP:75:ILE:HD12	2.21	0.41
17:CQ:15:ASP:O	17:CQ:17:MET:N	2.51	0.41
20:CT:54:MET:CE	20:CT:58:VAL:HG21	2.50	0.41
22:DA:287:G:N2	22:DA:354:A:C2	2.88	0.41
22:DA:294:A:N6	22:DA:345:A:N9	2.67	0.41
22:DA:322:A:H3'	22:DA:323:C:C5'	2.50	0.41
22:DA:347:A:N6	22:DA:348:A:N6	2.68	0.41
22:DA:464:U:H2'	22:DA:465:G:O4'	2.20	0.41
22:DA:470:A:C2	22:DA:471:A:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:641:U:C5	22:DA:642:U:O4	2.73	0.41
22:DA:669:G:N3	22:DA:801:G:C2	2.88	0.41
22:DA:711:G:C2	22:DA:721:A:C2	3.08	0.41
22:DA:1043:C:C5	22:DA:1044:C:C5	3.08	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
22:DA:1764:C:C2'	22:DA:1765:U:H5'	2.50	0.41
22:DA:1824:G:OP1	24:DC:53:HIS:CE1	2.73	0.41
22:DA:1905:C:N4	22:DA:1930:G:C2	2.87	0.41
22:DA:2061:G:C8	22:DA:2501:C:H4'	2.55	0.41
22:DA:2322:A:C6	22:DA:2323:G:C5	3.08	0.41
22:DA:2334:U:O2'	36:DO:13:ARG:NH1	2.53	0.41
22:DA:2829:A:C2'	22:DA:2830:C:H5'	2.50	0.41
22:DA:2847:U:C2'	22:DA:2848:G:H5'	2.50	0.41
22:DA:2876:G:C6	22:DA:2877:G:C5	3.08	0.41
23:DB:46:A:C5	23:DB:47:C:C5	3.07	0.41
24:DC:266:PHE:N	24:DC:266:PHE:CD1	2.87	0.41
26:DE:56:GLY:O	26:DE:57:LYS:C	2.58	0.41
28:DG:71:LEU:O	28:DG:75:MET:HG3	2.19	0.41
29:DH:31:VAL:HB	29:DH:32:PRO:HD2	2.00	0.41
30:DI:20:PRO:CG	30:DI:23:PRO:HG2	2.50	0.41
32:DK:92:GLU:O	32:DK:93:GLN:HB2	2.19	0.41
33:DL:127:VAL:HG12	33:DL:131:ALA:C	2.41	0.41
38:DQ:58:ARG:CZ	38:DQ:92:ARG:NH1	2.83	0.41
40:DS:10:ALA:HB3	40:DS:101:SER:O	2.20	0.41
42:DU:37:GLU:HG3	42:DU:37:GLU:O	2.19	0.41
42:DU:59:VAL:HG12	42:DU:61:LYS:HD3	2.02	0.41
42:DU:99:ASN:ND2	42:DU:101:GLU:HB2	2.35	0.41
1:AA:180:U:H2'	1:AA:181:A:O5'	2.19	0.41
1:AA:203:G:O2'	1:AA:466:A:N1	2.53	0.41
1:AA:666:G:C6	1:AA:741:G:C6	3.08	0.41
1:AA:874:G:O2'	1:AA:875:U:H5'	2.20	0.41
1:AA:1044:A:C5	1:AA:1045:C:H1'	2.54	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
1:AA:1286:U:O2	1:AA:1286:U:H2'	2.20	0.41
5:AE:41:ASP:OD1	5:AE:44:GLY:O	2.38	0.41
5:AE:88:VAL:HG23	5:AE:93:ARG:HG2	2.02	0.41
7:AG:87:VAL:HA	7:AG:88:PRO:HD3	1.92	0.41
9:AI:5:GLN:OE1	9:AI:5:GLN:HA	2.20	0.41
10:AJ:56:HIS:C	10:AJ:57:VAL:HG12	2.41	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:56:HIS:O	10:AJ:57:VAL:O	2.38	0.41
13:AM:33:ILE:HG23	13:AM:59:GLU:HB3	2.02	0.41
16:AP:6:LEU:HD13	16:AP:71:VAL:HG23	2.01	0.41
16:AP:45:GLU:O	16:AP:46:LYS:O	2.38	0.41
17:AQ:50:ASN:O	17:AQ:51:ASN:O	2.38	0.41
17:AQ:61:ILE:CG2	17:AQ:73:TRP:CE3	3.03	0.41
22:BA:31:C:O2'	22:BA:1238:G:H5'	2.21	0.41
22:BA:71:A:H5'	22:BA:73:A:C8	2.55	0.41
22:BA:163:C:H2'	22:BA:164:C:C6	2.54	0.41
22:BA:591:U:H1'	51:B3:2:PRO:N	2.35	0.41
22:BA:660:C:H2'	22:BA:661:A:H8	1.85	0.41
22:BA:953:G:H5''	34:BM:16:ARG:NH1	2.35	0.41
22:BA:1196:C:O4'	22:BA:1226:A:C2	2.74	0.41
22:BA:1269:A:O5'	22:BA:1269:A:H8	2.03	0.41
22:BA:1588:G:C5	22:BA:1589:U:C5	3.08	0.41
22:BA:1806:C:C2'	22:BA:1807:G:O5'	2.67	0.41
22:BA:1819:A:OP1	24:BC:155:ALA:HA	2.20	0.41
22:BA:1887:C:H2'	22:BA:1888:G:O5'	2.20	0.41
22:BA:1916:A:P	22:BA:1917:U:P	3.18	0.41
22:BA:1990:C:H2'	22:BA:1991:U:C1'	2.50	0.41
22:BA:2020:A:H5'	48:B0:9:THR:CG2	2.50	0.41
22:BA:2078:C:H2'	22:BA:2079:U:O4'	2.20	0.41
22:BA:2345:G:C5	22:BA:2381:A:C2	3.08	0.41
22:BA:2648:G:H2'	22:BA:2649:C:C6	2.55	0.41
22:BA:2748:A:C2	22:BA:2757:A:C5	3.08	0.41
24:BC:142:HIS:HB2	24:BC:195:VAL:HG23	2.02	0.41
25:BD:1:MET:HA	25:BD:88:GLU:OE1	2.20	0.41
25:BD:26:VAL:HG22	25:BD:188:LEU:CD2	2.50	0.41
26:BE:7:ASP:C	26:BE:9:GLN:N	2.73	0.41
29:BH:139:PHE:O	29:BH:140:ALA:HB3	2.20	0.41
36:BO:92:PHE:HB2	36:BO:117:PHE:CD1	2.55	0.41
51:B3:55:LEU:O	51:B3:59:ILE:HG13	2.20	0.41
1:CA:50:A:H1'	1:CA:52:C:O4'	2.20	0.41
1:CA:313:A:H2'	1:CA:314:C:C6	2.55	0.41
1:CA:1261:A:C2	1:CA:1262:C:C5	3.08	0.41
1:CA:1282:C:N3	1:CA:1283:U:C4	2.88	0.41
1:CA:1282:C:O2	1:CA:1282:C:H2'	2.19	0.41
1:CA:1289:A:O2'	7:CG:35:LYS:HE2	2.20	0.41
1:CA:1408:A:C2	1:CA:1494:G:C2	3.08	0.41
1:CA:1516:G:C2	1:CA:1518:A:OP2	2.73	0.41
2:CB:18:HIS:O	2:CB:19:GLN:HB2	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:57:LEU:O	2:CB:60:ILE:CD1	2.68	0.41
3:CC:81:GLY:O	3:CC:82:GLU:C	2.59	0.41
4:CD:53:VAL:O	4:CD:54:GLN:C	2.58	0.41
5:CE:104:GLY:HA3	5:CE:122:ASN:HA	2.01	0.41
6:CF:38:ARG:HG3	6:CF:63:ASN:HB2	2.00	0.41
7:CG:22:LEU:HG	7:CG:25:LYS:HE2	2.02	0.41
9:CI:15:SER:OG	9:CI:70:GLY:HA3	2.19	0.41
11:CK:89:PRO:HD3	21:CU:29:LEU:CD1	2.51	0.41
12:CL:90:LEU:HB2	12:CL:93:VAL:CG2	2.49	0.41
16:CP:78:VAL:HG22	16:CP:78:VAL:O	2.20	0.41
18:CR:72:ASP:C	18:CR:73:ARG:HG2	2.41	0.41
22:DA:82:U:N3	22:DA:83:A:N7	2.68	0.41
22:DA:227:A:H4'	22:DA:228:C:OP1	2.20	0.41
22:DA:265:A:N1	22:DA:427:U:O2'	2.53	0.41
22:DA:381:G:C2'	22:DA:382:A:H5'	2.50	0.41
22:DA:875:G:N2	22:DA:903:C:C2	2.88	0.41
22:DA:876:C:N4	22:DA:877:A:N6	2.68	0.41
22:DA:1091:G:N2	22:DA:1092:C:C4	2.88	0.41
22:DA:1193:G:C2	22:DA:1194:A:C5	3.08	0.41
22:DA:1288:G:C8	22:DA:1327:A:C6	3.08	0.41
22:DA:1331:G:O2'	22:DA:1332:G:H5'	2.20	0.41
22:DA:1343:G:C4	22:DA:1597:A:C6	3.09	0.41
22:DA:1555:G:C2	22:DA:1556:C:C2	3.08	0.41
22:DA:1999:C:O2	22:DA:2687:U:O2'	2.33	0.41
22:DA:2144:G:C2	22:DA:2146:C:O2	2.73	0.41
22:DA:2238:G:C4'	22:DA:2239:G:OP1	2.68	0.41
22:DA:2286:G:C4'	22:DA:2287:A:O5'	2.63	0.41
22:DA:2336:A:N3	22:DA:2385:C:H1'	2.35	0.41
22:DA:2477:U:O4	52:D4:10:LEU:CD2	2.68	0.41
22:DA:2718:G:C2	22:DA:2719:G:C1'	3.03	0.41
22:DA:2784:U:H2'	22:DA:2785:C:C6	2.55	0.41
25:DD:104:VAL:O	25:DD:105:LYS:HB3	2.20	0.41
26:DE:100:MET:O	26:DE:104:ALA:CB	2.68	0.41
27:DF:73:SER:HB2	27:DF:81:GLN:HB2	2.03	0.41
29:DH:40:THR:OG1	29:DH:43:ASN:ND2	2.54	0.41
36:DO:115:LEU:O	36:DO:117:PHE:N	2.48	0.41
39:DR:87:GLN:HG2	39:DR:88:GLY:N	2.35	0.41
48:D0:10:ARG:HG2	48:D0:11:SER:N	2.35	0.41
1:AA:132:C:H2'	1:AA:133:U:O4'	2.21	0.41
1:AA:748:G:N1	1:AA:749:A:C5	2.88	0.41
1:AA:956:U:H2'	1:AA:957:U:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:145:GLU:O	2:AB:149:GLY:N	2.54	0.41
3:AC:3:GLN:OE1	3:AC:3:GLN:N	2.53	0.41
3:AC:51:SER:O	3:AC:115:LEU:HD21	2.20	0.41
6:AF:3:HIS:CA	6:AF:92:THR:HG23	2.50	0.41
6:AF:15:SER:HB2	4:CD:193:ALA:CB	2.50	0.41
9:AI:80:ARG:NH1	9:AI:103:PHE:CE1	2.88	0.41
10:AJ:56:HIS:O	10:AJ:57:VAL:CG1	2.68	0.41
12:AL:32:GLY:HA3	12:AL:55:VAL:HG12	2.02	0.41
16:AP:19:VAL:HG13	16:AP:38:PHE:N	2.35	0.41
20:AT:44:LYS:CE	20:AT:87:ALA:HA	2.50	0.41
22:BA:136:G:N2	22:BA:144:A:C6	2.88	0.41
22:BA:281:C:H2'	22:BA:282:A:C8	2.55	0.41
22:BA:309:A:H4'	42:BU:16:GLY:HA2	2.01	0.41
22:BA:393:C:H2'	22:BA:394:C:C6	2.55	0.41
22:BA:785:G:C5	22:BA:786:C:C5	3.09	0.41
22:BA:870:U:N3	22:BA:871:U:C5	2.89	0.41
22:BA:1180:U:H2'	22:BA:1181:U:O4'	2.19	0.41
22:BA:1203:U:O4	22:BA:1204:A:C6	2.73	0.41
22:BA:1739:A:H2'	22:BA:1740:G:O4'	2.19	0.41
22:BA:1846:G:H2'	22:BA:1847:A:C4	2.55	0.41
22:BA:2452:C:N3	55:BA:3001:DOL:H131	2.34	0.41
22:BA:2714:G:O2'	22:BA:2715:C:H5'	2.20	0.41
24:BC:166:ALA:HB3	24:BC:173:THR:HB	2.02	0.41
27:BF:44:ILE:HG21	27:BF:79:ILE:HG22	2.01	0.41
27:BF:92:ARG:N	27:BF:96:MET:HB2	2.35	0.41
28:BG:74:SER:HA	28:BG:77:ILE:HG12	2.02	0.41
30:BI:59:ILE:HG22	30:BI:61:VAL:HG23	2.01	0.41
34:BM:55:ARG:CZ	34:BM:55:ARG:CB	2.99	0.41
41:BT:12:ARG:CB	41:BT:33:LYS:O	2.68	0.41
42:BU:34:VAL:HG23	42:BU:65:ILE:HG22	2.01	0.41
48:B0:11:SER:O	48:B0:15:MET:HG3	2.20	0.41
1:CA:28:A:H2'	1:CA:29:U:O4'	2.20	0.41
1:CA:75:G:N2	1:CA:96:U:H1'	2.34	0.41
1:CA:401:C:OP2	4:CD:70:ARG:HD3	2.20	0.41
1:CA:436:C:H2'	1:CA:437:U:C6	2.55	0.41
1:CA:743:A:C5	1:CA:744:C:C5	3.08	0.41
1:CA:785:G:H2'	1:CA:785:G:N3	2.34	0.41
1:CA:842:U:O2'	1:CA:846:G:C6	2.73	0.41
1:CA:857:C:H2'	1:CA:858:G:O4'	2.20	0.41
1:CA:926:G:C6	1:CA:1505:G:C6	3.08	0.41
1:CA:977:A:O2'	1:CA:1223:C:N4	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:980:C:OP1	57:CA:1866:HOH:O	2.22	0.41
1:CA:1095:U:N3	1:CA:1096:C:C4	2.88	0.41
1:CA:1159:U:O2	1:CA:1159:U:H5''	2.19	0.41
1:CA:1243:C:H2'	1:CA:1244:G:C8	2.56	0.41
1:CA:1262:C:N4	1:CA:1263:C:C4	2.88	0.41
1:CA:1300:G:N1	1:CA:1335:U:C6	2.88	0.41
1:CA:1394:A:H2'	1:CA:1501:C:O2'	2.20	0.41
1:CA:1458:G:O3'	20:CT:23:SER:HA	2.20	0.41
5:CE:38:VAL:HG12	5:CE:39:VAL:N	2.36	0.41
9:CI:51:PRO:HG2	9:CI:83:ILE:HD12	2.02	0.41
15:CO:35:GLN:NE2	15:CO:39:LEU:CD2	2.83	0.41
20:CT:30:THR:O	20:CT:34:LYS:HG2	2.20	0.41
22:DA:46:G:N3	22:DA:47:C:C6	2.88	0.41
22:DA:109:C:H5'	22:DA:348:A:O4'	2.20	0.41
22:DA:121:G:H1'	22:DA:131:A:N1	2.35	0.41
22:DA:200:U:C5	22:DA:201:C:C5	3.09	0.41
22:DA:290:U:N3	22:DA:291:G:C5	2.88	0.41
22:DA:372:G:H1'	22:DA:400:G:O6	2.20	0.41
22:DA:435:C:H2'	22:DA:436:C:H5'	2.01	0.41
22:DA:485:C:H2'	22:DA:486:C:O4'	2.19	0.41
22:DA:562:U:H2'	22:DA:572:A:O4'	2.20	0.41
22:DA:581:C:H2'	22:DA:582:A:C8	2.55	0.41
22:DA:878:A:C2	22:DA:900:A:C4	3.09	0.41
22:DA:1319:C:C2	22:DA:1334:G:C2	3.08	0.41
22:DA:1537:G:H3'	22:DA:1537:G:N3	2.36	0.41
22:DA:1623:G:C2	22:DA:1624:U:C6	3.08	0.41
22:DA:1760:C:H2'	22:DA:1761:C:O4'	2.20	0.41
22:DA:1847:A:O2'	22:DA:1848:A:P	2.77	0.41
22:DA:1933:G:H2'	22:DA:1934:C:O4'	2.21	0.41
22:DA:2193:G:H2'	22:DA:2194:U:C6	2.55	0.41
22:DA:2345:G:H5'	22:DA:2347:C:O4'	2.20	0.41
22:DA:2896:C:H2'	22:DA:2897:U:O5'	2.20	0.41
55:DA:3001:DOL:H432	55:DA:3001:DOL:C1	2.49	0.41
23:DB:29:A:H2'	23:DB:30:C:O4'	2.20	0.41
24:DC:17:VAL:HB	24:DC:204:VAL:HG22	2.02	0.41
26:DE:29:HIS:CD2	33:DL:6:LEU:HB3	2.55	0.41
28:DG:80:THR:HG22	28:DG:81:GLU:N	2.35	0.41
31:DJ:80:HIS:C	31:DJ:82:GLY:N	2.73	0.41
33:DL:78:ARG:CB	33:DL:113:ALA:CB	2.98	0.41
33:DL:127:VAL:CG1	33:DL:131:ALA:C	2.89	0.41
36:DO:92:PHE:HB2	36:DO:117:PHE:CD1	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:49:ALA:HB3	37:DP:60:THR:OG1	2.21	0.41
40:DS:18:ARG:HA	40:DS:21:ALA:HB3	2.02	0.41
41:DT:34:VAL:HG11	41:DT:43:ILE:HD13	2.02	0.41
41:DT:38:ALA:C	41:DT:39:THR:HG22	2.41	0.41
1:AA:215:C:H2'	1:AA:216:U:O4'	2.21	0.41
1:AA:338:A:H2'	1:AA:339:C:O4'	2.19	0.41
1:AA:411:A:N7	1:AA:429:U:C5	2.89	0.41
1:AA:454:G:C2'	1:AA:455:G:H5'	2.50	0.41
1:AA:602:A:C2	1:AA:603:U:C2	3.09	0.41
1:AA:676:A:C6	1:AA:677:U:C4	3.08	0.41
1:AA:715:A:N6	1:AA:716:A:N6	2.69	0.41
1:AA:872:A:N7	1:AA:874:G:C8	2.88	0.41
1:AA:937:A:C2	1:AA:1379:G:O6	2.73	0.41
1:AA:1074:G:C2	1:AA:1075:U:C2	3.08	0.41
1:AA:1145:A:O2'	1:AA:1146:A:P	2.78	0.41
1:AA:1238:A:H5'	1:AA:1336:C:H41	1.84	0.41
2:AB:47:VAL:C	2:AB:49:MET:N	2.74	0.41
2:AB:71:GLY:HA2	2:AB:164:ILE:CG2	2.51	0.41
2:AB:96:TRP:O	2:AB:97:LEU:C	2.59	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
9:AI:85:ARG:O	9:AI:88:MET:HB2	2.20	0.41
10:AJ:51:VAL:O	10:AJ:62:ARG:HA	2.20	0.41
13:AM:2:ALA:C	13:AM:9:ILE:HG23	2.41	0.41
13:AM:23:TYR:O	13:AM:69:LEU:HD23	2.20	0.41
13:AM:58:ASP:O	13:AM:61:ALA:HB3	2.21	0.41
13:AM:90:ARG:NH1	13:AM:95:LEU:HB3	2.35	0.41
13:AM:109:ARG:HG3	13:AM:109:ARG:O	2.20	0.41
17:AQ:15:ASP:HA	17:AQ:21:ILE:CD1	2.51	0.41
21:AU:37:PHE:CD1	21:AU:40:LYS:HG2	2.55	0.41
22:BA:54:G:C2'	22:BA:55:G:O5'	2.68	0.41
22:BA:75:G:H4'	46:BY:48:ARG:NH2	2.34	0.41
22:BA:78:U:OP2	46:BY:2:LYS:HD3	2.21	0.41
22:BA:195:A:C6	22:BA:198:C:C5	3.09	0.41
22:BA:247:G:H4'	22:BA:386:G:C5	2.55	0.41
22:BA:257:C:H3'	22:BA:258:G:C8	2.55	0.41
22:BA:404:A:C8	22:BA:406:G:C6	3.07	0.41
22:BA:494:G:C2'	22:BA:495:G:H5'	2.50	0.41
22:BA:570:G:C4	22:BA:2030:A:N7	2.88	0.41
22:BA:1179:G:N7	22:BA:1180:U:N1	2.69	0.41
22:BA:1206:G:C5	22:BA:1207:C:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1378:A:C4	22:BA:1380:G:C8	3.09	0.41
22:BA:1456:G:C5	22:BA:1457:U:C5	3.08	0.41
22:BA:2191:A:C4	22:BA:2192:U:C4	3.09	0.41
22:BA:2259:U:C6	22:BA:2427:C:C4	3.09	0.41
22:BA:2502:G:C5'	22:BA:2503:A:C5'	2.99	0.41
22:BA:2559:C:H2'	22:BA:2560:A:O5'	2.21	0.41
22:BA:2721:A:C2	22:BA:2873:A:C5	3.09	0.41
22:BA:2765:A:N3	22:BA:2765:A:C2'	2.83	0.41
24:BC:165:VAL:O	24:BC:166:ALA:HB2	2.20	0.41
26:BE:147:LEU:HB2	26:BE:183:PHE:CD1	2.55	0.41
28:BG:55:ARG:HG2	28:BG:58:TYR:CD1	2.56	0.41
29:BH:90:LEU:HD13	29:BH:125:THR:HA	2.03	0.41
32:BK:53:LYS:HG3	32:BK:56:ASP:OD2	2.20	0.41
37:BP:43:PHE:CE2	37:BP:63:LYS:HD3	2.56	0.41
41:BT:18:GLU:O	41:BT:19:LYS:C	2.58	0.41
42:BU:26:LYS:HD2	42:BU:26:LYS:HA	1.88	0.41
43:BV:41:GLU:O	43:BV:41:GLU:HG2	2.18	0.41
1:CA:64:G:C2	1:CA:67:C:N4	2.88	0.41
1:CA:64:G:N2	1:CA:67:C:C4	2.89	0.41
1:CA:312:C:H2'	1:CA:313:A:O4'	2.21	0.41
1:CA:373:A:C2'	1:CA:374:A:H5'	2.50	0.41
1:CA:496:A:H2'	1:CA:496:A:N3	2.35	0.41
1:CA:545:C:O2'	1:CA:549:C:H5''	2.20	0.41
1:CA:821:G:H2'	1:CA:822:U:C6	2.54	0.41
1:CA:878:A:C5	1:CA:879:C:C5	3.08	0.41
2:CB:60:ILE:HD12	2:CB:61:ALA:N	2.36	0.41
3:CC:101:ILE:HG23	3:CC:101:ILE:O	2.20	0.41
3:CC:153:VAL:HG23	3:CC:196:ILE:CG2	2.50	0.41
4:CD:168:PRO:HB3	4:CD:171:LEU:HD12	2.00	0.41
4:CD:188:ARG:O	4:CD:191:LEU:HD12	2.21	0.41
5:CE:15:LEU:C	5:CE:16:ILE:HD12	2.41	0.41
10:CJ:91:ASP:O	10:CJ:92:LEU:CB	2.68	0.41
11:CK:112:ASP:HB3	21:CU:20:LYS:HE3	2.02	0.41
12:CL:90:LEU:HB2	12:CL:93:VAL:HG21	2.02	0.41
13:CM:19:LEU:CD1	13:CM:33:ILE:HB	2.50	0.41
17:CQ:48:ASP:O	17:CQ:49:GLU:C	2.57	0.41
22:DA:17:G:C6	22:DA:524:G:C6	3.08	0.41
22:DA:46:G:C2	22:DA:47:C:C4	3.09	0.41
22:DA:102:U:C2	46:DY:2:LYS:HE2	2.56	0.41
22:DA:167:A:H2'	22:DA:168:G:O4'	2.21	0.41
22:DA:191:A:C6	22:DA:192:C:N4	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:201:C:C4	22:DA:202:U:C5	3.08	0.41
22:DA:609:A:C5	22:DA:610:C:C2	3.09	0.41
22:DA:781:A:H2'	22:DA:1777:U:O2'	2.19	0.41
22:DA:842:U:C4	22:DA:843:G:N7	2.88	0.41
22:DA:1022:G:C6	22:DA:1140:C:C5	3.08	0.41
22:DA:1360:G:O6	22:DA:1372:U:N3	2.53	0.41
22:DA:1581:G:N7	22:DA:1582:C:N4	2.69	0.41
22:DA:1710:G:O2'	22:DA:1711:A:H5'	2.21	0.41
22:DA:1866:A:C2	22:DA:1876:A:C5	3.07	0.41
22:DA:2010:G:H5''	40:DS:42:LYS:HB2	2.00	0.41
22:DA:2064:C:H4'	22:DA:2251:G:N2	2.35	0.41
22:DA:2196:C:O2'	22:DA:2197:U:H5'	2.20	0.41
22:DA:2271:G:H2'	22:DA:2272:U:C6	2.55	0.41
22:DA:2314:A:O4'	27:DF:155:THR:HG21	2.19	0.41
22:DA:2391:G:OP2	51:D3:35:LYS:NZ	2.50	0.41
22:DA:2428:G:H5''	22:DA:2429:G:P	2.60	0.41
22:DA:2802:G:C6	22:DA:2803:G:C5	3.08	0.41
22:DA:2851:A:O2'	35:DN:64:ARG:NH2	2.51	0.41
25:DD:32:ASN:N	25:DD:96:ILE:O	2.53	0.41
26:DE:45:ALA:HA	26:DE:87:ALA:O	2.21	0.41
26:DE:170:ARG:NH2	26:DE:176:ASP:OD1	2.52	0.41
27:DF:135:GLN:HG2	27:DF:141:ILE:HG12	2.03	0.41
28:DG:89:LEU:CD1	28:DG:162:VAL:HG22	2.51	0.41
28:DG:109:PHE:N	28:DG:109:PHE:CD2	2.89	0.41
29:DH:135:HIS:CG	29:DH:136:SER:N	2.89	0.41
31:DJ:84:ILE:O	31:DJ:85:LYS:C	2.59	0.41
36:DO:48:LEU:C	36:DO:49:VAL:HG23	2.41	0.41
44:DW:50:ASN:OD1	44:DW:63:ALA:CB	2.68	0.41
49:D1:5:ILE:HG22	49:D1:28:ARG:CZ	2.50	0.41
1:AA:69:G:H5'	1:AA:70:U:P	2.61	0.41
1:AA:568:G:H2'	1:AA:569:C:H6	1.86	0.41
1:AA:591:U:OP2	8:AH:31:LYS:CD	2.68	0.41
1:AA:656:G:N2	15:AO:23:GLY:HA3	2.35	0.41
1:AA:935:A:C2	1:AA:936:C:N1	2.89	0.41
1:AA:1000:A:N1	1:AA:1041:G:N1	2.69	0.41
1:AA:1307:U:H2'	1:AA:1308:U:H6	1.85	0.41
1:AA:1327:C:O2'	1:AA:1328:C:H5'	2.20	0.41
2:AB:144:LEU:O	2:AB:148:LEU:HB2	2.20	0.41
5:AE:56:VAL:O	5:AE:60:ILE:CG2	2.68	0.41
8:AH:49:PHE:CD1	8:AH:49:PHE:C	2.93	0.41
8:AH:89:LYS:HG3	8:AH:90:ASP:H	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:12:LYS:O	16:AP:13:LYS:HB2	2.20	0.41
19:AS:52:HIS:CD2	19:AS:54:GLY:H	2.39	0.41
21:AU:14:VAL:CG1	21:AU:16:LEU:HD21	2.50	0.41
22:BA:48:G:N2	22:BA:49:A:N1	2.69	0.41
22:BA:257:C:H3'	22:BA:258:G:H8	1.85	0.41
22:BA:368:A:C6	22:BA:369:U:C4	3.09	0.41
22:BA:454:A:H4'	22:BA:455:C:OP2	2.20	0.41
22:BA:589:U:H2'	22:BA:590:A:H8	1.85	0.41
22:BA:744:U:H2'	22:BA:745:G:O4'	2.20	0.41
22:BA:1070:A:N1	22:BA:1097:U:O2'	2.44	0.41
22:BA:1406:U:N3	22:BA:1407:G:N7	2.68	0.41
22:BA:1414:C:C5	22:BA:1415:U:C5	3.09	0.41
22:BA:1494:A:H2'	22:BA:1495:A:C8	2.55	0.41
22:BA:1592:C:C2'	22:BA:1593:A:H5'	2.50	0.41
22:BA:2154:A:H2'	22:BA:2155:U:C6	2.55	0.41
22:BA:2488:G:C2'	22:BA:2489:U:H5'	2.51	0.41
22:BA:2496:C:C2'	22:BA:2497:A:O5'	2.69	0.41
22:BA:2820:A:H2'	22:BA:2821:A:OP1	2.20	0.41
22:BA:2861:U:O2	22:BA:2862:G:C8	2.74	0.41
23:BB:54:G:N2	27:BF:26:MET:CE	2.83	0.41
23:BB:113:C:H1'	36:BO:45:SER:O	2.20	0.41
24:BC:31:ALA:HA	24:BC:34:LEU:HD12	2.03	0.41
24:BC:111:LYS:O	24:BC:112:ALA:C	2.57	0.41
26:BE:145:ASP:HA	26:BE:166:LYS:O	2.20	0.41
27:BF:175:PHE:CE1	27:BF:177:PHE:CZ	3.08	0.41
29:BH:33:GLN:O	29:BH:35:LYS:N	2.53	0.41
30:BI:140:VAL:O	30:BI:140:VAL:HG13	2.20	0.41
41:BT:29:THR:HG23	41:BT:86:THR:HG23	2.03	0.41
42:BU:6:ARG:O	42:BU:9:ASP:HB2	2.20	0.41
43:BV:6:ALA:HB2	43:BV:42:LEU:HD23	2.03	0.41
43:BV:14:LYS:CD	43:BV:18:ARG:HH11	2.33	0.41
44:BW:49:ALA:O	44:BW:50:ASN:HB2	2.21	0.41
49:B1:40:ASP:HB2	49:B1:49:TYR:OH	2.20	0.41
1:CA:66:A:C4'	1:CA:173:U:C4	3.03	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
1:CA:456:A:C6	1:CA:457:G:C5	3.09	0.41
1:CA:858:G:N7	1:CA:869:G:N7	2.69	0.41
1:CA:1186:G:H4'	9:CI:112:GLU:CD	2.41	0.41
1:CA:1332:A:H2'	1:CA:1333:A:O4'	2.21	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)
4:CD:57:GLU:OE1	4:CD:57:GLU:HA	2.20	0.41
7:CG:92:ARG:HA	7:CG:92:ARG:HE	1.84	0.41
14:CN:31:ILE:HG22	14:CN:32:SER:N	2.36	0.41
17:CQ:13:VAL:CG1	17:CQ:22:VAL:HG13	2.50	0.41
21:CU:4:ILE:HA	21:CU:20:LYS:HZ1	1.84	0.41
22:DA:28:A:H2'	22:DA:29:U:O4'	2.21	0.41
22:DA:116:C:C5'	22:DA:128:C:C5	3.03	0.41
22:DA:377:G:O6	22:DA:378:C:N4	2.54	0.41
22:DA:764:A:N1	22:DA:1789:A:O2'	2.49	0.41
22:DA:1006:C:H6	22:DA:1006:C:O5'	2.04	0.41
22:DA:1124:G:O2'	52:D4:37:GLN:O	2.37	0.41
22:DA:1184:U:OP1	47:DZ:30:ARG:HD2	2.19	0.41
22:DA:1317:G:N2	22:DA:1336:A:N3	2.68	0.41
22:DA:1341:G:C2	41:DT:84:TYR:CD2	3.08	0.41
22:DA:1359:A:C2	22:DA:1360:G:H1'	2.56	0.41
22:DA:1404:C:H2'	22:DA:1405:U:O5'	2.21	0.41
22:DA:1854:A:O4'	22:DA:2233:U:H4'	2.20	0.41
22:DA:2184:A:H2'	22:DA:2185:U:C6	2.55	0.41
22:DA:2262:U:N3	22:DA:2279:G:C2	2.88	0.41
22:DA:2331:G:C2	22:DA:2385:C:C2	3.08	0.41
22:DA:2544:G:H2'	22:DA:2545:G:O4'	2.20	0.41
22:DA:2718:G:OP1	37:DP:98:TYR:CD1	2.74	0.41
22:DA:2785:C:H2'	22:DA:2786:U:O4'	2.20	0.41
22:DA:2811:G:OP1	25:DD:62:LYS:N	2.53	0.41
24:DC:75:PRO:O	24:DC:76:ALA:HB2	2.20	0.41
24:DC:130:LEU:HD12	24:DC:135:ILE:HG13	2.03	0.41
25:DD:114:LYS:HE2	25:DD:196:ALA:HB1	2.03	0.41
26:DE:12:LEU:HD23	26:DE:13:THR:N	2.35	0.41
26:DE:47:LYS:O	26:DE:83:VAL:CG1	2.69	0.41
26:DE:188:MET:CE	26:DE:192:ALA:HB3	2.50	0.41
27:DF:57:LEU:HB2	27:DF:65:PRO:HG2	2.03	0.41
28:DG:34:THR:HG22	28:DG:35:ARG:N	2.36	0.41
30:DI:109:ILE:O	30:DI:109:ILE:HG22	2.20	0.41
31:DJ:64:VAL:HG23	31:DJ:65:THR:N	2.36	0.41
32:DK:97:THR:C	32:DK:98:ARG:HG2	2.41	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
35:DN:12:ARG:CZ	35:DN:20:MET:HE3	2.50	0.41
37:DP:31:TRP:O	37:DP:32:VAL:HB	2.20	0.41
37:DP:103:ARG:HD3	37:DP:108:ALA:HB2	2.02	0.41
40:DS:55:ILE:O	40:DS:58:ALA:HB3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:82:ARG:O	42:DU:97:LYS:CG	2.69	0.41
43:DV:75:GLN:HB2	43:DV:92:VAL:CG2	2.50	0.41
1:AA:21:G:H1'	1:AA:915:A:N6	2.36	0.41
1:AA:65:A:C5	1:AA:381:C:C5	3.08	0.41
1:AA:172:A:C6	1:AA:174:A:C8	3.09	0.41
1:AA:426:U:H5''	4:AD:37:ALA:HB1	2.01	0.41
1:AA:457:G:C6	1:AA:458:U:N3	2.88	0.41
1:AA:595:A:C6	1:AA:641:U:C6	3.09	0.41
1:AA:663:A:H5'	1:AA:836:G:OP1	2.20	0.41
1:AA:1048:G:N2	1:AA:1214:C:O2	2.54	0.41
1:AA:1147:C:H4'	9:AI:7:TYR:CE1	2.55	0.41
1:AA:1370:G:H5''	9:AI:111:VAL:HG21	2.03	0.41
1:AA:1462:C:C2	1:AA:1463:U:C6	3.09	0.41
4:AD:197:GLU:H	4:AD:197:GLU:CD	2.24	0.41
8:AH:28:PRO:O	8:AH:33:LYS:NZ	2.48	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
17:AQ:45:HIS:CG	17:AQ:70:THR:HG22	2.56	0.41
18:AR:23:TYR:CE1	18:AR:24:LYS:HG3	2.56	0.41
22:BA:210:C:OP1	50:B2:29:GLN:NE2	2.53	0.41
22:BA:250:G:OP2	51:B3:13:ARG:NH1	2.54	0.41
22:BA:388:G:N7	22:BA:390:U:C2'	2.84	0.41
22:BA:833:A:OP2	33:BL:39:LYS:HE2	2.21	0.41
22:BA:1575:C:H2'	22:BA:1576:U:O4'	2.21	0.41
22:BA:2043:C:C4	22:BA:2777:G:C2	3.09	0.41
22:BA:2414:G:O2'	22:BA:2415:G:H5'	2.21	0.41
24:BC:17:VAL:HB	24:BC:204:VAL:HG13	2.03	0.41
24:BC:71:LYS:HB3	24:BC:96:TYR:HE2	1.84	0.41
27:BF:13:VAL:O	27:BF:14:LYS:C	2.59	0.41
34:BM:17:ASN:O	34:BM:38:ARG:HD3	2.21	0.41
36:BO:102:ARG:O	36:BO:105:ALA:HB3	2.20	0.41
38:BQ:66:ASN:CG	38:BQ:76:TYR:HB2	2.40	0.41
42:BU:54:GLN:N	42:BU:55:PRO:HD2	2.35	0.41
1:CA:144:G:C4	1:CA:179:A:C2	3.09	0.41
1:CA:560:A:N7	1:CA:566:G:C4	2.89	0.41
1:CA:846:G:N3	1:CA:846:G:H2'	2.35	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
1:CA:1269:A:N7	1:CA:1270:G:H1'	2.35	0.41
1:CA:1346:A:O3'	1:CA:1347:G:H4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1431:A:C6	1:CA:1432:G:N1	2.89	0.41
4:CD:50:ASP:O	4:CD:53:VAL:HG22	2.20	0.41
4:CD:150:LYS:O	4:CD:152:GLN:OE1	2.39	0.41
5:CE:38:VAL:HG12	5:CE:117:VAL:CG2	2.50	0.41
6:CF:55:HIS:O	6:CF:56:LYS:O	2.37	0.41
9:CI:35:LEU:HD21	9:CI:48:VAL:HG21	2.02	0.41
9:CI:118:LEU:CD1	9:CI:118:LEU:N	2.84	0.41
19:CS:79:THR:OG1	19:CS:79:THR:O	2.33	0.41
20:CT:33:LYS:HA	20:CT:36:TYR:HD2	1.86	0.41
22:DA:56:A:C2	22:DA:115:C:C2	3.08	0.41
22:DA:171:U:H2'	22:DA:172:A:C8	2.55	0.41
22:DA:245:G:O6	51:D3:8:ARG:CD	2.68	0.41
22:DA:447:A:C8	22:DA:473:G:C6	3.08	0.41
22:DA:485:C:C4	22:DA:496:G:C6	3.08	0.41
22:DA:536:G:H2'	22:DA:537:G:O4'	2.21	0.41
22:DA:612:G:H2'	22:DA:614:A:C8	2.55	0.41
22:DA:683:U:H2'	22:DA:684:G:O5'	2.20	0.41
22:DA:752:A:N3	22:DA:752:A:H2'	2.36	0.41
22:DA:770:G:O4'	22:DA:1379:U:C5	2.74	0.41
22:DA:792:A:O2'	22:DA:2440:C:N3	2.42	0.41
22:DA:900:A:C6	22:DA:901:C:C2	3.09	0.41
22:DA:920:A:C5	22:DA:921:C:C5	3.08	0.41
22:DA:947:A:H2'	22:DA:948:C:C6	2.56	0.41
22:DA:1073:A:H2'	22:DA:1074:G:H5'	2.03	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:1605:C:C4'	22:DA:1610:A:C6	3.03	0.41
22:DA:1663:G:H3'	57:DA:3423:HOH:O	2.21	0.41
22:DA:1731:G:H2'	22:DA:1732:C:H3'	2.02	0.41
22:DA:2015:A:C6	48:D0:3:VAL:HG23	2.55	0.41
22:DA:2140:G:C6	22:DA:2152:G:C5	3.08	0.41
22:DA:2205:A:C2	22:DA:2206:C:C2	3.08	0.41
22:DA:2280:G:O2'	22:DA:2388:A:N1	2.40	0.41
22:DA:2413:G:O2'	22:DA:2414:G:H5'	2.20	0.41
22:DA:2848:G:C8	37:DP:95:ALA:HB2	2.55	0.41
25:DD:114:LYS:HG2	25:DD:196:ALA:HB2	2.02	0.41
26:DE:40:ARG:CZ	26:DE:92:HIS:CE1	3.03	0.41
27:DF:74:VAL:CG2	27:DF:79:ILE:HD11	2.51	0.41
29:DH:53:GLU:C	29:DH:55:GLU:N	2.72	0.41
29:DH:130:VAL:CG1	29:DH:131:SER:N	2.82	0.41
44:DW:37:ILE:HG22	44:DW:38:VAL:CG2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:D0:40:ARG:O	48:D0:41:HIS:HB2	2.21	0.41
50:D2:11:LYS:O	50:D2:15:SER:N	2.53	0.41
50:D2:34:ARG:HB2	50:D2:42:LEU:CD1	2.51	0.41
1:AA:18:C:H2'	1:AA:19:A:O4'	2.21	0.41
1:AA:238:A:H2'	1:AA:239:U:O4'	2.21	0.41
1:AA:855:U:C4	1:AA:856:C:C5	3.08	0.41
1:AA:1014:A:C4	19:AS:34:TRP:CZ3	3.08	0.41
1:AA:1099:G:C5	1:AA:1100:C:C5	3.08	0.41
1:AA:1140:C:HO2'	1:AA:1141:C:P	2.44	0.41
1:AA:1162:C:H2'	1:AA:1163:A:O4'	2.21	0.41
1:AA:1195:C:H2'	1:AA:1197:A:O4'	2.20	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
2:AB:9:MET:N	2:AB:9:MET:SD	2.94	0.41
2:AB:27:MET:HE3	2:AB:193:PRO:HG3	2.02	0.41
3:AC:175:LEU:HD12	3:AC:175:LEU:O	2.21	0.41
4:AD:88:GLU:HG2	4:AD:188:ARG:HD3	2.01	0.41
4:AD:143:VAL:O	4:AD:143:VAL:CG2	2.65	0.41
8:AH:2:SER:N	8:AH:4:GLN:HG3	2.36	0.41
8:AH:26:THR:O	8:AH:27:MET:HB3	2.21	0.41
16:AP:51:ARG:NH1	16:AP:51:ARG:HB3	2.35	0.41
16:AP:78:VAL:O	16:AP:78:VAL:HG13	2.20	0.41
17:AQ:43:LYS:O	17:AQ:44:LEU:HD23	2.21	0.41
20:AT:51:PHE:CD1	20:AT:51:PHE:C	2.93	0.41
21:AU:25:LYS:O	21:AU:27:GLY:N	2.53	0.41
22:BA:221:A:C4	22:BA:266:G:N7	2.88	0.41
22:BA:439:A:H2'	22:BA:440:C:O4'	2.19	0.41
22:BA:499:U:O4	22:BA:500:G:C6	2.73	0.41
22:BA:779:U:O2	22:BA:779:U:H2'	2.21	0.41
22:BA:1001:A:P	57:BA:3736:HOH:O	2.73	0.41
22:BA:1350:C:N3	22:BA:1382:G:C2	2.88	0.41
22:BA:1424:G:C2	22:BA:1425:G:H1'	2.56	0.41
22:BA:1584:U:OP1	22:BA:1584:U:C6	2.73	0.41
22:BA:1688:U:O2	22:BA:1688:U:H2'	2.20	0.41
22:BA:1879:C:H2'	22:BA:1880:U:O4'	2.20	0.41
22:BA:2166:U:O4	22:BA:2170:A:N7	2.54	0.41
22:BA:2243:U:O2'	22:BA:2244:U:H5'	2.20	0.41
22:BA:2271:G:H2'	22:BA:2272:U:H6	1.86	0.41
22:BA:2444:G:OP2	26:BE:63:LYS:HD3	2.20	0.41
22:BA:2534:A:C2'	22:BA:2535:G:O5'	2.69	0.41
22:BA:2592:G:C5	22:BA:2593:U:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:46:A:H2'	23:BB:47:C:O4'	2.21	0.41
24:BC:199:GLU:O	24:BC:200:HIS:C	2.58	0.41
26:BE:134:LEU:HD23	26:BE:160:ALA:O	2.19	0.41
27:BF:14:LYS:O	27:BF:18:THR:CG2	2.69	0.41
29:BH:30:LEU:C	29:BH:32:PRO:HD2	2.41	0.41
29:BH:82:SER:HB3	29:BH:146:VAL:HG12	2.03	0.41
30:BI:127:ARG:HA	30:BI:130:GLU:HG3	2.02	0.41
34:BM:58:LYS:C	34:BM:60:GLN:H	2.24	0.41
37:BP:53:ARG:CG	37:BP:53:ARG:NH1	2.75	0.41
40:BS:36:LEU:HD13	40:BS:48:LYS:HA	2.01	0.41
41:BT:29:THR:HG23	41:BT:86:THR:N	2.35	0.41
41:BT:47:VAL:CG1	41:BT:55:VAL:CG2	2.99	0.41
43:BV:80:HIS:ND1	43:BV:83:LYS:CG	2.84	0.41
45:BX:18:ARG:CZ	45:BX:24:ALA:HB2	2.51	0.41
49:B1:35:GLU:HA	49:B1:49:TYR:O	2.21	0.41
1:CA:79:G:N2	1:CA:91:U:O2	2.54	0.41
1:CA:164:G:N3	1:CA:164:G:H2'	2.35	0.41
1:CA:257:G:C2	1:CA:270:A:C6	3.08	0.41
1:CA:382:A:H2'	1:CA:383:A:C8	2.55	0.41
1:CA:587:G:H4'	8:CH:4:GLN:HA	2.03	0.41
1:CA:792:A:H1'	1:CA:794:A:N7	2.35	0.41
1:CA:972:C:H4'	10:CJ:59:LYS:CG	2.50	0.41
1:CA:1000:A:H3'	1:CA:1001:C:C6	2.56	0.41
2:CB:87:CYS:SG	2:CB:89:GLN:NE2	2.94	0.41
2:CB:115:LYS:HA	2:CB:118:GLU:HG2	2.03	0.41
4:CD:76:TYR:O	4:CD:77:LYS:C	2.58	0.41
7:CG:133:THR:HA	7:CG:136:LYS:HB3	2.03	0.41
10:CJ:78:GLU:HA	10:CJ:79:PRO:HD3	1.89	0.41
11:CK:52:PHE:CE2	11:CK:62:ALA:HB1	2.55	0.41
13:CM:22:ILE:HG22	13:CM:23:TYR:N	2.36	0.41
13:CM:81:MET:O	13:CM:83:LEU:N	2.53	0.41
15:CO:43:PHE:CZ	15:CO:53:ARG:HA	2.56	0.41
18:CR:20:GLU:O	18:CR:21:ILE:C	2.57	0.41
22:DA:218:A:H2'	22:DA:219:A:O4'	2.21	0.41
22:DA:232:G:N1	22:DA:420:C:OP1	2.53	0.41
22:DA:251:A:H4'	33:DL:47:ARG:NH2	2.35	0.41
22:DA:772:C:H2'	22:DA:773:U:O4'	2.20	0.41
22:DA:804:A:H2'	22:DA:806:C:C4	2.56	0.41
22:DA:1040:A:H2'	22:DA:1041:G:O4'	2.20	0.41
22:DA:1120:G:C5	22:DA:1121:C:C5	3.09	0.41
22:DA:1231:U:C2'	22:DA:1232:G:H8	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1366:A:C4	22:DA:1367:A:C8	3.09	0.41
22:DA:1866:A:N7	22:DA:1867:G:C8	2.88	0.41
22:DA:2179:C:H2'	22:DA:2180:U:C6	2.55	0.41
22:DA:2250:G:C2	34:DM:82:MET:CB	3.03	0.41
22:DA:2314:A:C2	22:DA:2315:G:C5	3.09	0.41
23:DB:29:A:C2	23:DB:30:C:C2	3.09	0.41
23:DB:55:U:H4'	27:DF:25:VAL:HG12	2.02	0.41
24:DC:129:THR:CG2	24:DC:130:LEU:N	2.83	0.41
25:DD:106:LYS:HB2	25:DD:206:ALA:HB2	2.02	0.41
27:DF:111:ILE:HB	27:DF:114:PHE:CB	2.51	0.41
28:DG:91:GLY:O	28:DG:92:VAL:C	2.58	0.41
30:DI:29:GLY:HA2	30:DI:33:VAL:HB	2.03	0.41
30:DI:57:VAL:HG22	30:DI:69:PHE:HB2	2.02	0.41
36:DO:48:LEU:O	36:DO:49:VAL:CG2	2.69	0.41
40:DS:47:VAL:HB	40:DS:103:ILE:HG21	2.02	0.41
40:DS:95:ARG:O	40:DS:95:ARG:CG	2.68	0.41
41:DT:8:LEU:CD2	41:DT:50:LEU:HD21	2.50	0.41
41:DT:38:ALA:O	41:DT:39:THR:CB	2.67	0.41
41:DT:77:ARG:O	41:DT:78:SER:HB2	2.21	0.41
42:DU:21:LYS:HB2	42:DU:39:ILE:HD12	2.02	0.41
43:DV:42:LEU:HD23	43:DV:42:LEU:N	2.36	0.41
43:DV:49:ASN:O	43:DV:52:ALA:HB3	2.21	0.41
45:DX:39:TRP:HB2	45:DX:46:PHE:CE2	2.56	0.41
46:DY:20:ASN:O	46:DY:24:GLU:HB2	2.20	0.41
48:D0:27:SER:O	48:D0:28:LEU:C	2.59	0.41
1:AA:409:U:H2'	1:AA:410:G:O4'	2.21	0.41
1:AA:464:U:N3	1:AA:467:U:OP2	2.50	0.41
1:AA:675:A:OP1	18:AR:71:THR:HG21	2.21	0.41
1:AA:676:A:C2	1:AA:677:U:C2	3.09	0.41
1:AA:691:G:O6	11:AK:57:LYS:HE2	2.20	0.41
1:AA:721:G:C6	1:AA:733:G:C2	3.09	0.41
1:AA:1125:U:C5	1:AA:1127:G:C5	3.09	0.41
1:AA:1314:C:N4	19:AS:4:SER:HA	2.35	0.41
2:AB:41:ILE:N	2:AB:41:ILE:CD1	2.83	0.41
2:AB:210:VAL:O	2:AB:211:THR:C	2.59	0.41
9:AI:86:ALA:O	9:AI:88:MET:N	2.54	0.41
12:AL:38:TYR:O	12:AL:39:THR:CG2	2.69	0.41
13:AM:64:VAL:O	13:AM:64:VAL:CG1	2.63	0.41
14:AN:64:CYS:HB2	14:AN:80:SER:HB2	2.03	0.41
16:AP:21:VAL:HG21	16:AP:60:TRP:CD1	2.56	0.41
16:AP:38:PHE:CE2	16:AP:51:ARG:HB2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:359:G:H2'	22:BA:360:U:O4'	2.21	0.41
22:BA:629:G:N3	22:BA:639:U:O2'	2.51	0.41
22:BA:826:U:H2'	22:BA:828:U:O4'	2.21	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
22:BA:1140:C:O4'	22:BA:1143:A:C2	2.73	0.41
22:BA:1735:A:C4	22:BA:1736:U:C6	3.08	0.41
22:BA:2392:A:O2'	33:BL:60:ARG:O	2.36	0.41
22:BA:2779:U:C5	22:BA:2781:A:C2	3.09	0.41
22:BA:2816:G:O3'	35:BN:99:LYS:HE2	2.21	0.41
23:BB:30:C:C2'	23:BB:31:C:H5'	2.48	0.41
23:BB:101:A:H2'	23:BB:102:G:O4'	2.21	0.41
24:BC:71:LYS:HE3	24:BC:96:TYR:CD2	2.56	0.41
29:BH:95:GLY:HA2	29:BH:117:LEU:CD2	2.51	0.41
29:BH:100:ALA:HB2	29:BH:115:VAL:CG2	2.50	0.41
31:BJ:80:HIS:O	31:BJ:81:ILE:C	2.58	0.41
32:BK:41:ILE:HD11	32:BK:58:LEU:CD2	2.51	0.41
33:BL:87:GLY:O	33:BL:89:VAL:HG12	2.21	0.41
34:BM:95:LEU:C	34:BM:96:ILE:HD13	2.40	0.41
35:BN:46:ARG:O	35:BN:50:PRO:HG2	2.21	0.41
39:BR:69:GLY:C	39:BR:70:GLU:O	2.58	0.41
42:BU:77:THR:O	42:BU:79:LYS:HG2	2.20	0.41
46:BY:57:LEU:O	46:BY:57:LEU:CG	2.69	0.41
50:B2:30:VAL:O	50:B2:34:ARG:HG3	2.20	0.41
1:CA:40:C:H2'	1:CA:41:G:O4'	2.20	0.41
1:CA:101:A:C5	1:CA:102:G:N7	2.88	0.41
1:CA:375:U:C4	1:CA:376:G:N7	2.89	0.41
1:CA:414:A:N1	1:CA:415:A:C4	2.89	0.41
1:CA:834:U:H2'	1:CA:835:U:C6	2.56	0.41
1:CA:913:A:H4'	1:CA:914:A:H4'	2.03	0.41
3:CC:179:ARG:O	3:CC:206:GLU:O	2.38	0.41
4:CD:149:ALA:O	4:CD:150:LYS:C	2.56	0.41
4:CD:153:SER:O	4:CD:154:ARG:C	2.58	0.41
5:CE:36:LEU:HD21	5:CE:137:VAL:CG1	2.50	0.41
5:CE:134:ILE:HD12	5:CE:134:ILE:H	1.85	0.41
5:CE:153:VAL:O	5:CE:153:VAL:HG23	2.20	0.41
8:CH:78:VAL:N	8:CH:126:ILE:O	2.51	0.41
9:CI:13:LYS:O	9:CI:14:SER:CB	2.69	0.41
11:CK:100:LEU:O	11:CK:101:ASN:C	2.59	0.41
20:CT:44:LYS:HB3	20:CT:87:ALA:HB1	2.02	0.41
22:DA:36:G:N2	22:DA:445:C:C2	2.89	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:DA:191:A:C2	22:DA:192:C:N3	2.89	0.41
22:DA:373:U:C2	22:DA:374:A:C8	3.08	0.41
22:DA:410:G:C6	22:DA:2407:A:N6	2.89	0.41
22:DA:513:A:C2	22:DA:514:A:N7	2.89	0.41
22:DA:515:A:C8	22:DA:516:C:C6	3.08	0.41
22:DA:1096:A:C5	22:DA:1097:U:H5	2.39	0.41
22:DA:1275:A:C5	35:DN:16:HIS:CD2	3.08	0.41
22:DA:1358:G:O6	22:DA:1371:G:C8	2.74	0.41
22:DA:1838:C:C4	22:DA:1899:A:C4	3.08	0.41
22:DA:1877:A:H2'	22:DA:1878:G:C8	2.56	0.41
22:DA:1911:U:H2'	22:DA:1918:A:C2	2.55	0.41
22:DA:2115:G:N3	22:DA:2117:A:C8	2.89	0.41
22:DA:2134:A:C6	22:DA:2135:A:C5	3.08	0.41
22:DA:2466:C:O2'	22:DA:2467:C:H5'	2.21	0.41
22:DA:2516:A:C2'	22:DA:2517:C:O5'	2.69	0.41
22:DA:2634:A:O2'	25:DD:79:LEU:HD12	2.21	0.41
22:DA:2771:C:H2'	22:DA:2772:C:C6	2.55	0.41
23:DB:15:A:H1'	23:DB:109:A:C8	2.56	0.41
23:DB:90:C:C5'	34:DM:18:ARG:HG2	2.50	0.41
24:DC:71:LYS:HG2	24:DC:102:ARG:CZ	2.51	0.41
24:DC:252:THR:O	24:DC:253:LYS:HB2	2.21	0.41
25:DD:8:LYS:HB2	25:DD:201:LEU:CD1	2.51	0.41
26:DE:150:THR:O	26:DE:192:ALA:HB2	2.20	0.41
27:DF:136:ILE:HG22	27:DF:136:ILE:O	2.21	0.41
28:DG:62:TRP:CE3	28:DG:62:TRP:HA	2.56	0.41
40:DS:47:VAL:O	40:DS:47:VAL:CG2	2.69	0.41
41:DT:24:MET:CG	41:DT:29:THR:O	2.69	0.41
42:DU:18:ASP:HB3	42:DU:21:LYS:HG3	2.01	0.41
45:DX:54:LYS:HA	45:DX:57:ARG:CG	2.50	0.41
50:D2:24:THR:HG23	50:D2:27:GLY:HA3	2.03	0.41
1:AA:69:G:H3'	1:AA:70:U:C6	2.56	0.41
1:AA:178:C:H2'	1:AA:179:A:O4'	2.21	0.41
1:AA:181:A:N6	1:AA:195:A:C8	2.89	0.41
1:AA:225:C:H2'	1:AA:226:G:O4'	2.20	0.41
1:AA:257:G:N2	1:AA:258:G:C4	2.89	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
1:AA:539:A:H2'	1:AA:540:G:C8	2.56	0.41
1:AA:591:U:H2'	1:AA:592:G:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:AA:697:U:C5	1:AA:698:G:C8	3.09	0.41
1:AA:728:A:OP1	15:AO:54:ARG:NH2	2.53	0.41
1:AA:737:C:C2	1:AA:738:C:C5	3.08	0.41
1:AA:771:G:C5	1:AA:772:U:C5	3.08	0.41
1:AA:865:A:H5'	1:AA:1078:U:O4	2.20	0.41
1:AA:960:U:H2'	1:AA:1225:A:H62	1.85	0.41
1:AA:1059:C:N3	1:AA:1060:U:C5	2.89	0.41
1:AA:1080:A:OP1	5:AE:52:LYS:CE	2.68	0.41
1:AA:1101:A:N3	1:AA:1102:A:H1'	2.36	0.41
1:AA:1153:G:C4	1:AA:1154:G:C8	3.09	0.41
1:AA:1154:G:H2'	1:AA:1155:A:H8	1.86	0.41
1:AA:1239:A:H2'	1:AA:1298:U:O4	2.21	0.41
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.21	0.41
1:AA:1296:C:H5''	1:AA:1297:G:OP2	2.21	0.41
1:AA:1323:G:O2'	1:AA:1324:A:H5'	2.21	0.41
1:AA:1340:A:H2'	1:AA:1341:U:O4'	2.21	0.41
1:AA:1401:G:C2	1:AA:1402:C:H1'	2.56	0.41
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.56	0.41
1:AA:1461:G:H2'	1:AA:1462:C:H6	1.86	0.41
2:AB:68:LEU:HD12	2:AB:154:MET:HE1	2.02	0.41
2:AB:111:ILE:O	2:AB:114:LEU:N	2.54	0.41
3:AC:22:TRP:CD1	3:AC:59:ARG:HD2	2.56	0.41
3:AC:97:VAL:HB	3:AC:98:PRO:HD2	2.02	0.41
4:AD:28:ILE:O	4:AD:28:ILE:HG22	2.20	0.41
4:AD:30:THR:O	4:AD:31:LYS:C	2.58	0.41
4:AD:97:ARG:O	4:AD:100:ASN:HB3	2.20	0.41
5:AE:107:ALA:CB	5:AE:125:ALA:HB3	2.51	0.41
5:AE:154:ALA:O	5:AE:157:ARG:C	2.59	0.41
6:AF:17:GLN:HG2	4:CD:189:SER:HB2	2.02	0.41
7:AG:69:VAL:HG21	7:AG:104:ILE:CD1	2.50	0.41
7:AG:108:ALA:O	7:AG:119:ARG:HD3	2.19	0.41
8:AH:11:LEU:HD23	8:AH:11:LEU:N	2.36	0.41
8:AH:41:LYS:O	8:AH:42:GLU:C	2.59	0.41
9:AI:44:ALA:HB1	9:AI:47:VAL:CG1	2.50	0.41
10:AJ:42:LEU:HG	10:AJ:43:PRO:HD2	2.02	0.41
11:AK:31:ILE:O	11:AK:31:ILE:HG13	2.18	0.41
13:AM:8:ASN:OD1	13:AM:9:ILE:N	2.54	0.41
