Full wwPDB X-ray Structure Validation Report ⓘ

Mar 9, 2026 – 09:47 AM UTC

PDB ID	:	4U26 / pdb_00004u26
Title	:	Crystal structure of the E. coli ribosome bound to dalfopristin and quinupristin.
Authors	:	Noeske, J.; Huang, J.; Olivier, N.B.; Giacobbe, R.A.; Zambrowski, M.; Cate, J.H.D.
Deposited on	:	2014-07-16
Resolution	:	2.80 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
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:

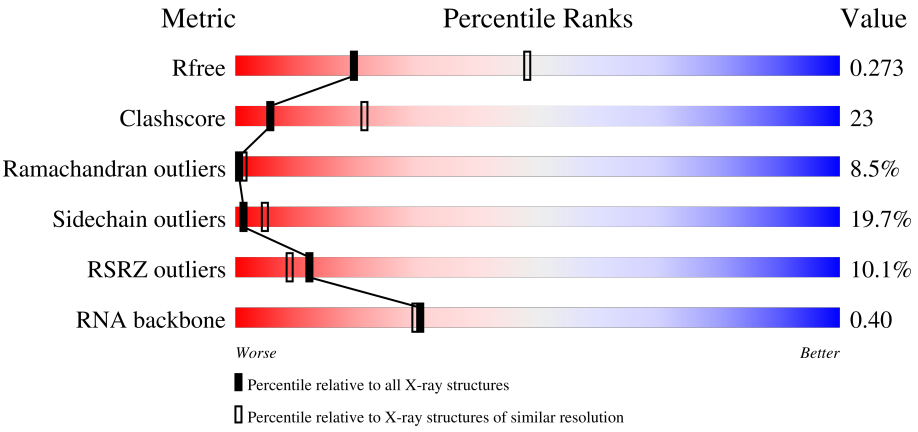
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

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 2.80 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	3866 (2.80-2.80)
Clashscore	190562	4276 (2.80-2.80)
Ramachandran outliers	187476	4196 (2.80-2.80)
Sidechain outliers	187428	4198 (2.80-2.80)
RSRZ outliers	180081	3869 (2.80-2.80)
RNA backbone	3983	1114 (3.00-2.60)

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 <=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	.% 34% 50% 15%
1	CA	1539	3% 30% 54% 16%
2	AB	218	6% 22% 48% 23% 6%

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Mol	Chain	Length	Quality of chain
2	CB	218	14% 27% 51% 19%
3	AC	206	3% 41% 43% 15%
3	CC	206	5% 51% 39% 9%
4	AD	205	7% 32% 49% 15%
4	CD	205	3% 43% 39% 16%
5	AE	150	5% 31% 46% 21%
5	CE	150	3% 30% 47% 21%
6	AF	100	2% 41% 41% 15%
6	CF	100	8% 34% 40% 22%
7	AG	151	6% 45% 42% 13%
7	CG	151	30% 44% 47% 8%
8	AH	129	2% 50% 41% 9%
8	CH	129	5% 42% 44% 13%
9	AI	127	13% 35% 41% 22%
9	CI	127	26% 36% 48% 13%
10	AJ	98	8% 29% 38% 31%
10	CJ	98	45% 40% 38% 20%
11	AK	117	3% 46% 37% 14%
11	CK	117	% 40% 46% 13%
12	AL	123	5% 54% 35% 8%
12	CL	123	10% 42% 37% 17%
13	AM	114	5% 46% 40% 12%
13	CM	114	55% 42% 42% 14%
14	AN	100	10% 36% 39% 20%
14	CN	100	26% 41% 35% 18%

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Mol	Chain	Length	Quality of chain
15	AO	88	5% 52% 35% 13%
15	CO	88	5% 56% 33% 10%
16	AP	82	5% 29% 43% 26%
16	CP	82	11% 51% 39% 10%
17	AQ	80	6% 36% 36% 24%
17	CQ	80	26% 32% 41% 21% 5%
18	AR	55	7% 51% 40% 9%
18	CR	55	4% 44% 42% 9% 5%
19	AS	79	8% 42% 42% 13%
19	CS	79	54% 41% 47% 8% 5%
20	AT	85	6% 41% 39% 15% 5%
20	CT	85	25% 35% 48% 12% 5%
21	AU	51	27% 24% 45% 20% 12%
21	CU	51	20% 18% 39% 33% 10%
22	BA	2903	4% 43% 44% 12%
22	DA	2903	6% 26% 54% 19%
23	BB	119	56% 39% 5%
23	DB	119	% 38% 52% 9%
24	BC	271	% 52% 40% 7%
24	DC	271	14% 44% 44% 11%
25	BD	209	60% 32% 8%
25	DD	209	18% 41% 48% 10%
26	BE	201	53% 37% 8%
26	DE	201	34% 45% 41% 13%
27	BF	177	% 45% 39% 15%

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Mol	Chain	Length	Quality of chain
27	DF	177	24% 52% 36% 10%
28	BG	176	% 62% 30% 8%
28	DG	176	20% 56% 35% 8%
29	BH	149	50% 29% 44% 22% 5%
29	DH	149	19% 37% 48% 11%
30	BI	141	55% 37% 40% 20%
30	DI	141	69% 36% 43% 21%
31	BJ	142	% 61% 30% 9%
31	DJ	142	18% 45% 39% 16%
32	BK	122	2% 52% 34% 14%
32	DK	122	8% 40% 48% 9%
33	BL	143	% 62% 30% 8%
33	DL	143	38% 47% 41% 11%
34	BM	136	% 60% 34% 7%
34	DM	136	11% 56% 38% 7%
35	BN	120	50% 42% 8%
35	DN	120	37% 39% 42% 17%
36	BO	116	53% 34% 11%
36	DO	116	29% 44% 50% 5%
37	BP	114	2% 55% 33% 11%
37	DP	114	20% 57% 35% 8%
38	BQ	117	60% 37%
38	DQ	117	25% 56% 39% 5%
39	BR	103	% 41% 44% 15%
39	DR	103	19% 51% 43% 5%

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Mol	Chain	Length	Quality of chain
40	BS	110	55% 33% 12%
40	DS	110	32% 57% 31% 11%
41	BT	93	6% 49% 37% 13%
41	DT	93	39% 27% 54% 16%
42	BU	102	% 53% 37% 9%
42	DU	102	58% 32% 49% 17%
43	BV	94	59% 29% 12%
43	DV	94	4% 55% 41%
44	BW	76	63% 25% 12%
44	DW	76	16% 57% 38%
45	BX	77	64% 32%
45	DX	77	36% 39% 45% 16%
46	BY	63	6% 33% 46% 19%
46	DY	63	35% 37% 51% 10%
47	BZ	58	64% 34%
47	DZ	58	5% 50% 34% 14%
48	B0	56	43% 45% 12%
48	D0	56	20% 50% 41% 9%
49	B1	50	2% 46% 40% 12%
49	D1	50	34% 46% 40% 12%
50	B2	46	2% 65% 30%
50	D2	46	46% 30% 54% 13%
51	B3	64	67% 27% 6%
51	D3	64	66% 64% 28% 8%
52	B4	38	68% 29%

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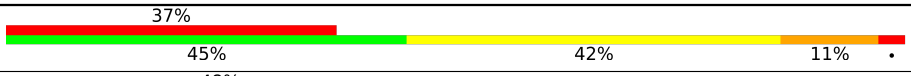
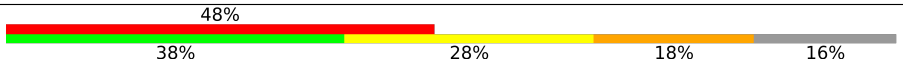
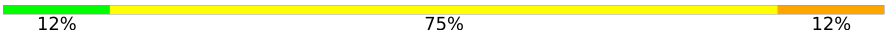
Mol	Chain	Length	Quality of chain
52	D4	38	
53	B5	228	
54	B6	8	
54	D6	8	

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
55	MG	DA	3058	-	-	-	X
55	MG	DA	3061	-	-	-	X
55	MG	DA	3112	-	-	-	X
56	DOL	DA	3001	-	-	X	-

2 Entry composition (i)

There are 58 unique types of molecules in this entry. The entry contains 288423 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1538	Total	C	N	O	P	0	0	0
			32995	14716	6050	10691	1538			
1	CA	1539	Total	C	N	O	P	0	0	0
			33015	14725	6052	10699	1539			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AO	88	Total	C	N	O	S	0	0	0
			710	437	143	129	1			
15	CO	88	Total	C	N	O	S	0	0	0
			710	437	143	129	1			

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	BA	2897	Total	C	N	O	P	0	0	0
			62195	27745	11446	20107	2897			
22	DA	2897	Total	C	N	O	P	0	0	0
			62195	27745	11446	20107	2897			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
38	BQ	117	Total	C	N	O	0	0	0
			947	604	192	151			
38	DQ	117	Total	C	N	O	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
42	DU	102	Total	C	N	O	0	0	0
			780	492	146	142			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

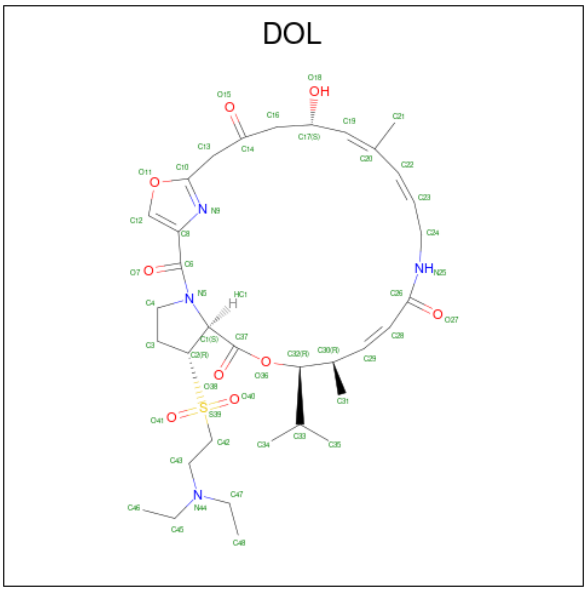
- Molecule 54 is a protein called Quinupristin.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	B6	8	Total 73	C 53	N 9	O 10	S 1	0	0	0
54	D6	8	Total 73	C 53	N 9	O 10	S 1	0	0	0

- Molecule 55 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	AA	71	Total 71	Mg 71	0	0
55	AM	1	Total 1	Mg 1	0	0
55	BA	194	Total 194	Mg 194	0	0
55	BB	4	Total 4	Mg 4	0	0
55	BQ	1	Total 1	Mg 1	0	0
55	CA	56	Total 56	Mg 56	0	0
55	DA	166	Total 166	Mg 166	0	0
55	DB	3	Total 3	Mg 3	0	0
55	DQ	1	Total 1	Mg 1	0	0
55	D2	1	Total 1	Mg 1	0	0

- Molecule 56 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 (CCD ID: DOL) (formula: $C_{34}H_{50}N_4O_9S$).



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

- Molecule 57 is ZINC ION (CCD ID: ZN) (formula: Zn).

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

- Molecule 58 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	AA	194	Total O 194 194	0	0
58	AE	2	Total O 2 2	0	0
58	AL	1	Total O 1 1	0	0
58	AN	3	Total O 3 3	0	0
58	AT	2	Total O 2 2	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	AU	1	Total O 1 1	0	0
58	BA	617	Total O 617 617	0	0
58	BB	14	Total O 14 14	0	0
58	BC	6	Total O 6 6	0	0
58	BD	4	Total O 4 4	0	0
58	BE	1	Total O 1 1	0	0
58	BF	1	Total O 1 1	0	0
58	BG	1	Total O 1 1	0	0
58	BJ	1	Total O 1 1	0	0
58	BL	7	Total O 7 7	0	0
58	BN	5	Total O 5 5	0	0
58	BQ	1	Total O 1 1	0	0
58	BS	1	Total O 1 1	0	0
58	BT	2	Total O 2 2	0	0
58	B3	3	Total O 3 3	0	0
58	B4	1	Total O 1 1	0	0
58	CA	192	Total O 192 192	0	0
58	CL	1	Total O 1 1	0	0
58	CN	2	Total O 2 2	0	0
58	CT	2	Total O 2 2	0	0
58	CU	1	Total O 1 1	0	0

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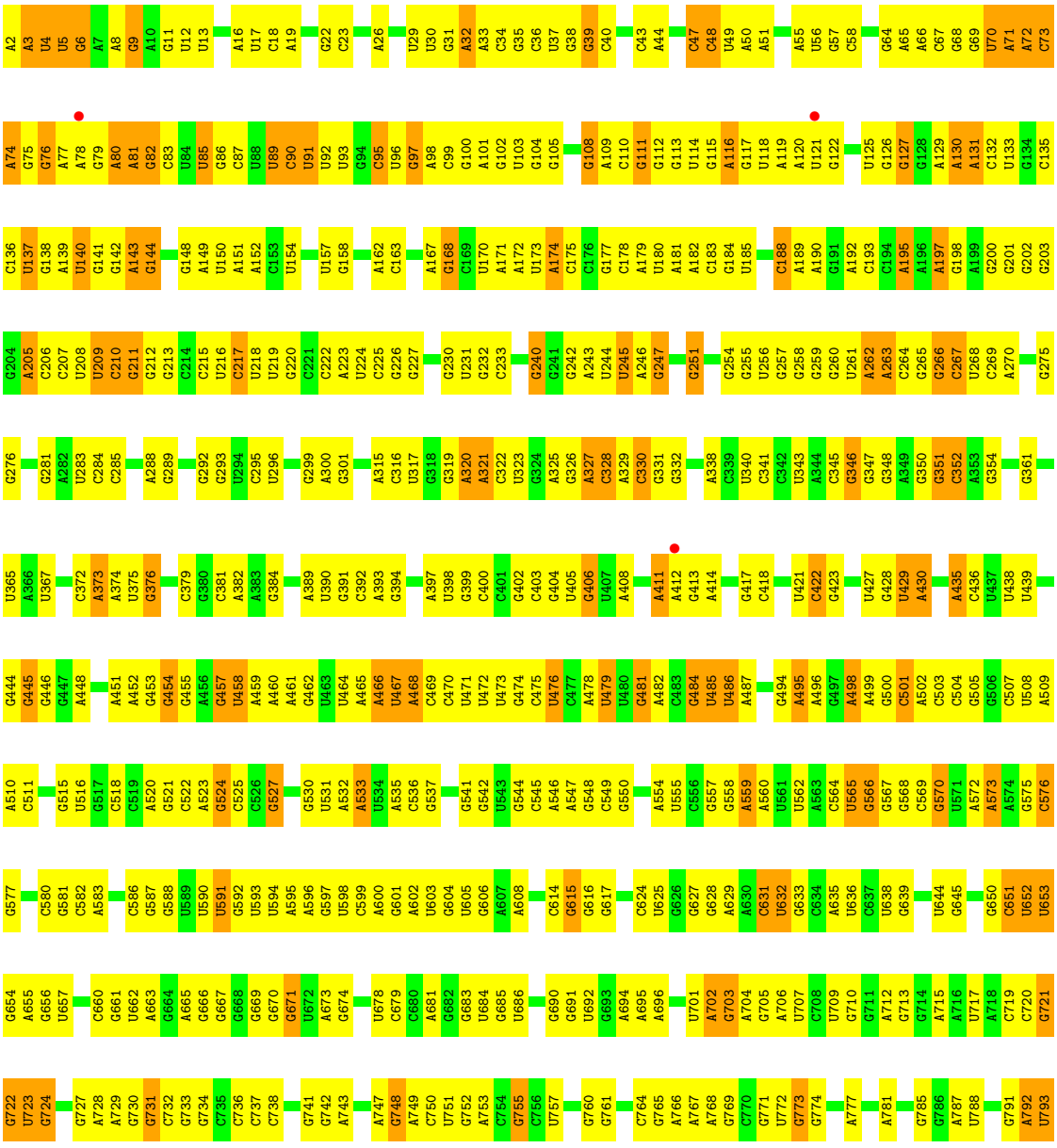
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	DA	610	Total O 610 610	0	0
58	DB	13	Total O 13 13	0	0
58	DC	8	Total O 8 8	0	0
58	DD	4	Total O 4 4	0	0
58	DE	4	Total O 4 4	0	0
58	DJ	1	Total O 1 1	0	0
58	DL	4	Total O 4 4	0	0
58	DN	2	Total O 2 2	0	0
58	DS	2	Total O 2 2	0	0
58	DT	3	Total O 3 3	0	0
58	DU	1	Total O 1 1	0	0
58	DV	1	Total O 1 1	0	0
58	D2	1	Total O 1 1	0	0
58	D3	1	Total O 1 1	0	0
58	D4	1	Total O 1 1	0	0

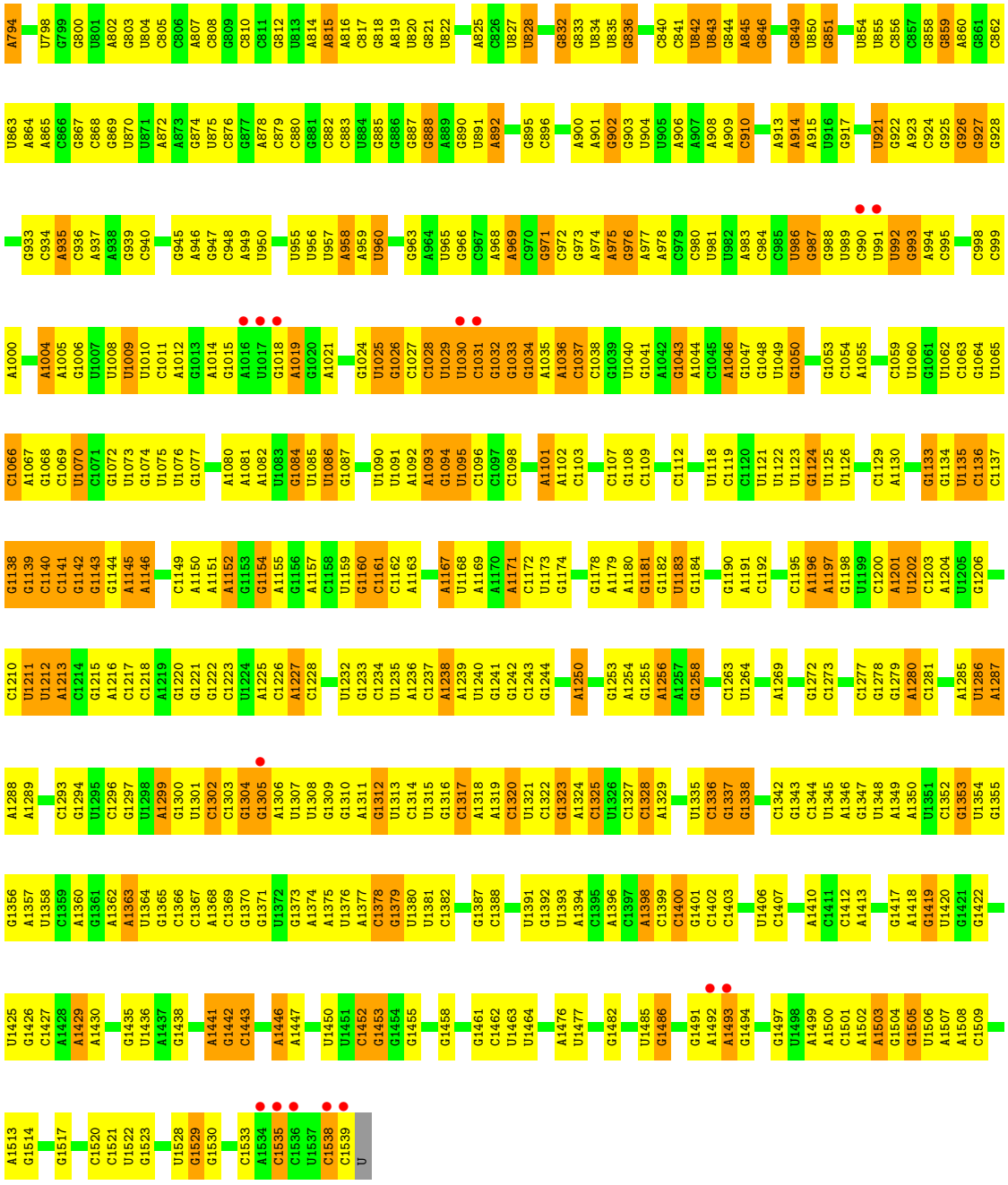
3 Residue-property plots (i)

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

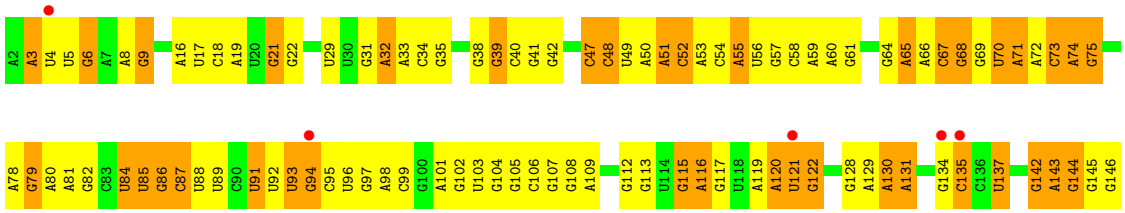
Chain AA:

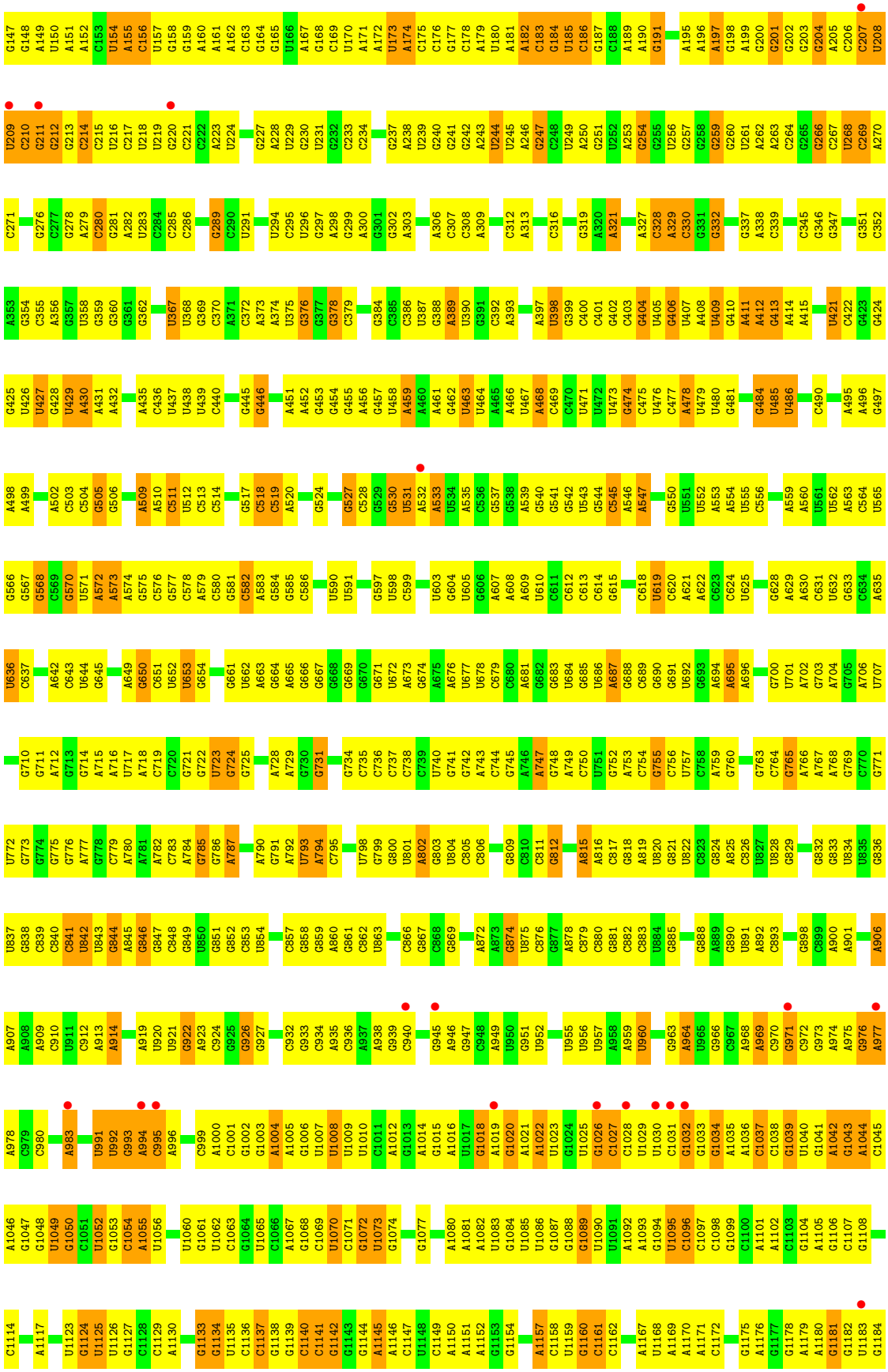


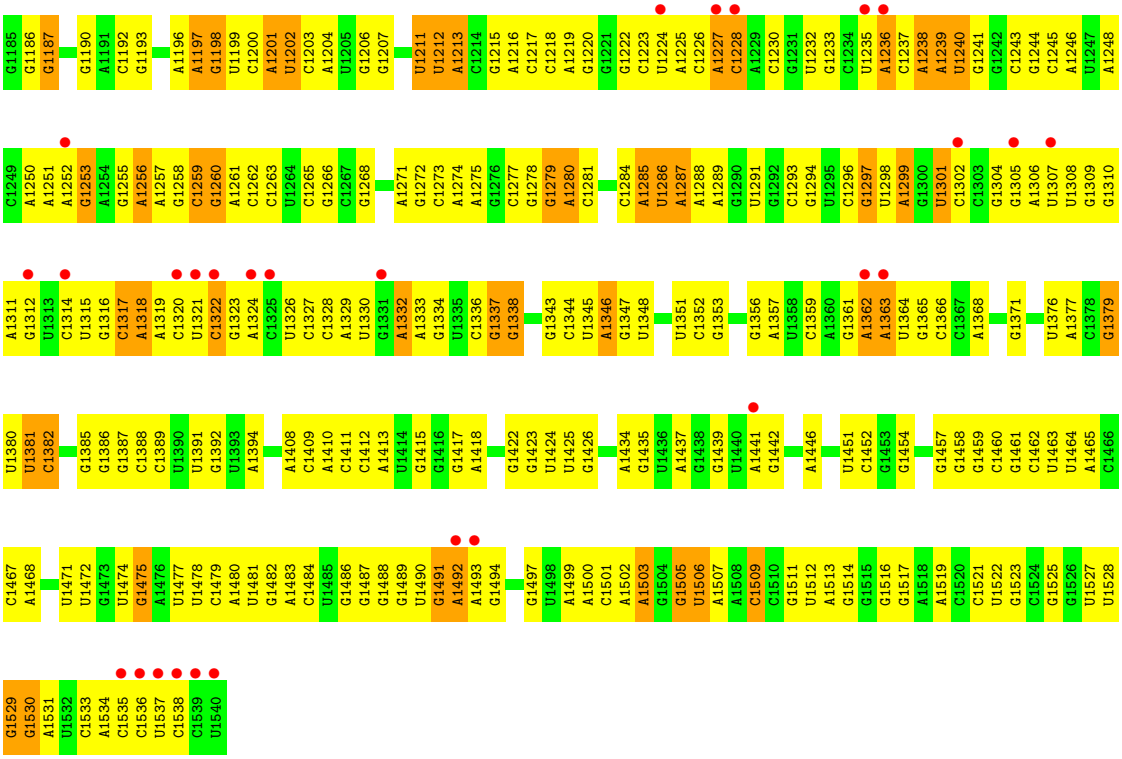


• Molecule 1: 16S rRNA

Chain CA:

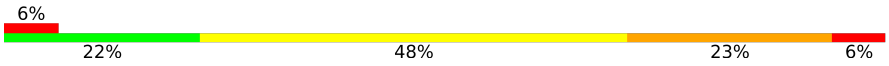


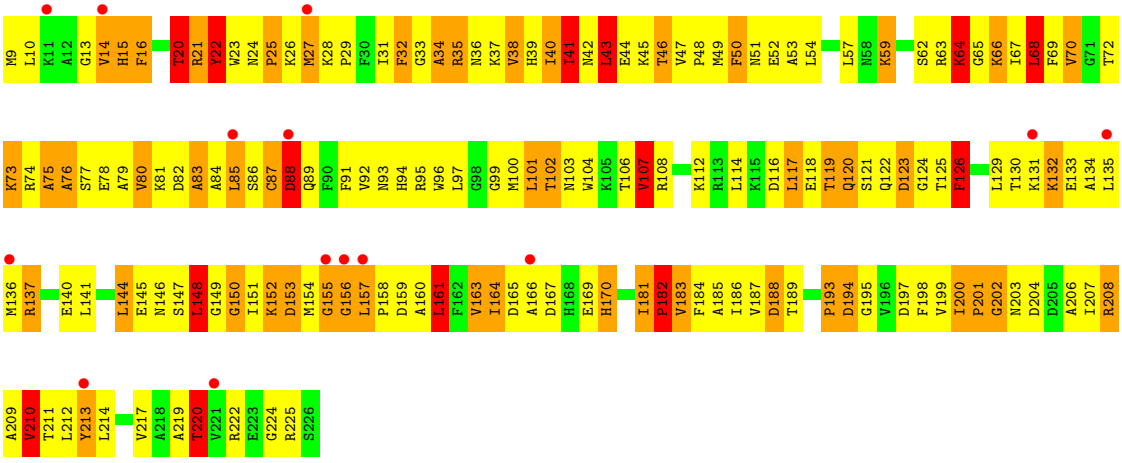




• Molecule 2: 30S ribosomal protein S2

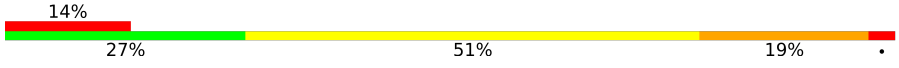
Chain AB:

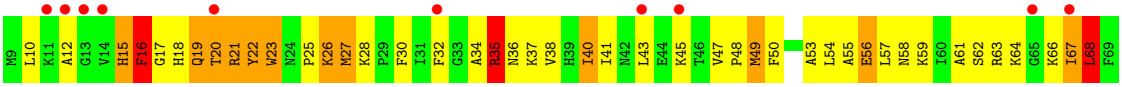


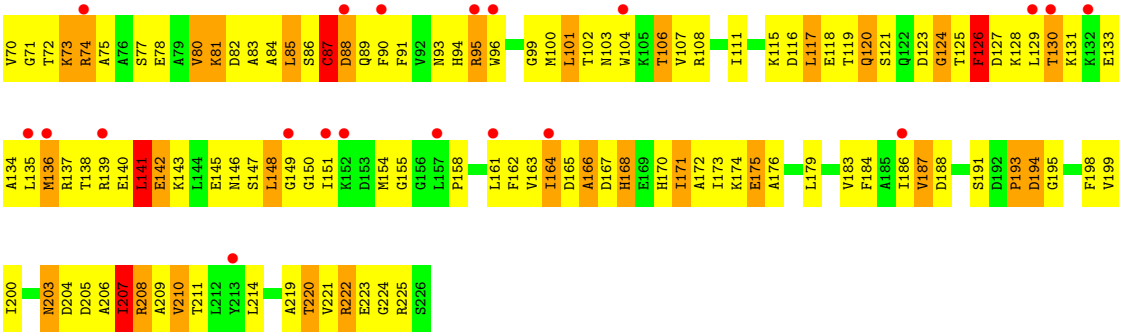


• Molecule 2: 30S ribosomal protein S2

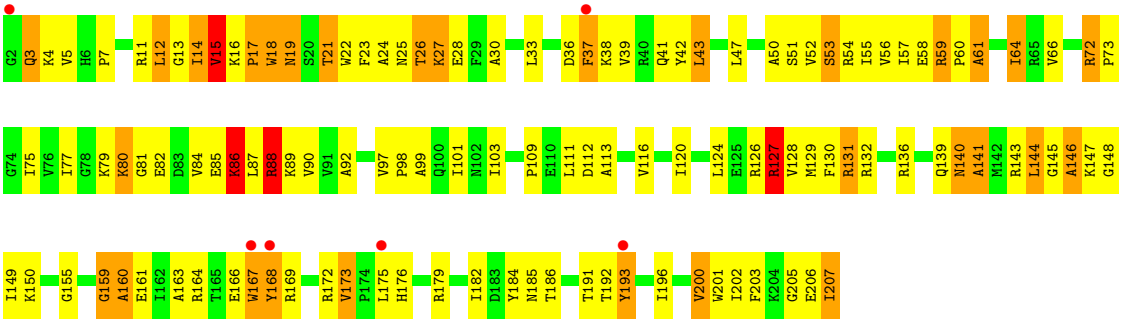
Chain CB:



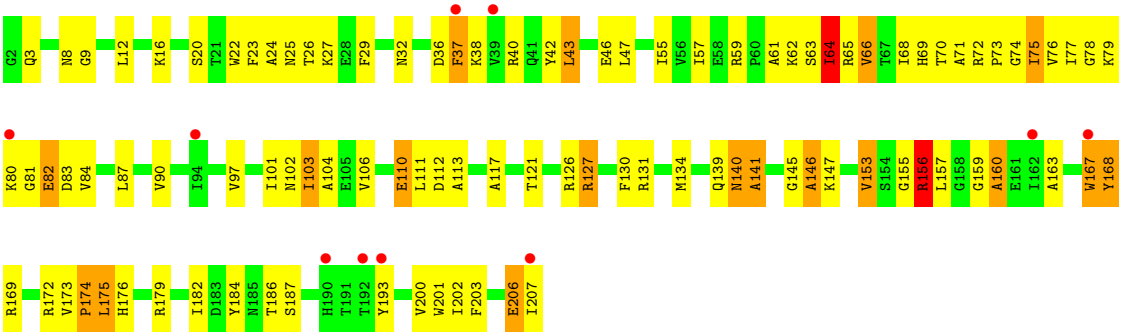




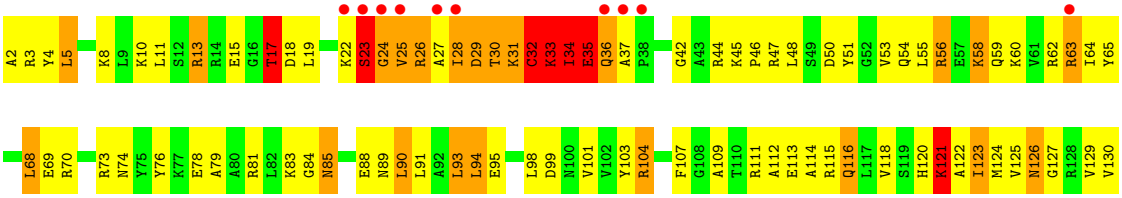
• Molecule 3: 30S ribosomal protein S3

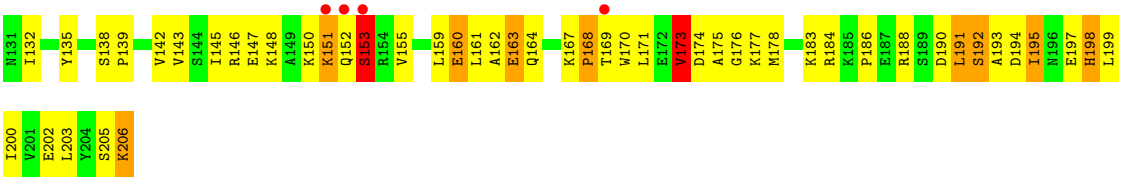


• Molecule 3: 30S ribosomal protein S3

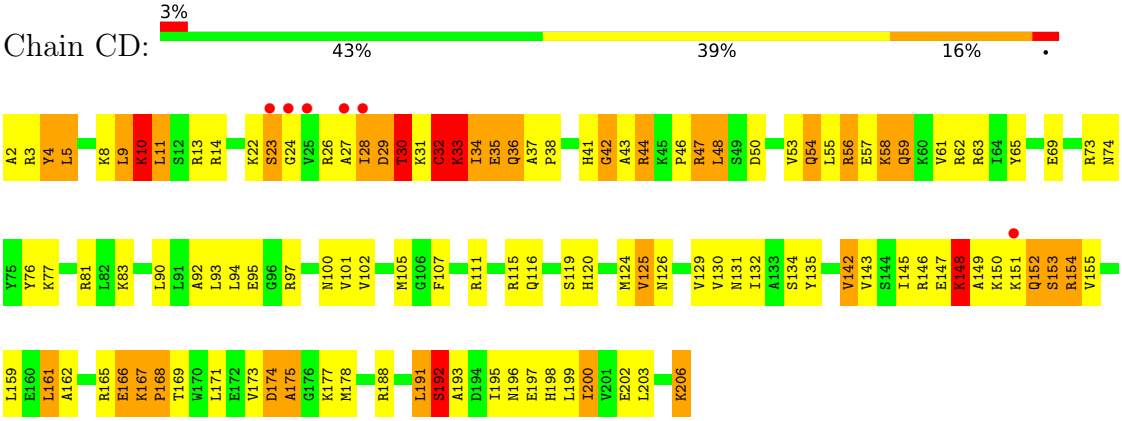


• Molecule 4: 30S ribosomal protein S4

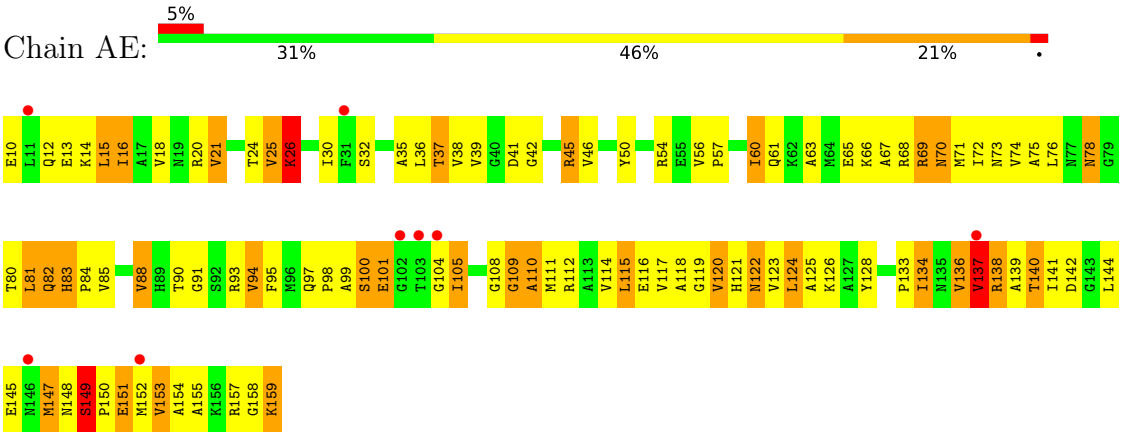




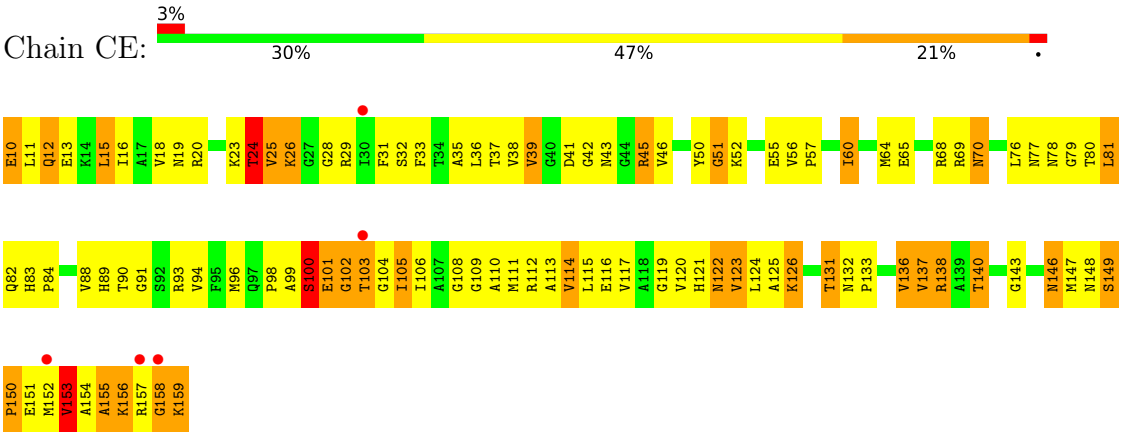
• Molecule 4: 30S ribosomal protein S4



• Molecule 5: 30S ribosomal protein S5

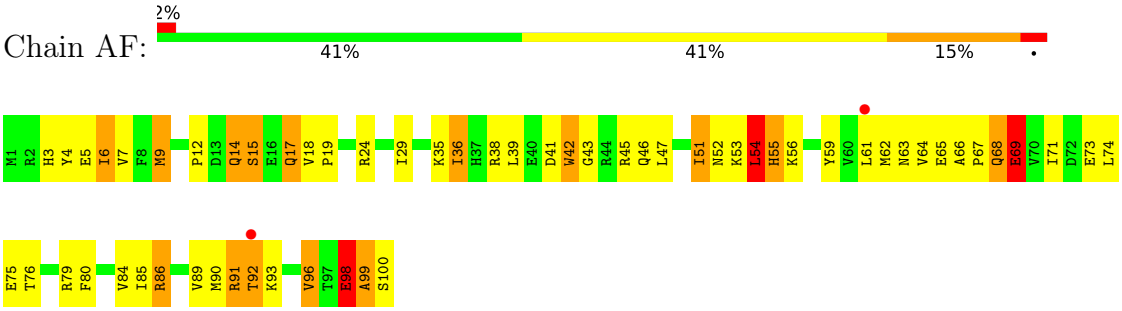


• Molecule 5: 30S ribosomal protein S5



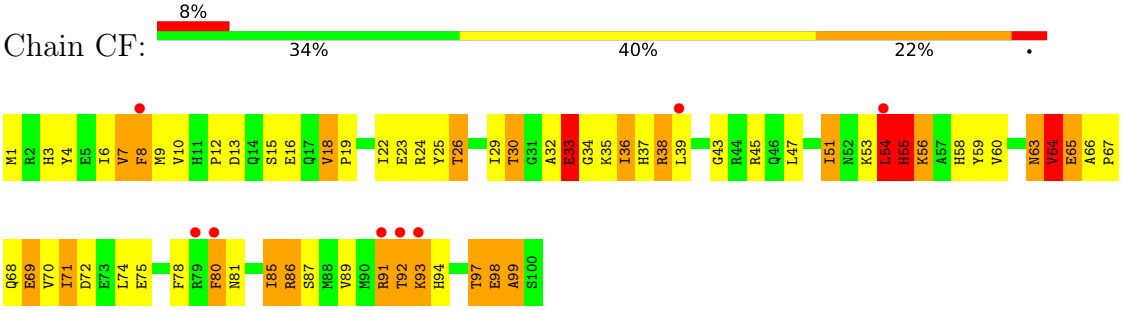
• Molecule 6: 30S ribosomal protein S6

Chain AF:



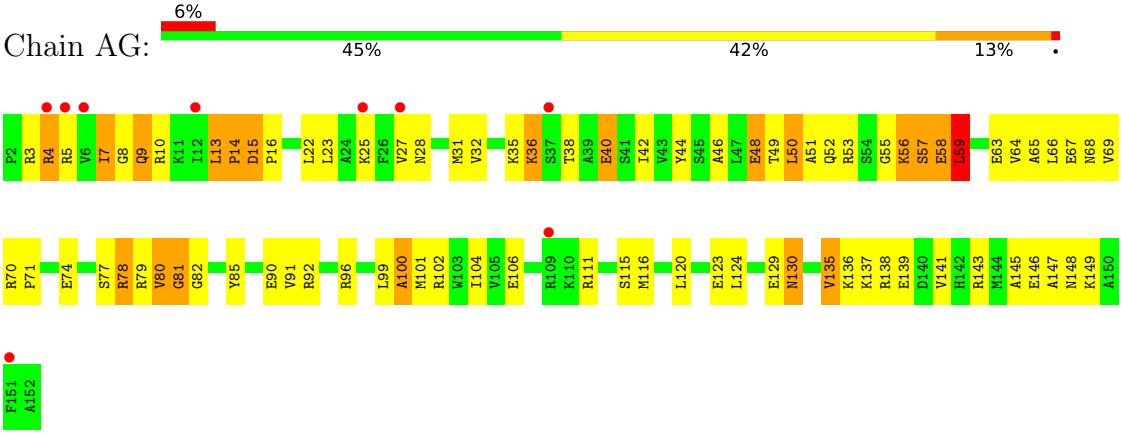
• Molecule 6: 30S ribosomal protein S6

Chain CF:



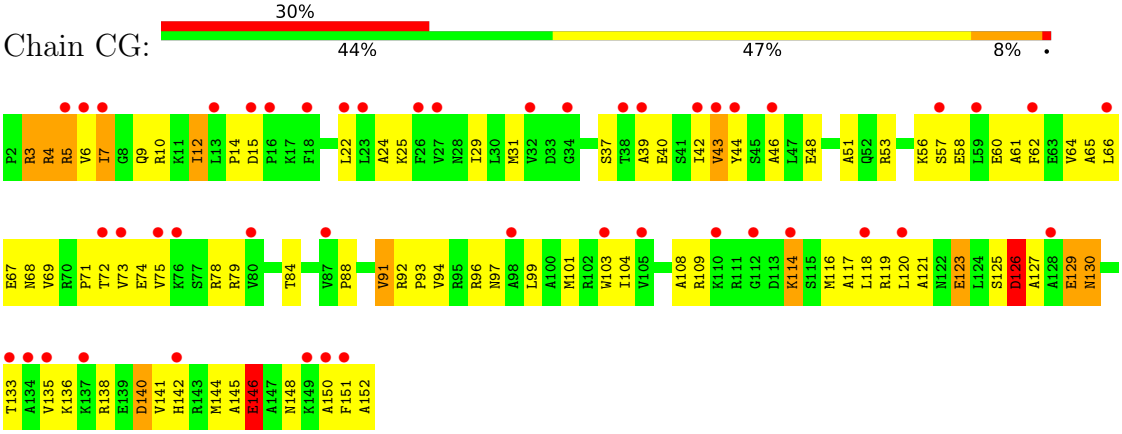
• Molecule 7: 30S ribosomal protein S7

Chain AG:



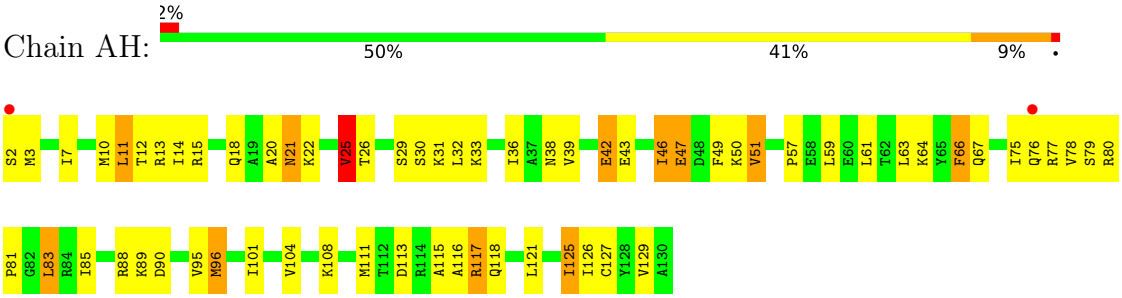
• Molecule 7: 30S ribosomal protein S7

Chain CG:



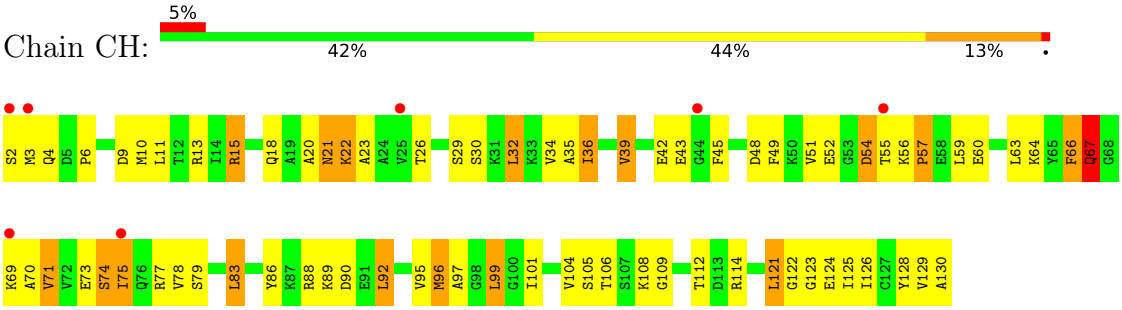
• Molecule 8: 30S ribosomal protein S8

Chain AH:



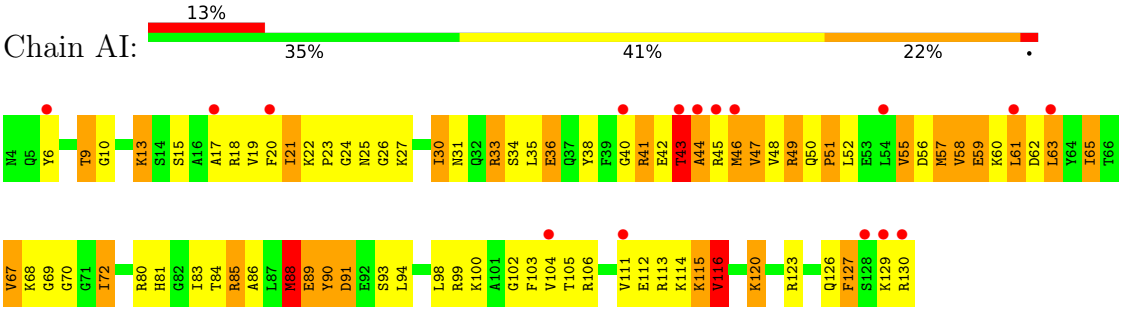
• Molecule 8: 30S ribosomal protein S8

Chain CH:



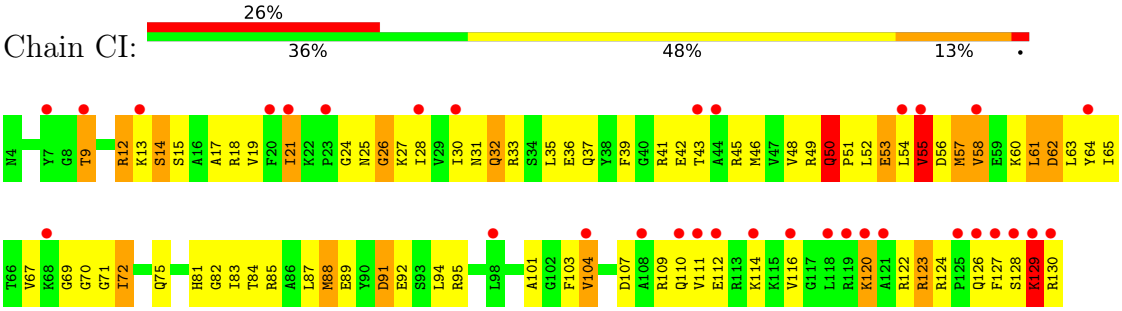
• Molecule 9: 30S ribosomal protein S9

Chain AI:



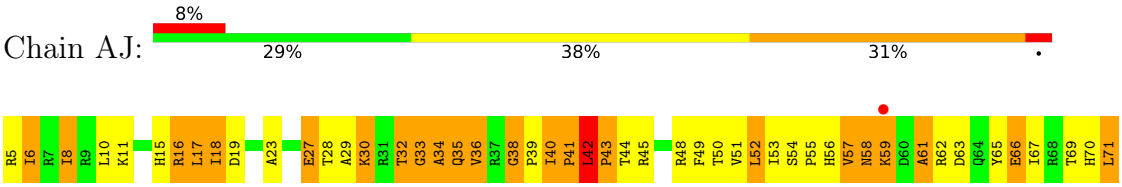
• Molecule 9: 30S ribosomal protein S9

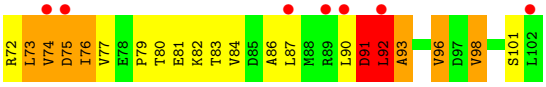
Chain CI:



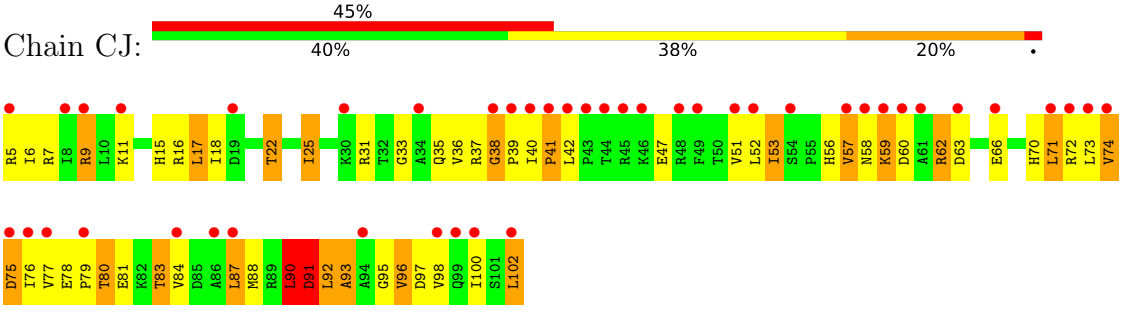
• Molecule 10: 30S ribosomal protein S10

Chain AJ:

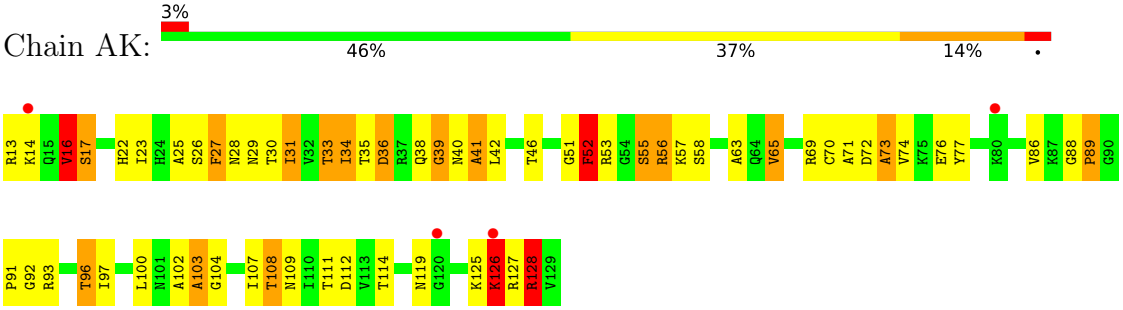




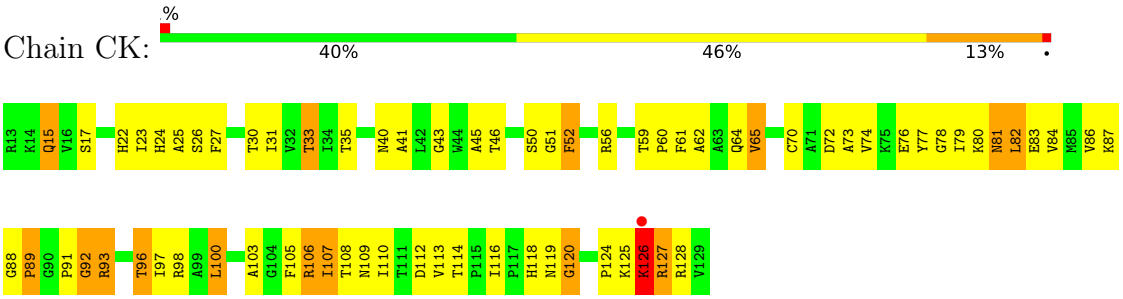
• Molecule 10: 30S ribosomal protein S10



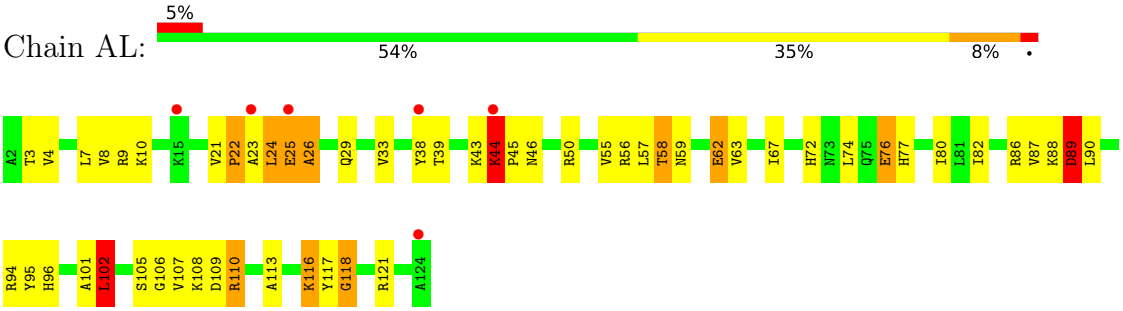
• Molecule 11: 30S ribosomal protein S11



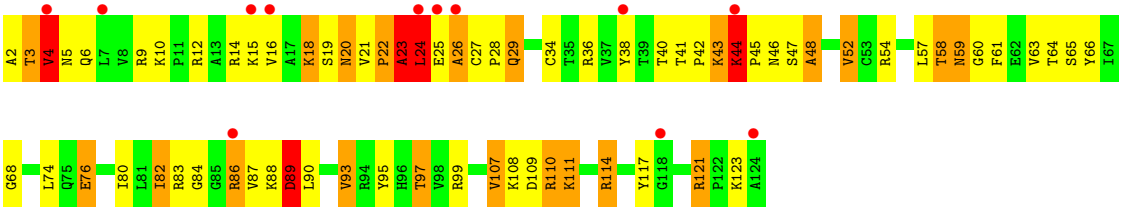
• Molecule 11: 30S ribosomal protein S11