13:AM:66:GLU:O	13:AM:69:LEU:N	2.54	0.41
16:AP:46:LYS:HD3	16:AP:47:GLU:H	1.82	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:60:TRP:HA	16:AP:63:GLN:HB3	2.03	0.41
16:AP:78:VAL:O	16:AP:78:VAL:CG1	2.68	0.41
20:AT:67:ILE:HD12	20:AT:71:LYS:HG2	2.01	0.41
22:BA:28:A:C5	22:BA:29:U:C5	3.08	0.41
22:BA:45:G:H5''	22:BA:46:G:OP1	2.21	0.41
22:BA:71:A:N1	22:BA:114:U:H1'	2.36	0.41
22:BA:167:A:H2'	22:BA:168:G:O4'	2.21	0.41
22:BA:215:G:H4'	22:BA:216:A:OP1	2.20	0.41
22:BA:218:A:OP2	57:BA:3225:HOH:O	2.22	0.41
22:BA:259:G:O2'	22:BA:260:G:H5'	2.20	0.41
22:BA:416:U:H2'	22:BA:417:C:C6	2.55	0.41
22:BA:523:C:C2'	22:BA:524:G:H5'	2.51	0.41
22:BA:585:G:H5''	22:BA:586:A:OP1	2.21	0.41
22:BA:770:G:O2'	22:BA:771:G:H5'	2.21	0.41
22:BA:817:C:H2'	22:BA:818:G:O4'	2.21	0.41
22:BA:954:G:OP2	34:BM:16:ARG:NH2	2.54	0.41
22:BA:971:G:C6	22:BA:972:A:C4	3.08	0.41
22:BA:1071:G:C4	22:BA:1089:A:C6	3.08	0.41
22:BA:1106:G:C2	22:BA:1107:G:N9	2.88	0.41
22:BA:1142:A:N3	22:BA:1144:A:C8	2.89	0.41
22:BA:1301:A:H2'	22:BA:1301:A:N3	2.36	0.41
22:BA:1346:G:C2'	22:BA:1347:A:H5'	2.51	0.41
22:BA:1354:A:H2'	22:BA:1355:G:O4'	2.21	0.41
22:BA:1421:G:N3	22:BA:1421:G:H2'	2.35	0.41
22:BA:1441:G:H2'	22:BA:1442:U:H6	1.84	0.41
22:BA:1452:G:C4	22:BA:2702:G:C6	3.09	0.41
22:BA:1816:C:C5	24:BC:62:TYR:CE1	3.09	0.41
22:BA:1906:G:C5	22:BA:1929:G:N2	2.88	0.41
22:BA:2001:C:H4'	22:BA:2689:U:H2'	2.03	0.41
22:BA:2311:A:C8	27:BF:77:PHE:CG	3.08	0.41
22:BA:2317:A:H2'	22:BA:2318:G:H5'	2.03	0.41
22:BA:2326:C:C1'	22:BA:2327:A:OP1	2.68	0.41
22:BA:2331:G:O2'	22:BA:2336:A:N1	2.49	0.41
22:BA:2486:C:H2'	22:BA:2487:G:O5'	2.19	0.41
22:BA:2673:G:N3	22:BA:2674:G:C8	2.89	0.41
22:BA:2839:G:H2'	22:BA:2840:C:O5'	2.20	0.41
24:BC:221:ARG:NH2	57:BC:404:HOH:O	2.53	0.41
24:BC:252:THR:O	24:BC:254:GLY:N	2.54	0.41
25:BD:11:MET:O	25:BD:12:THR:CG2	2.68	0.41
27:BF:17:MET:HE1	27:BF:22:TYR:HB2	2.01	0.41
29:BH:90:LEU:HG	29:BH:92:GLY:C	2.41	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:129:GLU:C	29:BH:130:VAL:HG23	2.41	0.41
31:BJ:23:LYS:CE	31:BJ:142:ILE:OXT	2.69	0.41
32:BK:41:ILE:HD11	32:BK:58:LEU:HD22	2.02	0.41
33:BL:81:ASP:HB3	33:BL:100:ILE:CD1	2.51	0.41
34:BM:69:PRO:O	34:BM:70:ASP:OD2	2.39	0.41
37:BP:110:ILE:O	37:BP:110:ILE:HG12	2.20	0.41
39:BR:40:MET:O	39:BR:41:ILE:HG12	2.21	0.41
42:BU:7:ARG:O	42:BU:8:ASP:O	2.38	0.41
49:B1:25:LYS:CD	49:B1:52:ALA:O	2.69	0.41
53:B5:94:TYR:O	53:B5:95:VAL:HG23	2.20	0.41
1:CA:4:U:O2	1:CA:4:U:C2'	2.68	0.41
1:CA:49:U:O4	1:CA:365:U:H5	2.03	0.41
1:CA:69:G:H5'	1:CA:70:U:OP1	2.20	0.41
1:CA:109:A:N1	1:CA:327:A:C6	2.88	0.41
1:CA:186:C:O2	1:CA:186:C:H2'	2.21	0.41
1:CA:228:A:H2'	1:CA:229:U:O4'	2.21	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:345:C:OP1	37:DP:39:ARG:CD	2.69	0.41
1:CA:463:U:H5'	1:CA:464:U:OP2	2.21	0.41
1:CA:671:G:O2'	1:CA:672:U:H5'	2.21	0.41
1:CA:684:U:O2	11:CK:41:ALA:HB3	2.21	0.41
1:CA:867:G:C5	1:CA:868:C:C5	3.08	0.41
1:CA:929:G:C5	1:CA:930:C:C5	3.08	0.41
1:CA:976:G:C8	1:CA:1361:G:O6	2.74	0.41
1:CA:1055:A:C5	1:CA:1206:G:C6	3.09	0.41
1:CA:1090:U:H2'	1:CA:1091:U:C6	2.56	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:CA:1219:A:C6	1:CA:1220:G:C6	3.09	0.41
1:CA:1261:A:N6	1:CA:1275:A:N9	2.68	0.41
1:CA:1293:C:H2'	1:CA:1294:G:O4'	2.21	0.41
1:CA:1327:C:N4	1:CA:1328:C:N4	2.68	0.41
1:CA:1412:C:C2	1:CA:1413:A:C8	3.09	0.41
1:CA:1428:A:N1	1:CA:1473:G:C6	2.89	0.41
2:CB:94:HIS:CG	2:CB:95:ARG:NH2	2.89	0.41
3:CC:13:GLY:C	3:CC:14:ILE:HD13	2.41	0.41
3:CC:23:PHE:CD2	10:CJ:97:ASP:HB2	2.56	0.41
3:CC:50:ALA:O	3:CC:51:SER:HB2	2.21	0.41
3:CC:64:ILE:HG23	3:CC:99:ALA:HB2	2.02	0.41
3:CC:134:MET:SD	3:CC:153:VAL:HG12	2.60	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:167:TRP:C	3:CC:167:TRP:CE3	2.94	0.41
4:CD:58:LYS:HG3	4:CD:59:GLN:N	2.36	0.41
4:CD:152:GLN:OE1	4:CD:152:GLN:N	2.53	0.41
5:CE:156:LYS:HD3	8:CH:71:VAL:HG13	2.03	0.41
6:CF:88:MET:SD	6:CF:90:MET:SD	3.19	0.41
9:CI:71:GLY:O	9:CI:75:GLN:N	2.46	0.41
12:CL:38:TYR:O	12:CL:39:THR:HG23	2.21	0.41
12:CL:43:LYS:O	12:CL:44:LYS:O	2.39	0.41
12:CL:72:HIS:ND1	12:CL:72:HIS:O	2.54	0.41
13:CM:22:ILE:HB	13:CM:25:VAL:CG1	2.51	0.41
13:CM:34:LEU:HD22	13:CM:39:ILE:HG21	2.02	0.41
15:CO:41:GLY:O	15:CO:42:HIS:C	2.59	0.41
15:CO:60:VAL:O	15:CO:63:ARG:HB3	2.20	0.41
16:CP:4:ILE:CD1	16:CP:65:ALA:HB1	2.51	0.41
16:CP:28:ARG:CG	16:CP:29:ASN:N	2.84	0.41
20:CT:39:ILE:HD11	20:CT:83:ILE:CG2	2.51	0.41
21:CU:4:ILE:N	21:CU:19:PHE:CE1	2.89	0.41
21:CU:15:ALA:O	21:CU:16:LEU:C	2.59	0.41
22:DA:36:G:C2	22:DA:445:C:N3	2.88	0.41
22:DA:55:G:C2	22:DA:116:C:C2	3.09	0.41
22:DA:83:A:H2	22:DA:103:A:N7	2.18	0.41
22:DA:100:U:O4'	22:DA:101:A:C2	2.73	0.41
22:DA:116:C:C2	22:DA:117:G:C8	3.09	0.41
22:DA:291:G:N2	22:DA:350:G:C8	2.89	0.41
22:DA:377:G:C6	22:DA:378:C:N4	2.89	0.41
22:DA:404:A:C1'	22:DA:405:U:OP2	2.69	0.41
22:DA:420:C:H2'	22:DA:421:C:H6	1.85	0.41
22:DA:459:U:C5	22:DA:469:G:N2	2.88	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:688:U:OP1	50:D2:2:LYS:HD3	2.20	0.41
22:DA:826:U:H5''	57:DA:3696:HOH:O	2.19	0.41
22:DA:869:G:H1'	34:DM:8:LYS:HD2	2.01	0.41
22:DA:877:A:C2'	22:DA:878:A:OP2	2.68	0.41
22:DA:952:G:C2	22:DA:966:G:C2	3.09	0.41
22:DA:1014:A:C6	22:DA:1015:U:C4	3.09	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
22:DA:1404:C:C2'	22:DA:1405:U:O5'	2.68	0.41
22:DA:1439:A:C8	22:DA:1440:U:C6	3.09	0.41
22:DA:1483:G:C6	22:DA:1484:U:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1501:G:H2'	22:DA:1502:A:O4'	2.21	0.41
22:DA:1599:U:P	41:DT:40:LYS:HD2	2.60	0.41
22:DA:1806:C:C5	22:DA:1807:G:C8	3.08	0.41
22:DA:1844:C:C2	22:DA:1845:G:C8	3.09	0.41
22:DA:1933:G:O2'	22:DA:1974:C:H4'	2.20	0.41
22:DA:2127:G:O2'	22:DA:2173:A:C4	2.73	0.41
22:DA:2209:G:C2	22:DA:2216:G:N3	2.88	0.41
22:DA:2246:G:H2'	22:DA:2247:A:O4'	2.21	0.41
22:DA:2281:A:H2'	22:DA:2282:G:H5'	2.03	0.41
22:DA:2415:G:C5	22:DA:2416:C:C4	3.08	0.41
22:DA:2503:A:N3	22:DA:2503:A:C5'	2.84	0.41
22:DA:2553:G:H2'	22:DA:2554:U:C4'	2.50	0.41
22:DA:2646:C:N3	22:DA:2675:A:C2	2.89	0.41
22:DA:2720:U:C4	22:DA:2872:A:C2	3.08	0.41
22:DA:2766:A:N3	22:DA:2766:A:H2'	2.36	0.41
22:DA:2884:U:O2	22:DA:2884:U:O4'	2.38	0.41
23:DB:24:G:H4'	23:DB:25:U:C5	2.55	0.41
24:DC:53:HIS:HA	24:DC:217:ARG:HB2	2.03	0.41
26:DE:22:ASP:OD2	26:DE:22:ASP:N	2.54	0.41
26:DE:135:ALA:O	26:DE:139:LYS:HB2	2.20	0.41
26:DE:195:GLN:O	26:DE:199:MET:HB2	2.20	0.41
27:DF:9:LYS:O	27:DF:13:VAL:HB	2.21	0.41
27:DF:69:LYS:HG3	27:DF:84:PRO:HA	2.02	0.41
27:DF:99:PHE:HA	27:DF:102:ARG:NE	2.36	0.41
29:DH:1:MET:HB3	29:DH:21:VAL:O	2.20	0.41
29:DH:2:GLN:O	29:DH:3:VAL:O	2.38	0.41
29:DH:118:PRO:HB2	29:DH:119:ASN:H	1.72	0.41
30:DI:22:PRO:CB	30:DI:23:PRO:HD3	2.51	0.41
31:DJ:4:PHE:CG	38:DQ:100:VAL:HG11	2.56	0.41
32:DK:78:ARG:NH2	37:DP:73:VAL:CG1	2.84	0.41
34:DM:34:LYS:O	34:DM:128:THR:CG2	2.68	0.41
36:DO:97:PHE:HB3	36:DO:103:VAL:HG11	2.01	0.41
38:DQ:25:TYR:CD2	38:DQ:25:TYR:C	2.94	0.41
38:DQ:58:ARG:NH2	38:DQ:92:ARG:CZ	2.84	0.41
40:DS:33:LEU:CD2	40:DS:52:GLU:CG	2.98	0.41
40:DS:57:ASN:OD1	40:DS:57:ASN:N	2.53	0.41
40:DS:58:ALA:O	40:DS:62:ASP:O	2.39	0.41
43:DV:30:ILE:O	43:DV:37:PRO:HA	2.21	0.41
44:DW:85:GLU:HA	44:DW:85:GLU:OE2	2.21	0.41
46:DY:27:ASN:O	46:DY:31:GLN:HB2	2.21	0.41
47:DZ:3:LYS:N	47:DZ:3:LYS:HD3	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:258:G:C5	1:AA:259:G:N7	2.89	0.41
1:AA:451:A:H4'	1:AA:452:A:O5'	2.21	0.41
1:AA:459:A:H2'	1:AA:460:A:C8	2.56	0.41
1:AA:669:G:O2'	1:AA:670:G:H5'	2.21	0.41
1:AA:704:A:C6	1:AA:705:G:C4	3.09	0.41
1:AA:953:G:C2	1:AA:1229:A:C2	3.09	0.41
1:AA:958:A:N6	1:AA:959:A:N1	2.69	0.41
1:AA:987:G:H2'	1:AA:987:G:N3	2.36	0.41
1:AA:1130:A:C2	1:AA:1146:A:C4	3.09	0.41
1:AA:1288:A:C6	1:AA:1289:A:C5	3.08	0.41
2:AB:79:ALA:C	2:AB:82:ASP:OD2	2.58	0.41
2:AB:101:LEU:HD13	2:AB:101:LEU:HA	1.90	0.41
2:AB:149:GLY:O	2:AB:152:LYS:N	2.53	0.41
9:AI:29:VAL:HB	9:AI:64:TYR:HA	2.03	0.41
11:AK:55:SER:O	11:AK:56:ARG:C	2.58	0.41
11:AK:82:LEU:O	11:AK:82:LEU:HD23	2.20	0.41
13:AM:29:ARG:CZ	13:AM:63:PHE:CB	2.99	0.41
19:AS:4:SER:O	19:AS:5:LEU:HB2	2.21	0.41
19:AS:50:ALA:HB1	19:AS:57:HIS:CB	2.51	0.41
20:AT:43:ASP:O	20:AT:47:ALA:HB2	2.21	0.41
22:BA:21:A:O2'	22:BA:22:C:H5'	2.21	0.41
22:BA:49:A:C8	22:BA:51:G:C2	3.09	0.41
22:BA:300:A:OP2	42:BU:97:LYS:NZ	2.53	0.41
22:BA:597:G:C6	22:BA:598:U:C4	3.08	0.41
22:BA:764:A:OP2	24:BC:213:TRP:CZ3	2.74	0.41
22:BA:790:U:HO2'	22:BA:791:C:P	2.43	0.41
22:BA:1014:A:C2	22:BA:1149:G:C4	3.08	0.41
22:BA:1088:A:N3	22:BA:1088:A:H3'	2.36	0.41
22:BA:1121:C:H2'	22:BA:1122:G:O4'	2.22	0.41
22:BA:1153:C:C4	22:BA:1154:G:C5	3.09	0.41
22:BA:1165:A:H2'	22:BA:1166:G:H8	1.86	0.41
22:BA:2127:G:H5'	22:BA:2128:G:OP1	2.21	0.41
22:BA:2188:U:C4	22:BA:2189:U:O4	2.74	0.41
22:BA:2516:A:N6	22:BA:2517:C:N4	2.68	0.41
23:BB:28:C:OP1	36:BO:31:THR:HG21	2.20	0.41
23:BB:35:C:C3'	23:BB:36:C:H5'	2.50	0.41
24:BC:36:LYS:O	24:BC:37:ASN:HB3	2.19	0.41
26:BE:25:GLU:O	26:BE:26:ALA:C	2.59	0.41
27:BF:33:LYS:HG2	27:BF:157:THR:HB	2.02	0.41
27:BF:119:ALA:HB1	27:BF:167:ARG:CD	2.51	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)
29:BH:132:PHE:CE2	29:BH:142:VAL:CG2	3.04	0.41
30:BI:33:VAL:HG13	30:BI:67:PHE:CZ	2.56	0.41
30:BI:115:ALA:O	30:BI:116:ASP:HB2	2.21	0.41
30:BI:122:ILE:HG23	30:BI:125:MET:SD	2.61	0.41
31:BJ:7:LYS:HA	31:BJ:8:PRO:HD3	1.85	0.41
33:BL:85:VAL:HA	33:BL:98:ALA:HB2	2.02	0.41
34:BM:135:VAL:O	34:BM:136:MET:HB3	2.21	0.41
35:BN:9:GLN:O	35:BN:11:ASN:N	2.54	0.41
35:BN:38:LEU:N	35:BN:39:PRO:CD	2.84	0.41
38:BQ:81:ASN:O	38:BQ:84:LYS:HB3	2.21	0.41
39:BR:11:GLN:C	39:BR:12:HIS:CG	2.94	0.41
40:BS:29:VAL:CG1	40:BS:55:ILE:CD1	2.99	0.41
41:BT:61:LEU:C	41:BT:61:LEU:HD12	2.42	0.41
41:BT:69:ARG:CB	41:BT:74:ILE:HG22	2.50	0.41
1:CA:9:G:C2	1:CA:10:A:C8	3.08	0.41
1:CA:74:A:C2	1:CA:75:G:C8	3.09	0.41
1:CA:77:A:C2	1:CA:93:U:N3	2.89	0.41
1:CA:263:A:P	20:CT:74:ARG:NH1	2.94	0.41
1:CA:748:G:C2	1:CA:749:A:C5	3.09	0.41
1:CA:822:U:C2	1:CA:823:C:C5	3.08	0.41
1:CA:1072:G:C4	1:CA:1104:G:N2	2.89	0.41
1:CA:1263:C:C5	1:CA:1264:U:C5	3.09	0.41
1:CA:1502:A:C8	1:CA:1504:G:C4	3.09	0.41
2:CB:102:THR:HA	2:CB:179:LEU:HD21	2.01	0.41
2:CB:199:VAL:C	2:CB:200:ILE:HD12	2.41	0.41
2:CB:207:ILE:O	2:CB:210:VAL:HG13	2.21	0.41
5:CE:83:HIS:HB2	5:CE:84:PRO:HD2	2.01	0.41
6:CF:51:ILE:O	6:CF:51:ILE:HG12	2.21	0.41
6:CF:70:VAL:HG23	6:CF:71:ILE:HD12	2.01	0.41
7:CG:71:PRO:HD2	7:CG:96:ARG:HG2	2.03	0.41
11:CK:36:ASP:CG	11:CK:40:ASN:HB2	2.42	0.41
16:CP:39:PHE:O	16:CP:41:PRO:HD3	2.21	0.41
17:CQ:52:GLU:CD	17:CQ:75:LEU:HD21	2.42	0.41
22:DA:79:C:C4	22:DA:80:G:N7	2.89	0.41
22:DA:178:G:C6	22:DA:179:C:C5	3.09	0.41
22:DA:206:U:C2	22:DA:207:A:C8	3.08	0.41
22:DA:283:G:C5	22:DA:284:U:C5	3.09	0.41
22:DA:396:G:H5'	22:DA:396:G:H8	1.86	0.41
22:DA:802:A:H2'	22:DA:803:U:C6	2.56	0.41
22:DA:1059:G:N2	30:DI:131:GLY:HA3	2.36	0.41
22:DA:1469:A:C2	22:DA:1470:A:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1838:C:C5	22:DA:1899:A:C6	3.09	0.41
22:DA:2125:G:H5'	22:DA:2126:A:OP2	2.21	0.41
22:DA:2282:G:OP1	22:DA:2283:C:H1'	2.21	0.41
22:DA:2370:G:H4'	49:D1:44:ARG:NH1	2.35	0.41
22:DA:2420:C:OP1	51:D3:34:THR:CB	2.68	0.41
22:DA:2728:U:O2'	22:DA:2729:G:H5''	2.21	0.41
22:DA:2819:G:H1'	22:DA:2828:G:N2	2.36	0.41
23:DB:59:A:H2'	23:DB:60:C:O4'	2.20	0.41
23:DB:67:G:C6	23:DB:68:C:N4	2.89	0.41
28:DG:24:ILE:CD1	28:DG:43:VAL:HG11	2.51	0.41
28:DG:39:ASP:O	28:DG:58:TYR:CE1	2.74	0.41
28:DG:123:ALA:CB	28:DG:133:LEU:HA	2.50	0.41
33:DL:111:ILE:HG22	33:DL:112:LEU:N	2.36	0.41
34:DM:2:LEU:HB2	34:DM:69:PRO:HG2	2.03	0.41
1:AA:146:G:C2	1:AA:147:G:C4	3.10	0.40
1:AA:223:A:H2'	1:AA:224:U:C6	2.56	0.40
1:AA:270:A:H2'	1:AA:271:C:O4'	2.21	0.40
1:AA:457:G:O6	1:AA:458:U:N3	2.54	0.40
1:AA:774:G:C4	1:AA:775:G:C8	3.09	0.40
1:AA:790:A:H2'	1:AA:791:G:C8	2.56	0.40
1:AA:827:U:H2'	1:AA:870:U:O4	2.21	0.40
1:AA:955:U:O4'	1:AA:1227:A:N6	2.52	0.40
1:AA:987:G:H5'	1:AA:988:G:OP2	2.21	0.40
1:AA:1035:A:H2'	1:AA:1036:A:C1'	2.51	0.40
1:AA:1058:G:C5	1:AA:1059:C:C5	3.10	0.40
1:AA:1211:U:O2'	1:AA:1212:U:P	2.78	0.40
1:AA:1385:G:O2'	1:AA:1386:G:H5'	2.21	0.40
1:AA:1533:C:C5'	1:AA:1534:A:OP1	2.70	0.40
2:AB:62:SER:C	2:AB:64:LYS:N	2.74	0.40
2:AB:171:ILE:O	2:AB:175:GLU:HG3	2.21	0.40
2:AB:186:ILE:HD11	2:AB:204:ASP:HA	2.02	0.40
3:AC:10:ILE:O	3:AC:10:ILE:HG13	2.21	0.40
3:AC:14:ILE:N	3:AC:14:ILE:HD13	2.36	0.40
4:AD:4:TYR:CE2	4:AD:11:LEU:HD11	2.56	0.40
4:AD:98:LEU:O	4:AD:99:ASP:C	2.59	0.40
5:AE:151:GLU:C	5:AE:153:VAL:H	2.24	0.40
11:AK:61:PHE:O	11:AK:64:GLN:N	2.54	0.40
13:AM:77:ILE:O	13:AM:80:LEU:HB2	2.21	0.40
14:AN:68:GLY:O	14:AN:69:ARG:C	2.58	0.40
20:AT:35:VAL:HG11	20:AT:79:LEU:HD22	2.03	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)
22:BA:449:A:C6	22:BA:450:G:C5	3.09	0.40
22:BA:451:U:H5'	57:BA:3238:HOH:O	2.21	0.40
22:BA:958:U:H2'	23:BB:89:U:O2	2.22	0.40
22:BA:1014:A:C2	22:BA:1149:G:N3	2.89	0.40
22:BA:1366:A:C5	22:BA:1367:A:C8	3.09	0.40
22:BA:1577:C:H2'	22:BA:1578:U:O4'	2.21	0.40
22:BA:1856:U:C4	22:BA:1857:G:C6	3.09	0.40
22:BA:1936:A:C2	22:BA:1943:U:N3	2.87	0.40
22:BA:2001:C:N3	22:BA:2002:G:C8	2.89	0.40
22:BA:2190:G:C4	22:BA:2191:A:C8	3.09	0.40
22:BA:2243:U:H2'	22:BA:2244:U:H6	1.85	0.40
22:BA:2492:U:H2'	22:BA:2493:U:C6	2.55	0.40
22:BA:2498:C:P	57:BA:3686:HOH:O	2.61	0.40
22:BA:2615:U:H1'	48:B0:4:GLN:HB3	2.02	0.40
22:BA:2690:U:C4	22:BA:2873:A:C2	3.09	0.40
26:BE:4:VAL:C	26:BE:6:LYS:H	2.24	0.40
26:BE:157:LEU:HG	26:BE:169:VAL:HG21	2.02	0.40
27:BF:20:PHE:O	27:BF:21:ASN:C	2.59	0.40
27:BF:44:ILE:HG21	27:BF:79:ILE:CG2	2.51	0.40
29:BH:88:GLY:C	29:BH:125:THR:OG1	2.59	0.40
31:BJ:31:GLU:OE1	31:BJ:34:ARG:NE	2.54	0.40
35:BN:71:ARG:O	35:BN:71:ARG:CG	2.69	0.40
37:BP:16:ASP:OD1	37:BP:16:ASP:C	2.59	0.40
38:BQ:99:ALA:O	38:BQ:103:LYS:HE2	2.21	0.40
41:BT:1:MET:HG3	41:BT:2:ILE:N	2.36	0.40
1:CA:128:G:C2	1:CA:234:C:C2	3.09	0.40
1:CA:189:A:N6	1:CA:190:A:C2	2.89	0.40
1:CA:243:A:C5	1:CA:281:G:N2	2.90	0.40
1:CA:263:A:OP1	20:CT:74:ARG:NH1	2.53	0.40
1:CA:453:G:H2'	1:CA:454:G:C8	2.56	0.40
1:CA:782:A:C5	1:CA:801:U:N3	2.89	0.40
1:CA:793:U:HO2'	1:CA:1516:G:C1'	2.34	0.40
1:CA:799:G:C6	1:CA:800:G:C4	3.09	0.40
1:CA:923:A:H2'	1:CA:924:C:O4'	2.21	0.40
1:CA:975:A:H5'	1:CA:975:A:N3	2.36	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
1:CA:1244:G:H2'	1:CA:1245:C:C6	2.56	0.40
2:CB:141:LEU:O	2:CB:143:LYS:N	2.54	0.40
3:CC:154:SER:CB	3:CC:165:THR:HG22	2.51	0.40
4:CD:9:LEU:HD13	4:CD:9:LEU:HA	1.80	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:194:ASP:O	4:CD:195:ILE:CG2	2.69	0.40
7:CG:136:LYS:O	7:CG:136:LYS:HD2	2.21	0.40
8:CH:95:VAL:CG1	8:CH:96:MET:N	2.84	0.40
9:CI:28:ILE:HG21	9:CI:35:LEU:HD22	2.02	0.40
11:CK:124:PRO:HB2	11:CK:126:LYS:CD	2.50	0.40
12:CL:114:ARG:CZ	12:CL:121:ARG:HA	2.51	0.40
16:CP:19:VAL:CG1	16:CP:37:GLY:CA	2.99	0.40
22:DA:46:G:C2'	22:DA:47:C:O5'	2.69	0.40
22:DA:120:U:O4	22:DA:177:G:N7	2.54	0.40
22:DA:140:C:O2	22:DA:140:C:O4'	2.37	0.40
22:DA:176:A:C5	22:DA:177:G:C6	3.09	0.40
22:DA:270:A:H2	22:DA:369:U:H4'	1.85	0.40
22:DA:319:G:N9	22:DA:333:G:N2	2.69	0.40
22:DA:537:G:OP1	22:DA:995:C:N4	2.54	0.40
22:DA:647:G:C5	22:DA:648:G:C5	3.08	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
22:DA:1059:G:H1'	30:DI:117:MET:HE1	2.02	0.40
22:DA:1203:U:H1'	33:DL:4:ASN:CB	2.46	0.40
22:DA:1436:G:N2	22:DA:1557:C:C2	2.89	0.40
22:DA:1783:A:C5'	22:DA:2608:G:H4'	2.51	0.40
22:DA:1820:U:OP1	24:DC:177:ARG:HG3	2.21	0.40
22:DA:2052:A:OP1	25:DD:146:ILE:HG12	2.21	0.40
22:DA:2128:G:C4	22:DA:2173:A:O2'	2.74	0.40
22:DA:2322:A:N6	22:DA:2323:G:C6	2.89	0.40
22:DA:2457:U:C4	22:DA:2458:G:C6	3.09	0.40
22:DA:2690:U:C5	22:DA:2873:A:N1	2.89	0.40
22:DA:2820:A:C6	25:DD:197:THR:HB	2.56	0.40
22:DA:2896:C:C2'	22:DA:2897:U:O5'	2.69	0.40
23:DB:77:U:C2'	23:DB:78:A:H5'	2.50	0.40
24:DC:192:LEU:HD22	24:DC:192:LEU:N	2.36	0.40
25:DD:4:LEU:HD22	25:DD:101:PHE:CE2	2.56	0.40
25:DD:186:LEU:HD21	37:DP:4:ILE:CG2	2.51	0.40
27:DF:16:LEU:HD11	27:DF:169:LEU:HD12	2.03	0.40
27:DF:117:LEU:CD2	27:DF:176:PRO:HG2	2.51	0.40
31:DJ:120:ARG:O	31:DJ:123:LYS:NZ	2.37	0.40
32:DK:121:GLU:OE2	37:DP:66:ASN:OD1	2.39	0.40
33:DL:77:ILE:HG23	33:DL:81:ASP:OD2	2.21	0.40
35:DN:103:ARG:HD3	35:DN:110:MET:SD	2.60	0.40
37:DP:31:TRP:NE1	37:DP:82:ASP:OD1	2.54	0.40
39:DR:67:GLY:C	39:DR:93:PHE:CE2	2.94	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:56:GLY:O	42:DU:57:GLY:C	2.59	0.40
44:DW:67:VAL:HG12	44:DW:68:LYS:N	2.37	0.40
48:D0:43:ILE:HG22	48:D0:49:TYR:HB2	2.03	0.40
49:D1:25:LYS:HE2	49:D1:30:LYS:O	2.20	0.40
49:D1:40:ASP:HA	49:D1:41:PRO:HD2	1.90	0.40
1:AA:53:A:C2'	1:AA:54:C:O5'	2.70	0.40
1:AA:147:G:H2'	1:AA:148:G:C8	2.56	0.40
1:AA:457:G:C6	1:AA:458:U:C2	3.09	0.40
1:AA:862:C:H2'	1:AA:863:U:H5'	2.02	0.40
1:AA:914:A:C6	1:AA:915:A: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
1:AA:1259:C:O2	1:AA:1283:U:H1'	2.21	0.40
1:AA:1324:A:H2'	1:AA:1325:C:C6	2.56	0.40
1:AA:1442:G:H5'	37:BP:114:LEU:HD13	2.04	0.40
2:AB:144:LEU:O	2:AB:145:GLU:C	2.60	0.40
2:AB:167:ASP:O	2:AB:170:HIS:ND1	2.55	0.40
4:AD:78:GLU:CG	4:AD:93:LEU:HD21	2.51	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
10:AJ:65:TYR:HB3	14:AN:96:LEU:HD11	2.03	0.40
11:AK:65:VAL:O	11:AK:65:VAL:CG2	2.69	0.40
11:AK:69:ARG:HD2	22:BA:2146:C:C4	2.56	0.40
12:AL:3:THR:HB	12:AL:6:GLN:HG3	2.03	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
16:AP:38:PHE:CD1	16:AP:38:PHE:C	2.94	0.40
20:AT:15:GLU:OE1	20:AT:19:LYS:NZ	2.55	0.40
20:AT:46:ALA:HA	20:AT:49:LYS:HB2	2.03	0.40
22:BA:669:G:N3	22:BA:669:G:C2'	2.83	0.40
22:BA:767:U:O2'	22:BA:768:G:H5'	2.21	0.40
22:BA:839:U:H2'	22:BA:840:C:C6	2.56	0.40
22:BA:1142:A:C4	22:BA:1144:A:C8	3.10	0.40
22:BA:1671:U:O2	22:BA:1673:G:C8	2.75	0.40
22:BA:1759:A:H2'	22:BA:1760:C:C6	2.55	0.40
22:BA:1838:C:N4	22:BA:1899:A:C4	2.90	0.40
22:BA:1844:C:C2	22:BA:1897:G:C2	3.10	0.40
22:BA:2176:A:H2'	22:BA:2177:C:C6	2.56	0.40
22:BA:2345:G:N3	22:BA:2381:A:H2'	2.36	0.40
22:BA:2564:A:C5	22:BA:2565:A:C6	3.10	0.40
22:BA:2824:C:C4	22:BA:2825:G:C5	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:97:LYS:N	24:BC:97:LYS:HD2	2.35	0.40
24:BC:247:PRO:HG2	24:BC:248:TRP:CZ3	2.56	0.40
26:BE:4:VAL:O	26:BE:4:VAL:HG22	2.21	0.40
30:BI:116:ASP:O	30:BI:117:MET:CG	2.70	0.40
31:BJ:37:ARG:HG3	31:BJ:37:ARG:O	2.21	0.40
32:BK:102:PRO:HB3	32:BK:121:GLU:HB2	2.04	0.40
35:BN:9:GLN:O	35:BN:10:LEU:C	2.60	0.40
39:BR:49:ILE:O	39:BR:49:ILE:HG13	2.21	0.40
42:BU:57:GLY:O	42:BU:59:VAL:HG23	2.21	0.40
47:BZ:35:THR:CG2	47:BZ:36:VAL:N	2.84	0.40
53:B5:49:GLY:CA	53:B5:206:LYS:CB	2.99	0.40
53:B5:133:GLY:O	53:B5:134:PRO:CB	2.69	0.40
1:CA:207:C:O2	1:CA:207:C:H2'	2.21	0.40
1:CA:374:A:OP1	1:CA:452:A:N1	2.54	0.40
1:CA:577:G:N3	1:CA:578:C:C6	2.90	0.40
1:CA:599:C:C2	1:CA:640:A:C2	3.09	0.40
1:CA:659:U:O2'	1:CA:660:C:H5'	2.21	0.40
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.86	0.40
1:CA:1295:U:H2'	1:CA:1296:C:C6	2.56	0.40
1:CA:1500:A:C5	1:CA:1501:C:C5	3.09	0.40
2:CB:139:ARG:HD2	2:CB:140:GLU:N	2.36	0.40
4:CD:30:THR:O	4:CD:31:LYS:HD3	2.21	0.40
4:CD:102:VAL:HG13	4:CD:107:PHE:HB2	2.04	0.40
5:CE:147:MET:HG2	5:CE:147:MET:O	2.21	0.40
7:CG:91:VAL:HG21	7:CG:96:ARG:HA	2.03	0.40
17:CQ:38:ILE:HG22	17:CQ:39:LYS:O	2.21	0.40
22:DA:145:C:H2'	22:DA:146:A:C8	2.56	0.40
22:DA:200:U:C6	22:DA:201:C:C6	3.09	0.40
22:DA:432:A:H2'	22:DA:433:C:C6	2.56	0.40
22:DA:600:G:C1'	26:DE:100:MET:HG2	2.51	0.40
22:DA:825:A:H4'	22:DA:2428:G:C5	2.56	0.40
22:DA:1022:G:C5	22:DA:1140:C:C4	3.10	0.40
22:DA:1090:A:C6	22:DA:1102:C:O2	2.74	0.40
22:DA:1378:A:O3'	57:DA:3751:HOH:O	2.21	0.40
22:DA:1645:G:H5''	22:DA:1646:C:C5'	2.50	0.40
22:DA:1953:A:C2	22:DA:2550:G:O4'	2.74	0.40
22:DA:1989:G:C2'	22:DA:1990:C:H5'	2.51	0.40
22:DA:2066:C:O2'	22:DA:2067:G:H5'	2.21	0.40
22:DA:2115:G:C4	22:DA:2117:A:C8	3.09	0.40
22:DA:2345:G:C5	22:DA:2347:C:C5	3.09	0.40
22:DA:2351:G:O6	51:D3:39:LYS:HE3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2392:A:H4'	51:D3:28:ASN:OD1	2.22	0.40
22:DA:2436:G:C2	22:DA:2437:G:C8	3.09	0.40
22:DA:2526:G:O2'	52:D4:34:LYS:HE2	2.22	0.40
22:DA:2619:C:OP1	25:DD:157:LYS:HE2	2.21	0.40
22:DA:2838:G:C6	22:DA:2839:G:C6	3.10	0.40
22:DA:2881:U:H2'	22:DA:2882:A:C8	2.57	0.40
26:DE:108:ILE:HD13	26:DE:181:ILE:HG13	2.03	0.40
29:DH:96:THR:O	29:DH:98:ASP:N	2.54	0.40
30:DI:53:LEU:CG	30:DI:82:LYS:HE2	2.51	0.40
31:DJ:38:GLY:O	31:DJ:40:HIS:N	2.54	0.40
33:DL:29:LYS:O	33:DL:29:LYS:CG	2.68	0.40
35:DN:20:MET:HG3	35:DN:21:PHE:N	2.36	0.40
39:DR:85:LYS:HG2	39:DR:86:GLN:N	2.36	0.40
41:DT:45:ALA:HA	41:DT:49:LYS:HE3	2.02	0.40
41:DT:91:GLN:O	41:DT:91:GLN:HG2	2.20	0.40
47:DZ:24:LEU:HD11	47:DZ:54:MET:CE	2.50	0.40
50:D2:6:GLN:OE1	50:D2:6:GLN:HA	2.21	0.40
1:AA:193:C:H2'	1:AA:194:C:H6	1.86	0.40
1:AA:204:G:N2	1:AA:465:A:C8	2.89	0.40
1:AA:273:U:C2'	1:AA:274:A:H5'	2.51	0.40
1:AA:389:A:C6	1:AA:390:U:H1'	2.56	0.40
1:AA:666:G:C2	1:AA:741:G:C4	3.09	0.40
1:AA:722:G:H2'	1:AA:723:U:OP2	2.21	0.40
1:AA:849:G:N1	1:AA:850:U:C2	2.90	0.40
1:AA:935:A:O2'	1:AA:1383:C:O2	2.38	0.40
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.56	0.40
1:AA:1126:U:O4'	1:AA:1281:C:C2	2.73	0.40
1:AA:1133:G:C6	1:AA:1142:G:C6	3.09	0.40
1:AA:1134:G:H2'	1:AA:1135:U:O4'	2.21	0.40
1:AA:1301:U:C5	1:AA:1303:C:C4	3.09	0.40
3:AC:167:TRP:C	3:AC:167:TRP:HE3	2.25	0.40
13:AM:11:ASP:CG	13:AM:45:ILE:CG1	2.90	0.40
14:AN:66:GLN:HG3	14:AN:79:LEU:HD21	2.03	0.40
15:AO:82:ILE:HG22	15:AO:87:LEU:HD21	2.04	0.40
16:AP:36:VAL:CG2	16:AP:57:ILE:HG13	2.51	0.40
16:AP:77:GLU:C	16:AP:79:ASN:N	2.75	0.40
17:AQ:13:VAL:HG12	17:AQ:22:VAL:O	2.21	0.40
17:AQ:81:LYS:N	17:AQ:81:LYS:CD	2.85	0.40
22:BA:272:A:H2'	22:BA:273:G:C8	2.56	0.40
22:BA:744:U:C4	22:BA:745:G:C5	3.09	0.40
22:BA:752:A:C2	22:BA:1781:U:N1	2.89	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
22:BA:1248:G:C5	26:BE:46:GLN:NE2	2.89	0.40
22:BA:1842:G:H5''	22:BA:1843:C:OP2	2.21	0.40
22:BA:2031:A:C6	22:BA:2498:C:H1'	2.55	0.40
22:BA:2298:A:C2	22:BA:2321:U:C5	3.09	0.40
22:BA:2564:A:OP1	22:BA:2648:G:H4'	2.21	0.40
22:BA:2756:U:C1'	22:BA:2757:A:H5''	2.51	0.40
27:BF:4:LEU:HD22	27:BF:173:PHE:CE2	2.56	0.40
28:BG:25:THR:HG23	28:BG:34:THR:OG1	2.22	0.40
28:BG:52:PHE:CD2	28:BG:52:PHE:N	2.90	0.40
32:BK:66:LYS:HA	32:BK:79:PHE:O	2.21	0.40
33:BL:38:GLN:O	33:BL:44:GLY:HA3	2.21	0.40
33:BL:120:VAL:HG22	33:BL:121:THR:N	2.36	0.40
35:BN:55:ALA:HB1	35:BN:80:PHE:N	2.36	0.40
42:BU:8:ASP:OD2	42:BU:24:LYS:HD3	2.21	0.40
44:BW:75:LYS:O	44:BW:76:ASN:HB2	2.21	0.40
52:B4:36:ARG:HG2	52:B4:37:GLN:H	1.86	0.40
1:CA:53:A:H2'	1:CA:54:C:O4'	2.21	0.40
1:CA:116:A:H2'	1:CA:117:G:O5'	2.21	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
1:CA:678:U:N3	1:CA:713:G:N2	2.70	0.40
1:CA:890:G:H22	1:CA:906:A:H2'	1.85	0.40
1:CA:1057:G:C5	1:CA:1204:A:C2	3.09	0.40
1:CA:1129:C:C5	1:CA:1139:G:C8	3.09	0.40
1:CA:1386:G:O2'	1:CA:1387:G:H5'	2.21	0.40
3:CC:130:PHE:CZ	3:CC:131:ARG:HD3	2.55	0.40
7:CG:57:SER:HB3	7:CG:60:GLU:HB2	2.03	0.40
9:CI:101:ALA:HB1	9:CI:103:PHE:CE1	2.56	0.40
15:CO:16:GLY:O	15:CO:18:ASP:N	2.54	0.40
17:CQ:44:LEU:O	17:CQ:46:VAL:HG23	2.21	0.40
21:CU:36:GLU:OE1	21:CU:36:GLU:HA	2.20	0.40
22:DA:144:A:N1	22:DA:145:C:C2	2.88	0.40
22:DA:380:G:O3'	45:DX:16:ASN:HB2	2.21	0.40
22:DA:445:C:H2'	22:DA:446:G:C8	2.56	0.40
22:DA:491:G:C2	22:DA:492:A:C4	3.09	0.40
22:DA:681:G:N3	22:DA:682:G:C8	2.89	0.40
22:DA:1028:A:N6	22:DA:1125:G:H2'	2.36	0.40
22:DA:1198:U:H2'	22:DA:1199:U:C6	2.56	0.40
22:DA:1999:C:H5''	22:DA:2723:C:O2'	2.22	0.40
22:DA:2033:A:H4'	22:DA:2034:U:OP1	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2050:C:C4	22:DA:2051:A:C6	3.09	0.40
22:DA:2744:G:C6	22:DA:2761:A:C6	3.10	0.40
55:DA:3001:DOL:O15	55:DA:3001:DOL:C21	2.62	0.40
23:DB:96:G:C2'	23:DB:97:C:H5'	2.51	0.40
25:DD:140:HIS:CD2	25:DD:140:HIS:N	2.88	0.40
26:DE:115:GLN:O	26:DE:117:ARG:HG3	2.22	0.40
32:DK:35:VAL:HG22	32:DK:69:VAL:HG12	2.02	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
46:DY:55:THR:O	46:DY:58:ASN:CB	2.70	0.40
1:AA:270:A:C5	1:AA:271:C:C4	3.09	0.40
1:AA:397:A:C5	1:AA:548:G:N7	2.90	0.40
1:AA:451:A:H5''	16:AP:70:ARG:NH2	2.37	0.40
1:AA:600:A:C2	1:AA:601:G:C4	3.09	0.40
1:AA:945:G:H2'	1:AA:945:G:N3	2.37	0.40
1:AA:957:U:H1'	1:AA:960:U:C4	2.56	0.40
1:AA:982:U:H4'	1:AA:983:A:O5'	2.22	0.40
1:AA:1209:C:O2'	1:AA:1210:C:H5'	2.21	0.40
1:AA:1319:A:C5	1:AA:1323:G:C4	3.10	0.40
1:AA:1419:G:C4	1:AA:1420:U:C5	3.09	0.40
2:AB:77:SER:O	2:AB:93:ASN:HB2	2.21	0.40
4:AD:147:GLU:O	4:AD:150:LYS:HB2	2.21	0.40
7:AG:122:ASN:O	7:AG:126:ASP:OD1	2.39	0.40
8:AH:64:LYS:HB3	8:AH:64:LYS:HE2	1.94	0.40
9:AI:28:ILE:HG13	9:AI:63:LEU:HD21	2.04	0.40
10:AJ:32:THR:HG21	10:AJ:86:ALA:CB	2.51	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
14:AN:51:LEU:HB3	14:AN:52:PRO:HD2	2.03	0.40
17:AQ:49:GLU:O	17:AQ:51:ASN:N	2.54	0.40
22:BA:64:A:C6	22:BA:65:U:C4	3.09	0.40
22:BA:976:G:C2	22:BA:977:G:C8	3.09	0.40
22:BA:1036:G:C5	22:BA:1120:G:C6	3.10	0.40
22:BA:1178:C:O3'	22:BA:1179:G:C8	2.74	0.40
22:BA:1205:A:C6	26:BE:165:HIS:HB2	2.57	0.40
22:BA:1301:A:C2	22:BA:1303:G:C6	3.10	0.40
22:BA:1583:A:O2'	22:BA:1584:U:P	2.80	0.40
22:BA:1665:A:O2'	32:BK:1:MET:HB3	2.21	0.40
22:BA:1840:G:C2'	22:BA:1841:U:H5'	2.52	0.40
22:BA:1851:U:C2'	22:BA:1852:U:H5'	2.51	0.40
22:BA:1920:C:O2	22:BA:1920:C:H2'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2297:A:C2	22:BA:2321:U:C5	3.09	0.40
22:BA:2432:A:H2'	22:BA:2433:A:O4'	2.21	0.40
22:BA:2512:C:H4'	25:BD:127:PHE:CE1	2.57	0.40
22:BA:2627:G:N2	22:BA:2777:G:OP2	2.54	0.40
22:BA:2900:A:H2'	22:BA:2901:C:O4'	2.22	0.40
23:BB:111:U:O2	23:BB:111:U:H2'	2.21	0.40
24:BC:172:VAL:HG23	24:BC:174:LEU:CD1	2.51	0.40
26:BE:97:ASN:O	26:BE:98:LYS:C	2.59	0.40
27:BF:91:LEU:HB3	27:BF:96:MET:HA	2.03	0.40
29:BH:120:GLY:HA2	29:BH:122:LEU:HA	2.04	0.40
35:BN:55:ALA:HB1	35:BN:80:PHE:H	1.87	0.40
39:BR:49:ILE:HB	39:BR:52:PRO:CA	2.52	0.40
1:CA:88:U:C5	1:CA:89:U:C5	3.09	0.40
1:CA:861:G:N7	1:CA:862:C:C5	2.90	0.40
1:CA:1179:A:C2'	1:CA:1180:A:H5'	2.52	0.40
1:CA:1292:G:C2	1:CA:1293:C:C2	3.09	0.40
1:CA:1352:C:C2	1:CA:1371:G:N1	2.89	0.40
2:CB:56:GLU:OE2	2:CB:56:GLU:HA	2.22	0.40
3:CC:117:ALA:HB1	3:CC:187:SER:CB	2.51	0.40
3:CC:184:TYR:CD1	3:CC:201:TRP:NE1	2.89	0.40
4:CD:106:GLY:O	4:CD:158:ALA:HB1	2.21	0.40
6:CF:38:ARG:CG	6:CF:63:ASN:HB2	2.51	0.40
9:CI:91:ASP:OD2	9:CI:91:ASP:C	2.59	0.40
22:DA:201:C:H2'	22:DA:202:U:O5'	2.22	0.40
22:DA:528:A:C2	22:DA:2043:C:C5'	3.05	0.40
22:DA:590:A:H2'	22:DA:591:U:C6	2.56	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:1187:G:H5''	39:DR:83:TYR:CZ	2.55	0.40
22:DA:1316:U:H2'	22:DA:1317:G:C8	2.57	0.40
22:DA:1340:U:H2'	22:DA:1340:U:O2	2.20	0.40
22:DA:1651:G:C6	22:DA:1652:A:C5	3.09	0.40
22:DA:2043:C:O2	22:DA:2044:C:C5	2.75	0.40
22:DA:2756:U:C4	22:DA:2759:G:O6	2.75	0.40
26:DE:8:ALA:CB	26:DE:122:GLU:CG	2.99	0.40
31:DJ:35:ARG:CG	31:DJ:40:HIS:CD2	3.04	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
33:DL:68:SER:O	33:DL:69:ARG:HG3	2.21	0.40
33:DL:100:ILE:O	33:DL:100:ILE:CG1	2.69	0.40
37:DP:51:ARG:O	37:DP:51:ARG:CG	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:33:LEU:HD21	40:DS:52:GLU:CG	2.51	0.40
1:AA:57:G:C6	1:AA:58:C:C4	3.09	0.40
1:AA:69:G:C3'	1:AA:70:U:H6	2.34	0.40
1:AA:139:A:C2'	1:AA:140:U:H5'	2.51	0.40
1:AA:201:G:H2'	1:AA:202:G:O4'	2.21	0.40
1:AA:279:A:N3	1:AA:281:G:N2	2.69	0.40
1:AA:324:G:N2	1:AA:326:G:H3'	2.36	0.40
1:AA:557:G:C6	1:AA:558:G:N1	2.89	0.40
1:AA:606:G:H1'	1:AA:633:G:C2	2.56	0.40
1:AA:1030:U:H5'	1:AA:1031:C:OP1	2.22	0.40
1:AA:1125:U:O4'	10:AJ:73:LEU:CD1	2.70	0.40
1:AA:1239:A:H4'	1:AA:1239:A:OP1	2.22	0.40
1:AA:1302:C:C4	13:AM:17:ILE:HD13	2.56	0.40
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.37	0.40
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.56	0.40
1:AA:1383:C:H2'	1:AA:1384:C:C6	2.56	0.40
2:AB:49:MET:C	2:AB:51:ASN:O	2.60	0.40
4:AD:29:ASP:O	4:AD:31:LYS:CE	2.70	0.40
6:AF:72:ASP:O	6:AF:75:GLU:N	2.54	0.40
8:AH:25:VAL:O	8:AH:25:VAL:HG13	2.21	0.40
8:AH:43:GLU:HG3	8:AH:112:THR:HG21	2.03	0.40
9:AI:51:PRO:HD3	9:AI:80:ARG:HG2	2.03	0.40
11:AK:38:GLN:O	11:AK:38:GLN:HG2	2.21	0.40
12:AL:7:LEU:HD12	17:AQ:34:TYR:CE2	2.56	0.40
16:AP:20:VAL:CG2	16:AP:34:GLU:O	2.69	0.40
21:AU:17:ARG:NH1	21:AU:20:LYS:HG3	2.36	0.40
22:BA:115:C:O2'	22:BA:116:C:H5'	2.22	0.40
22:BA:149:A:C5	22:BA:150:U:C5	3.10	0.40
22:BA:319:G:C5	22:BA:333:G:N2	2.90	0.40
22:BA:565:C:H4'	22:BA:1253:A:N6	2.37	0.40
22:BA:613:A:C8	22:BA:616:A:H2	2.38	0.40
22:BA:634:C:H2'	22:BA:635:C:C6	2.57	0.40
22:BA:735:A:N7	22:BA:761:A:H2	2.20	0.40
22:BA:1100:C:H2'	22:BA:1101:U:C6	2.56	0.40
22:BA:1109:C:N4	22:BA:1110:G:N1	2.70	0.40
22:BA:1588:G:C4	22:BA:1589:U:C5	3.10	0.40
22:BA:2010:G:H2'	22:BA:2011:U:O4'	2.21	0.40
22:BA:2021:C:P	48:B0:9:THR:HG21	2.61	0.40
22:BA:2052:A:O4'	25:BD:147:GLY:HA3	2.22	0.40
22:BA:2127:G:O2'	22:BA:2128:G:O4'	2.39	0.40
22:BA:2232:C:C4	22:BA:2233:U:C5	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2619:C:O2'	22:BA:2620:C:H5'	2.21	0.40
22:BA:2741:A:H2'	22:BA:2742:G:O4'	2.21	0.40
23:BB:30:C:O2'	23:BB:57:A:N1	2.45	0.40
23:BB:109:A:C6	23:BB:110:C:N3	2.90	0.40
26:BE:119:ILE:O	26:BE:187:VAL:HA	2.21	0.40
36:BO:12:THR:O	36:BO:12:THR:CG2	2.69	0.40
36:BO:88:LYS:CG	36:BO:89:ASP:N	2.85	0.40
36:BO:110:ALA:O	36:BO:115:LEU:HB3	2.20	0.40
37:BP:6:LYS:O	37:BP:7:GLN:C	2.59	0.40
38:BQ:18:LEU:HD13	38:BQ:18:LEU:HA	1.99	0.40
45:BX:45:ARG:HG2	45:BX:46:PHE:N	2.37	0.40
46:BY:14:LEU:HG	46:BY:57:LEU:HD11	2.02	0.40
47:BZ:5:ILE:HG23	47:BZ:40:ASP:HB2	2.04	0.40
51:B3:45:ARG:N	51:B3:46:PRO:HD2	2.37	0.40
1:CA:91:U:C4	1:CA:92:U:C5	3.10	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
1:CA:496:A:N3	1:CA:497:G:N7	2.69	0.40
1:CA:505:G:N3	1:CA:505:G:H2'	2.36	0.40
1:CA:563:A:N7	1:CA:567:G:H1'	2.36	0.40
1:CA:844:G:C8	1:CA:844:G:OP2	2.74	0.40
1:CA:1007:U:C3'	1:CA:1008:U:H5'	2.52	0.40
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.57	0.40
1:CA:1434:A:N6	1:CA:1435:G:C6	2.89	0.40
1:CA:1536:C:H2'	1:CA:1537:U:C6	2.56	0.40
1:CA:1540:U:H4'	21:CU:18:ARG:HG2	2.02	0.40
4:CD:24:GLY:O	4:CD:161:LEU:CD1	2.70	0.40
4:CD:91:LEU:HD12	4:CD:188:ARG:NE	2.37	0.40
4:CD:195:ILE:O	4:CD:195:ILE:CG1	2.69	0.40
6:CF:71:ILE:CD1	6:CF:71:ILE:N	2.85	0.40
7:CG:148:ASN:C	7:CG:150:ALA:N	2.75	0.40
9:CI:31:ASN:HA	9:CI:66:THR:HG22	2.03	0.40
9:CI:61:LEU:CD2	9:CI:61:LEU:N	2.85	0.40
9:CI:76:ALA:HA	9:CI:79:ILE:HD12	2.03	0.40
12:CL:79:VAL:O	12:CL:103:ASP:HB2	2.21	0.40
13:CM:13:LYS:O	13:CM:14:HIS:CG	2.72	0.40
13:CM:24:GLY:HA3	13:CM:65:VAL:HG12	2.04	0.40
15:CO:57:LEU:O	15:CO:61:SER:N	2.46	0.40
18:CR:49:ALA:O	18:CR:50:LYS:C	2.58	0.40
22:DA:7:G:H4'	31:DJ:15:TRP:HH2	1.87	0.40
22:DA:61:C:OP1	46:DY:44:LYS:HD3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:190:A:N6	22:DA:191:A:N1	2.70	0.40
22:DA:211:C:H2'	22:DA:212:G:O4'	2.21	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
22:DA:476:G:H4'	22:DA:502:A:N1	2.36	0.40
22:DA:540:C:C2	22:DA:541:A:C8	3.10	0.40
22:DA:563:A:C2	22:DA:2018:G:H1'	2.56	0.40
22:DA:690:G:O2'	22:DA:780:G:OP1	2.29	0.40
22:DA:756:A:H2'	22:DA:757:G:O4'	2.21	0.40
22:DA:1263:U:H4'	48:D0:7:LYS:HE3	2.04	0.40
22:DA:1275:A:H4'	22:DA:1276:A:OP1	2.19	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
22:DA:1409:U:H2'	22:DA:1410:G:C8	2.56	0.40
22:DA:1437:C:C4	22:DA:1438:U:O4	2.75	0.40
22:DA:1737:G:C6	22:DA:1738:G:C6	3.10	0.40
22:DA:1924:C:H2'	22:DA:1925:C:O4'	2.21	0.40
22:DA:2234:G:C6	22:DA:2235:G:C8	3.10	0.40
22:DA:2677:G:H2'	22:DA:2678:C:C6	2.56	0.40
23:DB:44:G:N2	23:DB:48:U:C2	2.89	0.40
25:DD:62:LYS:N	25:DD:63:PRO:CD	2.84	0.40
26:DE:18:THR:O	26:DE:110:SER:OG	2.40	0.40
26:DE:52:VAL:HB	26:DE:74:LYS:HD3	2.03	0.40
31:DJ:17:VAL:HG23	31:DJ:137:PRO:HB2	2.03	0.40
32:DK:31:ARG:HB2	32:DK:32:TYR:CD2	2.56	0.40
37:DP:28:VAL:HG21	37:DP:74:PHE:CE2	2.56	0.40
39:DR:51:VAL:O	39:DR:52:PRO:C	2.58	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
41:DT:93:LEU:HD22	41:DT:93:LEU:N	2.36	0.40
42:DU:38:GLY:HA2	42:DU:41:LEU:HD21	2.01	0.40
45:DX:58:VAL:CG1	45:DX:59:ILE:N	2.85	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	6
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	1
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%)	1	4
8	AH	127/129 (98%)	87 (68%)	31 (24%)	9 (7%)	1	3
8	CH	127/129 (98%)	102 (80%)	17 (13%)	8 (6%)	1	4
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	0
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	2
12	AL	121/123 (98%)	91 (75%)	20 (16%)	10 (8%)	1	2
12	CL	121/123 (98%)	89 (74%)	20 (16%)	12 (10%)	0	1
13	AM	112/114 (98%)	80 (71%)	21 (19%)	11 (10%)	0	1
13	CM	112/114 (98%)	82 (73%)	17 (15%)	13 (12%)	0	1
14	AN	92/100 (92%)	54 (59%)	29 (32%)	9 (10%)	0	1

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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	3
15	CO	86/88 (98%)	66 (77%)	16 (19%)	4 (5%)	2	8
16	AP	80/82 (98%)	57 (71%)	11 (14%)	12 (15%)	0	0
16	CP	80/82 (98%)	59 (74%)	16 (20%)	5 (6%)	1	4
17	AQ	78/80 (98%)	55 (70%)	15 (19%)	8 (10%)	0	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%)	3	13
18	CR	53/55 (96%)	34 (64%)	16 (30%)	3 (6%)	1	5
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%)	2	9
24	DC	269/271 (99%)	195 (72%)	50 (19%)	24 (9%)	1	1
25	BD	207/209 (99%)	178 (86%)	22 (11%)	7 (3%)	3	15
25	DD	207/209 (99%)	153 (74%)	45 (22%)	9 (4%)	2	10
26	BE	199/201 (99%)	162 (81%)	34 (17%)	3 (2%)	10	34
26	DE	199/201 (99%)	153 (77%)	29 (15%)	17 (8%)	1	2
27	BF	175/177 (99%)	139 (79%)	28 (16%)	8 (5%)	2	9
27	DF	175/177 (99%)	140 (80%)	23 (13%)	12 (7%)	1	3
28	BG	174/176 (99%)	147 (84%)	18 (10%)	9 (5%)	2	6
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%)	0	1
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%)	7	26
31	DJ	140/142 (99%)	112 (80%)	14 (10%)	14 (10%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
32	BK	120/122 (98%)	97 (81%)	16 (13%)	7 (6%)	1	5
32	DK	120/122 (98%)	97 (81%)	13 (11%)	10 (8%)	1	2
33	BL	141/143 (99%)	118 (84%)	18 (13%)	5 (4%)	3	14
33	DL	141/143 (99%)	101 (72%)	25 (18%)	15 (11%)	0	1
34	BM	134/136 (98%)	118 (88%)	14 (10%)	2 (2%)	10	34
34	DM	134/136 (98%)	108 (81%)	19 (14%)	7 (5%)	2	6
35	BN	118/120 (98%)	99 (84%)	16 (14%)	3 (2%)	5	21
35	DN	118/120 (98%)	92 (78%)	16 (14%)	10 (8%)	1	2
36	BO	114/116 (98%)	94 (82%)	17 (15%)	3 (3%)	5	20
36	DO	114/116 (98%)	84 (74%)	23 (20%)	7 (6%)	1	4
37	BP	112/114 (98%)	96 (86%)	10 (9%)	6 (5%)	2	6
37	DP	112/114 (98%)	86 (77%)	19 (17%)	7 (6%)	1	4
38	BQ	115/117 (98%)	109 (95%)	4 (4%)	2 (2%)	9	31
38	DQ	115/117 (98%)	93 (81%)	20 (17%)	2 (2%)	9	31
39	BR	101/103 (98%)	81 (80%)	10 (10%)	10 (10%)	0	1
39	DR	101/103 (98%)	73 (72%)	22 (22%)	6 (6%)	1	5
40	BS	108/110 (98%)	92 (85%)	13 (12%)	3 (3%)	5	19
40	DS	108/110 (98%)	83 (77%)	17 (16%)	8 (7%)	1	2
41	BT	91/93 (98%)	74 (81%)	8 (9%)	9 (10%)	0	1
41	DT	91/93 (98%)	53 (58%)	26 (29%)	12 (13%)	0	0
42	BU	100/102 (98%)	77 (77%)	17 (17%)	6 (6%)	1	4
42	DU	100/102 (98%)	69 (69%)	17 (17%)	14 (14%)	0	0
43	BV	92/94 (98%)	84 (91%)	6 (6%)	2 (2%)	6	24
43	DV	92/94 (98%)	77 (84%)	12 (13%)	3 (3%)	4	15
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%)	12	37
45	DX	75/77 (97%)	57 (76%)	11 (15%)	7 (9%)	0	1
46	BY	61/63 (97%)	42 (69%)	11 (18%)	8 (13%)	0	0
46	DY	61/63 (97%)	46 (75%)	12 (20%)	3 (5%)	2	8
47	BZ	56/58 (97%)	51 (91%)	3 (5%)	2 (4%)	3	14