• Molecule 12: 30S ribosomal protein S12

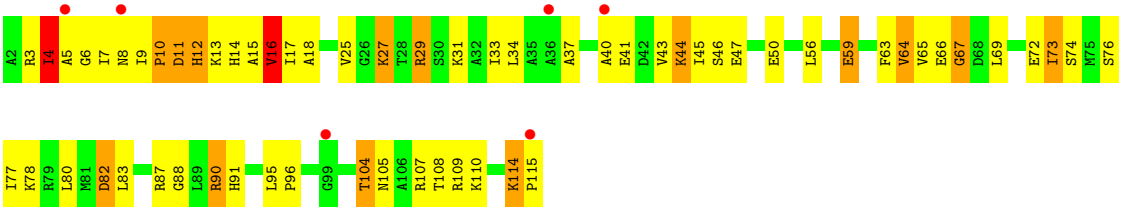


• Molecule 12: 30S ribosomal protein S12



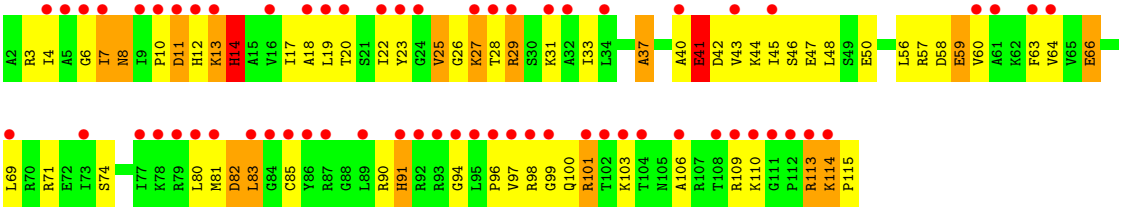
• Molecule 13: 30S ribosomal protein S13

Chain AM:



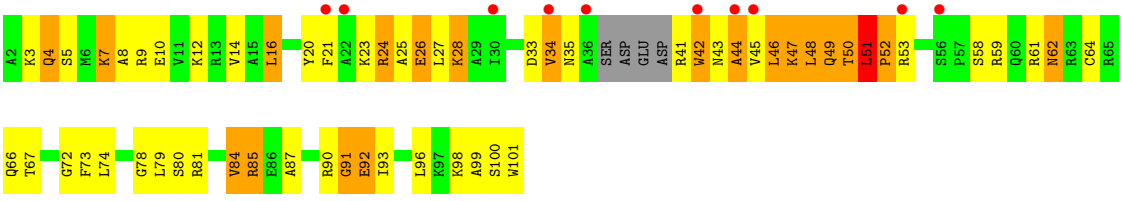
• Molecule 13: 30S ribosomal protein S13

Chain CM:



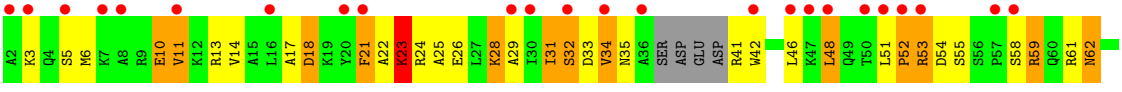
• Molecule 14: 30S ribosomal protein S14

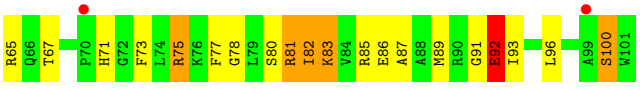
Chain AN:



• Molecule 14: 30S ribosomal protein S14

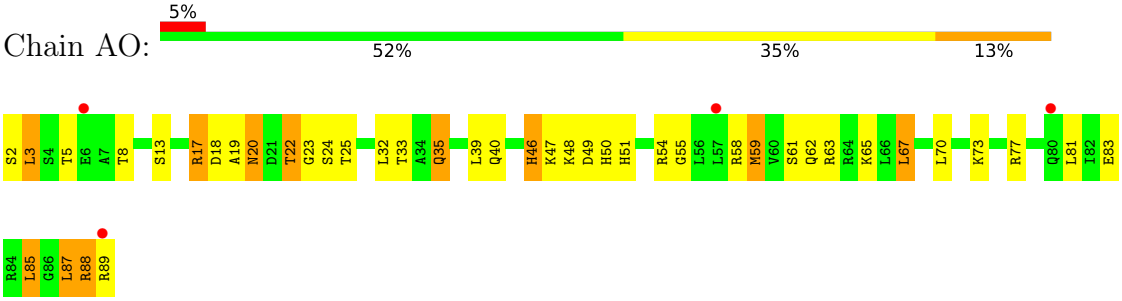
Chain CN:





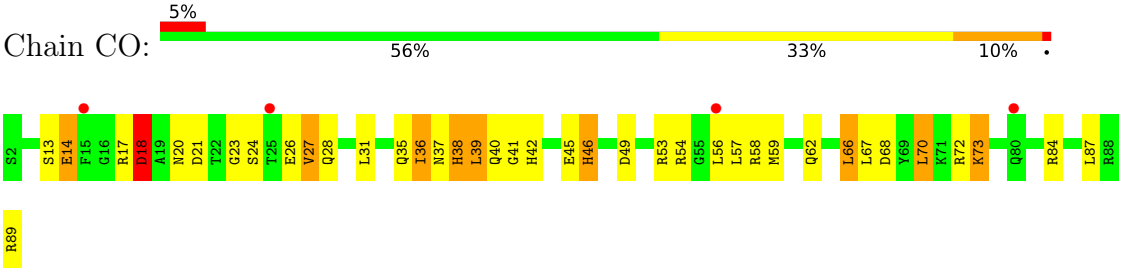
• Molecule 15: 30S ribosomal protein S15

Chain AO:



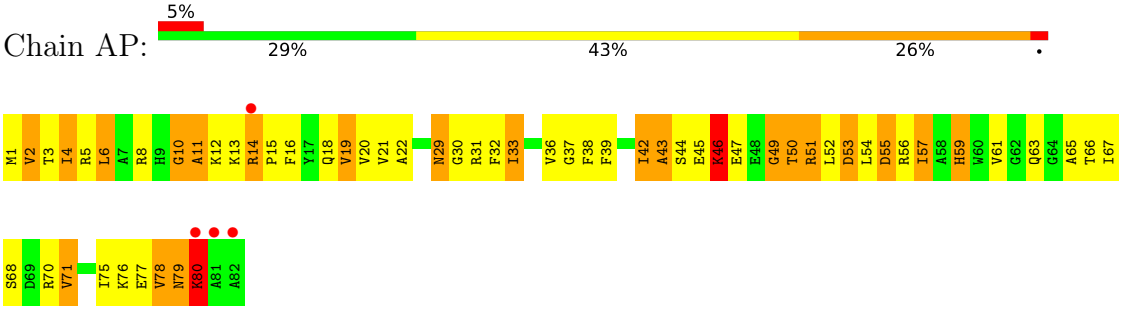
• Molecule 15: 30S ribosomal protein S15

Chain CO:



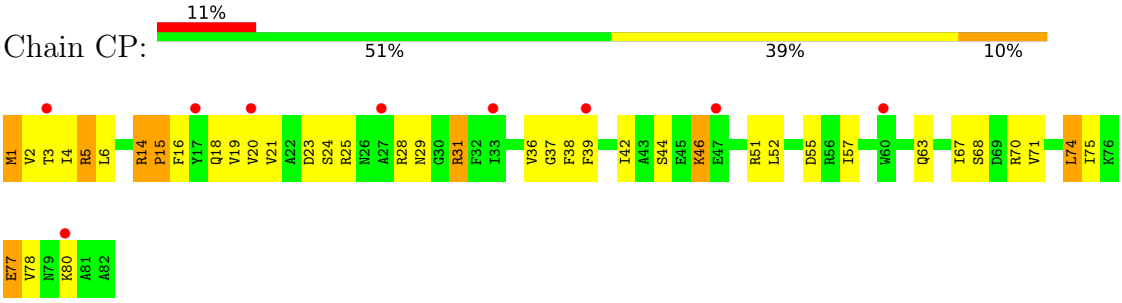
• Molecule 16: 30S ribosomal protein S16

Chain AP:



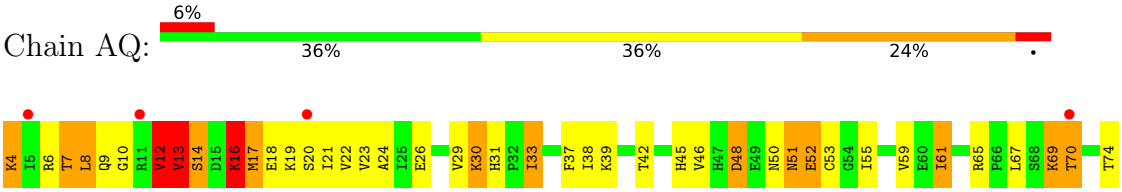
• Molecule 16: 30S ribosomal protein S16

Chain CP:



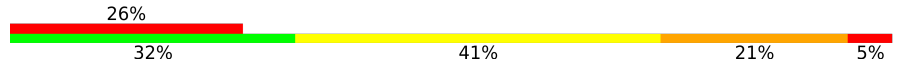
• Molecule 17: 30S ribosomal protein S17

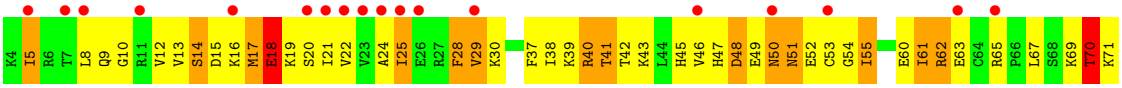
Chain AQ:

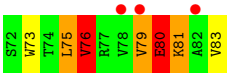


• Molecule 17: 30S ribosomal protein S17

Chain CQ:

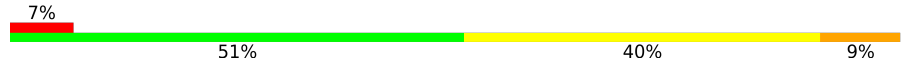


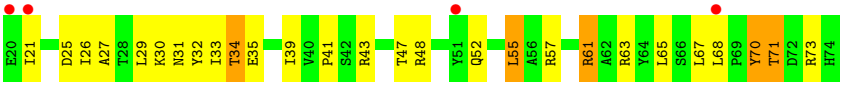




• Molecule 18: 30S ribosomal protein S18

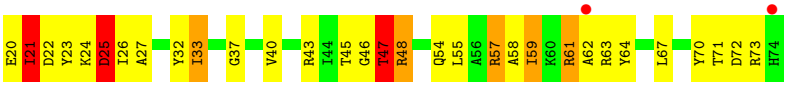
Chain AR:





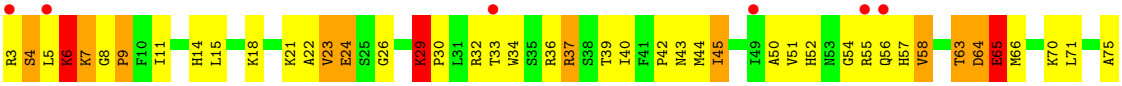
• Molecule 18: 30S ribosomal protein S18

Chain CR:



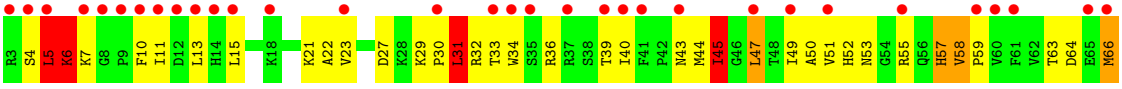
• Molecule 19: 30S ribosomal protein S19

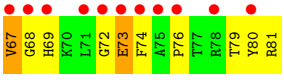
Chain AS:



• Molecule 19: 30S ribosomal protein S19

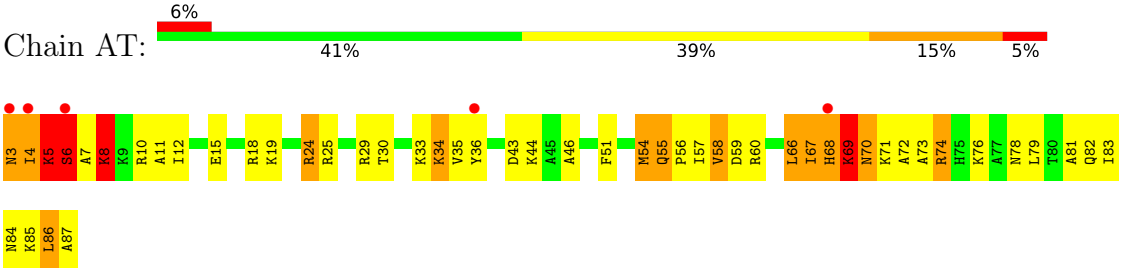
Chain CS:





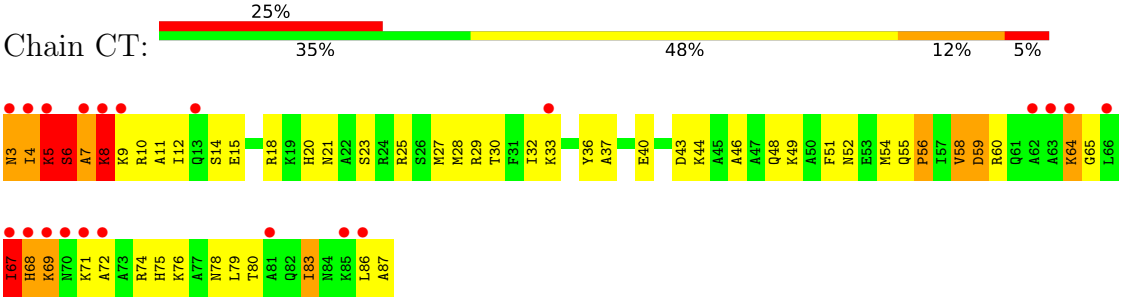
• Molecule 20: 30S ribosomal protein S20

Chain AT:



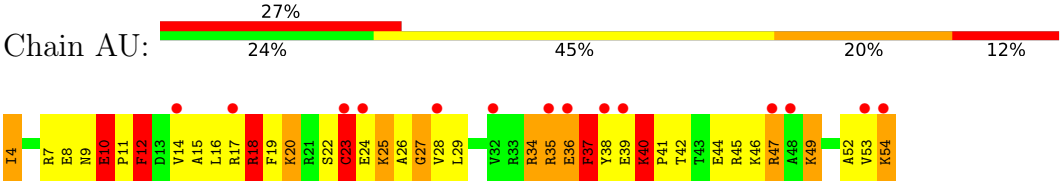
• Molecule 20: 30S ribosomal protein S20

Chain CT:



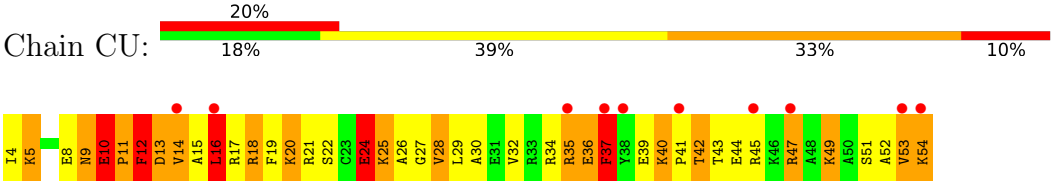
• Molecule 21: 30S ribosomal protein S21

Chain AU:



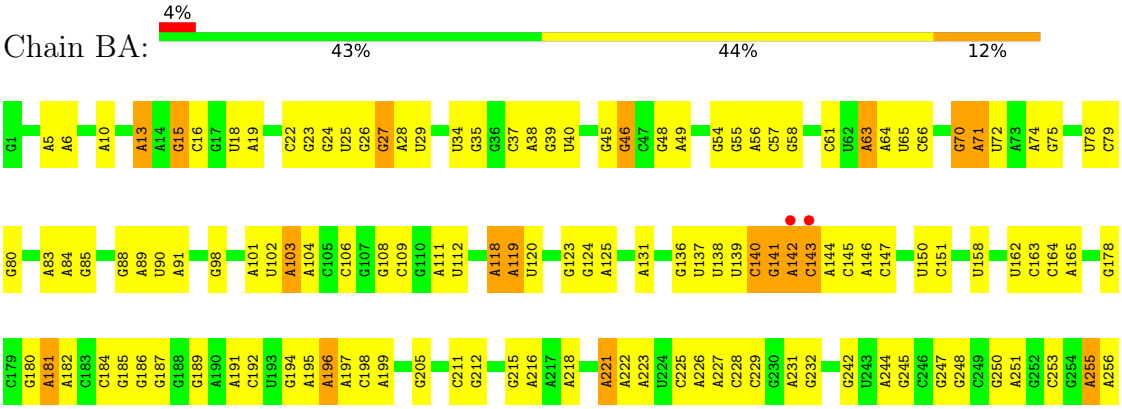
• Molecule 21: 30S ribosomal protein S21

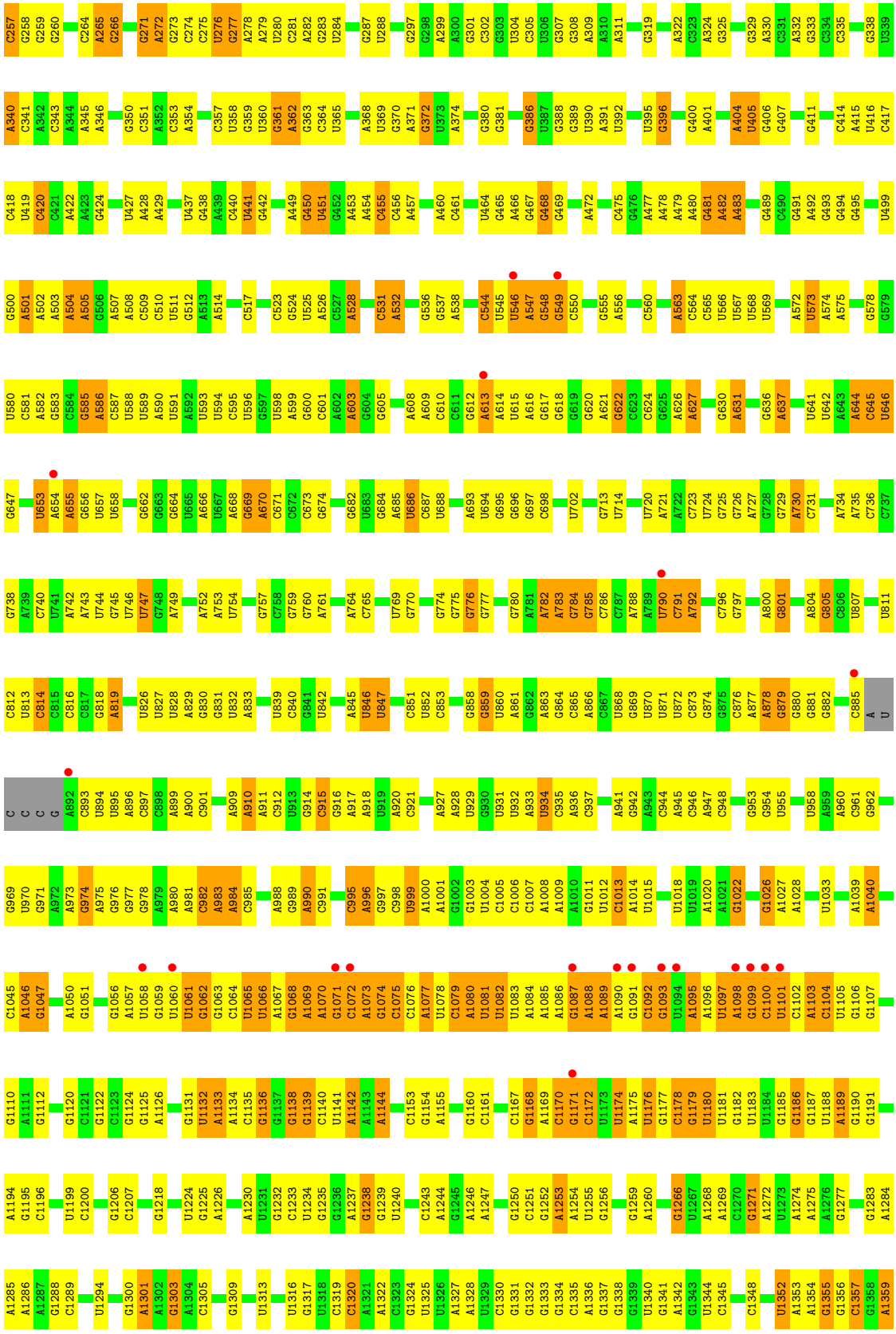
Chain CU:

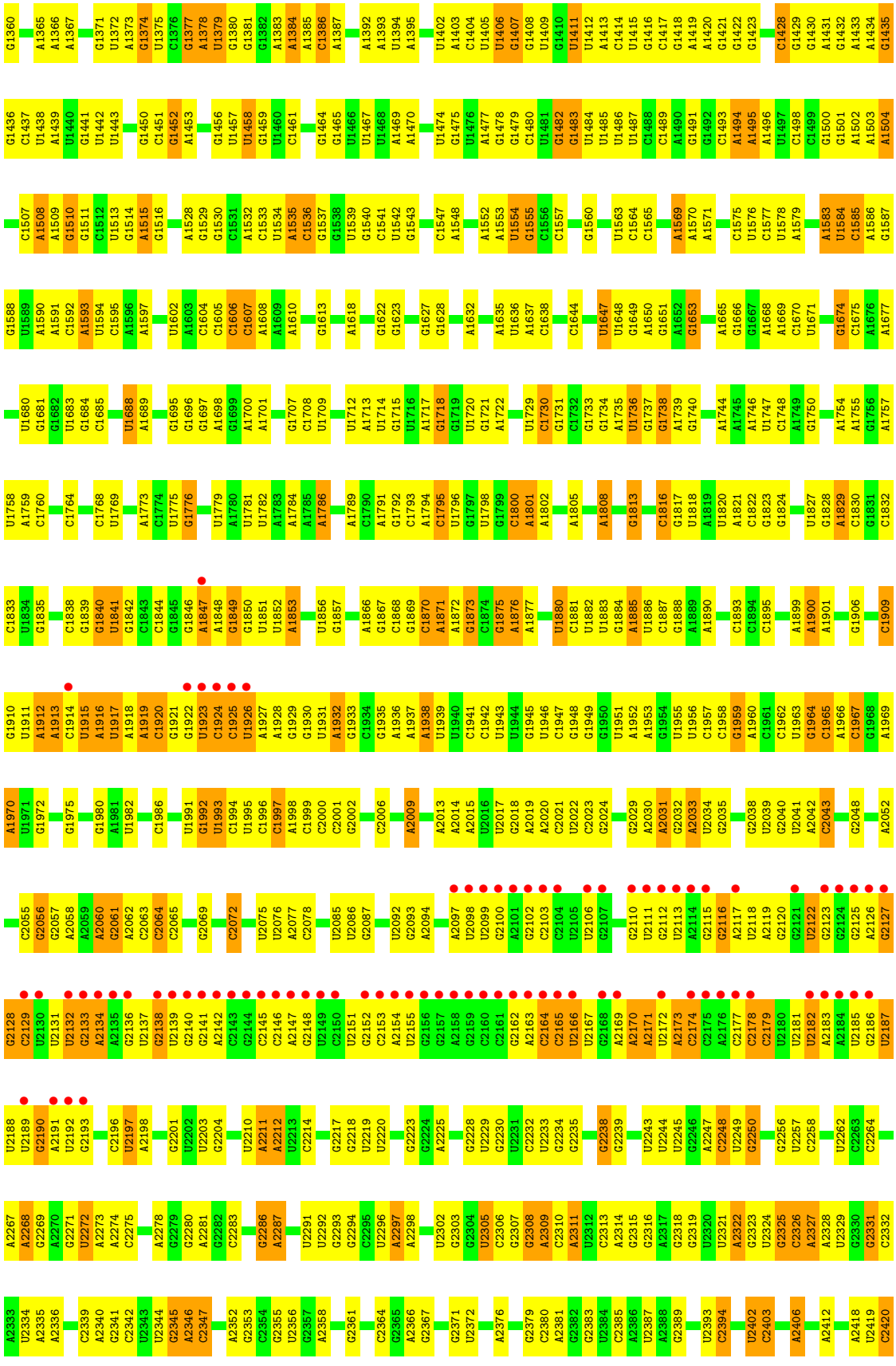


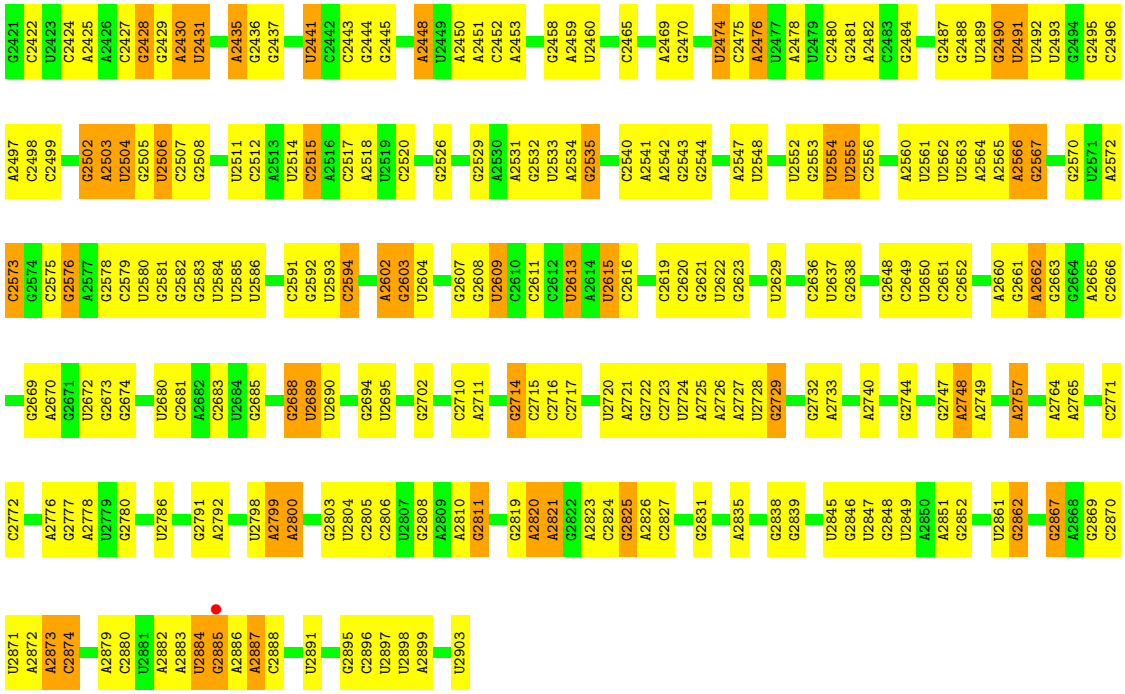
• Molecule 22: 23S rRNA

Chain BA:



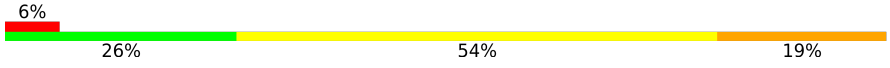


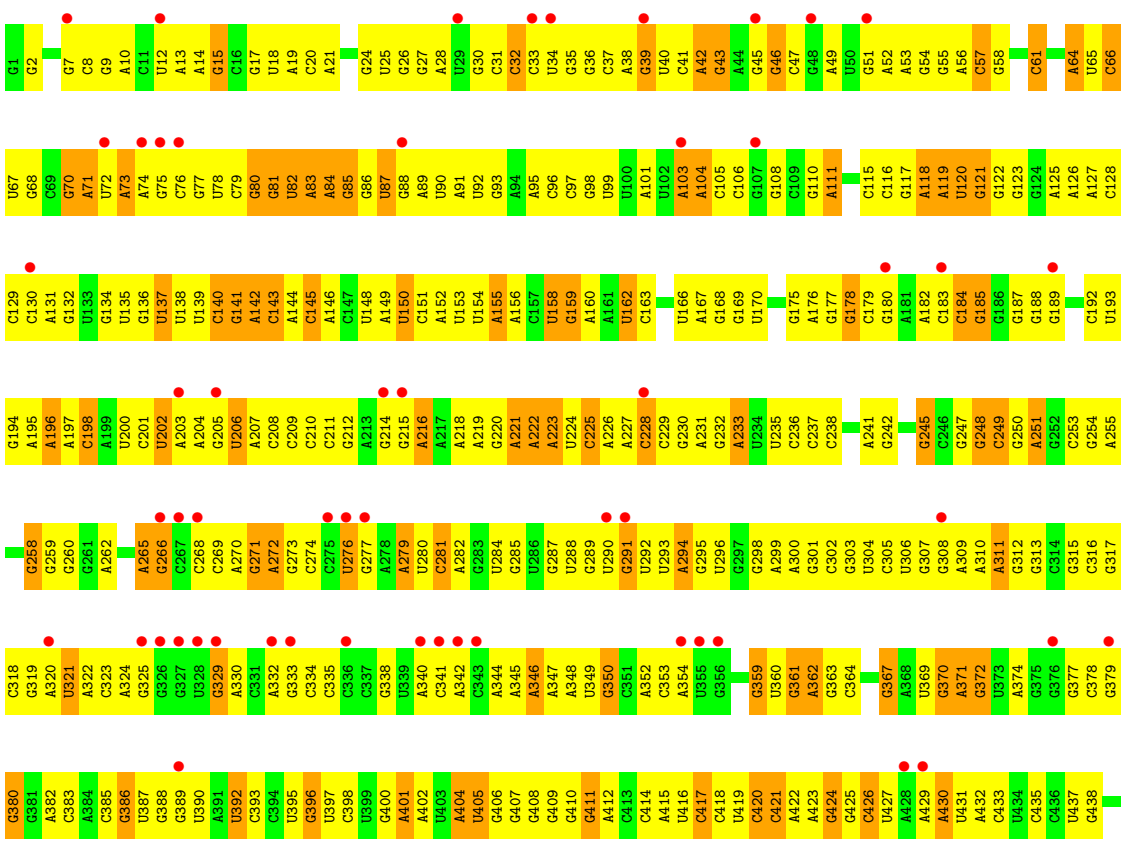


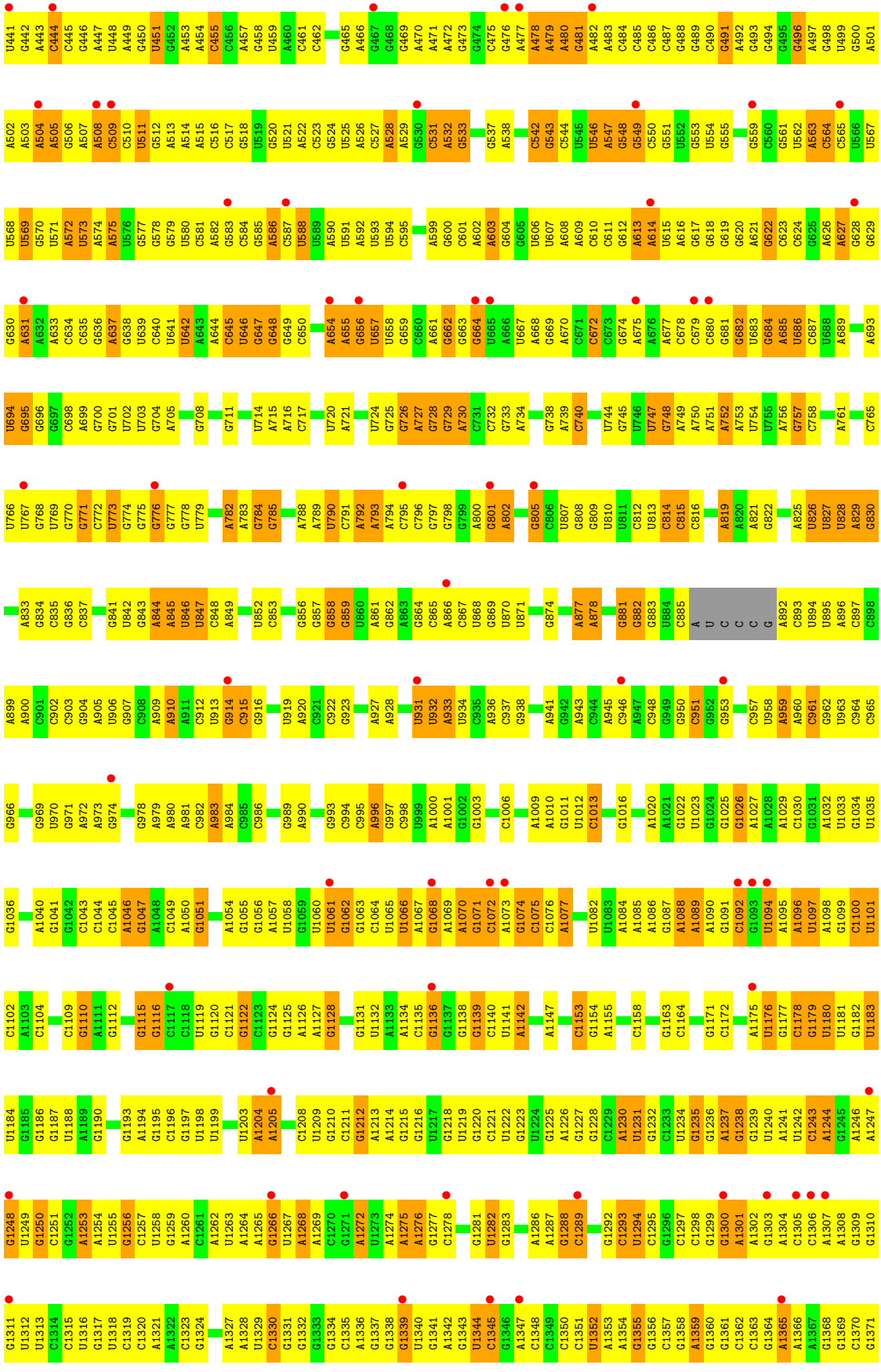


• Molecule 22: 23S rRNA

Chain DA:



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A502 A503 A504 A505 G506 A507 A508 C509 C510 U511 G512 A513 A514 A515 C516 C517 G518 U519 G520 U521 A522 C523 G524 U525 A526 C527 A528 A529 G530 C531 A532 G533 G537 A538 C542 G543 C544 U545 U546 A547 G548 G549 C550 G551 U552 G553 U554 G555 G559 C560 G561 U562 A563 C564 C565 U566 U567
U568 U569 G570 U571 A572 U573 A574 A575 U576 G577 G578 G579 U580 C581 A582 G583 C584 G585 A586 C587 U588 U589 A590 U591 A592 U593 U594 C595 A599 G600 C601 A602 A603 G604 G605 U606 U607 A608 A609 C610 C611 G612 A613 A614 U615 A616 G617 G618 G619 G620 A621 G622 C623 C624 G625 A626 A627 G628 G629
G630 A631 A632 A633 C634 C635 C636 A637 G638 U639 C640 U641 U642 A643 A644 C645 U646 G647 G648 G649 C650 A654 A655 G656 U657 U658 G659 C660 A661 G662 G663 G664 U665 A666 U667 A668 G669 A670 C671 C672 G673 G674 A675 A676 A677 C678 C679 C680 G681 G682 U683 G684 A685 U686 C687 U688 A689 A693
U694 G695 G696 G697 C698 A699 G700 G701 U702 U703 G704 A705 G708 G711 U714 A715 A716 C717 U720 A721 U724 G725 G726 A727 G728 G729 A730 C731 C732 G733 A734 G738 A739 C740 U744 G745 U746 U747 G748 A749 A750 A751 A752 A753 U754 U755 A756 G757 C758 A761 C765
U766 U767 G768 U769 G770 G771 C772 U773 G774 G775 G776 G777 G778 U779 A782 A783 G784 G785 A788 A789 U790 C791 A792 A793 A794 C795 C796 G797 G798 G799 A800 G801 A802 G805 C806 U807 G808 G809 U810 U811 C812 U813 C814 C815 C816 A819 A820 A821 G822 A825 U826 U827 U828 A829 G830
A833 G834 C835 G836 C837 G841 U842 G843 A844 A845 U846 U847 C848 A849 U852 C853 G856 G857 G858 G859 U860 A861 G862 A863 G864 C865 A866 C867 U868 G869 U870 U871 G874 A877 A878 G881 G882 G883 U884 C885 A U C C C G A892 C893 U894 U895 A896 C897 G898
A899 A900 C901 C902 C903 C904 A905 U906 G907 C908 A909 A910 A911 C912 U913 G914 C915 G916 U919 A920 C921 C922 G923 A927 A928 U931 U932 A933 U934 C935 A936 C937 G938 A941 G942 A943 C944 A945 C946 A947 C948 G949 G950 C951 G952 G953 C957 U958 A959 A960 C961 G962 U963 C964 C965
G966 G969 U970 G971 A972 A973 G974 G978 A979 A980 A981 C982 A983 A984 C985 C986 G989 A990 G993 C994 C995 A996 G997 C998 U999 A1000 A1001 G1002 G1003 C1006 A1009 A1010 G1011 U1012 C1013 G1016 A1020 A1021 G1022 U1023 G1024 G1025 G1026 A1027 A1028 A1029 C1030 G1031 A1032 U1033 G1034 U1035
G1036 A1040 G1041 G1042 C1043 C1044 C1045 A1046 G1047 A1048 C1049 A1050 G1051 A1054 G1055 G1056 A1057 U1058 G1059 U1060 U1061 G1062 G1063 C1064 U1065 U1066 A1067 G1068 A1069 A1070 G1071 C1072 A1073 G1074 C1075 C1076 A1077 U1082 U1083 A1084 A1085 A1086 G1087 A1088 A1089 A1090 G1091 C1092 G1093 U1094 A1095 A1096 U1097 A1098 G1099 C1100 U1101
C1102 A1103 C1104 C1109 G1110 A1111 G1112 G1115 G1116 C1117 C1118 U1119 G1120 C1121 G1122 C1123 G1124 G1125 A1126 A1127 G1128 G1131 U1132 A1133 A1134 C1135 G1136 G1137 G1138 G1139 C1140 U1141 A1142 A1147 C1153 G1154 A1155 C1158 G1163 C1164 G1171 C1172 A1175 U1176 G1177 C1178 G1179 U1180 U1181 G1182 U1183
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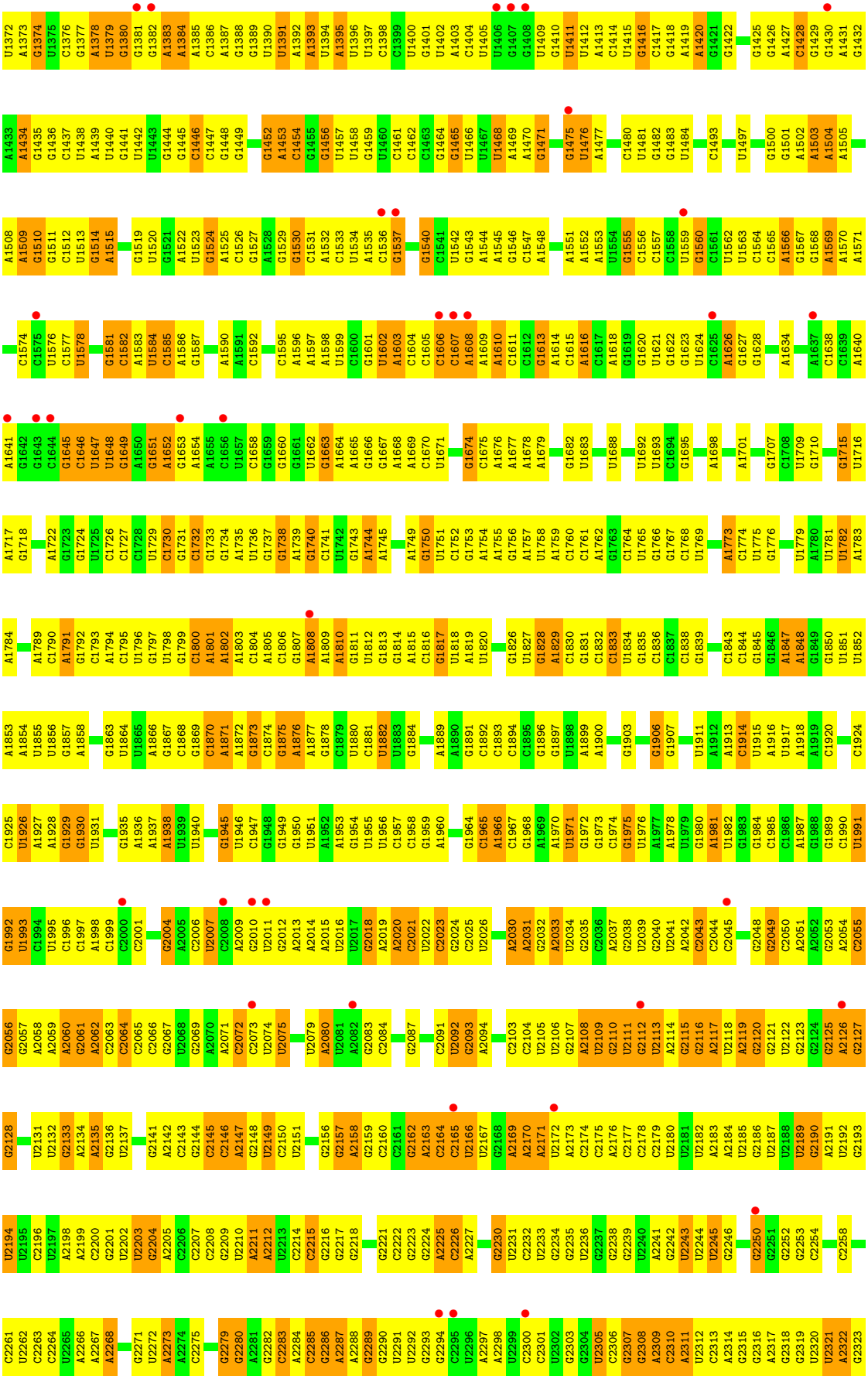
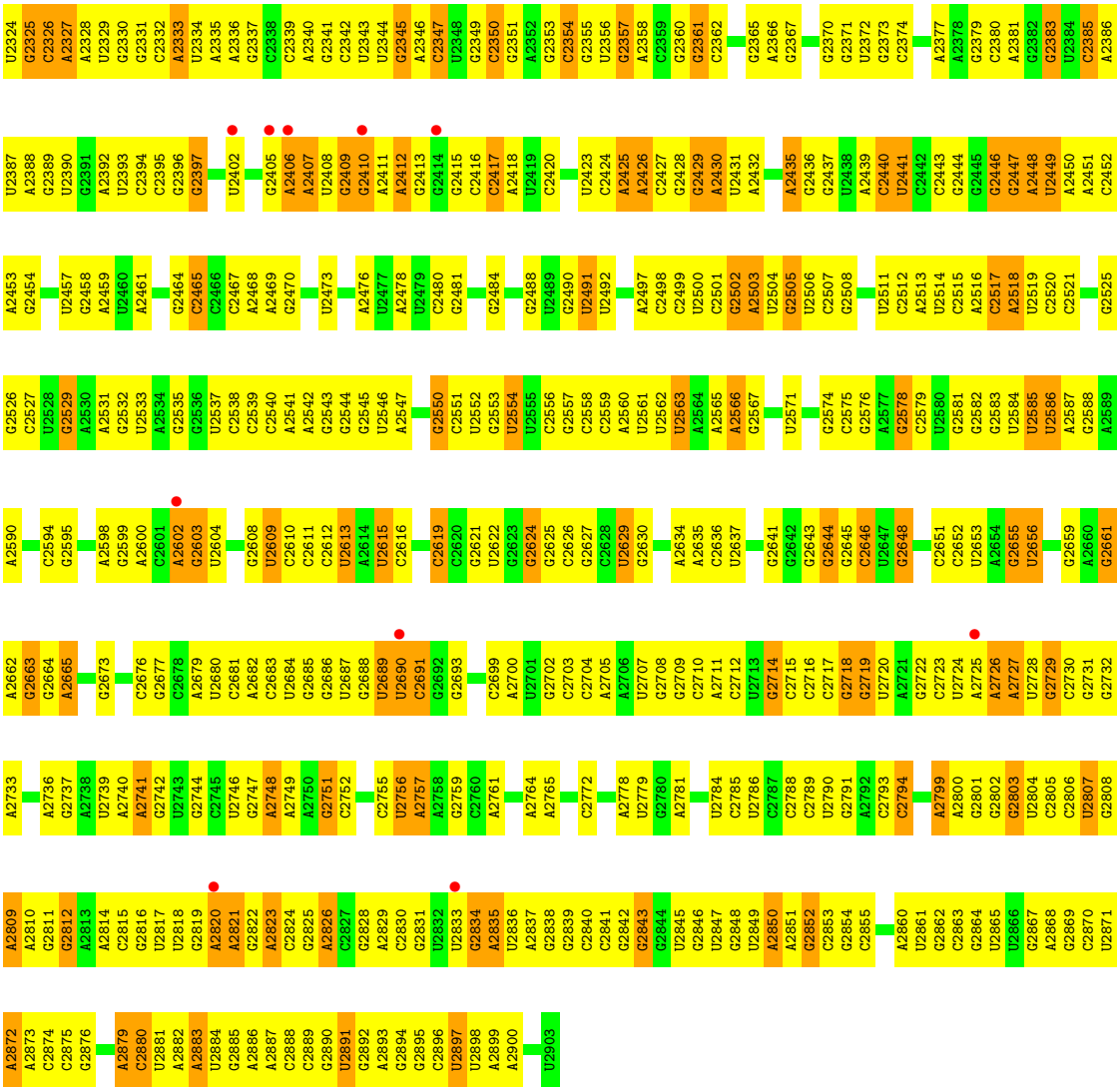
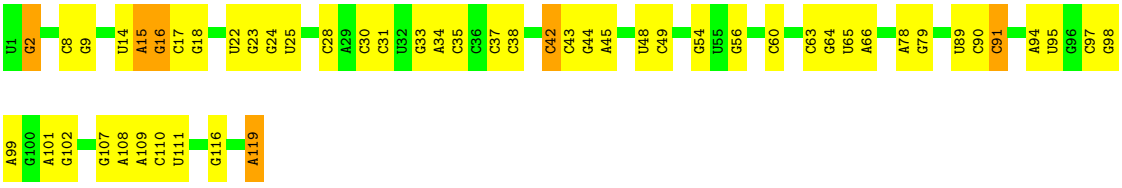
G1248 U1249 G1250 C1251 G1252 A1253 A1254 U1255 G1256 C1257 U1258 G1259 A1260 C1261 A1262 U1263 A1264 A1265 G1266 U1267 A1268 A1269 C1270 G1271 A1272 U1273 A1274 A1275 A1276 G1277 C1278 G1281 U1282 G1283 A1286 A1287 G1288 C1289 G1292 C1293 U1294 C1295 G1296 C1297 C1298 G1299 G1300 A1301 A1302 G1303 A1304 C1305 C1306 A1307 A1308 G1309 G1310
G1311 U1312 U1313 C1314 C1315 U1316 G1317 U1318 C1319 C1320 A1321 A1322 C1323 G1324 A1327 A1328 U1329 C1330 G1331 G1332 G1333 G1334 C1335 A1336 G1337 G1338 G1339 U1340 G1341 A1342 G1343 U1344 C1345 G1346 A1347 C1348 C1349 C1350 C1351 U1352 A1353 A1354 G1355 G1356 C1357 G1358 A1359 G1360 G1361 C1362 C1363 G1364 A1365 A1366 A1367 G1368 G1369 C1370 G1371





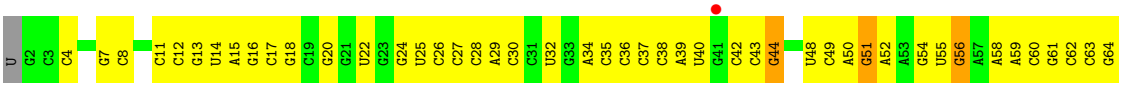
• Molecule 23: 5S rRNA

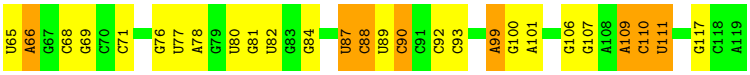
Chain BB:



• Molecule 23: 5S rRNA

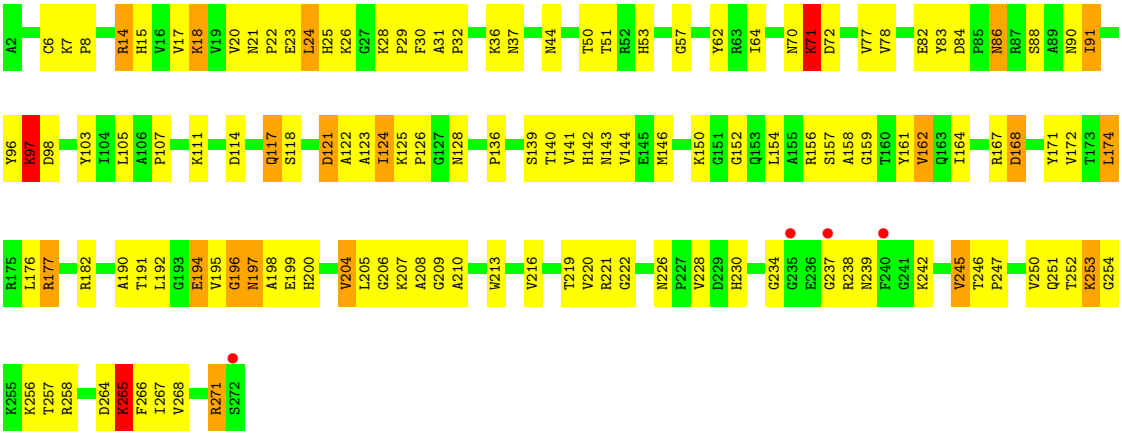
Chain DB:





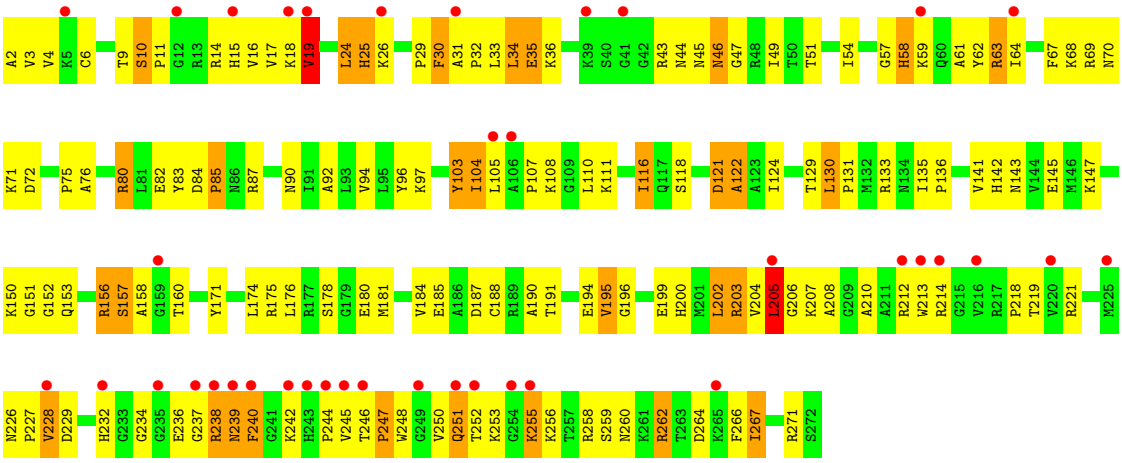
• Molecule 24: 50S ribosomal protein L2

Chain BC:



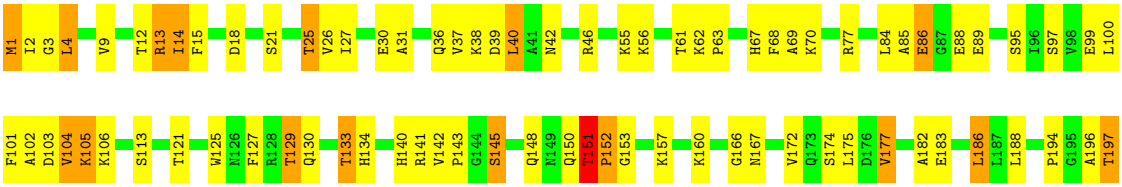
• Molecule 24: 50S ribosomal protein L2

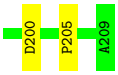
Chain DC:



• Molecule 25: 50S ribosomal protein L3

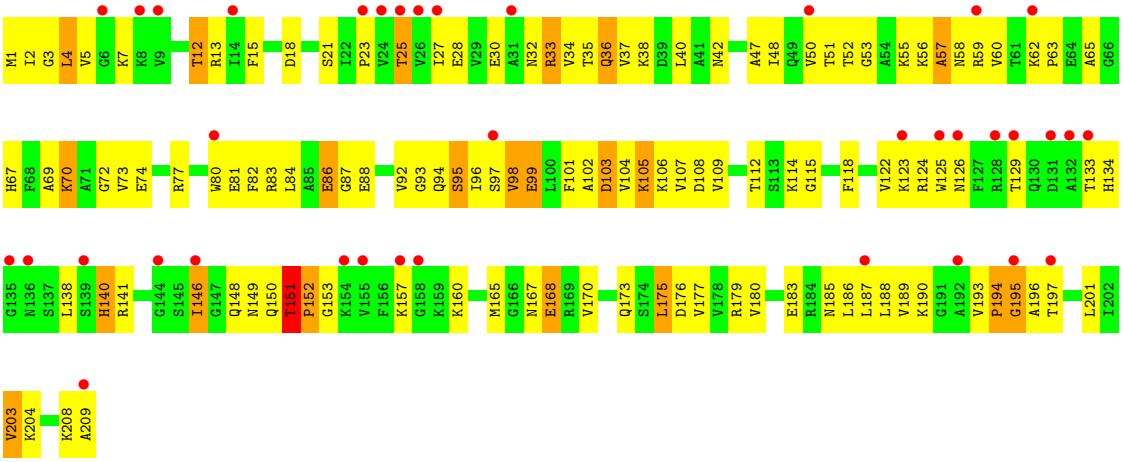
Chain BD:





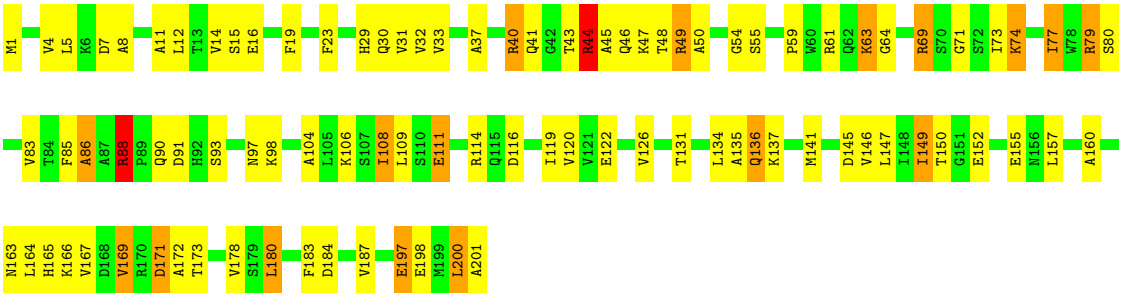
• Molecule 25: 50S ribosomal protein L3

Chain DD:



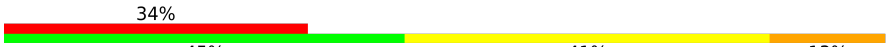
• Molecule 26: 50S ribosomal protein L4

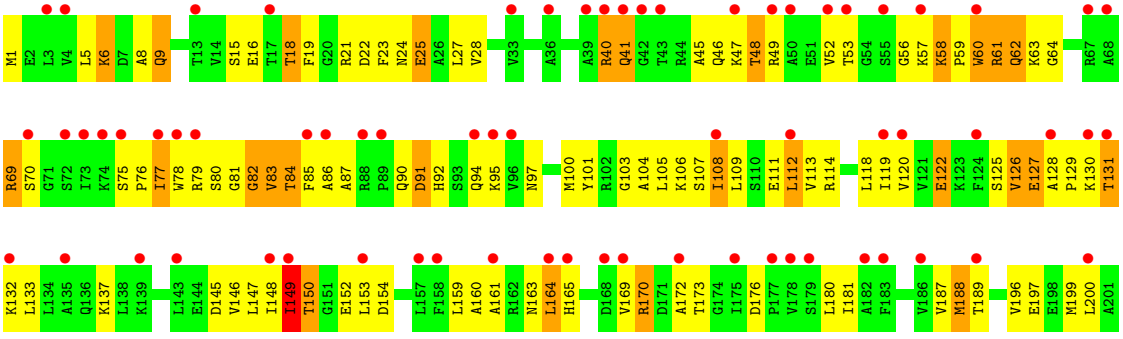
Chain BE:



• Molecule 26: 50S ribosomal protein L4

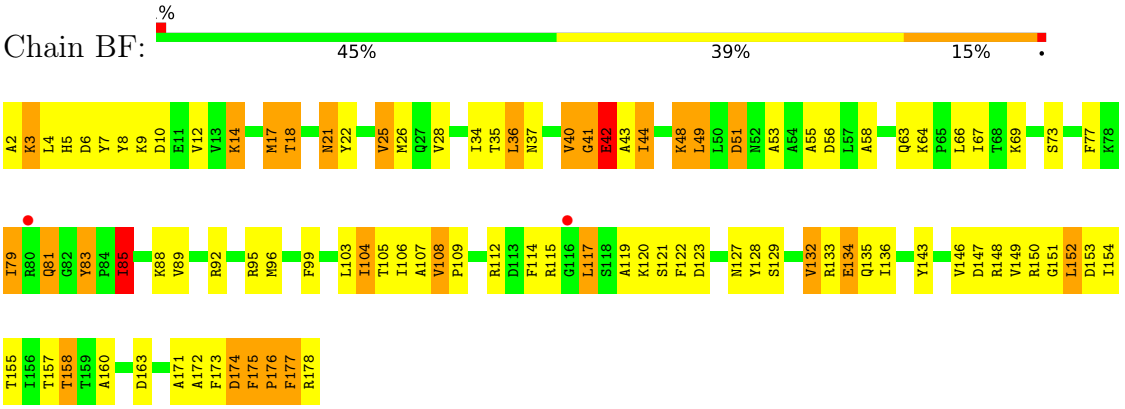
Chain DE:





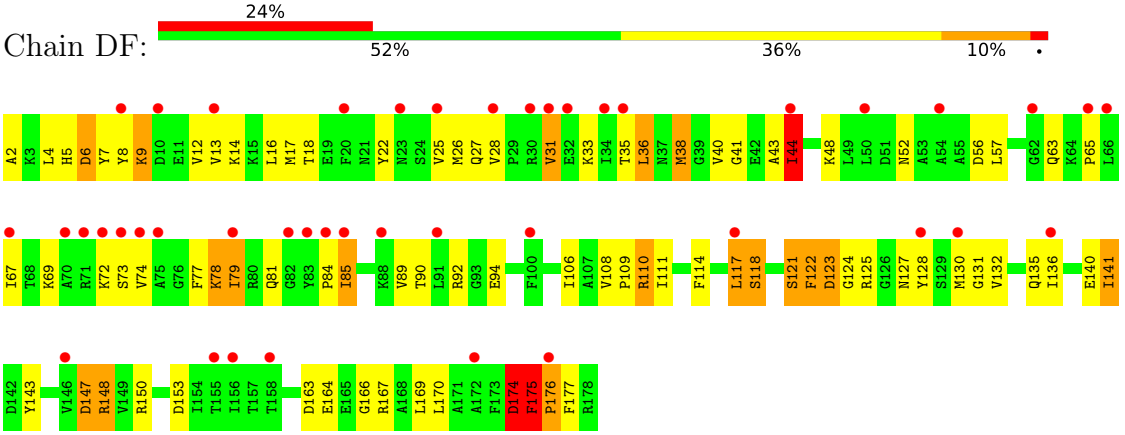
• Molecule 27: 50S ribosomal protein L5

Chain BF:



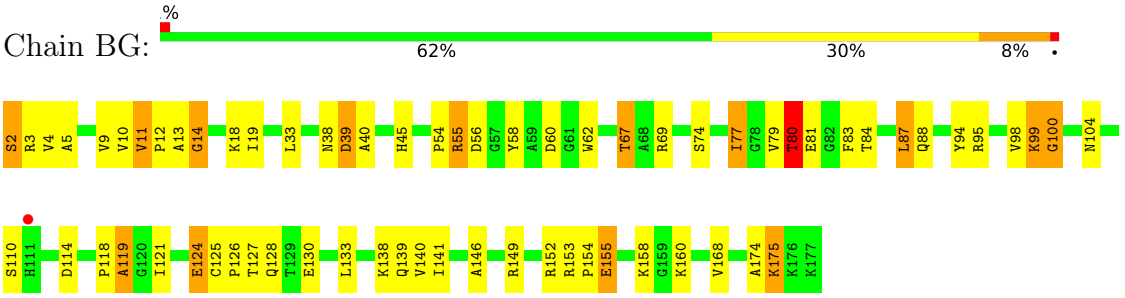
• Molecule 27: 50S ribosomal protein L5

Chain DF:



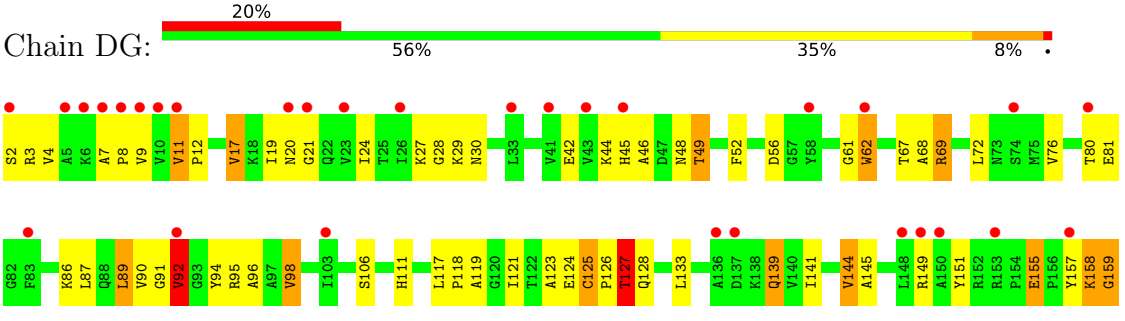
• Molecule 28: 50S ribosomal protein L6

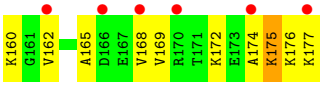
Chain BG:



• Molecule 28: 50S ribosomal protein L6

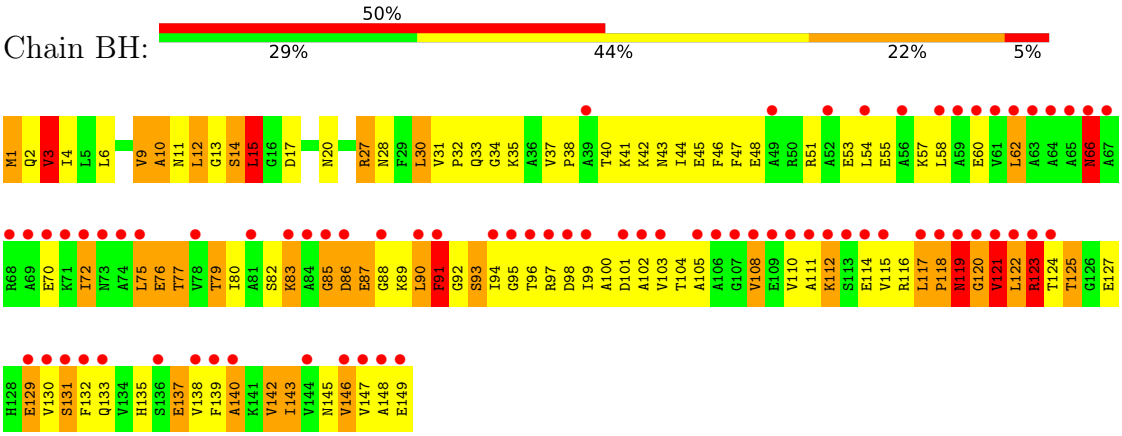
Chain DG:





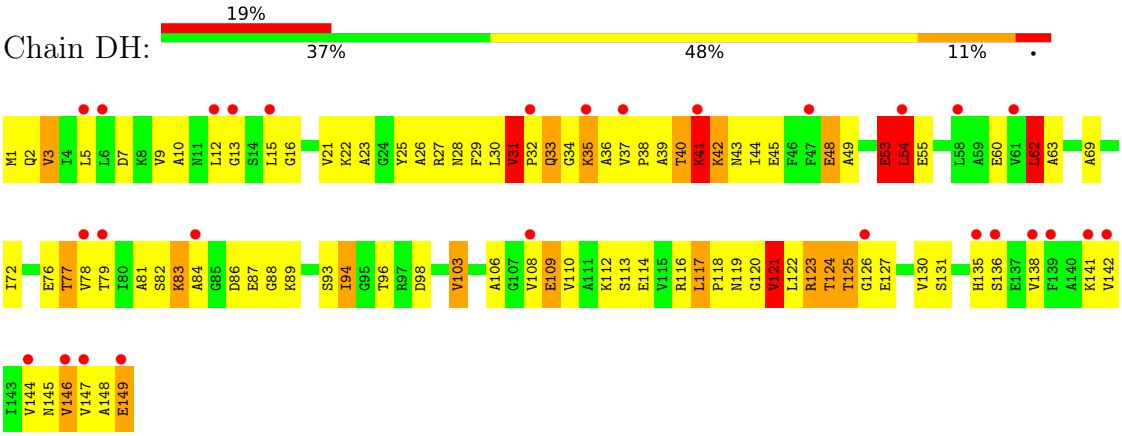
• Molecule 29: 50S ribosomal protein L9

Chain BH:



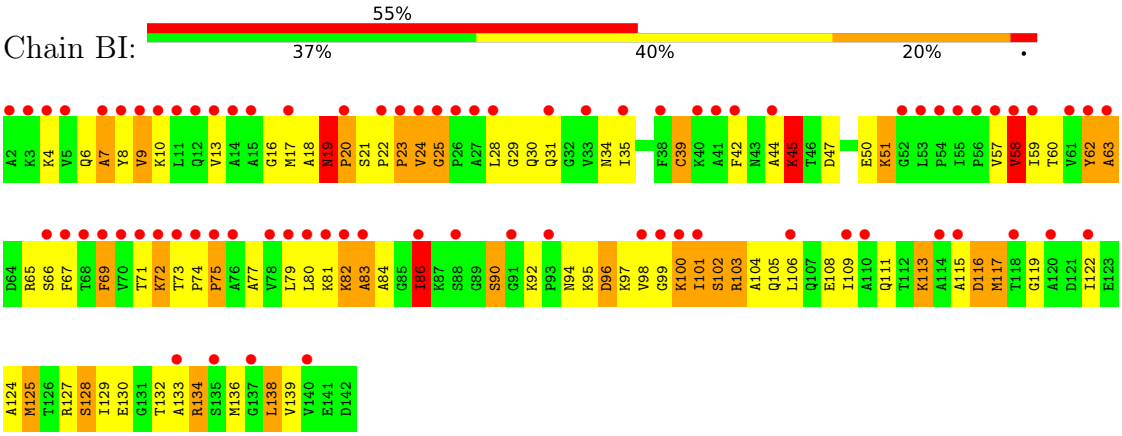
• Molecule 29: 50S ribosomal protein L9

Chain DH:



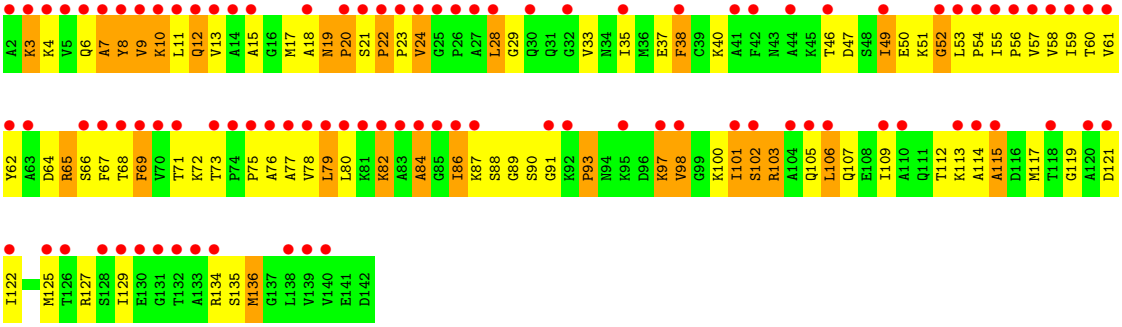
• Molecule 30: 50S ribosomal protein L11

Chain BI:

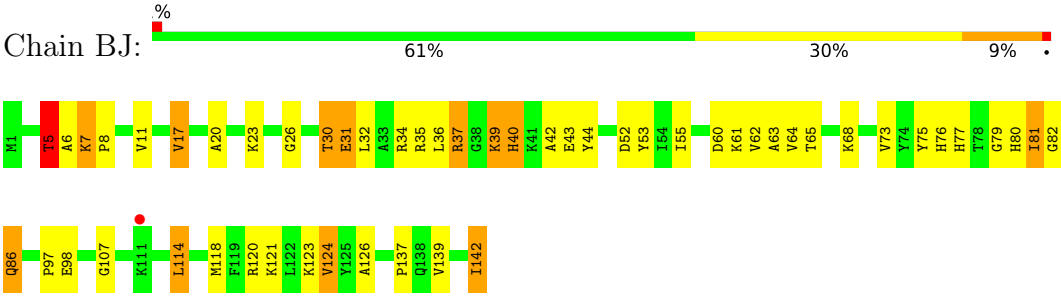


• Molecule 30: 50S ribosomal protein L11

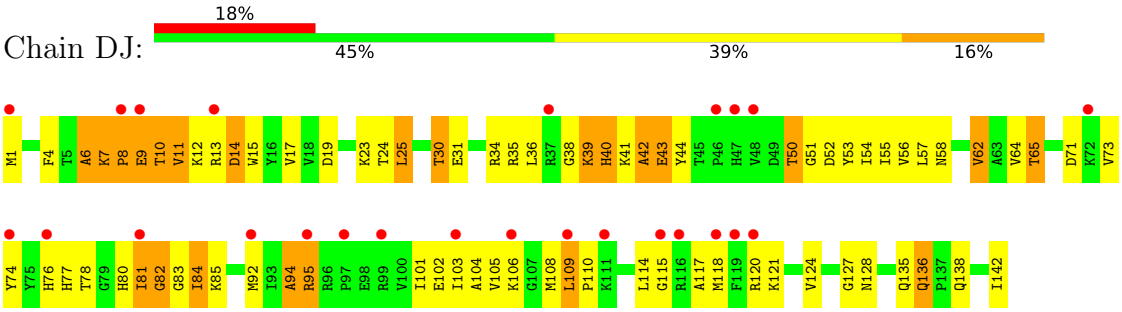
Chain DI:



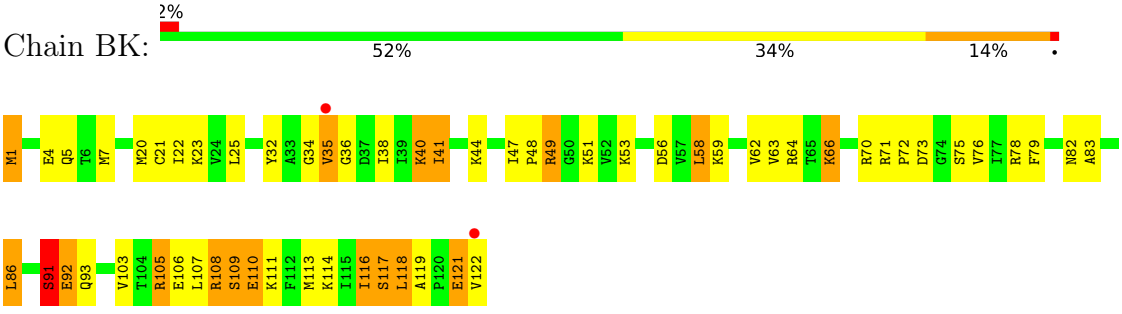
• Molecule 31: 50S ribosomal protein L13



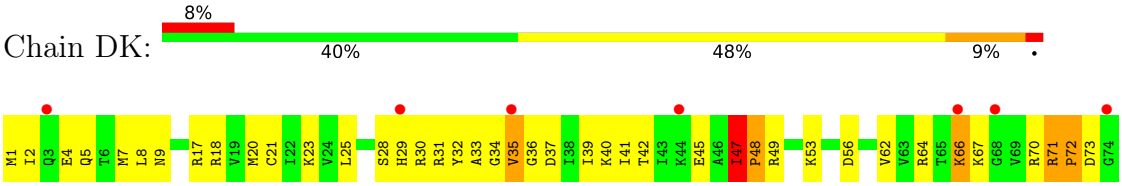
• Molecule 31: 50S ribosomal protein L13

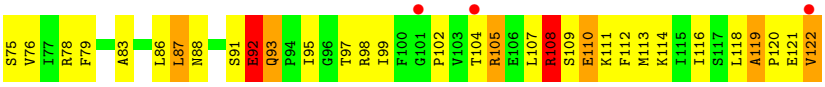


• Molecule 32: 50S ribosomal protein L14



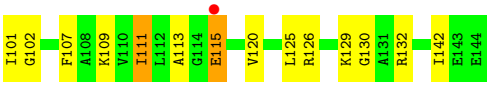
• Molecule 32: 50S ribosomal protein L14





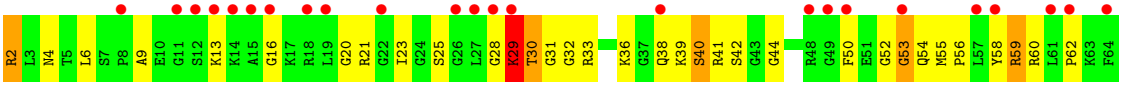
• Molecule 33: 50S ribosomal protein L15

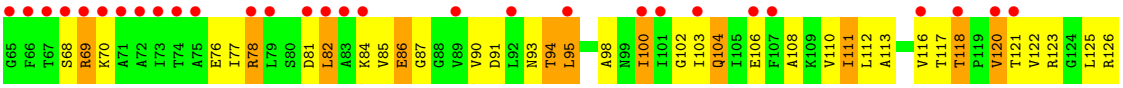
Chain BL:

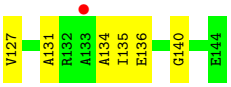


• Molecule 33: 50S ribosomal protein L15

Chain DL:





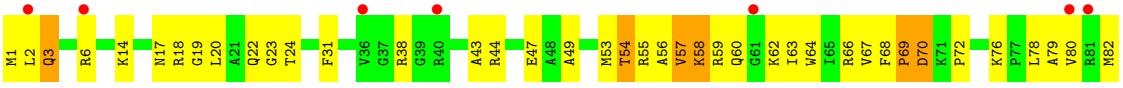


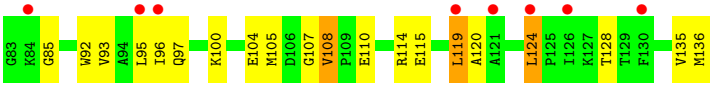
• Molecule 34: 50S ribosomal protein L16

Chain BM:

• Molecule 34: 50S ribosomal protein L16

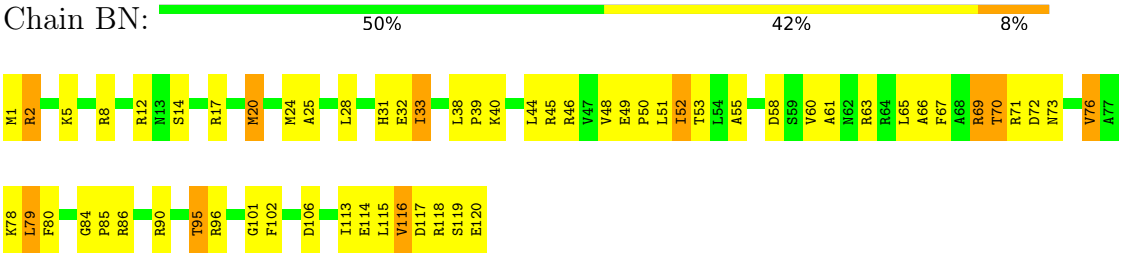
Chain DM:





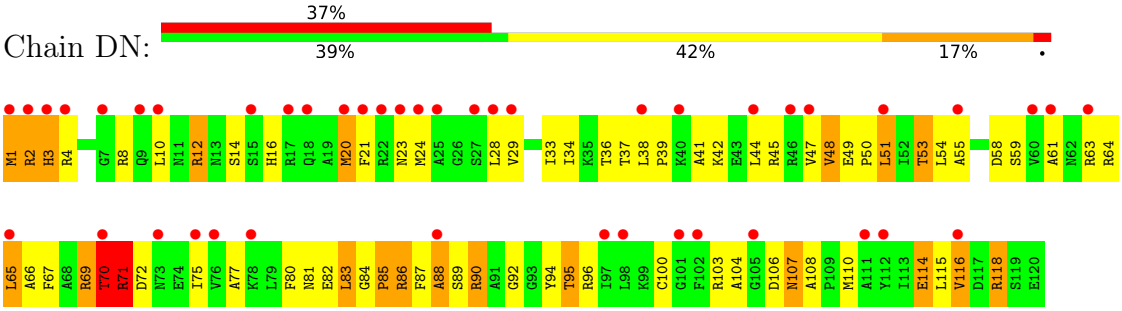
• Molecule 35: 50S ribosomal protein L17

Chain BN:



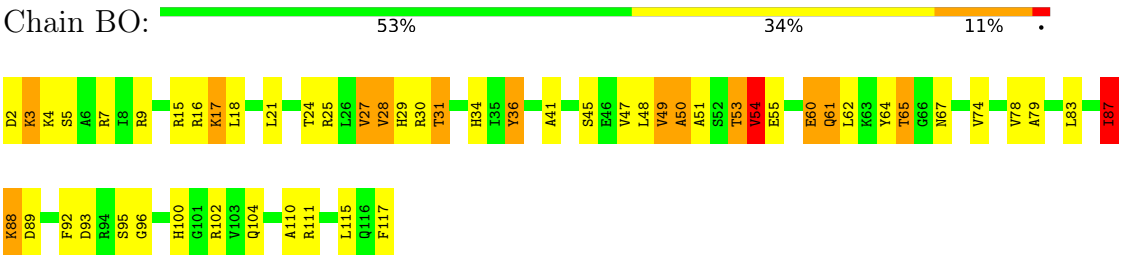
• Molecule 35: 50S ribosomal protein L17

Chain DN:



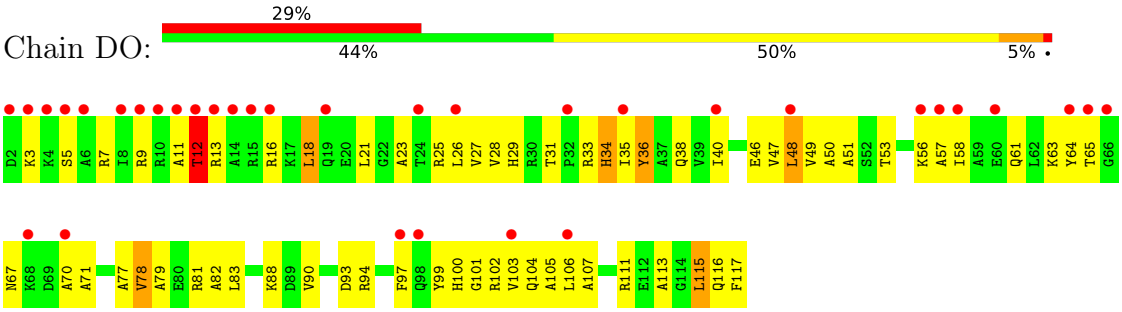
• Molecule 36: 50S ribosomal protein L18

Chain BO:



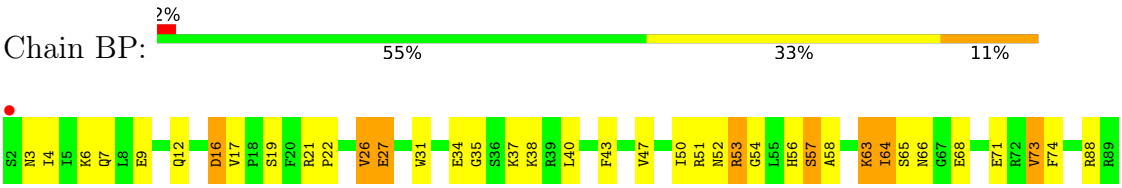
• Molecule 36: 50S ribosomal protein L18

Chain DO:



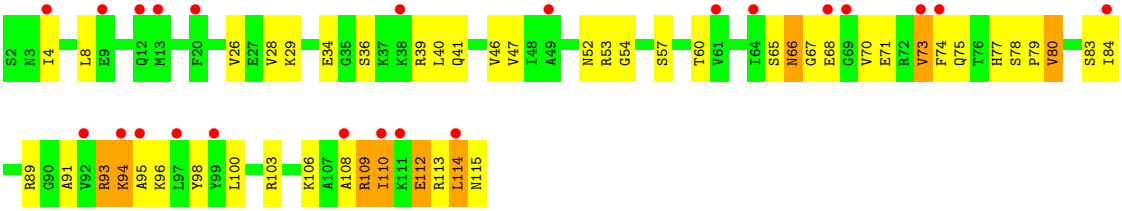
• Molecule 37: 50S ribosomal protein L19

Chain BP:



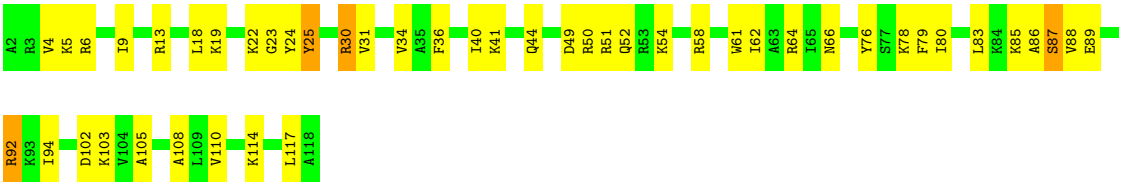
• Molecule 37: 50S ribosomal protein L19

Chain DP:



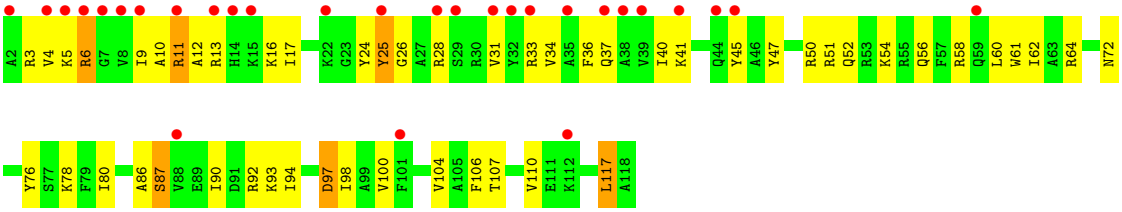
• Molecule 38: 50S ribosomal protein L20

Chain BQ:



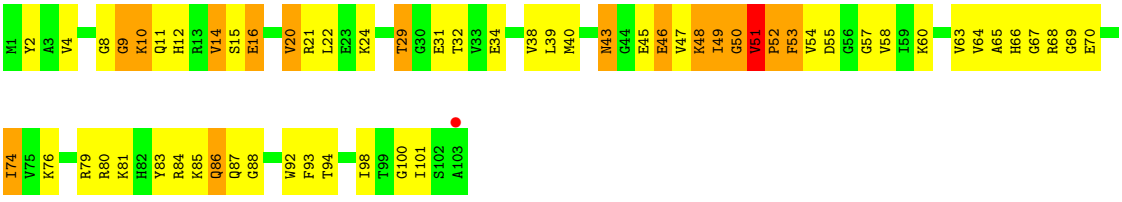
• Molecule 38: 50S ribosomal protein L20

Chain DQ:



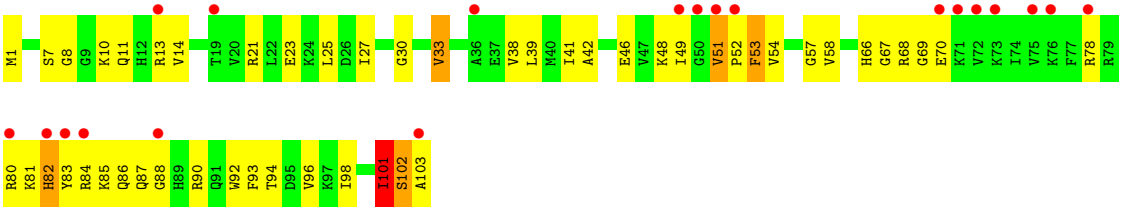
• Molecule 39: 50S ribosomal protein L21

Chain BR:



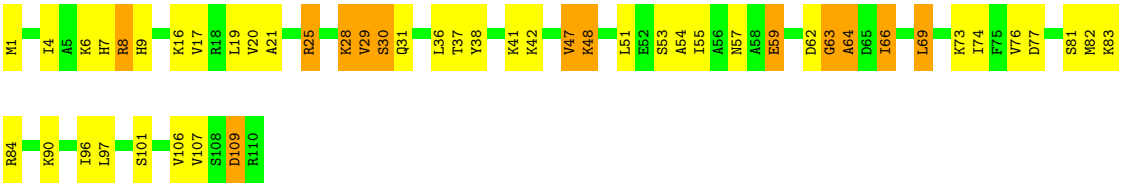
• Molecule 39: 50S ribosomal protein L21

Chain DR:



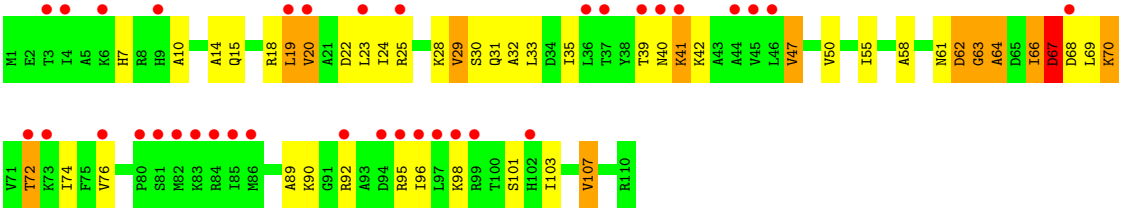
• Molecule 40: 50S ribosomal protein L22

Chain BS:



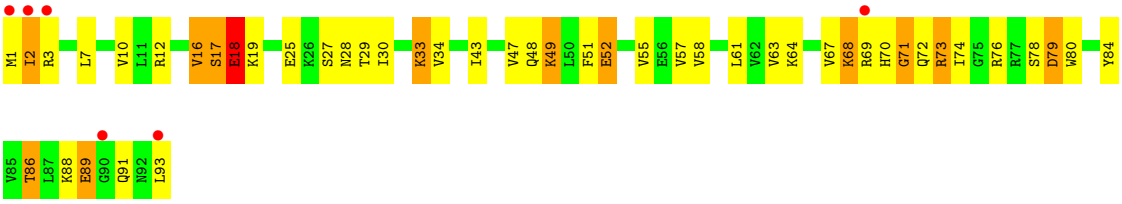
• Molecule 40: 50S ribosomal protein L22

Chain DS:



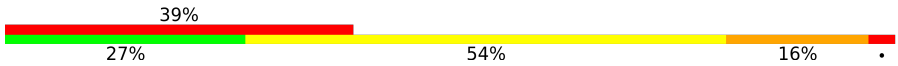
• Molecule 41: 50S ribosomal protein L23

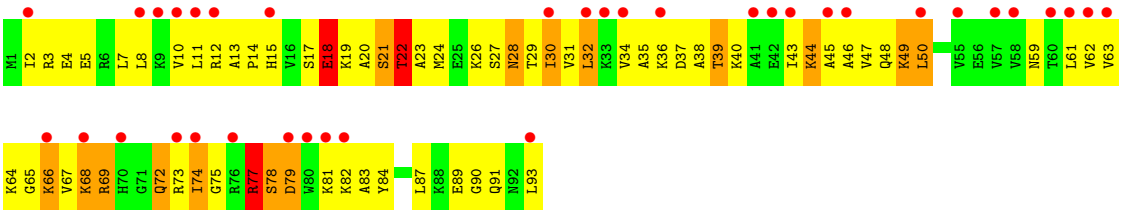
Chain BT:



• Molecule 41: 50S ribosomal protein L23

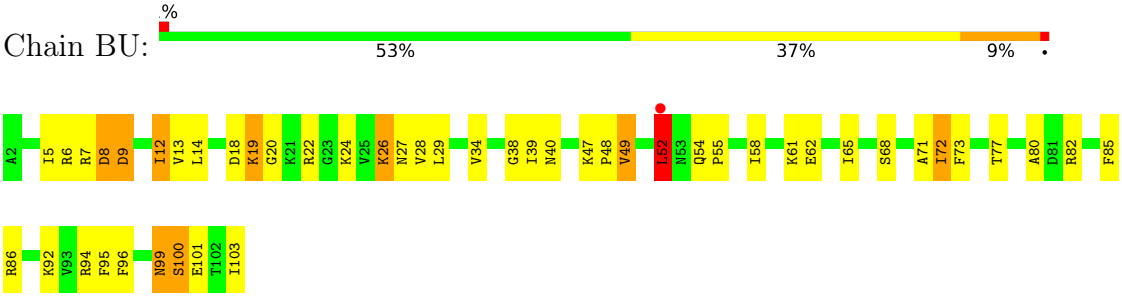
Chain DT:





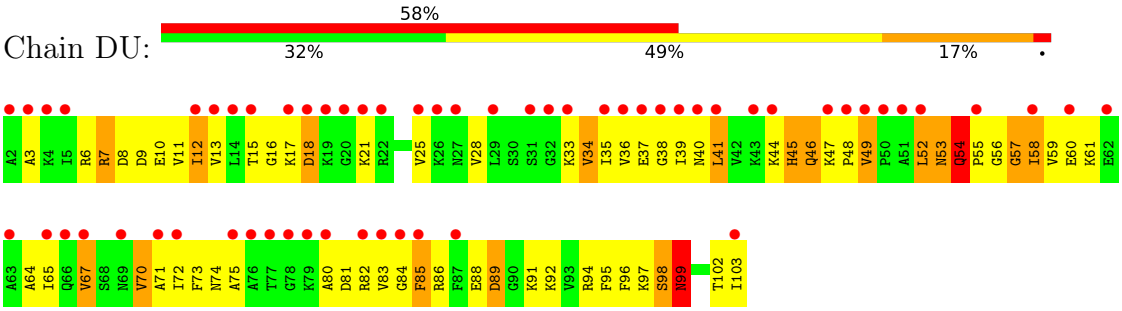
• Molecule 42: 50S ribosomal protein L24

Chain BU:



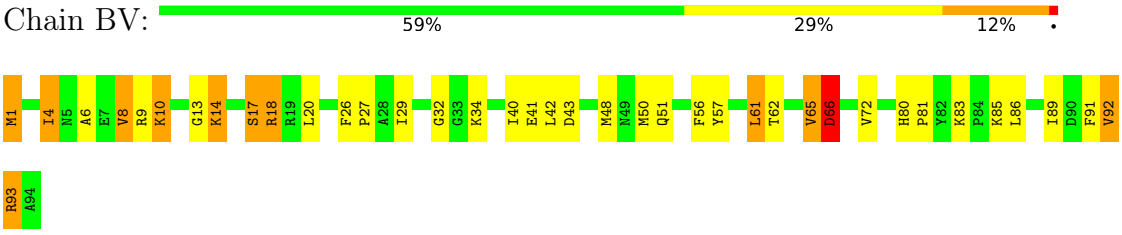
• Molecule 42: 50S ribosomal protein L24

Chain DU:



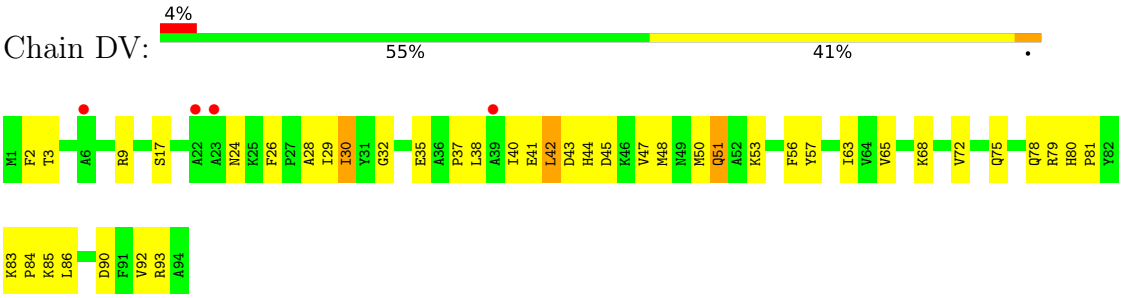
• Molecule 43: 50S ribosomal protein L25

Chain BV:



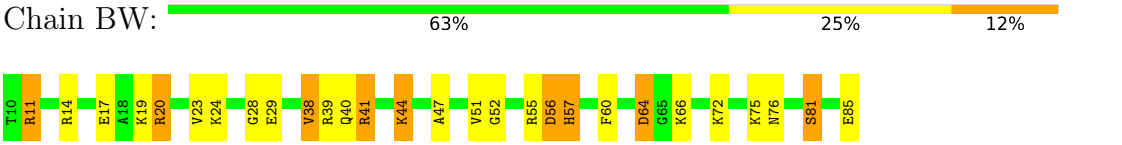
• Molecule 43: 50S ribosomal protein L25

Chain DV:



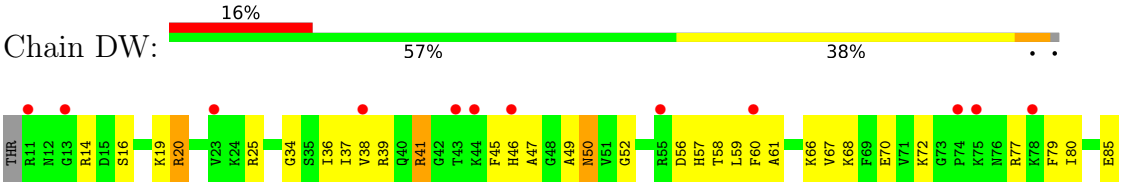
• Molecule 44: 50S ribosomal protein L27

Chain BW:



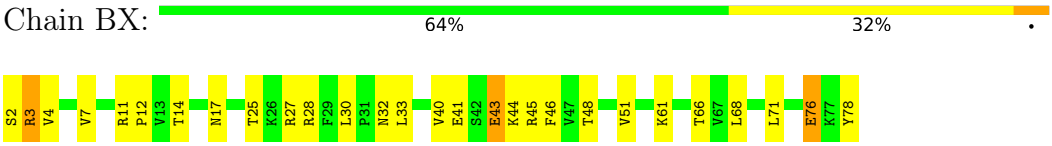
• Molecule 44: 50S ribosomal protein L27

Chain DW:



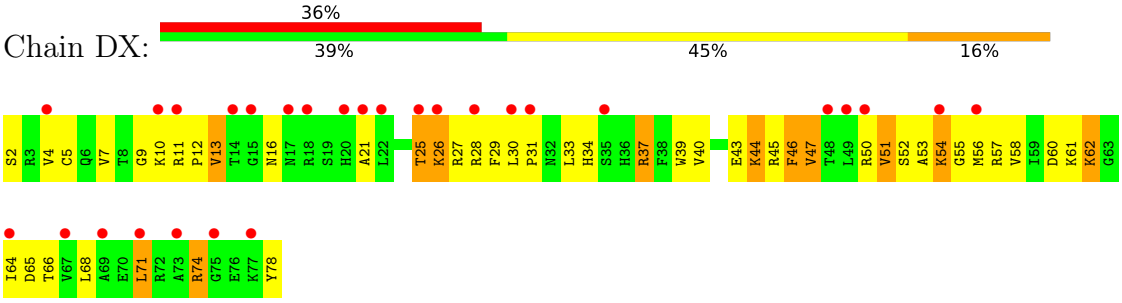
• Molecule 45: 50S ribosomal protein L28

Chain BX:



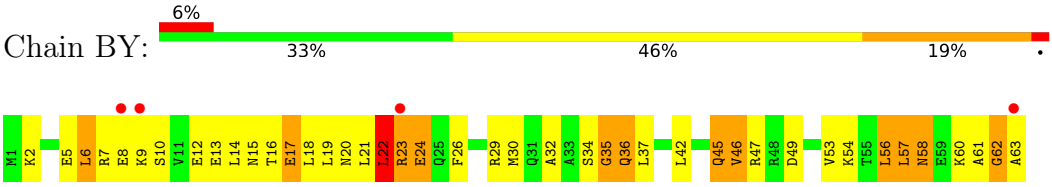
• Molecule 45: 50S ribosomal protein L28

Chain DX:



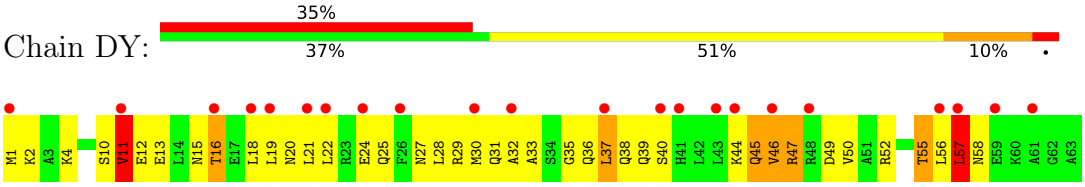
• Molecule 46: 50S ribosomal protein L29

Chain BY:



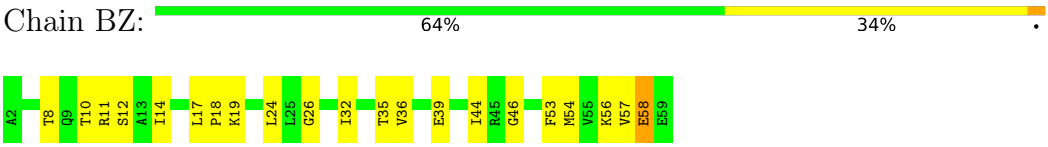
• Molecule 46: 50S ribosomal protein L29

Chain DY:



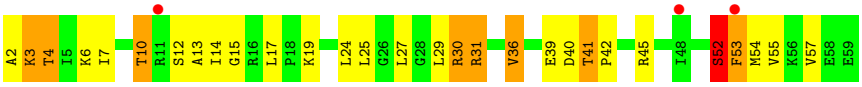
• Molecule 47: 50S ribosomal protein L30

Chain BZ:



• Molecule 47: 50S ribosomal protein L30

Chain DZ:

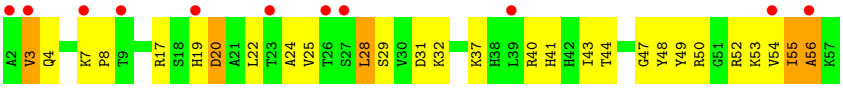


• Molecule 48: 50S ribosomal protein L32

Chain B0:

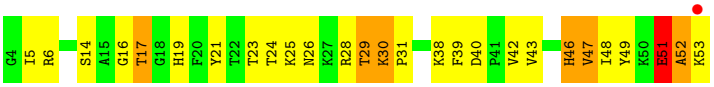
• Molecule 48: 50S ribosomal protein L32

Chain D0:



• Molecule 49: 50S ribosomal protein L33

Chain B1:

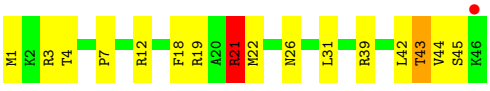


• Molecule 49: 50S ribosomal protein L33

Chain D1:

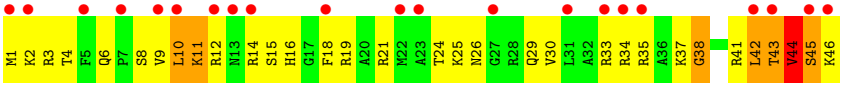
• Molecule 50: 50S ribosomal protein L34

Chain B2:



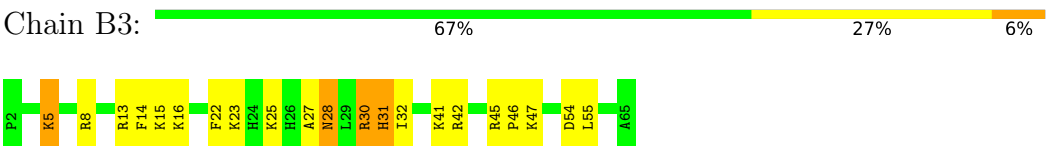
• Molecule 50: 50S ribosomal protein L34

Chain D2:



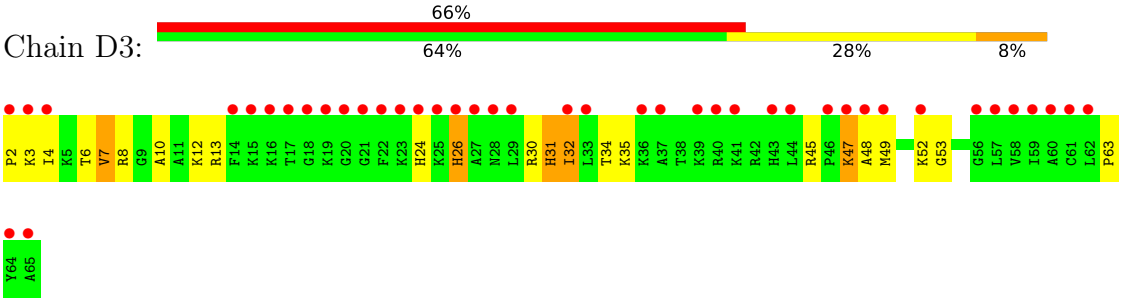
• Molecule 51: 50S ribosomal protein L35

Chain B3:



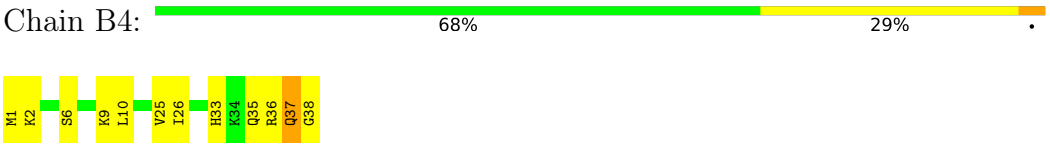
• Molecule 51: 50S ribosomal protein L35

Chain D3:



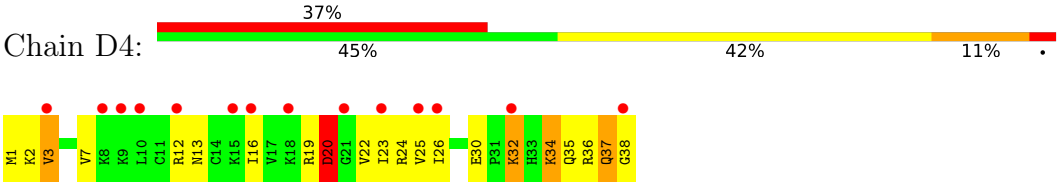
• Molecule 52: 50S ribosomal protein L36

Chain B4:



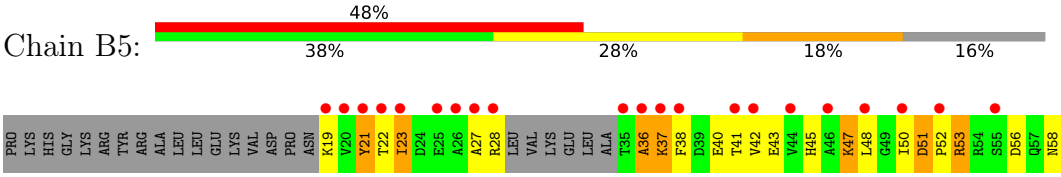
• Molecule 52: 50S ribosomal protein L36

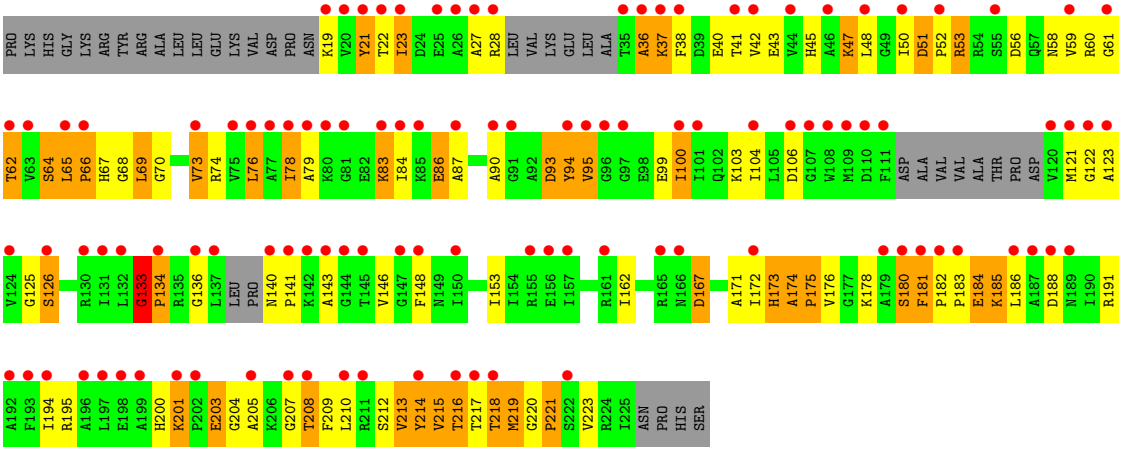
Chain D4:



• Molecule 53: 50S ribosomal protein L1

Chain B5:





• Molecule 54: Quinupristin

Chain B6:

• Molecule 54: Quinupristin

Chain D6:

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	211.26Å 432.34Å 621.39Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	69.08 – 2.80 69.08 – 2.80	Depositor EDS
% Data completeness (in resolution range)	94.1 (69.08-2.80) 94.1 (69.08-2.80)	Depositor EDS
R_{merge}	0.14	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.40 (at 2.81Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.8.1_1160)	Depositor
R, R_{free}	0.225 , 0.271 0.228 , 0.273	Depositor DCC
R_{free} test set	5217 reflections (0.40%)	wwPDB-VP
Wilson B-factor (Å^2)	48.8	Xtriage
Anisotropy	0.379	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.27 , 47.9	EDS
L-test for twinning[2]	$< \|L\| > = 0.47$, $< L^2 > = 0.29$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.92	EDS
Total number of atoms	288423	wwPDB-VP
Average B, all atoms (Å^2)	61.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.65% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: DOL, MG, MHU, MHW, ZN, MHT, 004, DBB, MHV

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	0.19	0/36944	0.37	0/57632
1	CA	0.16	0/36966	0.34	0/57666
2	AB	0.38	0/1736	0.87	4/2338 (0.2%)
2	CB	0.36	0/1736	0.81	1/2338 (0.0%)
3	AC	0.36	0/1652	0.80	2/2225 (0.1%)
3	CC	0.34	0/1652	0.73	0/2225
4	AD	0.35	0/1665	0.80	1/2227 (0.0%)
4	CD	0.39	0/1665	0.79	1/2227 (0.0%)
5	AE	0.42	0/1119	0.86	1/1504 (0.1%)
5	CE	0.40	0/1119	0.85	1/1504 (0.1%)
6	AF	0.40	0/836	0.79	0/1128
6	CF	0.35	0/836	0.76	0/1128
7	AG	0.35	0/1196	0.80	2/1602 (0.1%)
7	CG	0.35	0/1196	0.80	1/1602 (0.1%)
8	AH	0.38	0/989	0.81	0/1326
8	CH	0.31	0/989	0.73	0/1326
9	AI	0.33	0/1034	0.77	0/1375
9	CI	0.32	0/1034	0.78	0/1375
10	AJ	0.40	0/797	0.75	0/1077
10	CJ	0.37	0/797	0.80	0/1077
11	AK	0.38	0/893	0.78	0/1205
11	CK	0.35	0/893	0.83	1/1205 (0.1%)
12	AL	0.39	0/969	0.82	1/1300 (0.1%)
12	CL	0.38	0/969	0.83	0/1300
13	AM	0.39	0/893	0.82	0/1193
13	CM	0.36	0/893	0.77	0/1193
14	AN	0.37	0/785	0.85	2/1043 (0.2%)
14	CN	0.32	0/785	0.74	0/1043
15	AO	0.36	0/718	0.75	0/959
15	CO	0.32	0/718	0.70	0/959
16	AP	0.39	0/659	0.84	2/884 (0.2%)
16	CP	0.34	0/659	0.76	0/884

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AQ	0.39	0/658	0.77	0/881
17	CQ	0.37	0/658	0.73	0/881
18	AR	0.37	0/463	0.78	1/621 (0.2%)
18	CR	0.36	0/463	0.72	0/621
19	AS	0.36	0/653	0.86	2/877 (0.2%)
19	CS	0.40	0/653	0.84	0/877
20	AT	0.39	0/671	0.81	1/888 (0.1%)
20	CT	0.35	0/671	0.80	1/888 (0.1%)
21	AU	0.46	0/431	0.90	1/570 (0.2%)
21	CU	0.39	0/431	0.78	0/570
22	BA	0.32	0/69659	0.49	0/108672
22	DA	0.15	0/69659	0.33	0/108672
23	BB	0.28	0/2850	0.45	0/4444
23	DB	0.12	0/2828	0.27	0/4410
24	BC	0.49	0/2122	0.90	2/2852 (0.1%)
24	DC	0.34	0/2122	0.77	2/2852 (0.1%)
25	BD	0.55	0/1586	0.95	3/2134 (0.1%)
25	DD	0.33	0/1586	0.77	2/2134 (0.1%)
26	BE	0.51	0/1571	0.86	3/2113 (0.1%)
26	DE	0.36	0/1571	0.80	2/2113 (0.1%)
27	BF	0.38	0/1435	0.78	0/1926
27	DF	0.32	0/1435	0.78	3/1926 (0.2%)
28	BG	0.38	0/1343	0.84	1/1816 (0.1%)
28	DG	0.34	0/1343	0.77	2/1816 (0.1%)
29	BH	0.48	0/1121	0.99	5/1515 (0.3%)
29	DH	0.47	0/1121	0.92	5/1515 (0.3%)
30	BI	0.44	0/1046	0.88	2/1410 (0.1%)
30	DI	0.44	0/1046	0.87	0/1410
31	BJ	0.55	0/1152	0.86	3/1551 (0.2%)
31	DJ	0.34	0/1152	0.78	0/1551
32	BK	0.51	0/948	0.90	0/1268
32	DK	0.34	0/948	0.81	4/1268 (0.3%)
33	BL	0.50	0/1054	0.90	1/1403 (0.1%)
33	DL	0.36	0/1054	0.77	1/1403 (0.1%)
34	BM	0.54	0/1093	0.87	0/1460
34	DM	0.32	0/1093	0.72	0/1460
35	BN	0.62	0/974	0.97	2/1301 (0.2%)
35	DN	0.34	0/974	0.75	1/1301 (0.1%)
36	BO	0.45	0/902	0.86	2/1209 (0.2%)
36	DO	0.34	0/902	0.73	0/1209
37	BP	0.52	0/929	0.85	1/1242 (0.1%)
37	DP	0.33	0/929	0.70	0/1242
38	BQ	0.60	0/960	0.94	0/1278

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	DQ	0.33	0/960	0.73	0/1278
39	BR	0.59	0/829	1.02	3/1107 (0.3%)
39	DR	0.29	0/829	0.74	2/1107 (0.2%)
40	BS	0.63	0/864	0.83	0/1156
40	DS	0.37	0/864	0.80	0/1156
41	BT	0.44	0/745	0.81	0/994
41	DT	0.34	0/745	0.71	0/994
42	BU	0.44	0/788	0.80	0/1051
42	DU	0.38	0/788	0.82	0/1051
43	BV	0.47	0/766	0.86	0/1025
43	DV	0.32	0/766	0.70	0/1025
44	BW	0.54	0/587	0.89	1/776 (0.1%)
44	DW	0.27	0/576	0.73	0/762
45	BX	0.44	0/635	0.80	0/848
45	DX	0.36	0/635	0.85	2/848 (0.2%)
46	BY	0.41	0/510	0.89	2/677 (0.3%)
46	DY	0.30	0/510	0.75	0/677
47	BZ	0.58	0/453	0.88	0/605
47	DZ	0.36	0/453	0.77	0/605
48	B0	0.58	0/450	0.94	3/599 (0.5%)
48	D0	0.34	0/450	0.73	0/599
49	B1	0.42	0/417	0.84	2/554 (0.4%)
49	D1	0.35	0/417	0.67	0/554
50	B2	0.55	0/380	1.00	1/498 (0.2%)
50	D2	0.35	0/380	0.85	0/498
51	B3	0.51	0/513	0.86	0/676
51	D3	0.32	0/513	0.69	0/676
52	B4	0.54	0/303	0.93	0/397
52	D4	0.32	0/303	0.73	0/397
53	B5	0.41	0/1145	1.13	13/1556 (0.8%)
54	B6	1.96	0/13	2.89	2/15 (13.3%)
54	D6	1.58	0/13	2.27	1/15 (6.7%)
All	All	0.29	0/310652	0.54	105/464396 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
6	CF	0	1
11	AK	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
12	CL	0	2
25	BD	0	1
25	DD	0	1
All	All	0	6

There are no bond length outliers.