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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	5
48	D0	54/56 (96%)	38 (70%)	12 (22%)	4 (7%)	1	2
49	B1	48/50 (96%)	38 (79%)	7 (15%)	3 (6%)	1	4
49	D1	48/50 (96%)	39 (81%)	4 (8%)	5 (10%)	0	1
50	B2	44/46 (96%)	38 (86%)	4 (9%)	2 (4%)	2	9
50	D2	44/46 (96%)	32 (73%)	8 (18%)	4 (9%)	1	1
51	B3	62/64 (97%)	56 (90%)	5 (8%)	1 (2%)	9	32
51	D3	62/64 (97%)	49 (79%)	11 (18%)	2 (3%)	4	16
52	B4	36/38 (95%)	31 (86%)	4 (11%)	1 (3%)	5	19
52	D4	36/38 (95%)	31 (86%)	3 (8%)	2 (6%)	2	5
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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Mol	Chain	Res	Type
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 [i](#)

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	1
2	CB	180/180 (100%)	132 (73%)	48 (27%)	0	1
3	AC	170/170 (100%)	136 (80%)	34 (20%)	1	4
3	CC	170/170 (100%)	146 (86%)	24 (14%)	3	10
4	AD	172/172 (100%)	138 (80%)	34 (20%)	1	4
4	CD	172/172 (100%)	145 (84%)	27 (16%)	2	8
5	AE	113/113 (100%)	86 (76%)	27 (24%)	0	2
5	CE	113/113 (100%)	84 (74%)	29 (26%)	0	1
6	AF	87/87 (100%)	71 (82%)	16 (18%)	1	5
6	CF	87/87 (100%)	60 (69%)	27 (31%)	0	1
7	AG	124/124 (100%)	105 (85%)	19 (15%)	2	8
7	CG	124/124 (100%)	100 (81%)	24 (19%)	1	4
8	AH	104/104 (100%)	84 (81%)	20 (19%)	1	4
8	CH	104/104 (100%)	84 (81%)	20 (19%)	1	4
9	AI	105/105 (100%)	76 (72%)	29 (28%)	0	1
9	CI	105/105 (100%)	90 (86%)	15 (14%)	3	10
10	AJ	86/86 (100%)	69 (80%)	17 (20%)	1	4
10	CJ	86/86 (100%)	65 (76%)	21 (24%)	0	2
11	AK	90/90 (100%)	75 (83%)	15 (17%)	2	6
11	CK	90/90 (100%)	73 (81%)	17 (19%)	1	4
12	AL	103/103 (100%)	86 (84%)	17 (16%)	2	7
12	CL	103/103 (100%)	83 (81%)	20 (19%)	1	4
13	AM	92/92 (100%)	76 (83%)	16 (17%)	2	6
13	CM	92/92 (100%)	75 (82%)	17 (18%)	1	5
14	AN	79/83 (95%)	65 (82%)	14 (18%)	2	5
14	CN	79/83 (95%)	71 (90%)	8 (10%)	7	23

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
15	AO	75/76 (99%)	63 (84%)	12 (16%)	2	7
15	CO	75/76 (99%)	64 (85%)	11 (15%)	3	9
16	AP	65/65 (100%)	49 (75%)	16 (25%)	0	2
16	CP	65/65 (100%)	55 (85%)	10 (15%)	2	8
17	AQ	74/74 (100%)	50 (68%)	24 (32%)	0	0
17	CQ	74/74 (100%)	52 (70%)	22 (30%)	0	1
18	AR	48/48 (100%)	37 (77%)	11 (23%)	1	2
18	CR	48/48 (100%)	39 (81%)	9 (19%)	1	4
19	AS	70/70 (100%)	54 (77%)	16 (23%)	1	2
19	CS	70/70 (100%)	57 (81%)	13 (19%)	1	5
20	AT	65/65 (100%)	51 (78%)	14 (22%)	1	3
20	CT	65/65 (100%)	57 (88%)	8 (12%)	4	14
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%)	4	14
24	DC	216/216 (100%)	194 (90%)	22 (10%)	7	22
25	BD	164/164 (100%)	147 (90%)	17 (10%)	7	21
25	DD	164/164 (100%)	147 (90%)	17 (10%)	7	21
26	BE	165/165 (100%)	138 (84%)	27 (16%)	2	7
26	DE	165/165 (100%)	139 (84%)	26 (16%)	2	8
27	BF	148/148 (100%)	115 (78%)	33 (22%)	1	3
27	DF	148/148 (100%)	121 (82%)	27 (18%)	1	5
28	BG	137/137 (100%)	120 (88%)	17 (12%)	4	14
28	DG	137/137 (100%)	114 (83%)	23 (17%)	2	6
29	BH	114/114 (100%)	88 (77%)	26 (23%)	1	2
29	DH	114/114 (100%)	88 (77%)	26 (23%)	1	2
30	BI	109/109 (100%)	83 (76%)	26 (24%)	0	2
30	DI	109/109 (100%)	83 (76%)	26 (24%)	0	2
31	BJ	116/116 (100%)	104 (90%)	12 (10%)	7	22
31	DJ	116/116 (100%)	97 (84%)	19 (16%)	2	7
32	BK	103/103 (100%)	90 (87%)	13 (13%)	4	13

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
32	DK	103/103 (100%)	92 (89%)	11 (11%)	6	20
33	BL	102/102 (100%)	92 (90%)	10 (10%)	8	24
33	DL	102/102 (100%)	89 (87%)	13 (13%)	4	13
34	BM	109/109 (100%)	100 (92%)	9 (8%)	11	32
34	DM	109/109 (100%)	97 (89%)	12 (11%)	6	19
35	BN	100/100 (100%)	93 (93%)	7 (7%)	15	41
35	DN	100/100 (100%)	77 (77%)	23 (23%)	1	2
36	BO	86/86 (100%)	66 (77%)	20 (23%)	1	2
36	DO	86/86 (100%)	69 (80%)	17 (20%)	1	4
37	BP	99/99 (100%)	84 (85%)	15 (15%)	3	8
37	DP	99/99 (100%)	90 (91%)	9 (9%)	9	28
38	BQ	89/89 (100%)	78 (88%)	11 (12%)	4	14
38	DQ	89/89 (100%)	78 (88%)	11 (12%)	4	14
39	BR	84/84 (100%)	74 (88%)	10 (12%)	5	15
39	DR	84/84 (100%)	79 (94%)	5 (6%)	19	49
40	BS	93/93 (100%)	77 (83%)	16 (17%)	2	6
40	DS	93/93 (100%)	82 (88%)	11 (12%)	5	16
41	BT	80/80 (100%)	70 (88%)	10 (12%)	4	14
41	DT	80/80 (100%)	69 (86%)	11 (14%)	3	10
42	BU	83/83 (100%)	71 (86%)	12 (14%)	3	9
42	DU	83/83 (100%)	68 (82%)	15 (18%)	1	5
43	BV	78/78 (100%)	61 (78%)	17 (22%)	1	3
43	DV	78/78 (100%)	65 (83%)	13 (17%)	2	6
44	BW	57/58 (98%)	48 (84%)	9 (16%)	2	8
44	DW	56/58 (97%)	48 (86%)	8 (14%)	3	10
45	BX	67/67 (100%)	59 (88%)	8 (12%)	5	15
45	DX	67/67 (100%)	57 (85%)	10 (15%)	3	9
46	BY	55/55 (100%)	49 (89%)	6 (11%)	6	19
46	DY	55/55 (100%)	42 (76%)	13 (24%)	1	2
47	BZ	48/48 (100%)	43 (90%)	5 (10%)	7	21
47	DZ	48/48 (100%)	38 (79%)	10 (21%)	1	3

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
48	B0	47/47 (100%)	43 (92%)	4 (8%)	10	31
48	D0	47/47 (100%)	42 (89%)	5 (11%)	6	20
49	B1	45/45 (100%)	42 (93%)	3 (7%)	16	43
49	D1	45/45 (100%)	38 (84%)	7 (16%)	2	8
50	B2	38/38 (100%)	34 (90%)	4 (10%)	7	21
50	D2	38/38 (100%)	32 (84%)	6 (16%)	2	8
51	B3	51/51 (100%)	45 (88%)	6 (12%)	5	16
51	D3	51/51 (100%)	46 (90%)	5 (10%)	8	24
52	B4	34/34 (100%)	32 (94%)	2 (6%)	19	49
52	D4	34/34 (100%)	28 (82%)	6 (18%)	2	5
53	B5	61/180 (34%)	47 (77%)	14 (23%)	1	2
All	All	9386/9518 (99%)	7782 (83%)	1604 (17%)	2	6

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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Mol	Chain	Res	Type
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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Mol	Chain	Res	Type
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

Sometimes 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 [i](#)

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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Mol	Chain	Res	Type
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 monosaccharides 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	2.84	15 (34%)	51,70,70	2.93	17 (33%)
55	DOL	DA	3001	-	43,50,50	2.94	13 (30%)	51,70,70	2.84	11 (21%)

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	-	-	15/58/77/77	0/2/3/3
55	DOL	DA	3001	-	-	11/58/77/77	0/2/3/3

All (28) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	DA	3001	DOL	O15-C14	9.24	1.37	1.21
55	BA	3001	DOL	O15-C14	9.11	1.37	1.21
55	DA	3001	DOL	C22-C23	7.99	1.52	1.32
55	BA	3001	DOL	C22-C23	7.21	1.50	1.32
55	BA	3001	DOL	O38-C37	6.58	1.37	1.21
55	DA	3001	DOL	O38-C37	6.51	1.37	1.21
55	DA	3001	DOL	C26-N25	6.15	1.47	1.34
55	DA	3001	DOL	C19-C20	5.25	1.51	1.34
55	BA	3001	DOL	C26-N25	5.10	1.45	1.34
55	BA	3001	DOL	C19-C20	4.89	1.49	1.34
55	DA	3001	DOL	C6-N5	4.57	1.45	1.34
55	BA	3001	DOL	C6-N5	4.51	1.45	1.34
55	BA	3001	DOL	C16-C17	-3.73	1.48	1.54
55	DA	3001	DOL	C28-C29	3.69	1.41	1.32
55	BA	3001	DOL	O36-C32	-3.54	1.39	1.44
55	BA	3001	DOL	C28-C29	3.40	1.40	1.32
55	DA	3001	DOL	O18-C17	-3.34	1.37	1.43
55	DA	3001	DOL	C16-C17	-3.22	1.49	1.54
55	DA	3001	DOL	C42-S39	3.12	1.83	1.78
55	BA	3001	DOL	O18-C17	-3.01	1.38	1.43
55	BA	3001	DOL	O36-C37	-2.96	1.27	1.34
55	DA	3001	DOL	O36-C32	-2.86	1.40	1.44
55	DA	3001	DOL	C22-C20	2.85	1.52	1.45
55	BA	3001	DOL	C3-C4	2.46	1.57	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	DA	3001	DOL	O36-C37	-2.29	1.29	1.34
55	BA	3001	DOL	C1-N5	-2.16	1.43	1.46
55	BA	3001	DOL	C22-C20	2.13	1.50	1.45
55	BA	3001	DOL	C42-S39	2.05	1.81	1.78

All (28) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	DA	3001	DOL	O40-S39-O41	-15.59	100.41	118.19
55	BA	3001	DOL	O40-S39-O41	-11.60	104.96	118.19
55	BA	3001	DOL	C29-C28-C26	-7.33	104.35	122.69
55	BA	3001	DOL	C43-C42-S39	7.02	126.83	112.14
55	BA	3001	DOL	C8-C6-N5	7.00	127.83	119.76
55	DA	3001	DOL	C4-N5-C1	-5.09	106.19	112.45
55	BA	3001	DOL	C24-N25-C26	-4.54	114.69	122.03
55	DA	3001	DOL	C30-C29-C28	-4.27	114.77	126.44
55	DA	3001	DOL	C23-C22-C20	-4.13	119.65	125.89
55	BA	3001	DOL	O7-C6-N5	-3.82	115.41	121.59
55	BA	3001	DOL	C3-C2-C1	3.65	109.19	103.13
55	DA	3001	DOL	C29-C28-C26	-3.64	113.59	122.69
55	BA	3001	DOL	C28-C26-N25	3.57	121.69	114.97
55	DA	3001	DOL	C32-O36-C37	3.51	123.81	117.78
55	DA	3001	DOL	C3-C2-C1	3.41	108.79	103.13
55	DA	3001	DOL	O36-C37-C1	3.15	117.96	111.52
55	BA	3001	DOL	C4-N5-C1	-3.04	108.72	112.45
55	BA	3001	DOL	O27-C26-N25	-2.71	117.75	122.23
55	BA	3001	DOL	C23-C22-C20	-2.68	121.84	125.89
55	BA	3001	DOL	O36-C37-C1	2.68	116.99	111.52
55	BA	3001	DOL	C30-C29-C28	-2.63	119.25	126.44
55	DA	3001	DOL	C3-C4-N5	-2.53	100.73	103.33
55	BA	3001	DOL	C21-C20-C22	2.44	121.92	118.08
55	DA	3001	DOL	C43-C42-S39	2.40	117.16	112.14
55	BA	3001	DOL	O40-S39-C42	2.38	117.31	107.97
55	DA	3001	DOL	C28-C26-N25	2.19	119.09	114.97
55	BA	3001	DOL	C16-C17-C19	-2.16	107.05	111.10
55	BA	3001	DOL	O15-C14-C13	-2.13	117.59	120.77

There are no chirality outliers.

All (26) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
55	BA	3001	DOL	C43-C42-S39-C2

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Mol	Chain	Res	Type	Atoms
55	BA	3001	DOL	C43-C42-S39-O41
55	BA	3001	DOL	C43-C42-S39-O40
55	BA	3001	DOL	S39-C42-C43-N44
55	BA	3001	DOL	N25-C26-C28-C29
55	BA	3001	DOL	O27-C26-C28-C29
55	DA	3001	DOL	N25-C26-C28-C29
55	BA	3001	DOL	C21-C20-C22-C23
55	BA	3001	DOL	C19-C20-C22-C23
55	DA	3001	DOL	C28-C29-C30-C31
55	DA	3001	DOL	O27-C26-C28-C29
55	DA	3001	DOL	C46-C45-N44-C47
55	BA	3001	DOL	C46-C45-N44-C43
55	BA	3001	DOL	C46-C45-N44-C47
55	DA	3001	DOL	C46-C45-N44-C43
55	DA	3001	DOL	C2-C1-C37-O38
55	DA	3001	DOL	C2-C1-C37-O36
55	BA	3001	DOL	O36-C32-C33-C34
55	DA	3001	DOL	C43-C42-S39-C2
55	DA	3001	DOL	C10-C13-C14-C16
55	DA	3001	DOL	C10-C13-C14-O15
55	BA	3001	DOL	C28-C29-C30-C31
55	BA	3001	DOL	C30-C32-C33-C35
55	BA	3001	DOL	O36-C32-C33-C35
55	BA	3001	DOL	C42-C43-N44-C45
55	DA	3001	DOL	C42-C43-N44-C47

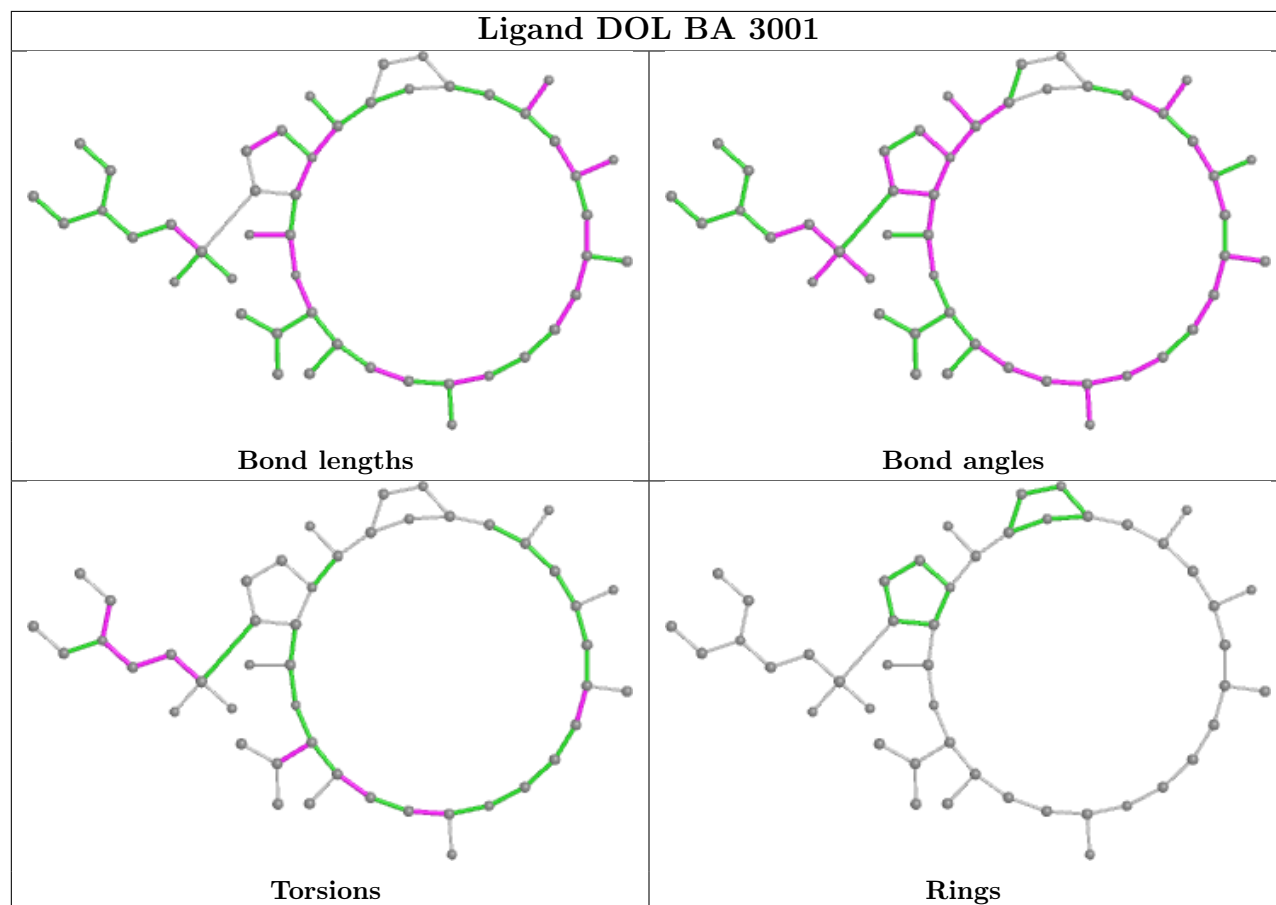
There are no ring outliers.

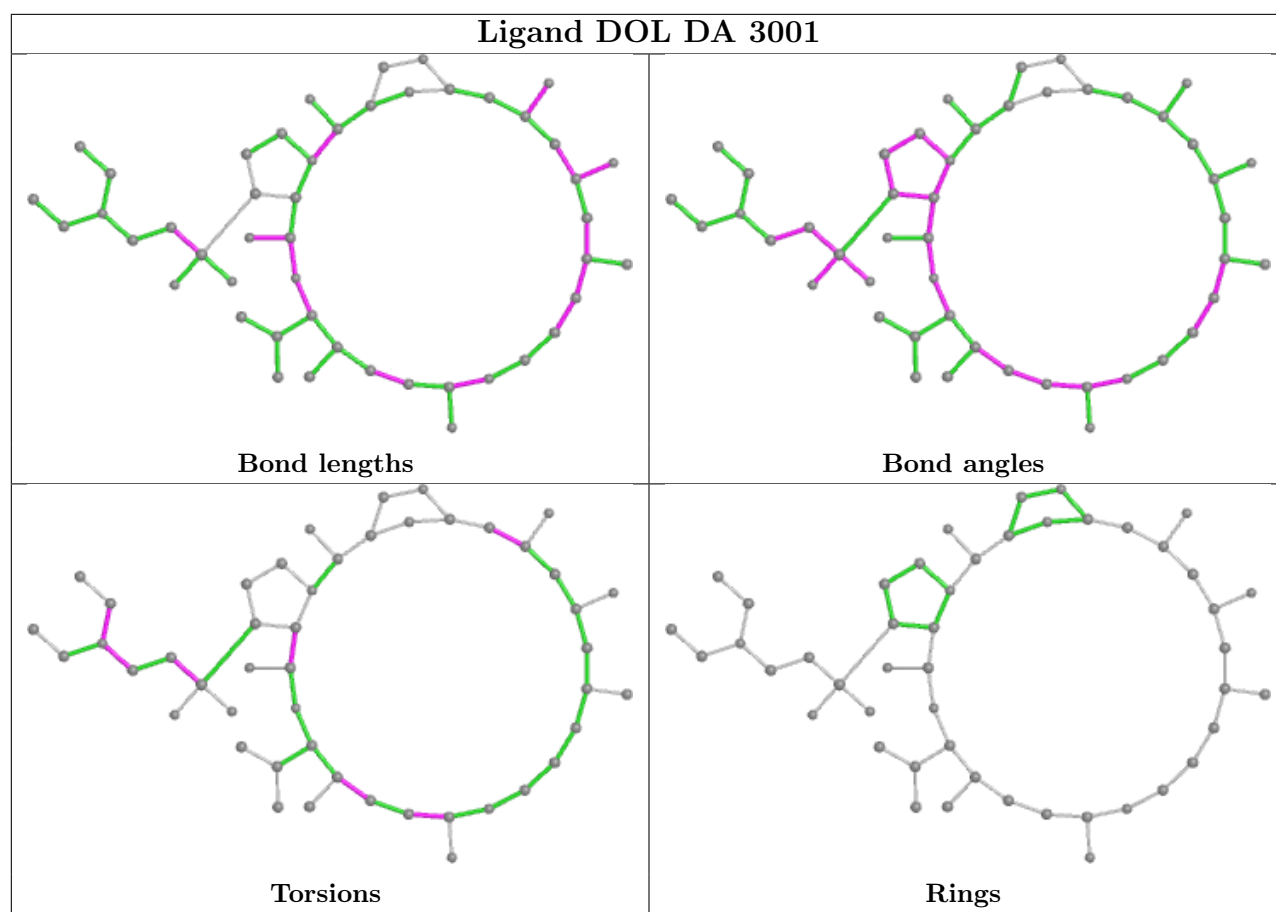
2 monomers are involved in 38 short contacts:

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

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and

any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.