All (105) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	BD	151	THR	CA-C-N	12.47	135.43	119.84
25	BD	151	THR	C-N-CA	12.47	135.43	119.84
53	B5	133	GLY	CA-C-N	10.66	133.16	119.84
53	B5	133	GLY	C-N-CA	10.66	133.16	119.84
53	B5	220	GLY	CA-C-N	10.66	133.16	119.84
53	B5	220	GLY	C-N-CA	10.66	133.16	119.84
14	AN	51	LEU	CA-C-N	10.11	132.48	119.84
14	AN	51	LEU	C-N-CA	10.11	132.48	119.84
53	B5	181	PHE	CA-C-N	9.55	130.22	120.38
53	B5	181	PHE	C-N-CA	9.55	130.22	120.38
39	BR	51	VAL	CA-C-N	-9.17	108.38	119.84
39	BR	51	VAL	C-N-CA	-9.17	108.38	119.84
20	AT	8	LYS	N-CA-C	-8.87	101.61	111.28
49	B1	30	LYS	CA-C-N	8.38	128.10	119.56
49	B1	30	LYS	C-N-CA	8.38	128.10	119.56
53	B5	174	ALA	CA-C-N	8.23	130.13	119.84
53	B5	174	ALA	C-N-CA	8.23	130.13	119.84
2	AB	181	ILE	CA-C-N	7.80	129.59	119.84
2	AB	181	ILE	C-N-CA	7.80	129.59	119.84
53	B5	182	PRO	CA-C-N	7.54	129.27	119.84
53	B5	182	PRO	C-N-CA	7.54	129.27	119.84
5	CE	153	VAL	N-CA-C	-7.42	104.27	112.80
26	DE	146	VAL	N-CA-C	7.37	117.52	108.53
29	BH	121	VAL	CA-C-N	7.15	134.57	121.70
29	BH	121	VAL	C-N-CA	7.15	134.57	121.70
39	DR	51	VAL	CA-C-N	-6.92	112.35	119.83
39	DR	51	VAL	C-N-CA	-6.92	112.35	119.83
39	BR	9	GLY	N-CA-C	-6.91	104.26	114.90
12	AL	116	LYS	N-CA-C	-6.85	101.49	110.53
26	BE	88	ARG	N-CA-C	-6.71	102.26	110.31
29	DH	121	VAL	N-CA-C	-6.59	106.25	113.43
29	BH	123	ARG	N-CA-C	6.59	119.48	110.06
54	D6	4	PRO	N-CA-CB	6.57	110.23	103.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	AE	148	ASN	N-CA-C	6.53	119.25	108.99
26	DE	60	TRP	N-CA-C	6.51	116.83	108.24
53	B5	140	ASN	CA-C-N	6.50	127.97	119.84
53	B5	140	ASN	C-N-CA	6.50	127.97	119.84
26	BE	73	ILE	N-CA-C	-6.50	105.23	113.22
35	BN	79	LEU	N-CA-C	-6.45	101.86	110.24
21	AU	18	ARG	N-CA-C	-6.44	105.06	113.17
25	BD	151	THR	C-N-CD	-6.43	98.64	125.00
46	BY	45	GLN	N-CA-C	-6.41	102.53	110.41
48	B0	21	ALA	N-CA-C	-6.32	101.75	110.35
54	B6	4	PRO	N-CA-CB	6.30	109.93	103.00
7	AG	92	ARG	CA-C-N	6.29	125.51	118.97
7	AG	92	ARG	C-N-CA	6.29	125.51	118.97
32	DK	47	ILE	CA-C-N	6.16	127.55	119.84
32	DK	47	ILE	C-N-CA	6.16	127.55	119.84
48	B0	25	VAL	N-CA-C	6.09	117.12	111.45
46	BY	56	LEU	N-CA-C	-6.08	102.50	110.53
28	DG	7	ALA	CA-C-N	6.03	127.38	119.84
28	DG	7	ALA	C-N-CA	6.03	127.38	119.84
19	AS	8	GLY	CA-C-N	6.03	127.37	119.84
19	AS	8	GLY	C-N-CA	6.03	127.37	119.84
3	AC	72	ARG	CA-C-N	5.97	126.13	119.32
3	AC	72	ARG	C-N-CA	5.97	126.13	119.32
54	B6	2	THR	N-CA-CB	-5.85	101.55	111.50
33	DL	95	LEU	N-CA-C	-5.84	104.92	111.28
2	CB	61	ALA	N-CA-C	-5.80	105.46	112.54
29	DH	31	VAL	CA-C-N	-5.80	113.73	119.93
29	DH	31	VAL	C-N-CA	-5.80	113.73	119.93
28	BG	3	ARG	N-CA-C	-5.66	104.50	111.75
24	DC	84	ASP	CA-C-N	5.63	126.88	119.84
24	DC	84	ASP	C-N-CA	5.63	126.88	119.84
24	BC	91	ILE	N-CA-C	5.59	116.76	108.65
50	B2	21	ARG	N-CA-C	-5.56	105.13	111.14
27	DF	175	PHE	CA-C-N	5.54	126.77	119.84
27	DF	175	PHE	C-N-CA	5.54	126.77	119.84
26	BE	41	GLN	N-CA-C	-5.54	102.71	110.35
24	BC	237	GLY	N-CA-C	-5.51	105.48	112.65
29	BH	70	GLU	N-CA-C	-5.49	106.54	113.18
48	B0	19	HIS	N-CA-C	5.40	119.44	112.41
16	AP	14	ARG	CA-C-N	5.40	125.34	119.78
16	AP	14	ARG	C-N-CA	5.40	125.34	119.78
44	BW	44	LYS	N-CA-C	-5.34	105.36	111.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	CD	148	LYS	N-CA-C	-5.34	103.30	110.24
11	CK	76	GLU	N-CA-C	-5.32	106.77	113.20
36	BO	53	THR	N-CA-C	-5.29	106.13	112.59
25	DD	151	THR	CA-C-N	-5.29	113.23	119.84
25	DD	151	THR	C-N-CA	-5.29	113.23	119.84
4	AD	30	THR	N-CA-C	-5.27	99.58	110.80
29	BH	91	PHE	N-CA-C	-5.24	106.89	113.28
35	DN	71	ARG	NE-CZ-NH2	5.21	123.89	119.20
31	BJ	5	THR	CB-CA-C	-5.20	100.02	109.38
37	BP	3	ASN	N-CA-C	-5.13	106.18	112.90
33	BL	22	GLY	N-CA-C	5.11	119.03	112.18
20	CT	8	LYS	N-CA-C	-5.11	105.89	111.82
18	AR	70	TYR	N-CA-C	-5.09	106.58	112.89
29	DH	123	ARG	N-CA-C	-5.09	105.38	112.30
36	BO	54	VAL	N-CA-C	-5.08	107.89	113.43
35	BN	67	PHE	N-CA-C	-5.08	107.21	113.41
7	CG	142	HIS	N-CA-C	-5.08	106.94	113.23
45	DX	11	ARG	CA-C-N	5.06	125.85	119.98
45	DX	11	ARG	C-N-CA	5.06	125.85	119.98
29	DH	62	LEU	N-CA-C	-5.06	107.06	113.18
53	B5	186	LEU	N-CA-C	-5.05	106.42	112.59
30	BI	25	GLY	CA-C-N	5.03	124.81	119.28
30	BI	25	GLY	C-N-CA	5.03	124.81	119.28
31	BJ	7	LYS	CA-C-N	5.02	125.29	119.47
31	BJ	7	LYS	C-N-CA	5.02	125.29	119.47
2	AB	200	ILE	CA-C-N	5.01	126.11	119.84
2	AB	200	ILE	C-N-CA	5.01	126.11	119.84
27	DF	135	GLN	N-CA-C	-5.01	107.12	113.18
32	DK	71	ARG	CA-C-N	5.01	126.10	119.84
32	DK	71	ARG	C-N-CA	5.01	126.10	119.84

There are no chirality outliers.

All (6) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
11	AK	126	LYS	Peptide
25	BD	151	THR	Peptide
6	CF	54	LEU	Peptide
12	CL	23	ALA	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	964	0
1	CA	33015	0	16617	1120	1
2	AB	1705	0	1732	183	0
2	CB	1705	0	1732	147	0
3	AC	1625	0	1696	83	0
3	CC	1625	0	1696	77	0
4	AD	1643	0	1707	131	0
4	CD	1643	0	1707	126	0
5	AE	1106	0	1148	96	0
5	CE	1106	0	1148	113	0
6	AF	818	0	808	50	0
6	CF	818	0	808	64	0
7	AG	1182	0	1238	64	0
7	CG	1182	0	1238	69	0
8	AH	979	0	1031	56	0
8	CH	979	0	1031	62	0
9	AI	1022	0	1070	94	0
9	CI	1022	0	1070	72	0
10	AJ	787	0	828	84	0
10	CJ	787	0	828	60	0
11	AK	877	0	887	73	0
11	CK	877	0	887	58	0
12	AL	955	0	1016	49	0
12	CL	955	0	1016	81	0
13	AM	884	0	941	47	0
13	CM	884	0	941	51	0
14	AN	774	0	824	62	0
14	CN	774	0	824	54	0
15	AO	710	0	728	34	0
15	CO	710	0	728	34	0
16	AP	649	0	666	58	0
16	CP	649	0	666	37	0
17	AQ	649	0	691	64	0
17	CQ	649	0	691	57	0
18	AR	456	0	478	18	0
18	CR	456	0	478	27	0
19	AS	638	0	665	39	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	CS	638	0	665	43	0
20	AT	665	0	714	66	0
20	CT	665	0	714	48	0
21	AU	426	0	449	56	0
21	CU	426	0	449	58	0
22	BA	62195	0	31280	1494	0
22	DA	62195	0	31280	2454	1
23	BB	2549	0	1291	38	0
23	DB	2529	0	1281	67	0
24	BC	2083	0	2154	111	0
24	DC	2083	0	2154	131	0
25	BD	1565	0	1616	71	0
25	DD	1565	0	1616	101	0
26	BE	1552	0	1619	72	0
26	DE	1552	0	1619	98	0
27	BF	1411	0	1444	88	0
27	DF	1411	0	1444	59	0
28	BG	1323	0	1371	43	0
28	DG	1323	0	1371	47	0
29	BH	1110	0	1147	146	0
29	DH	1110	0	1148	93	0
30	BI	1032	0	1085	78	0
30	DI	1032	0	1085	86	0
31	BJ	1129	0	1162	49	0
31	DJ	1129	0	1162	64	0
32	BK	939	0	1012	50	0
32	DK	939	0	1012	57	0
33	BL	1045	0	1117	60	0
33	DL	1045	0	1117	80	0
34	BM	1074	0	1157	47	0
34	DM	1074	0	1157	44	0
35	BN	961	0	1000	52	0
35	DN	961	0	1000	73	0
36	BO	892	0	923	42	0
36	DO	892	0	923	46	0
37	BP	917	0	962	46	0
37	DP	917	0	962	42	0
38	BQ	947	0	1019	43	0
38	DQ	947	0	1019	47	0
39	BR	816	0	839	73	0
39	DR	816	0	839	45	0
40	BS	857	0	922	35	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
40	DS	857	0	922	39	0
41	BT	739	0	807	42	0
41	DT	739	0	807	61	0
42	BU	780	0	831	38	0
42	DU	780	0	831	71	0
43	BV	753	0	780	30	0
43	DV	753	0	780	26	0
44	BW	580	0	594	20	0
44	DW	569	0	581	24	0
45	BX	625	0	652	16	0
45	DX	625	0	652	50	0
46	BY	509	0	543	36	0
46	DY	509	0	543	30	0
47	BZ	449	0	488	10	0
47	DZ	449	0	488	27	0
48	B0	444	0	458	28	0
48	D0	444	0	458	22	0
49	B1	410	0	440	22	0
49	D1	410	0	440	23	0
50	B2	377	0	418	12	0
50	D2	377	0	418	32	0
51	B3	504	0	572	27	0
51	D3	504	0	572	24	0
52	B4	302	0	340	7	0
52	D4	302	0	340	14	0
53	B5	1142	0	865	71	0
54	B6	73	0	64	3	0
54	D6	73	0	65	12	0
55	AA	71	0	0	0	0
55	AM	1	0	0	0	0
55	BA	194	0	0	0	0
55	BB	4	0	0	0	0
55	BQ	1	0	0	0	0
55	CA	56	0	0	0	0
55	D2	1	0	0	0	0
55	DA	166	0	0	0	0
55	DB	3	0	0	0	0
55	DQ	1	0	0	0	0
56	BA	48	0	50	15	0
56	DA	48	0	50	25	0
57	B4	1	0	0	0	0
57	D4	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
58	AA	194	0	0	18	0
58	AE	2	0	0	0	0
58	AL	1	0	0	0	0
58	AN	3	0	0	0	0
58	AT	2	0	0	0	0
58	AU	1	0	0	0	0
58	B3	3	0	0	0	0
58	B4	1	0	0	0	0
58	BA	617	0	0	66	0
58	BB	14	0	0	1	0
58	BC	6	0	0	1	0
58	BD	4	0	0	2	0
58	BE	1	0	0	0	0
58	BF	1	0	0	1	0
58	BG	1	0	0	1	0
58	BJ	1	0	0	0	0
58	BL	7	0	0	0	0
58	BN	5	0	0	0	0
58	BQ	1	0	0	0	0
58	BS	1	0	0	0	0
58	BT	2	0	0	0	0
58	CA	192	0	0	12	0
58	CL	1	0	0	0	0
58	CN	2	0	0	0	0
58	CT	2	0	0	0	0
58	CU	1	0	0	1	0
58	D2	1	0	0	1	0
58	D3	1	0	0	0	0
58	D4	1	0	0	0	0
58	DA	610	0	0	84	0
58	DB	13	0	0	1	0
58	DC	8	0	0	1	0
58	DD	4	0	0	2	0
58	DE	4	0	0	0	0
58	DJ	1	0	0	0	0
58	DL	4	0	0	1	0
58	DN	2	0	0	0	0
58	DS	2	0	0	0	0
58	DT	3	0	0	1	0
58	DU	1	0	0	0	0
58	DV	1	0	0	0	0
All	All	288423	0	193016	10982	1

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 23.

All (10982) 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:BA:730:A:OP2	58:BA:3693:HOH:O	1.58	1.21
1:AA:533:A:OP1	58:AA:1848:HOH:O	1.65	1.15
29:BH:117:LEU:O	29:BH:121:VAL:CG2	1.95	1.14
22:BA:2498:C:OP2	58:BA:3684:HOH:O	1.64	1.13
22:BA:627:A:OP1	33:BL:78:ARG:NH1	1.83	1.11
22:BA:731:C:OP2	58:BA:3693:HOH:O	1.66	1.11
25:DD:151:THR:O	25:DD:153:GLY:N	1.84	1.10
29:BH:123:ARG:O	29:BH:124:THR:CG2	2.01	1.09
22:DA:1378:A:O2'	22:DA:1380:G:N7	1.86	1.08
5:CE:101:GLU:O	5:CE:103:THR:N	1.89	1.05
22:BA:2720:U:OP1	37:BP:53:ARG:NH2	1.89	1.04
22:DA:2711:A:OP2	58:DA:3546:HOH:O	1.73	1.03
56:DA:3001:DOL:H483	56:DA:3001:DOL:H463	1.41	1.03
22:BA:1395:A:OP1	58:BA:3411:HOH:O	1.76	1.02
22:DA:1439:A:OP2	58:DA:3627:HOH:O	1.76	1.02
22:DA:842:U:O4	58:DA:3577:HOH:O	1.75	1.02
22:BA:842:U:O4	58:BA:3587:HOH:O	1.75	1.02
22:DA:310:A:O2'	22:DA:311:A:OP2	1.77	1.01
22:BA:1342:A:OP2	58:BA:3712:HOH:O	1.76	1.01
22:DA:784:G:OP1	58:DA:3315:HOH:O	1.79	1.01
22:DA:2349:G:OP1	51:D3:45:ARG:NH2	1.93	1.01
23:DB:28:C:OP1	36:DO:36:TYR:OH	1.78	1.01
22:DA:789:A:N1	58:DA:3311:HOH:O	1.91	1.00
13:AM:11:ASP:OD1	13:AM:12:HIS:N	1.94	1.00
29:BH:120:GLY:C	29:BH:122:LEU:HA	1.85	1.00
22:BA:1153:C:OP2	58:BA:3359:HOH:O	1.78	1.00
25:BD:140:HIS:NE2	58:BD:303:HOH:O	1.95	0.99
2:AB:193:PRO:O	2:AB:195:GLY:N	1.95	0.99
29:BH:117:LEU:HD21	29:BH:121:VAL:H	1.23	0.99
22:BA:517:C:OP2	48:B0:10:ARG:NH2	1.94	0.99
29:BH:123:ARG:O	29:BH:124:THR:HG23	1.61	0.99
28:DG:126:PRO:O	28:DG:127:THR:OG1	1.81	0.99
22:BA:1001:A:OP2	58:BA:3735:HOH:O	1.78	0.98
5:CE:157:ARG:O	5:CE:159:LYS:N	1.96	0.98
22:DA:2588:G:OP1	58:DA:3315:HOH:O	1.81	0.98
4:CD:41:HIS:O	4:CD:43:ALA:N	1.97	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1500:A:OP2	58:CA:1883:HOH:O	1.82	0.97
22:DA:2714:G:OP2	58:DA:3546:HOH:O	1.82	0.97
22:BA:797:G:O6	58:BA:3322:HOH:O	1.83	0.97
1:AA:516:U:O4	58:AA:1848:HOH:O	1.82	0.97
29:DH:40:THR:O	29:DH:42:LYS:N	1.98	0.96
22:BA:1923:U:H2'	22:BA:1924:C:H5'	1.46	0.96
2:CB:73:LYS:O	2:CB:75:ALA:N	1.98	0.96
22:DA:2627:G:O2'	22:DA:2781:A:N1	1.98	0.96
1:AA:980:C:OP2	58:AA:1835:HOH:O	1.82	0.96
2:AB:21:ARG:O	2:AB:23:TRP:N	1.97	0.96
22:DA:602:A:O2'	22:DA:604:G:O2'	1.84	0.96
22:DA:182:A:O2'	22:DA:433:C:O2'	1.83	0.96
6:AF:91:ARG:O	6:AF:92:THR:OG1	1.84	0.95
22:DA:514:A:N3	22:DA:581:C:O2'	1.98	0.95
5:AE:157:ARG:O	5:AE:159:LYS:N	2.00	0.94
22:DA:370:G:N7	58:DA:3555:HOH:O	1.97	0.94
56:BA:3001:DOL:HC1	56:BA:3001:DOL:H463	1.49	0.94
9:CI:107:ASP:OD1	9:CI:109:ARG:NH1	1.99	0.93
22:BA:1916:A:C4	22:BA:1917:U:H1'	2.02	0.93
22:DA:790:U:OP2	58:DA:3755:HOH:O	1.84	0.93
22:BA:1062:G:N2	22:BA:1077:A:N1	2.16	0.93
22:BA:2428:G:OP1	58:BA:3699:HOH:O	1.85	0.93
22:DA:621:A:OP2	58:DA:3293:HOH:O	1.85	0.93
29:BH:117:LEU:C	29:BH:121:VAL:HG23	1.93	0.92
22:DA:2056:G:OP2	58:DA:3485:HOH:O	1.86	0.92
4:CD:28:ILE:O	4:CD:31:LYS:NZ	2.04	0.91
22:BA:2269:G:OP1	58:BA:3512:HOH:O	1.89	0.91
40:DS:28:LYS:O	40:DS:30:SER:N	2.02	0.91
22:DA:299:A:N3	22:DA:319:G:O2'	2.02	0.91
35:DN:87:PHE:O	35:DN:89:SER:N	2.04	0.91
1:AA:1312:G:N7	19:AS:3:ARG:N	2.17	0.91
22:BA:1602:U:O4	58:BA:3712:HOH:O	1.87	0.91
39:DR:101:ILE:O	39:DR:103:ALA:N	2.03	0.91
23:DB:43:C:O2	27:DF:92:ARG:NH2	2.04	0.90
29:DH:83:LYS:HG3	29:DH:149:GLU:CG	2.02	0.90
22:DA:450:G:O6	58:DA:3242:HOH:O	1.90	0.90
22:DA:1817:G:OP1	24:DC:62:TYR:OH	1.89	0.90
22:DA:1050:A:N6	22:DA:1109:C:O2	2.04	0.90
1:AA:880:C:OP1	12:AL:9:ARG:NH1	2.05	0.90
1:CA:858:G:N7	58:CA:1819:HOH:O	2.04	0.90
2:CB:87:CYS:O	2:CB:89:GLN:N	2.05	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:729:G:OP2	24:DC:207:LYS:NZ	2.03	0.90
22:DA:488:G:N2	22:DA:493:G:O6	2.05	0.89
5:CE:102:GLY:O	5:CE:104:GLY:N	2.06	0.89
22:BA:1964:G:O2'	22:BA:1967:C:OP2	1.89	0.89
22:DA:2615:U:OP1	58:DA:3745:HOH:O	1.90	0.89
3:AC:85:GLU:OE1	3:AC:88:ARG:NH1	2.05	0.89
17:CQ:69:LYS:O	17:CQ:70:THR:OG1	1.91	0.89
22:DA:58:G:OP1	41:DT:78:SER:OG	1.88	0.89
22:BA:1924:C:H2'	22:BA:1925:C:H5"	1.54	0.89
31:DJ:80:HIS:O	31:DJ:82:GLY:N	2.06	0.89
22:DA:1464:G:N7	58:DA:3633:HOH:O	2.05	0.88
22:BA:1823:G:N7	58:BA:3657:HOH:O	2.06	0.88
22:DA:1268:A:OP1	58:DA:3378:HOH:O	1.89	0.88
13:AM:82:ASP:OD1	27:BF:112:ARG:NH2	2.06	0.88
22:BA:1073:A:H3'	22:BA:1074:G:C5'	2.04	0.88
50:D2:11:LYS:NZ	58:D2:201:HOH:O	2.06	0.88
22:BA:2271:G:O6	58:BA:3511:HOH:O	1.91	0.88
29:BH:123:ARG:O	29:BH:124:THR:HG22	1.74	0.88
14:CN:41:ARG:NH1	14:CN:42:TRP:O	2.07	0.88
22:BA:747:U:C5	22:BA:2613:U:C5	2.62	0.87
22:BA:1909:C:N4	22:BA:1921:G:O6	2.06	0.87
1:CA:1256:A:O2'	1:CA:1278:G:O6	1.91	0.87
22:DA:528:A:OP1	58:DA:3246:HOH:O	1.90	0.87
1:CA:1046:A:N6	1:CA:1211:U:O2	2.08	0.87
16:AP:42:ILE:O	16:AP:44:SER:N	2.08	0.87
29:DH:83:LYS:HG3	29:DH:149:GLU:HG2	1.56	0.87
22:DA:2834:G:O6	22:DA:2879:A:O2'	1.93	0.86
4:AD:125:VAL:O	4:AD:127:GLY:N	2.07	0.86
22:BA:2448:A:OP2	58:BA:3684:HOH:O	1.92	0.86
1:CA:912:C:OP1	12:CL:43:LYS:NZ	2.07	0.86
4:CD:192:SER:OG	4:CD:193:ALA:N	2.04	0.86
20:CT:5:LYS:O	20:CT:7:ALA:N	2.09	0.86
7:AG:55:GLY:O	7:AG:57:SER:N	2.08	0.86
25:BD:103:ASP:O	25:BD:105:LYS:N	2.07	0.86
36:BO:31:THR:O	36:BO:102:ARG:NH1	2.09	0.86
22:DA:18:U:O4	58:DA:3205:HOH:O	1.94	0.86
22:BA:622:G:OP2	58:BA:3293:HOH:O	1.94	0.86
1:AA:1108:G:O6	58:AA:1861:HOH:O	1.92	0.86
29:BH:147:VAL:HG12	29:BH:149:GLU:HG3	1.57	0.86
22:DA:1010:A:OP2	58:DA:3778:HOH:O	1.94	0.86
22:DA:1508:A:O2'	22:DA:1509:A:O4'	1.93	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:41:LYS:O	31:DJ:43:GLU:N	2.09	0.85
1:AA:537:G:OP1	12:AL:110:ARG:NH2	2.09	0.85
22:DA:858:G:O2'	22:DA:2268:A:N3	2.08	0.85
22:DA:618:G:O6	58:DA:3292:HOH:O	1.94	0.85
48:B0:20:ASP:OD2	48:B0:20:ASP:N	2.09	0.85
22:DA:1371:G:N7	58:DA:3399:HOH:O	2.08	0.85
4:AD:163:GLU:OE2	4:AD:164:GLN:N	2.10	0.85
2:AB:118:GLU:O	2:AB:121:SER:N	2.09	0.85
14:AN:61:ARG:O	14:AN:62:ASN:HB2	1.77	0.84
1:CA:1007:U:O4	1:CA:1022:A:N6	2.10	0.84
17:AQ:17:MET:SD	17:AQ:17:MET:N	2.50	0.84
1:CA:684:U:O2'	11:CK:40:ASN:O	1.94	0.84
56:DA:3001:DOL:C6	56:DA:3001:DOL:H432	2.07	0.84
1:CA:1198:G:N7	58:CA:1852:HOH:O	2.09	0.84
39:DR:8:GLY:O	39:DR:10:LYS:NZ	2.09	0.84
29:BH:117:LEU:O	29:BH:119:ASN:N	2.08	0.84
5:CE:41:ASP:OD1	5:CE:42:GLY:N	2.10	0.84
56:DA:3001:DOL:H432	56:DA:3001:DOL:O7	1.76	0.84
29:BH:117:LEU:HD21	29:BH:121:VAL:N	1.93	0.84
1:CA:319:G:O6	58:CA:1735:HOH:O	1.95	0.84
29:DH:82:SER:O	29:DH:84:ALA:N	2.10	0.84
22:BA:2453:A:N7	58:BA:3524:HOH:O	2.11	0.84
47:DZ:52:SER:O	47:DZ:54:MET:N	2.10	0.84
22:BA:1651:G:O6	58:BA:3800:HOH:O	1.95	0.84
22:DA:2243:U:OP1	58:DA:3737:HOH:O	1.95	0.84
22:BA:1093:G:N3	22:BA:1098:A:N6	2.25	0.84
1:CA:736:C:OP1	18:CR:61:ARG:NH1	2.10	0.84
22:DA:2684:U:O4'	32:DK:70:ARG:NH1	2.11	0.84
50:D2:43:THR:OG1	50:D2:44:VAL:N	2.09	0.83
1:AA:1222:G:O6	58:AA:1835:HOH:O	1.96	0.83
22:DA:2004:G:OP1	58:DA:3800:HOH:O	1.96	0.83
29:DH:94:ILE:HB	29:DH:122:LEU:HD12	1.60	0.83
46:DY:11:VAL:O	46:DY:15:ASN:ND2	2.10	0.83
14:AN:33:ASP:O	14:AN:35:ASN:N	2.11	0.83
21:AU:35:ARG:O	21:AU:37:PHE:N	2.11	0.83
1:CA:484:G:H4'	1:CA:485:U:O5'	1.79	0.83
21:CU:51:SER:O	21:CU:53:VAL:N	2.12	0.83
4:CD:29:ASP:O	4:CD:31:LYS:N	2.10	0.83
18:CR:20:GLU:O	18:CR:22:ASP:N	2.11	0.83
22:DA:1515:A:O2'	22:DA:1556:C:O2'	1.97	0.83
22:BA:2048:G:O6	58:BA:3678:HOH:O	1.96	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:49:ILE:HG22	39:BR:53:PHE:N	1.94	0.83
22:DA:1266:G:O2'	22:DA:2012:G:O6	1.96	0.83
4:AD:22:LYS:O	4:AD:24:GLY:N	2.12	0.82
22:BA:2445:G:OP1	26:BE:69:ARG:NH2	2.12	0.82
22:BA:2572:A:N7	25:BD:150:GLN:HG3	1.95	0.82
22:DA:1287:A:O4'	35:DN:103:ARG:NH1	2.12	0.82
23:DB:40:U:N3	23:DB:44:G:OP2	2.13	0.82
9:AI:57:MET:N	9:AI:57:MET:SD	2.52	0.82
1:CA:614:C:OP1	4:CD:83:LYS:NZ	2.13	0.82
9:AI:42:GLU:O	9:AI:45:ARG:NH1	2.12	0.82
1:CA:32:A:C2	1:CA:33:A:C5	2.67	0.82
1:CA:201:G:N2	1:CA:469:C:O2	2.13	0.82
22:DA:2134:A:OP2	22:DA:2157:G:N2	2.11	0.82
6:CF:12:PRO:O	6:CF:15:SER:OG	1.98	0.82
22:DA:1378:A:O2'	58:DA:3751:HOH:O	1.96	0.81
39:DR:82:HIS:ND1	39:DR:82:HIS:O	2.13	0.81
22:BA:1064:C:N4	22:BA:1070:A:OP2	2.13	0.81
1:CA:72:A:C6	1:CA:73:C:N4	2.48	0.81
8:AH:113:ASP:OD2	8:AH:117:ARG:NH2	2.13	0.81
26:BE:7:ASP:OD2	26:BE:8:ALA:N	2.14	0.81
1:CA:209:U:H4'	1:CA:210:C:OP2	1.81	0.81
26:DE:21:ARG:O	26:DE:114:ARG:NH2	2.12	0.81
22:BA:2116:G:O6	22:BA:2171:A:N6	2.14	0.81
2:CB:193:PRO:O	2:CB:195:GLY:N	2.13	0.81
43:BV:80:HIS:CE1	43:BV:83:LYS:HG3	2.15	0.81
22:DA:258:G:O2'	33:DL:104:GLN:OE1	1.97	0.81
22:DA:2307:G:OP1	22:DA:2308:G:N2	2.14	0.81
1:AA:825:A:O2'	8:AH:13:ARG:NH1	2.14	0.81
5:CE:99:ALA:O	5:CE:101:GLU:N	2.14	0.80
22:DA:188:G:O2'	22:DA:1365:A:N6	2.14	0.80
1:AA:207:C:O2	1:AA:213:G:N2	2.14	0.80
22:BA:2269:G:OP1	58:BA:3510:HOH:O	1.97	0.80
22:DA:225:C:N4	22:DA:419:U:O2'	2.13	0.80
22:DA:2550:G:OP1	58:DA:3720:HOH:O	1.99	0.80
7:AG:80:VAL:O	7:AG:82:GLY:N	2.14	0.80
35:DN:1:MET:HE2	35:DN:1:MET:H1	1.47	0.80
31:BJ:114:LEU:HG	31:BJ:118:MET:HE3	1.61	0.80
7:CG:93:PRO:O	7:CG:97:ASN:ND2	2.14	0.80
22:DA:613:A:O2'	22:DA:614:A:OP1	1.98	0.80
22:BA:370:G:OP2	58:BA:3560:HOH:O	2.00	0.80
1:AA:1232:U:OP1	9:AI:126:GLN:NE2	2.15	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2579:C:OP1	58:BA:3541:HOH:O	1.99	0.80
21:AU:44:GLU:OE2	21:AU:45:ARG:NH1	2.15	0.80
13:CM:40:ALA:O	13:CM:42:ASP:N	2.14	0.80
46:BY:61:ALA:O	46:BY:63:ALA:N	2.14	0.80
1:CA:195:A:OP1	20:CT:60:ARG:NH1	2.15	0.80
22:DA:1606:C:O2'	22:DA:1607:C:OP2	1.99	0.80
22:BA:2611:C:OP2	58:BA:3543:HOH:O	2.00	0.79
22:DA:2575:C:OP2	58:DA:3707:HOH:O	2.00	0.79
29:BH:120:GLY:C	29:BH:122:LEU:CA	2.47	0.79
22:DA:1269:A:OP2	58:DA:3385:HOH:O	1.98	0.79
1:AA:650:G:H2'	1:AA:651:C:H5'	1.62	0.79
22:BA:194:G:N7	58:BA:3758:HOH:O	2.14	0.79
22:BA:2305:U:C2	27:BF:151:GLY:HA3	2.17	0.79
7:AG:99:LEU:O	7:AG:102:ARG:N	2.16	0.79
29:BH:123:ARG:C	29:BH:124:THR:HG23	2.06	0.79
22:DA:1427:A:N6	22:DA:1571:A:OP2	2.15	0.79
2:AB:73:LYS:O	2:AB:75:ALA:N	2.15	0.79
22:BA:1061:U:O2'	22:BA:1062:G:O5'	2.00	0.79
1:AA:319:G:N7	58:AA:1708:HOH:O	2.15	0.79
22:DA:1667:G:O2'	22:DA:1991:U:O4	1.99	0.79
1:CA:890:G:O2'	1:CA:906:A:N6	2.16	0.79
22:BA:1179:G:C5	22:BA:1180:U:H1'	2.18	0.79
22:BA:1653:G:H3'	35:BN:2:ARG:HG3	1.65	0.79
40:BS:53:SER:O	40:BS:57:ASN:ND2	2.16	0.79
22:DA:279:A:N6	22:DA:361:G:O2'	2.16	0.79
6:AF:91:ARG:C	6:AF:92:THR:HG1	1.91	0.78
33:BL:87:GLY:O	33:BL:89:VAL:N	2.16	0.78
22:DA:732:C:OP2	58:DA:3298:HOH:O	2.02	0.78
24:BC:70:ASN:O	24:BC:72:ASP:N	2.16	0.78
22:BA:1827:U:O4	58:BA:3787:HOH:O	1.99	0.78
23:BB:8:C:O3'	36:BO:25:ARG:NH1	2.16	0.78
20:CT:59:ASP:OD2	20:CT:76:LYS:NZ	2.14	0.78
1:CA:1095:U:OP2	58:CA:1857:HOH:O	2.01	0.78
35:DN:106:ASP:O	35:DN:108:ALA:N	2.16	0.78
17:AQ:16:LYS:C	17:AQ:17:MET:SD	2.67	0.78
22:DA:2576:G:O2'	22:DA:2579:C:OP2	2.01	0.78
22:BA:1509:A:O2'	22:BA:1510:G:OP2	2.00	0.78
22:DA:300:A:N6	58:DA:3551:HOH:O	2.16	0.78
22:DA:1377:G:OP2	58:DA:3394:HOH:O	2.00	0.78
22:BA:1746:A:H2'	22:BA:1747:U:C6	2.20	0.77
22:DA:1469:A:H2'	22:DA:1470:A:C8	2.19	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:76:GLU:C	22:BA:2141:G:OP1	2.27	0.77
20:AT:43:ASP:OD1	20:AT:46:ALA:N	2.17	0.77
22:BA:1923:U:C2'	22:BA:1924:C:H5'	2.14	0.77
47:BZ:8:THR:OG1	47:BZ:35:THR:OG1	2.02	0.77
22:DA:1363:C:O2	22:DA:1369:G:C2	2.37	0.77
22:DA:2453:A:N7	58:DA:3525:HOH:O	2.17	0.77
7:AG:111:ARG:NH1	7:AG:123:GLU:OE2	2.17	0.77
22:BA:2874:C:OP1	58:BA:3803:HOH:O	2.02	0.77
22:DA:1091:G:O2'	22:DA:1092:C:OP2	2.03	0.77
22:DA:1344:U:O2'	22:DA:1345:C:OP2	2.03	0.77
1:CA:183:C:O2'	1:CA:184:G:O5'	2.01	0.77
15:CO:18:ASP:OD1	15:CO:20:ASN:N	2.17	0.77
28:DG:158:LYS:O	28:DG:160:LYS:N	2.18	0.77
2:CB:103:ASN:ND2	2:CB:106:THR:OG1	2.18	0.77
22:DA:370:G:OP2	58:DA:3556:HOH:O	2.03	0.77
1:CA:1061:G:O4'	10:CJ:58:ASN:ND2	2.18	0.77
22:DA:2055:C:OP2	58:DA:3569:HOH:O	2.01	0.77
22:DA:2286:G:H4'	22:DA:2287:A:O5'	1.83	0.77
29:DH:1:MET:SD	29:DH:27:ARG:NH1	2.58	0.77
16:AP:43:ALA:O	16:AP:44:SER:OG	2.01	0.77
25:BD:77:ARG:NH2	25:BD:200:ASP:OD1	2.17	0.77
12:CL:66:TYR:O	12:CL:97:THR:OG1	2.03	0.77
37:DP:65:SER:O	37:DP:67:GLY:N	2.18	0.77
1:AA:928:G:O2'	1:AA:1533:C:OP1	2.03	0.76
1:CA:243:A:H4'	1:CA:244:U:H5'	1.67	0.76
1:CA:992:U:O4'	1:CA:993:G:N2	2.19	0.76
22:BA:1998:A:OP2	25:BD:141:ARG:NH2	2.19	0.76
22:DA:1607:C:N4	22:DA:1622:G:N7	2.34	0.76
22:DA:1613:G:O6	58:DA:3638:HOH:O	2.03	0.76
22:BA:560:C:OP2	58:BA:3250:HOH:O	2.01	0.76
29:DH:45:GLU:O	29:DH:49:ALA:N	2.19	0.76
14:AN:91:GLY:O	14:AN:93:ILE:N	2.19	0.76
1:CA:243:A:H4'	1:CA:244:U:C5'	2.15	0.76
22:DA:622:G:OP2	58:DA:3293:HOH:O	2.03	0.76
22:DA:1009:A:N3	22:DA:1153:C:O2'	2.18	0.76
29:DH:53:GLU:O	29:DH:55:GLU:N	2.19	0.76
1:CA:205:A:N6	1:CA:213:G:O6	2.17	0.76
1:CA:949:A:O2'	1:CA:971:G:O6	2.04	0.76
17:CQ:19:LYS:O	17:CQ:71:LYS:NZ	2.14	0.76
29:BH:97:ARG:NH1	1:CA:369:G:O2'	2.18	0.76
22:DA:449:A:OP2	58:DA:3244:HOH:O	2.04	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:404:G:N7	4:CD:2:ALA:N	2.33	0.76
22:DA:1359:A:OP1	58:DA:3610:HOH:O	2.04	0.76
37:BP:54:GLY:O	37:BP:57:SER:OG	2.04	0.76
22:DA:761:A:OP2	58:DA:3295:HOH:O	2.03	0.76
34:DM:66:ARG:NH1	34:DM:104:GLU:OE1	2.19	0.76
22:BA:1776:G:P	58:BA:3449:HOH:O	2.43	0.75
22:DA:910:A:N3	22:DA:2264:C:O2'	2.18	0.75
27:DF:123:ASP:OD1	27:DF:124:GLY:N	2.19	0.75
31:DJ:41:LYS:NZ	31:DJ:52:ASP:OD2	2.16	0.75
53:B5:50:ILE:C	53:B5:52:PRO:HD3	2.11	0.75
22:DA:58:G:N3	22:DA:70:G:N2	2.34	0.75
29:DH:124:THR:OG1	29:DH:125:THR:N	2.17	0.75
22:BA:370:G:N7	58:BA:3561:HOH:O	2.19	0.75
22:BA:1253:A:N7	58:BA:3335:HOH:O	2.18	0.75
22:DA:83:A:OP2	42:DU:92:LYS:NZ	2.15	0.75
22:BA:528:A:C2	22:BA:2043:C:H5'	2.21	0.75
22:DA:1475:G:O2'	22:DA:1476:U:OP1	2.05	0.75
22:BA:372:G:O2'	22:BA:400:G:O6	2.01	0.75
22:BA:481:G:C4	22:BA:507:A:C2	2.75	0.75
1:CA:495:A:C2	1:CA:496:A:C6	2.75	0.75
22:DA:2563:U:O4'	22:DA:2566:A:N6	2.18	0.75
1:AA:1403:C:O2	1:AA:1499:A:N6	2.19	0.75
11:AK:102:ALA:O	11:AK:104:GLY:N	2.20	0.75
1:AA:702:A:N6	22:BA:1846:G:O2'	2.20	0.75
22:DA:1223:G:N2	22:DA:1226:A:OP2	2.19	0.75
22:BA:1378:A:O2'	22:BA:1380:G:OP2	2.05	0.75
20:AT:59:ASP:OD1	20:AT:76:LYS:NZ	2.19	0.74
22:BA:1385:A:H1'	22:BA:1386:C:C6	2.22	0.74
38:BQ:49:ASP:HA	38:BQ:52:GLN:HB2	1.68	0.74
12:CL:25:GLU:O	12:CL:26:ALA:C	2.27	0.74
13:CM:13:LYS:O	13:CM:14:HIS:ND1	2.20	0.74
22:DA:27:G:O2'	22:DA:28:A:OP2	2.04	0.74
22:DA:374:A:N6	22:DA:400:G:O2'	2.19	0.74
22:DA:878:A:N6	22:DA:899:A:O2'	2.20	0.74
4:AD:95:GLU:OE2	4:AD:104:ARG:NH1	2.20	0.74
29:BH:88:GLY:O	29:BH:125:THR:OG1	2.04	0.74
1:AA:208:U:C5	1:AA:210:C:C4	2.76	0.74
1:AA:251:G:C6	1:AA:266:G:C6	2.75	0.74
16:AP:50:THR:O	16:AP:50:THR:HG22	1.87	0.74
19:CS:4:SER:O	19:CS:5:LEU:HB2	1.87	0.74
22:DA:733:G:OP2	58:DA:3296:HOH:O	2.05	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:111:GLU:OE2	26:DE:114:ARG:NH1	2.21	0.74
11:AK:38:GLN:O	11:AK:40:ASN:ND2	2.21	0.74
29:BH:117:LEU:HD11	29:BH:122:LEU:HD12	1.69	0.74
22:DA:2502:G:OP2	58:DA:3491:HOH:O	2.03	0.74
1:AA:1422:G:O3'	32:BK:49:ARG:NH2	2.18	0.74
22:BA:1604:C:OP2	58:BA:3411:HOH:O	2.04	0.74
39:BR:49:ILE:HB	39:BR:52:PRO:C	2.13	0.74
22:DA:581:C:OP2	38:DQ:33:ARG:NH1	2.21	0.74
42:DU:9:ASP:OD2	42:DU:10:GLU:N	2.20	0.74
22:BA:622:G:OP2	58:BA:3292:HOH:O	2.06	0.74
22:BA:1124:G:N7	58:BA:3607:HOH:O	2.19	0.74
1:CA:1067:A:N1	1:CA:1108:G:O2'	2.19	0.74
4:AD:3:ARG:CZ	4:AD:115:ARG:HD3	2.18	0.74
9:CI:12:ARG:NH1	9:CI:107:ASP:OD2	2.21	0.74
12:CL:57:LEU:O	12:CL:60:GLY:N	2.20	0.74
27:DF:122:PHE:O	27:DF:124:GLY:N	2.21	0.74
1:AA:411:A:OP1	4:AD:26:ARG:NH2	2.20	0.74
5:AE:104:GLY:O	5:AE:105:ILE:HG22	1.87	0.74
4:AD:59:GLN:O	4:AD:63:ARG:HG2	1.87	0.74
9:AI:57:MET:SD	9:AI:58:VAL:N	2.61	0.74
23:DB:29:A:O2'	23:DB:58:A:N1	2.21	0.74
22:BA:653:U:OP2	22:BA:653:U:C6	2.41	0.74
22:BA:1179:G:C4	22:BA:1180:U:H1'	2.22	0.74
22:BA:1922:G:N2	22:BA:1923:U:H1'	2.03	0.74
1:CA:374:A:H5"	1:CA:452:A:N1	2.03	0.74
13:CM:10:PRO:O	13:CM:11:ASP:HB2	1.87	0.74
1:CA:1108:G:O6	58:CA:1857:HOH:O	2.04	0.73
22:DA:1973:G:OP1	58:DA:3462:HOH:O	2.05	0.73
1:AA:1181:G:O2'	1:AA:1182:G:C5	2.41	0.73
22:BA:1917:U:C4	22:BA:1918:A:C6	2.75	0.73
5:CE:101:GLU:O	5:CE:101:GLU:CD	2.31	0.73
20:CT:44:LYS:NZ	20:CT:86:LEU:O	2.18	0.73
22:BA:2728:U:O2'	22:BA:2729:G:OP2	2.06	0.73
1:CA:266:G:H3'	17:CQ:69:LYS:HB2	1.70	0.73
22:DA:1995:U:OP1	58:DA:3807:HOH:O	2.04	0.73
31:BJ:81:ILE:HG23	31:BJ:82:GLY:N	2.03	0.73
22:DA:2127:G:O2'	22:DA:2173:A:N3	2.21	0.73
1:AA:1370:G:O5'	9:AI:111:VAL:HG21	1.88	0.73
21:AU:36:GLU:O	21:AU:37:PHE:HB2	1.87	0.73
28:BG:104:ASN:ND2	28:BG:114:ASP:OD1	2.21	0.73
32:DK:34:GLY:O	32:DK:36:GLY:N	2.22	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2291:U:H2'	22:BA:2292:U:C6	2.23	0.73
22:BA:2346:A:H4'	22:BA:2347:C:OP2	1.88	0.73
16:AP:79:ASN:O	16:AP:80:LYS:HB2	1.88	0.73
1:CA:403:C:OP1	4:CD:134:SER:OG	2.03	0.73
4:CD:100:ASN:OD1	4:CD:111:ARG:NH1	2.21	0.73
5:CE:80:THR:OG1	5:CE:122:ASN:ND2	2.21	0.73
21:CU:18:ARG:O	21:CU:21:ARG:N	2.21	0.73
22:DA:777:G:C2	22:DA:778:G:C8	2.77	0.73
46:BY:34:SER:O	46:BY:36:GLN:N	2.22	0.73
1:CA:485:U:O2'	1:CA:486:U:OP1	2.05	0.73
22:DA:242:G:O2'	22:DA:254:G:O6	2.05	0.73
1:AA:1198:G:N7	58:AA:1787:HOH:O	2.21	0.73
10:CJ:63:ASP:OD1	14:CN:85:ARG:NH1	2.22	0.73
50:D2:44:VAL:O	50:D2:45:SER:OG	2.07	0.73
2:AB:87:CYS:O	2:AB:89:GLN:N	2.22	0.73
22:DA:79:C:O2'	22:DA:346:A:N3	2.21	0.73
49:D1:15:ALA:O	49:D1:17:THR:N	2.22	0.73
2:AB:82:ASP:O	2:AB:85:LEU:N	2.22	0.72
3:AC:36:ASP:OD1	3:AC:59:ARG:NH1	2.22	0.72
1:CA:1124:G:O2'	1:CA:1145:A:N6	2.21	0.72
22:DA:2091:C:H3'	22:DA:2092:U:H5"	1.69	0.72
22:DA:2355:G:OP1	44:DW:25:ARG:NH2	2.22	0.72
1:CA:376:G:H5'	16:CP:5:ARG:HB3	1.69	0.72
1:CA:1181:G:O2'	1:CA:1182:G:N7	2.21	0.72
24:DC:258:ARG:NH1	24:DC:264:ASP:OD2	2.22	0.72
1:AA:131:A:H2'	1:AA:132:C:C6	2.23	0.72
1:AA:1225:A:H2'	1:AA:1226:C:C5	2.25	0.72
14:AN:46:LEU:O	14:AN:48:LEU:N	2.22	0.72
21:AU:34:ARG:CZ	21:AU:35:ARG:HB2	2.19	0.72
22:BA:1901:A:OP2	24:BC:253:LYS:NZ	2.22	0.72
22:DA:1141:U:OP2	31:DJ:65:THR:OG1	2.05	0.72
22:BA:509:C:O3'	58:BA:3771:HOH:O	2.07	0.72
1:CA:1308:U:OP1	13:CM:97:VAL:N	2.22	0.72
1:AA:800:G:O6	58:AA:1812:HOH:O	2.07	0.72
22:BA:587:C:OP2	33:BL:21:ARG:NH1	2.23	0.72
1:CA:688:G:O2'	1:CA:704:A:N1	2.19	0.72
22:DA:70:G:N2	22:DA:71:A:N1	2.37	0.72
22:BA:404:A:O2'	22:BA:405:U:OP2	2.07	0.72
22:BA:826:U:OP1	58:BA:3699:HOH:O	2.08	0.72
22:BA:944:C:OP2	58:BA:3260:HOH:O	2.06	0.72
1:CA:8:A:N6	4:CD:54:GLN:OE1	2.21	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2504:U:C5	56:DA:3001:DOL:H161	2.25	0.72
22:DA:2707:U:O2	35:DN:71:ARG:NH1	2.22	0.72
22:DA:2838:G:O2'	35:DN:45:ARG:NH1	2.22	0.72
40:DS:66:ILE:O	40:DS:68:ASP:N	2.23	0.72
22:BA:2757:A:N1	28:BG:67:THR:HG21	2.03	0.72
22:DA:1440:U:O4	58:DA:3627:HOH:O	2.06	0.72
2:AB:63:ARG:O	2:AB:64:LYS:HB2	1.88	0.72
13:AM:73:ILE:O	13:AM:76:SER:OG	2.07	0.72
22:BA:757:G:N7	58:BA:3303:HOH:O	2.23	0.72
22:BA:1057:A:N6	22:BA:1087:G:OP2	2.23	0.72
11:CK:17:SER:O	11:CK:80:LYS:N	2.23	0.72
1:AA:844:G:C6	1:AA:846:G:O2'	2.43	0.71
2:AB:23:TRP:CH2	2:AB:25:PRO:HA	2.25	0.71
27:BF:21:ASN:O	27:BF:21:ASN:ND2	2.22	0.71
22:DA:2199:A:OP1	45:DX:37:ARG:NH1	2.23	0.71
1:AA:173:U:C2	1:AA:197:A:N1	2.58	0.71
1:AA:976:G:OP2	1:AA:1358:U:O2'	2.09	0.71
7:AG:64:VAL:O	7:AG:67:GLU:N	2.23	0.71
20:AT:83:ILE:O	20:AT:87:ALA:HB3	1.90	0.71
22:DA:2343:U:O2'	22:DA:2373:G:O2'	2.07	0.71
27:BF:40:VAL:O	27:BF:42:GLU:N	2.23	0.71
29:DH:31:VAL:HB	29:DH:32:PRO:CD	2.20	0.71
23:BB:30:C:OP1	36:BO:3:LYS:NZ	2.23	0.71
23:BB:91:C:OP2	34:BM:18:ARG:HG2	1.91	0.71
51:B3:31:HIS:CD2	51:B3:32:ILE:HG13	2.26	0.71
4:CD:26:ARG:HG3	4:CD:27:ALA:N	2.03	0.71
22:DA:593:U:H2'	22:DA:594:U:C6	2.26	0.71
22:DA:668:A:C2	22:DA:670:A:C5	2.79	0.71
22:DA:776:G:O2'	22:DA:2241:A:OP1	2.09	0.71
25:DD:149:ASN:OD1	25:DD:150:GLN:N	2.24	0.71
22:BA:2125:G:N3	22:BA:2173:A:N6	2.39	0.71
22:DA:52:A:N3	22:DA:178:G:N2	2.39	0.71
22:BA:2189:U:H2'	22:BA:2190:G:C1'	2.19	0.71
56:BA:3001:DOL:H421	56:BA:3001:DOL:N5	2.06	0.71
9:CI:57:MET:SD	9:CI:58:VAL:N	2.64	0.71
22:DA:46:G:C2	22:DA:47:C:C5	2.78	0.71
22:DA:1153:C:OP1	58:DA:3359:HOH:O	2.08	0.71
22:DA:1154:G:OP2	38:DQ:58:ARG:NH1	2.24	0.71
22:DA:2407:A:OP1	58:DA:3560:HOH:O	2.08	0.71
1:AA:993:G:O2'	1:AA:994:A:N7	2.23	0.71
39:BR:49:ILE:HG22	39:BR:53:PHE:CA	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1335:C:N4	58:DA:3392:HOH:O	2.22	0.71
22:DA:2115:G:O2'	22:DA:2117:A:N6	2.23	0.71
22:BA:181:A:H2'	22:BA:182:A:C8	2.26	0.71
24:BC:143:ASN:OD1	24:BC:152:GLY:HA3	1.90	0.71
22:DA:2788:C:O2'	22:DA:2809:A:N3	2.22	0.71
22:DA:827:U:OP2	58:DA:3696:HOH:O	2.08	0.71
10:CJ:87:LEU:HD13	10:CJ:88:MET:N	2.06	0.70
22:BA:566:U:OP1	33:BL:29:LYS:HD2	1.91	0.70
22:DA:2289:G:HO2'	22:DA:2383:G:HO2'	1.35	0.70
24:DC:45:ASN:OD1	24:DC:46:ASN:N	2.24	0.70
1:AA:683:G:N2	11:AK:39:GLY:O	2.24	0.70
1:CA:537:G:OP1	12:CL:110:ARG:NH2	2.24	0.70
22:DA:277:G:H3'	22:DA:277:G:N3	2.06	0.70
1:AA:652:U:O4	1:AA:752:G:O2'	2.05	0.70
56:BA:3001:DOL:H421	56:BA:3001:DOL:C6	2.22	0.70
42:BU:49:VAL:CG2	42:BU:49:VAL:O	2.39	0.70
22:DA:686:U:OP2	58:DA:3717:HOH:O	2.09	0.70
24:DC:70:ASN:O	24:DC:72:ASP:N	2.23	0.70
1:AA:254:G:OP1	17:AQ:70:THR:HB	1.91	0.70
4:AD:78:GLU:OE1	4:AD:81:ARG:NH1	2.24	0.70
17:AQ:69:LYS:O	17:AQ:70:THR:CB	2.39	0.70
20:AT:6:SER:OG	20:AT:7:ALA:N	2.23	0.70
22:BA:1179:G:N7	22:BA:1180:U:C6	2.59	0.70
22:BA:2192:U:H2'	22:BA:2193:G:H5'	1.72	0.70
2:CB:83:ALA:O	2:CB:86:SER:OG	2.09	0.70
2:CB:203:ASN:OD1	2:CB:204:ASP:N	2.23	0.70
22:DA:2609:U:H2'	54:D6:7:004:HA	1.71	0.70
29:BH:94:ILE:HG22	29:BH:99:ILE:HG13	1.72	0.70
1:CA:679:C:O2	1:CA:712:A:C2	2.45	0.70
22:DA:388:G:N7	22:DA:390:U:H2'	2.05	0.70
22:DA:1603:A:OP1	58:DA:3409:HOH:O	2.10	0.70
56:DA:3001:DOL:C43	56:DA:3001:DOL:HC1	2.22	0.70
22:BA:1450:G:C6	22:BA:1451:C:N4	2.60	0.70
28:BG:80:THR:HG22	28:BG:81:GLU:N	2.07	0.70
1:CA:802:A:C2	1:CA:803:G:H1'	2.26	0.70
22:DA:2199:A:C5	22:DA:2225:A:C6	2.80	0.70
54:D6:6:MHV:HE1	54:D6:7:004:HNA	1.55	0.70
16:AP:46:LYS:HD3	16:AP:47:GLU:N	2.07	0.70
12:CL:21:VAL:O	12:CL:23:ALA:N	2.25	0.70
22:DA:1340:U:C5	22:DA:1603:A:C8	2.80	0.70
2:AB:21:ARG:HA	2:AB:21:ARG:CZ	2.22	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1204:A:OP2	58:CA:1848:HOH:O	2.09	0.70
22:DA:116:C:O2'	22:DA:126:A:O2'	2.06	0.70
22:DA:377:G:C6	22:DA:378:C:C4	2.80	0.70
2:AB:50:PHE:HA	2:AB:213:TYR:OH	1.92	0.69
22:BA:2057:G:OP2	58:BA:3489:HOH:O	2.10	0.69
12:CL:25:GLU:O	12:CL:27:CYS:N	2.24	0.69
22:DA:564:C:O4'	38:DQ:37:GLN:NE2	2.24	0.69
22:DA:616:A:H4'	26:DE:101:TYR:CZ	2.26	0.69
22:DA:1109:C:H5"	22:DA:1110:G:OP2	1.92	0.69
35:DN:107:ASN:ND2	35:DN:107:ASN:O	2.24	0.69
22:BA:301:G:OP2	42:BU:82:ARG:NH1	2.26	0.69
22:BA:2061:G:O6	56:BA:3001:DOL:H162	1.93	0.69
35:BN:65:LEU:HD11	35:BN:69:ARG:NH2	2.06	0.69
22:DA:1475:G:O2'	22:DA:1476:U:P	2.49	0.69
41:DT:21:SER:O	41:DT:23:ALA:N	2.24	0.69
1:CA:875:U:O2'	8:CH:15:ARG:NH1	2.24	0.69
1:AA:109:A:H2'	1:AA:326:G:N2	2.06	0.69
22:BA:2380:C:OP1	36:BO:17:LYS:NZ	2.25	0.69
28:DG:118:PRO:CG	28:DG:144:VAL:HG21	2.22	0.69
1:CA:533:A:O2'	1:CA:535:A:OP2	2.10	0.69
1:CA:858:G:O6	1:CA:869:G:H3'	1.92	0.69
22:DA:453:A:OP1	58:DA:3242:HOH:O	2.09	0.69
22:BA:528:A:C2	22:BA:2043:C:H4'	2.27	0.69
22:BA:2886:A:C5	22:BA:2887:A:C8	2.81	0.69
29:BH:122:LEU:C	29:BH:123:ARG:HG2	2.17	0.69
1:CA:1211:U:O2'	1:CA:1212:U:OP2	2.11	0.69
2:CB:21:ARG:HA	2:CB:21:ARG:CZ	2.22	0.69
22:DA:749:A:C5	22:DA:750:A:N7	2.61	0.69
22:DA:1973:G:C6	22:DA:1974:C:C4	2.80	0.69
2:CB:206:ALA:O	2:CB:208:ARG:N	2.25	0.69
5:CE:155:ALA:HB1	8:CH:66:PHE:CD2	2.27	0.69
11:CK:27:PHE:CZ	11:CK:89:PRO:HG2	2.27	0.69
22:DA:247:G:H4'	22:DA:386:G:C5	2.27	0.69
5:AE:82:GLN:NE2	5:AE:150:PRO:HD3	2.08	0.69
23:DB:48:U:H4'	36:DO:100:HIS:CD2	2.28	0.69
4:AD:27:ALA:O	4:AD:31:LYS:NZ	2.26	0.69
22:BA:1073:A:H3'	22:BA:1074:G:H5'	1.74	0.69
22:BA:1584:U:O2	22:BA:1584:U:H2'	1.92	0.69
22:BA:1922:G:N3	22:BA:1922:G:H2'	2.06	0.69
1:CA:562:U:OP2	12:CL:14:ARG:NE	2.26	0.69
18:CR:20:GLU:N	18:CR:55:LEU:HD12	2.08	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:965:U:OP2	58:AA:1831:HOH:O	2.10	0.69
22:BA:2308:G:O6	22:BA:2311:A:N7	2.26	0.69
9:CI:19:VAL:HG21	9:CI:82:GLY:HA3	1.75	0.69
22:DA:866:A:O4'	22:DA:914:G:N2	2.26	0.69
22:DA:1313:U:H4'	22:DA:1332:G:H4'	1.74	0.69
1:AA:81:A:H2'	1:AA:82:G:H5"	1.75	0.68
1:AA:792:A:H4'	1:AA:793:U:O5'	1.92	0.68
23:BB:91:C:OP2	34:BM:18:ARG:NH2	2.26	0.68
1:CA:674:G:OP1	6:CF:86:ARG:NH2	2.26	0.68
22:DA:1259:G:H2'	22:DA:1260:A:C8	2.27	0.68
22:DA:1525:A:C2	22:DA:1526:C:C2	2.80	0.68
22:DA:1677:A:N7	58:DA:3765:HOH:O	2.26	0.68
22:DA:2006:C:OP2	58:DA:3382:HOH:O	2.10	0.68
1:AA:144:G:C4	1:AA:179:A:C2	2.81	0.68
1:AA:1018:G:C2	1:AA:1019:A:C8	2.81	0.68
22:BA:1379:U:C6	22:BA:1379:U:OP1	2.47	0.68
22:BA:1917:U:C4	22:BA:1918:A:C5	2.81	0.68
29:BH:117:LEU:O	29:BH:121:VAL:HG22	1.93	0.68
22:DA:698:C:O2'	22:DA:734:A:N6	2.26	0.68
22:DA:1237:A:H4'	22:DA:1238:G:OP1	1.92	0.68
22:DA:2585:U:O2'	54:D6:3:DBB:HG2	1.93	0.68
1:AA:111:G:O6	1:AA:330:C:N4	2.27	0.68
1:AA:645:G:N7	58:AA:1748:HOH:O	2.27	0.68
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.29	0.68
22:BA:1182:G:H2'	22:BA:1183:U:O4'	1.94	0.68
25:BD:133:THR:HG23	25:BD:134:HIS:N	2.08	0.68
6:CF:91:ARG:O	6:CF:92:THR:OG1	2.10	0.68
22:DA:185:G:C6	22:DA:212:G:C2	2.81	0.68
22:DA:810:U:OP1	58:DA:3333:HOH:O	2.10	0.68
22:DA:2594:C:N4	22:DA:2595:G:O6	2.26	0.68
49:D1:14:SER:OG	49:D1:48:ILE:O	2.11	0.68
11:AK:29:ASN:OD1	11:AK:30:THR:N	2.26	0.68
20:AT:3:ASN:C	20:AT:3:ASN:OD1	2.35	0.68
22:BA:2499:C:OP2	58:BA:3685:HOH:O	2.12	0.68
46:BY:9:LYS:O	46:BY:12:GLU:N	2.26	0.68
14:CN:21:PHE:O	14:CN:23:LYS:N	2.26	0.68
22:DA:118:A:C8	22:DA:119:A:C8	2.82	0.68
22:DA:2226:C:H2'	22:DA:2227:A:O4'	1.93	0.68
34:DM:19:GLY:O	34:DM:38:ARG:NH1	2.27	0.68
40:DS:67:ASP:OD1	40:DS:67:ASP:N	2.25	0.68
1:AA:130:A:N1	1:AA:233:C:O2'	2.23	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:15:HIS:O	24:BC:204:VAL:HG21	1.93	0.68
1:CA:687:A:O2'	1:CA:701:U:O4	2.11	0.68
35:DN:1:MET:H1	35:DN:1:MET:CE	2.06	0.68
1:AA:203:G:O2'	1:AA:465:A:N1	2.25	0.68
22:DA:1094:U:H2'	22:DA:1096:A:OP2	1.94	0.68
22:DA:2200:C:O2	22:DA:2226:C:N4	2.27	0.68
22:DA:2655:G:O2'	22:DA:2656:U:P	2.51	0.68
1:AA:1006:G:OP1	1:AA:1037:C:O2'	2.12	0.68
22:BA:1915:U:C2	22:BA:1916:A:C8	2.82	0.68
43:BV:32:GLY:O	43:BV:93:ARG:NH1	2.27	0.68
22:DA:2306:C:OP2	22:DA:2307:G:O2'	2.10	0.68
1:AA:728:A:OP1	15:AO:54:ARG:NH2	2.27	0.68
22:BA:276:U:O2'	22:BA:278:A:N7	2.27	0.68
22:BA:1266:G:OP1	48:B0:16:ARG:NE	2.25	0.68
22:BA:1474:U:H2'	22:BA:1475:G:H5'	1.74	0.68
22:BA:2325:G:C6	22:BA:2326:C:N4	2.62	0.68
1:CA:1297:G:O2'	7:CG:114:LYS:NZ	2.22	0.68
17:CQ:21:ILE:N	17:CQ:48:ASP:OD1	2.27	0.68
22:DA:1260:A:N6	58:DA:3277:HOH:O	2.27	0.68
22:DA:1411:U:H2'	22:DA:1412:U:O4'	1.94	0.68
22:DA:2886:A:C2	22:DA:2887:A:H1'	2.29	0.68
22:BA:28:A:C5	22:BA:29:U:C5	2.81	0.67
39:BR:39:LEU:HA	39:BR:49:ILE:CG2	2.24	0.67
24:DC:237:GLY:O	24:DC:239:ASN:N	2.27	0.67
12:AL:25:GLU:O	12:AL:26:ALA:C	2.38	0.67
22:BA:572:A:C2	22:BA:2033:A:C2	2.83	0.67
1:CA:1525:G:O6	58:CA:1891:HOH:O	2.09	0.67
22:DA:152:A:C2	22:DA:175:G:C2	2.83	0.67
22:DA:856:G:N2	22:DA:922:C:C2	2.62	0.67
12:AL:44:LYS:CB	12:AL:45:PRO:CD	2.72	0.67
22:BA:983:A:C6	22:BA:984:A:C2	2.83	0.67
22:BA:2189:U:H2'	22:BA:2190:G:C8	2.29	0.67
22:BA:2520:C:C6	22:BA:2567:G:H1'	2.30	0.67
24:BC:70:ASN:O	24:BC:71:LYS:C	2.37	0.67
25:BD:104:VAL:O	25:BD:105:LYS:HB2	1.94	0.67
22:DA:192:C:OP2	58:DA:3739:HOH:O	2.11	0.67
22:DA:1715:G:O2'	22:DA:1743:G:O6	2.13	0.67
22:BA:1187:G:H5"	39:BR:83:TYR:CE2	2.30	0.67
29:BH:122:LEU:HD23	29:BH:123:ARG:N	2.10	0.67
39:BR:49:ILE:CG2	39:BR:53:PHE:N	2.57	0.67
1:CA:1124:G:N2	1:CA:1127:G:C2	2.63	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1279:G:H2'	1:CA:1279:G:N3	2.09	0.67
24:DC:204:VAL:O	24:DC:206:GLY:N	2.27	0.67
25:DD:56:LYS:O	25:DD:58:ASN:N	2.27	0.67
42:DU:38:GLY:HA2	42:DU:41:LEU:CD2	2.23	0.67
49:D1:5:ILE:O	49:D1:28:ARG:NH1	2.27	0.67
13:AM:114:LYS:CB	13:AM:115:PRO:HD3	2.23	0.67
17:AQ:14:SER:HB3	17:AQ:22:VAL:CG1	2.25	0.67
22:BA:361:G:O2'	22:BA:362:A:O5'	2.09	0.67
24:BC:71:LYS:NZ	24:BC:98:ASP:OD2	2.27	0.67
25:BD:101:PHE:O	25:BD:103:ASP:N	2.27	0.67
22:DA:694:U:C2'	22:DA:695:G:H5"	2.24	0.67
22:DA:1342:A:OP2	58:DA:3711:HOH:O	2.12	0.67
22:DA:1603:A:OP2	58:DA:3407:HOH:O	2.13	0.67
17:AQ:81:LYS:O	17:AQ:83:VAL:N	2.28	0.67
22:BA:1494:A:C2'	22:BA:1495:A:O5'	2.42	0.67
22:BA:2800:A:C2	22:BA:2895:G:H1'	2.30	0.67
37:BP:53:ARG:CG	37:BP:53:ARG:HH11	2.08	0.67
4:CD:174:ASP:O	4:CD:175:ALA:CB	2.42	0.67
22:DA:78:U:H2'	22:DA:79:C:O4'	1.94	0.67
22:BA:747:U:C4	22:BA:2613:U:C5	2.83	0.67
27:BF:2:ALA:O	27:BF:3:LYS:C	2.38	0.67
37:BP:90:GLY:O	37:BP:113:ARG:NH1	2.26	0.67
1:CA:1006:G:H2'	1:CA:1007:U:C6	2.30	0.67
5:AE:81:LEU:HA	5:AE:147:MET:HE1	1.75	0.67
22:BA:747:U:OP2	54:B6:8:MHT:H5	1.95	0.67
24:BC:252:THR:O	24:BC:253:LYS:C	2.38	0.67
31:BJ:114:LEU:HG	31:BJ:118:MET:CE	2.25	0.67
37:BP:103:ARG:CG	37:BP:103:ARG:HH11	2.08	0.67
39:BR:39:LEU:HA	39:BR:49:ILE:HG23	1.76	0.67
48:B0:55:ILE:O	48:B0:56:ALA:CB	2.43	0.67
1:CA:31:G:O4'	1:CA:306:A:C2	2.47	0.67
12:CL:47:SER:O	12:CL:48:ALA:CB	2.43	0.67
22:DA:2451:A:C4	56:DA:3001:DOL:HC12	2.30	0.67
23:DB:78:A:C5	23:DB:99:A:C8	2.83	0.67
1:AA:1018:G:N3	1:AA:1018:G:H2'	2.10	0.67
22:BA:2799:A:O2'	22:BA:2800:A:O5'	2.12	0.67
30:BI:19:ASN:N	30:BI:20:PRO:CD	2.58	0.67
22:DA:1141:U:H4'	22:DA:1142:A:O4'	1.95	0.67
22:DA:2058:A:N6	22:DA:2059:A:N6	2.43	0.67
46:DY:56:LEU:O	46:DY:57:LEU:CB	2.43	0.67
1:AA:203:G:N2	1:AA:215:C:C2	2.63	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:381:C:H2'	1:AA:382:A:O4'	1.95	0.67
2:AB:154:MET:O	2:AB:156:GLY:N	2.28	0.67
22:BA:1065:U:O4	22:BA:1074:G:O2'	2.13	0.67
22:BA:1394:U:P	58:BA:3407:HOH:O	2.52	0.67
29:BH:27:ARG:O	29:BH:28:ASN:HB2	1.95	0.67
46:BY:18:LEU:O	46:BY:22:LEU:HB2	1.95	0.67
1:CA:552:U:C4	1:CA:553:A:N7	2.63	0.67
1:CA:1302:C:C4	13:CM:17:ILE:HD13	2.30	0.67
1:AA:89:U:O2'	1:AA:90:C:C5'	2.43	0.66
1:AA:1406:U:C5	1:AA:1407:C:C5	2.83	0.66
22:BA:2258:C:O2'	22:BA:2427:C:OP2	2.12	0.66
29:BH:91:PHE:O	1:CA:55:A:C6	2.48	0.66
1:CA:70:U:H2'	1:CA:94:G:N7	2.10	0.66
1:CA:1072:G:C6	1:CA:1073:U:C4	2.83	0.66
22:DA:981:A:OP2	22:DA:982:C:N4	2.27	0.66
22:DA:1378:A:O3'	58:DA:3751:HOH:O	2.13	0.66
22:DA:2507:C:OP1	58:DA:3708:HOH:O	2.12	0.66
22:DA:2609:U:H6	54:D6:7:004:HA	1.59	0.66
47:DZ:52:SER:OG	47:DZ:53:PHE:N	2.26	0.66
1:AA:1493:A:C8	1:AA:1493:A:OP2	2.49	0.66
5:AE:69:ARG:O	5:AE:71:MET:N	2.27	0.66
13:AM:95:LEU:HB3	13:AM:96:PRO:HD2	1.77	0.66
22:BA:1717:A:H2'	22:BA:1718:G:O5'	1.94	0.66
28:BG:121:ILE:HD12	28:BG:141:ILE:HG22	1.77	0.66
1:CA:1316:G:N1	1:CA:1319:A:OP2	2.28	0.66
22:DA:1737:G:C6	22:DA:1738:G:N1	2.64	0.66
22:DA:2241:A:N7	58:DA:3502:HOH:O	2.27	0.66
28:DG:111:HIS:ND1	28:DG:111:HIS:O	2.28	0.66
1:AA:650:G:C2'	1:AA:651:C:H5'	2.26	0.66
22:BA:1288:G:C4	22:BA:1327:A:C2	2.82	0.66
22:BA:1371:G:N7	58:BA:3401:HOH:O	2.28	0.66
1:CA:154:U:C2'	1:CA:155:A:H5'	2.25	0.66
1:CA:533:A:OP1	58:CA:1763:HOH:O	2.13	0.66
22:DA:2505:G:OP2	56:DA:3001:DOL:HC17	1.95	0.66
22:DA:2751:G:OP1	28:DG:3:ARG:NH1	2.29	0.66
41:DT:17:SER:O	41:DT:19:LYS:N	2.28	0.66
2:AB:24:ASN:O	2:AB:26:LYS:N	2.29	0.66
11:AK:34:ILE:HB	11:AK:74:VAL:HG11	1.78	0.66
13:AM:4:ILE:O	13:AM:6:GLY:N	2.28	0.66
13:AM:64:VAL:O	13:AM:64:VAL:HG12	1.94	0.66
22:BA:142:A:C5	22:BA:143:C:C4	2.83	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2591:C:OP1	24:BC:238:ARG:NH1	2.27	0.66
29:BH:94:ILE:CG2	29:BH:99:ILE:HG13	2.26	0.66
10:CJ:91:ASP:N	10:CJ:91:ASP:OD1	2.29	0.66
22:DA:1581:G:C5	22:DA:1582:C:C4	2.84	0.66
22:DA:2339:C:H2'	22:DA:2340:A:C8	2.30	0.66
33:DL:38:GLN:O	33:DL:40:SER:N	2.28	0.66
22:BA:265:A:H4'	22:BA:266:G:OP1	1.96	0.66
22:BA:744:U:OP1	58:BA:3654:HOH:O	2.12	0.66
30:BI:97:LYS:CG	30:BI:139:VAL:HG22	2.25	0.66
22:DA:223:A:C5	22:DA:422:A:C8	2.83	0.66
22:DA:1855:U:C5	22:DA:1856:U:C5	2.83	0.66
22:DA:1875:G:O2'	22:DA:1876:A:OP2	2.14	0.66
50:D2:29:GLN:O	50:D2:33:ARG:NH2	2.27	0.66
22:BA:620:G:H4'	22:BA:621:A:O5'	1.95	0.66
22:BA:1384:A:H1'	22:BA:1405:U:H1'	1.78	0.66
22:BA:1869:G:H3'	22:BA:1870:C:H5'	1.78	0.66
22:BA:1952:A:C6	22:BA:1953:A:N1	2.64	0.66
39:BR:24:LYS:HA	39:BR:94:THR:HG23	1.77	0.66
4:CD:30:THR:C	4:CD:31:LYS:HD3	2.21	0.66
5:CE:137:VAL:O	5:CE:138:ARG:HG2	1.95	0.66
22:DA:444:C:OP1	26:DE:40:ARG:NH1	2.28	0.66
22:DA:1627:G:C2	22:DA:1628:G:N7	2.64	0.66
22:DA:2261:C:C2	22:DA:2280:G:N2	2.64	0.66
25:DD:151:THR:O	25:DD:152:PRO:C	2.38	0.66
30:DI:69:PHE:N	30:DI:69:PHE:CD1	2.64	0.66
35:DN:90:ARG:CZ	35:DN:116:VAL:HG11	2.25	0.66
1:AA:209:U:H4'	1:AA:210:C:OP2	1.94	0.66
1:AA:345:C:O2'	32:BK:116:ILE:HD11	1.95	0.66
4:AD:32:CYS:O	4:AD:33:LYS:HB2	1.95	0.66
22:BA:2582:G:C2	22:BA:2583:G:C8	2.83	0.66
34:BM:69:PRO:O	34:BM:70:ASP:CG	2.39	0.66
1:CA:1005:A:O3'	1:CA:1037:C:O2'	2.13	0.66
1:CA:1460:C:N4	1:CA:1461:G:C6	2.64	0.66
22:DA:362:A:C5	22:DA:363:G:C8	2.84	0.66
30:DI:58:VAL:HG12	30:DI:59:ILE:N	2.10	0.66
1:AA:262:A:C6	1:AA:263:A:C6	2.84	0.66
15:AO:63:ARG:HG2	15:AO:67:LEU:HD12	1.76	0.66
22:BA:1509:A:O2'	22:BA:1510:G:P	2.54	0.66
1:CA:1004:A:O2'	1:CA:1036:A:N1	2.28	0.66
1:CA:1408:A:C2	1:CA:1494:G:C4	2.84	0.66
22:DA:352:A:H2'	22:DA:353:C:O4'	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:931:U:OP1	47:DZ:30:ARG:NH1	2.29	0.66
22:DA:1826:G:C5	22:DA:1827:U:C5	2.84	0.66
22:DA:2415:G:C6	22:DA:2416:C:C4	2.84	0.66
22:DA:2636:C:H2'	22:DA:2637:U:C6	2.31	0.66
26:DE:149:ILE:CD1	26:DE:172:ALA:HA	2.26	0.66
32:DK:76:VAL:HG12	37:DP:73:VAL:HG22	1.77	0.66
9:AI:91:ASP:OD2	9:AI:93:SER:N	2.29	0.66
1:CA:1108:G:H5"	3:CC:176:HIS:CD2	2.31	0.66
22:DA:395:U:H4'	22:DA:396:G:OP1	1.96	0.66
22:DA:1006:C:OP2	58:DA:3779:HOH:O	2.14	0.66
22:DA:2061:G:O6	56:DA:3001:DOL:H162	1.96	0.66
22:DA:2874:C:H2'	22:DA:2875:C:C6	2.31	0.66
43:DV:51:GLN:HB3	43:DV:56:PHE:CG	2.31	0.66
22:DA:1010:A:OP2	58:DA:3776:HOH:O	2.14	0.66
22:DA:1120:G:C6	22:DA:1121:C:C4	2.84	0.66
22:DA:2146:C:H5"	22:DA:2147:A:OP1	1.95	0.66
35:DN:87:PHE:O	35:DN:90:ARG:N	2.29	0.66
1:AA:67:C:O2'	1:AA:171:A:N3	2.29	0.65
22:BA:1494:A:C2	22:BA:1495:A:C4	2.84	0.65
22:BA:1925:C:H4'	22:BA:1926:U:OP1	1.95	0.65
23:BB:116:G:H4'	36:BO:54:VAL:HG13	1.78	0.65
29:BH:14:SER:O	29:BH:15:LEU:HB2	1.95	0.65
1:CA:154:U:H2'	1:CA:155:A:H5'	1.77	0.65
22:DA:226:A:N6	22:DA:227:A:N1	2.44	0.65
22:DA:2164:C:H2'	22:DA:2165:C:C6	2.32	0.65
12:AL:24:LEU:O	12:AL:25:GLU:C	2.37	0.65
14:AN:21:PHE:HA	14:AN:25:ALA:HB3	1.77	0.65
22:DA:425:G:C2	22:DA:426:C:C4	2.84	0.65
22:DA:1359:A:C8	22:DA:1373:A:C2	2.83	0.65
22:DA:2407:A:OP2	58:DA:3558:HOH:O	2.13	0.65
1:AA:68:G:C5	1:AA:69:G:H1'	2.31	0.65
1:AA:1304:G:N1	1:AA:1305:G:N2	2.45	0.65
22:BA:819:A:C4	22:BA:1189:A:C2	2.84	0.65
22:BA:1922:G:H22	22:BA:1923:U:H1'	1.62	0.65
1:CA:1077:G:N2	1:CA:1080:A:OP2	2.28	0.65
22:DA:642:U:O2'	22:DA:644:A:N7	2.29	0.65
22:DA:2063:C:H4'	56:DA:3001:DOL:H343	1.77	0.65
56:DA:3001:DOL:HC1	56:DA:3001:DOL:H431	1.77	0.65
42:DU:7:ARG:HG3	42:DU:8:ASP:N	2.10	0.65
42:DU:36:VAL:O	42:DU:38:GLY:N	2.29	0.65
22:BA:2430:A:H5'	22:BA:2431:U:OP2	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:146:ASN:N	5:CE:146:ASN:OD1	2.26	0.65
20:CT:15:GLU:OE2	20:CT:18:ARG:NH2	2.29	0.65
22:DA:125:A:OP2	50:D2:19:ARG:NH2	2.30	0.65
22:DA:250:G:OP2	51:D3:13:ARG:NH1	2.28	0.65
22:DA:1430:G:H2'	22:DA:1431:A:O4'	1.97	0.65
22:DA:2250:G:OP1	22:DA:2275:C:O2'	2.13	0.65
25:DD:104:VAL:O	25:DD:105:LYS:CB	2.44	0.65
4:AD:11:LEU:CD2	4:AD:63:ARG:HD3	2.27	0.65
11:AK:26:SER:O	11:AK:28:ASN:N	2.29	0.65
29:BH:139:PHE:O	29:BH:140:ALA:CB	2.44	0.65
12:CL:57:LEU:O	12:CL:59:ASN:N	2.29	0.65
22:DA:301:G:O4'	22:DA:317:G:N2	2.29	0.65
22:DA:948:C:O2	22:DA:984:A:O2'	2.15	0.65
22:DA:1581:G:C5	22:DA:1582:C:N4	2.65	0.65
22:DA:1638:C:H5"	22:DA:2710:C:O2'	1.97	0.65
22:DA:1676:A:H2'	22:DA:1677:A:O4'	1.97	0.65
22:DA:2334:U:C4	36:DO:16:ARG:HD3	2.32	0.65
22:BA:997:G:OP1	38:BQ:92:ARG:HG2	1.96	0.65
22:BA:2749:A:OP1	28:BG:2:SER:N	2.30	0.65
29:BH:114:GLU:HB3	29:BH:133:GLN:O	1.97	0.65
1:CA:706:A:C5	1:CA:707:U:C5	2.85	0.65
1:CA:1490:U:H2'	1:CA:1491:G:O4'	1.96	0.65
4:CD:173:VAL:O	4:CD:174:ASP:HB3	1.97	0.65
12:CL:44:LYS:O	12:CL:46:ASN:N	2.30	0.65
18:CR:33:ILE:HA	18:CR:40:VAL:HG23	1.79	0.65
22:DA:2032:G:H1'	25:DD:150:GLN:NE2	2.11	0.65
22:DA:2603:G:C6	22:DA:2604:U:C4	2.84	0.65
1:AA:16:A:O2'	1:AA:17:U:H5'	1.97	0.65
10:AJ:33:GLY:O	10:AJ:34:ALA:CB	2.45	0.65
22:BA:84:A:N1	22:BA:98:G:O2'	2.23	0.65
22:BA:142:A:N7	22:BA:143:C:N4	2.45	0.65
22:BA:747:U:C4	22:BA:2613:U:C4	2.84	0.65
22:BA:1141:U:H4'	22:BA:1142:A:O4'	1.97	0.65
40:BS:63:GLY:O	40:BS:64:ALA:CB	2.45	0.65
1:CA:73:C:O2'	1:CA:74:A:O5'	2.14	0.65
1:CA:268:U:H2'	1:CA:269:C:C6	2.30	0.65
1:CA:378:G:C2	1:CA:386:C:O2	2.50	0.65
22:DA:1317:G:C2	22:DA:1336:A:C2	2.84	0.65
22:DA:1801:A:C5	24:DC:262:ARG:NH2	2.65	0.65
22:DA:1938:A:C6	22:DA:2590:A:H1'	2.32	0.65
25:DD:12:THR:OG1	25:DD:13:ARG:N	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:151:ILE:HD12	2:AB:154:MET:SD	2.36	0.65
17:AQ:69:LYS:O	17:AQ:70:THR:HB	1.96	0.65
1:CA:734:G:C2	1:CA:735:C:C6	2.84	0.65
22:DA:527:C:OP1	58:DA:3247:HOH:O	2.14	0.65
22:DA:2297:A:C2	22:DA:2298:A:C8	2.84	0.65