5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data i

6.1 Protein, DNA and RNA chains i

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th 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 ²)	Q<0.9
1	AA	1538/1539 (99%)	-0.11	34 (2%) 62 59	11, 51, 132, 183	0
1	CA	1539/1539 (100%)	0.35	125 (8%) 12 9	24, 70, 147, 178	0
2	AB	218/218 (100%)	1.02	38 (17%) 1 1	40, 75, 101, 117	0
2	CB	218/218 (100%)	1.08	47 (21%) 0 0	60, 88, 108, 123	0
3	AC	206/206 (100%)	0.17	7 (3%) 45 40	37, 58, 80, 95	0
3	CC	206/206 (100%)	0.98	35 (16%) 1 1	55, 80, 98, 108	0
4	AD	205/205 (100%)	0.29	9 (4%) 34 30	33, 57, 80, 100	0
4	CD	205/205 (100%)	-0.08	6 (2%) 51 47	15, 36, 60, 84	0
5	AE	150/150 (100%)	0.15	3 (2%) 65 63	29, 48, 78, 94	0
5	CE	150/150 (100%)	0.27	7 (4%) 31 28	27, 53, 83, 104	0
6	AF	100/100 (100%)	0.48	10 (10%) 7 5	35, 56, 75, 79	0
6	CF	100/100 (100%)	0.54	6 (6%) 21 18	43, 73, 92, 104	0
7	AG	151/151 (100%)	0.79	17 (11%) 5 4	54, 76, 92, 100	0
7	CG	151/151 (100%)	2.73	88 (58%) 0 0	82, 106, 115, 119	0
8	AH	129/129 (100%)	0.02	2 (1%) 72 71	29, 48, 68, 79	0
8	CH	129/129 (100%)	0.26	4 (3%) 49 44	48, 64, 81, 96	0
9	AI	127/127 (100%)	1.09	24 (18%) 1 0	45, 75, 98, 107	0
9	CI	127/127 (100%)	1.74	44 (34%) 0 0	81, 97, 114, 121	0
10	AJ	98/98 (100%)	0.82	16 (16%) 1 1	41, 68, 88, 116	0
10	CJ	98/98 (100%)	2.56	53 (54%) 0 0	73, 98, 115, 124	0
11	AK	117/117 (100%)	0.44	12 (10%) 6 5	28, 62, 92, 120	0
11	CK	117/117 (100%)	0.33	4 (3%) 45 40	36, 68, 82, 90	0
12	AL	123/123 (100%)	0.05	4 (3%) 46 41	20, 35, 65, 97	0
12	CL	123/123 (100%)	0.33	7 (5%) 23 19	33, 50, 75, 96	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AM	114/114 (100%)	1.16	26 (22%) 0 0	49, 72, 93, 104	0
13	CM	114/114 (100%)	3.75	90 (78%) 0 0	94, 115, 124, 126	0
14	AN	96/100 (96%)	0.71	11 (11%) 4 3	41, 62, 96, 105	0
14	CN	96/100 (96%)	2.36	51 (53%) 0 0	71, 97, 116, 123	0
15	AO	88/88 (100%)	0.20	3 (3%) 45 40	31, 48, 65, 90	0
15	CO	88/88 (100%)	0.38	6 (6%) 17 13	38, 65, 80, 103	0
16	AP	82/82 (100%)	0.33	4 (4%) 29 26	35, 48, 84, 109	0
16	CP	82/82 (100%)	0.63	7 (8%) 10 8	45, 62, 92, 113	0
17	AQ	80/80 (100%)	0.45	4 (5%) 28 25	28, 49, 75, 110	0
17	CQ	80/80 (100%)	1.22	18 (22%) 0 0	43, 79, 98, 100	0
18	AR	55/55 (100%)	0.67	8 (14%) 2 1	42, 55, 78, 101	0
18	CR	55/55 (100%)	0.48	7 (12%) 3 2	36, 55, 78, 109	0
19	AS	79/79 (100%)	1.31	24 (30%) 0 0	56, 72, 89, 97	0
19	CS	79/79 (100%)	3.39	57 (72%) 0 0	98, 115, 124, 129	0
20	AT	85/85 (100%)	0.46	7 (8%) 11 9	36, 48, 70, 95	0
20	CT	85/85 (100%)	1.54	25 (29%) 0 0	54, 78, 96, 101	0
21	AU	51/51 (100%)	1.44	17 (33%) 0 0	44, 76, 97, 105	0
21	CU	51/51 (100%)	0.65	4 (7%) 13 10	45, 71, 100, 103	0
22	BA	2897/2903 (99%)	0.06	140 (4%) 30 27	1, 14, 129, 195	0
22	DA	2897/2903 (99%)	0.60	229 (7%) 12 10	41, 85, 148, 181	0
23	BB	119/119 (100%)	-0.41	0 100 100	2, 23, 50, 80	0
23	DB	118/119 (99%)	0.77	14 (11%) 4 3	69, 115, 134, 143	0
24	BC	271/271 (100%)	-0.33	2 (0%) 87 87	2, 20, 37, 55	0
24	DC	271/271 (100%)	0.46	12 (4%) 34 30	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%)	0.75	31 (14%) 2 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%)	1.40	50 (24%) 0 0	53, 90, 107, 114	0
27	BF	177/177 (100%)	0.22	14 (7%) 12 10	22, 44, 76, 90	0
27	DF	177/177 (100%)	3.11	120 (67%) 0 0	97, 114, 126, 131	0
28	BG	176/176 (100%)	-0.29	1 (0%) 89 89	16, 36, 57, 72	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	DG	176/176 (100%)	2.16	86 (48%) 0 0	77, 96, 111, 121	0
29	BH	149/149 (100%)	2.72	74 (49%) 0 0	25, 102, 121, 129	0
29	DH	149/149 (100%)	1.28	36 (24%) 0 0	25, 92, 107, 115	0
30	BI	141/141 (100%)	3.80	96 (68%) 0 0	90, 117, 127, 134	0
30	DI	141/141 (100%)	5.64	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%)	0.55	10 (7%) 16 12	52, 69, 83, 91	0
32	BK	122/122 (100%)	-0.36	0 100 100	3, 12, 31, 62	0
32	DK	122/122 (100%)	0.53	8 (6%) 18 14	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%)	1.70	53 (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%)	0.62	15 (11%) 5 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%)	0.99	18 (15%) 2 1	59, 79, 94, 112	0
36	BO	116/116 (100%)	-0.32	0 100 100	14, 26, 45, 55	0
36	DO	116/116 (100%)	2.11	59 (50%) 0 0	86, 100, 111, 118	0
37	BP	114/114 (100%)	-0.36	2 (1%) 68 67	8, 17, 41, 72	0
37	DP	114/114 (100%)	0.98	19 (16%) 1 1	61, 75, 86, 95	0
38	BQ	117/117 (100%)	-0.31	0 100 100	0, 3, 13, 34	0
38	DQ	117/117 (100%)	1.02	19 (16%) 1 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%)	1.52	32 (31%) 0 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%)	1.19	22 (20%) 1 0	62, 80, 95, 106	0
41	BT	93/93 (100%)	0.07	3 (3%) 47 43	9, 26, 68, 100	0
41	DT	93/93 (100%)	2.09	48 (51%) 0 0	73, 92, 106, 115	0
42	BU	102/102 (100%)	0.22	11 (10%) 5 4	12, 29, 63, 79	0
42	DU	102/102 (100%)	2.75	58 (56%) 0 0	78, 96, 110, 122	0
43	BV	94/94 (100%)	-0.38	0 100 100	5, 21, 43, 55	0
43	DV	94/94 (100%)	1.16	22 (23%) 0 0	74, 88, 99, 106	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	BW	76/76 (100%)	-0.35	1 (1%) 77 77	5, 12, 30, 57	0
44	DW	75/76 (98%)	1.42	22 (29%) 0 0	58, 83, 92, 105	0
45	BX	77/77 (100%)	-0.32	0 100 100	8, 22, 51, 68	0
45	DX	77/77 (100%)	1.02	16 (20%) 1 0	50, 72, 87, 92	0
46	BY	63/63 (100%)	0.21	3 (4%) 30 27	24, 41, 73, 95	0
46	DY	63/63 (100%)	2.05	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%)	0.80	6 (10%) 6 5	60, 74, 85, 103	0
48	B0	56/56 (100%)	-0.49	0 100 100	1, 10, 35, 60	0
48	D0	56/56 (100%)	1.41	15 (26%) 0 0	52, 83, 98, 105	0
49	B1	50/50 (100%)	-0.20	0 100 100	15, 27, 51, 58	0
49	D1	50/50 (100%)	2.05	22 (44%) 0 0	74, 90, 95, 105	0
50	B2	46/46 (100%)	-0.34	1 (2%) 62 59	5, 9, 16, 79	0
50	D2	46/46 (100%)	1.23	12 (26%) 0 0	58, 72, 87, 102	0
51	B3	64/64 (100%)	-0.40	0 100 100	4, 10, 20, 29	0
51	D3	64/64 (100%)	1.42	17 (26%) 0 0	62, 75, 84, 95	0
52	B4	38/38 (100%)	-0.08	1 (2%) 56 52	8, 19, 34, 54	0
52	D4	38/38 (100%)	2.51	20 (52%) 0 0	64, 79, 90, 100	0
53	B5	191/228 (83%)	6.30	188 (98%) 0 0	100, 122, 133, 142	0
All	All	20734/20794 (99%)	0.62	2764 (13%) 3 2	0, 64, 125, 195	0

All (2764) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
53	B5	218	THR	28.0
53	B5	140	ASN	21.5
29	BH	130	VAL	18.3
30	BI	53	LEU	17.3
10	AJ	102	LEU	17.2
22	BA	2100	G	16.8
22	BA	2184	A	16.3
30	BI	54	PRO	15.4
30	DI	68	THR	15.4
53	B5	217	THR	15.0
30	BI	79	LEU	14.8

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Mol	Chain	Res	Type	RSRZ
53	B5	97	GLY	14.6
30	BI	2	ALA	14.3
30	DI	2	ALA	14.1
53	B5	170	GLY	14.0
53	B5	162	ILE	14.0
22	BA	2101	A	13.9
53	B5	147	GLY	13.5
22	BA	2135	A	13.3
22	BA	2148	G	13.1
53	B5	96	GLY	13.0
1	CA	1536	C	12.8
30	DI	130	GLU	12.6
30	DI	80	LEU	12.5
53	B5	173	HIS	12.5
22	BA	2121	G	12.5
53	B5	107	GLY	12.5
30	DI	67	PHE	12.4
30	DI	78	VAL	12.4
53	B5	214	TYR	12.3
53	B5	143	ALA	12.3
30	BI	12	GLN	12.1
22	BA	2102	G	12.0
30	DI	54	PRO	12.0
30	BI	4	LYS	11.9
22	DA	1073	A	11.8
22	BA	2103	C	11.8
53	B5	111	PHE	11.8
53	B5	122	GLY	11.7
22	BA	2174	C	11.5
22	BA	2147	A	11.5
53	B5	131	ILE	11.5
30	DI	3	LYS	11.5
22	BA	2159	G	11.3
30	DI	133	ALA	11.3
22	BA	2112	G	11.3
53	B5	106	ASP	11.1
10	CJ	74	VAL	11.1
22	BA	2117	A	11.0
30	BI	3	LYS	11.0
22	BA	2145	C	11.0
53	B5	76	LEU	11.0
7	CG	62	PHE	10.9

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Mol	Chain	Res	Type	RSRZ
1	CA	1538	C	10.9
30	DI	53	LEU	10.9
22	BA	2177	C	10.9
22	BA	2136	G	10.9
22	BA	2140	G	10.9
1	CA	1539	C	10.9
30	DI	129	ILE	10.8
53	B5	55	SER	10.8
28	DG	33	LEU	10.8
22	BA	2185	U	10.7
22	BA	2183	A	10.7
22	BA	2132	U	10.7
13	CM	45	ILE	10.6
30	BI	11	LEU	10.6
53	B5	157	ILE	10.6
20	CT	4	ILE	10.5
30	BI	69	PHE	10.4
22	BA	2160	C	10.4
22	BA	2176	A	10.4
27	DF	76	GLY	10.3
22	BA	2158	A	10.2
53	B5	95	VAL	10.2
53	B5	66	PRO	10.2
29	BH	98	ASP	10.2
30	DI	76	ALA	10.2
2	AB	157	LEU	10.2
30	DI	85	GLY	10.1
22	BA	2161	C	10.0
29	BH	97	ARG	10.0
29	BH	102	ALA	10.0
22	BA	2182	U	9.9
53	B5	68	GLY	9.9
53	B5	141	PRO	9.8
22	BA	2178	C	9.8
22	DA	1067	A	9.7
9	CI	128	SER	9.6
29	BH	101	ASP	9.6
30	BI	114	ALA	9.6
22	BA	2139	U	9.5
13	CM	10	PRO	9.5
53	B5	223	VAL	9.4
22	BA	2144	G	9.4

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Mol	Chain	Res	Type	RSRZ
30	DI	139	VAL	9.4
1	CA	1535	C	9.4
30	DI	69	PHE	9.3
53	B5	134	PRO	9.3
22	BA	2120	G	9.2
29	DH	142	VAL	9.2
22	BA	2169	A	9.2
30	BI	87	LYS	9.2
22	BA	2149	U	9.2
22	BA	2123	G	9.1
30	DI	52	GLY	9.1
29	BH	96	THR	9.0
22	BA	2124	G	9.0
22	BA	2156	G	9.0
27	DF	39	GLY	9.0
22	BA	2130	U	8.9
30	DI	22	PRO	8.9
53	B5	148	PHE	8.9
53	B5	142	LYS	8.9
13	CM	23	TYR	8.9
53	B5	165	ARG	8.9
29	BH	72	ILE	8.8
29	DH	136	SER	8.8
53	B5	98	GLU	8.8
30	DI	6	GLN	8.8
30	BI	80	LEU	8.7
22	BA	2104	C	8.7
30	DI	98	VAL	8.7
22	BA	2099	U	8.7
30	DI	120	ALA	8.7
30	DI	77	ALA	8.6
30	DI	56	PRO	8.6
30	DI	4	LYS	8.5
30	DI	110	ALA	8.5
22	BA	2111	U	8.5
22	BA	2138	G	8.5
13	CM	39	ILE	8.5
28	DG	32	GLU	8.4
22	BA	2143	C	8.4
30	DI	121	ASP	8.4
53	B5	62	THR	8.4
53	B5	87	ALA	8.4

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Mol	Chain	Res	Type	RSRZ
30	BI	133	ALA	8.4
2	AB	156	GLY	8.4
22	BA	2162	G	8.3
53	B5	27	ALA	8.3
1	CA	1537	U	8.3
13	CM	63	PHE	8.3
22	DA	2174	C	8.2
30	DI	79	LEU	8.2
22	DA	1065	U	8.2
14	CN	20	TYR	8.2
30	DI	58	VAL	8.2
22	BA	2155	U	8.2
53	B5	84	ILE	8.2
19	CS	71	LEU	8.2
22	BA	2113	U	8.2
53	B5	219	MET	8.2
53	B5	183	PRO	8.2
30	DI	99	GLY	8.2
7	CG	111	ARG	8.2
7	CG	66	LEU	8.1
53	B5	109	MET	8.1
53	B5	207	GLY	8.1
30	BI	13	VAL	8.1
30	DI	82	LYS	8.1
30	DI	8	TYR	8.1
36	DO	65	THR	8.1
53	B5	155	ARG	8.1
22	BA	2180	U	8.0
30	BI	67	PHE	8.0
30	DI	28	LEU	8.0
42	DU	58	ILE	8.0
53	B5	174	ALA	8.0
53	B5	166	ASN	8.0
30	DI	60	THR	8.0
53	B5	45	HIS	8.0
22	BA	2118	U	8.0
30	DI	57	VAL	7.9
30	DI	23	PRO	7.9
53	B5	108	TRP	7.9
22	DA	2124	G	7.9
53	B5	94	TYR	7.9
53	B5	156	GLU	7.9

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Mol	Chain	Res	Type	RSRZ
22	BA	2168	G	7.9
27	DF	128	TYR	7.9
22	BA	2166	U	7.9
53	B5	67	HIS	7.9
36	DO	64	TYR	7.8
53	B5	77	ALA	7.9
30	DI	25	GLY	7.8
33	DL	92	LEU	7.8
29	BH	146	VAL	7.8
30	DI	48	SER	7.8
22	BA	2115	G	7.8
22	BA	2107	G	7.8
53	B5	179	ALA	7.8
1	AA	86	G	7.8
22	BA	2172	U	7.8
1	CA	1020	G	7.8
22	DA	1537	G	7.7
22	BA	2142	A	7.7
1	AA	1536	C	7.7
22	DA	2309	A	7.7
53	B5	216	THR	7.7
53	B5	48	LEU	7.7
26	DE	119	ILE	7.7
53	B5	93	ASP	7.7
30	DI	59	ILE	7.7
53	B5	132	LEU	7.7
9	CI	130	ARG	7.7
22	DA	1175	A	7.6
29	BH	110	VAL	7.6
19	CS	67	VAL	7.6
22	BA	2116	G	7.6
22	BA	2152	G	7.6
30	DI	66	SER	7.6
10	CJ	77	VAL	7.5
27	DF	129	SER	7.5
29	BH	136	SER	7.5
30	DI	96	ASP	7.5
13	CM	95	LEU	7.5
22	BA	2179	C	7.5
53	B5	182	PRO	7.5
27	DF	147	ASP	7.5
22	BA	2157	G	7.4

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Mol	Chain	Res	Type	RSRZ
36	DO	66	GLY	7.4
42	DU	89	ASP	7.4
42	DU	20	GLY	7.4
1	AA	1535	C	7.4
30	DI	90	SER	7.3
13	CM	84	GLY	7.3
29	BH	106	ALA	7.3
53	B5	180	SER	7.3
22	BA	2153	C	7.3
22	BA	2165	C	7.3
27	DF	35	THR	7.3
1	AA	78	A	7.2
1	CA	1032	G	7.2
19	CS	80	TYR	7.2
53	B5	78	ILE	7.2
2	CB	32	PHE	7.2
53	B5	81	GLY	7.2
4	AD	37	ALA	7.2
52	D4	10	LEU	7.2
53	B5	59	VAL	7.2
30	BI	115	ALA	7.2
28	DG	62	TRP	7.2
22	BA	2163	A	7.2
53	B5	154	ILE	7.1
19	CS	60	VAL	7.1
53	B5	20	VAL	7.1
1	AA	1538	C	7.1
14	CN	36	ALA	7.1
53	B5	208	THR	7.1
42	DU	52	LEU	7.1
30	BI	5	VAL	7.1
30	DI	95	LYS	7.1
53	B5	161	ARG	7.1
22	BA	2181	U	7.1
22	DA	1093	G	7.1
1	AA	1539	C	7.1
42	DU	51	ALA	7.1
53	B5	46	ALA	7.1
14	CN	51	LEU	7.0
1	CA	1024	G	7.0
53	B5	85	LYS	7.0
30	BI	88	SER	7.0

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Mol	Chain	Res	Type	RSRZ
14	CN	4	GLN	7.0
1	CA	1022	A	7.0
53	B5	104	ILE	7.0
13	CM	85	CYS	7.0
53	B5	42	VAL	7.0
22	BA	2114	A	7.0
53	B5	100	ILE	7.0
42	DU	78	GLY	7.0
53	B5	69	LEU	6.9
53	B5	146	VAL	6.9
10	CJ	76	ILE	6.9
7	AG	5	ARG	6.9
42	DU	50	PRO	6.9
22	BA	2175	C	6.9
29	BH	69	ALA	6.8
53	B5	171	ALA	6.8
30	DI	61	VAL	6.8
38	DQ	29	SER	6.8
29	BH	68	ARG	6.8
28	DG	105	LEU	6.8
4	CD	25	VAL	6.8
19	CS	74	PHE	6.8
27	DF	79	ILE	6.8
2	AB	136	MET	6.7
22	BA	2122	U	6.7
22	BA	2127	G	6.7
30	DI	55	ILE	6.7
9	AI	43	THR	6.7
22	BA	2134	A	6.7
22	BA	2154	A	6.7
1	CA	1030	U	6.7
9	AI	130	ARG	6.7
27	DF	113	ASP	6.7
13	CM	22	ILE	6.7
22	BA	2141	G	6.7
7	CG	88	PRO	6.7
7	CG	41	SER	6.7
52	D4	25	VAL	6.6
13	CM	69	LEU	6.6
19	CS	24	GLU	6.6
22	BA	2164	C	6.6
7	CG	133	THR	6.6

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Mol	Chain	Res	Type	RSRZ
27	DF	24	SER	6.6
12	AL	124	ALA	6.6
7	CG	52	GLN	6.6
22	DA	1057	A	6.6
42	DU	39	ILE	6.6
53	B5	213	VAL	6.6
30	DI	73	THR	6.5
30	DI	5	VAL	6.5
29	BH	105	ALA	6.5
1	CA	1534	A	6.5
30	BI	99	GLY	6.5
13	CM	83	LEU	6.5
27	DF	112	ARG	6.5
42	DU	12	ILE	6.5
22	BA	2110	G	6.5
30	DI	46	THR	6.5
19	CS	51	VAL	6.4
22	BA	2150	C	6.4
53	B5	160	GLY	6.4
13	CM	64	VAL	6.4
22	DA	1077	A	6.4
53	B5	86	GLU	6.4
44	DW	52	GLY	6.4
7	CG	151	PHE	6.4
22	DA	1536	C	6.4
2	CB	135	LEU	6.4
29	BH	54	LEU	6.4
14	CN	52	PRO	6.4
30	DI	34	ASN	6.3
53	B5	64	SER	6.3
53	B5	37	LYS	6.3
53	B5	72	GLN	6.3
53	B5	80	LYS	6.3
27	DF	78	LYS	6.3
29	BH	85	GLY	6.3
42	DU	87	PHE	6.3
27	DF	43	ALA	6.3
53	B5	70	GLY	6.3
1	AA	1030	U	6.3
30	DI	75	PRO	6.3
30	DI	83	ALA	6.3
19	CS	31	LEU	6.3

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Mol	Chain	Res	Type	RSRZ
27	DF	28	VAL	6.3
37	DP	115	ASN	6.3
30	DI	11	LEU	6.3
53	B5	151	GLY	6.3
9	AI	129	LYS	6.2
22	DA	2169	A	6.2
53	B5	110	ASP	6.2
27	DF	114	PHE	6.2
53	B5	199	ALA	6.2
53	B5	224	ARG	6.2
1	CA	1016	A	6.2
7	CG	57	SER	6.2
22	DA	2126	A	6.2
27	DF	21	ASN	6.2
30	BI	22	PRO	6.2
30	DI	47	ASP	6.2
1	CA	1025	U	6.2
19	CS	29	LYS	6.2
9	CI	43	THR	6.2
27	DF	130	MET	6.2
1	CA	1302	C	6.1
53	B5	158	LYS	6.1
53	B5	52	PRO	6.1
7	CG	54	SER	6.1
13	CM	32	ALA	6.1
30	BI	101	ILE	6.1
30	DI	118	THR	6.1
53	B5	149	ASN	6.1
1	CA	1031	C	6.1
30	DI	140	VAL	6.1
30	DI	114	ALA	6.1
41	DT	2	ILE	6.1
45	DX	49	LEU	6.1
30	BI	25	GLY	6.1
7	CG	118	LEU	6.1
22	BA	2167	U	6.1
53	B5	194	ILE	6.1
19	CS	30	PRO	6.1
20	CT	38	ALA	6.1
53	B5	105	LEU	6.0
22	BA	2171	A	6.0
28	DG	166	ASP	6.0

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Mol	Chain	Res	Type	RSRZ
53	B5	26	ALA	6.0
30	DI	131	GLY	6.0
30	DI	142	ASP	6.0
42	DU	60	GLU	6.0
30	BI	100	LYS	6.0
1	CA	1018	G	6.0
30	BI	97	LYS	6.0
53	B5	198	GLU	6.0
19	CS	72	GLY	6.0
42	DU	35	ILE	6.0
22	BA	2126	A	6.0
22	DA	1078	U	6.0
29	BH	119	ASN	6.0
30	DI	21	SER	5.9
19	CS	66	MET	5.9
29	BH	121	VAL	5.9
29	BH	86	ASP	5.9
30	DI	126	THR	5.9
53	B5	90	ALA	5.9
18	AR	20	GLU	5.9
28	DG	52	PHE	5.9
13	CM	80	LEU	5.9
49	D1	24	THR	5.9
42	DU	21	LYS	5.9
14	CN	27	LEU	5.9
29	BH	58	LEU	5.9
13	CM	46	SER	5.9
10	CJ	100	ILE	5.9
53	B5	181	PHE	5.9
13	CM	109	ARG	5.9
22	DA	931	U	5.8
22	BA	885	C	5.8
19	CS	11	ILE	5.8
1	CA	1017	U	5.8
30	BI	8	TYR	5.8
14	AN	30	ILE	5.8
22	BA	2173	A	5.8
53	B5	153	ILE	5.8
10	CJ	86	ALA	5.8
39	DR	27	ILE	5.8
22	DA	2120	G	5.8
29	BH	137	GLU	5.8

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Mol	Chain	Res	Type	RSRZ
27	DF	122	PHE	5.8
27	DF	54	ALA	5.8
27	DF	77	PHE	5.8
27	DF	155	THR	5.8
22	DA	1066	U	5.8
30	BI	135	SER	5.8
9	CI	38	TYR	5.8
10	CJ	87	LEU	5.8
10	CJ	82	LYS	5.7
21	AU	4	ILE	5.7
29	BH	113	SER	5.7
30	DI	32	GLY	5.7
22	BA	2131	U	5.7
53	B5	206	LYS	5.7
22	DA	1068	G	5.7
26	DE	104	ALA	5.7
30	BI	21	SER	5.7
27	DF	25	VAL	5.7
53	B5	152	GLU	5.7
7	CG	75	VAL	5.7
42	BU	49	VAL	5.7
22	DA	2585	U	5.7
7	CG	77	SER	5.7
8	CH	2	SER	5.7
53	B5	128	LEU	5.7
13	CM	2	ALA	5.7
17	AQ	20	SER	5.7
27	DF	23	ASN	5.7
27	DF	67	ILE	5.7
30	DI	91	GLY	5.7
10	CJ	99	GLN	5.7
29	BH	144	VAL	5.7
8	AH	2	SER	5.7
9	CI	64	TYR	5.7
16	AP	80	LYS	5.7
29	BH	91	PHE	5.7
3	CC	193	TYR	5.7
30	BI	66	SER	5.7
22	DA	2168	G	5.7
16	CP	80	LYS	5.6
19	CS	49	ILE	5.6
41	DT	34	VAL	5.6

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Mol	Chain	Res	Type	RSRZ
2	AB	135	LEU	5.6
40	DS	92	ARG	5.6
53	B5	82	GLU	5.6
2	AB	9	MET	5.6
7	CG	73	VAL	5.6
22	DA	1171	G	5.6
40	DS	84	ARG	5.6
33	DL	144	GLU	5.6
19	CS	39	THR	5.6
30	DI	112	THR	5.6
42	DU	77	THR	5.6
22	BA	2125	G	5.6
30	DI	35	ILE	5.6
53	B5	172	ILE	5.6
30	DI	20	PRO	5.6
42	BU	55	PRO	5.6
22	BA	2119	A	5.6
22	DA	1084	A	5.6
19	CS	48	THR	5.6
13	CM	47	GLU	5.6
53	B5	41	THR	5.6
41	DT	15	HIS	5.5
53	B5	61	GLY	5.5
53	B5	121	MET	5.5
53	B5	212	SER	5.5
30	BI	68	THR	5.5
7	CG	18	PHE	5.5
13	CM	79	ARG	5.5
30	DI	138	LEU	5.5
53	B5	144	GLY	5.5
7	CG	91	VAL	5.5
27	DF	152	LEU	5.5
30	DI	43	ASN	5.5
29	BH	123	ARG	5.5
7	CG	134	ALA	5.5
1	CA	209	U	5.5
41	DT	70	HIS	5.5
27	DF	51	ASP	5.5
29	BH	115	VAL	5.5
53	B5	187	ALA	5.4
42	DU	48	PRO	5.4
53	B5	65	LEU	5.4

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Mol	Chain	Res	Type	RSRZ
28	DG	80	THR	5.4
10	CJ	10	LEU	5.4
13	CM	106	ALA	5.4
51	D3	57	LEU	5.4
22	DA	2175	C	5.4
29	BH	112	LYS	5.4
53	B5	38	PHE	5.4
22	BA	138	U	5.4
14	CN	29	ALA	5.4
42	DU	36	VAL	5.4
9	CI	125	PRO	5.4
27	DF	26	MET	5.4
2	CB	130	THR	5.4
21	AU	38	TYR	5.4
29	DH	79	THR	5.4
13	CM	52	GLN	5.4
14	CN	45	VAL	5.4
7	CG	53	ARG	5.4
13	CM	62	LYS	5.4
28	DG	43	VAL	5.4
22	DA	2125	G	5.4
9	CI	89	GLU	5.4
13	CM	19	LEU	5.4
17	AQ	83	VAL	5.3
19	CS	76	PRO	5.3
14	CN	54	ASP	5.3
12	CL	124	ALA	5.3
30	BI	55	ILE	5.3
22	BA	1065	U	5.3
41	DT	76	ARG	5.3
27	DF	22	TYR	5.3
1	CA	1026	G	5.3
19	CS	44	MET	5.3
22	BA	2133	G	5.3
10	CJ	19	ASP	5.3
53	B5	137	LEU	5.3
15	AO	89	ARG	5.3
32	DK	111	LYS	5.3
52	D4	8	LYS	5.3
30	BI	14	ALA	5.3
19	AS	49	ILE	5.3
22	BA	2186	G	5.3

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Mol	Chain	Res	Type	RSRZ
25	DD	60	VAL	5.3
28	DG	103	ILE	5.2
53	B5	164	PHE	5.2
14	CN	60	GLN	5.2
46	DY	36	GLN	5.2
7	CG	59	LEU	5.2
53	B5	79	ALA	5.2
46	DY	59	GLU	5.2
7	CG	79	ARG	5.2
29	BH	132	PHE	5.2
30	DI	128	SER	5.2
22	DA	1172	C	5.2
22	DA	896	A	5.2
10	CJ	81	GLU	5.2
27	DF	29	PRO	5.2
10	CJ	72	ARG	5.2
14	CN	47	LYS	5.2
30	DI	17	MET	5.2
29	BH	83	LYS	5.2
22	DA	2797	U	5.2
30	BI	84	ALA	5.2
42	DU	71	ALA	5.2
13	CM	12	HIS	5.2
1	CA	1021	A	5.1
19	CS	17	LYS	5.1
22	BA	1094	U	5.1
53	B5	192	ALA	5.1
27	DF	156	ILE	5.1
53	B5	83	LYS	5.1
13	CM	55	THR	5.1
13	CM	86	TYR	5.1
36	DO	99	TYR	5.1
46	BY	63	ALA	5.1
29	BH	131	SER	5.1
53	B5	169	THR	5.1
30	DI	10	LYS	5.1
53	B5	89	GLU	5.1
27	BF	80	ARG	5.1
27	DF	80	ARG	5.1
28	DG	58	TYR	5.1
53	B5	39	ASP	5.1
13	CM	31	LYS	5.1

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Mol	Chain	Res	Type	RSRZ
30	DI	15	ALA	5.1
22	DA	1090	A	5.1
53	B5	197	LEU	5.1
22	BA	2106	U	5.1
30	BI	96	ASP	5.1
30	DI	12	GLN	5.1
1	CA	94	G	5.1
53	B5	50	ILE	5.0
30	BI	23	PRO	5.0
53	B5	176	VAL	5.0
7	CG	78	ARG	5.0
13	CM	75	MET	5.0
22	DA	138	U	5.0
22	DA	1094	U	5.0
30	BI	78	VAL	5.0
53	B5	74	ARG	5.0
22	DA	2172	U	5.0
7	CG	85	TYR	5.0
30	DI	92	LYS	5.0
7	CG	152	ALA	5.0
30	DI	36	MET	5.0
9	AI	20	PHE	5.0
19	CS	68	GLY	5.0
46	DY	28	LEU	5.0
22	DA	2173	A	5.0
22	DA	2176	A	5.0
29	BH	120	GLY	5.0
53	B5	188	ASP	5.0
22	DA	846	U	5.0
22	DA	2180	U	5.0
33	DL	101	ILE	5.0
28	DG	167	GLU	5.0
1	AA	1534	A	5.0
22	DA	1048	A	5.0
22	BA	2146	C	5.0
22	BA	2105	U	5.0
14	CN	48	LEU	5.0
14	CN	11	VAL	4.9
30	BI	92	LYS	4.9
30	DI	119	GLY	4.9
53	B5	126	SER	4.9
53	B5	222	SER	4.9

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Mol	Chain	Res	Type	RSRZ
10	CJ	73	LEU	4.9
19	CS	13	LEU	4.9
26	DE	144	GLU	4.9
30	DI	63	ALA	4.9
22	BA	2170	A	4.9
53	B5	225	ILE	4.9
1	CA	1242	G	4.9
19	CS	59	PRO	4.9
52	D4	12	ARG	4.9
53	B5	53	ARG	4.9
22	DA	1174	U	4.9
22	DA	2402	U	4.9
26	DE	164	LEU	4.9
22	BA	1063	G	4.9
13	CM	51	GLY	4.9
28	DG	26	ILE	4.9
29	BH	87	GLU	4.9
7	CG	69	VAL	4.9
27	DF	143	TYR	4.9
29	BH	148	ALA	4.9
19	CS	41	PHE	4.9
14	CN	35	ASN	4.9
28	DG	168	VAL	4.8
27	DF	10	ASP	4.8
49	D1	36	LEU	4.8
10	CJ	80	THR	4.8
3	CC	91	VAL	4.8
16	AP	81	ALA	4.8
10	CJ	71	LEU	4.8
22	BA	1171	G	4.8
7	CG	148	ASN	4.8
42	DU	80	ALA	4.8
30	DI	87	LYS	4.8
22	DA	1085	A	4.8
36	DO	117	PHE	4.8
41	DT	8	LEU	4.8
28	DG	45	HIS	4.8
41	DT	43	ILE	4.8
51	D3	61	CYS	4.8
13	CM	94	GLY	4.8
13	CM	114	LYS	4.8
22	BA	896	A	4.8

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Mol	Chain	Res	Type	RSRZ
30	BI	121	ASP	4.8
53	B5	57	GLN	4.8
1	AA	87	C	4.8
48	D0	57	LYS	4.8
53	B5	54	ARG	4.8
27	DF	65	PRO	4.8
53	B5	24	ASP	4.8
7	CG	72	THR	4.8
3	CC	79	LYS	4.8
9	CI	129	LYS	4.8
13	CM	98	ARG	4.8
1	AA	844	G	4.8
30	DI	24	VAL	4.8
53	B5	75	VAL	4.8
30	DI	18	ALA	4.8
42	DU	3	ALA	4.8
2	CB	67	ILE	4.8
2	CB	83	ALA	4.7
3	CC	192	THR	4.7
48	D0	26	THR	4.7
13	CM	38	GLY	4.7
9	CI	58	VAL	4.7
9	AI	104	VAL	4.7
13	CM	65	VAL	4.7
33	DL	89	VAL	4.7
22	DA	1870	C	4.7
53	B5	210	LEU	4.7
13	AM	4	ILE	4.7
13	CM	58	ASP	4.7
33	DL	142	ILE	4.7
53	B5	167	ASP	4.7
22	DA	12	U	4.7
14	CN	26	GLU	4.7
53	B5	99	GLU	4.7
53	B5	130	ARG	4.7
29	BH	62	LEU	4.7
42	DU	63	ALA	4.7
20	CT	9	LYS	4.7
22	DA	546	U	4.7
36	DO	24	THR	4.7
53	B5	73	VAL	4.7
2	CB	37	LYS	4.7

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Mol	Chain	Res	Type	RSRZ
30	DI	122	ILE	4.7
53	B5	136	GLY	4.7
22	DA	1076	C	4.7
53	B5	195	ARG	4.7
48	D0	54	VAL	4.7
36	DO	40	ILE	4.7
49	D1	52	ALA	4.7
20	CT	3	ASN	4.7
11	AK	14	LYS	4.7
2	CB	136	MET	4.6
13	CM	43	VAL	4.6
36	DO	85	LYS	4.6
9	CI	126	GLN	4.6
27	DF	31	VAL	4.6
43	DV	57	TYR	4.6
40	DS	94	ASP	4.6
1	AA	85	U	4.6
13	CM	56	LEU	4.6
50	D2	42	LEU	4.6
27	DF	32	GLU	4.6
29	BH	55	GLU	4.6
49	D1	53	LYS	4.6
53	B5	63	VAL	4.6
7	CG	45	SER	4.6
19	CS	75	ALA	4.6
7	CG	15	ASP	4.6
30	DI	31	GLN	4.6
36	DO	46	GLU	4.6
30	DI	86	ILE	4.6
50	B2	46	LYS	4.6
7	CG	49	THR	4.6
13	CM	72	GLU	4.6
22	DA	1074	G	4.6
28	DG	57	GLY	4.6
30	DI	70	VAL	4.6
30	BI	117	MET	4.6
2	AB	74	ARG	4.6
22	DA	1075	C	4.6
53	B5	211	ARG	4.6
10	AJ	74	VAL	4.6
14	CN	34	VAL	4.6
13	AM	33	ILE	4.6

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Mol	Chain	Res	Type	RSRZ
41	DT	42	GLU	4.6
51	D3	14	PHE	4.6
27	DF	120	LYS	4.6
27	BF	74	VAL	4.5
29	BH	61	VAL	4.5
34	DM	99	GLY	4.6
53	B5	124	VAL	4.5
38	DQ	74	ILE	4.5
29	DH	15	LEU	4.5
28	DG	48	ASN	4.5
22	DA	1064	C	4.5
1	AA	1537	U	4.5
19	CS	42	PRO	4.5
29	BH	64	ALA	4.5
20	AT	68	HIS	4.5
26	DE	201	ALA	4.5
30	DI	127	ARG	4.5
30	DI	62	TYR	4.5
27	DF	106	ILE	4.5
53	B5	145	THR	4.5
27	DF	41	GLY	4.5
52	D4	33	HIS	4.5
22	DA	2109	U	4.5
32	DK	110	GLU	4.5
22	DA	885	C	4.5
22	DA	1606	C	4.5
7	CG	116	MET	4.5
3	CC	39	VAL	4.5
41	DT	55	VAL	4.5
2	CB	139	ARG	4.5
30	DI	81	LYS	4.5
22	BA	2137	U	4.5
53	B5	135	ARG	4.5
30	BI	6	GLN	4.5
40	DS	68	ASP	4.5
30	BI	71	THR	4.5
39	DR	29	THR	4.5
9	CI	90	TYR	4.5
13	CM	48	LEU	4.4
44	DW	38	VAL	4.4
2	CB	9	MET	4.4
28	DG	111	HIS	4.4