34:DM:2:LEU:O	34:DM:3:GLN:HB3	1.96	0.65
1:AA:536:C:OP1	58:AA:1884:HOH:O	2.13	0.65
2:AB:184:PHE:CZ	2:AB:198:PHE:CD2	2.85	0.65
22:BA:973:A:O4'	22:BA:1188:U:C6	2.50	0.65
22:BA:2321:U:H5'	22:BA:2322:A:OP2	1.95	0.65
22:BA:2728:U:O2'	22:BA:2729:G:P	2.55	0.65
33:BL:82:LEU:HD23	33:BL:83:ALA:N	2.12	0.65
41:BT:1:MET:O	41:BT:2:ILE:HG13	1.96	0.65
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.31	0.65
22:DA:1097:U:C5	22:DA:1098:A:H1'	2.32	0.65
22:DA:1197:G:H2'	22:DA:1198:U:C6	2.32	0.65
34:DM:76:LYS:NZ	34:DM:85:GLY:O	2.30	0.65
1:AA:597:G:C2	1:AA:644:U:C2	2.84	0.65
1:AA:684:U:O2'	11:AK:40:ASN:O	2.14	0.65
1:AA:715:A:OP1	1:AA:805:C:O2'	2.10	0.65
13:AM:114:LYS:HB2	13:AM:115:PRO:HD3	1.78	0.65
22:BA:684:G:OP1	50:B2:21:ARG:NH1	2.30	0.65
24:BC:141:VAL:HG11	24:BC:190:ALA:HB1	1.77	0.65
22:DA:2056:G:O6	22:DA:2612:C:N3	2.29	0.65
22:DA:2612:C:H5"	22:DA:2613:U:OP1	1.97	0.65
1:AA:89:U:O2'	1:AA:90:C:H5"	1.96	0.64
12:AL:21:VAL:HG23	12:AL:95:TYR:CE1	2.32	0.64
22:BA:455:C:N3	22:BA:472:A:H2'	2.11	0.64
24:BC:6:CYS:SG	24:BC:18:LYS:HD2	2.37	0.64
1:CA:604:G:H2'	1:CA:605:U:O4'	1.97	0.64
22:DA:247:G:H4'	22:DA:386:G:C4	2.32	0.64
22:DA:443:A:N7	26:DE:40:ARG:HG3	2.12	0.64
22:DA:583:G:C6	22:DA:584:C:C4	2.85	0.64
22:DA:694:U:H2'	22:DA:695:G:H5"	1.79	0.64
22:DA:788:A:OP1	22:DA:791:C:N4	2.30	0.64
22:DA:1566:A:C2	24:DC:213:TRP:CD2	2.85	0.64
22:DA:2147:A:H2'	22:DA:2148:G:O4'	1.97	0.64
26:DE:108:ILE:HD13	26:DE:181:ILE:CG1	2.27	0.64
48:D0:55:ILE:O	48:D0:56:ALA:CB	2.45	0.64
1:AA:202:G:N2	1:AA:216:U:O2	2.29	0.64
4:AD:58:LYS:HG3	4:AD:59:GLN:N	2.11	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:22:ALA:O	19:AS:26:GLY:N	2.30	0.64
52:B4:37:GLN:HG2	52:B4:37:GLN:O	1.96	0.64
22:DA:53:A:N3	22:DA:179:C:H4'	2.11	0.64
22:DA:160:A:N3	22:DA:2208:C:O2'	2.29	0.64
22:DA:1361:G:C2	22:DA:1362:C:C6	2.85	0.64
22:DA:2498:C:OP2	58:DA:3681:HOH:O	2.15	0.64
1:AA:338:A:N1	1:AA:351:G:O6	2.31	0.64
11:AK:13:ARG:NE	22:BA:2142:A:OP1	2.30	0.64
22:BA:136:G:N2	22:BA:144:A:C5	2.65	0.64
22:BA:1607:C:N4	22:BA:1622:G:N7	2.45	0.64
30:BI:39:CYS:HA	30:BI:42:PHE:CB	2.28	0.64
2:CB:134:ALA:O	2:CB:138:THR:OG1	2.11	0.64
13:CM:98:ARG:O	13:CM:100:GLN:N	2.30	0.64
14:CN:80:SER:O	14:CN:82:ILE:N	2.29	0.64
22:DA:49:A:C8	22:DA:51:G:N2	2.66	0.64
22:DA:1438:U:C5	22:DA:1552:A:C2	2.86	0.64
22:DA:2820:A:C8	25:DD:196:ALA:HB1	2.32	0.64
1:AA:31:G:O2'	1:AA:48:C:N4	2.30	0.64
1:AA:484:G:H4'	1:AA:485:U:OP1	1.97	0.64
4:AD:11:LEU:HD22	4:AD:63:ARG:HD3	1.79	0.64
22:BA:983:A:N6	22:BA:984:A:N1	2.45	0.64
34:BM:42:THR:HG22	34:BM:93:VAL:HG12	1.78	0.64
1:CA:716:A:N3	11:CK:119:ASN:O	2.30	0.64
1:CA:1151:A:C2	1:CA:1152:A:C5	2.85	0.64
5:CE:24:THR:HA	5:CE:29:ARG:HA	1.79	0.64
20:CT:67:ILE:O	20:CT:67:ILE:CG2	2.44	0.64
22:DA:1027:A:C6	22:DA:1126:A:N3	2.66	0.64
22:DA:1606:C:C2'	22:DA:1607:C:OP2	2.44	0.64
8:AH:42:GLU:OE1	8:AH:42:GLU:N	2.30	0.64
12:AL:72:HIS:ND1	12:AL:72:HIS:O	2.30	0.64
22:BA:395:U:O2'	22:BA:396:G:N7	2.28	0.64
22:BA:1056:G:H5"	22:BA:1057:A:O4'	1.98	0.64
6:CF:32:ALA:O	6:CF:34:GLY:N	2.29	0.64
22:DA:192:C:N4	22:DA:193:U:O2	2.31	0.64
22:DA:2590:A:O3'	24:DC:238:ARG:NH1	2.31	0.64
22:DA:2824:C:N4	22:DA:2825:G:N7	2.46	0.64
25:DD:97:SER:O	25:DD:99:GLU:N	2.30	0.64
34:DM:136:MET:O	43:DV:79:ARG:NH2	2.31	0.64
1:AA:1304:G:OP2	58:AA:1795:HOH:O	2.15	0.64
22:BA:1924:C:C2'	22:BA:1925:C:H5"	2.27	0.64
41:BT:49:LYS:HD3	41:BT:49:LYS:N	2.13	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:505:G:C6	1:CA:535:A:C2	2.86	0.64
1:CA:1069:C:C2'	1:CA:1070:U:O5'	2.46	0.64
22:DA:341:C:H2'	22:DA:342:A:C8	2.31	0.64
22:DA:1753:G:C2	22:DA:1756:G:N2	2.66	0.64
17:AQ:12:VAL:HG12	17:AQ:13:VAL:N	2.12	0.64
22:BA:500:G:N2	22:BA:502:A:H3'	2.13	0.64
5:CE:41:ASP:OD1	5:CE:43:ASN:N	2.31	0.64
20:CT:67:ILE:O	20:CT:67:ILE:HG22	1.98	0.64
22:DA:1251:C:OP2	38:DQ:6:ARG:NH2	2.30	0.64
26:DE:21:ARG:NH1	26:DE:103:GLY:O	2.31	0.64
28:DG:11:VAL:O	28:DG:48:ASN:ND2	2.31	0.64
1:AA:736:C:OP1	18:AR:61:ARG:NH1	2.31	0.64
22:BA:1717:A:C2'	22:BA:1718:G:O5'	2.46	0.64
1:CA:1012:A:C2	1:CA:1018:G:C2	2.86	0.64
1:CA:1069:C:H2'	1:CA:1070:U:O5'	1.97	0.64
22:DA:276:U:O2	22:DA:276:U:H2'	1.98	0.64
22:DA:1208:C:C4	22:DA:1209:U:C4	2.86	0.64
5:AE:108:GLY:O	5:AE:109:GLY:C	2.41	0.64
22:BA:1066:U:O2	22:BA:1069:A:N7	2.30	0.64
22:BA:1079:C:C5	22:BA:1088:A:C2	2.86	0.64
22:BA:1924:C:H2'	22:BA:1925:C:C5'	2.28	0.64
22:BA:2188:U:H2'	22:BA:2189:U:C6	2.33	0.64
22:BA:2419:U:O2'	22:BA:2420:C:H5'	1.98	0.64
53:B5:213:VAL:O	53:B5:214:TYR:CB	2.45	0.64
22:DA:682:G:N2	22:DA:683:U:C2	2.66	0.64
22:DA:1469:A:C2	22:DA:1470:A:C6	2.86	0.64
23:DB:87:U:O2'	23:DB:88:C:H5'	1.97	0.64
3:AC:64:ILE:HG23	3:AC:99:ALA:HB2	1.80	0.64
4:AD:46:PRO:O	4:AD:48:LEU:N	2.31	0.64
22:BA:1073:A:H3'	22:BA:1074:G:H5"	1.79	0.64
22:BA:2191:A:H2'	22:BA:2192:U:C6	2.33	0.64
39:BR:66:HIS:ND1	39:BR:94:THR:HG22	2.13	0.64
1:CA:1147:C:O2	9:CI:18:ARG:NH2	2.31	0.64
22:DA:2111:U:C5	22:DA:2145:C:H2'	2.32	0.64
22:DA:2182:U:H2'	22:DA:2183:A:C8	2.32	0.64
25:DD:208:LYS:O	25:DD:209:ALA:CB	2.46	0.64
1:AA:604:G:C2	1:AA:635:A:C2	2.86	0.63
1:AA:1204:A:OP1	58:AA:1781:HOH:O	2.14	0.63
22:BA:1917:U:C2'	22:BA:1918:A:H5'	2.28	0.63
39:BR:14:VAL:CG1	39:BR:98:ILE:HG13	2.28	0.63
1:CA:706:A:O2'	11:CK:31:ILE:HD11	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:791:G:C6	1:CA:792:A:N7	2.65	0.63
16:CP:14:ARG:N	16:CP:15:PRO:CD	2.61	0.63
22:DA:1607:C:O2	22:DA:1621:U:C4	2.50	0.63
22:DA:2816:G:N3	22:DA:2883:A:O2'	2.29	0.63
29:DH:117:LEU:CD1	29:DH:130:VAL:HG22	2.28	0.63
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.34	0.63
1:AA:1299:A:H2'	1:AA:1299:A:N3	2.13	0.63
2:AB:160:ALA:O	2:AB:161:LEU:HB2	1.98	0.63
22:BA:1668:A:O2'	22:BA:1674:G:N7	2.21	0.63
22:BA:1915:U:C2'	22:BA:1916:A:H5'	2.28	0.63
1:CA:811:C:O2'	1:CA:901:A:N1	2.29	0.63
3:CC:74:GLY:O	3:CC:78:GLY:N	2.32	0.63
18:CR:22:ASP:OD1	18:CR:23:TYR:N	2.31	0.63
22:DA:271:G:H4'	22:DA:272:A:OP1	1.98	0.63
22:DA:1826:G:C6	22:DA:1827:U:C4	2.86	0.63
22:DA:2001:C:H4'	22:DA:2689:U:H2'	1.79	0.63
22:DA:2121:G:N2	22:DA:2177:C:O2	2.31	0.63
37:DP:29:LYS:HB3	37:DP:40:LEU:HD21	1.79	0.63
5:AE:137:VAL:O	5:AE:138:ARG:HB2	1.98	0.63
53:B5:121:MET:CB	53:B5:143:ALA:HB1	2.29	0.63
1:CA:1521:C:N3	1:CA:1522:U:C5	2.66	0.63
22:DA:1364:G:H2'	22:DA:1365:A:H5'	1.79	0.63
35:DN:71:ARG:HH21	35:DN:71:ARG:CG	2.12	0.63
22:BA:2286:G:H5"	22:BA:2287:A:O4'	1.99	0.63
40:BS:84:ARG:HB2	40:BS:96:ILE:CG1	2.29	0.63
1:CA:1219:A:N6	1:CA:1220:G:O6	2.32	0.63
1:CA:1225:A:H2'	1:CA:1226:C:C5	2.32	0.63
4:CD:95:GLU:OE2	4:CD:100:ASN:ND2	2.29	0.63
4:CD:174:ASP:OD1	4:CD:175:ALA:N	2.30	0.63
22:DA:2622:U:O2'	22:DA:2825:G:N7	2.31	0.63
17:AQ:16:LYS:N	17:AQ:17:MET:SD	2.72	0.63
22:BA:2189:U:H2'	22:BA:2190:G:N9	2.12	0.63
1:CA:499:A:C6	1:CA:547:A:C8	2.86	0.63
1:CA:801:U:H2'	1:CA:802:A:H8	1.63	0.63
15:CO:17:ARG:O	15:CO:18:ASP:HB3	1.98	0.63
22:DA:19:A:C2	22:DA:522:A:C2	2.86	0.63
23:DB:78:A:C6	23:DB:99:A:C8	2.86	0.63
29:DH:117:LEU:HG	29:DH:120:GLY:O	1.98	0.63
33:DL:93:ASN:OD1	33:DL:94:THR:N	2.31	0.63
22:BA:2191:A:C6	22:BA:2192:U:O4	2.52	0.63
27:BF:176:PRO:O	27:BF:177:PHE:CG	2.52	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:64:G:C8	1:CA:99:C:N4	2.67	0.63
1:CA:718:A:C5	11:CK:118:HIS:CD2	2.86	0.63
2:CB:21:ARG:O	2:CB:23:TRP:N	2.31	0.63
1:AA:328:C:O2	1:AA:328:C:H2'	1.98	0.63
1:AA:468:A:C2	1:AA:469:C:C4	2.85	0.63
2:AB:149:GLY:O	2:AB:151:ILE:N	2.32	0.63
22:BA:2061:G:C2	56:BA:3001:DOL:HC22	2.34	0.63
22:BA:2211:A:H1'	22:BA:2212:A:OP1	1.99	0.63
22:BA:2444:G:P	26:BE:63:LYS:HD3	2.39	0.63
25:BD:125:TRP:CD2	25:BD:160:LYS:HD2	2.33	0.63
51:B3:27:ALA:O	51:B3:28:ASN:HB2	1.99	0.63
4:CD:32:CYS:SG	4:CD:33:LYS:N	2.72	0.63
6:CF:45:ARG:O	6:CF:56:LYS:HA	1.99	0.63
22:DA:771:G:C2	22:DA:772:C:C6	2.87	0.63
22:DA:1075:C:H2'	22:DA:1076:C:C6	2.34	0.63
22:DA:1707:G:N2	22:DA:1752:C:C2	2.67	0.63
22:DA:2688:G:N1	22:DA:2720:U:OP2	2.27	0.63
3:AC:139:GLN:O	3:AC:141:ALA:N	2.31	0.63
5:AE:99:ALA:O	5:AE:101:GLU:N	2.31	0.63
16:AP:42:ILE:O	16:AP:43:ALA:C	2.41	0.63
22:BA:1921:G:C2	22:BA:1922:G:C8	2.87	0.63
27:BF:85:ILE:O	27:BF:85:ILE:CG1	2.47	0.63
42:BU:18:ASP:O	42:BU:19:LYS:C	2.41	0.63
22:DA:2353:G:H2'	22:DA:2354:C:O4'	1.99	0.63
22:DA:2563:U:C1'	22:DA:2566:A:N6	2.61	0.63
1:AA:1118:U:H1'	1:AA:1179:A:C4	2.33	0.63
13:AM:46:SER:O	13:AM:47:GLU:HB3	1.98	0.63
14:AN:51:LEU:O	14:AN:53:ARG:N	2.32	0.63
1:CA:182:A:C5	1:CA:184:G:N7	2.67	0.63
1:CA:254:G:O2'	17:CQ:18:GLU:O	2.15	0.63
2:CB:58:ASN:ND2	2:CB:220:THR:O	2.32	0.63
22:DA:481:G:C4	22:DA:507:A:C2	2.87	0.63
22:DA:2128:G:N3	22:DA:2173:A:O2'	2.32	0.63
22:DA:2790:U:H5'	22:DA:2893:A:N7	2.13	0.63
35:DN:69:ARG:O	35:DN:71:ARG:N	2.31	0.63
1:AA:773:G:H2'	1:AA:774:G:O4'	1.98	0.62
4:AD:120:HIS:O	4:AD:121:LYS:C	2.41	0.62
7:AG:40:GLU:HB2	7:AG:44:TYR:CE2	2.35	0.62
22:BA:555:G:O2'	22:BA:556:A:OP2	2.16	0.62
22:BA:2033:A:P	58:BA:3478:HOH:O	2.57	0.62
22:BA:2128:G:H2'	22:BA:2129:C:O4'	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:96:TRP:CE2	2:CB:172:ALA:HB2	2.33	0.62
52:D4:36:ARG:HG2	52:D4:37:GLN:N	2.14	0.62
1:AA:126:G:OP1	1:AA:605:U:O2'	2.17	0.62
9:AI:43:THR:O	9:AI:44:ALA:HB3	1.99	0.62
10:AJ:17:LEU:HD23	10:AJ:17:LEU:C	2.24	0.62
22:BA:70:G:H4'	22:BA:71:A:OP1	1.98	0.62
22:BA:245:G:O6	51:B3:8:ARG:HD3	1.99	0.62
22:BA:324:A:N6	22:BA:338:G:O2'	2.32	0.62
22:BA:1176:U:C4	22:BA:1177:G:O6	2.53	0.62
32:BK:78:ARG:NH1	37:BP:71:GLU:OE2	2.31	0.62
12:CL:21:VAL:N	12:CL:22:PRO:HD3	2.14	0.62
22:DA:287:G:C2	22:DA:354:A:C2	2.87	0.62
22:DA:2271:G:O6	58:DA:3508:HOH:O	2.10	0.62
22:DA:2854:G:C2	22:DA:2864:G:C2	2.86	0.62
39:DR:49:ILE:HG22	39:DR:54:VAL:N	2.14	0.62
1:CA:790:A:C6	1:CA:791:G:C6	2.87	0.62
1:CA:801:U:H2'	1:CA:802:A:C8	2.34	0.62
18:CR:24:LYS:O	18:CR:26:ILE:N	2.31	0.62
21:CU:21:ARG:N	21:CU:21:ARG:HD3	2.13	0.62
22:DA:503:A:C2	22:DA:506:G:C4	2.88	0.62
22:DA:1875:G:C2'	22:DA:1876:A:OP2	2.46	0.62
4:AD:84:GLY:O	4:AD:89:ASN:ND2	2.33	0.62
22:BA:1816:C:C5	24:BC:62:TYR:CE1	2.87	0.62
2:CB:167:ASP:O	2:CB:168:HIS:CB	2.46	0.62
22:BA:2190:G:C6	22:BA:2191:A:C5	2.87	0.62
22:BA:2846:G:OP2	37:BP:52:ASN:HB2	1.99	0.62
26:BE:149:ILE:HD11	26:BE:172:ALA:HA	1.81	0.62
1:CA:992:U:C4	1:CA:1043:G:C8	2.87	0.62
3:CC:168:TYR:OH	5:CE:55:GLU:OE1	2.16	0.62
22:DA:1088:A:N6	30:DI:135:SER:OG	2.32	0.62
22:DA:1378:A:C2'	22:DA:1380:G:N7	2.62	0.62
22:DA:1973:G:C5	22:DA:1974:C:C5	2.88	0.62
22:DA:1993:U:H4'	25:DD:133:THR:HG22	1.80	0.62
1:AA:1539:C:H5"	21:AU:18:ARG:CG	2.30	0.62
20:AT:58:VAL:CG1	20:AT:72:ALA:HB1	2.30	0.62
22:BA:871:U:H2'	22:BA:872:U:C6	2.35	0.62
22:BA:1178:C:H2'	22:BA:1179:G:N7	2.14	0.62
22:BA:2503:A:N3	22:BA:2503:A:H5'	2.14	0.62
1:CA:920:U:H2'	1:CA:921:U:C6	2.34	0.62
1:CA:1092:A:C6	1:CA:1183:U:O2	2.53	0.62
22:DA:990:A:N1	39:DR:78:ARG:NH1	2.48	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2467:C:N4	22:DA:2468:A:C6	2.68	0.62
25:DD:35:THR:O	25:DD:36:GLN:CB	2.47	0.62
7:AG:120:LEU:HD13	7:AG:124:LEU:HD23	1.82	0.62
22:BA:265:A:N1	22:BA:427:U:O2'	2.28	0.62
22:BA:572:A:H5"	22:BA:573:U:OP2	1.99	0.62
22:BA:1277:G:H5'	35:BN:20:MET:CE	2.30	0.62
22:BA:1528:A:H2'	22:BA:1529:G:O4'	2.00	0.62
23:BB:33:G:O2'	23:BB:34:A:H5'	2.00	0.62
14:CN:52:PRO:O	14:CN:53:ARG:CB	2.47	0.62
22:DA:196:A:O2'	22:DA:805:G:O6	2.08	0.62
22:DA:858:G:C4	22:DA:2268:A:C2	2.87	0.62
22:DA:998:C:OP2	38:DQ:58:ARG:NH2	2.33	0.62
22:DA:1300:G:O6	22:DA:1626:A:O2'	2.18	0.62
22:DA:1844:C:O3'	24:DC:256:LYS:NZ	2.32	0.62
22:DA:2262:U:OP1	44:DW:41:ARG:NH2	2.33	0.62
29:BH:123:ARG:C	29:BH:124:THR:CG2	2.65	0.62
53:B5:174:ALA:O	53:B5:175:PRO:CB	2.47	0.62
22:DA:608:A:H2'	22:DA:609:A:C8	2.35	0.62
22:DA:674:G:H1'	26:DE:69:ARG:NE	2.15	0.62
22:DA:1187:G:H5"	39:DR:83:TYR:CE2	2.35	0.62
22:DA:1444:G:C2	22:DA:1548:A:C2	2.88	0.62
22:DA:1465:G:C5	22:DA:1466:U:C4	2.88	0.62
22:DA:1649:G:C6	22:DA:2009:A:C6	2.87	0.62
1:AA:995:C:N3	1:AA:1046:A:O2'	2.31	0.62
11:AK:125:LYS:O	11:AK:126:LYS:O	2.18	0.62
22:BA:1923:U:O2'	22:BA:1924:C:C5'	2.48	0.62
48:B0:33:THR:HG22	48:B0:33:THR:O	2.00	0.62
1:CA:1007:U:H2'	1:CA:1008:U:C5'	2.28	0.62
2:CB:219:ALA:O	2:CB:220:THR:HB	2.00	0.62
22:DA:53:A:N7	22:DA:54:G:C4	2.68	0.62
22:DA:590:A:C6	22:DA:591:U:C4	2.88	0.62
22:DA:2408:U:O4	58:DA:3559:HOH:O	2.14	0.62
22:DA:2531:A:H5'	28:DG:157:TYR:CZ	2.35	0.62
4:AD:99:ASP:OD2	4:AD:115:ARG:NH2	2.33	0.62
7:AG:56:LYS:O	7:AG:57:SER:CB	2.47	0.62
11:AK:13:ARG:N	22:BA:2141:G:H4'	2.13	0.62
22:BA:1188:U:C2'	22:BA:1189:A:H5'	2.30	0.62
22:BA:2547:A:H2'	22:BA:2548:U:C6	2.34	0.62
1:CA:38:G:C2	1:CA:397:A:C2	2.88	0.62
22:DA:1806:C:C5	22:DA:1807:G:N7	2.68	0.62
52:D4:22:VAL:O	52:D4:24:ARG:N	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1433:A:O2'	22:BA:1434:A:H5'	2.00	0.61
22:BA:1605:C:C2'	22:BA:1606:C:H5'	2.30	0.61
22:BA:1731:G:C6	22:BA:1733:G:C5	2.88	0.61
1:CA:692:U:O2'	1:CA:694:A:N7	2.29	0.61
21:CU:8:GLU:HB3	21:CU:12:PHE:CD2	2.35	0.61
22:DA:300:A:O2'	22:DA:318:C:O2'	2.07	0.61
29:DH:32:PRO:O	29:DH:33:GLN:CB	2.48	0.61
31:DJ:41:LYS:O	31:DJ:42:ALA:C	2.42	0.61
1:AA:1157:A:N7	1:AA:1180:A:N6	2.47	0.61
1:AA:1161:C:H2'	1:AA:1162:C:C6	2.35	0.61
1:AA:1278:G:H4'	1:AA:1279:G:C8	2.35	0.61
16:AP:22:ALA:HA	16:AP:33:ILE:HG13	1.80	0.61
22:BA:528:A:H2	22:BA:2043:C:H5'	1.65	0.61
42:BU:99:ASN:C	42:BU:99:ASN:OD1	2.43	0.61
1:CA:527:G:C6	1:CA:528:C:C5	2.88	0.61
1:CA:801:U:C2	1:CA:802:A:C8	2.88	0.61
20:CT:68:HIS:C	20:CT:69:LYS:HG3	2.24	0.61
21:CU:12:PHE:O	21:CU:13:ASP:HB2	2.00	0.61
22:DA:629:G:N3	22:DA:639:U:O2'	2.32	0.61
22:DA:699:A:N6	22:DA:733:G:O2'	2.33	0.61
23:DB:7:G:H5'	36:DO:29:HIS:CE1	2.35	0.61
1:AA:627:G:OP1	16:AP:51:ARG:NH2	2.33	0.61
22:BA:1327:A:N6	22:BA:1328:A:C2	2.68	0.61
25:BD:140:HIS:CE1	58:BD:303:HOH:O	2.44	0.61
1:CA:577:G:C8	1:CA:816:A:C6	2.87	0.61
1:CA:582:C:N3	1:CA:760:G:C6	2.68	0.61
15:CO:42:HIS:O	15:CO:45:GLU:O	2.18	0.61
22:DA:450:G:N1	22:DA:454:A:OP2	2.28	0.61
22:DA:776:G:N7	22:DA:793:A:C4	2.68	0.61
22:DA:1360:G:C2	22:DA:1361:G:H1'	2.35	0.61
22:DA:1843:C:H4'	24:DC:251:GLN:CD	2.25	0.61
22:DA:2142:A:C2	22:DA:2150:C:N3	2.69	0.61
22:DA:2162:G:C4'	22:DA:2163:A:OP1	2.48	0.61
29:DH:62:LEU:HD13	29:DH:62:LEU:C	2.25	0.61
42:DU:53:ASN:O	42:DU:53:ASN:ND2	2.33	0.61
1:AA:71:A:O2'	1:AA:72:A:P	2.58	0.61
8:AH:111:MET:HE1	8:AH:116:ALA:HA	1.81	0.61
11:AK:16:VAL:O	11:AK:17:SER:OG	2.16	0.61
20:AT:68:HIS:C	20:AT:69:LYS:HG3	2.25	0.61
22:BA:1232:G:C5	22:BA:1233:C:C5	2.88	0.61
53:B5:180:SER:CB	53:B5:188:ASP:CB	2.79	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:37:PHE:CD2	21:CU:41:PRO:HG3	2.36	0.61
22:DA:30:G:O2'	22:DA:1214:A:N3	2.33	0.61
30:DI:114:ALA:O	30:DI:115:ALA:CB	2.48	0.61
38:DQ:25:TYR:CD2	38:DQ:26:GLY:N	2.67	0.61
22:BA:1779:U:H5	22:BA:1784:A:N7	1.99	0.61
25:BD:62:LYS:HB2	25:BD:63:PRO:HD3	1.82	0.61
32:BK:34:GLY:O	32:BK:35:VAL:C	2.44	0.61
33:BL:68:SER:O	33:BL:69:ARG:HB2	2.00	0.61
35:BN:79:LEU:O	35:BN:80:PHE:HB2	2.01	0.61
40:BS:29:VAL:HG13	40:BS:55:ILE:HD11	1.82	0.61
53:B5:68:GLY:O	53:B5:70:GLY:N	2.33	0.61
2:CB:15:HIS:O	2:CB:17:GLY:N	2.34	0.61
4:CD:4:TYR:O	4:CD:5:LEU:HB2	1.99	0.61
4:CD:34:ILE:O	4:CD:35:GLU:CB	2.48	0.61
5:CE:154:ALA:HA	5:CE:157:ARG:HB3	1.82	0.61
2:AB:187:VAL:HG23	2:AB:187:VAL:O	2.01	0.61
22:BA:18:U:OP1	38:BQ:30:ARG:NH2	2.33	0.61
23:BB:60:C:N4	58:BB:303:HOH:O	2.33	0.61
30:BI:62:TYR:O	30:BI:63:ALA:CB	2.49	0.61
53:B5:50:ILE:O	53:B5:203:GLU:CB	2.48	0.61
1:CA:1211:U:C2'	1:CA:1212:U:OP2	2.49	0.61
4:CD:35:GLU:O	4:CD:38:PRO:HD3	2.00	0.61
22:DA:26:G:C6	22:DA:27:G:N1	2.69	0.61
22:DA:1096:A:H2'	22:DA:1097:U:O4'	2.00	0.61
22:DA:1359:A:C8	22:DA:1373:A:N1	2.68	0.61
22:DA:1951:U:H2'	22:DA:1953:A:OP2	2.01	0.61
23:DB:37:C:C5	23:DB:38:C:C5	2.88	0.61
24:DC:108:LYS:N	24:DC:194:GLU:O	2.33	0.61
29:DH:83:LYS:H	29:DH:149:GLU:HG2	1.64	0.61
31:DJ:77:HIS:HA	31:DJ:83:GLY:O	2.00	0.61
1:AA:64:G:C8	1:AA:99:C:N4	2.68	0.61
1:AA:807:A:C5	1:AA:808:C:C5	2.88	0.61
4:AD:70:ARG:O	4:AD:74:ASN:ND2	2.34	0.61
17:AQ:53:CYS:SG	17:AQ:75:LEU:HD23	2.41	0.61
22:BA:482:A:H5"	22:BA:483:A:OP1	2.01	0.61
22:BA:588:U:H2'	22:BA:589:U:C6	2.35	0.61
22:BA:1429:G:O2'	22:BA:1430:G:H5'	2.00	0.61
22:BA:2897:U:H2'	22:BA:2898:U:C6	2.35	0.61
31:BJ:31:GLU:HG3	31:BJ:142:ILE:HD11	1.82	0.61
38:BQ:76:TYR:OH	38:BQ:92:ARG:NH1	2.33	0.61
43:BV:80:HIS:CE1	43:BV:83:LYS:CG	2.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:994:A:N3	1:CA:994:A:H2'	2.15	0.61
3:CC:139:GLN:O	3:CC:141:ALA:N	2.34	0.61
4:CD:166:GLU:O	4:CD:167:LYS:HB2	1.99	0.61
22:DA:53:A:C8	22:DA:54:G:C8	2.89	0.61
22:DA:126:A:N7	22:DA:127:A:C2	2.69	0.61
22:DA:511:U:H5"	22:DA:1235:G:H4'	1.83	0.61
22:DA:864:G:C6	22:DA:865:C:N4	2.69	0.61
22:DA:1827:U:C2'	22:DA:1828:G:O5'	2.48	0.61
22:DA:2418:A:OP1	51:D3:45:ARG:NH1	2.34	0.61
22:DA:2725:A:C4	22:DA:2727:A:C8	2.88	0.61
22:DA:2744:G:C6	22:DA:2761:A:N6	2.69	0.61
30:DI:6:GLN:O	30:DI:7:ALA:CB	2.49	0.61
1:AA:1446:A:H2'	1:AA:1447:A:H5'	1.83	0.61
15:AO:2:SER:O	15:AO:3:LEU:CB	2.48	0.61
22:BA:142:A:H2'	22:BA:143:C:C6	2.36	0.61
22:BA:1590:A:H2'	22:BA:1591:A:C8	2.35	0.61
2:CB:21:ARG:HA	2:CB:21:ARG:NH1	2.15	0.61
12:CL:88:LYS:HG3	12:CL:88:LYS:O	2.01	0.61
22:DA:104:A:N7	22:DA:105:C:C4	2.69	0.61
22:DA:192:C:C5	22:DA:193:U:C2	2.88	0.61
22:DA:684:G:OP1	50:D2:16:HIS:ND1	2.34	0.61
22:DA:740:C:H5'	22:DA:1784:A:H3'	1.82	0.61
22:DA:2061:G:H2'	22:DA:2501:C:O2'	2.00	0.61
22:DA:2788:C:H2'	22:DA:2789:C:C6	2.35	0.61
1:AA:232:G:H2'	1:AA:233:C:O4'	2.01	0.61
1:AA:1528:U:O3'	1:AA:1529:G:H3'	2.01	0.61
9:AI:23:PRO:HA	9:AI:61:LEU:HA	1.82	0.61
22:BA:1250:G:C5'	38:BQ:6:ARG:HD3	2.30	0.61
8:CH:106:THR:OG1	8:CH:109:GLY:O	2.16	0.61
14:CN:61:ARG:O	14:CN:62:ASN:HB2	2.00	0.61
22:DA:67:U:C2	22:DA:68:G:C8	2.89	0.61
22:DA:353:C:H2'	22:DA:354:A:C8	2.35	0.61
22:DA:724:U:H2'	22:DA:725:G:O4'	2.01	0.61
22:DA:2330:G:N2	22:DA:2386:A:C2	2.68	0.61
32:DK:107:LEU:O	32:DK:109:SER:N	2.34	0.61
1:AA:887:G:H2'	1:AA:888:G:H5'	1.83	0.61
1:AA:1429:A:C2	1:AA:1430:A:C8	2.88	0.61
4:AD:174:ASP:OD2	4:AD:176:GLY:N	2.34	0.61
22:BA:357:C:H2'	22:BA:358:U:C6	2.35	0.61
22:BA:1936:A:C2	22:BA:1945:G:C8	2.89	0.61
22:BA:2502:G:H5'	22:BA:2503:A:H5"	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:72:A:N6	1:CA:73:C:N4	2.48	0.61
1:CA:1376:U:O4	7:CG:10:ARG:NH1	2.33	0.61
1:CA:1381:U:C2'	1:CA:1382:C:O5'	2.49	0.61
22:DA:54:G:C2	22:DA:55:G:C8	2.88	0.61
22:DA:2571:U:C4	22:DA:2574:G:C8	2.89	0.61
26:DE:108:ILE:HD11	26:DE:180:LEU:CB	2.31	0.61
1:AA:1160:G:O6	1:AA:1181:G:C6	2.54	0.60
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.36	0.60
23:BB:30:C:H2'	23:BB:31:C:H5'	1.83	0.60
24:BC:230:HIS:CD2	24:BC:247:PRO:HA	2.36	0.60
1:CA:960:U:C5	1:CA:1225:A:C8	2.89	0.60
1:CA:994:A:C8	1:CA:1216:A:H4'	2.36	0.60
1:CA:1521:C:C4	1:CA:1522:U:C5	2.88	0.60
5:CE:133:PRO:O	5:CE:137:VAL:HG12	2.00	0.60
7:CG:74:GLU:O	7:CG:88:PRO:HA	2.01	0.60
12:CL:18:LYS:HD2	12:CL:18:LYS:C	2.25	0.60
22:DA:38:A:H2'	22:DA:39:G:O4'	2.00	0.60
22:DA:616:A:C2	22:DA:617:G:O4'	2.54	0.60
22:DA:2720:U:OP1	37:DP:53:ARG:NH2	2.34	0.60
32:DK:87:LEU:HD22	32:DK:92:GLU:HA	1.82	0.60
39:DR:82:HIS:O	39:DR:82:HIS:CG	2.54	0.60
50:D2:44:VAL:HG13	50:D2:45:SER:N	2.16	0.60
1:AA:108:G:N3	1:AA:108:G:H5'	2.15	0.60
1:AA:154:U:C2	1:AA:168:G:N2	2.69	0.60
2:AB:49:MET:O	2:AB:53:ALA:CB	2.49	0.60
5:AE:109:GLY:O	5:AE:110:ALA:CB	2.49	0.60
22:BA:137:U:H2'	22:BA:140:C:C2	2.36	0.60
22:BA:142:A:C5	22:BA:143:C:N4	2.69	0.60
29:BH:121:VAL:N	29:BH:122:LEU:HB2	2.16	0.60
41:BT:2:ILE:CA	41:BT:3:ARG:HB2	2.32	0.60
1:CA:109:A:C6	1:CA:327:A:C6	2.89	0.60
1:CA:115:G:H4'	1:CA:116:A:O5'	2.01	0.60
1:CA:945:G:C2	1:CA:946:A:C8	2.88	0.60
9:CI:15:SER:OG	9:CI:69:GLY:O	2.12	0.60
12:CL:20:ASN:N	12:CL:20:ASN:OD1	2.34	0.60
20:CT:43:ASP:HB3	20:CT:46:ALA:HB3	1.83	0.60
22:DA:88:G:C2	22:DA:89:A:C8	2.88	0.60
22:DA:187:G:C2	22:DA:210:C:C2	2.89	0.60
22:DA:497:A:H2'	22:DA:498:G:O4'	2.01	0.60
22:DA:1055:G:O2'	22:DA:1085:A:N1	2.31	0.60
22:DA:1179:G:C5	22:DA:1180:U:H1'	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2146:C:C5'	22:DA:2147:A:OP1	2.49	0.60
30:DI:80:LEU:HD13	30:DI:136:MET:SD	2.41	0.60
1:AA:701:U:H4'	1:AA:702:A:H5"	1.83	0.60
1:AA:1074:G:OP1	5:AE:69:ARG:NH2	2.34	0.60
5:AE:157:ARG:C	5:AE:159:LYS:N	2.60	0.60
17:AQ:48:ASP:C	17:AQ:48:ASP:OD2	2.43	0.60
22:BA:475:C:C4	22:BA:481:G:O6	2.55	0.60
26:BE:149:ILE:CD1	26:BE:172:ALA:HA	2.31	0.60
29:BH:100:ALA:HB1	29:BH:112:LYS:HA	1.83	0.60
19:CS:66:MET:SD	19:CS:74:PHE:CZ	2.94	0.60
23:DB:4:C:C2	23:DB:117:G:N2	2.69	0.60
35:DN:49:GLU:N	35:DN:50:PRO:CD	2.65	0.60
1:AA:673:A:H2'	1:AA:674:G:C8	2.36	0.60
5:AE:83:HIS:HB2	5:AE:84:PRO:HD2	1.83	0.60
9:AI:63:LEU:N	9:AI:63:LEU:HD23	2.17	0.60
11:AK:16:VAL:O	11:AK:17:SER:CB	2.49	0.60
23:BB:28:C:OP1	36:BO:31:THR:HG21	2.01	0.60
33:BL:68:SER:O	33:BL:69:ARG:CB	2.50	0.60
35:BN:58:ASP:OD1	35:BN:63:ARG:NH2	2.35	0.60
38:BQ:88:VAL:HG13	39:BR:49:ILE:HD11	1.82	0.60
40:BS:83:LYS:O	40:BS:84:ARG:HD3	2.00	0.60
1:CA:475:C:H2'	1:CA:476:U:C6	2.36	0.60
1:CA:485:U:OP2	1:CA:485:U:H4'	2.00	0.60
6:CF:98:GLU:O	6:CF:99:ALA:HB3	2.00	0.60
22:DA:749:A:C4	22:DA:750:A:C8	2.89	0.60
22:DA:1355:G:H2'	22:DA:1356:G:H5'	1.84	0.60
22:DA:1735:A:N1	22:DA:1736:U:C2	2.70	0.60
22:DA:1868:C:N4	22:DA:1869:G:O6	2.34	0.60
29:DH:126:GLY:O	29:DH:146:VAL:HG23	2.00	0.60
30:DI:58:VAL:CG1	30:DI:59:ILE:N	2.63	0.60
2:AB:123:ASP:N	2:AB:123:ASP:OD1	2.34	0.60
22:BA:417:C:H2'	22:BA:418:C:H6	1.66	0.60
22:BA:636:G:C6	33:BL:111:ILE:HD11	2.36	0.60
22:BA:997:G:OP1	38:BQ:92:ARG:CG	2.49	0.60
22:BA:1916:A:C6	22:BA:1917:U:C2	2.90	0.60
27:BF:119:ALA:HB2	27:BF:177:PHE:CD2	2.37	0.60
35:BN:73:ASN:HA	35:BN:76:VAL:CG1	2.31	0.60
1:CA:227:G:H2'	1:CA:228:A:O4'	2.00	0.60
1:CA:409:U:OP1	4:CD:24:GLY:HA3	2.00	0.60
1:CA:495:A:C2	1:CA:496:A:N6	2.70	0.60
22:DA:324:A:N6	22:DA:338:G:O2'	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:528:A:N1	22:DA:2043:C:O5'	2.34	0.60
22:DA:846:U:O2'	22:DA:847:U:O5'	2.19	0.60
22:DA:1127:A:C2'	22:DA:1128:G:H5"	2.32	0.60
22:DA:1390:U:H2'	22:DA:1391:U:H5'	1.83	0.60
22:DA:2058:A:C6	22:DA:2059:A:N6	2.69	0.60
22:DA:2133:G:H2'	22:DA:2157:G:N2	2.15	0.60
49:D1:21:TYR:CD1	49:D1:38:LYS:HD2	2.37	0.60
1:AA:188:C:O2	1:AA:188:C:H2'	2.01	0.60
1:AA:327:A:O3'	1:AA:328:C:H4'	2.02	0.60
4:AD:174:ASP:OD2	4:AD:177:LYS:N	2.35	0.60
22:BA:2786:U:OP1	25:BD:70:LYS:NZ	2.28	0.60
27:BF:108:VAL:HG11	27:BF:176:PRO:HG2	1.82	0.60
1:CA:909:A:H2'	1:CA:910:C:O4'	2.01	0.60
9:CI:19:VAL:HG21	9:CI:82:GLY:CA	2.32	0.60
22:DA:826:U:O2'	33:DL:53:GLY:HA3	2.02	0.60
22:DA:1060:U:O4'	22:DA:1062:G:H5'	2.02	0.60
22:DA:1358:G:O2'	22:DA:1359:A:H5'	2.02	0.60
22:DA:1850:G:O6	22:DA:1892:C:N3	2.35	0.60
25:DD:151:THR:HG22	25:DD:152:PRO:CD	2.31	0.60
26:DE:108:ILE:HD11	26:DE:180:LEU:HB2	1.83	0.60
2:AB:151:ILE:O	2:AB:152:LYS:C	2.44	0.60
4:AD:3:ARG:NE	4:AD:115:ARG:HD3	2.16	0.60
22:BA:790:U:O2'	22:BA:791:C:O5'	2.19	0.60
22:BA:1688:U:N3	22:BA:1698:A:C2	2.70	0.60
53:B5:65:LEU:HD11	53:B5:191:ARG:CB	2.32	0.60
2:CB:210:VAL:O	2:CB:214:LEU:HB2	2.00	0.60
22:DA:400:G:N7	45:DX:57:ARG:NH1	2.50	0.60
22:DA:2328:A:H2'	22:DA:2329:U:C6	2.37	0.60
23:DB:48:U:H2'	23:DB:49:C:C6	2.37	0.60
41:DT:21:SER:O	41:DT:22:THR:C	2.44	0.60
22:BA:1078:U:H1'	22:BA:1088:A:C2	2.37	0.60
22:BA:1132:U:H3'	22:BA:1133:A:H5"	1.84	0.60
22:BA:1269:A:OP2	58:BA:3385:HOH:O	2.16	0.60
22:BA:1866:A:N1	22:BA:1876:A:C8	2.70	0.60
22:BA:2683:C:OP1	37:BP:51:ARG:NH2	2.34	0.60
28:BG:99:LYS:O	28:BG:100:GLY:C	2.45	0.60
29:BH:117:LEU:CD2	29:BH:121:VAL:HA	2.31	0.60
33:BL:61:LEU:O	51:B3:13:ARG:HD3	2.02	0.60
36:BO:53:THR:HB	36:BO:65:THR:HG22	1.84	0.60
43:BV:13:GLY:O	43:BV:17:SER:OG	2.19	0.60
1:CA:1007:U:H2'	1:CA:1008:U:H5'	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:39:G:C6	22:DA:40:U:C4	2.90	0.60
22:DA:271:G:C2	22:DA:367:G:C2	2.90	0.60
22:DA:363:G:H2'	22:DA:364:C:C6	2.36	0.60
22:DA:2074:U:H2'	22:DA:2075:U:C6	2.36	0.60
1:AA:495:A:C2	1:AA:496:A:N6	2.69	0.60
4:AD:68:LEU:HD22	4:AD:68:LEU:N	2.17	0.60
22:BA:1179:G:C6	22:BA:1180:U:C2	2.90	0.60
22:BA:2094:A:C2	22:BA:2196:C:C2	2.90	0.60
22:BA:2187:U:H2'	22:BA:2188:U:C1'	2.32	0.60
22:BA:2318:G:C6	22:BA:2319:G:N1	2.70	0.60
26:BE:108:ILE:HD11	26:BE:180:LEU:HB3	1.84	0.60
27:BF:83:TYR:O	27:BF:85:ILE:HG22	2.02	0.60
31:BJ:81:ILE:HG23	31:BJ:82:GLY:H	1.65	0.60
53:B5:56:ASP:OD2	53:B5:58:ASN:ND2	2.34	0.60
1:CA:73:C:C2	1:CA:74:A:C8	2.90	0.60
1:CA:1296:C:H4'	1:CA:1302:C:N4	2.17	0.60
5:CE:56:VAL:N	5:CE:57:PRO:HD2	2.17	0.60
5:CE:157:ARG:HD3	5:CE:158:GLY:N	2.17	0.60
22:DA:269:C:O2	22:DA:269:C:H2'	2.02	0.60
22:DA:680:C:H2'	22:DA:681:G:C8	2.37	0.60
22:DA:1582:C:O2'	22:DA:1585:C:N3	2.33	0.60
56:DA:3001:DOL:H483	56:DA:3001:DOL:C46	2.24	0.60
1:AA:859:G:H2'	1:AA:860:A:C8	2.36	0.60
1:AA:1378:C:C5	1:AA:1379:G:C8	2.90	0.60
9:AI:114:LYS:HG2	9:AI:120:LYS:HA	1.82	0.60
22:BA:1730:C:O2'	22:BA:1731:G:C4	2.55	0.60
22:BA:1916:A:P	22:BA:1917:U:OP2	2.60	0.60
30:BI:39:CYS:HA	30:BI:42:PHE:HB3	1.83	0.60
1:CA:949:A:C2	1:CA:1233:G:N3	2.70	0.60
1:CA:992:U:C4	1:CA:1043:G:N7	2.70	0.60
4:CD:59:GLN:OE1	4:CD:59:GLN:HA	2.00	0.60
5:CE:106:ILE:HD11	5:CE:124:LEU:HD23	1.83	0.60
11:CK:126:LYS:O	11:CK:127:ARG:HB2	2.01	0.60
22:DA:1351:C:H2'	22:DA:1352:U:O4'	2.01	0.60
22:DA:1709:U:H2'	22:DA:1710:G:C8	2.37	0.60
23:DB:29:A:H2'	23:DB:30:C:C6	2.37	0.60
26:DE:149:ILE:HD12	26:DE:172:ALA:HA	1.83	0.60
1:AA:1491:G:H2'	1:AA:1492:A:O4'	2.01	0.59
14:AN:41:ARG:O	14:AN:43:ASN:N	2.35	0.59
22:BA:1735:A:C2	22:BA:1736:U:C1'	2.85	0.59
24:BC:204:VAL:O	24:BC:205:LEU:HB2	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:18:ALA:C	30:BI:20:PRO:HD3	2.27	0.59
31:BJ:30:THR:HG22	31:BJ:31:GLU:N	2.17	0.59
1:CA:734:G:N3	1:CA:735:C:C6	2.70	0.59
1:CA:1201:A:H4'	1:CA:1202:U:O5'	2.01	0.59
5:CE:78:ASN:OD1	5:CE:79:GLY:N	2.35	0.59
9:CI:120:LYS:HG3	9:CI:123:ARG:HB3	1.82	0.59
22:DA:120:U:H1'	22:DA:149:A:C8	2.37	0.59
22:DA:1369:G:C2	22:DA:1370:C:C6	2.90	0.59
22:DA:2757:A:N1	28:DG:67:THR:HG21	2.17	0.59
22:BA:28:A:C4	22:BA:29:U:C6	2.89	0.59
22:BA:350:G:H2'	22:BA:351:C:O4'	2.02	0.59
22:BA:2418:A:C5	22:BA:2419:U:C5	2.89	0.59
24:BC:136:PRO:O	24:BC:139:SER:OG	2.15	0.59
27:BF:158:THR:O	58:BF:201:HOH:O	2.17	0.59
39:BR:48:LYS:O	39:BR:49:ILE:C	2.45	0.59
1:CA:66:A:C6	1:CA:67:C:C5	2.90	0.59
1:CA:1167:A:N7	1:CA:1169:A:C5	2.70	0.59
1:CA:1190:G:H5'	3:CC:176:HIS:CE1	2.37	0.59
1:CA:1365:G:H2'	1:CA:1366:C:O4'	2.02	0.59
3:CC:42:TYR:CE1	3:CC:90:VAL:HG21	2.36	0.59
16:CP:51:ARG:C	16:CP:51:ARG:HD3	2.27	0.59
21:CU:47:ARG:HA	21:CU:47:ARG:HE	1.66	0.59
22:DA:1668:A:O4'	22:DA:1669:A:C2	2.55	0.59
22:DA:2889:C:N4	22:DA:2890:G:C6	2.70	0.59
24:DC:9:THR:O	24:DC:10:SER:CB	2.49	0.59
17:AQ:52:GLU:CD	17:AQ:52:GLU:N	2.60	0.59
22:BA:1922:G:N2	22:BA:1923:U:C1'	2.65	0.59
27:BF:132:VAL:HG22	27:BF:152:LEU:HB3	1.83	0.59
28:BG:60:ASP:OD2	58:BG:201:HOH:O	2.17	0.59
29:BH:94:ILE:HG22	29:BH:99:ILE:CG1	2.32	0.59
29:BH:123:ARG:HH22	1:CA:367:U:P	2.25	0.59
39:BR:51:VAL:HG23	39:BR:52:PRO:HD2	1.84	0.59
43:BV:48:MET:SD	43:BV:86:LEU:HD12	2.43	0.59
53:B5:99:GLU:O	53:B5:103:LYS:CB	2.51	0.59
1:CA:1089:G:C5	1:CA:1090:U:C5	2.91	0.59
22:DA:362:A:C4	22:DA:363:G:C8	2.90	0.59
22:DA:777:G:N7	22:DA:793:A:H2	1.99	0.59
22:DA:1395:A:O2'	22:DA:1397:U:C6	2.54	0.59
22:DA:1790:C:O2'	24:DC:208:ALA:HB2	2.02	0.59
22:DA:2079:U:H2'	22:DA:2080:A:O4'	2.01	0.59
22:DA:2815:C:O2'	48:D0:41:HIS:ND1	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:45:ARG:HG2	5:AE:73:ASN:HB3	1.84	0.59
9:AI:45:ARG:HG2	9:AI:46:MET:SD	2.43	0.59
22:BA:746:U:O2'	54:B6:8:MHT:H8A	2.02	0.59
22:BA:1131:G:OP1	31:BJ:82:GLY:HA2	2.02	0.59
24:BC:91:ILE:HD12	24:BC:103:TYR:CD1	2.37	0.59
29:BH:99:ILE:HB	29:BH:115:VAL:HG11	1.84	0.59
46:BY:23:ARG:O	46:BY:24:GLU:C	2.45	0.59
1:CA:388:G:O2'	1:CA:389:A:OP1	2.17	0.59
1:CA:1141:C:O2'	1:CA:1142:G:O5'	2.19	0.59
2:CB:93:ASN:OD1	2:CB:94:HIS:N	2.36	0.59
2:CB:184:PHE:CE1	2:CB:198:PHE:CD2	2.91	0.59
11:CK:23:ILE:HG21	11:CK:96:THR:HG21	1.84	0.59
17:CQ:48:ASP:N	17:CQ:48:ASP:OD2	2.35	0.59
17:CQ:69:LYS:C	17:CQ:70:THR:OG1	2.45	0.59
21:CU:8:GLU:HB3	21:CU:12:PHE:CE2	2.38	0.59
22:DA:118:A:N7	22:DA:119:A:C8	2.70	0.59
39:DR:81:LYS:O	39:DR:82:HIS:C	2.44	0.59
41:DT:89:GLU:O	41:DT:91:GLN:N	2.35	0.59
1:AA:205:A:OP1	1:AA:205:A:H4'	2.01	0.59
22:BA:2000:C:O2'	22:BA:2001:C:H5'	2.03	0.59
29:BH:1:MET:O	29:BH:20:ASN:ND2	2.35	0.59
53:B5:87:ALA:HB2	53:B5:153:ILE:CB	2.32	0.59
22:DA:945:A:C8	22:DA:2448:A:C2	2.89	0.59
22:DA:2110:G:O2'	22:DA:2120:G:OP2	2.14	0.59
41:DT:82:LYS:HG2	41:DT:83:ALA:N	2.18	0.59
1:AA:1306:A:C4	1:AA:1307:U:C6	2.91	0.59
2:AB:49:MET:O	2:AB:53:ALA:HB2	2.03	0.59
3:AC:25:ASN:O	3:AC:27:LYS:N	2.35	0.59
8:AH:10:MET:HE1	8:AH:33:LYS:HA	1.85	0.59
9:AI:6:TYR:HB3	9:AI:89:GLU:HG2	1.84	0.59
13:AM:3:ARG:O	13:AM:4:ILE:HG12	2.03	0.59
17:AQ:6:ARG:O	17:AQ:7:THR:HG23	2.02	0.59
22:BA:264:C:O2'	22:BA:265:A:H2'	2.02	0.59
22:BA:1952:A:C5	32:BK:22:ILE:HG21	2.37	0.59
48:B0:55:ILE:HG22	48:B0:56:ALA:N	2.17	0.59
1:CA:1302:C:C5	13:CM:17:ILE:HD13	2.38	0.59
1:CA:1364:U:O2	1:CA:1364:U:H2'	2.03	0.59
8:CH:18:GLN:NE2	8:CH:70:ALA:HB1	2.18	0.59
15:CO:53:ARG:O	15:CO:56:LEU:N	2.35	0.59
20:CT:36:TYR:CD1	20:CT:36:TYR:C	2.81	0.59
26:DE:196:VAL:O	26:DE:196:VAL:HG12	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:118:PRO:HG3	28:DG:144:VAL:HG21	1.83	0.59
46:DY:18:LEU:O	46:DY:22:LEU:HB3	2.03	0.59
1:AA:984:C:N4	58:AA:1836:HOH:O	2.35	0.59
9:AI:57:MET:CG	9:AI:58:VAL:H	2.14	0.59
14:AN:21:PHE:HA	14:AN:25:ALA:CB	2.33	0.59
16:AP:10:GLY:HA3	16:AP:15:PRO:HA	1.83	0.59
22:BA:2182:U:O4	22:BA:2183:A:N6	2.36	0.59
22:BA:2192:U:C2'	22:BA:2193:G:H5'	2.32	0.59
26:BE:48:THR:O	26:BE:50:ALA:N	2.35	0.59
46:BY:18:LEU:O	46:BY:22:LEU:N	2.34	0.59
1:CA:1105:A:C2	1:CA:1106:G:N7	2.71	0.59
2:CB:119:THR:O	2:CB:120:GLN:HB2	2.01	0.59
6:CF:97:THR:O	6:CF:98:GLU:HB3	2.03	0.59
7:CG:68:ASN:O	7:CG:138:ARG:NH2	2.35	0.59
7:CG:92:ARG:HB3	7:CG:93:PRO:HD2	1.84	0.59
22:DA:1410:G:C2	22:DA:1411:U:C4	2.91	0.59
22:DA:1668:A:C4	22:DA:1674:G:N7	2.70	0.59
22:DA:1798:U:O2'	22:DA:1802:A:N3	2.33	0.59
22:DA:2038:G:H2'	22:DA:2039:U:O4'	2.02	0.59
22:DA:2293:G:H2'	22:DA:2294:G:O4'	2.03	0.59
23:DB:84:G:N2	23:DB:93:C:C2	2.70	0.59
29:DH:126:GLY:O	29:DH:146:VAL:N	2.35	0.59
31:DJ:105:VAL:HG12	31:DJ:109:LEU:HD12	1.84	0.59
1:AA:178:C:OP2	20:AT:60:ARG:NH2	2.35	0.59
1:AA:582:C:C2	1:AA:583:A:C8	2.91	0.59
1:AA:872:A:C5	1:AA:874:G:C8	2.91	0.59
1:AA:1377:A:C4	7:AG:7:ILE:HD11	2.38	0.59
11:AK:35:THR:OG1	11:AK:41:ALA:N	2.35	0.59
13:AM:11:ASP:CG	13:AM:12:HIS:N	2.61	0.59
22:BA:616:A:C2	22:BA:617:G:H1'	2.38	0.59
22:BA:734:A:C5	22:BA:735:A:C8	2.90	0.59
22:BA:1935:G:C6	22:BA:1962:C:C5	2.91	0.59
22:BA:2685:G:OP1	32:BK:78:ARG:NH2	2.34	0.59
1:CA:803:G:C5	1:CA:804:U:C4	2.90	0.59
4:CD:29:ASP:C	4:CD:31:LYS:H	2.11	0.59
22:DA:237:C:C4	22:DA:238:C:C5	2.90	0.59
22:DA:583:G:C5	22:DA:584:C:C5	2.91	0.59
22:DA:2262:U:OP2	44:DW:16:SER:HB2	2.03	0.59
30:DI:58:VAL:O	30:DI:69:PHE:HB3	2.03	0.59
1:AA:4:U:O2	1:AA:4:U:H2'	2.03	0.59
1:AA:131:A:O2'	1:AA:262:A:N3	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:65:GLU:OE1	5:AE:66:LYS:N	2.36	0.59
10:AJ:80:THR:O	10:AJ:83:THR:N	2.35	0.59
22:BA:538:A:H5"	31:BJ:7:LYS:HE3	1.85	0.59
1:CA:206:C:H2'	1:CA:207:C:H5'	1.85	0.59
1:CA:1439:G:C2	1:CA:1463:U:O2	2.56	0.59
2:CB:54:LEU:HA	2:CB:57:LEU:HB3	1.84	0.59
4:CD:105:MET:SD	4:CD:143:VAL:HG13	2.43	0.59
22:DA:332:A:O2'	22:DA:334:C:OP2	2.11	0.59
22:DA:1447:C:H2'	22:DA:1448:G:C8	2.37	0.59
22:DA:2305:U:C4	22:DA:2306:C:C4	2.91	0.59
22:DA:2645:G:H3'	22:DA:2646:C:H5'	1.85	0.59
35:DN:55:ALA:HA	35:DN:80:PHE:CE1	2.37	0.59
46:DY:56:LEU:O	46:DY:57:LEU:HB2	2.03	0.59
1:AA:151:A:H2'	1:AA:152:A:O4'	2.03	0.59
1:AA:212:G:C2	1:AA:213:G:C4	2.90	0.59
2:AB:10:LEU:C	2:AB:10:LEU:HD23	2.28	0.59
5:AE:90:THR:HG22	5:AE:91:GLY:N	2.16	0.59
12:AL:76:GLU:O	12:AL:77:HIS:HB2	2.03	0.59
29:BH:14:SER:OG	29:BH:17:ASP:CG	2.46	0.59
30:BI:96:ASP:OD1	30:BI:97:LYS:N	2.36	0.59
39:BR:16:GLU:OE1	39:BR:100:GLY:HA2	2.03	0.59
42:BU:12:ILE:HG21	42:BU:80:ALA:HB2	1.85	0.59
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.38	0.59
3:CC:77:ILE:HA	3:CC:84:VAL:CG2	2.33	0.59
14:CN:52:PRO:O	14:CN:53:ARG:HB3	2.03	0.59
20:CT:55:GLN:N	20:CT:56:PRO:CD	2.65	0.59
22:DA:82:U:C2	22:DA:83:A:C8	2.90	0.59
22:DA:1203:U:H1'	33:DL:4:ASN:HB3	1.85	0.59
39:DR:38:VAL:HG11	39:DR:57:GLY:HA3	1.83	0.59
1:AA:69:G:O6	1:AA:98:A:N6	2.36	0.58
1:AA:90:C:C2	1:AA:91:U:C6	2.91	0.58
1:AA:1134:G:C2	1:AA:1135:U:C2	2.89	0.58
8:AH:20:ALA:O	8:AH:21:ASN:C	2.46	0.58
22:BA:1008:A:N6	22:BA:1136:G:C6	2.71	0.58
22:BA:1935:G:C6	22:BA:1962:C:C6	2.91	0.58
1:CA:243:A:H4'	1:CA:244:U:H5"	1.83	0.58
2:CB:141:LEU:O	2:CB:145:GLU:N	2.34	0.58
22:DA:841:G:N2	22:DA:937:C:O2	2.32	0.58
22:DA:1439:A:N7	22:DA:1552:A:C2	2.71	0.58
22:DA:2189:U:H2'	22:DA:2190:G:H5'	1.84	0.58
22:DA:2845:U:H2'	22:DA:2846:G:O4'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:76:ALA:CB	30:DI:129:ILE:HG23	2.33	0.58
1:AA:701:U:H4'	1:AA:702:A:C5'	2.33	0.58
2:AB:222:ARG:HB3	2:AB:222:ARG:CZ	2.34	0.58
22:BA:2831:G:OP1	25:BD:56:LYS:NZ	2.36	0.58
24:BC:117:GLN:N	24:BC:128:ASN:OD1	2.35	0.58
46:BY:45:GLN:O	46:BY:46:VAL:HB	2.03	0.58
53:B5:50:ILE:HB	53:B5:52:PRO:HD3	1.85	0.58
22:DA:85:G:OP2	42:DU:28:VAL:HG12	2.03	0.58
23:DB:22:U:O4	58:DB:302:HOH:O	2.15	0.58
2:AB:200:ILE:O	2:AB:201:PRO:O	2.21	0.58
4:AD:58:LYS:NZ	4:AD:69:GLU:OE2	2.32	0.58
7:AG:13:LEU:O	7:AG:15:ASP:N	2.37	0.58
10:AJ:48:ARG:NH1	10:AJ:66:GLU:OE1	2.35	0.58
13:AM:10:PRO:O	13:AM:11:ASP:HB3	2.04	0.58
16:AP:51:ARG:HG2	16:AP:51:ARG:HH11	1.67	0.58
17:AQ:12:VAL:O	17:AQ:13:VAL:HG12	2.03	0.58
22:BA:1355:G:O2'	22:BA:1356:G:H5'	2.03	0.58
27:BF:174:ASP:O	27:BF:175:PHE:O	2.21	0.58
39:BR:52:PRO:O	39:BR:53:PHE:O	2.21	0.58
1:CA:1245:C:C4	1:CA:1246:A:N7	2.71	0.58
22:DA:1068:G:H2'	22:DA:1068:G:N3	2.17	0.58
22:DA:1544:A:N1	22:DA:1545:A:C2	2.71	0.58
22:DA:1605:C:H2'	22:DA:1606:C:H5'	1.85	0.58
22:DA:1808:A:N1	45:DX:28:ARG:HD2	2.17	0.58
24:DC:34:LEU:O	24:DC:35:GLU:HB3	2.03	0.58
32:DK:18:ARG:HB2	32:DK:45:GLU:HB3	1.84	0.58
36:DO:33:ARG:O	36:DO:34:HIS:CB	2.50	0.58
3:AC:60:PRO:O	3:AC:61:ALA:C	2.46	0.58
21:AU:10:GLU:CG	21:AU:11:PRO:HD3	2.33	0.58
1:CA:913:A:H4'	1:CA:914:A:OP1	2.02	0.58
1:CA:1127:G:H5'	1:CA:1280:A:O2'	2.02	0.58
7:CG:5:ARG:NE	7:CG:5:ARG:HA	2.18	0.58
40:DS:28:LYS:O	40:DS:29:VAL:C	2.47	0.58
1:AA:119:A:OP2	1:AA:288:A:N6	2.35	0.58
2:AB:145:GLU:O	2:AB:149:GLY:N	2.37	0.58
5:AE:101:GLU:HB3	5:AE:122:ASN:HB2	1.84	0.58
22:BA:811:U:C2	22:BA:1251:C:C5	2.91	0.58
22:BA:1421:G:C2	22:BA:1422:G:C8	2.92	0.58
30:BI:82:LYS:O	30:BI:83:ALA:HB2	2.04	0.58
1:CA:618:C:H5"	1:CA:619:U:H5"	1.84	0.58
2:CB:15:HIS:C	2:CB:15:HIS:ND1	2.61	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:119:THR:O	2:CB:120:GLN:CB	2.50	0.58
15:CO:18:ASP:OD1	15:CO:20:ASN:HB2	2.03	0.58
20:CT:32:ILE:HG12	20:CT:54:MET:HE3	1.86	0.58
22:DA:129:C:H2'	22:DA:130:C:C6	2.39	0.58
22:DA:636:G:N1	33:DL:76:GLU:OE2	2.36	0.58
42:DU:18:ASP:OD2	42:DU:18:ASP:N	2.36	0.58
1:AA:722:G:H3'	1:AA:722:G:N3	2.18	0.58
1:AA:1062:U:H2'	1:AA:1063:C:C5	2.39	0.58
1:AA:1492:A:OP1	12:AL:44:LYS:N	2.36	0.58
21:AU:4:ILE:N	21:AU:20:LYS:HZ1	2.01	0.58
22:BA:545:U:H3'	22:BA:546:U:H4'	1.86	0.58
22:BA:1916:A:H2'	22:BA:1917:U:C1'	2.34	0.58
22:BA:2358:A:N1	33:BL:54:GLN:NE2	2.50	0.58
24:BC:197:ASN:CG	24:BC:197:ASN:O	2.45	0.58
4:CD:35:GLU:HG3	4:CD:36:GLN:N	2.18	0.58
17:CQ:46:VAL:HG21	17:CQ:61:ILE:CD1	2.34	0.58
22:DA:607:U:N3	22:DA:620:G:O4'	2.36	0.58
22:DA:720:U:H2'	22:DA:721:A:C8	2.38	0.58
22:DA:1099:G:N7	22:DA:1100:C:N4	2.52	0.58
22:DA:1344:U:O2'	22:DA:1345:C:P	2.62	0.58
22:DA:2285:C:HO2'	22:DA:2288:A:HO2'	1.51	0.58
29:DH:34:GLY:O	29:DH:35:LYS:CB	2.51	0.58
1:AA:1394:A:N1	1:AA:1500:A:O2'	2.32	0.58
2:AB:186:ILE:HA	2:AB:200:ILE:O	2.04	0.58
4:AD:32:CYS:O	4:AD:33:LYS:CB	2.52	0.58
9:AI:9:THR:HG22	9:AI:10:GLY:N	2.18	0.58
14:AN:41:ARG:O	14:AN:42:TRP:C	2.46	0.58
17:AQ:81:LYS:O	17:AQ:82:ALA:C	2.46	0.58
22:BA:1417:C:H2'	22:BA:1418:G:O4'	2.03	0.58
22:BA:1439:A:OP2	58:BA:3636:HOH:O	2.17	0.58
24:BC:141:VAL:HG12	24:BC:142:HIS:N	2.19	0.58
28:BG:124:GLU:OE1	28:BG:125:CYS:N	2.37	0.58
28:BG:174:ALA:O	28:BG:175:LYS:CB	2.51	0.58
29:BH:31:VAL:N	29:BH:32:PRO:HD2	2.19	0.58
33:BL:82:LEU:HD23	33:BL:82:LEU:C	2.29	0.58
37:BP:91:ALA:HB2	37:BP:113:ARG:HA	1.84	0.58
1:CA:815:A:N7	1:CA:1509:C:O2'	2.28	0.58
22:DA:1351:C:H2'	22:DA:1352:U:C1'	2.34	0.58
22:DA:1360:G:N1	22:DA:1361:G:H1'	2.18	0.58
22:DA:1510:G:H2'	22:DA:1511:G:O4'	2.03	0.58
22:DA:2266:A:C2	22:DA:2272:U:C5	2.91	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1674:G:N2	22:BA:1677:A:N1	2.49	0.58
22:BA:1800:C:H3'	24:BC:146:MET:HE1	1.84	0.58
22:BA:2517:C:C5	22:BA:2542:A:C5	2.92	0.58
22:BA:2534:A:H2'	22:BA:2535:G:O5'	2.04	0.58
39:BR:68:ARG:HD3	39:BR:92:TRP:CZ2	2.39	0.58
1:CA:190:A:C8	1:CA:191:G:H1'	2.39	0.58
2:CB:139:ARG:HD2	2:CB:139:ARG:C	2.29	0.58
6:CF:86:ARG:CG	6:CF:86:ARG:HH11	2.17	0.58
11:CK:125:LYS:O	21:CU:34:ARG:NE	2.35	0.58
22:DA:1210:G:O6	22:DA:1237:A:O2'	2.12	0.58
22:DA:1648:U:H2'	22:DA:1649:G:O4'	2.03	0.58
22:DA:2061:G:C6	56:DA:3001:DOL:HC19	2.39	0.58
22:DA:2123:G:C2	22:DA:2176:A:C2	2.92	0.58
30:DI:10:LYS:HB2	30:DI:56:PRO:CB	2.33	0.58
9:AI:50:GLN:C	9:AI:52:LEU:H	2.11	0.58
11:AK:69:ARG:CD	22:BA:2146:C:N3	2.66	0.58
18:AR:47:THR:HG22	18:AR:48:ARG:O	2.02	0.58
22:BA:544:C:H5'	22:BA:545:U:OP2	2.04	0.58
42:BU:49:VAL:O	42:BU:49:VAL:HG22	2.04	0.58
1:CA:1330:U:H4'	13:CM:23:TYR:CE1	2.38	0.58
4:CD:29:ASP:C	4:CD:31:LYS:N	2.61	0.58
22:DA:223:A:C4	22:DA:408:G:H1'	2.38	0.58
22:DA:306:U:O2	22:DA:312:G:N2	2.37	0.58
22:DA:425:G:N2	22:DA:426:C:C2	2.72	0.58
22:DA:447:A:N1	22:DA:454:A:O2'	2.36	0.58
22:DA:622:G:H2'	22:DA:623:C:C6	2.38	0.58
1:AA:152:A:N6	1:AA:170:U:C2	2.71	0.58
1:AA:887:G:C2'	1:AA:888:G:H5'	2.34	0.58
1:AA:1337:G:C5'	1:AA:1338:G:OP1	2.51	0.58
3:AC:7:PRO:HG2	3:AC:184:TYR:CD1	2.39	0.58
20:AT:58:VAL:HG12	20:AT:59:ASP:N	2.18	0.58
22:BA:1020:A:C2	22:BA:1141:U:C2	2.92	0.58
22:BA:1695:G:H1'	24:BC:8:PRO:O	2.04	0.58
22:BA:1786:A:C4	22:BA:1938:A:C6	2.91	0.58
22:BA:2665:A:C2	22:BA:2666:C:C6	2.91	0.58
5:CE:56:VAL:O	5:CE:60:ILE:HG23	2.04	0.58
6:CF:8:PHE:CZ	6:CF:60:VAL:HB	2.38	0.58
6:CF:26:THR:O	6:CF:30:THR:OG1	2.22	0.58
18:CR:63:ARG:HB3	18:CR:70:TYR:CE1	2.38	0.58
22:DA:182:A:H2'	22:DA:183:C:C6	2.39	0.58
22:DA:454:A:H4'	22:DA:455:C:OP2	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:668:A:N6	22:DA:670:A:O2'	2.37	0.58
22:DA:1802:A:C2	22:DA:1803:A:C4	2.92	0.58
22:DA:1809:A:H2'	22:DA:1810:A:C8	2.39	0.58
22:DA:2563:U:H1'	22:DA:2566:A:C6	2.39	0.58
1:AA:736:C:H2'	1:AA:737:C:C6	2.39	0.57
1:AA:1311:A:C2	1:AA:1327:C:N3	2.72	0.57
2:AB:75:ALA:O	2:AB:76:ALA:HB2	2.02	0.57
2:AB:154:MET:O	2:AB:155:GLY:C	2.47	0.57
2:AB:219:ALA:O	2:AB:220:THR:HB	2.03	0.57
16:AP:75:ILE:HG22	16:AP:80:LYS:HE2	1.86	0.57
20:AT:67:ILE:HG13	20:AT:71:LYS:HG2	1.85	0.57
22:BA:1106:G:N2	22:BA:1107:G:H1'	2.19	0.57
22:BA:1377:G:H5"	22:BA:1378:A:OP2	2.03	0.57
22:BA:1754:A:C6	22:BA:1755:A:C6	2.92	0.57
22:BA:2716:C:O2'	22:BA:2717:C:H5'	2.04	0.57
30:BI:69:PHE:O	30:BI:69:PHE:CD1	2.57	0.57
1:CA:152:A:N6	1:CA:170:U:C2	2.72	0.57
1:CA:765:G:C6	1:CA:812:G:C4	2.92	0.57
1:CA:977:A:H3'	1:CA:977:A:N3	2.19	0.57
2:CB:15:HIS:O	2:CB:15:HIS:CG	2.55	0.57
4:CD:32:CYS:O	4:CD:33:LYS:CB	2.51	0.57
6:CF:97:THR:O	6:CF:98:GLU:CB	2.51	0.57
9:CI:84:THR:HG21	9:CI:103:PHE:HB3	1.86	0.57
12:CL:44:LYS:CB	12:CL:45:PRO:CD	2.82	0.57
22:DA:396:G:C5'	45:DX:13:VAL:HG21	2.34	0.57
22:DA:479:A:H4'	22:DA:480:A:OP1	2.04	0.57
22:DA:1263:U:O4	40:DS:95:ARG:NH1	2.36	0.57
22:DA:1315:C:O2'	22:DA:1392:A:N3	2.33	0.57
29:DH:108:VAL:O	29:DH:110:VAL:N	2.36	0.57
33:DL:55:MET:SD	33:DL:59:ARG:HB3	2.43	0.57
1:AA:1299:A:C6	1:AA:1301:U:O2	2.57	0.57
3:AC:87:LEU:O	3:AC:88:ARG:C	2.46	0.57
4:AD:25:VAL:HG12	4:AD:26:ARG:N	2.19	0.57
9:AI:47:VAL:HA	9:AI:50:GLN:HB2	1.86	0.57
22:BA:580:U:H2'	22:BA:581:C:H6	1.69	0.57
22:BA:826:U:O2'	33:BL:53:GLY:HA3	2.04	0.57
22:BA:1563:U:H2'	22:BA:1564:C:C6	2.39	0.57
29:BH:123:ARG:NH2	1:CA:367:U:OP2	2.31	0.57
43:BV:48:MET:O	43:BV:51:GLN:HG3	2.04	0.57
1:CA:1041:G:H2'	1:CA:1042:A:C8	2.39	0.57
22:DA:247:G:N7	22:DA:249:C:C2	2.72	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:674:G:H1'	26:DE:69:ARG:HE	1.69	0.57
22:DA:842:U:N3	22:DA:843:G:N7	2.52	0.57
22:DA:1109:C:C4	22:DA:1110:G:C6	2.93	0.57
22:DA:1308:A:N6	22:DA:1309:G:C2	2.72	0.57
22:DA:2054:A:OP1	22:DA:2055:C:O2'	2.22	0.57
22:DA:2234:G:C6	22:DA:2235:G:N7	2.72	0.57
35:DN:63:ARG:NH1	35:DN:81:ASN:OD1	2.37	0.57
45:DX:52:SER:OG	45:DX:55:GLY:N	2.35	0.57
1:AA:1107:C:C4	1:AA:1108:G:N7	2.72	0.57
1:AA:1144:G:H5"	1:AA:1145:A:OP2	2.04	0.57
3:AC:12:LEU:O	3:AC:13:GLY:C	2.47	0.57
9:AI:49:ARG:NH2	9:AI:52:LEU:O	2.38	0.57
10:AJ:73:LEU:O	10:AJ:74:VAL:HB	2.04	0.57
22:BA:278:A:C2	22:BA:362:A:C8	2.91	0.57
22:BA:585:G:N7	38:BQ:6:ARG:NH1	2.53	0.57
22:BA:927:A:H2'	22:BA:928:A:C8	2.39	0.57
22:BA:1385:A:C4	22:BA:1386:C:C5	2.93	0.57
22:BA:2032:G:N7	58:BA:3534:HOH:O	2.32	0.57
26:BE:119:ILE:HB	26:BE:187:VAL:HG22	1.84	0.57
1:CA:412:A:O2'	1:CA:413:G:O5'	2.05	0.57
1:CA:496:A:C2	1:CA:497:G:C5	2.92	0.57
1:CA:527:G:C2	1:CA:528:C:C6	2.92	0.57
2:CB:47:VAL:HB	2:CB:48:PRO:HD3	1.86	0.57
12:CL:90:LEU:CB	12:CL:93:VAL:HG21	2.35	0.57
22:DA:142:A:C5	22:DA:143:C:N4	2.72	0.57
22:DA:1773:A:N7	22:DA:1829:A:H1'	2.19	0.57
37:DP:93:ARG:O	37:DP:94:LYS:CB	2.52	0.57
1:AA:22:G:H4'	1:AA:885:G:C8	2.39	0.57
10:AJ:92:LEU:O	10:AJ:93:ALA:CB	2.52	0.57
22:BA:645:C:O2'	22:BA:646:U:H5"	2.04	0.57
22:BA:1189:A:H2'	22:BA:1190:G:O4'	2.04	0.57
22:BA:1413:A:H2'	22:BA:1414:C:O4'	2.05	0.57
22:BA:1669:A:OP2	58:BA:3722:HOH:O	2.17	0.57
22:BA:1736:U:H2'	22:BA:1737:G:O4'	2.04	0.57
22:BA:1793:C:O2'	22:BA:1794:A:H5'	2.04	0.57
22:BA:2120:G:N2	22:BA:2179:C:O2	2.37	0.57
22:BA:2491:U:H4'	22:BA:2492:U:OP1	2.04	0.57
43:BV:10:LYS:N	43:BV:10:LYS:HE2	2.19	0.57
44:BW:17:GLU:O	44:BW:19:LYS:NZ	2.36	0.57
1:CA:405:U:OP2	4:CD:3:ARG:NH1	2.37	0.57
11:CK:126:LYS:O	21:CU:34:ARG:CZ	2.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:53:A:N7	22:DA:54:G:C5	2.73	0.57
22:DA:106:C:O2'	22:DA:294:A:O2'	2.08	0.57
22:DA:533:G:H5'	38:DQ:24:TYR:CE2	2.39	0.57
22:DA:563:A:C4	22:DA:2018:G:C2	2.93	0.57
22:DA:588:U:H1'	26:DE:85:PHE:CD1	2.39	0.57
22:DA:1050:A:C2	22:DA:2751:G:C4	2.92	0.57
28:DG:176:LYS:O	28:DG:177:LYS:HB2	2.03	0.57
29:DH:117:LEU:HB3	29:DH:120:GLY:O	2.05	0.57
37:DP:91:ALA:HB2	37:DP:113:ARG:HA	1.85	0.57
1:AA:657:U:O2	15:AO:22:THR:CG2	2.52	0.57
2:AB:67:ILE:O	2:AB:68:LEU:CB	2.51	0.57
9:AI:30:ILE:HD11	9:AI:38:TYR:CD2	2.39	0.57
30:BI:82:LYS:O	30:BI:83:ALA:CB	2.52	0.57
38:BQ:9:ILE:O	38:BQ:13:ARG:HG3	2.04	0.57
40:BS:28:LYS:O	40:BS:29:VAL:C	2.47	0.57
40:BS:84:ARG:HB2	40:BS:96:ILE:HG13	1.85	0.57
1:CA:938:A:N6	1:CA:939:G:C6	2.72	0.57
1:CA:957:U:O3'	19:CS:79:THR:OG1	2.21	0.57
15:CO:17:ARG:O	15:CO:18:ASP:CB	2.51	0.57
22:DA:324:A:C2	22:DA:325:G:H1'	2.39	0.57
29:DH:40:THR:O	29:DH:41:LYS:C	2.48	0.57
31:DJ:35:ARG:HG2	31:DJ:40:HIS:CD2	2.40	0.57
39:DR:52:PRO:O	39:DR:53:PHE:CG	2.57	0.57
11:AK:51:GLY:O	11:AK:52:PHE:O	2.22	0.57
11:AK:128:ARG:HG2	11:AK:128:ARG:HH11	1.70	0.57
22:BA:618:G:N7	58:BA:3286:HOH:O	2.32	0.57
22:BA:995:C:H5'	22:BA:995:C:H6	1.70	0.57
22:BA:2808:G:N2	22:BA:2891:U:C6	2.73	0.57
26:BE:91:ASP:C	26:BE:91:ASP:OD1	2.47	0.57
32:BK:36:GLY:HA2	32:BK:62:VAL:O	2.05	0.57
39:BR:51:VAL:HB	39:BR:52:PRO:CD	2.35	0.57
40:BS:55:ILE:CG2	40:BS:66:ILE:HG12	2.35	0.57
53:B5:184:GLU:O	53:B5:185:LYS:CB	2.53	0.57
1:CA:992:U:N3	1:CA:1043:G:N7	2.53	0.57
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.40	0.57
2:CB:16:PHE:CE1	2:CB:18:HIS:CE1	2.93	0.57
22:DA:613:A:HO2'	22:DA:614:A:P	2.25	0.57
22:DA:1181:U:H2'	22:DA:1182:G:C8	2.39	0.57
22:DA:2091:C:H1'	45:DX:34:HIS:CD2	2.39	0.57
22:DA:2615:U:C2	48:D0:4:GLN:HA	2.39	0.57
26:DE:97:ASN:HB2	26:DE:100:MET:SD	2.44	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:169:VAL:O	28:DG:169:VAL:HG12	2.04	0.57
38:DQ:10:ALA:O	38:DQ:13:ARG:HG3	2.05	0.57
42:DU:74:ASN:ND2	42:DU:96:PHE:CD1	2.72	0.57
1:AA:77:A:N1	1:AA:91:U:O4	2.38	0.57
1:AA:108:G:N3	1:AA:108:G:C5'	2.68	0.57
1:AA:614:C:H2'	1:AA:615:G:O4'	2.05	0.57
3:AC:145:GLY:O	3:AC:146:ALA:C	2.48	0.57
10:AJ:53:ILE:HG22	10:AJ:61:ALA:CB	2.35	0.57
19:AS:64:ASP:O	19:AS:65:GLU:HB3	2.02	0.57
22:BA:1078:U:H1'	22:BA:1088:A:N1	2.19	0.57
22:BA:1309:G:H4'	50:B2:7:PRO:HB2	1.85	0.57
22:BA:1731:G:C6	22:BA:1733:G:C6	2.92	0.57
22:BA:2328:A:H2'	22:BA:2329:U:C6	2.40	0.57
29:BH:132:PHE:CE2	29:BH:142:VAL:HG21	2.40	0.57
35:BN:25:ALA:CB	35:BN:48:VAL:HG22	2.35	0.57
38:BQ:89:GLU:H	39:BR:49:ILE:CD1	2.18	0.57
1:CA:1151:A:N3	1:CA:1152:A:C5	2.72	0.57
1:CA:1217:C:H2'	1:CA:1218:C:C6	2.40	0.57
5:CE:83:HIS:CD2	8:CH:96:MET:CE	2.88	0.57
6:CF:9:MET:SD	6:CF:59:TYR:CE1	2.98	0.57
7:CG:125:SER:O	7:CG:127:ALA:N	2.37	0.57
22:DA:12:U:O2	22:DA:12:U:H2'	2.04	0.57
22:DA:46:G:C2	22:DA:47:C:C6	2.92	0.57
22:DA:1353:A:C8	22:DA:1378:A:N6	2.73	0.57
22:DA:1566:A:C2	24:DC:213:TRP:CE3	2.92	0.57
22:DA:1753:G:C2	22:DA:1756:G:C2	2.92	0.57
22:DA:2272:U:H5"	22:DA:2273:A:OP1	2.03	0.57
22:DA:2387:U:H1'	44:DW:41:ARG:CD	2.35	0.57
24:DC:16:VAL:HG22	24:DC:206:GLY:HA3	1.87	0.57
25:DD:140:HIS:NE2	58:DD:303:HOH:O	2.32	0.57
29:DH:21:VAL:HG22	29:DH:22:LYS:N	2.19	0.57
37:DP:103:ARG:HB3	37:DP:108:ALA:HB2	1.87	0.57
5:AE:101:GLU:HB3	5:AE:122:ASN:CB	2.34	0.57
6:AF:18:VAL:N	6:AF:19:PRO:HD2	2.20	0.57
15:AO:87:LEU:O	15:AO:88:ARG:CB	2.52	0.57
22:BA:1688:U:H1'	22:BA:1701:A:C6	2.40	0.57
22:BA:2191:A:C2	22:BA:2192:U:C4	2.93	0.57
26:BE:106:LYS:HG3	26:BE:200:LEU:HG	1.85	0.57
41:BT:64:LYS:N	41:BT:64:LYS:HD3	2.19	0.57
53:B5:125:GLY:O	53:B5:126:SER:CB	2.53	0.57
1:CA:17:U:H2'	1:CA:18:C:C6	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:563:A:H2'	1:CA:567:G:C8	2.40	0.57
16:CP:39:PHE:CD1	16:CP:74:LEU:HD11	2.39	0.57
22:DA:372:G:N2	22:DA:401:A:OP2	2.36	0.57
22:DA:744:U:H4'	22:DA:1658:C:H4'	1.87	0.57
22:DA:893:C:H2'	22:DA:894:U:O4'	2.05	0.57
22:DA:1272:A:C2	22:DA:1618:A:C4	2.92	0.57
22:DA:2199:A:C6	22:DA:2200:C:C2	2.93	0.57
22:DA:2882:A:H5'	35:DN:96:ARG:HB2	1.86	0.57
30:DI:28:LEU:C	30:DI:28:LEU:HD12	2.30	0.57
32:DK:105:ARG:NH2	37:DP:34:GLU:OE2	2.37	0.57
37:DP:103:ARG:CB	37:DP:108:ALA:HB2	2.35	0.57
1:AA:495:A:C2	1:AA:496:A:C6	2.93	0.57
3:AC:155:GLY:HA2	3:AC:163:ALA:HB1	1.87	0.57
9:AI:112:GLU:OE2	9:AI:115:LYS:NZ	2.38	0.57
18:AR:26:ILE:O	18:AR:30:LYS:HG3	2.05	0.57
22:BA:495:G:H1'	40:BS:57:ASN:OD1	2.05	0.57
22:BA:974:G:H8	22:BA:990:A:H62	1.51	0.57
22:BA:1283:G:N1	22:BA:1286:A:OP2	2.38	0.57
22:BA:2825:G:C2'	22:BA:2826:A:H5'	2.35	0.57
29:BH:95:GLY:HA2	29:BH:117:LEU:HD22	1.87	0.57
29:BH:117:LEU:HD21	29:BH:121:VAL:CA	2.35	0.57
39:BR:9:GLY:C	39:BR:10:LYS:HG2	2.29	0.57
1:CA:455:G:N2	1:CA:478:A:C2	2.72	0.57
3:CC:72:ARG:HB3	3:CC:75:ILE:HG23	1.86	0.57
22:DA:43:G:N2	22:DA:437:U:C6	2.73	0.57
22:DA:537:G:N1	22:DA:555:G:C2	2.73	0.57
22:DA:667:U:C4	22:DA:668:A:N7	2.73	0.57
22:DA:2800:A:C2	22:DA:2895:G:H1'	2.40	0.57
35:DN:84:GLY:N	35:DN:85:PRO:CD	2.68	0.57
36:DO:33:ARG:O	36:DO:34:HIS:HB2	2.04	0.57
39:DR:52:PRO:O	39:DR:53:PHE:CB	2.53	0.57
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.86	0.57
1:AA:1238:A:C2	1:AA:1303:C:H4'	2.40	0.57
4:AD:174:ASP:O	4:AD:175:ALA:HB3	2.04	0.57
22:BA:666:A:H4'	33:BL:48:ARG:HD3	1.87	0.57
22:BA:851:C:H2'	22:BA:852:U:C6	2.40	0.57
22:BA:1924:C:OP2	22:BA:1924:C:H3'	2.05	0.57
22:BA:1926:U:O2	22:BA:1928:A:N7	2.38	0.57
22:BA:2086:U:H2'	22:BA:2087:G:C8	2.40	0.57
1:CA:8:A:C5	4:CD:206:LYS:HB3	2.40	0.57
1:CA:160:A:H2'	1:CA:161:A:O4'	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:269:C:H2'	1:CA:270:A:C8	2.40	0.57
1:CA:412:A:HO2'	1:CA:413:G:P	2.26	0.57
1:CA:545:C:OP2	4:CD:59:GLN:NE2	2.36	0.57
17:CQ:16:LYS:C	17:CQ:17:MET:SD	2.88	0.57
22:DA:56:A:C2	22:DA:57:C:C2	2.92	0.57
22:DA:411:G:OP2	22:DA:2406:A:O2'	2.15	0.57
22:DA:1125:G:C6	22:DA:1126:A:N6	2.72	0.57
22:DA:1343:G:H1'	22:DA:1597:A:C4	2.40	0.57
22:DA:1509:A:O2'	22:DA:1510:G:P	2.63	0.57
22:DA:2293:G:OP1	22:DA:2377:A:N6	2.38	0.57
28:DG:176:LYS:O	28:DG:177:LYS:CB	2.52	0.57
1:AA:80:A:C2	1:AA:90:C:N3	2.73	0.56
1:AA:269:C:H2'	1:AA:270:A:C8	2.40	0.56
22:BA:831:G:OP1	58:BA:3262:HOH:O	2.17	0.56
22:BA:1009:A:P	31:BJ:39:LYS:HZ1	2.28	0.56
22:BA:1179:G:C5	22:BA:1180:U:C1'	2.88	0.56
22:BA:1605:C:H2'	22:BA:1606:C:H5'	1.87	0.56
30:BI:21:SER:N	30:BI:22:PRO:CD	2.68	0.56
1:CA:145:G:C2	1:CA:146:G:C8	2.92	0.56
1:CA:214:C:H2'	1:CA:215:C:C6	2.40	0.56
9:CI:116:VAL:CG2	10:CJ:62:ARG:HD3	2.35	0.56
22:DA:749:A:C5	22:DA:1618:A:C2	2.93	0.56
22:DA:1581:G:C6	22:DA:1582:C:C4	2.93	0.56
22:DA:2652:C:C4	22:DA:2653:U:C4	2.93	0.56
26:DE:84:THR:O	26:DE:85:PHE:CG	2.58	0.56
30:DI:77:ALA:HA	30:DI:80:LEU:HD12	1.87	0.56
47:DZ:24:LEU:HD11	47:DZ:54:MET:CE	2.35	0.56
50:D2:15:SER:OG	50:D2:16:HIS:CE1	2.58	0.56
1:AA:560:A:H5'	1:AA:566:G:N2	2.19	0.56
1:AA:1269:A:C2	1:AA:1313:U:O4'	2.57	0.56
1:AA:1289:A:O3'	7:AG:35:LYS:NZ	2.38	0.56
1:AA:1493:A:O2'	1:AA:1494:G:OP2	2.19	0.56
11:AK:76:GLU:O	11:AK:77:TYR:CD1	2.58	0.56
20:AT:29:ARG:O	20:AT:33:LYS:HG2	2.04	0.56
22:BA:1274:A:N1	22:BA:1644:C:O2'	2.33	0.56
22:BA:1700:A:H5'	22:BA:1701:A:OP2	2.05	0.56
24:BC:97:LYS:N	24:BC:97:LYS:HD2	2.19	0.56
24:BC:167:ARG:O	24:BC:168:ASP:HB2	2.04	0.56
26:BE:54:GLY:O	26:BE:74:LYS:CE	2.53	0.56
39:BR:48:LYS:O	39:BR:48:LYS:HG2	2.05	0.56
41:BT:48:GLN:O	41:BT:52:GLU:HA	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:148:LYS:O	4:CD:149:ALA:HB3	2.04	0.56
5:CE:25:VAL:N	5:CE:28:GLY:O	2.37	0.56
5:CE:153:VAL:O	5:CE:157:ARG:N	2.37	0.56
17:CQ:50:ASN:O	17:CQ:51:ASN:C	2.48	0.56
22:DA:13:A:N1	22:DA:525:U:H2'	2.20	0.56
22:DA:30:G:H2'	22:DA:31:C:O4'	2.05	0.56
22:DA:305:C:H1'	22:DA:313:G:N2	2.20	0.56
22:DA:310:A:O2'	22:DA:311:A:P	2.63	0.56
22:DA:618:G:N7	58:DA:3290:HOH:O	2.33	0.56
22:DA:1091:G:N3	22:DA:1092:C:C5	2.73	0.56
22:DA:1737:G:O6	22:DA:1738:G:N1	2.37	0.56
22:DA:2209:G:C2	22:DA:2216:G:C2	2.94	0.56
22:DA:2725:A:C5	22:DA:2727:A:C8	2.93	0.56
22:DA:2747:G:O6	22:DA:2755:C:H5"	2.05	0.56
23:DB:81:G:C5	23:DB:82:U:C5	2.93	0.56
24:DC:31:ALA:N	24:DC:32:PRO:HD2	2.19	0.56
28:DG:126:PRO:C	28:DG:127:THR:OG1	2.48	0.56
31:DJ:78:THR:OG1	31:DJ:80:HIS:HB2	2.05	0.56
1:AA:616:G:C2	1:AA:617:G:C8	2.93	0.56
2:AB:119:THR:O	2:AB:120:GLN:CB	2.54	0.56
2:AB:154:MET:HE2	2:AB:158:PRO:HG3	1.87	0.56
2:AB:169:GLU:O	2:AB:170:HIS:C	2.47	0.56
10:AJ:33:GLY:O	10:AJ:34:ALA:HB3	2.06	0.56
11:AK:16:VAL:HG22	11:AK:17:SER:N	2.20	0.56
11:AK:76:GLU:N	11:AK:76:GLU:OE2	2.38	0.56
15:AO:63:ARG:HG2	15:AO:67:LEU:CD1	2.36	0.56
16:AP:38:PHE:CE2	16:AP:51:ARG:HB2	2.40	0.56
17:AQ:17:MET:O	17:AQ:19:LYS:N	2.39	0.56
22:BA:274:C:C4	22:BA:275:C:C4	2.94	0.56
22:BA:752:A:H3'	50:B2:1:MET:SD	2.46	0.56
22:BA:1073:A:C3'	22:BA:1074:G:C5'	2.80	0.56
22:BA:1494:A:H2'	22:BA:1495:A:O5'	2.04	0.56
22:BA:1932:A:H5"	22:BA:1933:G:OP2	2.05	0.56
22:BA:2064:C:H2'	22:BA:2065:C:C6	2.39	0.56
23:BB:37:C:C5	23:BB:38:C:C4	2.93	0.56
24:BC:125:LYS:HG2	24:BC:128:ASN:ND2	2.20	0.56
26:BE:59:PRO:HD3	26:BE:71:GLY:O	2.05	0.56
29:BH:117:LEU:CD2	29:BH:121:VAL:H	2.08	0.56
36:BO:79:ALA:HB2	36:BO:110:ALA:HA	1.87	0.56
37:BP:103:ARG:HH11	37:BP:103:ARG:HG3	1.70	0.56
51:B3:27:ALA:O	51:B3:28:ASN:CB	2.53	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:106:C:O2	1:CA:379:C:H4'	2.05	0.56
1:CA:919:A:C2	1:CA:920:U:C5	2.94	0.56
2:CB:35:ARG:O	2:CB:38:VAL:HG12	2.06	0.56
2:CB:210:VAL:HG22	2:CB:211:THR:N	2.19	0.56
22:DA:204:A:O4'	22:DA:206:U:C6	2.58	0.56
22:DA:290:U:C4	22:DA:291:G:N7	2.73	0.56
22:DA:684:G:C2	22:DA:794:A:C2	2.93	0.56
22:DA:1313:U:O2	22:DA:1313:U:H2'	2.05	0.56
22:DA:1327:A:H2'	22:DA:1328:A:O4'	2.06	0.56
22:DA:1973:G:C6	22:DA:1974:C:N4	2.73	0.56
22:DA:2199:A:O4'	29:DH:28:ASN:ND2	2.39	0.56
22:DA:2550:G:O6	22:DA:2551:C:N4	2.37	0.56
22:DA:2599:G:N7	24:DC:236:GLU:HB3	2.19	0.56
1:AA:81:A:C2'	1:AA:82:G:H5"	2.36	0.56
4:AD:125:VAL:O	4:AD:126:ASN:C	2.47	0.56
6:AF:98:GLU:CG	6:AF:99:ALA:N	2.68	0.56
14:AN:43:ASN:OD1	14:AN:47:LYS:NZ	2.38	0.56
17:AQ:45:HIS:CD2	17:AQ:70:THR:CG2	2.88	0.56
22:BA:627:A:C6	22:BA:637:A:C8	2.93	0.56
22:BA:1073:A:C3'	22:BA:1074:G:H5"	2.35	0.56
22:BA:1277:G:H5'	35:BN:20:MET:HE2	1.87	0.56
22:BA:1786:A:H1'	22:BA:1938:A:N6	2.21	0.56
22:BA:1912:A:C2	22:BA:1919:A:C5	2.93	0.56
1:CA:466:A:N1	1:CA:468:A:N7	2.53	0.56
1:CA:572:A:H5'	1:CA:573:A:OP2	2.06	0.56
1:CA:1000:A:H2'	1:CA:1001:C:O4'	2.06	0.56
7:CG:129:GLU:OE1	7:CG:129:GLU:N	2.38	0.56
22:DA:1853:A:N3	22:DA:2233:U:O2'	2.37	0.56
22:DA:2032:G:N7	58:DA:3531:HOH:O	2.33	0.56
22:DA:2839:G:C6	22:DA:2840:C:C4	2.93	0.56
24:DC:108:LYS:HA	24:DC:196:GLY:HA3	1.86	0.56
29:DH:32:PRO:HB3	45:DX:39:TRP:HB3	1.87	0.56
29:DH:83:LYS:N	29:DH:149:GLU:HG2	2.20	0.56
47:DZ:10:THR:HG23	47:DZ:54:MET:C	2.30	0.56
1:AA:1492:A:OP1	12:AL:44:LYS:HA	2.05	0.56
10:AJ:34:ALA:O	10:AJ:35:GLN:CB	2.53	0.56
15:AO:63:ARG:CG	15:AO:67:LEU:HD12	2.35	0.56
22:BA:655:A:H4'	22:BA:656:G:OP1	2.05	0.56
22:BA:1585:C:C2'	22:BA:1586:A:H5'	2.35	0.56
22:BA:1916:A:C2	22:BA:1917:U:O2	2.59	0.56
26:BE:54:GLY:O	26:BE:74:LYS:HE2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:21:ASN:O	27:BF:21:ASN:CG	2.48	0.56
49:B1:51:GLU:OE2	49:B1:53:LYS:HD3	2.05	0.56
1:CA:8:A:C6	4:CD:206:LYS:HB3	2.40	0.56
1:CA:247:G:C6	1:CA:278:G:N1	2.72	0.56
1:CA:955:U:O2'	1:CA:1227:A:N6	2.39	0.56
2:CB:85:LEU:HG	2:CB:85:LEU:O	2.05	0.56
22:DA:424:G:C2	22:DA:425:G:C8	2.93	0.56
22:DA:2112:G:H2'	22:DA:2112:G:N3	2.21	0.56
22:DA:2499:C:N4	22:DA:2500:U:O4	2.38	0.56
22:DA:2521:C:C2	22:DA:2545:G:N2	2.74	0.56
22:DA:2820:A:C8	25:DD:196:ALA:CB	2.89	0.56
33:DL:95:LEU:O	33:DL:100:ILE:HG23	2.06	0.56
42:DU:54:GLN:N	42:DU:55:PRO:HD3	2.21	0.56
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.05	0.56
5:AE:157:ARG:HD2	8:AH:43:GLU:O	2.05	0.56
13:AM:16:VAL:HG23	13:AM:41:GLU:O	2.05	0.56
20:AT:44:LYS:CD	20:AT:87:ALA:HA	2.36	0.56
22:BA:819:A:OP2	22:BA:1187:G:N2	2.29	0.56
22:BA:1001:A:P	58:BA:3735:HOH:O	2.57	0.56
22:BA:1405:U:H2'	22:BA:1406:U:C6	2.41	0.56
22:BA:1824:G:N3	24:BC:252:THR:HG21	2.20	0.56
22:BA:1941:C:O2	22:BA:1941:C:H2'	2.05	0.56
46:BY:6:LEU:O	46:BY:60:LYS:NZ	2.34	0.56
1:CA:511:C:C2	1:CA:512:U:C5	2.93	0.56
1:CA:755:G:C2	1:CA:756:C:C5	2.93	0.56
1:CA:824:G:H1'	8:CH:2:SER:N	2.21	0.56
5:CE:15:LEU:C	5:CE:15:LEU:HD12	2.30	0.56
22:DA:294:A:N6	22:DA:345:A:C4	2.73	0.56
22:DA:847:U:O2	22:DA:847:U:H2'	2.06	0.56
22:DA:1312:U:C2	22:DA:1603:A:N1	2.74	0.56
22:DA:1693:U:O2'	24:DC:14:ARG:NH2	2.38	0.56
22:DA:1817:G:H2'	22:DA:1818:U:H5'	1.88	0.56
22:DA:2171:A:O2'	22:DA:2173:A:OP1	2.23	0.56
22:DA:2262:U:H1'	22:DA:2328:A:H1'	1.88	0.56
23:DB:32:U:C2	23:DB:51:G:N2	2.74	0.56
30:DI:80:LEU:HA	30:DI:84:ALA:CB	2.35	0.56
37:DP:113:ARG:O	37:DP:114:LEU:C	2.48	0.56
39:DR:14:VAL:HG21	39:DR:98:ILE:HG13	1.87	0.56
1:AA:205:A:H2'	1:AA:205:A:N3	2.21	0.56
1:AA:692:U:O2'	1:AA:694:A:N7	2.24	0.56
17:AQ:16:LYS:HG3	17:AQ:16:LYS:O	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:80:GLU:C	17:AQ:81:LYS:HD3	2.30	0.56
22:BA:644:A:H2'	22:BA:645:C:O4'	2.06	0.56
22:BA:947:A:O2'	22:BA:984:A:C2	2.56	0.56
22:BA:1071:G:C8	22:BA:1089:A:N6	2.74	0.56
22:BA:1915:U:H2'	22:BA:1916:A:H5'	1.87	0.56
22:BA:1916:A:H2'	22:BA:1917:U:O2'	2.05	0.56
22:BA:2474:U:H5"	22:BA:2475:C:OP2	2.06	0.56
24:BC:86:ASN:N	24:BC:86:ASN:OD1	2.38	0.56
29:BH:40:THR:OG1	29:BH:43:ASN:OD1	2.24	0.56
53:B5:50:ILE:HG22	53:B5:51:ASP:H	1.71	0.56
1:CA:1348:U:H4'	9:CI:122:ARG:HG3	1.88	0.56
1:CA:1491:G:C6	1:CA:1492:A:N1	2.74	0.56
2:CB:15:HIS:O	2:CB:16:PHE:C	2.48	0.56
4:CD:174:ASP:O	4:CD:175:ALA:HB2	2.05	0.56
12:CL:57:LEU:O	12:CL:58:THR:C	2.49	0.56
19:CS:55:ARG:NE	19:CS:79:THR:HG22	2.20	0.56
21:CU:14:VAL:HG12	21:CU:16:LEU:HG	1.88	0.56
22:DA:478:A:C2	22:DA:480:A:C4	2.94	0.56
22:DA:848:C:H2'	22:DA:849:A:C8	2.41	0.56
22:DA:1436:G:N2	22:DA:1557:C:C2	2.74	0.56
22:DA:2053:G:H2'	22:DA:2054:A:O4'	2.06	0.56
32:DK:30:ARG:NH2	32:DK:37:ASP:OD1	2.39	0.56
41:DT:23:ALA:O	41:DT:27:SER:N	2.39	0.56
1:AA:683:G:N2	11:AK:40:ASN:HA	2.21	0.56
1:AA:844:G:N3	1:AA:845:A:N7	2.54	0.56
1:AA:1319:A:C8	1:AA:1323:G:C6	2.94	0.56
1:AA:1322:C:OP1	19:AS:78:ARG:NH2	2.39	0.56
17:AQ:16:LYS:HB3	17:AQ:17:MET:HE1	1.86	0.56
22:BA:776:G:H4'	22:BA:777:G:O5'	2.05	0.56
22:BA:953:G:H5"	34:BM:16:ARG:NH1	2.21	0.56
22:BA:1277:G:C5'	35:BN:20:MET:HE2	2.36	0.56
22:BA:1436:G:N2	22:BA:1557:C:C2	2.74	0.56
22:BA:2825:G:H2'	22:BA:2826:A:H5'	1.86	0.56
41:BT:63:VAL:O	41:BT:79:ASP:HB3	2.06	0.56
1:CA:620:C:C2	4:CD:132:ILE:HD13	2.41	0.56
1:CA:632:U:O2	1:CA:632:U:H2'	2.06	0.56
1:CA:1093:A:C5	1:CA:1095:U:O4'	2.58	0.56
6:CF:45:ARG:HD2	6:CF:59:TYR:CE2	2.41	0.56
22:DA:565:C:H4'	22:DA:1253:A:N6	2.21	0.56
22:DA:868:U:C4	22:DA:869:G:N7	2.74	0.56
22:DA:1115:G:O2'	22:DA:1116:G:OP2	2.18	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1530:G:C2	22:DA:1542:U:O2	2.58	0.56
22:DA:1907:G:C2	22:DA:1924:C:C2	2.94	0.56
22:DA:2024:G:OP2	22:DA:2034:U:H4'	2.05	0.56
22:DA:2571:U:C4	22:DA:2574:G:H8	2.24	0.56
56:DA:3001:DOL:H463	56:DA:3001:DOL:C48	2.16	0.56
25:DD:187:LEU:CD2	25:DD:203:VAL:HG11	2.36	0.56
29:DH:53:GLU:O	29:DH:54:LEU:C	2.49	0.56
36:DO:100:HIS:CD2	36:DO:101:GLY:N	2.74	0.56
1:AA:2:A:N6	1:AA:3:A:N1	2.53	0.56
1:AA:265:G:H4'	17:AQ:67:LEU:O	2.05	0.56
1:AA:429:U:H1'	1:AA:430:A:H5"	1.87	0.56
1:AA:1031:C:H4'	1:AA:1032:G:O5'	2.06	0.56
2:AB:181:ILE:O	2:AB:183:VAL:HG23	2.04	0.56
4:AD:26:ARG:CD	4:AD:31:LYS:HD2	2.36	0.56
20:AT:58:VAL:CG1	20:AT:72:ALA:CB	2.84	0.56
22:BA:1917:U:H2'	22:BA:1918:A:H5'	1.87	0.56
22:BA:2334:U:C4	36:BO:16:ARG:HD3	2.40	0.56
27:BF:42:GLU:O	27:BF:42:GLU:HG2	2.06	0.56
32:BK:116:ILE:HG13	32:BK:117:SER:N	2.21	0.56
1:CA:375:U:C2	1:CA:376:G:C8	2.94	0.56
1:CA:718:A:C8	1:CA:719:C:C5	2.94	0.56
5:CE:109:GLY:O	5:CE:110:ALA:HB3	2.05	0.56
19:CS:80:TYR:O	19:CS:81:ARG:CB	2.54	0.56
20:CT:60:ARG:O	20:CT:64:LYS:N	2.36	0.56
22:DA:1062:G:C5	22:DA:1088:A:H2'	2.41	0.56
24:DC:57:GLY:HA3	24:DC:213:TRP:HA	1.88	0.56
24:DC:80:ARG:NE	24:DC:82:GLU:OE2	2.39	0.56
32:DK:121:GLU:O	32:DK:122:VAL:O	2.24	0.56
51:D3:26:HIS:CE1	51:D3:48:ALA:HB2	2.41	0.56
52:D4:36:ARG:CG	52:D4:37:GLN:N	2.68	0.56
1:AA:11:G:C5	1:AA:12:U:C5	2.93	0.56
19:AS:5:LEU:O	19:AS:7:LYS:N	2.38	0.56
22:BA:813:U:H2'	22:BA:814:C:C6	2.41	0.56
22:BA:973:A:H5'	22:BA:1188:U:H1'	1.87	0.56
22:BA:2243:U:OP1	58:BA:3739:HOH:O	2.17	0.56
27:BF:106:ILE:C	27:BF:109:PRO:HD2	2.31	0.56
37:BP:31:TRP:CE2	37:BP:40:LEU:CD1	2.89	0.56
52:B4:36:ARG:HG2	52:B4:37:GLN:N	2.20	0.56
1:CA:337:G:H2'	1:CA:338:A:C8	2.40	0.56
1:CA:664:G:N2	1:CA:666:G:C8	2.74	0.56
1:CA:991:U:C4	1:CA:1212:U:O4'	2.59	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1004:A:C6	1:CA:1005:A:C6	2.93	0.56
3:CC:36:ASP:C	3:CC:38:LYS:H	2.14	0.56
21:CU:35:ARG:NH2	58:CU:101:HOH:O	2.39	0.56
22:DA:546:U:O2'	22:DA:547:A:O4'	2.20	0.56
22:DA:1087:G:C2	22:DA:1089:A:C2	2.94	0.56
22:DA:1304:A:N1	22:DA:1305:C:C4	2.74	0.56
22:DA:2111:U:C4	22:DA:2145:C:H2'	2.41	0.56
22:DA:2365:G:H4'	44:DW:60:PHE:CE2	2.41	0.56
22:DA:2602:A:H4'	22:DA:2603:G:H5'	1.86	0.56
45:DX:68:LEU:HD22	45:DX:78:TYR:CZ	2.41	0.56
1:AA:17:U:H2'	1:AA:18:C:C6	2.41	0.55
1:AA:276:G:P	17:AQ:17:MET:HE2	2.46	0.55
10:AJ:35:GLN:CG	10:AJ:77:VAL:HB	2.36	0.55
20:AT:70:ASN:OD1	20:AT:70:ASN:N	2.28	0.55
22:BA:878:A:N6	22:BA:899:A:O2'	2.39	0.55
22:BA:1009:A:OP2	31:BJ:39:LYS:NZ	2.38	0.55
22:BA:1322:A:O3'	40:BS:84:ARG:NH1	2.37	0.55
22:BA:2076:U:O2	22:BA:2076:U:O4'	2.23	0.55
30:BI:116:ASP:O	30:BI:117:MET:CB	2.54	0.55
37:BP:52:ASN:O	37:BP:53:ARG:HG2	2.06	0.55
40:BS:73:LYS:HB2	40:BS:106:VAL:HB	1.87	0.55
1:CA:495:A:N1	1:CA:496:A:N6	2.53	0.55
1:CA:568:G:N2	1:CA:883:C:C2	2.74	0.55
1:CA:866:C:C5	1:CA:867:G:H1'	2.41	0.55
1:CA:1029:U:O2	1:CA:1029:U:H2'	2.05	0.55
1:CA:1417:G:C6	1:CA:1482:G:C6	2.94	0.55
12:CL:3:THR:HB	12:CL:6:GLN:HG3	1.86	0.55
22:DA:158:U:O2	22:DA:169:G:C2	2.58	0.55
22:DA:301:G:H1'	22:DA:302:C:C6	2.41	0.55
22:DA:532:A:N7	22:DA:2021:C:H2'	2.20	0.55
22:DA:559:G:N3	38:DQ:56:GLN:NE2	2.55	0.55
22:DA:776:G:C8	22:DA:793:A:C4	2.94	0.55
22:DA:1627:G:C2	22:DA:1628:G:C8	2.94	0.55
22:DA:2550:G:C6	22:DA:2551:C:N4	2.75	0.55
22:DA:2726:A:O2'	22:DA:2727:A:O5'	2.24	0.55
30:DI:18:ALA:O	30:DI:19:ASN:CB	2.54	0.55
39:DR:80:ARG:C	39:DR:82:HIS:H	2.14	0.55
42:DU:54:GLN:N	42:DU:55:PRO:CD	2.69	0.55
1:AA:91:U:H2'	1:AA:92:U:O4'	2.07	0.55
1:AA:211:G:N2	1:AA:212:G:C8	2.74	0.55
1:AA:1426:G:H2'	1:AA:1427:C:O4'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:186:ILE:HA	2:AB:200:ILE:HB	1.88	0.55
5:AE:155:ALA:HB1	8:AH:66:PHE:CZ	2.41	0.55
9:AI:40:GLY:O	9:AI:41:ARG:CB	2.55	0.55
22:BA:682:G:H5'	50:B2:26:ASN:OD1	2.05	0.55
22:BA:686:U:H2'	22:BA:788:A:N1	2.22	0.55
22:BA:1045:C:C3'	22:BA:1046:A:H5'	2.36	0.55
22:BA:1794:A:H2'	22:BA:1795:C:H6	1.70	0.55
25:BD:151:THR:HG22	25:BD:152:PRO:CD	2.36	0.55
25:BD:151:THR:HG22	25:BD:152:PRO:HD2	1.87	0.55
27:BF:28:VAL:HG13	27:BF:28:VAL:O	2.06	0.55
1:CA:134:G:H2'	1:CA:135:C:O4'	2.07	0.55
1:CA:407:U:H2'	1:CA:408:A:C8	2.41	0.55
1:CA:644:U:H2'	1:CA:645:G:O4'	2.06	0.55
21:CU:53:VAL:HG13	21:CU:54:LYS:N	2.21	0.55
22:DA:200:U:O4	22:DA:248:G:C2	2.59	0.55
22:DA:478:A:C6	22:DA:480:A:C6	2.94	0.55
22:DA:1847:A:C2'	22:DA:1848:A:OP2	2.54	0.55
22:DA:2019:A:H4'	38:DQ:34:VAL:CG2	2.36	0.55
22:DA:2854:G:N2	22:DA:2864:G:C2	2.75	0.55
39:DR:39:LEU:HA	39:DR:49:ILE:HG21	1.87	0.55
39:DR:66:HIS:CD2	39:DR:94:THR:HG23	2.41	0.55
45:DX:33:LEU:HD23	45:DX:50:ARG:CZ	2.36	0.55
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.41	0.55
4:AD:130:VAL:HG11	4:AD:135:TYR:CD1	2.40	0.55
22:BA:45:G:H5"	22:BA:46:G:H5'	1.88	0.55
22:BA:58:G:OP1	41:BT:78:SER:CB	2.55	0.55
22:BA:626:A:H2'	33:BL:78:ARG:NH1	2.20	0.55
22:BA:1079:C:C5	22:BA:1088:A:N1	2.75	0.55
22:BA:1932:A:C2	22:BA:1969:A:C2	2.95	0.55
22:BA:2153:C:H2'	22:BA:2154:A:O4'	2.07	0.55
22:BA:2177:C:O2'	53:B5:47:LYS:NZ	2.35	0.55
56:BA:3001:DOL:N5	56:BA:3001:DOL:C42	2.68	0.55
27:BF:108:VAL:N	27:BF:109:PRO:CD	2.69	0.55
32:BK:70:ARG:HD3	32:BK:76:VAL:HG22	1.87	0.55
4:CD:9:LEU:CD2	4:CD:22:LYS:HD2	2.37	0.55
6:CF:80:PHE:CG	6:CF:80:PHE:O	2.59	0.55
12:CL:25:GLU:C	12:CL:27:CYS:N	2.60	0.55
18:CR:58:ALA:O	18:CR:61:ARG:N	2.40	0.55
22:DA:669:G:C2	22:DA:801:G:N1	2.74	0.55
22:DA:1020:A:C2	22:DA:1141:U:C2	2.94	0.55
22:DA:1530:G:N2	22:DA:1542:U:O2	2.38	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1856:U:C4	22:DA:1857:G:C6	2.95	0.55
22:DA:1998:A:OP2	25:DD:141:ARG:NH2	2.39	0.55
22:DA:2843:G:N2	22:DA:2875:C:C2	2.74	0.55
30:DI:80:LEU:HD23	30:DI:84:ALA:HB2	1.88	0.55
50:D2:35:ARG:O	50:D2:38:GLY:N	2.39	0.55
1:AA:1350:A:OP1	9:AI:123:ARG:NE	2.38	0.55
9:AI:58:VAL:O	9:AI:58:VAL:HG12	2.06	0.55
16:AP:38:PHE:CZ	16:AP:51:ARG:HB2	2.42	0.55
22:BA:1911:U:C4	22:BA:1918:A:C5	2.94	0.55
40:BS:63:GLY:O	40:BS:64:ALA:HB3	2.05	0.55
41:BT:33:LYS:HG3	41:BT:80:TRP:CE3	2.41	0.55
22:DA:699:A:H2'	22:DA:700:G:O4'	2.06	0.55
22:DA:1316:U:C2	22:DA:1337:G:N2	2.75	0.55
22:DA:1438:U:C5	22:DA:1552:A:N1	2.74	0.55
22:DA:1730:C:O2'	22:DA:1731:G:C2	2.58	0.55
22:DA:1869:G:H3'	22:DA:1870:C:H5'	1.88	0.55
22:DA:1935:G:H1'	22:DA:1964:G:N2	2.21	0.55
22:DA:2146:C:H4'	22:DA:2147:A:OP1	2.05	0.55
22:DA:2310:C:C4	27:DF:77:PHE:CZ	2.94	0.55
25:DD:112:THR:O	25:DD:195:GLY:HA2	2.06	0.55
39:DR:78:ARG:HB3	39:DR:83:TYR:CD1	2.41	0.55
21:AU:11:PRO:C	21:AU:12:PHE:CD2	2.84	0.55
22:BA:580:U:H2'	22:BA:581:C:C6	2.40	0.55
22:BA:2192:U:C4	22:BA:2193:G:C8	2.94	0.55
22:BA:2314:A:OP1	27:BF:88:LYS:NZ	2.40	0.55
39:BR:29:THR:O	39:BR:63:VAL:HB	2.07	0.55
1:CA:801:U:C2	1:CA:802:A:N7	2.75	0.55
1:CA:1089:G:N2	1:CA:1090:U:H1'	2.22	0.55
1:CA:1298:U:O2	1:CA:1298:U:C2'	2.54	0.55
1:CA:1345:U:C2	1:CA:1377:A:C2	2.95	0.55
16:CP:38:PHE:CE2	16:CP:51:ARG:HD2	2.42	0.55
20:CT:67:ILE:O	20:CT:68:HIS:C	2.49	0.55
22:DA:121:G:H1'	22:DA:131:A:C2	2.41	0.55
22:DA:484:C:N4	22:DA:497:A:C2	2.74	0.55
22:DA:902:C:H2'	22:DA:903:C:C6	2.42	0.55
22:DA:1361:G:C5	22:DA:1371:G:N2	2.74	0.55
22:DA:1570:A:H2'	22:DA:1571:A:C8	2.42	0.55
22:DA:1599:U:P	41:DT:40:LYS:HD2	2.47	0.55
22:DA:1917:U:C2'	22:DA:1918:A:H5'	2.37	0.55
22:DA:2162:G:H4'	22:DA:2163:A:OP1	2.06	0.55
1:AA:1226:C:OP2	13:AM:90:ARG:NH2	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1327:C:C2’	1:AA:1328:C:H5’	2.37	0.55
4:AD:123:ILE:HD13	4:AD:123:ILE:N	2.20	0.55
4:AD:152:GLN:O	4:AD:153:SER:C	2.49	0.55
9:AI:58:VAL:O	9:AI:59:GLU:CB	2.55	0.55
22:BA:587:C:C6	22:BA:671:C:H1’	2.42	0.55
22:BA:2077:A:O2’	22:BA:2078:C:H5’	2.07	0.55
22:BA:2683:C:H4’	25:BD:13:ARG:NH1	2.21	0.55
25:BD:12:THR:CG2	37:BP:9:GLU:OE2	2.55	0.55
29:BH:86:ASP:O	29:BH:87:GLU:CB	2.53	0.55
1:CA:624:C:H2’	1:CA:625:U:O4’	2.07	0.55
4:CD:34:ILE:O	4:CD:35:GLU:HB3	2.06	0.55
12:CL:82:ILE:HD11	12:CL:95:TYR:HB2	1.87	0.55
22:DA:35:G:C4	22:DA:454:A:C2	2.94	0.55
22:DA:150:U:H2’	22:DA:151:C:C6	2.41	0.55
22:DA:1740:G:C2	22:DA:1741:C:C2	2.95	0.55
22:DA:2103:C:H2’	22:DA:2104:C:C6	2.41	0.55
22:DA:2390:U:OP2	51:D3:35:LYS:NZ	2.39	0.55
22:DA:2412:A:H3’	22:DA:2413:G:C8	2.42	0.55
22:DA:2469:A:H4’	34:DM:55:ARG:HD3	1.87	0.55
26:DE:8:ALA:O	26:DE:9:GLN:HB2	2.06	0.55
38:DQ:50:ARG:O	38:DQ:54:LYS:NZ	2.33	0.55
45:DX:68:LEU:HD22	45:DX:78:TYR:CE1	2.42	0.55
1:AA:316:C:C2	1:AA:317:U:C5	2.95	0.55
1:AA:1145:A:O2’	1:AA:1146:A:O5’	2.23	0.55
5:AE:119:GLY:O	5:AE:121:HIS:ND1	2.39	0.55
8:AH:83:LEU:C	8:AH:83:LEU:HD22	2.32	0.55
9:AI:30:ILE:HD11	9:AI:38:TYR:HB3	1.87	0.55
22:BA:141:G:H5”	22:BA:142:A:C6	2.41	0.55
22:BA:253:C:OP2	51:B3:5:LYS:HE3	2.07	0.55
22:BA:742:A:H2’	22:BA:743:A:C8	2.41	0.55
22:BA:1731:G:C2	22:BA:1733:G:C4	2.95	0.55
29:BH:98:ASP:O	29:BH:102:ALA:HB3	2.07	0.55
39:BR:49:ILE:CB	39:BR:52:PRO:C	2.79	0.55
43:BV:1:MET:SD	43:BV:1:MET:C	2.90	0.55
1:CA:1060:U:C5’	10:CJ:53:ILE:HG23	2.37	0.55
5:CE:80:THR:OG1	5:CE:98:PRO:O	2.25	0.55
14:CN:80:SER:O	14:CN:81:ARG:C	2.50	0.55
15:CO:27:VAL:HG12	15:CO:28:GLN:N	2.21	0.55
17:CQ:69:LYS:O	17:CQ:69:LYS:HG2	2.06	0.55
22:DA:308:G:C8	22:DA:501:A:H1’	2.42	0.55
22:DA:420:C:H2’	22:DA:421:C:C6	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1138:G:O2'	31:DJ:104:ALA:O	2.23	0.55
22:DA:1182:G:H2'	22:DA:1183:U:O4'	2.07	0.55
22:DA:1352:U:H5	22:DA:1377:G:C5	2.25	0.55
22:DA:1380:G:OP2	58:DA:3751:HOH:O	2.18	0.55
22:DA:1441:G:H2'	22:DA:1442:U:C6	2.42	0.55
22:DA:1459:G:C2	22:DA:1461:C:C2	2.95	0.55
22:DA:1623:G:C5	22:DA:1624:U:C5	2.95	0.55
22:DA:1806:C:O2	24:DC:44:ASN:ND2	2.40	0.55
22:DA:2107:G:C2	22:DA:2183:A:C2	2.95	0.55
22:DA:2176:A:H2'	22:DA:2177:C:C6	2.42	0.55
1:AA:263:A:OP2	20:AT:74:ARG:NH1	2.40	0.55
1:AA:723:U:H5'	1:AA:724:G:OP1	2.05	0.55
10:AJ:6:ILE:HD12	10:AJ:76:ILE:HB	1.89	0.55
12:AL:94:ARG:HB2	12:AL:95:TYR:CE2	2.42	0.55
15:AO:19:ALA:O	15:AO:20:ASN:CB	2.54	0.55
15:AO:19:ALA:O	15:AO:20:ASN:HB2	2.07	0.55
22:BA:958:U:OP2	34:BM:14:LYS:NZ	2.40	0.55
22:BA:996:A:C2	22:BA:997:G:C8	2.94	0.55
22:BA:1028:A:N6	22:BA:1125:G:H2'	2.22	0.55
22:BA:1083:U:O2	22:BA:1085:A:C8	2.59	0.55
22:BA:1802:A:N1	22:BA:1822:C:H1'	2.21	0.55
22:BA:2637:U:C2'	22:BA:2638:G:H5'	2.37	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
29:BH:121:VAL:N	29:BH:122:LEU:CB	2.70	0.55
38:BQ:24:TYR:O	38:BQ:25:TYR:HB2	2.07	0.55
40:BS:4:ILE:HG12	40:BS:106:VAL:HG22	1.89	0.55
1:CA:32:A:H2'	1:CA:32:A:N3	2.21	0.55
1:CA:131:A:O2'	1:CA:262:A:N3	2.40	0.55
1:CA:466:A:C2	1:CA:468:A:C8	2.94	0.55
1:CA:692:U:H1'	1:CA:695:A:N7	2.21	0.55
1:CA:1171:A:C2	1:CA:1172:C:C2	2.95	0.55
1:CA:1394:A:N1	1:CA:1500:A:O2'	2.36	0.55
22:DA:126:A:N7	22:DA:127:A:N1	2.54	0.55
22:DA:144:A:C2	22:DA:145:C:C2	2.94	0.55
22:DA:187:G:N2	22:DA:210:C:H1'	2.22	0.55
22:DA:200:U:C4	22:DA:248:G:N2	2.75	0.55
22:DA:475:C:N3	22:DA:481:G:C6	2.75	0.55
22:DA:528:A:H2'	22:DA:529:A:H5"	1.88	0.55
22:DA:1077:A:C2	22:DA:1088:A:C2	2.95	0.55
22:DA:1293:C:H2'	22:DA:1294:U:O4'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1827:U:H2'	22:DA:1828:G:O5'	2.06	0.55
22:DA:1856:U:O4	22:DA:1857:G:N1	2.40	0.55
22:DA:2395:C:H2'	22:DA:2396:G:O4'	2.07	0.55
25:DD:123:LYS:HG2	25:DD:165:MET:SD	2.47	0.55
30:DI:90:SER:HB3	30:DI:93:PRO:HG3	1.89	0.55
1:AA:1124:G:H3'	1:AA:1145:A:N6	2.21	0.55
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.42	0.55
7:AG:15:ASP:OD2	7:AG:44:TYR:OH	2.25	0.55
9:AI:43:THR:O	9:AI:44:ALA:CB	2.55	0.55
13:AM:15:ALA:HB1	13:AM:34:LEU:HD21	1.88	0.55
22:BA:479:A:N3	22:BA:481:G:H5"	2.22	0.55
22:BA:1084:A:H2'	22:BA:1085:A:C8	2.42	0.55
22:BA:2043:C:OP1	22:BA:2777:G:O2'	2.22	0.55
35:BN:33:ILE:HG13	35:BN:114:GLU:HB3	1.88	0.55
39:BR:64:VAL:HG23	39:BR:65:ALA:N	2.22	0.55
39:BR:67:GLY:C	39:BR:93:PHE:CE2	2.84	0.55
40:BS:55:ILE:HG23	40:BS:66:ILE:HG12	1.89	0.55
1:CA:1003:G:C2	1:CA:1038:C:C4	2.95	0.55
4:CD:22:LYS:O	4:CD:23:SER:C	2.49	0.55
4:CD:124:MET:HE2	4:CD:146:ARG:HA	1.87	0.55
5:CE:50:TYR:O	5:CE:51:GLY:O	2.24	0.55
22:DA:277:G:C2'	22:DA:361:G:O6	2.55	0.55
22:DA:374:A:C6	22:DA:401:A:C8	2.95	0.55
22:DA:1027:A:N6	22:DA:1126:A:N3	2.55	0.55
22:DA:2091:C:C3'	22:DA:2092:U:H5"	2.35	0.55
22:DA:2120:G:C2	22:DA:2121:G:C8	2.95	0.55
22:DA:2341:G:C6	22:DA:2342:C:C4	2.95	0.55
22:DA:2831:G:OP1	25:DD:56:LYS:NZ	2.36	0.55
24:DC:210:ALA:HA	24:DC:213:TRP:CE2	2.41	0.55
29:DH:31:VAL:HB	29:DH:32:PRO:HD3	1.89	0.55
42:DU:41:LEU:HD12	42:DU:60:GLU:HG2	1.89	0.55
42:DU:72:ILE:HD13	42:DU:83:VAL:CG2	2.37	0.55
45:DX:31:PRO:HB2	45:DX:33:LEU:CD1	2.37	0.55
1:AA:254:G:OP1	17:AQ:69:LYS:O	2.25	0.55
1:AA:582:C:C4	1:AA:583:A:N7	2.74	0.55
1:AA:667:G:H4'	15:AO:51:HIS:ND1	2.22	0.55
5:AE:25:VAL:O	5:AE:26:LYS:C	2.50	0.55
6:AF:14:GLN:OE1	6:AF:17:GLN:HB2	2.07	0.55
10:AJ:80:THR:O	10:AJ:82:LYS:N	2.40	0.55
17:AQ:45:HIS:CD2	17:AQ:70:THR:HG23	2.42	0.55
22:BA:308:G:C8	22:BA:501:A:H1'	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:686:U:H2'	22:BA:788:A:C2	2.42	0.55
22:BA:1288:G:C5	22:BA:1327:A:C2	2.95	0.55
22:BA:1355:G:C2'	22:BA:1356:G:H5'	2.37	0.55
22:BA:1435:G:O2'	22:BA:1436:G:H5'	2.07	0.55
22:BA:1587:G:C4	22:BA:1588:G:C8	2.94	0.55
22:BA:1795:C:C4	22:BA:1796:U:C4	2.95	0.55
22:BA:1876:A:C2	22:BA:1877:A:C4	2.95	0.55
24:BC:57:GLY:HA2	24:BC:213:TRP:HA	1.88	0.55
38:BQ:87:SER:HB3	39:BR:51:VAL:HA	1.89	0.55
1:CA:1224:U:C4	1:CA:1322:C:O2	2.60	0.55
5:CE:98:PRO:O	5:CE:122:ASN:ND2	2.37	0.55
10:CJ:92:LEU:O	10:CJ:93:ALA:HB2	2.07	0.55
22:DA:24:G:C5	22:DA:25:U:C5	2.94	0.55
22:DA:202:U:H2'	22:DA:203:A:C8	2.42	0.55
22:DA:289:G:H2'	22:DA:290:U:O4'	2.06	0.55
22:DA:630:G:H3'	22:DA:631:A:C5'	2.37	0.55
22:DA:647:G:C5	22:DA:648:G:N7	2.75	0.55
22:DA:1248:G:N7	26:DE:46:GLN:NE2	2.55	0.55
22:DA:1355:G:C2'	22:DA:1356:G:H5'	2.37	0.55
22:DA:1389:G:C2	22:DA:1390:U:O2	2.60	0.55
22:DA:1769:U:O2'	22:DA:1958:C:OP1	2.25	0.55
22:DA:1826:G:C4	22:DA:1827:U:C5	2.95	0.55
22:DA:2373:G:C2	22:DA:2374:C:C2	2.94	0.55
22:DA:2842:G:C2	22:DA:2843:G:H1'	2.42	0.55
22:DA:2888:C:H2'	22:DA:2889:C:C6	2.41	0.55
23:DB:80:U:H2'	23:DB:81:G:C8	2.42	0.55
31:DJ:30:THR:HG22	31:DJ:31:GLU:N	2.21	0.55
31:DJ:36:LEU:O	31:DJ:121:LYS:NZ	2.40	0.55
43:DV:9:ARG:NH2	43:DV:17:SER:OG	2.40	0.55
45:DX:12:PRO:HB3	45:DX:28:ARG:NH2	2.21	0.55
1:AA:405:U:OP1	1:AA:406:G:O2'	2.20	0.54
1:AA:882:C:O2'	1:AA:883:C:H5'	2.07	0.54
1:AA:1055:A:C6	1:AA:1206:G:C5	2.95	0.54
4:AD:65:TYR:O	4:AD:115:ARG:NH2	2.40	0.54
14:AN:51:LEU:CB	14:AN:52:PRO:HD2	2.36	0.54
22:BA:760:G:H2'	22:BA:761:A:O4'	2.08	0.54
22:BA:1847:A:C8	22:BA:1847:A:OP2	2.60	0.54
22:BA:1936:A:H2	22:BA:1943:U:H3	1.53	0.54
22:BA:2017:U:H4'	48:B0:5:GLN:O	2.07	0.54
22:BA:2406:A:C2	33:BL:69:ARG:NH2	2.76	0.54
23:BB:54:G:N2	27:BF:26:MET:HE3	2.21	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
29:BH:14:SER:HG	29:BH:17:ASP:CG	2.13	0.54
30:BI:117:MET:HE2	30:BI:117:MET:HA	1.88	0.54
33:BL:132:ARG:HG3	33:BL:142:ILE:HD12	1.89	0.54
48:B0:55:ILE:O	48:B0:56:ALA:HB3	2.05	0.54
49:B1:14:SER:HB3	49:B1:48:ILE:O	2.07	0.54
50:B2:18:PHE:HA	50:B2:43:THR:HG21	1.88	0.54
1:CA:309:A:O2'	1:CA:607:A:N1	2.33	0.54
1:CA:636:U:H2'	1:CA:637:C:C6	2.41	0.54
1:CA:728:A:H2'	1:CA:729:A:C8	2.42	0.54
1:CA:1178:G:N2	1:CA:1181:G:OP2	2.41	0.54
1:CA:1279:G:H5"	10:CJ:9:ARG:NH2	2.22	0.54
1:CA:1480:A:H2'	1:CA:1481:U:O4'	2.08	0.54
9:CI:33:ARG:NE	9:CI:37:GLN:OE1	2.40	0.54
15:CO:53:ARG:O	15:CO:56:LEU:HB3	2.07	0.54
21:CU:12:PHE:O	21:CU:13:ASP:CB	2.55	0.54
22:DA:27:G:N2	22:DA:512:G:H1'	2.22	0.54
22:DA:295:G:H2'	22:DA:295:G:N3	2.21	0.54
22:DA:2057:G:OP2	58:DA:3485:HOH:O	2.18	0.54
22:DA:2497:A:N3	22:DA:2498:C:N4	2.54	0.54
27:DF:128:TYR:CG	27:DF:170:LEU:CD1	2.90	0.54
36:DO:111:ARG:NH2	36:DO:117:PHE:O	2.40	0.54
1:AA:89:U:O2'	1:AA:90:C:H5'	2.07	0.54
1:AA:390:U:H2'	1:AA:391:G:C8	2.42	0.54
5:AE:46:VAL:CG2	5:AE:118:ALA:HA	2.37	0.54
6:AF:98:GLU:HG3	6:AF:99:ALA:N	2.22	0.54
9:AI:57:MET:O	9:AI:59:GLU:N	2.41	0.54
20:AT:15:GLU:OE1	20:AT:19:LYS:NZ	2.40	0.54
22:BA:273:G:N2	22:BA:365:U:C2	2.75	0.54
22:BA:1324:G:C4	22:BA:1328:A:N6	2.75	0.54
22:BA:2660:A:H2'	22:BA:2661:G:O4'	2.07	0.54
24:BC:88:SER:HB2	24:BC:200:HIS:CD2	2.42	0.54
24:BC:146:MET:SD	24:BC:154:LEU:HD21	2.47	0.54
29:BH:90:LEU:CD2	29:BH:93:SER:HA	2.37	0.54
33:BL:77:ILE:HD11	33:BL:101:ILE:CG2	2.37	0.54
35:BN:60:VAL:O	35:BN:61:ALA:C	2.50	0.54
40:BS:38:TYR:CD2	48:B0:39:LEU:HD21	2.41	0.54
1:CA:71:A:C2	1:CA:72:A:C8	2.95	0.54
1:CA:256:U:OP1	17:CQ:19:LYS:NZ	2.40	0.54
1:CA:1255:G:C6	1:CA:1279:G:C8	2.95	0.54
11:CK:107:ILE:C	11:CK:107:ILE:HD13	2.32	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:54:ASP:HA	14:CN:59:ARG:HD3	1.89	0.54
22:DA:211:C:OP1	50:D2:25:LYS:NZ	2.37	0.54
22:DA:526:A:N6	22:DA:2626:C:H4'	2.22	0.54
22:DA:537:G:C6	22:DA:555:G:C2	2.95	0.54
22:DA:732:C:H2'	22:DA:733:G:O4'	2.07	0.54
22:DA:834:G:H1'	22:DA:2358:A:N3	2.23	0.54
22:DA:1410:G:N1	22:DA:1411:U:O4	2.41	0.54
22:DA:1439:A:N7	22:DA:1552:A:H2	2.04	0.54
22:DA:1585:C:C5	22:DA:1586:A:N7	2.76	0.54
22:DA:1623:G:C6	22:DA:1624:U:C5	2.95	0.54
22:DA:1779:U:H5	22:DA:1784:A:N7	2.05	0.54
36:DO:33:ARG:O	36:DO:34:HIS:CD2	2.60	0.54
1:AA:1000:A:C2	1:AA:1041:G:C2	2.95	0.54
1:AA:1253:G:C4	1:AA:1254:A:C8	2.94	0.54
5:AE:101:GLU:CB	5:AE:122:ASN:HB2	2.37	0.54
9:AI:120:LYS:HG3	9:AI:123:ARG:HB3	1.88	0.54
22:BA:783:A:C8	22:BA:784:G:H4'	2.42	0.54
22:BA:980:A:C6	22:BA:981:A:N1	2.75	0.54