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Mol	Chain	Res	Type	RSRZ
53	B5	200	HIS	4.4
13	CM	71	ARG	4.4
39	DR	50	GLY	4.4
19	CS	43	ASN	4.4
22	DA	1103	A	4.4
22	DA	2163	A	4.4
1	CA	1540	U	4.4
27	DF	176	PRO	4.4
10	CJ	102	LEU	4.4
22	BA	2108	A	4.4
22	DA	1083	U	4.4
22	DA	2167	U	4.4
52	D4	9	LYS	4.4
13	CM	33	ILE	4.4
40	DS	85	ILE	4.4
30	BI	91	GLY	4.4
7	AG	4	ARG	4.4
53	B5	215	VAL	4.4
22	DA	1046	A	4.4
27	DF	173	PHE	4.4
30	DI	42	PHE	4.4
48	D0	27	SER	4.4
27	DF	38	MET	4.4
30	BI	81	LYS	4.4
1	CA	1235	U	4.4
1	CA	983	A	4.4
30	DI	50	GLU	4.4
19	CS	28	LYS	4.4
22	BA	1172	C	4.4
14	CN	24	ARG	4.4
28	DG	56	ASP	4.4
32	DK	89	ASN	4.4
22	BA	2109	U	4.4
30	DI	101	ILE	4.4
53	B5	123	ALA	4.3
18	AR	51	TYR	4.3
27	DF	153	ASP	4.3
2	AB	131	LYS	4.3
7	CG	43	VAL	4.3
22	DA	1535	A	4.3
4	CD	36	GLN	4.3
2	CB	34	ALA	4.3

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Mol	Chain	Res	Type	RSRZ
19	CS	50	ALA	4.3
2	CB	22	TYR	4.3
19	CS	12	ASP	4.3
42	DU	49	VAL	4.3
30	BI	34	ASN	4.3
36	DO	63	LYS	4.3
22	DA	1086	A	4.3
30	BI	41	ALA	4.3
30	BI	48	SER	4.3
29	BH	94	ILE	4.3
53	B5	101	ILE	4.3
7	CG	109	ARG	4.3
10	CJ	89	ARG	4.3
13	CM	4	ILE	4.3
13	CM	29	ARG	4.3
52	D4	29	ALA	4.3
53	B5	28	ARG	4.3
22	DA	1087	G	4.3
2	CB	129	LEU	4.3
19	AS	31	LEU	4.3
30	DI	39	CYS	4.3
33	DL	80	SER	4.3
2	CB	138	THR	4.2
7	CG	51	ALA	4.2
53	B5	196	ALA	4.2
33	DL	62	PRO	4.2
24	DC	49	ILE	4.2
37	DP	84	ILE	4.2
37	DP	111	LYS	4.2
22	BA	2151	U	4.2
27	DF	157	THR	4.2
53	B5	103	LYS	4.2
30	DI	7	ALA	4.2
17	CQ	50	ASN	4.2
10	CJ	7	ARG	4.2
39	DR	96	VAL	4.2
27	DF	60	ILE	4.2
29	BH	67	ALA	4.2
2	CB	35	ARG	4.2
19	AS	39	THR	4.2
1	CA	1305	G	4.2
7	CG	80	VAL	4.2

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Mol	Chain	Res	Type	RSRZ
30	BI	15	ALA	4.2
29	DH	119	ASN	4.2
7	CG	87	VAL	4.2
26	DE	28	VAL	4.2
27	DF	151	GLY	4.2
1	AA	79	G	4.2
42	DU	79	LYS	4.2
22	DA	1049	C	4.2
53	B5	203	GLU	4.2
9	CI	124	ARG	4.2
34	DM	136	MET	4.2
7	CG	50	LEU	4.2
30	BI	83	ALA	4.2
43	DV	32	GLY	4.2
3	CC	42	TYR	4.2
16	AP	22	ALA	4.1
22	BA	1066	U	4.2
17	CQ	5	ILE	4.1
22	DA	2121	G	4.1
49	D1	47	VAL	4.1
53	B5	204	GLY	4.1
28	DG	150	ALA	4.1
42	DU	88	GLU	4.1
46	DY	56	LEU	4.1
13	CM	87	ARG	4.1
33	DL	78	ARG	4.1
2	CB	132	LYS	4.1
19	CS	25	SER	4.1
28	DG	86	LYS	4.1
1	CA	211	G	4.1
22	DA	2107	G	4.1
27	DF	102	ARG	4.1
44	DW	32	LEU	4.1
19	CS	64	ASP	4.1
13	CM	70	ARG	4.1
19	AS	32	ARG	4.1
30	BI	26	PRO	4.1
22	DA	2307	G	4.1
37	DP	91	ALA	4.1
28	DG	10	VAL	4.1
27	DF	148	ARG	4.1
4	AD	36	GLN	4.1

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Mol	Chain	Res	Type	RSRZ
21	CU	38	TYR	4.1
22	DA	2119	A	4.1
10	CJ	8	ILE	4.1
7	CG	86	GLN	4.1
9	AI	21	ILE	4.1
13	CM	17	ILE	4.1
22	DA	1095	A	4.1
39	DR	75	VAL	4.1
53	B5	175	PRO	4.1
46	DY	4	LYS	4.1
9	CI	32	GLN	4.1
22	DA	884	U	4.1
30	BI	142	ASP	4.0
27	DF	40	VAL	4.0
27	DF	89	VAL	4.0
19	AS	74	PHE	4.0
22	BA	2309	A	4.0
22	DA	2123	G	4.0
1	CA	999	C	4.0
30	DI	45	LYS	4.0
28	DG	59	ALA	4.0
30	DI	84	ALA	4.0
4	AD	25	VAL	4.0
13	CM	61	ALA	4.0
13	AM	115	PRO	4.0
7	CG	103	TRP	4.0
26	DE	33	VAL	4.0
35	DN	76	VAL	4.0
49	D1	48	ILE	4.0
50	D2	33	ARG	4.0
40	DS	3	THR	4.0
14	CN	2	ALA	4.0
7	CG	76	LYS	4.0
13	CM	16	VAL	4.0
53	B5	193	PHE	4.0
6	AF	95	ALA	4.0
29	DH	140	ALA	4.0
30	DI	134	ARG	4.0
10	CJ	75	ASP	4.0
33	DL	106	GLU	4.0
14	CN	44	ALA	4.0
22	DA	2165	C	4.0

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Mol	Chain	Res	Type	RSRZ
22	BA	139	U	4.0
22	BA	884	U	4.0
27	DF	149	VAL	4.0
42	DU	13	VAL	4.0
1	CA	207	C	4.0
14	CN	50	THR	4.0
30	BI	56	PRO	4.0
35	DN	29	VAL	4.0
4	AD	28	ILE	4.0
27	DF	111	ILE	4.0
49	D1	34	LEU	4.0
33	DL	108	ALA	4.0
52	D4	1	MET	4.0
1	AA	81	A	3.9
7	CG	84	THR	3.9
7	CG	141	VAL	3.9
52	D4	26	ILE	3.9
32	DK	112	PHE	3.9
53	B5	133	GLY	3.9
28	DG	27	LYS	3.9
2	AB	139	ARG	3.9
9	CI	20	PHE	3.9
10	CJ	92	LEU	3.9
29	DH	54	LEU	3.9
46	DY	37	LEU	3.9
22	DA	2157	G	3.9
28	DG	151	TYR	3.9
33	DL	121	THR	3.9
33	DL	70	LYS	3.9
53	B5	184	GLU	3.9
53	B5	220	GLY	3.9
9	CI	7	TYR	3.9
30	DI	125	MET	3.9
22	DA	1407	G	3.9
53	B5	102	GLN	3.9
13	CM	24	GLY	3.9
1	AA	1492	A	3.9
29	DH	74	ALA	3.9
30	BI	17	MET	3.9
30	BI	95	LYS	3.9
42	DU	47	LYS	3.9
17	CQ	23	VAL	3.9

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Mol	Chain	Res	Type	RSRZ
22	DA	2127	G	3.9
26	DE	126	VAL	3.9
14	CN	23	LYS	3.9
48	D0	34	SER	3.9
28	DG	9	VAL	3.9
29	BH	109	GLU	3.9
30	DI	123	GLU	3.9
28	DG	112	PRO	3.9
26	DE	143	LEU	3.9
33	DL	49	GLY	3.9
53	B5	49	GLY	3.9
26	DE	17	THR	3.9
7	CG	137	LYS	3.9
14	CN	12	LYS	3.9
17	CQ	53	CYS	3.9
3	CC	77	ILE	3.9
10	AJ	75	ASP	3.9
27	DF	27	GLN	3.9
28	DG	77	ILE	3.9
27	DF	158	THR	3.9
14	CN	10	GLU	3.9
22	DA	1173	U	3.9
29	DH	130	VAL	3.9
42	BU	54	GLN	3.9
19	AS	3	ARG	3.9
30	DI	65	ARG	3.9
33	DL	82	LEU	3.9
33	DL	132	ARG	3.9
46	DY	54	LYS	3.9
46	DY	14	LEU	3.9
43	DV	74	ALA	3.9
9	CI	127	PHE	3.8
10	CJ	90	LEU	3.8
13	AM	63	PHE	3.8
6	AF	92	THR	3.8
10	CJ	34	ALA	3.8
27	DF	45	ALA	3.8
30	BI	120	ALA	3.8
30	DI	94	ASN	3.8
10	CJ	20	GLN	3.8
10	CJ	35	GLN	3.8
22	DA	653	U	3.8

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Mol	Chain	Res	Type	RSRZ
30	DI	102	SER	3.8
46	DY	7	ARG	3.8
41	DT	75	GLY	3.8
27	DF	175	PHE	3.8
13	AM	31	LYS	3.8
19	AS	55	ARG	3.8
7	CG	8	GLY	3.8
41	DT	60	THR	3.8
22	DA	1104	C	3.8
27	DF	174	ASP	3.8
41	DT	74	ILE	3.8
2	AB	132	LYS	3.8
42	DU	19	LYS	3.8
12	CL	25	GLU	3.8
2	CB	225	ARG	3.8
13	AM	5	ALA	3.8
3	CC	158	GLY	3.8
2	AB	88	ASP	3.8
2	AB	221	VAL	3.8
28	DG	84	THR	3.8
29	BH	142	VAL	3.8
10	CJ	27	GLU	3.8
29	BH	149	GLU	3.8
10	CJ	45	ARG	3.8
21	AU	23	CYS	3.8
1	AA	82	G	3.8
11	CK	126	LYS	3.8
22	DA	277	G	3.8
22	DA	139	U	3.8
42	DU	29	LEU	3.8
13	CM	36	ALA	3.8
30	DI	30	GLN	3.8
1	CA	1006	G	3.8
22	DA	895	U	3.8
36	DO	92	PHE	3.8
42	BU	53	ASN	3.8
19	CS	63	THR	3.8
13	CM	103	LYS	3.8
43	DV	94	ALA	3.8
7	CG	17	LYS	3.8
22	DA	878	A	3.8
17	AQ	5	ILE	3.8

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Mol	Chain	Res	Type	RSRZ
13	AM	114	LYS	3.7
22	DA	2181	U	3.7
51	D3	58	VAL	3.8
26	DE	12	LEU	3.7
39	DR	26	ASP	3.7
50	D2	46	LYS	3.7
52	D4	20	ASP	3.7
22	DA	1106	G	3.7
53	B5	43	GLU	3.7
41	DT	47	VAL	3.7
33	DL	79	LEU	3.7
42	DU	14	LEU	3.7
1	CA	844	G	3.7
22	DA	1063	G	3.7
37	DP	92	VAL	3.7
27	DF	142	ASP	3.7
11	CK	43	GLY	3.7
2	AB	226	SER	3.7
7	CG	83	SER	3.7
9	AI	32	GLN	3.7
30	BI	118	THR	3.7
53	B5	22	THR	3.7
36	DO	51	ALA	3.7
27	DF	12	VAL	3.7
13	AM	19	LEU	3.7
22	BA	2128	G	3.7
36	DO	26	LEU	3.7
37	DP	110	ILE	3.7
22	DA	2903	U	3.7
42	BU	52	LEU	3.7
2	CB	36	ASN	3.7
20	CT	71	LYS	3.7
13	CM	115	PRO	3.7
14	CN	30	ILE	3.7
22	DA	1044	C	3.7
28	DG	102	VAL	3.7
17	CQ	6	ARG	3.7
29	DH	123	ARG	3.7
30	BI	39	CYS	3.7
16	CP	47	GLU	3.7
22	DA	1058	U	3.7
22	DA	2305	U	3.7

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Mol	Chain	Res	Type	RSRZ
30	DI	51	LYS	3.7
36	DO	56	LYS	3.7
22	DA	2112	G	3.7
27	DF	172	ALA	3.7
46	DY	16	THR	3.7
10	CJ	26	VAL	3.7
45	DX	11	ARG	3.7
29	BH	122	LEU	3.7
22	DA	2118	U	3.7
1	CA	1271	A	3.7
1	CA	79	G	3.7
2	CB	152	LYS	3.7
28	DG	40	ALA	3.7
30	DI	44	ALA	3.7
27	DF	117	LEU	3.7
22	DA	343	C	3.7
33	DL	87	GLY	3.7
53	B5	125	GLY	3.7
22	DA	613	A	3.7
28	DG	20	ASN	3.7
9	AI	17	ALA	3.7
42	BU	51	ALA	3.7
19	AS	56	GLN	3.7
13	CM	108	THR	3.7
22	DA	1211	C	3.6
27	DF	95	ARG	3.6
45	DX	50	ARG	3.6
27	DF	164	GLU	3.6
13	CM	73	ILE	3.6
17	CQ	8	LEU	3.6
29	DH	58	LEU	3.6
10	CJ	23	ALA	3.6
13	AM	3	ARG	3.6
1	CA	950	U	3.6
2	CB	226	SER	3.6
46	DY	24	GLU	3.6
1	CA	988	G	3.6
30	BI	10	LYS	3.6
53	B5	205	ALA	3.6
28	DG	104	ASN	3.6
13	CM	101	ARG	3.6
14	CN	57	PRO	3.6

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Mol	Chain	Res	Type	RSRZ
20	AT	4	ILE	3.6
1	CA	1004	A	3.6
22	DA	877	A	3.6
53	B5	88	GLU	3.6
19	CS	47	LEU	3.6
27	DF	131	GLY	3.6
9	CI	39	PHE	3.6
13	CM	89	LEU	3.6
22	DA	331	C	3.6
26	DE	103	GLY	3.6
29	BH	66	ASN	3.6
30	BI	98	VAL	3.6
30	DI	13	VAL	3.6
1	CA	82	G	3.6
1	CA	1007	U	3.6
30	DI	105	GLN	3.6
7	CG	5	ARG	3.6
16	CP	39	PHE	3.6
21	AU	7	ARG	3.6
44	DW	25	ARG	3.6
13	CM	44	LYS	3.6
30	DI	100	LYS	3.6
35	DN	28	LEU	3.6
36	DO	22	GLY	3.6
53	B5	120	VAL	3.6
22	DA	2110	G	3.6
35	DN	63	ARG	3.6
27	DF	91	LEU	3.6
21	AU	9	ASN	3.6
53	B5	51	ASP	3.6
22	DA	1105	U	3.6
50	D2	1	MET	3.6
26	DE	2	GLU	3.6
22	BA	1067	A	3.6
42	DU	5	ILE	3.6
30	DI	111	GLN	3.6
24	DC	242	LYS	3.5
2	AB	134	ALA	3.5
27	BF	76	GLY	3.5
28	DG	21	GLY	3.5
6	AF	36	ILE	3.5
13	CM	9	ILE	3.5

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Mol	Chain	Res	Type	RSRZ
22	BA	1847	A	3.5
7	CG	131	LYS	3.5
49	D1	38	LYS	3.5
22	BA	546	U	3.5
22	BA	1925	C	3.5
7	CG	132	GLY	3.5
29	BH	84	ALA	3.5
1	CA	1023	U	3.5
52	D4	16	ILE	3.5
30	DI	64	ASP	3.5
1	CA	1296	C	3.5
9	CI	117	GLY	3.5
22	DA	1043	C	3.5
28	DG	17	VAL	3.5
46	DY	49	ASP	3.5
19	CS	37	ARG	3.5
42	DU	90	GLY	3.5
3	CC	146	ALA	3.5
29	BH	59	ALA	3.5
30	DI	106	LEU	3.5
13	AM	25	VAL	3.5
14	AN	21	PHE	3.5
33	DL	81	ASP	3.5
30	BI	20	PRO	3.5
9	AI	90	TYR	3.5
30	BI	104	ALA	3.5
26	DE	129	PRO	3.5
42	DU	32	GLY	3.5
30	DI	19	ASN	3.5
17	AQ	4	LYS	3.5
27	DF	144	ASP	3.5
9	CI	4	ASN	3.5
25	DD	55	LYS	3.5
27	BF	72	LYS	3.5
27	DF	88	LYS	3.5
42	DU	40	ASN	3.5
36	DO	21	LEU	3.5
13	CM	77	ILE	3.5
14	CN	42	TRP	3.4
28	DG	176	LYS	3.4
52	D4	15	LYS	3.4
7	CG	123	GLU	3.4

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Mol	Chain	Res	Type	RSRZ
19	AS	33	THR	3.4
41	DT	92	ASN	3.4
44	BW	10	THR	3.4
46	DY	63	ALA	3.4
29	DH	61	VAL	3.4
30	BI	38	PHE	3.4
1	AA	845	A	3.4
19	AS	9	PRO	3.4
22	BA	277	G	3.4
30	DI	108	GLU	3.4
19	CS	14	HIS	3.4
41	DT	87	LEU	3.4
3	CC	196	ILE	3.4
14	CN	22	ALA	3.4
28	DG	92	VAL	3.4
30	BI	140	VAL	3.4
33	DL	66	PHE	3.4
22	DA	2300	C	3.4
7	CG	70	ARG	3.4
14	AN	55	SER	3.4
22	DA	1069	A	3.4
13	CM	105	ASN	3.4
17	CQ	21	ILE	3.4
22	BA	1093	G	3.4
36	DO	113	ALA	3.4
46	DY	30	MET	3.4
27	DF	37	ASN	3.4
1	CA	1320	C	3.4
27	DF	170	LEU	3.4
22	DA	2308	G	3.4
26	DE	21	ARG	3.4
29	DH	139	PHE	3.4
9	CI	120	LYS	3.4
33	DL	13	LYS	3.4
40	DS	19	LEU	3.4
44	DW	59	LEU	3.4
27	BF	79	ILE	3.4
30	DI	117	MET	3.4
47	DZ	48	ILE	3.4
22	BA	1175	A	3.4
34	DM	80	VAL	3.4
42	DU	53	ASN	3.4

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Mol	Chain	Res	Type	RSRZ
26	DE	64	GLY	3.4
37	DP	20	PHE	3.4
22	BA	1087	G	3.4
22	BA	2885	G	3.4
1	AA	88	U	3.4
1	AA	1031	C	3.4
1	CA	1317	C	3.4
22	DA	1045	C	3.4
28	DG	54	PRO	3.4
33	DL	3	LEU	3.4
33	DL	61	LEU	3.4
19	CS	40	ILE	3.4
45	DX	18	ARG	3.4
2	CB	33	GLY	3.4
7	CG	122	ASN	3.4
22	DA	345	A	3.4
30	BI	16	GLY	3.4
42	BU	56	GLY	3.4
53	B5	185	LYS	3.4
22	DA	883	G	3.4
6	CF	39	LEU	3.4
22	DA	1072	C	3.4
29	BH	73	ASN	3.4
30	DI	97	LYS	3.4
43	DV	56	PHE	3.4
9	CI	37	GLN	3.4
22	DA	1729	U	3.4
27	DF	133	ARG	3.4
46	DY	19	LEU	3.4
37	DP	35	GLY	3.4
39	DR	66	HIS	3.4
43	DV	67	GLY	3.4
53	B5	129	GLY	3.4
53	B5	58	ASN	3.4
7	CG	143	ARG	3.3
9	CI	33	ARG	3.3
30	BI	138	LEU	3.3
41	DT	85	VAL	3.3
1	CA	1028	C	3.3
22	DA	1107	G	3.3
22	DA	1170	C	3.3
27	DF	66	LEU	3.3

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Mol	Chain	Res	Type	RSRZ
7	AG	80	VAL	3.3
9	CI	44	ALA	3.3
30	BI	49	ILE	3.3
44	DW	23	VAL	3.3
29	BH	82	SER	3.3
53	B5	191	ARG	3.3
22	DA	882	G	3.3
11	AK	111	THR	3.3
25	DD	133	THR	3.3
29	DH	6	LEU	3.3
13	CM	40	ALA	3.3
22	DA	1089	A	3.3
25	DD	87	GLY	3.3
26	DE	128	ALA	3.3
40	DS	110	ARG	3.3
50	D2	22	MET	3.3
53	B5	56	ASP	3.3
40	DS	69	LEU	3.3
9	AI	79	ILE	3.3
10	CJ	41	PRO	3.3
30	DI	27	ALA	3.3
39	DR	63	VAL	3.3
53	B5	221	PRO	3.3
22	BA	892	A	3.3
14	CN	58	SER	3.3
29	DH	135	HIS	3.3
43	DV	41	GLU	3.3
9	CI	5	GLN	3.3
27	DF	36	LEU	3.3
1	CA	989	U	3.3
22	DA	1460	U	3.3
22	DA	1179	G	3.3
3	CC	71	ALA	3.3
14	AN	36	ALA	3.3
30	DI	49	ILE	3.3
39	DR	99	THR	3.3
7	CG	14	PRO	3.3
30	DI	33	VAL	3.3
1	CA	1274	A	3.3
22	DA	2170	A	3.3
13	CM	30	SER	3.3
19	CS	38	SER	3.3

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Mol	Chain	Res	Type	RSRZ
49	D1	18	GLY	3.3
20	CT	41	ALA	3.3
26	DE	23	PHE	3.3
29	BH	139	PHE	3.3
22	DA	1071	G	3.3
18	AR	74	HIS	3.3
27	BF	78	LYS	3.3
27	DF	69	LYS	3.3
7	CG	23	LEU	3.3
20	CT	24	ARG	3.3
27	DF	50	LEU	3.3
29	DH	12	LEU	3.3
45	DX	35	SER	3.3
1	CA	1027	C	3.3
26	DE	14	VAL	3.3
38	DQ	118	ALA	3.3
53	B5	47	LYS	3.3
2	CB	213	TYR	3.3
5	CE	151	GLU	3.3
22	BA	2402	U	3.3
36	DO	60	GLU	3.3
53	B5	23	ILE	3.3
9	AI	19	VAL	3.3
28	DG	136	ALA	3.3
24	DC	47	GLY	3.3
22	DA	2106	U	3.2
53	B5	163	GLU	3.2
10	AJ	36	VAL	3.2
29	BH	63	ALA	3.2
28	DG	170	ARG	3.2
15	CO	25	THR	3.2
39	DR	32	THR	3.2
3	CC	144	LEU	3.2
13	CM	54	ASP	3.2
33	DL	19	LEU	3.2
17	CQ	20	SER	3.2
22	DA	2116	G	3.2
32	DK	14	SER	3.2
3	CC	92	ALA	3.2
7	CG	61	ALA	3.2
13	CM	37	ALA	3.2
38	DQ	2	ALA	3.2

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Mol	Chain	Res	Type	RSRZ
22	DA	2310	C	3.2
28	DG	37	LEU	3.2
5	AE	31	PHE	3.2
18	CR	74	HIS	3.2
30	BI	94	ASN	3.2
39	DR	43	ASN	3.2
53	B5	150	ILE	3.2
26	DE	11	ALA	3.2
22	DA	914	G	3.2
12	AL	25	GLU	3.2
29	BH	90	LEU	3.2
36	DO	62	LEU	3.2
36	DO	93	ASP	3.2
3	CC	127	ARG	3.2
44	DW	78	LYS	3.2
1	CA	206	C	3.2
26	DE	131	THR	3.2
27	DF	150	ARG	3.2
7	CG	42	ILE	3.2
52	D4	23	ILE	3.2
10	CJ	36	VAL	3.2
13	CM	25	VAL	3.2
42	DU	28	VAL	3.2
42	DU	76	ALA	3.2
48	D0	56	ALA	3.2
1	CA	1217	C	3.2
30	BI	119	GLY	3.2
33	DL	139	GLY	3.2
42	BU	48	PRO	3.2
51	D3	52	LYS	3.2
4	CD	27	ALA	3.2
6	AF	96	VAL	3.2
26	DE	32	VAL	3.2
27	DF	13	VAL	3.2
7	CG	139	GLU	3.2
28	DG	82	GLY	3.2
13	CM	96	PRO	3.2
13	CM	11	ASP	3.2
22	DA	2306	C	3.2
1	CA	1019	A	3.2
22	DA	866	A	3.2
7	CG	58	GLU	3.2

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Mol	Chain	Res	Type	RSRZ
17	CQ	78	VAL	3.2
30	DI	104	ALA	3.2
36	DO	103	VAL	3.2
25	DD	59	ARG	3.2
27	DF	93	GLY	3.2
37	BP	2	SER	3.2
41	DT	71	GLY	3.2
27	DF	17	MET	3.2
53	B5	186	LEU	3.2
46	DY	13	GLU	3.2
15	CO	89	ARG	3.2
21	AU	21	ARG	3.2
29	DH	148	ALA	3.2
30	BI	58	VAL	3.2
23	DB	117	G	3.2
13	CM	76	SER	3.2
37	DP	85	SER	3.2
53	B5	71	LYS	3.2
41	DT	1	MET	3.2
22	DA	2150	C	3.2
11	AK	129	VAL	3.1
10	CJ	30	LYS	3.1
41	DT	35	ALA	3.1
49	D1	37	LYS	3.1
36	DO	61	GLN	3.1
41	DT	72	GLN	3.1
52	D4	35	GLN	3.1
1	CA	202	G	3.1
22	DA	356	G	3.1
7	AG	59	LEU	3.1
36	DO	106	LEU	3.1
46	DY	10	SER	3.1
27	DF	6	ASP	3.1
7	CG	4	ARG	3.1
10	CJ	16	ARG	3.1
25	DD	154	LYS	3.1
53	B5	178	LYS	3.1
1	AA	91	U	3.1
34	DM	79	ALA	3.1
39	DR	42	ALA	3.1
41	DT	41	ALA	3.1
30	BI	89	GLY	3.1

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Mol	Chain	Res	Type	RSRZ
49	D1	23	THR	3.1
1	CA	1441	A	3.1
19	CS	16	LEU	3.1
28	DG	106	SER	3.1
3	CC	156	ARG	3.1
22	DA	879	G	3.1
42	BU	50	PRO	3.1
27	DF	154	ILE	3.1
4	CD	24	GLY	3.1
9	CI	108	ALA	3.1
39	DR	33	VAL	3.1
3	CC	85	GLU	3.1
27	DF	83	TYR	3.1
43	DV	42	LEU	3.1
44	DW	53	CYS	3.1
49	D1	32	GLU	3.1
30	DI	38	PHE	3.1
22	DA	2128	G	3.1
10	CJ	98	VAL	3.1
27	DF	55	ALA	3.1
27	DF	82	GLY	3.1
22	DA	2143	C	3.1
18	AR	68	LEU	3.1
26	DE	118	LEU	3.1
42	DU	43	LYS	3.1
7	CG	2	PRO	3.1
1	CA	4	U	3.1
1	CA	1033	G	3.1
14	CN	8	ALA	3.1
30	BI	33	VAL	3.1
36	DO	14	ALA	3.1
9	CI	115	LYS	3.1
23	DB	35	C	3.1
9	CI	118	LEU	3.1
3	AC	168	TYR	3.1
27	DF	7	TYR	3.1
45	DX	17	ASN	3.1
51	D3	49	MET	3.1
20	CT	39	ILE	3.1
9	AI	41	ARG	3.1
22	DA	1176	U	3.1
30	BI	7	ALA	3.1

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Mol	Chain	Res	Type	RSRZ
30	DI	124	ALA	3.1
43	DV	55	GLU	3.1
1	AA	1032	G	3.1
22	DA	1100	C	3.1
26	DE	200	LEU	3.1
41	BT	2	ILE	3.1
13	CM	35	ALA	3.1
33	DL	83	ALA	3.1
1	CA	1314	C	3.1
33	DL	50	PHE	3.1
4	AD	151	LYS	3.1
7	CG	38	THR	3.1
16	CP	17	TYR	3.1
9	CI	10	GLY	3.1
10	CJ	33	GLY	3.1
28	DG	110	SER	3.1
35	DN	118	ARG	3.1
38	DQ	37	GLN	3.1
49	D1	45	GLN	3.1
14	CN	17	ALA	3.1
22	BA	1072	C	3.1
22	DA	2667	C	3.1
23	DB	118	C	3.1
9	CI	40	GLY	3.1
18	AR	23	TYR	3.1
28	DG	19	ILE	3.1
45	DX	31	PRO	3.1
36	DO	50	ALA	3.0
38	DQ	22	LYS	3.0
42	DU	26	LYS	3.0
22	DA	892	A	3.0
13	CM	88	GLY	3.0
38	DQ	25	TYR	3.0
53	B5	21	TYR	3.0
36	DO	5	SER	3.0
41	DT	16	VAL	3.0
9	CI	16	ALA	3.0
23	DB	21	G	3.0
30	DI	14	ALA	3.0
31	DJ	47	HIS	3.0
53	B5	40	GLU	3.0
13	AM	27	LYS	3.0

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Mol	Chain	Res	Type	RSRZ
14	CN	31	ILE	3.0
22	BA	1100	C	3.0
19	CS	79	THR	3.0
27	DF	146	VAL	3.0
44	DW	61	ALA	3.0
9	CI	103	PHE	3.0
15	CO	17	ARG	3.0
22	BA	1068	G	3.0
26	DE	124	PHE	3.0
27	DF	14	LYS	3.0
28	DG	53	GLY	3.0
34	DM	8	LYS	3.0
2	CB	40	ILE	3.0
28	DG	74	SER	3.0
44	DW	85	GLU	3.0
13	AM	85	CYS	3.0
22	DA	75	G	3.0
22	DA	881	G	3.0
1	CA	1236	A	3.0
10	CJ	94	ALA	3.0
27	DF	162	SER	3.0
28	DG	42	GLU	3.0
47	DZ	8	THR	3.0
28	DG	134	LYS	3.0
36	DO	4	LYS	3.0
27	DF	119	ALA	3.0
30	BI	76	ALA	3.0
35	DN	25	ALA	3.0
36	DO	88	LYS	3.0
44	DW	60	PHE	3.0
41	DT	73	ARG	3.0
27	BF	42	GLU	3.0
30	DI	9	VAL	3.0
7	CG	117	ALA	3.0
30	BI	62	TYR	3.0
28	DG	148	LEU	3.0
35	DN	98	LEU	3.0
22	BA	1090	A	3.0
22	DA	2602	A	3.0
28	DG	44	LYS	3.0
52	D4	32	LYS	3.0
26	DE	127	GLU	3.0

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Mol	Chain	Res	Type	RSRZ
39	DR	37	GLU	3.0
48	D0	38	HIS	3.0
7	CG	65	ALA	3.0
42	DU	55	PRO	3.0
22	DA	1534	U	3.0
29	BH	11	ASN	3.0
13	CM	3	ARG	3.0
38	DQ	23	GLY	3.0
2	AB	128	LYS	3.0
30	DI	132	THR	3.0
42	DU	33	LYS	3.0
53	B5	127	LYS	3.0
1	CA	1035	A	3.0
10	CJ	51	VAL	3.0
1	AA	4	U	2.9
19	AS	81	ARG	2.9
22	BA	2585	U	2.9
25	DD	186	LEU	2.9
33	DL	114	GLY	2.9
42	DU	44	LYS	2.9
43	DV	34	LYS	2.9
22	DA	2341	G	2.9
27	DF	68	THR	2.9
24	DC	172	VAL	2.9
20	CT	8	LYS	2.9
22	DA	280	U	2.9
30	DI	72	LYS	2.9
51	D3	15	LYS	2.9
28	DG	30	ASN	2.9
18	CR	20	GLU	2.9
37	DP	112	GLU	2.9
21	AU	42	THR	2.9
22	DA	1053	C	2.9
22	BA	883	G	2.9
22	DA	1091	G	2.9
23	DB	18	G	2.9
7	CG	110	LYS	2.9
21	CU	35	ARG	2.9
7	CG	150	ALA	2.9
22	DA	1420	A	2.9
41	BT	69	ARG	2.9
20	AT	36	TYR	2.9

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Mol	Chain	Res	Type	RSRZ
1	CA	210	C	2.9
17	CQ	59	VAL	2.9
40	DS	86	MET	2.9
20	CT	68	HIS	2.9
28	DG	133	LEU	2.9
53	B5	92	ALA	2.9
30	BI	82	LYS	2.9
21	CU	47	ARG	2.9
27	BF	71	ARG	2.9
9	AI	67	VAL	2.9
22	DA	2177	C	2.9
6	CF	8	PHE	2.9
7	CG	39	ALA	2.9
11	CK	42	LEU	2.9
38	DQ	38	ALA	2.9
22	DA	2111	U	2.9
22	DA	2796	U	2.9
53	B5	202	PRO	2.9
20	CT	85	LYS	2.9
27	DF	87	CYS	2.9
33	DL	58	TYR	2.9
42	DU	54	GLN	2.9
46	DY	38	GLN	2.9
30	BI	122	ILE	2.9
9	AI	128	SER	2.9
30	DI	71	THR	2.9
41	DT	53	VAL	2.9
42	DU	98	SER	2.9
48	D0	3	VAL	2.9
27	DF	165	GLU	2.9
51	D3	26	HIS	2.9
19	CS	81	ARG	2.9
30	BI	103	ARG	2.9
1	CA	1227	A	2.9
22	BA	1098	A	2.9
25	DD	26	VAL	2.9
52	D4	7	VAL	2.9
3	CC	78	GLY	2.9
42	DU	31	SER	2.9
51	D3	53	GLY	2.9
1	CA	984	C	2.9
10	AJ	37	ARG	2.9

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Mol	Chain	Res	Type	RSRZ
13	AM	92	ARG	2.9
22	BA	1061	U	2.9
22	BA	1926	U	2.9
14	CN	19	LYS	2.9
22	DA	1112	G	2.9
28	DG	6	LYS	2.9
30	DI	141	GLU	2.9
7	CG	125	SER	2.9
11	AK	42	LEU	2.9
13	CM	113	ARG	2.9
28	DG	13	ALA	2.9
28	DG	165	ALA	2.9
22	BA	140	C	2.9
19	CS	52	HIS	2.9
26	DE	165	HIS	2.9
30	DI	107	GLN	2.9
13	CM	78	LYS	2.9
49	D1	5	ILE	2.9
49	D1	21	TYR	2.9
9	AI	89	GLU	2.9
9	CI	31	ASN	2.9
10	CJ	78	GLU	2.9
1	CA	1015	G	2.9
14	CN	16	LEU	2.9
20	CT	86	LEU	2.9
22	DA	1056	G	2.9
24	DC	48	ARG	2.9
30	DI	137	GLY	2.9
36	DO	90	VAL	2.9
28	DG	46	ALA	2.9
44	DW	63	ALA	2.9
46	DY	33	ALA	2.9
33	DL	68	SER	2.8
29	DH	77	THR	2.8
26	DE	102	ARG	2.8
30	DI	16	GLY	2.8
50	D2	18	PHE	2.8
22	DA	2860	A	2.8
42	DU	30	SER	2.8
1	CA	1126	U	2.8
12	AL	14	ARG	2.8
36	DO	114	GLY	2.8

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Mol	Chain	Res	Type	RSRZ
19	AS	15	LEU	2.8
25	DD	132	ALA	2.8
33	DL	57	LEU	2.8
22	DA	344	A	2.8
30	BI	30	GLN	2.8
22	BA	1729	U	2.8
1	CA	1214	C	2.8
22	DA	2630	G	2.8
32	DK	98	ARG	2.8
33	DL	117	THR	2.8
29	BH	145	ASN	2.8
40	DS	46	LEU	2.8
3	CC	206	GLU	2.8
26	DE	55	SER	2.8
7	CG	26	PHE	2.8
13	CM	13	LYS	2.8
14	AN	33	ASP	2.8
14	CN	7	LYS	2.8
53	B5	91	GLY	2.8
7	AG	6	VAL	2.8
28	DG	132	VAL	2.8
25	DD	126	ASN	2.8
26	DE	156	ASN	2.8
37	DP	97	LEU	2.8
47	DZ	29	LEU	2.8
2	CB	133	GLU	2.8
29	BH	116	ARG	2.8
1	CA	1286	U	2.8
11	AK	126	LYS	2.8
1	CA	1003	G	2.8
7	CG	90	GLU	2.8
14	CN	69	ARG	2.8
19	AS	24	GLU	2.8
19	CS	65	GLU	2.8
24	DC	238	ARG	2.8
25	DD	77	ARG	2.8
26	DE	190	ALA	2.8
46	DY	5	GLU	2.8
1	CA	208	U	2.8
24	DC	249	GLY	2.8
26	DE	89	PRO	2.8
27	DF	44	ILE	2.8

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Mol	Chain	Res	Type	RSRZ
45	DX	46	PHE	2.8
22	DA	2171	A	2.8
19	CS	3	ARG	2.8
42	DU	41	LEU	2.8
25	DD	185	ASN	2.8
3	CC	195	VAL	2.8
10	AJ	98	VAL	2.8
14	CN	53	ARG	2.8
35	DN	116	VAL	2.8
14	AN	20	TYR	2.8
22	DA	2147	A	2.8
43	DV	6	ALA	2.8
41	BT	92	ASN	2.8
1	AA	1026	G	2.8
5	CE	109	GLY	2.8
13	AM	47	GLU	2.8
27	DF	118	SER	2.8
27	DF	169	LEU	2.8
51	D3	64	TYR	2.8
22	DA	405	U	2.7
2	CB	74	ARG	2.7
30	BI	59	ILE	2.7
22	BA	141	G	2.7
2	AB	57	LEU	2.7
27	BF	83	TYR	2.7
47	DZ	2	ALA	2.7
2	AB	27	MET	2.7
1	CA	845	A	2.7
9	AI	4	ASN	2.7
1	CA	1008	U	2.7
26	DE	88	ARG	2.7
3	CC	14	ILE	2.7
36	DO	80	GLU	2.7
21	AU	11	PRO	2.7
19	AS	71	LEU	2.7
29	DH	75	LEU	2.7
42	DU	93	VAL	2.7
45	DX	22	LEU	2.7
1	CA	1002	G	2.7
1	CA	1331	G	2.7
16	AP	82	ALA	2.7
36	DO	41	ALA	2.7

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Mol	Chain	Res	Type	RSRZ
39	DR	28	ALA	2.7
5	AE	159	LYS	2.7
34	DM	6	ARG	2.7
22	DA	544	C	2.7
2	AB	30	PHE	2.7
7	AG	18	PHE	2.7
9	CI	83	ILE	2.7
4	CD	46	PRO	2.7
14	CN	33	ASP	2.7
29	DH	144	VAL	2.7
32	DK	35	VAL	2.7
39	DR	20	VAL	2.7
9	CI	11	ARG	2.7
21	AU	35	ARG	2.7
36	DO	107	ALA	2.7
42	DU	2	ALA	2.7
43	DV	23	ALA	2.7
2	AB	65	GLY	2.7
22	DA	880	G	2.7
26	DE	150	THR	2.7
28	DG	25	THR	2.7
39	DR	19	THR	2.7
39	DR	31	GLU	2.7
39	DR	88	GLY	2.7
46	DY	35	GLY	2.7
48	D0	23	THR	2.7
1	AA	1001	C	2.7
1	CA	1321	U	2.7
11	AK	113	VAL	2.7
19	CS	21	LYS	2.7
28	DG	50	LEU	2.7
26	DE	10	SER	2.7
27	DF	107	ALA	2.7
7	CG	112	GLY	2.7
9	CI	30	ILE	2.7
22	BA	879	G	2.7
27	DF	100	PHE	2.7
22	DA	2313	C	2.7
1	CA	81	A	2.7
19	CS	32	ARG	2.7
19	CS	58	VAL	2.7
53	B5	44	VAL	2.7

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Mol	Chain	Res	Type	RSRZ
13	CM	5	ALA	2.7
53	B5	177	GLY	2.7
6	CF	35	LYS	2.7
41	DT	30	ILE	2.7
41	DT	40	LYS	2.7
26	DE	178	VAL	2.7
42	DU	25	VAL	2.7
29	BH	89	LYS	2.7
27	BF	77	PHE	2.7
22	DA	102	U	2.7
26	DE	24	ASN	2.7
53	B5	189	ASN	2.7
9	AI	63	LEU	2.7
17	CQ	63	GLU	2.7
29	DH	122	LEU	2.7
33	DL	115	GLU	2.7
42	DU	81	ASP	2.7
22	DA	1321	A	2.7
29	BH	25	TYR	2.7
7	CG	60	GLU	2.7
7	AG	69	VAL	2.7
16	CP	54	LEU	2.7
1	CA	1001	C	2.7
30	BI	27	ALA	2.7
51	D3	27	ALA	2.7
19	AS	61	PHE	2.6
29	DH	91	PHE	2.6
18	CR	51	TYR	2.6
22	BA	2192	U	2.6
28	DG	24	ILE	2.6
3	CC	157	LEU	2.6
49	D1	43	VAL	2.6
27	BF	41	GLY	2.6
22	DA	893	C	2.6
27	DF	109	PRO	2.6
27	DF	75	ALA	2.6
30	DI	103	ARG	2.6
37	DP	95	ALA	2.6
2	CB	15	HIS	2.6
9	AI	83	ILE	2.6
13	AM	17	ILE	2.6
22	DA	88	G	2.6

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Mol	Chain	Res	Type	RSRZ
22	DA	141	G	2.6
22	DA	1059	G	2.6
29	BH	99	ILE	2.6
30	BI	86	ILE	2.6
34	DM	62	LYS	2.6
35	DN	97	ILE	2.6
2	AB	117	LEU	2.6
28	DG	117	LEU	2.6
39	DR	22	LEU	2.6
46	DY	45	GLN	2.6
44	DW	64	ASP	2.6
2	CB	149	GLY	2.6
10	AJ	38	GLY	2.6
11	AK	43	GLY	2.6
26	DE	13	THR	2.6
7	AG	88	PRO	2.6
28	DG	35	ARG	2.6
1	CA	1132	C	2.6
7	CG	74	GLU	2.6
27	DF	85	ILE	2.6
28	DG	131	ILE	2.6
29	DH	143	ILE	2.6
31	DJ	118	MET	2.6
39	DR	49	ILE	2.6
40	DS	4	ILE	2.6
28	DG	164	TYR	2.6
1	AA	412	A	2.6
1	AA	1042	A	2.6
2	AB	35	ARG	2.6
2	AB	187	VAL	2.6
7	CG	82	GLY	2.6
14	AN	18	ASP	2.6
19	CS	62	VAL	2.6
30	BI	24	VAL	2.6
35	DN	73	ASN	2.6
30	BI	73	THR	2.6
20	CT	47	ALA	2.6
25	DD	41	ALA	2.6
46	DY	60	LYS	2.6
1	CA	1237	C	2.6
22	BA	2129	C	2.6
27	DF	42	GLU	2.6

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Mol	Chain	Res	Type	RSRZ
8	CH	3	MET	2.6
33	DL	73	ILE	2.6
40	DS	103	ILE	2.6
10	AJ	71	LEU	2.6
33	DL	7	SER	2.6
41	DT	50	LEU	2.6
52	B4	12	ARG	2.6
2	AB	123	ASP	2.6
18	CR	40	VAL	2.6
1	CA	1036	A	2.6
7	CG	71	PRO	2.6
30	BI	63	ALA	2.6
36	DO	57	ALA	2.6
2	CB	30	PHE	2.6
1	CA	85	U	2.6
9	CI	57	MET	2.6
22	DA	1468	U	2.6
8	CH	90	ASP	2.6
17	CQ	83	VAL	2.6
41	DT	80	TRP	2.6
41	DT	45	ALA	2.6
51	D3	65	ALA	2.6
52	D4	13	ASN	2.6
1	CA	1275	A	2.6
2	CB	91	PHE	2.6
14	CN	21	PHE	2.6
22	BA	2193	G	2.6
22	DA	2158	A	2.6
7	CG	144	MET	2.6
38	DQ	44	GLN	2.6
53	B5	19	LYS	2.6
2	CB	217	VAL	2.6
10	CJ	91	ASP	2.6
13	CM	18	ALA	2.6
10	CJ	37	ARG	2.6
37	DP	109	ARG	2.6
44	DW	43	THR	2.6
12	CL	123	LYS	2.6
22	DA	291	G	2.6
25	DD	96	ILE	2.6
22	DA	1101	U	2.6
30	BI	9	VAL	2.6

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Mol	Chain	Res	Type	RSRZ
30	DI	116	ASP	2.6
29	BH	81	ALA	2.6
29	DH	84	ALA	2.6
46	DY	48	ARG	2.6
2	AB	67	ILE	2.6
1	CA	978	A	2.6
10	CJ	15	HIS	2.6
26	DE	199	MET	2.6
22	DA	1092	C	2.6
22	DA	1408	G	2.6
39	DR	34	GLU	2.6
41	DT	56	GLU	2.6
13	AM	35	ALA	2.6
29	DH	47	PHE	2.6
40	DS	93	ALA	2.6
2	AB	129	LEU	2.5
3	CC	107	ARG	2.5
36	DO	9	ARG	2.5
13	CM	112	PRO	2.5
41	DT	89	GLU	2.5
27	DF	47	LYS	2.5
36	DO	81	ARG	2.5
40	DS	6	LYS	2.5
33	DL	85	VAL	2.5
46	DY	47	ARG	2.5
1	CA	1209	C	2.5
22	DA	1533	C	2.5
1	CA	1270	G	2.5
20	CT	45	ALA	2.5
29	DH	10	ALA	2.5
37	DP	19	SER	2.5
2	AB	29	PRO	2.5
25	DD	76	GLY	2.5
35	DN	26	GLY	2.5
35	DN	93	GLY	2.5
43	DV	89	ILE	2.5
46	BY	2	LYS	2.5
46	DY	62	GLY	2.5
13	CM	93	ARG	2.5
29	BH	5	LEU	2.5
41	DT	77	ARG	2.5
13	CM	28	THR	2.5

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Mol	Chain	Res	Type	RSRZ
1	CA	1218	C	2.5
2	CB	182	PRO	2.5
29	DH	137	GLU	2.5
10	CJ	40	ILE	2.5
23	DB	20	G	2.5
35	DN	107	ASN	2.5
38	DQ	82	GLY	2.5
43	DV	49	ASN	2.5
2	CB	107	VAL	2.5
9	AI	48	VAL	2.5
22	DA	646	U	2.5
29	BH	138	VAL	2.5
30	BI	139	VAL	2.5
43	DV	1	MET	2.5
9	CI	91	ASP	2.5
19	CS	77	THR	2.5
12	CL	44	LYS	2.5
27	DF	171	ALA	2.5
36	DO	30	ARG	2.5
52	D4	38	GLY	2.5
10	CJ	6	ILE	2.5
25	DD	27	ILE	2.5
39	DR	101	ILE	2.5
1	AA	842	U	2.5
22	BA	880	G	2.5
23	DB	64	G	2.5
6	CF	80	PHE	2.5
7	AG	151	PHE	2.5
41	DT	49	LYS	2.5
51	D3	24	HIS	2.5
14	CN	99	ALA	2.5
38	DQ	30	ARG	2.5
42	DU	75	ALA	2.5
52	D4	36	ARG	2.5
51	D3	59	ILE	2.5
13	AM	105	ASN	2.5
25	DD	56	LYS	2.5
29	DH	57	LYS	2.5
2	AB	18	HIS	2.5
29	BH	76	GLU	2.5
39	DR	103	ALA	2.5
20	CT	13	GLN	2.5

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Mol	Chain	Res	Type	RSRZ
5	AE	115	LEU	2.5
17	CQ	44	LEU	2.5
27	DF	9	LYS	2.5
30	BI	106	LEU	2.5
39	DR	24	LYS	2.5
46	BY	6	LEU	2.5
14	CN	43	ASN	2.5
30	BI	43	ASN	2.5
14	CN	6	MET	2.5
15	CO	26	GLU	2.5
20	CT	43	ASP	2.5
46	DY	26	PHE	2.5
22	DA	548	G	2.5
25	DD	209	ALA	2.5
34	DM	29	GLY	2.5
46	DY	3	ALA	2.5
13	CM	110	LYS	2.5
1	CA	841	C	2.5
2	CB	161	LEU	2.5
17	CQ	75	LEU	2.5
22	DA	2129	C	2.5
33	DL	107	PHE	2.5
2	CB	128	LYS	2.5
11	AK	19	GLY	2.5
20	AT	64	LYS	2.5
27	DF	81	GLN	2.5
1	CA	1455	G	2.5
6	AF	54	LEU	2.5
9	AI	6	TYR	2.5
18	AR	32	TYR	2.5
22	DA	2801	G	2.5
24	DC	205	LEU	2.5
6	CF	91	ARG	2.4
14	CN	63	ARG	2.4
22	DA	33	C	2.4
22	DA	436	C	2.4
26	DE	179	SER	2.4
52	D4	30	GLU	2.4
46	DY	1	MET	2.4
1	CA	1492	A	2.4
22	DA	1205	A	2.4
36	DO	3	LYS	2.4

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Mol	Chain	Res	Type	RSRZ
42	DU	91	LYS	2.4
29	BH	126	GLY	2.4
42	BU	57	GLY	2.4
2	AB	15	HIS	2.4
48	D0	2	ALA	2.4
7	CG	44	TYR	2.4
10	CJ	31	ARG	2.4
17	CQ	61	ILE	2.4
29	DH	72	ILE	2.4
30	DI	37	GLU	2.4
1	CA	987	G	2.4
14	CN	55	SER	2.4
46	DY	40	SER	2.4
1	CA	995	C	2.4
22	DA	897	C	2.4
23	DB	19	C	2.4
24	DC	26	LYS	2.4
39	DR	1	MET	2.4
46	DY	9	LYS	2.4
43	DV	43	ASP	2.4
21	AU	50	ALA	2.4
28	DG	174	ALA	2.4
33	DL	15	ALA	2.4
1	CA	80	A	2.4
22	DA	2211	A	2.4
2	CB	137	ARG	2.4
3	CC	126	ARG	2.4
17	CQ	77	ARG	2.4
49	D1	46	HIS	2.4
14	CN	46	LEU	2.4
41	DT	54	GLU	2.4
42	DU	15	THR	2.4
2	AB	213	TYR	2.4
3	AC	193	TYR	2.4
20	CT	36	TYR	2.4
4	AD	177	LYS	2.4
24	DC	5	LYS	2.4
30	DI	113	LYS	2.4
22	DA	316	C	2.4
36	DO	105	ALA	2.4
3	CC	162	ILE	2.4
10	AJ	25	ILE	2.4

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Mol	Chain	Res	Type	RSRZ
22	DA	1509	A	2.4
45	DX	30	LEU	2.4
40	DS	100	THR	2.4
3	CC	37	PHE	2.4
6	AF	89	VAL	2.4
33	DL	122	VAL	2.4
7	CG	81	GLY	2.4
26	DE	1	MET	2.4
35	DN	62	ASN	2.4
6	CF	79	ARG	2.4
36	DO	19	GLN	2.4
38	DQ	59	GLN	2.4
8	CH	130	ALA	2.4
27	DF	168	ALA	2.4
22	DA	1214	A	2.4
27	DF	132	VAL	2.4
34	DM	64	TRP	2.4
21	AU	24	GLU	2.4
36	DO	38	GLN	2.4
42	BU	46	GLN	2.4
53	B5	168	LYS	2.4
36	DO	23	ALA	2.4
53	B5	159	ALA	2.4
1	CA	460	A	2.4
10	CJ	32	THR	2.4
11	AK	13	ARG	2.4
27	DF	71	ARG	2.4
28	DG	171	THR	2.4
30	BI	93	PRO	2.4
30	DI	26	PRO	2.4
31	DJ	74	TYR	2.4
7	AG	56	LYS	2.4
22	DA	508	A	2.4
41	DT	86	THR	2.4
26	DE	9	GLN	2.4
27	BF	81	GLN	2.4
29	BH	20	ASN	2.4
34	DM	27	SER	2.4
43	DV	45	ASP	2.4
3	CC	102	ASN	2.4
10	AJ	34	ALA	2.4
21	AU	52	ALA	2.4

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Mol	Chain	Res	Type	RSRZ
29	BH	111	ALA	2.4
3	CC	87	LEU	2.4
36	DO	87	ILE	2.4
35	DN	30	ARG	2.4
27	DF	74	VAL	2.4
33	DL	118	THR	2.4
22	BA	1089	A	2.4
3	CC	141	ALA	2.4
22	DA	228	C	2.4
29	BH	4	ILE	2.4
27	DF	30	ARG	2.4
7	CG	6	VAL	2.4
24	DC	245	VAL	2.4
28	DG	169	VAL	2.4
42	DU	83	VAL	2.4
13	CM	82	ASP	2.4
1	CA	1362	A	2.4
13	CM	15	ALA	2.4
22	DA	1111	A	2.4
22	DA	1169	A	2.4
34	DM	56	ALA	2.4
46	DY	32	ALA	2.4
10	AJ	90	LEU	2.4
13	CM	57	ARG	2.4
32	DK	53	LYS	2.4
41	DT	69	ARG	2.4
22	DA	2164	C	2.4
27	DF	99	PHE	2.3
28	DG	31	GLY	2.3
41	DT	10	VAL	2.3
1	CA	467	U	2.3
1	CA	1224	U	2.3
1	CA	1307	U	2.3
2	CB	88	ASP	2.3
22	DA	2105	U	2.3
37	DP	13	MET	2.3
20	CT	87	ALA	2.3
22	DA	619	G	2.3
22	DA	1212	G	2.3
29	BH	65	ALA	2.3
28	DG	38	ASN	2.3
49	D1	44	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
48	D0	39	LEU	2.3
22	BA	893	C	2.3
22	DA	2178	C	2.3
28	DG	28	GLY	2.3
33	DL	124	GLY	2.3
22	DA	2149	U	2.3
38	DQ	45	TYR	2.3
7	CG	115	SER	2.3
26	DE	180	LEU	2.3
22	BA	1062	G	2.3
22	DA	583	G	2.3
22	DA	1734	G	2.3
37	BP	115	ASN	2.3
40	DS	40	ASN	2.3
43	DV	58	SER	2.3
51	D3	28	ASN	2.3
1	CA	1493	A	2.3
25	DD	6	GLY	2.3
27	DF	138	PHE	2.3
53	B5	209	PHE	2.3
26	DE	90	GLN	2.3
26	DE	96	VAL	2.3
28	DG	4	VAL	2.3
41	DT	31	VAL	2.3
1	CA	842	U	2.3
22	DA	2182	U	2.3
28	DG	137	ASP	2.3
30	BI	47	ASP	2.3
41	DT	46	ALA	2.3
7	CG	129	GLU	2.3
14	AN	26	GLU	2.3
29	DH	149	GLU	2.3
30	BI	112	THR	2.3
33	DL	5	THR	2.3
33	DL	77	ILE	2.3
37	DP	114	LEU	2.3
51	D3	6	THR	2.3
21	AU	51	SER	2.3
9	AI	39	PHE	2.3
44	DW	73	GLY	2.3
15	CO	75	VAL	2.3
22	DA	279	A	2.3

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Mol	Chain	Res	Type	RSRZ
27	DF	115	ARG	2.3
30	BI	65	ARG	2.3
39	DR	51	VAL	2.3
22	DA	1730	C	2.3
22	DA	2798	U	2.3
36	DO	108	ASP	2.3
45	DX	78	TYR	2.3
49	D1	35	GLU	2.3
4	AD	82	LEU	2.3
20	CT	79	LEU	2.3
27	DF	57	LEU	2.3
28	DG	36	THR	2.3
14	CN	68	GLY	2.3
24	BC	237	GLY	2.3
25	DD	125	TRP	2.3
50	D2	30	VAL	2.3
1	CA	1241	G	2.3
1	CA	1287	A	2.3
22	DA	1538	G	2.3
1	CA	1212	U	2.3
14	CN	3	LYS	2.3
28	BG	177	LYS	2.3
2	AB	20	THR	2.3
7	AG	78	ARG	2.3
14	CN	41	ARG	2.3
33	DL	26	GLY	2.3
39	DR	35	PHE	2.3
7	CG	20	SER	2.3
45	DX	20	HIS	2.3
22	DA	549	G	2.3
22	DA	603	A	2.3
22	DA	1052	C	2.3
29	DH	86	ASP	2.3
22	DA	2108	A	2.3
22	DA	2412	A	2.3
29	BH	26	ALA	2.3
36	DO	25	ARG	2.3
19	AS	41	PHE	2.3
29	DH	132	PHE	2.3
28	DG	88	GLN	2.3
2	CB	210	VAL	2.3
30	BI	102	SER	2.3

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Mol	Chain	Res	Type	RSRZ
10	CJ	11	LYS	2.3
28	DG	12	PRO	2.3
31	DJ	97	PRO	2.3
1	CA	1325	C	2.3
30	BI	36	MET	2.3
34	DM	105	MET	2.3
3	CC	159	GLY	2.3
9	AI	28	ILE	2.3
18	AR	21	ILE	2.3
2	AB	32	PHE	2.3
15	CO	15	PHE	2.3
22	DA	1042	G	2.3
25	DD	115	GLY	2.3
31	DJ	119	PHE	2.3
43	DV	91	PHE	2.3
25	DD	49	GLN	2.3
13	AM	43	VAL	2.3
27	DF	121	SER	2.3
42	DU	37	GLU	2.3
2	AB	127	ASP	2.3
13	AM	109	ARG	2.3
22	DA	1542	U	2.3
25	DD	84	LEU	2.3
1	AA	1027	C	2.3
13	CM	81	MET	2.3
20	CT	67	ILE	2.3
35	DN	94	TYR	2.3
35	DN	113	ILE	2.3
7	AG	58	GLU	2.3
10	CJ	66	GLU	2.3
13	CM	41	GLU	2.3
23	DB	16	G	2.3
35	DN	82	GLU	2.3
28	DG	127	THR	2.2
3	CC	179	ARG	2.2
46	DY	29	ARG	2.2
14	CN	18	ASP	2.2
22	DA	1217	U	2.2
44	DW	57	HIS	2.2
10	CJ	38	GLY	2.2
53	B5	201	LYS	2.2
36	DO	84	GLU	2.2

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Mol	Chain	Res	Type	RSRZ
1	CA	101	A	2.2
22	BA	1088	A	2.2
22	DA	1872	A	2.2
20	CT	70	ASN	2.2
36	DO	54	VAL	2.2
1	CA	1050	G	2.2
2	CB	116	ASP	2.2
2	CB	159	ASP	2.2
2	CB	39	HIS	2.2
3	AC	86	LYS	2.2
48	D0	53	LYS	2.2
7	CG	121	ALA	2.2
13	AM	99	GLY	2.2
19	AS	13	LEU	2.2
19	CS	46	GLY	2.2
33	DL	102	GLY	2.2
40	DS	5	ALA	2.2
41	DT	32	LEU	2.2
43	DV	33	GLY	2.2
28	DG	141	ILE	2.2
31	DJ	142	ILE	2.2
19	CS	73	GLU	2.2
21	AU	10	GLU	2.2
33	DL	86	GLU	2.2
48	D0	49	TYR	2.2
9	CI	67	VAL	2.2
19	AS	60	VAL	2.2
28	DG	149	ARG	2.2
29	DH	110	VAL	2.2
2	AB	66	LYS	2.2
41	DT	36	LYS	2.2
10	CJ	44	THR	2.2
22	BA	882	G	2.2
22	DA	1475	G	2.2
23	DB	2	G	2.2
27	DF	116	GLY	2.2
38	DQ	73	GLY	2.2
20	CT	12	ILE	2.2
18	CR	73	ARG	2.2
28	DG	157	TYR	2.2
39	DR	92	TRP	2.2
22	DA	2146	C	2.2

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Mol	Chain	Res	Type	RSRZ
5	CE	149	SER	2.2
6	AF	61	LEU	2.2
7	CG	30	LEU	2.2
10	CJ	24	GLU	2.2
53	B5	190	ILE	2.2
10	AJ	7	ARG	2.2
10	AJ	89	ARG	2.2
22	DA	2162	G	2.2
42	DU	22	ARG	2.2
29	BH	147	VAL	2.2
29	DH	78	VAL	2.2
22	DA	1060	U	2.2
1	CA	1363	A	2.2
5	CE	124	LEU	2.2
4	CD	47	ARG	2.2
7	AG	79	ARG	2.2
22	DA	2799	A	2.2
26	DE	157	LEU	2.2
25	DD	47	ALA	2.2
27	DF	20	PHE	2.2
36	DO	13	ARG	2.2
36	DO	53	THR	2.2
50	D2	14	ARG	2.2
28	DG	22	GLN	2.2
28	DG	29	LYS	2.2
46	DY	25	GLN	2.2
13	CM	99	GLY	2.2
19	AS	20	GLU	2.2
33	DL	130	GLY	2.2
2	AB	42	ASN	2.2
13	CM	42	ASP	2.2
3	AC	64	ILE	2.2
6	AF	6	ILE	2.2
11	AK	110	ILE	2.2
14	CN	73	PHE	2.2
19	CS	10	PHE	2.2
22	DA	1061	U	2.2
25	DD	201	LEU	2.2
26	DE	183	PHE	2.2
28	DG	129	THR	2.2
1	CA	1219	A	2.2
3	AC	66	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
44	DW	83	GLU	2.2
29	BH	95	GLY	2.2
29	DH	13	GLY	2.2
36	DO	7	ARG	2.2
48	D0	35	GLY	2.2
19	CS	5	LEU	2.2
2	CB	164	ILE	2.2
7	CG	107	ALA	2.2
20	CT	72	ALA	2.2
41	DT	83	ALA	2.2
48	D0	55	ILE	2.2
2	CB	154	MET	2.2
29	BH	125	THR	2.2
36	DO	98	GLN	2.2
22	BA	654	A	2.2
7	CG	89	VAL	2.2
9	CI	112	GLU	2.2
41	DT	67	VAL	2.2
11	CK	13	ARG	2.2
18	AR	73	ARG	2.2
19	CS	15	LEU	2.2
22	DA	275	C	2.2
13	AM	40	ALA	2.2
27	DF	104	ILE	2.2
28	DG	73	ASN	2.2
41	DT	59	ASN	2.2
14	AN	12	LYS	2.2
18	CR	48	ARG	2.2
22	BA	613	A	2.2
22	BA	2191	A	2.2
27	DF	97	TRP	2.1
41	DT	79	ASP	2.1
1	CA	990	C	2.1
22	DA	11	C	2.1
22	DA	1167	C	2.1
33	DL	103	ILE	2.1
36	DO	37	ALA	2.1
47	DZ	9	GLN	2.1
1	CA	1260	G	2.1
16	CP	76	LYS	2.1
33	DL	141	LYS	2.1
4	AD	147	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
13	AM	107	ARG	2.1
41	DT	90	GLY	2.1
45	DX	13	VAL	2.1
22	DA	1347	A	2.1
13	AM	80	LEU	2.1
29	BH	75	LEU	2.1
38	DQ	101	PHE	2.1
47	DZ	24	LEU	2.1
3	CC	80	LYS	2.1
3	CC	160	ALA	2.1
7	AG	7	ILE	2.1
7	CG	7	ILE	2.1
18	CR	21	ILE	2.1
22	DA	2132	U	2.1
30	BI	77	ALA	2.1
1	AA	83	C	2.1
9	AI	97	GLU	2.1
31	DJ	35	ARG	2.1
13	AM	30	SER	2.1
22	BA	1071	G	2.1
23	DB	54	G	2.1
28	DG	90	VAL	2.1
33	DL	65	GLY	2.1
33	DL	88	GLY	2.1
34	DM	24	THR	2.1
44	DW	58	THR	2.1
44	DW	71	VAL	2.1
33	DL	125	LEU	2.1
40	DS	36	LEU	2.1
1	CA	1239	A	2.1
22	DA	101	A	2.1
2	CB	134	ALA	2.1
2	CB	151	ILE	2.1
19	CS	20	GLU	2.1
20	AT	12	ILE	2.1
20	CT	81	ALA	2.1
31	DJ	13	ARG	2.1
50	D2	32	ALA	2.1
1	CA	1210	C	2.1
20	AT	20	HIS	2.1
1	CA	1453	G	2.1
9	CI	68	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
12	AL	15	LYS	2.1
19	AS	21	LYS	2.1
22	DA	329	G	2.1
25	DD	8	LYS	2.1
50	D2	2	LYS	2.1
14	AN	16	LEU	2.1
19	AS	5	LEU	2.1
45	DX	33	LEU	2.1
6	AF	91	ARG	2.1
10	AJ	35	GLN	2.1
11	AK	18	ASP	2.1
24	BC	238	ARG	2.1
27	BF	113	ASP	2.1
53	B5	60	ARG	2.1
3	AC	101	ILE	2.1
22	DA	1224	U	2.1
30	DI	109	ILE	2.1
22	DA	2800	A	2.1
23	DB	119	A	2.1
1	AA	841	C	2.1
2	CB	23	TRP	2.1
31	DJ	92	MET	2.1
2	CB	131	LYS	2.1
3	AC	39	VAL	2.1
25	DD	38	LYS	2.1
44	DW	44	LYS	2.1
9	AI	33	ARG	2.1
12	CL	38	TYR	2.1
14	AN	51	LEU	2.1
15	AO	17	ARG	2.1
25	DD	46	ARG	2.1
1	AA	84	U	2.1
1	CA	1240	U	2.1
20	AT	87	ALA	2.1
23	DB	53	A	2.1
27	DF	161	LYS	2.1
1	CA	1228	C	2.1
16	CP	2	VAL	2.1
38	DQ	34	VAL	2.1
45	DX	47	VAL	2.1
21	AU	47	ARG	2.1
29	BH	93	SER	2.1

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Mol	Chain	Res	Type	RSRZ
2	AB	114	LEU	2.1
2	AB	130	THR	2.1
49	D1	7	GLU	2.1
26	DE	191	ASP	2.1
22	DA	1082	U	2.1
23	DB	22	U	2.1
1	AA	1002	G	2.1
22	DA	1731	G	2.1
3	CC	81	GLY	2.1
1	CA	1145	A	2.1
17	CQ	11	ARG	2.1
22	BA	1069	A	2.1
33	DL	8	PRO	2.1
39	DR	47	VAL	2.1
42	DU	70	VAL	2.1
1	CA	87	C	2.1
36	DO	20	GLU	2.1
36	DO	97	PHE	2.1
40	DS	101	SER	2.1
40	DS	109	ASP	2.1
1	AA	5	U	2.1
24	DC	2	ALA	2.1
49	D1	9	ILE	2.1
1	CA	1276	G	2.1
1	CA	1300	G	2.1
5	CE	152	MET	2.1
7	AG	64	VAL	2.1
13	CM	97	VAL	2.1
17	CQ	29	VAL	2.1
22	BA	1179	G	2.1
22	DA	117	G	2.1
22	DA	1311	G	2.1
22	DA	2668	G	2.1
42	DU	27	ASN	2.1
42	DU	59	VAL	2.1
1	CA	461	A	2.1
9	CI	94	LEU	2.1
30	BI	72	LYS	2.1
26	DE	41	GLN	2.1
38	DQ	71	GLN	2.1
1	AA	1017	U	2.1
1	CA	89	U	2.1

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Mol	Chain	Res	Type	RSRZ
1	CA	1301	U	2.1
2	CB	125	THR	2.1
19	AS	77	THR	2.1
26	DE	175	ILE	2.1
36	DO	11	ALA	2.1
36	DO	109	ALA	2.1
7	AG	8	GLY	2.1
10	CJ	9	ARG	2.1
34	DM	87	GLY	2.1
3	CC	89	LYS	2.1
7	AG	141	VAL	2.1
36	DO	55	GLU	2.1
30	BI	45	LYS	2.1
9	CI	63	LEU	2.0
19	AS	10	PHE	2.1
22	DA	180	G	2.1
22	DA	2410	G	2.1
1	CA	90	C	2.0
2	CB	104	TRP	2.0
8	AH	54	ASP	2.0
10	AJ	101	SER	2.0
10	CJ	101	SER	2.0
39	DR	18	GLN	2.0
13	CM	68	ASP	2.0
27	DF	56	ASP	2.0
1	CA	1029	U	2.0
5	CE	75	ALA	2.0
13	CM	104	THR	2.0
22	DA	2833	U	2.0
44	DW	41	ARG	2.0
10	CJ	59	LYS	2.0
29	BH	71	LYS	2.0
37	DP	9	GLU	2.0
25	DD	1	MET	2.0
19	AS	16	LEU	2.0
43	DV	38	LEU	2.0
50	D2	31	LEU	2.0
7	CG	140	ASP	2.0
19	CS	36	ARG	2.0
21	AU	17	ARG	2.0
22	DA	446	G	2.0
28	DG	114	ASP	2.0

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Mol	Chain	Res	Type	RSRZ
37	DP	42	ALA	2.0
45	DX	21	ALA	2.0
12	CL	62	GLU	2.0
44	DW	72	LYS	2.0
9	CI	111	VAL	2.0
21	AU	28	VAL	2.0
43	DV	92	VAL	2.0
6	AF	80	PHE	2.0
34	DM	17	ASN	2.0
14	CN	49	GLN	2.0
25	DD	128	ARG	2.0
40	DS	9	HIS	2.0
49	D1	6	ARG	2.0
3	CC	207	ILE	2.0
7	CG	56	LYS	2.0
10	AJ	14	ASP	2.0
12	CL	15	LYS	2.0
29	DH	83	LYS	2.0
30	BI	64	ASP	2.0
36	DO	2	ASP	2.0
41	DT	88	LYS	2.0
1	CA	121	U	2.0
1	CA	979	C	2.0
1	CA	1048	G	2.0
1	CA	1121	U	2.0
1	CA	1312	G	2.0
14	CN	101	TRP	2.0
22	BA	881	G	2.0
22	BA	1060	U	2.0
22	DA	70	G	2.0
22	DA	183	C	2.0
22	DA	281	C	2.0
22	DA	505	A	2.0
37	DP	31	TRP	2.0
15	AO	22	THR	2.0
36	DO	31	THR	2.0
5	CE	147	MET	2.0
9	CI	119	ARG	2.0
19	CS	61	PHE	2.0
13	AM	56	LEU	2.0
2	AB	167	ASP	2.0
25	DD	140	HIS	2.0

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Mol	Chain	Res	Type	RSRZ
27	BF	116	GLY	2.0
27	DF	19	GLU	2.0
31	DJ	9	GLU	2.0
13	AM	36	ALA	2.0
51	D3	21	GLY	2.0
22	DA	1108	U	2.0
39	DR	102	SER	2.0
1	CA	1034	G	2.0
1	CA	1220	G	2.0
22	DA	626	A	2.0
2	AB	63	ARG	2.0
20	CT	25	ARG	2.0
28	DG	49	THR	2.0
29	BH	124	THR	2.0
38	DQ	39	VAL	2.0
21	CU	37	PHE	2.0
50	D2	35	ARG	2.0
2	AB	141	LEU	2.0
4	AD	148	LYS	2.0
11	AK	82	LEU	2.0
19	CS	9	PRO	2.0
33	DL	119	PRO	2.0
41	DT	68	LYS	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 monosaccharides 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. The B-factors column lists the minimum, median, 95th 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.

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
54	MG	DA	3133	1/1	-0.13	1.03	105,105,105,105	0
54	MG	DA	3077	1/1	0.14	0.37	115,115,115,115	0
54	MG	CA	1636	1/1	0.14	0.24	127,127,127,127	0
54	MG	AA	1666	1/1	0.22	0.37	61,61,61,61	0
54	MG	DA	3100	1/1	0.30	0.42	86,86,86,86	0
54	MG	DA	3135	1/1	0.33	0.66	101,101,101,101	0
54	MG	DA	3026	1/1	0.34	0.49	100,100,100,100	0
54	MG	CA	1604	1/1	0.43	0.16	95,95,95,95	0
54	MG	DA	3019	1/1	0.44	0.32	109,109,109,109	0
54	MG	DA	3029	1/1	0.46	0.25	77,77,77,77	0
54	MG	DA	3062	1/1	0.46	0.61	89,89,89,89	0
54	MG	DA	3003	1/1	0.48	0.63	101,101,101,101	0
54	MG	CA	1629	1/1	0.49	0.10	89,89,89,89	0
54	MG	DA	3119	1/1	0.49	0.81	112,112,112,112	0
54	MG	DA	3099	1/1	0.52	0.39	91,91,91,91	0
54	MG	AA	1664	1/1	0.54	0.71	49,49,49,49	0
54	MG	CA	1615	1/1	0.56	0.18	52,52,52,52	0
54	MG	CA	1631	1/1	0.59	0.23	101,101,101,101	0
54	MG	DA	3005	1/1	0.60	0.53	103,103,103,103	0
54	MG	DA	3046	1/1	0.60	0.13	68,68,68,68	0
54	MG	DA	3028	1/1	0.60	1.15	104,104,104,104	0
54	MG	DL	201	1/1	0.60	0.52	68,68,68,68	0
54	MG	DA	3070	1/1	0.61	0.18	108,108,108,108	0
54	MG	DA	3041	1/1	0.61	0.45	72,72,72,72	0
54	MG	DA	3002	1/1	0.62	0.14	78,78,78,78	0
54	MG	DA	3137	1/1	0.62	0.48	52,52,52,52	0
54	MG	CA	1602	1/1	0.62	0.12	87,87,87,87	0
54	MG	DA	3111	1/1	0.63	0.19	103,103,103,103	0
54	MG	DA	3078	1/1	0.65	0.21	110,110,110,110	0
54	MG	DA	3061	1/1	0.65	2.99	102,102,102,102	0
54	MG	AA	1650	1/1	0.65	0.34	61,61,61,61	0
54	MG	CA	1630	1/1	0.66	0.34	120,120,120,120	0
54	MG	DA	3012	1/1	0.67	0.22	78,78,78,78	0
54	MG	DA	3071	1/1	0.67	0.22	87,87,87,87	0
54	MG	DB	203	1/1	0.67	0.09	85,85,85,85	0
54	MG	DA	3103	1/1	0.67	0.15	67,67,67,67	0
54	MG	DA	3113	1/1	0.68	0.58	72,72,72,72	0
54	MG	AA	1658	1/1	0.68	0.67	52,52,52,52	0
54	MG	DA	3093	1/1	0.68	0.36	94,94,94,94	0
54	MG	AA	1637	1/1	0.68	0.14	81,81,81,81	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3136	1/1	0.68	0.18	94,94,94,94	0
54	MG	DA	3009	1/1	0.68	0.20	91,91,91,91	0
54	MG	DA	3147	1/1	0.68	0.26	67,67,67,67	0
54	MG	AA	1618	1/1	0.68	0.29	75,75,75,75	0
54	MG	BA	3189	1/1	0.68	0.21	48,48,48,48	0
54	MG	CA	1628	1/1	0.69	0.31	99,99,99,99	0
54	MG	AA	1662	1/1	0.69	0.46	58,58,58,58	0
54	MG	DA	3048	1/1	0.70	0.32	123,123,123,123	0
54	MG	AA	1656	1/1	0.71	0.94	66,66,66,66	0
54	MG	DA	3044	1/1	0.71	0.46	113,113,113,113	0
54	MG	DA	3091	1/1	0.71	0.17	82,82,82,82	0
54	MG	DA	3092	1/1	0.71	0.78	117,117,117,117	0
54	MG	AA	1669	1/1	0.71	0.28	45,45,45,45	0
54	MG	BA	3027	1/1	0.71	0.30	44,44,44,44	0
54	MG	AA	1668	1/1	0.72	0.91	54,54,54,54	0
54	MG	BA	3049	1/1	0.72	0.17	50,50,50,50	0
54	MG	CA	1635	1/1	0.73	0.35	122,122,122,122	0
54	MG	DA	3162	1/1	0.73	0.69	63,63,63,63	0
54	MG	DB	201	1/1	0.73	0.13	113,113,113,113	0
54	MG	DA	3127	1/1	0.73	0.20	74,74,74,74	0
54	MG	DA	3106	1/1	0.73	0.19	49,49,49,49	0
54	MG	DA	3010	1/1	0.74	0.06	80,80,80,80	0
54	MG	DA	3104	1/1	0.74	0.08	80,80,80,80	0
54	MG	DA	3145	1/1	0.74	0.19	56,56,56,56	0
54	MG	DA	3095	1/1	0.74	0.28	91,91,91,91	0
54	MG	AA	1661	1/1	0.75	0.37	55,55,55,55	0
54	MG	CA	1632	1/1	0.75	0.17	79,79,79,79	0
54	MG	DA	3034	1/1	0.75	0.17	69,69,69,69	0
54	MG	BA	3120	1/1	0.76	0.18	47,47,47,47	0
54	MG	DA	3084	1/1	0.76	0.25	104,104,104,104	0
54	MG	DA	3023	1/1	0.76	0.13	76,76,76,76	0
54	MG	BA	3082	1/1	0.76	0.12	16,16,16,16	0
54	MG	DA	3027	1/1	0.76	0.33	97,97,97,97	0
54	MG	DA	3159	1/1	0.77	0.34	47,47,47,47	0
54	MG	DA	3049	1/1	0.77	0.18	87,87,87,87	0
54	MG	DA	3056	1/1	0.77	0.29	91,91,91,91	0
54	MG	CA	1614	1/1	0.77	0.12	49,49,49,49	0
54	MG	BA	3058	1/1	0.77	0.16	9,9,9,9	0
54	MG	CA	1603	1/1	0.78	0.08	37,37,37,37	0
54	MG	BA	3168	1/1	0.78	0.26	41,41,41,41	0
54	MG	AA	1626	1/1	0.78	0.27	53,53,53,53	0
54	MG	AA	1624	1/1	0.78	0.12	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3151	1/1	0.78	0.58	56,56,56,56	0
54	MG	DA	3016	1/1	0.79	0.37	73,73,73,73	0
54	MG	DA	3072	1/1	0.79	0.28	86,86,86,86	0
54	MG	DA	3042	1/1	0.79	0.13	87,87,87,87	0
54	MG	CA	1617	1/1	0.79	0.19	57,57,57,57	0
54	MG	CA	1621	1/1	0.79	0.14	72,72,72,72	0
54	MG	AA	1645	1/1	0.79	0.26	54,54,54,54	0
54	MG	DA	3132	1/1	0.80	0.25	64,64,64,64	0
54	MG	DA	3045	1/1	0.80	0.14	87,87,87,87	0
54	MG	DA	3088	1/1	0.80	0.12	75,75,75,75	0
54	MG	DA	3014	1/1	0.80	0.20	78,78,78,78	0
54	MG	DA	3165	1/1	0.80	0.15	100,100,100,100	0
54	MG	CA	1606	1/1	0.80	0.22	90,90,90,90	0
54	MG	DA	3144	1/1	0.80	0.29	72,72,72,72	0
54	MG	CA	1649	1/1	0.80	0.29	61,61,61,61	0
54	MG	BA	3134	1/1	0.81	0.42	54,54,54,54	0
54	MG	DA	3125	1/1	0.81	0.17	59,59,59,59	0
54	MG	AA	1659	1/1	0.81	0.18	62,62,62,62	0
54	MG	BA	3085	1/1	0.81	0.22	29,29,29,29	0
54	MG	CA	1608	1/1	0.81	0.18	80,80,80,80	0
54	MG	DA	3057	1/1	0.81	0.21	92,92,92,92	0
54	MG	AA	1638	1/1	0.81	0.09	64,64,64,64	0
54	MG	DA	3098	1/1	0.81	0.19	60,60,60,60	0
54	MG	DA	3140	1/1	0.81	0.36	42,42,42,42	0
54	MG	DA	3143	1/1	0.81	0.10	73,73,73,73	0
54	MG	DA	3126	1/1	0.82	0.20	77,77,77,77	0
54	MG	BA	3194	1/1	0.82	0.85	41,41,41,41	0
54	MG	BA	3005	1/1	0.82	0.14	45,45,45,45	0
54	MG	DA	3038	1/1	0.82	0.12	64,64,64,64	0
54	MG	DA	3134	1/1	0.82	0.14	54,54,54,54	0
54	MG	CA	1637	1/1	0.82	0.23	64,64,64,64	0
54	MG	AA	1639	1/1	0.82	0.14	45,45,45,45	0
54	MG	DA	3017	1/1	0.82	0.54	100,100,100,100	0
54	MG	DA	3060	1/1	0.82	0.36	81,81,81,81	0
54	MG	DA	3080	1/1	0.82	0.20	96,96,96,96	0
54	MG	CA	1610	1/1	0.83	0.08	65,65,65,65	0
54	MG	BA	3090	1/1	0.83	0.17	34,34,34,34	0
54	MG	DA	3058	1/1	0.83	0.92	107,107,107,107	0
54	MG	DA	3085	1/1	0.83	0.17	76,76,76,76	0
54	MG	DA	3008	1/1	0.83	0.30	102,102,102,102	0
54	MG	CA	1605	1/1	0.83	0.17	86,86,86,86	0
54	MG	DA	3124	1/1	0.83	0.17	87,87,87,87	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
54	MG	DA	3011	1/1	0.84	0.15	73,73,73,73	0
54	MG	CA	1653	1/1	0.84	0.17	47,47,47,47	0
54	MG	DA	3032	1/1	0.84	0.23	71,71,71,71	0
54	MG	CA	1626	1/1	0.84	0.20	54,54,54,54	0
54	MG	AA	1657	1/1	0.84	0.29	60,60,60,60	0
54	MG	AA	1651	1/1	0.84	0.20	51,51,51,51	0
54	MG	DA	3006	1/1	0.84	0.06	95,95,95,95	0
54	MG	AA	1619	1/1	0.84	0.08	71,71,71,71	0
54	MG	CA	1638	1/1	0.84	0.06	65,65,65,65	0
54	MG	DA	3116	1/1	0.84	0.33	72,72,72,72	0
54	MG	BA	3057	1/1	0.84	0.20	68,68,68,68	0
54	MG	DA	3107	1/1	0.85	0.12	70,70,70,70	0
54	MG	BA	3076	1/1	0.85	0.17	33,33,33,33	0
54	MG	DA	3161	1/1	0.85	0.30	46,46,46,46	0
54	MG	CA	1611	1/1	0.85	0.25	87,87,87,87	0
54	MG	DA	3047	1/1	0.85	0.11	74,74,74,74	0
54	MG	DA	3031	1/1	0.85	0.14	65,65,65,65	0
54	MG	DA	3120	1/1	0.85	0.18	81,81,81,81	0
54	MG	DA	3089	1/1	0.85	0.32	87,87,87,87	0
54	MG	D2	101	1/1	0.85	0.17	76,76,76,76	0
54	MG	DA	3022	1/1	0.86	0.07	55,55,55,55	0
54	MG	BA	3100	1/1	0.86	0.29	51,51,51,51	0
54	MG	DA	3157	1/1	0.86	0.67	76,76,76,76	0
54	MG	DA	3158	1/1	0.86	0.23	52,52,52,52	0
54	MG	DA	3040	1/1	0.86	0.12	80,80,80,80	0
54	MG	AA	1622	1/1	0.86	0.18	50,50,50,50	0
54	MG	BA	3125	1/1	0.86	0.29	39,39,39,39	0
54	MG	DA	3163	1/1	0.86	0.26	64,64,64,64	0
54	MG	DA	3083	1/1	0.86	0.23	74,74,74,74	0
54	MG	AA	1612	1/1	0.86	0.11	48,48,48,48	0
54	MG	AA	1614	1/1	0.86	0.23	74,74,74,74	0
54	MG	CA	1643	1/1	0.86	0.30	44,44,44,44	0
54	MG	BA	3059	1/1	0.86	0.35	36,36,36,36	0
54	MG	CA	1646	1/1	0.87	0.40	97,97,97,97	0
54	MG	DA	3087	1/1	0.87	0.15	64,64,64,64	0
54	MG	DA	3004	1/1	0.87	0.08	78,78,78,78	0
54	MG	DA	3021	1/1	0.87	0.16	53,53,53,53	0
54	MG	BA	3165	1/1	0.87	0.22	38,38,38,38	0
54	MG	AA	1642	1/1	0.87	0.19	32,32,32,32	0
54	MG	DA	3130	1/1	0.87	0.24	80,80,80,80	0
54	MG	DA	3007	1/1	0.87	0.34	119,119,119,119	0
54	MG	AA	1627	1/1	0.87	0.06	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
54	MG	DA	3067	1/1	0.87	0.12	53,53,53,53	0
54	MG	DA	3025	1/1	0.88	0.23	68,68,68,68	0
54	MG	AA	1665	1/1	0.88	0.27	47,47,47,47	0
54	MG	DA	3101	1/1	0.88	0.13	63,63,63,63	0
54	MG	BA	3167	1/1	0.88	0.26	32,32,32,32	0
54	MG	CA	1609	1/1	0.88	0.07	87,87,87,87	0
54	MG	CA	1655	1/1	0.88	0.11	45,45,45,45	0
54	MG	BA	3078	1/1	0.88	0.49	87,87,87,87	0
54	MG	DA	3081	1/1	0.88	0.22	66,66,66,66	0
54	MG	DA	3150	1/1	0.88	0.27	50,50,50,50	0
54	MG	DA	3053	1/1	0.88	0.12	44,44,44,44	0
54	MG	DA	3055	1/1	0.88	0.12	59,59,59,59	0
54	MG	BA	3104	1/1	0.88	0.11	8,8,8,8	0
54	MG	AA	1633	1/1	0.88	0.12	51,51,51,51	0
54	MG	DA	3037	1/1	0.88	0.12	92,92,92,92	0
54	MG	AM	201	1/1	0.88	0.85	59,59,59,59	0
54	MG	BA	3089	1/1	0.88	0.13	24,24,24,24	0
54	MG	DA	3164	1/1	0.88	0.26	40,40,40,40	0
54	MG	BA	3137	1/1	0.88	0.36	46,46,46,46	0
54	MG	DA	3066	1/1	0.88	0.14	58,58,58,58	0
54	MG	BA	3146	1/1	0.88	0.18	32,32,32,32	0
54	MG	DA	3096	1/1	0.88	0.11	61,61,61,61	0
54	MG	DA	3068	1/1	0.88	0.14	64,64,64,64	0
55	DOL	DA	3001	48/48	0.88	0.32	28,49,62,81	0
54	MG	AA	1608	1/1	0.89	0.13	27,27,27,27	0
54	MG	CA	1613	1/1	0.89	0.11	20,20,20,20	0
54	MG	DA	3030	1/1	0.89	0.22	70,70,70,70	0
54	MG	CA	1644	1/1	0.89	0.23	43,43,43,43	0
54	MG	CA	1633	1/1	0.89	0.53	76,76,76,76	0
54	MG	BA	3075	1/1	0.89	0.22	35,35,35,35	0
54	MG	DA	3035	1/1	0.89	0.10	79,79,79,79	0
54	MG	DA	3079	1/1	0.89	0.12	98,98,98,98	0
54	MG	DA	3149	1/1	0.89	0.41	55,55,55,55	0
54	MG	AA	1631	1/1	0.89	0.14	52,52,52,52	0
54	MG	DA	3094	1/1	0.89	0.30	87,87,87,87	0
54	MG	BA	3042	1/1	0.89	0.34	2,2,2,2	0
54	MG	DA	3015	1/1	0.90	0.13	63,63,63,63	0
54	MG	BA	3147	1/1	0.90	0.47	23,23,23,23	0
54	MG	CA	1656	1/1	0.90	0.27	50,50,50,50	0
54	MG	DA	3109	1/1	0.90	0.14	47,47,47,47	0
54	MG	AA	1644	1/1	0.90	0.38	45,45,45,45	0
54	MG	DA	3112	1/1	0.90	0.42	92,92,92,92	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3146	1/1	0.90	0.40	48,48,48,48	0
54	MG	BA	3101	1/1	0.90	0.10	1,1,1,1	0
54	MG	BA	3079	1/1	0.90	0.08	22,22,22,22	0
54	MG	DA	3118	1/1	0.90	0.09	55,55,55,55	0
54	MG	BA	3116	1/1	0.90	0.20	32,32,32,32	0
54	MG	DA	3156	1/1	0.90	0.19	57,57,57,57	0
54	MG	DA	3024	1/1	0.90	0.19	46,46,46,46	0
54	MG	DA	3121	1/1	0.90	0.06	48,48,48,48	0
54	MG	BA	3119	1/1	0.90	0.09	21,21,21,21	0
54	MG	AA	1607	1/1	0.90	0.05	54,54,54,54	0
54	MG	AA	1667	1/1	0.90	0.16	30,30,30,30	0
54	MG	DA	3075	1/1	0.90	0.19	83,83,83,83	0
54	MG	DA	3129	1/1	0.90	0.15	50,50,50,50	0
54	MG	AA	1647	1/1	0.90	0.17	48,48,48,48	0
54	MG	DA	3131	1/1	0.90	0.61	94,94,94,94	0
54	MG	AA	1606	1/1	0.90	0.08	44,44,44,44	0
54	MG	CA	1627	1/1	0.90	0.28	87,87,87,87	0
54	MG	BA	3094	1/1	0.90	0.10	42,42,42,42	0
54	MG	CA	1607	1/1	0.90	0.09	53,53,53,53	0
54	MG	DA	3122	1/1	0.91	0.10	36,36,36,36	0
54	MG	DA	3123	1/1	0.91	0.14	62,62,62,62	0
54	MG	DA	3148	1/1	0.91	0.19	41,41,41,41	0
54	MG	AA	1643	1/1	0.91	0.16	42,42,42,42	0
54	MG	AA	1609	1/1	0.91	0.12	35,35,35,35	0
54	MG	DA	3043	1/1	0.91	0.10	68,68,68,68	0
54	MG	DA	3153	1/1	0.91	0.12	45,45,45,45	0
54	MG	BA	3195	1/1	0.91	0.57	31,31,31,31	0
54	MG	AA	1625	1/1	0.91	0.13	14,14,14,14	0
54	MG	CA	1634	1/1	0.91	0.12	51,51,51,51	0
54	MG	AA	1663	1/1	0.91	0.11	45,45,45,45	0
54	MG	BA	3015	1/1	0.91	0.09	4,4,4,4	0
54	MG	DA	3018	1/1	0.91	0.17	55,55,55,55	0
54	MG	DA	3074	1/1	0.91	0.09	72,72,72,72	0
54	MG	DA	3115	1/1	0.91	0.33	113,113,113,113	0
54	MG	BA	3159	1/1	0.91	0.20	8,8,8,8	0
54	MG	DA	3117	1/1	0.91	0.07	72,72,72,72	0
54	MG	BA	3017	1/1	0.91	0.14	13,13,13,13	0
54	MG	BA	3087	1/1	0.91	0.12	2,2,2,2	0
54	MG	BA	3073	1/1	0.91	0.08	12,12,12,12	0
54	MG	BA	3178	1/1	0.91	0.47	27,27,27,27	0
54	MG	AA	1601	1/1	0.92	0.10	53,53,53,53	0
54	MG	AA	1613	1/1	0.92	0.12	33,33,33,33	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
54	MG	BA	3081	1/1	0.92	0.11	18,18,18,18	0
54	MG	BA	3096	1/1	0.92	0.09	19,19,19,19	0
54	MG	DA	3105	1/1	0.92	0.21	81,81,81,81	0
54	MG	DA	3152	1/1	0.92	0.10	45,45,45,45	0
54	MG	BA	3170	1/1	0.92	0.15	36,36,36,36	0
54	MG	BA	3172	1/1	0.92	0.09	27,27,27,27	0
54	MG	DA	3108	1/1	0.92	0.19	61,61,61,61	0
54	MG	DA	3020	1/1	0.92	0.22	49,49,49,49	0
54	MG	AA	1628	1/1	0.92	0.24	59,59,59,59	0
54	MG	BA	3135	1/1	0.92	0.12	3,3,3,3	0
54	MG	BA	3190	1/1	0.92	0.14	39,39,39,39	0
54	MG	DA	3114	1/1	0.92	0.14	66,66,66,66	0
54	MG	BA	3191	1/1	0.92	0.29	12,12,12,12	0
54	MG	AA	1630	1/1	0.92	0.07	35,35,35,35	0
54	MG	BA	3016	1/1	0.92	0.34	51,51,51,51	0
54	MG	CA	1639	1/1	0.92	0.08	49,49,49,49	0
54	MG	CA	1642	1/1	0.92	0.22	25,25,25,25	0
54	MG	BA	3114	1/1	0.92	0.12	0,0,0,0	0
54	MG	BA	3151	1/1	0.92	0.20	12,12,12,12	0
54	MG	BA	3136	1/1	0.93	0.17	24,24,24,24	0
54	MG	AA	1610	1/1	0.93	0.29	65,65,65,65	0
54	MG	BA	3140	1/1	0.93	0.33	0,0,0,0	0
54	MG	AA	1603	1/1	0.93	0.14	44,44,44,44	0
54	MG	BA	3095	1/1	0.93	0.07	17,17,17,17	0
54	MG	BA	3149	1/1	0.93	0.23	44,44,44,44	0
54	MG	DA	3065	1/1	0.93	0.10	34,34,34,34	0
54	MG	DA	3139	1/1	0.93	0.26	31,31,31,31	0
54	MG	CA	1652	1/1	0.93	0.15	86,86,86,86	0
54	MG	DA	3142	1/1	0.93	0.13	34,34,34,34	0
54	MG	BA	3069	1/1	0.93	0.16	1,1,1,1	0
54	MG	BA	3156	1/1	0.93	0.35	26,26,26,26	0
54	MG	DA	3069	1/1	0.93	0.17	80,80,80,80	0
54	MG	AA	1660	1/1	0.93	0.34	45,45,45,45	0
54	MG	BA	3164	1/1	0.93	0.12	4,4,4,4	0
54	MG	DA	3110	1/1	0.93	0.23	39,39,39,39	0
54	MG	BA	3031	1/1	0.93	0.10	20,20,20,20	0
54	MG	DA	3073	1/1	0.93	0.31	61,61,61,61	0
54	MG	BA	3103	1/1	0.93	0.16	0,0,0,0	0
54	MG	BA	3036	1/1	0.93	0.14	10,10,10,10	0
54	MG	DA	3036	1/1	0.93	0.17	62,62,62,62	0
54	MG	CA	1624	1/1	0.93	0.07	39,39,39,39	0
54	MG	BA	3169	1/1	0.93	0.16	29,29,29,29	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
54	MG	BA	3105	1/1	0.93	0.10	10,10,10,10	0
54	MG	BA	3040	1/1	0.93	0.14	2,2,2,2	0
54	MG	AA	1632	1/1	0.93	0.06	37,37,37,37	0
54	MG	BA	3180	1/1	0.93	0.14	29,29,29,29	0
54	MG	BA	3047	1/1	0.93	0.17	4,4,4,4	0
54	MG	BA	3012	1/1	0.93	0.08	19,19,19,19	0
54	MG	BA	3121	1/1	0.93	0.09	2,2,2,2	0
54	MG	BA	3122	1/1	0.93	0.11	25,25,25,25	0
54	MG	DB	202	1/1	0.93	0.10	64,64,64,64	0
54	MG	BA	3052	1/1	0.93	0.08	7,7,7,7	0
54	MG	CA	1601	1/1	0.93	0.11	38,38,38,38	0
54	MG	BA	3054	1/1	0.93	0.09	6,6,6,6	0
54	MG	AA	1604	1/1	0.93	0.11	56,56,56,56	0
54	MG	BA	3086	1/1	0.94	0.15	24,24,24,24	0
54	MG	BA	3161	1/1	0.94	0.16	33,33,33,33	0
54	MG	DA	3033	1/1	0.94	0.16	63,63,63,63	0
54	MG	BA	3162	1/1	0.94	0.11	21,21,21,21	0
54	MG	DA	3138	1/1	0.94	0.22	38,38,38,38	0
54	MG	AN	201	1/1	0.94	0.19	62,62,62,62	0
54	MG	BA	3032	1/1	0.94	0.18	5,5,5,5	0
54	MG	BA	3062	1/1	0.94	0.32	46,46,46,46	0
54	MG	BA	3063	1/1	0.94	0.53	52,52,52,52	0
54	MG	DA	3013	1/1	0.94	0.18	45,45,45,45	0
54	MG	BA	3002	1/1	0.94	0.06	19,19,19,19	0
54	MG	CA	1641	1/1	0.94	0.26	66,66,66,66	0
54	MG	AA	1629	1/1	0.94	0.28	79,79,79,79	0
54	MG	AA	1653	1/1	0.94	0.25	47,47,47,47	0
54	MG	BA	3014	1/1	0.94	0.14	0,0,0,0	0
54	MG	AA	1654	1/1	0.94	0.14	34,34,34,34	0
54	MG	CA	1648	1/1	0.94	0.25	19,19,19,19	0
54	MG	DA	3082	1/1	0.94	0.10	59,59,59,59	0
54	MG	BA	3141	1/1	0.94	0.14	17,17,17,17	0
54	MG	CA	1651	1/1	0.94	0.16	42,42,42,42	0
54	MG	CA	1622	1/1	0.94	0.16	46,46,46,46	0
54	MG	DA	3054	1/1	0.94	0.11	48,48,48,48	0
54	MG	BA	3050	1/1	0.94	0.07	18,18,18,18	0
54	MG	DA	3160	1/1	0.94	0.26	64,64,64,64	0
54	MG	AA	1602	1/1	0.94	0.42	55,55,55,55	0
54	MG	DA	3090	1/1	0.94	0.07	84,84,84,84	0
54	MG	BA	3113	1/1	0.94	0.15	39,39,39,39	0
54	MG	BA	3150	1/1	0.94	0.14	29,29,29,29	0
54	MG	DA	3059	1/1	0.94	0.11	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3128	1/1	0.94	0.12	79,79,79,79	0
54	MG	AA	1634	1/1	0.94	0.43	73,73,73,73	0
54	MG	BA	3152	1/1	0.94	0.18	12,12,12,12	0
54	MG	AA	1616	1/1	0.94	0.08	57,57,57,57	0
54	MG	DA	3063	1/1	0.94	0.17	50,50,50,50	0
54	MG	DA	3064	1/1	0.94	0.17	53,53,53,53	0
54	MG	AA	1670	1/1	0.95	0.39	58,58,58,58	0
54	MG	AA	1623	1/1	0.95	0.10	41,41,41,41	0
54	MG	CA	1612	1/1	0.95	0.20	46,46,46,46	0
54	MG	DA	3102	1/1	0.95	0.14	61,61,61,61	0
54	MG	BA	3171	1/1	0.95	0.15	28,28,28,28	0
54	MG	BA	3033	1/1	0.95	0.10	9,9,9,9	0
54	MG	BA	3174	1/1	0.95	0.12	14,14,14,14	0
54	MG	CA	1616	1/1	0.95	0.09	38,38,38,38	0
54	MG	BA	3035	1/1	0.95	0.15	3,3,3,3	0
54	MG	BA	3179	1/1	0.95	0.33	30,30,30,30	0
54	MG	BA	3143	1/1	0.95	0.31	22,22,22,22	0
54	MG	CA	1623	1/1	0.95	0.19	50,50,50,50	0
54	MG	BA	3181	1/1	0.95	0.14	16,16,16,16	0
54	MG	BA	3183	1/1	0.95	0.16	19,19,19,19	0
54	MG	BA	3056	1/1	0.95	0.10	2,2,2,2	0
54	MG	BA	3080	1/1	0.95	0.07	42,42,42,42	0
54	MG	BA	3112	1/1	0.95	0.06	29,29,29,29	0
54	MG	BA	3007	1/1	0.95	0.10	24,24,24,24	0
54	MG	BA	3038	1/1	0.95	0.16	31,31,31,31	0
54	MG	BB	201	1/1	0.95	0.07	31,31,31,31	0
54	MG	BB	202	1/1	0.95	0.08	6,6,6,6	0
54	MG	BB	203	1/1	0.95	0.04	8,8,8,8	0
54	MG	BB	204	1/1	0.95	0.41	12,12,12,12	0
54	MG	DA	3052	1/1	0.95	0.10	60,60,60,60	0
54	MG	BA	3115	1/1	0.95	0.14	17,17,17,17	0
54	MG	BA	3009	1/1	0.95	0.13	4,4,4,4	0
54	MG	BA	3060	1/1	0.95	0.07	14,14,14,14	0
54	MG	BA	3061	1/1	0.95	0.27	40,40,40,40	0
54	MG	CA	1640	1/1	0.95	0.13	27,27,27,27	0
54	MG	BA	3020	1/1	0.95	0.07	24,24,24,24	0
54	MG	BA	3044	1/1	0.95	0.11	3,3,3,3	0
54	MG	BA	3093	1/1	0.95	0.15	57,57,57,57	0
54	MG	AA	1617	1/1	0.95	0.06	42,42,42,42	0
54	MG	DQ	201	1/1	0.95	0.27	37,37,37,37	0
54	MG	DA	3097	1/1	0.95	0.21	87,87,87,87	0
54	MG	BA	3071	1/1	0.95	0.19	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	BA	3133	1/1	0.96	0.20	39,39,39,39	0
54	MG	BA	3097	1/1	0.96	0.06	8,8,8,8	0
54	MG	BA	3098	1/1	0.96	0.08	3,3,3,3	0
54	MG	BA	3022	1/1	0.96	0.07	16,16,16,16	0
54	MG	CA	1645	1/1	0.96	0.14	28,28,28,28	0
54	MG	BA	3043	1/1	0.96	0.12	5,5,5,5	0
54	MG	CA	1647	1/1	0.96	0.09	36,36,36,36	0
54	MG	DA	3141	1/1	0.96	0.21	39,39,39,39	0
54	MG	BA	3173	1/1	0.96	0.15	38,38,38,38	0
54	MG	BA	3138	1/1	0.96	0.37	1,1,1,1	0
54	MG	BA	3175	1/1	0.96	0.13	34,34,34,34	0
54	MG	BA	3176	1/1	0.96	0.08	28,28,28,28	0
54	MG	AA	1635	1/1	0.96	0.05	23,23,23,23	0
54	MG	CA	1654	1/1	0.96	0.19	55,55,55,55	0
54	MG	BA	3030	1/1	0.96	0.14	6,6,6,6	0
54	MG	CA	1619	1/1	0.96	0.09	34,34,34,34	0
54	MG	BA	3013	1/1	0.96	0.22	0,0,0,0	0
54	MG	BA	3145	1/1	0.96	0.27	17,17,17,17	0
54	MG	DA	3039	1/1	0.96	0.07	57,57,57,57	0
54	MG	BA	3064	1/1	0.96	0.14	1,1,1,1	0
54	MG	DA	3155	1/1	0.96	0.32	42,42,42,42	0
54	MG	BA	3066	1/1	0.96	0.14	0,0,0,0	0
54	MG	CA	1625	1/1	0.96	0.13	17,17,17,17	0
54	MG	BA	3004	1/1	0.96	0.07	22,22,22,22	0
54	MG	AA	1640	1/1	0.96	0.10	21,21,21,21	0
54	MG	BA	3192	1/1	0.96	0.18	23,23,23,23	0
54	MG	BA	3091	1/1	0.96	0.09	4,4,4,4	0
54	MG	BA	3092	1/1	0.96	0.09	21,21,21,21	0
54	MG	AA	1605	1/1	0.96	0.17	26,26,26,26	0
54	MG	BA	3157	1/1	0.96	0.07	18,18,18,18	0
54	MG	BA	3008	1/1	0.96	0.15	33,33,33,33	0
54	MG	AA	1611	1/1	0.96	0.07	20,20,20,20	0
54	MG	BA	3124	1/1	0.96	0.10	20,20,20,20	0
54	MG	BA	3163	1/1	0.96	0.39	12,12,12,12	0
54	MG	BA	3021	1/1	0.96	0.27	0,0,0,0	0
54	MG	BA	3127	1/1	0.96	0.12	5,5,5,5	0
54	MG	BA	3166	1/1	0.96	0.13	23,23,23,23	0
55	DOL	BA	3001	48/48	0.96	0.20	1,7,30,58	0
54	MG	BA	3129	1/1	0.96	0.15	3,3,3,3	0
54	MG	BA	3018	1/1	0.97	0.19	0,0,0,0	0
54	MG	BA	3148	1/1	0.97	0.17	28,28,28,28	0
54	MG	BA	3070	1/1	0.97	0.14	0,0,0,0	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	CA	1650	1/1	0.97	0.09	42,42,42,42	0
54	MG	BA	3034	1/1	0.97	0.13	2,2,2,2	0
54	MG	BA	3011	1/1	0.97	0.08	0,0,0,0	0
54	MG	BA	3074	1/1	0.97	0.12	1,1,1,1	0
54	MG	BA	3182	1/1	0.97	0.16	16,16,16,16	0
54	MG	CA	1620	1/1	0.97	0.04	61,61,61,61	0
54	MG	BA	3153	1/1	0.97	0.10	26,26,26,26	0
54	MG	BA	3186	1/1	0.97	0.20	14,14,14,14	0
54	MG	BA	3187	1/1	0.97	0.15	30,30,30,30	0
54	MG	DA	3076	1/1	0.97	0.07	66,66,66,66	0
54	MG	BA	3188	1/1	0.97	0.14	6,6,6,6	0
54	MG	BA	3154	1/1	0.97	0.14	12,12,12,12	0
54	MG	BA	3155	1/1	0.97	0.10	18,18,18,18	0
54	MG	BA	3055	1/1	0.97	0.18	0,0,0,0	0
54	MG	DA	3154	1/1	0.97	0.45	57,57,57,57	0
54	MG	BA	3003	1/1	0.97	0.08	18,18,18,18	0
54	MG	BA	3193	1/1	0.97	0.21	32,32,32,32	0
54	MG	BA	3158	1/1	0.97	0.25	22,22,22,22	0
54	MG	BA	3077	1/1	0.97	0.13	12,12,12,12	0
54	MG	BA	3160	1/1	0.97	0.10	3,3,3,3	0
54	MG	AA	1648	1/1	0.97	0.16	33,33,33,33	0
54	MG	BA	3023	1/1	0.97	0.08	1,1,1,1	0
54	MG	BA	3132	1/1	0.97	0.16	27,27,27,27	0
54	MG	BA	3026	1/1	0.97	0.11	3,3,3,3	0
54	MG	BA	3102	1/1	0.97	0.08	9,9,9,9	0
54	MG	AA	1649	1/1	0.97	0.14	32,32,32,32	0
54	MG	AA	1620	1/1	0.97	0.06	30,30,30,30	0
54	MG	BA	3045	1/1	0.97	0.06	27,27,27,27	0
54	MG	BA	3106	1/1	0.97	0.18	5,5,5,5	0
54	MG	BA	3107	1/1	0.97	0.19	0,0,0,0	0
54	MG	BA	3110	1/1	0.97	0.20	4,4,4,4	0
54	MG	BA	3046	1/1	0.97	0.15	6,6,6,6	0
54	MG	AA	1615	1/1	0.97	0.11	62,62,62,62	0
54	MG	AA	1652	1/1	0.97	0.18	18,18,18,18	0
54	MG	AA	1636	1/1	0.98	0.09	17,17,17,17	0
54	MG	BQ	201	1/1	0.98	0.14	7,7,7,7	0
54	MG	BA	3177	1/1	0.98	0.19	12,12,12,12	0
54	MG	BA	3118	1/1	0.98	0.12	4,4,4,4	0
54	MG	AA	1655	1/1	0.98	0.11	44,44,44,44	0
54	MG	BA	3025	1/1	0.98	0.17	2,2,2,2	0
54	MG	BA	3139	1/1	0.98	0.36	0,0,0,0	0
54	MG	BA	3048	1/1	0.98	0.16	9,9,9,9	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	AA	1646	1/1	0.98	0.07	54,54,54,54	0
54	MG	BA	3185	1/1	0.98	0.11	13,13,13,13	0
54	MG	DA	3050	1/1	0.98	0.10	48,48,48,48	0
54	MG	DA	3051	1/1	0.98	0.10	32,32,32,32	0
54	MG	BA	3142	1/1	0.98	0.37	0,0,0,0	0
54	MG	BA	3123	1/1	0.98	0.18	0,0,0,0	0
54	MG	AA	1621	1/1	0.98	0.17	19,19,19,19	0
54	MG	BA	3072	1/1	0.98	0.08	7,7,7,7	0
54	MG	BA	3126	1/1	0.98	0.17	4,4,4,4	0
54	MG	BA	3084	1/1	0.98	0.08	16,16,16,16	0
54	MG	BA	3128	1/1	0.98	0.07	0,0,0,0	0
54	MG	BA	3051	1/1	0.98	0.12	1,1,1,1	0
54	MG	DA	3086	1/1	0.98	0.10	74,74,74,74	0
54	MG	BA	3130	1/1	0.98	0.14	0,0,0,0	0
54	MG	CA	1618	1/1	0.98	0.16	35,35,35,35	0
54	MG	BA	3131	1/1	0.98	0.24	1,1,1,1	0
54	MG	BA	3029	1/1	0.98	0.13	23,23,23,23	0
54	MG	BA	3099	1/1	0.98	0.04	5,5,5,5	0
54	MG	BA	3053	1/1	0.98	0.10	6,6,6,6	0
56	ZN	D4	101	1/1	0.98	0.06	91,91,91,91	0
54	MG	BA	3065	1/1	0.99	0.17	1,1,1,1	0
54	MG	BA	3144	1/1	0.99	0.28	6,6,6,6	0
54	MG	BA	3019	1/1	0.99	0.07	14,14,14,14	0
54	MG	BA	3088	1/1	0.99	0.21	2,2,2,2	0
54	MG	BA	3067	1/1	0.99	0.11	1,1,1,1	0
54	MG	BA	3117	1/1	0.99	0.16	2,2,2,2	0
54	MG	BA	3068	1/1	0.99	0.14	1,1,1,1	0
54	MG	BA	3024	1/1	0.99	0.12	0,0,0,0	0
54	MG	BA	3010	1/1	0.99	0.09	0,0,0,0	0
54	MG	BA	3184	1/1	0.99	0.16	3,3,3,3	0
54	MG	BA	3006	1/1	0.99	0.10	43,43,43,43	0
54	MG	BA	3041	1/1	0.99	0.14	2,2,2,2	0
54	MG	BA	3083	1/1	0.99	0.14	2,2,2,2	0
54	MG	BA	3109	1/1	0.99	0.16	6,6,6,6	0
54	MG	AA	1641	1/1	0.99	0.07	24,24,24,24	0
54	MG	BA	3111	1/1	0.99	0.15	4,4,4,4	0
54	MG	BA	3028	1/1	0.99	0.04	6,6,6,6	0
54	MG	BA	3037	1/1	1.00	0.16	0,0,0,0	0
54	MG	BA	3039	1/1	1.00	0.23	0,0,0,0	0
56	ZN	B4	101	1/1	1.00	0.06	36,36,36,36	0
54	MG	BA	3108	1/1	1.00	0.20	1,1,1,1	0

6.5 Other polymers [i](#)

There are no such residues in this entry.