22:BA:1073:A:OP1	22:BA:1073:A:C8	2.60	0.54
22:BA:2517:C:C6	22:BA:2542:A:C5	2.95	0.54
30:BI:16:GLY:HA2	30:BI:51:LYS:HB3	1.89	0.54
33:BL:94:THR:HG22	33:BL:95:LEU:N	2.22	0.54
44:BW:56:ASP:O	44:BW:57:HIS:HB2	2.07	0.54
1:CA:477:C:H2'	1:CA:478:A:C8	2.43	0.54
1:CA:859:G:H2'	1:CA:860:A:C8	2.42	0.54
1:CA:951:G:N3	1:CA:970:C:O2'	2.39	0.54
2:CB:57:LEU:HD11	2:CB:221:VAL:CG2	2.37	0.54
2:CB:123:ASP:O	2:CB:124:GLY:C	2.51	0.54
5:CE:132:ASN:O	5:CE:136:VAL:HG12	2.08	0.54
8:CH:29:SER:HB2	8:CH:59:LEU:HB2	1.89	0.54
19:CS:79:THR:OG1	19:CS:79:THR:O	2.24	0.54
22:DA:132:G:N2	22:DA:148:U:C2	2.75	0.54
22:DA:585:G:C2	22:DA:1256:G:C6	2.95	0.54
22:DA:909:A:C6	22:DA:912:C:C2	2.95	0.54
22:DA:1196:C:H1'	22:DA:1226:A:C4	2.42	0.54
22:DA:1356:G:C2	22:DA:1357:C:H1'	2.43	0.54
22:DA:1446:C:H2'	22:DA:1447:C:O4'	2.07	0.54
22:DA:1524:G:H2'	22:DA:1524:G:N3	2.23	0.54
29:DH:79:THR:HA	29:DH:145:ASN:HB2	1.89	0.54
34:DM:135:VAL:O	34:DM:136:MET:CB	2.54	0.54
1:AA:49:U:O4	1:AA:365:U:H5	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:373:A:C2	1:AA:374:A:C8	2.95	0.54
1:AA:1093:A:OP2	7:AG:4:ARG:NH2	2.41	0.54
1:AA:1446:A:C2'	1:AA:1447:A:H5'	2.37	0.54
4:AD:17:THR:CG2	4:AD:18:ASP:N	2.69	0.54
7:AG:64:VAL:O	7:AG:65:ALA:C	2.51	0.54
22:BA:804:A:H5"	22:BA:805:G:OP1	2.07	0.54
22:BA:1022:G:N2	22:BA:1142:A:C2	2.75	0.54
22:BA:1359:A:C8	22:BA:1373:A:C2	2.96	0.54
22:BA:1585:C:H2'	22:BA:1586:A:O4'	2.07	0.54
22:BA:1731:G:C4	22:BA:1733:G:C8	2.96	0.54
22:BA:2056:G:H2'	22:BA:2056:G:N3	2.21	0.54
22:BA:2058:A:N6	58:BA:3487:HOH:O	2.40	0.54
29:BH:90:LEU:HA	29:BH:125:THR:HG23	1.90	0.54
30:BI:79:LEU:HD22	30:BI:109:ILE:CG2	2.37	0.54
39:BR:66:HIS:CE1	39:BR:94:THR:CG2	2.91	0.54
40:BS:25:ARG:HB2	40:BS:74:ILE:CG2	2.38	0.54
1:CA:211:G:N3	1:CA:211:G:H2'	2.22	0.54
1:CA:295:C:C4	1:CA:296:U:C5	2.95	0.54
3:CC:83:ASP:O	3:CC:84:VAL:C	2.51	0.54
3:CC:130:PHE:CE1	3:CC:157:LEU:HB3	2.43	0.54
6:CF:22:ILE:O	6:CF:26:THR:OG1	2.25	0.54
6:CF:69:GLU:O	6:CF:72:ASP:HB3	2.07	0.54
7:CG:92:ARG:NE	7:CG:93:PRO:CD	2.71	0.54
12:CL:21:VAL:N	12:CL:22:PRO:CD	2.69	0.54
12:CL:90:LEU:HB3	12:CL:93:VAL:CG2	2.37	0.54
22:DA:247:G:C8	22:DA:249:C:C6	2.95	0.54
22:DA:513:A:C2	22:DA:514:A:C5	2.94	0.54
22:DA:677:A:O2'	22:DA:2071:A:H5'	2.08	0.54
22:DA:1076:C:H2'	22:DA:1077:A:O4'	2.08	0.54
22:DA:1356:G:N2	22:DA:1357:C:H1'	2.22	0.54
22:DA:1805:A:N3	22:DA:1813:G:C2	2.75	0.54
22:DA:1914:C:H3'	22:DA:1915:U:C6	2.43	0.54
22:DA:2159:G:H2'	22:DA:2160:C:C6	2.42	0.54
22:DA:2345:G:C5	22:DA:2381:A:C2	2.96	0.54
25:DD:150:GLN:C	25:DD:151:THR:O	2.50	0.54
30:DI:101:ILE:O	30:DI:102:SER:CB	2.55	0.54
1:AA:125:U:H2'	1:AA:126:G:O4'	2.06	0.54
1:AA:1306:A:C5	1:AA:1307:U:C5	2.95	0.54
1:AA:1342:C:O2'	9:AI:126:GLN:HG3	2.08	0.54
4:AD:19:LEU:HD22	4:AD:64:ILE:HG13	1.89	0.54
16:AP:51:ARG:HH11	16:AP:51:ARG:CG	2.20	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1006:C:P	58:BA:3781:HOH:O	2.66	0.54
26:BE:149:ILE:HD11	26:BE:172:ALA:CA	2.37	0.54
27:BF:127:ASN:OD1	27:BF:157:THR:HA	2.08	0.54
38:BQ:105:ALA:O	38:BQ:108:ALA:HB3	2.07	0.54
1:CA:212:G:C2	1:CA:213:G:C8	2.96	0.54
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.90	0.54
1:CA:1167:A:N7	1:CA:1169:A:C6	2.76	0.54
1:CA:1259:C:H3'	1:CA:1260:G:H5"	1.90	0.54
2:CB:58:ASN:CG	2:CB:220:THR:O	2.51	0.54
5:CE:101:GLU:C	5:CE:103:THR:N	2.64	0.54
11:CK:88:GLY:N	11:CK:114:THR:HG22	2.21	0.54
14:CN:3:LYS:HD3	14:CN:6:MET:HG2	1.89	0.54
17:CQ:70:THR:O	17:CQ:71:LYS:C	2.49	0.54
22:DA:235:U:C4	22:DA:236:C:C5	2.95	0.54
22:DA:449:A:C5	22:DA:450:G:C8	2.95	0.54
22:DA:2520:C:HO2'	22:DA:2565:A:HO2'	1.53	0.54
28:DG:27:LYS:HG3	28:DG:27:LYS:O	2.08	0.54
1:AA:760:G:N7	1:AA:761:G:C8	2.76	0.54
1:AA:1126:U:O2	1:AA:1280:A:H5'	2.08	0.54
1:AA:1167:A:N7	1:AA:1169:A:C6	2.76	0.54
2:AB:88:ASP:C	2:AB:89:GLN:HG3	2.31	0.54
2:AB:151:ILE:HG23	2:AB:152:LYS:N	2.22	0.54
5:AE:81:LEU:HB3	5:AE:147:MET:CE	2.37	0.54
13:AM:29:ARG:CZ	13:AM:63:PHE:HB2	2.37	0.54
20:AT:5:LYS:O	20:AT:7:ALA:N	2.40	0.54
22:BA:744:U:P	58:BA:3654:HOH:O	2.64	0.54
22:BA:1095:A:C6	22:BA:1096:A:N6	2.76	0.54
22:BA:1178:C:H2'	22:BA:1179:G:C8	2.43	0.54
22:BA:1246:A:H2'	22:BA:1247:A:O5'	2.08	0.54
22:BA:1414:C:C4	22:BA:1415:U:C5	2.95	0.54
22:BA:1584:U:O2	22:BA:1584:U:C2'	2.56	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:130:GLU:HB3	30:BI:134:ARG:NH2	2.22	0.54
1:CA:106:C:C2'	1:CA:107:G:H5'	2.37	0.54
1:CA:1521:C:C2	1:CA:1522:U:C6	2.95	0.54
3:CC:134:MET:SD	3:CC:153:VAL:CG1	2.96	0.54
22:DA:53:A:C2	22:DA:179:C:H4'	2.42	0.54
22:DA:453:A:H4'	22:DA:472:A:N6	2.23	0.54
22:DA:587:C:N3	33:DL:33:ARG:NH2	2.55	0.54
22:DA:635:C:O2'	22:DA:639:U:H5"	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:980:A:C4	22:DA:1136:G:O4'	2.61	0.54
22:DA:1003:G:O2'	22:DA:1010:A:N1	2.40	0.54
22:DA:1060:U:H4'	22:DA:1061:U:H5'	1.90	0.54
22:DA:2817:U:O2	22:DA:2836:U:H1'	2.06	0.54
33:DL:81:ASP:O	33:DL:82:LEU:HB3	2.07	0.54
1:AA:71:A:H3'	1:AA:71:A:OP2	2.07	0.54
1:AA:129:A:H1'	1:AA:130:A:C8	2.43	0.54
1:AA:1093:A:N3	1:AA:1109:C:O2'	2.24	0.54
4:AD:109:ALA:N	4:AD:113:GLU:OE2	2.37	0.54
5:AE:81:LEU:CA	5:AE:147:MET:HE1	2.38	0.54
21:AU:40:LYS:N	21:AU:41:PRO:CD	2.71	0.54
22:BA:1027:A:C6	22:BA:1126:A:N3	2.76	0.54
22:BA:1075:C:H2'	22:BA:1076:C:C6	2.43	0.54
22:BA:1867:G:O2'	22:BA:1868:C:H5'	2.07	0.54
22:BA:1939:U:OP1	22:BA:2604:U:O2'	2.26	0.54
25:BD:85:ALA:O	25:BD:86:GLU:C	2.50	0.54
26:BE:48:THR:C	26:BE:50:ALA:N	2.63	0.54
53:B5:19:LYS:HG3	53:B5:23:ILE:CG1	2.38	0.54
1:CA:502:A:H2'	1:CA:503:C:O4'	2.08	0.54
1:CA:844:G:H2'	1:CA:844:G:N3	2.23	0.54
1:CA:949:A:C2	1:CA:1233:G:C4	2.96	0.54
1:CA:1027:C:N4	1:CA:1034:G:C6	2.76	0.54
1:CA:1089:G:C4	1:CA:1090:U:C6	2.95	0.54
1:CA:1381:U:H2'	1:CA:1382:C:O5'	2.08	0.54
19:CS:15:LEU:HD13	19:CS:33:THR:HG21	1.90	0.54
22:DA:230:G:C2	22:DA:231:A:C8	2.96	0.54
22:DA:2146:C:C4'	22:DA:2147:A:OP1	2.55	0.54
22:DA:2803:G:N2	22:DA:2804:U:C2	2.76	0.54
41:DT:69:ARG:HB2	41:DT:74:ILE:HG22	1.89	0.54
1:AA:891:U:C2'	1:AA:892:A:H5'	2.37	0.54
1:AA:1053:G:O5'	1:AA:1054:C:H3'	2.08	0.54
22:BA:1508:A:O2'	22:BA:1509:A:O4'	2.24	0.54
24:BC:252:THR:O	24:BC:254:GLY:N	2.40	0.54
29:BH:90:LEU:O	1:CA:358:U:H4'	2.08	0.54
41:BT:88:LYS:O	41:BT:89:GLU:HG2	2.08	0.54
1:CA:280:C:N3	17:CQ:40:ARG:HA	2.23	0.54
1:CA:474:G:H2'	1:CA:475:C:O4'	2.08	0.54
1:CA:555:U:H2'	1:CA:556:C:C6	2.43	0.54
1:CA:597:G:H2'	1:CA:598:U:H5'	1.90	0.54
1:CA:1151:A:C2	1:CA:1152:A:C6	2.96	0.54
1:CA:1347:G:O2'	1:CA:1348:U:OP2	2.24	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1505:G:H4'	1:CA:1506:U:H5"	1.89	0.54
5:CE:65:GLU:OE1	5:CE:69:ARG:NH2	2.41	0.54
6:CF:8:PHE:CE2	6:CF:60:VAL:HB	2.42	0.54
22:DA:658:U:C2	22:DA:659:G:C8	2.96	0.54
22:DA:2835:A:C2	22:DA:2879:A:N7	2.76	0.54
22:DA:2873:A:H4'	58:DA:3804:HOH:O	2.08	0.54
29:DH:81:ALA:C	29:DH:149:GLU:HB3	2.33	0.54
42:DU:98:SER:O	42:DU:99:ASN:HB3	2.08	0.54
1:AA:8:A:C6	4:AD:206:LYS:HB3	2.43	0.54
1:AA:596:A:C6	1:AA:645:G:C2	2.96	0.54
1:AA:946:A:C2	1:AA:1236:A:C2	2.96	0.54
2:AB:22:TYR:N	2:AB:22:TYR:CD1	2.75	0.54
2:AB:28:LYS:N	2:AB:29:PRO:CD	2.70	0.54
10:AJ:35:GLN:HG2	10:AJ:77:VAL:HB	1.90	0.54
22:BA:481:G:H1'	22:BA:507:A:N1	2.22	0.54
22:BA:852:U:H2'	22:BA:853:C:C6	2.43	0.54
22:BA:1061:U:O2'	22:BA:1062:G:C5'	2.55	0.54
25:BD:101:PHE:C	25:BD:103:ASP:N	2.66	0.54
33:BL:57:LEU:CD2	51:B3:54:ASP:HB3	2.38	0.54
48:B0:15:MET:O	48:B0:18:SER:HB3	2.07	0.54
1:CA:798:U:H2'	1:CA:799:G:O5'	2.08	0.54
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.43	0.54
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.42	0.54
3:CC:111:LEU:CD1	3:CC:146:ALA:HB2	2.38	0.54
14:CN:10:GLU:O	14:CN:11:VAL:C	2.49	0.54
21:CU:37:PHE:HA	21:CU:40:LYS:HE3	1.90	0.54
22:DA:1826:G:O2'	22:DA:1971:U:OP2	2.26	0.54
22:DA:2484:G:OP1	34:DM:44:ARG:NH2	2.41	0.54
22:DA:2531:A:C5'	28:DG:157:TYR:CZ	2.91	0.54
42:DU:67:VAL:HA	42:DU:70:VAL:CG2	2.38	0.54
1:AA:202:G:C2	1:AA:216:U:O2	2.61	0.54
1:AA:343:U:H2'	1:AA:345:C:C5	2.43	0.54
1:AA:702:A:H3'	1:AA:703:G:C5'	2.37	0.54
1:AA:821:G:H4'	58:AA:1740:HOH:O	2.06	0.54
1:AA:1167:A:N7	1:AA:1169:A:C5	2.76	0.54
1:AA:1407:C:O2'	22:BA:1912:A:N1	2.37	0.54
15:AO:35:GLN:HB3	15:AO:59:MET:HE2	1.88	0.54
22:BA:962:G:H21	22:BA:2250:G:H1	1.55	0.54
22:BA:1131:G:C5	31:BJ:77:HIS:CD2	2.96	0.54
22:BA:2243:U:H2'	22:BA:2244:U:C6	2.43	0.54
26:BE:108:ILE:HD11	26:BE:180:LEU:HD13	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:121:GLU:O	32:BK:122:VAL:O	2.26	0.54
37:BP:31:TRP:CZ2	37:BP:40:LEU:CD1	2.90	0.54
39:BR:49:ILE:HB	39:BR:51:VAL:O	2.07	0.54
1:CA:1262:C:C4	1:CA:1263:C:C4	2.96	0.54
1:CA:1298:U:O2	1:CA:1298:U:H2'	2.07	0.54
6:CF:18:VAL:HG12	6:CF:19:PRO:N	2.22	0.54
9:CI:49:ARG:C	9:CI:49:ARG:HD3	2.32	0.54
9:CI:81:HIS:O	9:CI:85:ARG:HB2	2.08	0.54
22:DA:71:A:H5'	22:DA:73:A:C4	2.43	0.54
22:DA:852:U:H2'	22:DA:853:C:O4'	2.08	0.54
22:DA:1127:A:H2'	22:DA:1128:G:H5"	1.90	0.54
22:DA:1440:U:H2'	22:DA:1441:G:O4'	2.08	0.54
22:DA:1453:A:C2	35:DN:77:ALA:CB	2.91	0.54
22:DA:1645:G:H5"	22:DA:1646:C:O5'	2.08	0.54
22:DA:2772:C:H5'	25:DD:173:GLN:NE2	2.23	0.54
23:DB:71:C:C2	23:DB:106:G:N2	2.76	0.54
24:DC:43:ARG:CZ	24:DC:49:ILE:HG12	2.38	0.54
24:DC:76:ALA:HB2	24:DC:96:TYR:CD2	2.41	0.54
26:DE:130:LYS:HB2	26:DE:133:LEU:CB	2.38	0.54
31:DJ:71:ASP:O	31:DJ:73:VAL:HG23	2.08	0.54
31:DJ:109:LEU:HD23	31:DJ:110:PRO:HD2	1.90	0.54
32:DK:17:ARG:HG2	32:DK:47:ILE:CG2	2.38	0.54
42:DU:13:VAL:HG21	42:DU:39:ILE:HD12	1.90	0.54
45:DX:71:LEU:HA	45:DX:74:ARG:HG2	1.89	0.54
1:AA:11:G:C6	1:AA:12:U:C4	2.96	0.53
1:AA:110:C:N4	1:AA:111:G:C6	2.77	0.53
1:AA:1108:G:H5'	3:AC:176:HIS:ND1	2.22	0.53
10:AJ:6:ILE:CD1	10:AJ:76:ILE:HB	2.38	0.53
10:AJ:65:TYR:CB	14:AN:96:LEU:HD11	2.39	0.53
11:AK:128:ARG:HH11	11:AK:128:ARG:CG	2.21	0.53
12:AL:24:LEU:HB2	12:AL:59:ASN:ND2	2.23	0.53
13:AM:64:VAL:O	13:AM:69:LEU:HB2	2.08	0.53
27:BF:171:ALA:O	27:BF:174:ASP:N	2.39	0.53
39:BR:14:VAL:HG13	39:BR:98:ILE:HG13	1.88	0.53
53:B5:19:LYS:HG3	53:B5:23:ILE:HG12	1.90	0.53
1:CA:757:U:OP1	1:CA:822:U:O2'	2.21	0.53
1:CA:803:G:C6	1:CA:804:U:N3	2.76	0.53
1:CA:1134:G:C6	1:CA:1141:C:N4	2.76	0.53
1:CA:1150:A:N6	1:CA:1151:A:H62	2.06	0.53
4:CD:146:ARG:O	4:CD:150:LYS:HB2	2.08	0.53
8:CH:2:SER:C	8:CH:4:GLN:H	2.14	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:89:LYS:HA	8:CH:92:LEU:CD1	2.38	0.53
22:DA:134:G:C2	22:DA:146:A:C2	2.96	0.53
22:DA:197:A:H2'	22:DA:197:A:N3	2.23	0.53
22:DA:485:C:C4	22:DA:496:G:C6	2.96	0.53
22:DA:1027:A:C6	22:DA:1126:A:C4	2.96	0.53
22:DA:1310:G:C2'	22:DA:1311:G:H5'	2.38	0.53
22:DA:1774:C:O2	24:DC:11:PRO:HB2	2.08	0.53
26:DE:128:ALA:O	26:DE:130:LYS:N	2.40	0.53
30:DI:101:ILE:O	30:DI:102:SER:HB3	2.07	0.53
35:DN:87:PHE:O	35:DN:88:ALA:C	2.52	0.53
36:DO:100:HIS:CG	36:DO:101:GLY:N	2.76	0.53
42:DU:34:VAL:HG22	42:DU:67:VAL:HG23	1.89	0.53
1:AA:49:U:C2	1:AA:361:G:N2	2.76	0.53
1:AA:90:C:C2	1:AA:91:U:C5	2.97	0.53
2:AB:41:ILE:HG21	2:AB:202:GLY:HA2	1.89	0.53
11:AK:52:PHE:CB	11:AK:56:ARG:HB3	2.38	0.53
22:BA:65:U:H2'	22:BA:66:C:H6	1.73	0.53
22:BA:839:U:H2'	22:BA:840:C:C6	2.43	0.53
22:BA:2306:C:OP2	22:BA:2307:G:O2'	2.17	0.53
26:BE:23:PHE:HB2	26:BE:111:GLU:HG3	1.90	0.53
36:BO:49:VAL:HG13	36:BO:50:ALA:N	2.22	0.53
41:BT:2:ILE:HA	41:BT:3:ARG:HB2	1.90	0.53
49:B1:17:THR:HG22	49:B1:42:VAL:CG1	2.38	0.53
53:B5:52:PRO:O	53:B5:53:ARG:CB	2.57	0.53
1:CA:484:G:N7	1:CA:486:U:H1'	2.23	0.53
1:CA:604:G:C5	1:CA:605:U:C5	2.96	0.53
1:CA:1288:A:N6	1:CA:1289:A:N6	2.56	0.53
6:CF:98:GLU:O	6:CF:99:ALA:CB	2.57	0.53
9:CI:55:VAL:O	9:CI:55:VAL:CG2	2.56	0.53
22:DA:197:A:H62	22:DA:2430:A:H2'	1.73	0.53
22:DA:445:C:O2'	22:DA:449:A:N3	2.41	0.53
22:DA:548:G:H4'	22:DA:549:G:C2	2.43	0.53
22:DA:696:G:C2	22:DA:767:U:O2	2.62	0.53
22:DA:770:G:H1'	22:DA:1379:U:C4	2.44	0.53
22:DA:937:C:C2	22:DA:938:G:C8	2.97	0.53
22:DA:1027:A:N7	22:DA:1126:A:C2	2.76	0.53
22:DA:1874:C:C4	22:DA:1875:G:C6	2.96	0.53
22:DA:2104:C:H2'	22:DA:2105:U:O4'	2.09	0.53
24:DC:62:TYR:CE1	24:DC:63:ARG:O	2.61	0.53
25:DD:86:GLU:HG3	25:DD:87:GLY:N	2.22	0.53
31:DJ:1:MET:HE1	39:DR:13:ARG:NH2	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:85:VAL:O	33:DL:86:GLU:HG3	2.09	0.53
42:DU:34:VAL:HG23	42:DU:65:ILE:O	2.08	0.53
1:AA:19:A:N3	1:AA:917:G:C2	2.77	0.53
1:AA:32:A:H2'	1:AA:32:A:N3	2.23	0.53
1:AA:469:C:C5	1:AA:470:C:C4	2.97	0.53
1:AA:1181:G:C2	1:AA:1182:G:N2	2.76	0.53
5:AE:104:GLY:HA3	5:AE:122:ASN:HA	1.90	0.53
14:AN:46:LEU:O	14:AN:47:LYS:C	2.51	0.53
22:BA:440:C:C2'	22:BA:441:U:H5'	2.39	0.53
22:BA:1474:U:C2'	22:BA:1475:G:H5'	2.36	0.53
22:BA:1735:A:C2	22:BA:1736:U:H1'	2.44	0.53
22:BA:2884:U:O2	22:BA:2884:U:O4'	2.26	0.53
24:BC:8:PRO:HB3	24:BC:14:ARG:HB2	1.90	0.53
43:BV:14:LYS:HD3	43:BV:18:ARG:NH1	2.23	0.53
1:CA:106:C:H2'	1:CA:107:G:H5'	1.90	0.53
1:CA:216:U:H2'	1:CA:217:C:C6	2.43	0.53
1:CA:392:C:C2	1:CA:393:A:C8	2.96	0.53
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.43	0.53
1:CA:1411:C:H2'	1:CA:1412:C:H6	1.73	0.53
6:CF:93:LYS:O	6:CF:93:LYS:HG2	2.08	0.53
8:CH:106:THR:HG21	8:CH:121:LEU:HD13	1.91	0.53
10:CJ:83:THR:O	10:CJ:87:LEU:HD12	2.08	0.53
17:CQ:61:ILE:HG23	17:CQ:73:TRP:CE3	2.43	0.53
22:DA:484:C:OP1	42:DU:48:PRO:HG3	2.08	0.53
22:DA:1420:A:C2	22:DA:2211:A:C4	2.96	0.53
22:DA:2746:U:H1'	28:DG:139:GLN:HG3	1.91	0.53
30:DI:8:TYR:HA	30:DI:59:ILE:HB	1.90	0.53
51:D3:31:HIS:ND1	51:D3:32:ILE:HG13	2.22	0.53
1:AA:474:G:C2	1:AA:475:C:C6	2.96	0.53
1:AA:702:A:N6	22:BA:1846:G:HO2'	2.07	0.53
2:AB:67:ILE:HG21	2:AB:69:PHE:CE2	2.43	0.53
2:AB:120:GLN:O	2:AB:120:GLN:HG2	2.08	0.53
5:AE:46:VAL:HG21	5:AE:118:ALA:HB2	1.91	0.53
10:AJ:53:ILE:CG2	10:AJ:61:ALA:HB1	2.39	0.53
19:AS:29:LYS:HB3	19:AS:30:PRO:HD2	1.91	0.53
21:AU:37:PHE:HB3	21:AU:41:PRO:CG	2.38	0.53
22:BA:276:U:H2'	22:BA:276:U:O2	2.08	0.53
22:BA:2452:C:C2	56:BA:3001:DOL:H131	2.44	0.53
22:BA:2820:A:C6	25:BD:197:THR:HG22	2.44	0.53
30:BI:101:ILE:O	30:BI:102:SER:HB2	2.07	0.53
36:BO:49:VAL:O	36:BO:50:ALA:HB2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BU:39:ILE:HG22	42:BU:40:ASN:N	2.23	0.53
43:BV:6:ALA:HB1	43:BV:40:ILE:HG23	1.90	0.53
49:B1:51:GLU:OE2	49:B1:53:LYS:HG2	2.07	0.53
1:CA:1082:A:C6	1:CA:1083:U:N3	2.76	0.53
1:CA:1491:G:H3'	1:CA:1492:A:C8	2.44	0.53
22:DA:183:C:C5	22:DA:184:C:C5	2.96	0.53
22:DA:600:G:C5	22:DA:601:C:C4	2.97	0.53
22:DA:1097:U:C4	22:DA:1098:A:H1'	2.44	0.53
22:DA:1364:G:C4	22:DA:1368:G:C2	2.96	0.53
22:DA:1512:C:C4	22:DA:1513:U:C4	2.97	0.53
22:DA:2491:U:O4	22:DA:2518:A:N6	2.41	0.53
22:DA:2571:U:N3	22:DA:2574:G:C8	2.76	0.53
22:DA:2805:C:H2'	22:DA:2806:C:C6	2.42	0.53
22:DA:2811:G:H2'	22:DA:2812:G:O4'	2.09	0.53
29:DH:32:PRO:O	29:DH:33:GLN:HB2	2.08	0.53
30:DI:79:LEU:HD13	30:DI:109:ILE:CG2	2.37	0.53
34:DM:124:LEU:CD2	34:DM:124:LEU:N	2.70	0.53
35:DN:85:PRO:O	35:DN:86:ARG:C	2.51	0.53
1:AA:340:U:H2'	1:AA:341:C:H6	1.74	0.53
1:AA:655:A:C2	1:AA:656:G:C4	2.97	0.53
1:AA:1349:A:C2	1:AA:1374:A:C4	2.96	0.53
2:AB:126:PHE:CD2	2:AB:126:PHE:N	2.76	0.53
10:AJ:91:ASP:OD2	10:AJ:91:ASP:N	2.41	0.53
19:AS:14:HIS:O	19:AS:18:LYS:HB2	2.08	0.53
20:AT:66:LEU:HD12	20:AT:66:LEU:C	2.34	0.53
22:BA:997:G:O2'	22:BA:998:C:H5'	2.09	0.53
22:BA:1817:G:H2'	22:BA:1818:U:H5'	1.91	0.53
29:BH:147:VAL:CG1	29:BH:149:GLU:HG3	2.36	0.53
53:B5:66:PRO:HG3	53:B5:194:ILE:CB	2.39	0.53
1:CA:667:G:C2	1:CA:740:U:O2	2.62	0.53
1:CA:1169:A:C2	1:CA:1170:A:C4	2.96	0.53
1:CA:1296:C:H4'	1:CA:1302:C:C4	2.43	0.53
20:CT:83:ILE:O	20:CT:87:ALA:HB3	2.08	0.53
22:DA:288:U:H2'	22:DA:289:G:O4'	2.09	0.53
22:DA:584:C:N4	22:DA:585:G:C6	2.77	0.53
22:DA:792:A:H1'	22:DA:2072:C:O2'	2.08	0.53
22:DA:1926:U:H1'	22:DA:1929:G:C6	2.44	0.53
22:DA:2506:U:C5	56:DA:3001:DOL:O41	2.61	0.53
25:DD:208:LYS:O	25:DD:209:ALA:HB2	2.06	0.53
35:DN:106:ASP:O	35:DN:107:ASN:C	2.52	0.53
1:AA:74:A:H1'	1:AA:97:G:N2	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:764:C:H5”	15:AO:50:HIS:CD2	2.43	0.53
1:AA:1287:A:H2’	1:AA:1288:A:C8	2.43	0.53
2:AB:72:THR:O	2:AB:73:LYS:HB3	2.09	0.53
2:AB:82:ASP:C	2:AB:84:ALA:N	2.64	0.53
2:AB:147:SER:O	2:AB:148:LEU:CB	2.56	0.53
22:BA:63:A:C2	22:BA:64:A:C5	2.96	0.53
22:BA:1720:U:H2’	22:BA:1721:G:O4’	2.08	0.53
22:BA:1923:U:C2’	22:BA:1924:C:C5’	2.87	0.53
22:BA:2443:C:O2’	22:BA:2444:G:H5’	2.07	0.53
22:BA:2517:C:C6	22:BA:2542:A:N7	2.77	0.53
30:BI:44:ALA:O	30:BI:45:LYS:HG3	2.09	0.53
53:B5:51:ASP:N	53:B5:52:PRO:HD3	2.23	0.53
1:CA:457:G:C5	1:CA:458:U:C4	2.97	0.53
1:CA:978:A:O2’	1:CA:1322:C:C5	2.61	0.53
1:CA:1040:U:H2’	1:CA:1041:G:C8	2.43	0.53
1:CA:1072:G:C5	1:CA:1073:U:C4	2.97	0.53
2:CB:141:LEU:O	2:CB:142:GLU:C	2.52	0.53
3:CC:155:GLY:O	3:CC:157:LEU:N	2.39	0.53
4:CD:9:LEU:HD12	4:CD:32:CYS:SG	2.49	0.53
5:CE:150:PRO:C	5:CE:152:MET:H	2.15	0.53
11:CK:25:ALA:HB3	11:CK:87:LYS:O	2.09	0.53
21:CU:10:GLU:HB2	21:CU:11:PRO:HD3	1.89	0.53
22:DA:1343:G:N2	22:DA:1405:U:C2	2.76	0.53
22:DA:2214:C:H2’	22:DA:2215:C:O5’	2.09	0.53
22:DA:2300:C:C4	22:DA:2317:A:C2	2.96	0.53
22:DA:2504:U:C4	56:DA:3001:DOL:H161	2.43	0.53
22:DA:2810:A:C8	22:DA:2811:G:C8	2.96	0.53
26:DE:27:LEU:HG	26:DE:104:ALA:HB2	1.91	0.53
28:DG:86:LYS:HB3	28:DG:165:ALA:HB2	1.89	0.53
29:DH:103:VAL:HA	29:DH:106:ALA:HB3	1.89	0.53
35:DN:20:MET:HG3	35:DN:21:PHE:CD1	2.43	0.53
38:DQ:72:ASN:HB3	38:DQ:110:VAL:HG11	1.91	0.53
1:AA:1320:C:N3	19:AS:36:ARG:NH1	2.57	0.53
2:AB:33:GLY:HA3	2:AB:40:ILE:N	2.24	0.53
2:AB:83:ALA:O	2:AB:86:SER:OG	2.26	0.53
2:AB:91:PHE:CD2	2:AB:150:GLY:HA3	2.44	0.53
9:AI:36:GLU:OE2	9:AI:36:GLU:N	2.41	0.53
14:AN:43:ASN:C	14:AN:45:VAL:N	2.64	0.53
14:AN:46:LEU:C	14:AN:46:LEU:HD12	2.34	0.53
22:BA:657:U:H2’	22:BA:658:U:C6	2.43	0.53
22:BA:1142:A:C2	22:BA:1144:A:C1’	2.92	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2191:A:N1	22:BA:2192:U:O4	2.42	0.53
22:BA:2327:A:H2'	22:BA:2328:A:C8	2.44	0.53
56:BA:3001:DOL:N44	56:BA:3001:DOL:O40	2.41	0.53
30:BI:81:LYS:HA	30:BI:86:ILE:O	2.09	0.53
34:BM:51:ARG:O	34:BM:55:ARG:HG3	2.09	0.53
1:CA:552:U:C2	1:CA:553:A:C8	2.96	0.53
1:CA:597:G:N7	1:CA:598:U:C5	2.76	0.53
1:CA:632:U:H3'	1:CA:633:G:H5'	1.90	0.53
1:CA:649:A:H2'	1:CA:650:G:O4'	2.08	0.53
1:CA:731:G:H5'	1:CA:766:A:H4'	1.91	0.53
5:CE:150:PRO:HA	8:CH:99:LEU:CD2	2.38	0.53
22:DA:315:G:H2'	22:DA:316:C:O4'	2.09	0.53
22:DA:696:G:N1	22:DA:767:U:C2	2.76	0.53
22:DA:1101:U:C5	22:DA:1102:C:C5	2.96	0.53
22:DA:1226:A:OP1	38:DQ:16:LYS:NZ	2.41	0.53
22:DA:1555:G:N2	22:DA:1556:C:H1'	2.24	0.53
22:DA:1581:G:N7	22:DA:1582:C:N4	2.57	0.53
22:DA:2512:C:H2'	22:DA:2513:A:O4'	2.08	0.53
25:DD:133:THR:HG23	25:DD:134:HIS:N	2.24	0.53
29:DH:2:GLN:O	29:DH:3:VAL:HG22	2.09	0.53
30:DI:59:ILE:HG22	30:DI:60:THR:N	2.24	0.53
30:DI:80:LEU:HD23	30:DI:84:ALA:CB	2.38	0.53
33:DL:68:SER:O	33:DL:69:ARG:HB2	2.09	0.53
37:DP:40:LEU:HD23	37:DP:41:GLN:N	2.24	0.53
51:D3:32:ILE:HG22	51:D3:32:ILE:O	2.09	0.53
1:AA:76:G:H2'	1:AA:76:G:N3	2.23	0.53
1:AA:323:U:OP1	20:AT:25:ARG:NH2	2.42	0.53
2:AB:64:LYS:C	2:AB:64:LYS:HD3	2.34	0.53
12:AL:22:PRO:C	12:AL:24:LEU:N	2.67	0.53
13:AM:29:ARG:O	13:AM:33:ILE:HG12	2.08	0.53
22:BA:528:A:C8	22:BA:528:A:H3'	2.43	0.53
22:BA:536:G:C6	22:BA:537:G:C4	2.96	0.53
22:BA:1246:A:C2'	22:BA:1247:A:O5'	2.56	0.53
22:BA:2619:C:OP1	25:BD:157:LYS:HE2	2.09	0.53
24:BC:22:PRO:C	24:BC:24:LEU:H	2.17	0.53
28:BG:127:THR:HG22	28:BG:128:GLN:N	2.24	0.53
34:BM:57:VAL:HG12	34:BM:112:LEU:HD23	1.90	0.53
39:BR:49:ILE:CG2	39:BR:52:PRO:C	2.82	0.53
1:CA:223:A:H2'	1:CA:224:U:C6	2.44	0.53
1:CA:666:G:C6	1:CA:741:G:C6	2.97	0.53
1:CA:922:G:H4'	5:CE:25:VAL:HA	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:3:ARG:HD2	4:CD:115:ARG:NE	2.24	0.53
11:CK:84:VAL:HG11	11:CK:97:ILE:HG22	1.91	0.53
22:DA:232:G:N1	22:DA:420:C:OP1	2.41	0.53
22:DA:319:G:C4	22:DA:333:G:N2	2.77	0.53
22:DA:441:U:O2'	26:DE:41:GLN:OE1	2.26	0.53
22:DA:451:U:H2'	22:DA:453:A:N7	2.24	0.53
22:DA:1428:C:C5	22:DA:1569:A:H5"	2.44	0.53
29:DH:37:VAL:CG2	29:DH:38:PRO:HD2	2.39	0.53
33:DL:56:PRO:O	33:DL:60:ARG:HB2	2.09	0.53
36:DO:104:GLN:O	36:DO:107:ALA:N	2.41	0.53
1:AA:135:C:N3	16:AP:1:MET:N	2.54	0.53
1:AA:258:G:C4	1:AA:259:G:C8	2.97	0.53
1:AA:452:A:H2'	1:AA:453:G:C5'	2.39	0.53
1:AA:568:G:C2	1:AA:569:C:C5	2.97	0.53
1:AA:933:G:OP2	7:AG:3:ARG:HB3	2.09	0.53
1:AA:1109:C:OP2	3:AC:176:HIS:ND1	2.34	0.53
1:AA:1135:U:C2'	1:AA:1136:C:O5'	2.57	0.53
1:AA:1353:G:C2	1:AA:1354:U:C6	2.97	0.53
1:AA:1523:G:OP1	11:AK:128:ARG:NH2	2.42	0.53
9:AI:57:MET:C	9:AI:59:GLU:H	2.17	0.53
16:AP:77:GLU:C	16:AP:79:ASN:H	2.16	0.53
22:BA:1384:A:H1'	22:BA:1405:U:C1'	2.38	0.53
22:BA:1627:G:C2	22:BA:1628:G:C8	2.97	0.53
22:BA:1926:U:O2	22:BA:1926:U:H2'	2.09	0.53
22:BA:2024:G:OP2	22:BA:2034:U:H4'	2.09	0.53
22:BA:2309:A:C6	22:BA:2310:C:C4	2.97	0.53
34:BM:12:MET:CE	34:BM:71:LYS:HG3	2.39	0.53
40:BS:1:MET:N	40:BS:109:ASP:OD1	2.41	0.53
1:CA:203:G:N2	1:CA:215:C:N3	2.57	0.53
1:CA:866:C:C4	1:CA:867:G:H1'	2.44	0.53
1:CA:878:A:C5	1:CA:879:C:C5	2.96	0.53
1:CA:885:G:O2'	1:CA:914:A:N1	2.33	0.53
4:CD:57:GLU:OE2	4:CD:196:ASN:N	2.41	0.53
14:CN:51:LEU:O	14:CN:53:ARG:N	2.42	0.53
22:DA:197:A:C2	22:DA:198:C:H1'	2.44	0.53
22:DA:483:A:C2	42:DU:58:ILE:HD11	2.43	0.53
22:DA:728:G:C2	22:DA:730:A:C4	2.97	0.53
22:DA:1519:G:C6	22:DA:1520:U:C2	2.97	0.53
28:DG:158:LYS:O	28:DG:159:GLY:C	2.51	0.53
30:DI:33:VAL:HG13	30:DI:67:PHE:CZ	2.43	0.53
45:DX:43:GLU:O	45:DX:44:LYS:C	2.52	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:71:A:O2'	1:AA:72:A:OP2	2.27	0.53
1:AA:259:G:N2	1:AA:260:G:H1'	2.23	0.53
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.09	0.53
2:AB:15:HIS:ND1	2:AB:15:HIS:C	2.66	0.53
5:AE:81:LEU:CB	5:AE:147:MET:HE1	2.39	0.53
9:AI:30:ILE:HD11	9:AI:38:TYR:CB	2.39	0.53
9:AI:40:GLY:O	9:AI:41:ARG:HB2	2.07	0.53
10:AJ:52:LEU:HB2	14:AN:81:ARG:NE	2.24	0.53
17:AQ:50:ASN:O	17:AQ:51:ASN:C	2.52	0.53
21:AU:18:ARG:N	21:AU:18:ARG:HD2	2.24	0.53
22:BA:102:U:C2	46:BY:2:LYS:HE3	2.44	0.53
22:BA:287:G:H2'	22:BA:288:U:C6	2.45	0.53
22:BA:1411:U:H2'	22:BA:1412:U:O4'	2.09	0.53
22:BA:1805:A:H1'	24:BC:50:THR:O	2.08	0.53
32:BK:20:MET:C	32:BK:41:ILE:HG22	2.34	0.53
35:BN:12:ARG:NH1	35:BN:20:MET:HE1	2.24	0.53
1:CA:690:G:H2'	1:CA:691:G:O4'	2.09	0.53
2:CB:85:LEU:O	2:CB:85:LEU:CG	2.57	0.53
3:CC:57:ILE:HG13	3:CC:66:VAL:HG22	1.90	0.53
4:CD:29:ASP:O	4:CD:30:THR:C	2.52	0.53
8:CH:35:ALA:O	8:CH:39:VAL:HG23	2.09	0.53
9:CI:30:ILE:HA	9:CI:65:ILE:HG13	1.91	0.53
13:CM:114:LYS:HB2	13:CM:115:PRO:HD3	1.91	0.53
22:DA:37:C:H2'	22:DA:38:A:O4'	2.09	0.53
22:DA:95:A:O2'	46:DY:40:SER:N	2.42	0.53
22:DA:301:G:N3	22:DA:302:C:C2	2.77	0.53
22:DA:658:U:N3	22:DA:659:G:N7	2.57	0.53
22:DA:979:A:C8	22:DA:982:C:N4	2.77	0.53
22:DA:1627:G:N2	22:DA:1628:G:C8	2.77	0.53
22:DA:2223:G:H2'	22:DA:2224:G:H5'	1.91	0.53
24:DC:147:LYS:HB2	24:DC:150:LYS:HB2	1.91	0.53
32:DK:31:ARG:CB	32:DK:32:TYR:CD2	2.92	0.53
46:DY:36:GLN:O	46:DY:37:LEU:C	2.52	0.53
1:AA:100:G:N7	1:AA:101:A:N7	2.57	0.52
1:AA:587:G:C2	1:AA:755:G:C5	2.97	0.52
1:AA:1157:A:N6	1:AA:1180:A:N7	2.58	0.52
1:AA:1191:A:OP2	3:AC:3:GLN:NE2	2.41	0.52
3:AC:11:ARG:O	3:AC:12:LEU:C	2.53	0.52
4:AD:37:ALA:HA	4:AD:42:GLY:HA3	1.91	0.52
4:AD:124:MET:HE3	4:AD:146:ARG:HD2	1.89	0.52
10:AJ:56:HIS:C	10:AJ:57:VAL:HG12	2.34	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:10:GLU:HG3	21:AU:11:PRO:HD3	1.92	0.52
22:BA:26:G:C6	22:BA:27:G:N1	2.77	0.52
22:BA:482:A:C5'	22:BA:483:A:OP1	2.56	0.52
22:BA:1206:G:C5	22:BA:1207:C:C5	2.97	0.52
27:BF:2:ALA:O	27:BF:4:LEU:N	2.42	0.52
30:BI:116:ASP:O	30:BI:117:MET:HB2	2.09	0.52
34:BM:77:PRO:HG2	34:BM:80:VAL:HG21	1.91	0.52
1:CA:60:A:N3	1:CA:61:G:H1'	2.24	0.52
1:CA:259:G:N2	1:CA:268:U:C2	2.77	0.52
1:CA:1211:U:O2'	1:CA:1212:U:P	2.66	0.52
1:CA:1363:A:O2'	1:CA:1365:G:N7	2.37	0.52
2:CB:81:LYS:HG3	2:CB:91:PHE:CZ	2.44	0.52
2:CB:125:THR:O	2:CB:126:PHE:HB3	2.09	0.52
4:CD:202:GLU:OE1	5:CE:105:ILE:HG23	2.09	0.52
8:CH:66:PHE:CE2	8:CH:67:GLN:OE1	2.62	0.52
10:CJ:73:LEU:CD2	10:CJ:75:ASP:HB2	2.38	0.52
20:CT:21:ASN:HB3	20:CT:25:ARG:NH2	2.24	0.52
20:CT:33:LYS:O	20:CT:36:TYR:CE2	2.62	0.52
22:DA:134:G:C6	22:DA:135:U:N3	2.78	0.52
22:DA:406:G:H2'	22:DA:407:G:O4'	2.08	0.52
22:DA:630:G:C3'	22:DA:631:A:H5"	2.39	0.52
22:DA:945:A:C5	22:DA:2448:A:C2	2.97	0.52
22:DA:1352:U:C5	22:DA:1377:G:C5	2.97	0.52
22:DA:1776:G:N2	22:DA:1789:A:H1'	2.25	0.52
22:DA:2325:G:C6	22:DA:2326:C:N4	2.77	0.52
22:DA:2550:G:C6	22:DA:2551:C:C4	2.97	0.52
22:DA:2851:A:O2'	35:DN:64:ARG:NH2	2.41	0.52
25:DD:186:LEU:CD1	37:DP:8:LEU:HD12	2.39	0.52
1:AA:255:G:C6	1:AA:256:U:C4	2.98	0.52
1:AA:374:A:H5"	1:AA:452:A:C2	2.44	0.52
1:AA:596:A:N6	1:AA:645:G:C6	2.77	0.52
2:AB:20:THR:HA	2:AB:38:VAL:HA	1.91	0.52
4:AD:150:LYS:O	4:AD:151:LYS:C	2.51	0.52
5:AE:69:ARG:O	5:AE:70:ASN:C	2.52	0.52
14:AN:72:GLY:O	14:AN:80:SER:HA	2.09	0.52
21:AU:11:PRO:O	21:AU:12:PHE:CG	2.62	0.52
22:BA:492:A:H2'	22:BA:493:G:O4'	2.08	0.52
22:BA:720:U:H2'	22:BA:721:A:C8	2.45	0.52
22:BA:981:A:H5"	58:BA:3595:HOH:O	2.09	0.52
22:BA:1650:A:N6	58:BA:3800:HOH:O	2.41	0.52
44:BW:56:ASP:N	44:BW:56:ASP:OD1	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:47:VAL:HG13	49:B1:48:ILE:N	2.24	0.52
53:B5:52:PRO:O	53:B5:53:ARG:HB2	2.10	0.52
1:CA:183:C:O2'	1:CA:184:G:C5'	2.57	0.52
1:CA:1105:A:N3	1:CA:1106:G:C8	2.77	0.52
1:CA:1126:U:O4	10:CJ:73:LEU:HD12	2.10	0.52
2:CB:35:ARG:O	2:CB:37:LYS:N	2.42	0.52
6:CF:66:ALA:HB1	6:CF:67:PRO:HD2	1.91	0.52
11:CK:81:ASN:HA	11:CK:106:ARG:O	2.09	0.52
20:CT:74:ARG:O	20:CT:78:ASN:ND2	2.41	0.52
22:DA:85:G:OP2	42:DU:7:ARG:HB2	2.10	0.52
22:DA:329:G:O4'	22:DA:477:A:H1'	2.10	0.52
22:DA:547:A:H3'	22:DA:548:G:H5'	1.91	0.52
22:DA:1577:C:H2'	22:DA:1578:U:O4'	2.09	0.52
22:DA:1645:G:H4'	22:DA:1646:C:C6	2.43	0.52
22:DA:2519:U:C6	22:DA:2542:A:N6	2.77	0.52
23:DB:76:G:O2'	43:DV:78:GLN:OE1	2.19	0.52
27:DF:111:ILE:HB	27:DF:114:PHE:HB2	1.90	0.52
29:DH:31:VAL:CB	29:DH:32:PRO:CD	2.86	0.52
34:DM:119:LEU:O	34:DM:119:LEU:HD13	2.09	0.52
46:DY:45:GLN:O	46:DY:47:ARG:N	2.43	0.52
1:AA:6:G:H3'	1:AA:6:G:N3	2.24	0.52
1:AA:198:G:C5	1:AA:220:G:C2	2.97	0.52
1:AA:1118:U:C1'	1:AA:1179:A:C4	2.92	0.52
4:AD:2:ALA:O	4:AD:68:LEU:HD21	2.10	0.52
5:AE:15:LEU:HB3	5:AE:37:THR:CG2	2.39	0.52
12:AL:22:PRO:C	12:AL:24:LEU:H	2.17	0.52
22:BA:441:U:H2'	22:BA:442:G:C8	2.45	0.52
22:BA:1026:G:C8	22:BA:1134:A:C4	2.97	0.52
22:BA:1061:U:H3'	22:BA:1062:G:H5'	1.91	0.52
22:BA:2470:G:O6	22:BA:2476:A:O2'	2.18	0.52
23:BB:2:G:C2	23:BB:119:A:C2	2.98	0.52
53:B5:40:GLU:HA	53:B5:181:PHE:HA	1.91	0.52
53:B5:67:HIS:CD2	53:B5:188:ASP:HA	2.45	0.52
1:CA:332:G:OP2	20:CT:5:LYS:HB3	2.09	0.52
1:CA:927:G:O2'	1:CA:1503:A:N7	2.36	0.52
1:CA:1478:U:H2'	1:CA:1479:C:C6	2.44	0.52
3:CC:117:ALA:HB1	3:CC:187:SER:CB	2.39	0.52
5:CE:96:MET:HE3	5:CE:111:MET:HE3	1.92	0.52
7:CG:68:ASN:ND2	7:CG:130:ASN:OD1	2.42	0.52
13:CM:81:MET:O	13:CM:82:ASP:C	2.52	0.52
22:DA:404:A:H1'	22:DA:405:U:OP2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:634:C:H2'	22:DA:635:C:C6	2.45	0.52
22:DA:681:G:C2	22:DA:682:G:C8	2.98	0.52
22:DA:747:U:O2	22:DA:2014:A:H1'	2.09	0.52
22:DA:1355:G:C6	22:DA:1377:G:C2	2.96	0.52
22:DA:2093:G:O2'	22:DA:2094:A:H5'	2.08	0.52
22:DA:2267:A:H5"	22:DA:2268:A:H5'	1.90	0.52
22:DA:2505:G:N2	54:D6:4:PRO:HB3	2.23	0.52
22:DA:2575:C:H2'	22:DA:2578:G:O6	2.10	0.52
22:DA:2611:C:H1'	54:D6:8:MHT:H2	1.91	0.52
26:DE:59:PRO:HB2	26:DE:70:SER:OG	2.09	0.52
29:DH:72:ILE:HG22	29:DH:72:ILE:O	2.09	0.52
36:DO:117:PHE:CD1	36:DO:117:PHE:C	2.87	0.52
40:DS:61:ASN:O	40:DS:62:ASP:HB3	2.09	0.52
48:D0:28:LEU:HD23	48:D0:37:LYS:HB3	1.92	0.52
1:AA:1014:A:H2'	1:AA:1015:G:O4'	2.10	0.52
1:AA:1195:C:H5"	1:AA:1196:A:OP2	2.09	0.52
2:AB:53:ALA:O	2:AB:57:LEU:HB2	2.10	0.52
22:BA:15:G:C5	22:BA:16:C:C5	2.97	0.52
22:BA:136:G:H2'	22:BA:137:U:C6	2.44	0.52
22:BA:244:A:OP2	51:B3:8:ARG:NH2	2.40	0.52
22:BA:1153:C:P	58:BA:3362:HOH:O	2.67	0.52
22:BA:1379:U:OP1	22:BA:1379:U:C5	2.62	0.52
22:BA:1565:C:OP1	24:BC:18:LYS:NZ	2.41	0.52
22:BA:1594:U:H2'	22:BA:1595:C:C6	2.45	0.52
22:BA:1916:A:N1	22:BA:1917:U:C2	2.77	0.52
22:BA:2441:U:OP2	22:BA:2586:U:O2'	2.28	0.52
24:BC:44:ASN:C	24:BC:44:ASN:OD1	2.51	0.52
26:BE:145:ASP:HB3	26:BE:184:ASP:OD2	2.09	0.52
29:BH:77:THR:HA	29:BH:143:ILE:O	2.10	0.52
30:BI:97:LYS:HG3	30:BI:139:VAL:HG22	1.91	0.52
31:BJ:65:THR:O	31:BJ:68:LYS:HG3	2.09	0.52
37:BP:26:VAL:HG13	37:BP:47:VAL:HG23	1.89	0.52
1:CA:406:G:C2	1:CA:407:U:C6	2.98	0.52
1:CA:747:A:C6	1:CA:748:G:C6	2.97	0.52
1:CA:1133:G:H2'	1:CA:1133:G:N3	2.25	0.52
1:CA:1235:U:H2'	1:CA:1236:A:O4'	2.08	0.52
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.09	0.52
1:CA:1296:C:C5'	1:CA:1297:G:OP2	2.57	0.52
2:CB:162:PHE:HA	2:CB:184:PHE:O	2.09	0.52
6:CF:4:TYR:CD2	6:CF:71:ILE:HG12	2.44	0.52
13:CM:6:GLY:O	13:CM:8:ASN:N	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:22:ASP:OD2	18:CR:24:LYS:NZ	2.42	0.52
19:CS:6:LYS:CB	19:CS:7:LYS:HE2	2.40	0.52
22:DA:749:A:C5	22:DA:750:A:C8	2.97	0.52
22:DA:1638:C:H4'	22:DA:2710:C:O2	2.09	0.52
22:DA:1874:C:H3'	22:DA:1875:G:C8	2.44	0.52
22:DA:2225:A:H1'	22:DA:2226:C:OP2	2.09	0.52
24:DC:141:VAL:CG1	24:DC:190:ALA:HB1	2.39	0.52
36:DO:7:ARG:HD2	36:DO:97:PHE:CE1	2.44	0.52
1:AA:118:U:O4	1:AA:288:A:H2'	2.10	0.52
1:AA:260:G:H2'	1:AA:261:U:C6	2.45	0.52
1:AA:624:C:H4'	16:AP:11:ALA:HB2	1.91	0.52
1:AA:1060:U:OP1	14:AN:85:ARG:NH2	2.39	0.52
1:AA:1277:C:HO2'	1:AA:1279:G:H8	1.54	0.52
3:AC:193:TYR:N	3:AC:193:TYR:CD2	2.76	0.52
22:BA:1124:G:N3	52:B4:38:GLY:O	2.43	0.52
22:BA:1575:C:H2'	22:BA:1576:U:O4'	2.10	0.52
22:BA:1593:A:H2'	22:BA:1594:U:O4'	2.09	0.52
22:BA:1680:U:H2'	22:BA:1681:G:O4'	2.09	0.52
22:BA:2243:U:O2'	22:BA:2244:U:H5'	2.10	0.52
22:BA:2318:G:C6	22:BA:2319:G:C6	2.97	0.52
22:BA:2512:C:H4'	25:BD:127:PHE:CE1	2.45	0.52
24:BC:21:ASN:O	24:BC:24:LEU:HB2	2.10	0.52
29:BH:51:ARG:NH1	29:BH:55:GLU:OE1	2.43	0.52
35:BN:66:ALA:O	35:BN:69:ARG:O	2.27	0.52
1:CA:72:A:C6	1:CA:73:C:C4	2.98	0.52
1:CA:179:A:C5	1:CA:180:U:C4	2.97	0.52
1:CA:186:C:O2'	1:CA:187:G:H5'	2.10	0.52
1:CA:802:A:N3	1:CA:802:A:H2'	2.25	0.52
2:CB:67:ILE:HG22	2:CB:68:LEU:N	2.24	0.52
3:CC:77:ILE:HD11	3:CC:103:ILE:HG12	1.92	0.52
3:CC:173:VAL:O	3:CC:175:LEU:N	2.42	0.52
10:CJ:84:VAL:O	10:CJ:88:MET:HB2	2.10	0.52
11:CK:92:GLY:O	11:CK:93:ARG:C	2.53	0.52
22:DA:459:U:C5	22:DA:469:G:N2	2.77	0.52
22:DA:593:U:C2	22:DA:594:U:C5	2.98	0.52
22:DA:931:U:H4'	22:DA:932:U:OP2	2.08	0.52
22:DA:1253:A:OP2	58:DA:3283:HOH:O	2.19	0.52
22:DA:1370:C:H2'	22:DA:1371:G:C8	2.45	0.52
22:DA:1838:C:H4'	22:DA:1839:G:C8	2.45	0.52
37:DP:106:LYS:HA	37:DP:109:ARG:HD2	1.90	0.52
51:D3:24:HIS:CE1	51:D3:48:ALA:HB3	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1160:G:O2'	1:AA:1161:C:P	2.68	0.52
3:AC:130:PHE:CZ	3:AC:131:ARG:HD3	2.45	0.52
4:AD:26:ARG:HD2	4:AD:31:LYS:HD2	1.92	0.52
19:AS:5:LEU:C	19:AS:6:LYS:HG3	2.34	0.52
22:BA:528:A:N1	22:BA:2043:C:H5'	2.24	0.52
22:BA:947:A:HO2'	22:BA:984:A:H2	1.51	0.52
22:BA:996:A:N6	22:BA:1160:G:C6	2.77	0.52
22:BA:2307:G:H4'	22:BA:2308:G:O5'	2.10	0.52
27:BF:42:GLU:O	27:BF:42:GLU:CG	2.57	0.52
1:CA:31:G:C5	1:CA:306:A:H1'	2.44	0.52
1:CA:321:A:C8	1:CA:328:C:C2	2.97	0.52
1:CA:505:G:C5	1:CA:535:A:C2	2.98	0.52
1:CA:1052:U:H5"	1:CA:1053:G:OP2	2.08	0.52
1:CA:1511:G:C5	1:CA:1512:U:C5	2.97	0.52
4:CD:173:VAL:HG13	4:CD:174:ASP:N	2.25	0.52
6:CF:6:ILE:HG22	6:CF:7:VAL:N	2.24	0.52
10:CJ:57:VAL:HG13	10:CJ:58:ASN:N	2.25	0.52
11:CK:61:PHE:C	11:CK:61:PHE:CD2	2.88	0.52
11:CK:72:ASP:OD1	11:CK:73:ALA:N	2.42	0.52
14:CN:10:GLU:O	14:CN:13:ARG:N	2.43	0.52
22:DA:247:G:OP2	22:DA:249:C:N4	2.43	0.52
22:DA:1082:U:H5'	30:DI:119:GLY:HA2	1.92	0.52
22:DA:1139:G:O2'	22:DA:1140:C:H5'	2.09	0.52
22:DA:1281:G:C2'	22:DA:1282:U:H5'	2.39	0.52
22:DA:1438:U:C4	22:DA:1552:A:C2	2.98	0.52
22:DA:1439:A:C8	22:DA:1440:U:C6	2.98	0.52
22:DA:1645:G:OP1	22:DA:1646:C:H5'	2.09	0.52
22:DA:2314:A:C2	22:DA:2315:G:C4	2.97	0.52
22:DA:2392:A:C2	33:DL:55:MET:HE3	2.45	0.52
22:DA:2563:U:H1'	22:DA:2566:A:N6	2.25	0.52
24:DC:34:LEU:O	24:DC:35:GLU:CB	2.57	0.52
29:DH:34:GLY:O	29:DH:35:LYS:HB2	2.08	0.52
29:DH:34:GLY:O	29:DH:35:LYS:HD2	2.10	0.52
42:DU:83:VAL:CG1	42:DU:84:GLY:N	2.73	0.52
45:DX:27:ARG:NE	45:DX:28:ARG:O	2.40	0.52
1:AA:208:U:C5	1:AA:210:C:N3	2.78	0.52
1:AA:1255:G:O2'	1:AA:1258:G:N3	2.40	0.52
1:AA:1311:A:H2'	1:AA:1312:G:O5'	2.10	0.52
2:AB:34:ALA:O	2:AB:35:ARG:C	2.52	0.52
13:AM:11:ASP:O	13:AM:12:HIS:HB2	2.09	0.52
22:BA:2669:G:C2'	22:BA:2670:A:H5'	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:68:PHE:C	34:BM:68:PHE:CD2	2.88	0.52
36:BO:51:ALA:O	36:BO:74:VAL:HG13	2.10	0.52
45:BX:17:ASN:OD1	45:BX:27:ARG:HD2	2.09	0.52
53:B5:122:GLY:HA3	53:B5:146:VAL:CB	2.40	0.52
1:CA:513:C:H2'	1:CA:514:C:C6	2.45	0.52
1:CA:734:G:C4	1:CA:735:C:C5	2.98	0.52
1:CA:838:G:H2'	1:CA:839:C:O4'	2.09	0.52
2:CB:186:ILE:HG13	2:CB:200:ILE:O	2.10	0.52
6:CF:43:GLY:HA2	6:CF:58:HIS:NE2	2.24	0.52
7:CG:116:MET:HA	7:CG:119:ARG:HD3	1.91	0.52
16:CP:23:ASP:OD2	16:CP:25:ARG:CG	2.58	0.52
22:DA:1029:A:N1	22:DA:2465:C:O2'	2.36	0.52
22:DA:1352:U:C5	22:DA:1377:G:C6	2.98	0.52
22:DA:1355:G:C2	22:DA:1356:G:C8	2.98	0.52
22:DA:1363:C:H2'	22:DA:1364:G:H8	1.75	0.52
22:DA:2093:G:C6	22:DA:2225:A:C8	2.98	0.52
22:DA:2677:G:C4	22:DA:2731:G:N2	2.77	0.52
24:DC:141:VAL:HG11	24:DC:190:ALA:HB1	1.90	0.52
26:DE:5:LEU:O	26:DE:6:LYS:C	2.52	0.52
26:DE:8:ALA:HB2	26:DE:122:GLU:HG3	1.92	0.52
27:DF:122:PHE:CE1	27:DF:166:GLY:HA3	2.45	0.52
30:DI:62:TYR:HB2	30:DI:66:SER:O	2.08	0.52
1:AA:202:G:O2'	1:AA:468:A:C8	2.62	0.52
1:AA:1118:U:O2	1:AA:1179:A:C6	2.63	0.52
3:AC:146:ALA:C	3:AC:148:GLY:H	2.18	0.52
4:AD:88:GLU:HG2	4:AD:188:ARG:HD3	1.91	0.52
13:AM:11:ASP:OD1	13:AM:45:ILE:HB	2.09	0.52
15:AO:35:GLN:HB3	15:AO:59:MET:CE	2.40	0.52
19:AS:5:LEU:HD23	19:AS:9:PRO:HA	1.92	0.52
22:BA:555:G:HO2'	22:BA:556:A:P	2.32	0.52
22:BA:1317:G:C2	22:BA:1336:A:C2	2.98	0.52
22:BA:2291:U:H2'	22:BA:2292:U:C5	2.45	0.52
23:BB:2:G:N1	23:BB:119:A:C2	2.78	0.52
29:BH:2:GLN:O	29:BH:3:VAL:HG22	2.10	0.52
29:BH:94:ILE:HD12	29:BH:98:ASP:HB3	1.92	0.52
41:BT:19:LYS:NZ	41:BT:84:TYR:OH	2.42	0.52
17:CQ:52:GLU:CD	17:CQ:75:LEU:HD21	2.34	0.52
22:DA:30:G:C6	22:DA:31:C:N3	2.78	0.52
22:DA:61:C:OP1	46:DY:44:LYS:HD3	2.10	0.52
22:DA:67:U:H2'	22:DA:68:G:O4'	2.10	0.52
22:DA:142:A:C6	22:DA:143:C:N4	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:158:U:H2'	22:DA:159:G:H5'	1.92	0.52
22:DA:250:G:H2'	22:DA:251:A:C8	2.44	0.52
22:DA:996:A:C2	22:DA:997:G:C8	2.98	0.52
22:DA:1722:A:C6	22:DA:1739:A:C8	2.98	0.52
22:DA:1893:C:C5	22:DA:1894:C:C5	2.98	0.52
22:DA:2024:G:N2	22:DA:2040:G:H1'	2.25	0.52
22:DA:2073:C:H5"	24:DC:228:VAL:HB	1.91	0.52
22:DA:2690:U:C5	22:DA:2873:A:N1	2.78	0.52
29:DH:25:TYR:CZ	29:DH:30:LEU:HD21	2.45	0.52
33:DL:2:ARG:HD3	33:DL:2:ARG:N	2.25	0.52
41:DT:35:ALA:O	41:DT:36:LYS:C	2.51	0.52
42:DU:88:GLU:O	42:DU:89:ASP:CB	2.58	0.52
1:AA:92:U:H2'	1:AA:93:U:C6	2.45	0.52
1:AA:502:A:H2'	1:AA:503:C:O4'	2.09	0.52
1:AA:926:G:N2	1:AA:1505:G:H2'	2.25	0.52
1:AA:1296:C:H4'	1:AA:1302:C:C4	2.44	0.52
2:AB:27:MET:HG2	2:AB:189:THR:HA	1.92	0.52
2:AB:219:ALA:O	2:AB:220:THR:CB	2.57	0.52
7:AG:71:PRO:HD2	7:AG:96:ARG:O	2.10	0.52
10:AJ:57:VAL:HG22	10:AJ:58:ASN:N	2.25	0.52
14:AN:10:GLU:OE2	14:AN:61:ARG:HB3	2.10	0.52
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.90	0.52
22:BA:65:U:H2'	22:BA:66:C:C6	2.44	0.52
22:BA:792:A:N3	22:BA:2072:C:O2'	2.35	0.52
22:BA:1224:U:C4	22:BA:1225:G:C6	2.98	0.52
22:BA:1779:U:C5	22:BA:1784:A:N7	2.78	0.52
22:BA:1916:A:OP2	22:BA:1917:U:OP2	2.28	0.52
22:BA:1993:U:H4'	25:BD:133:THR:HG21	1.92	0.52
22:BA:2154:A:H2'	22:BA:2155:U:C5	2.45	0.52
22:BA:2339:C:H2'	22:BA:2340:A:C8	2.44	0.52
26:BE:164:LEU:HB3	26:BE:167:VAL:HB	1.92	0.52
27:BF:36:LEU:HD21	27:BF:99:PHE:CE1	2.45	0.52
43:BV:65:VAL:O	43:BV:66:ASP:C	2.53	0.52
48:B0:48:TYR:CE2	48:B0:53:LYS:HB2	2.44	0.52
53:B5:83:LYS:HB3	53:B5:87:ALA:HB3	1.92	0.52
53:B5:204:GLY:O	53:B5:205:ALA:HB3	2.08	0.52
1:CA:197:A:C6	1:CA:221:C:H4'	2.45	0.52
1:CA:328:C:O2	1:CA:328:C:C2'	2.58	0.52
1:CA:632:U:O2	1:CA:632:U:C2'	2.58	0.52
1:CA:1001:C:H2'	1:CA:1002:G:N7	2.25	0.52
4:CD:65:TYR:CG	4:CD:94:LEU:HD22	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:104:GLY:O	5:CE:105:ILE:CG2	2.57	0.52
5:CE:125:ALA:O	5:CE:126:LYS:HB3	2.09	0.52
11:CK:51:GLY:O	11:CK:52:PHE:O	2.28	0.52
22:DA:207:A:H2'	22:DA:207:A:N3	2.24	0.52
22:DA:249:C:P	22:DA:2394:C:O2'	2.68	0.52
22:DA:927:A:O2'	47:DZ:39:GLU:OE1	2.28	0.52
22:DA:1289:C:O2'	22:DA:1330:C:H4'	2.10	0.52
22:DA:1318:U:H2'	22:DA:1319:C:C6	2.45	0.52
22:DA:1338:G:H5"	41:DT:17:SER:HB2	1.92	0.52
22:DA:1566:A:C2	24:DC:213:TRP:CG	2.98	0.52
22:DA:1731:G:C6	22:DA:1733:G:N7	2.77	0.52
22:DA:2199:A:N7	22:DA:2225:A:N6	2.58	0.52
22:DA:2214:C:C2'	22:DA:2215:C:O5'	2.57	0.52
22:DA:2621:G:OP1	25:DD:124:ARG:NH2	2.43	0.52
25:DD:151:THR:HB	25:DD:152:PRO:HD2	1.92	0.52
30:DI:97:LYS:N	30:DI:97:LYS:HD2	2.25	0.52
42:DU:10:GLU:OE2	42:DU:73:PHE:CD2	2.62	0.52
49:D1:26:ASN:O	49:D1:27:LYS:C	2.52	0.52
1:AA:1452:C:O4'	1:AA:1453:G:C2	2.63	0.52
1:AA:1463:U:H2'	1:AA:1464:U:C6	2.45	0.52
2:AB:126:PHE:N	2:AB:126:PHE:HD2	2.06	0.52
2:AB:147:SER:O	2:AB:148:LEU:HB2	2.08	0.52
8:AH:25:VAL:HG12	8:AH:61:LEU:HB2	1.92	0.52
10:AJ:53:ILE:HG22	10:AJ:61:ALA:HB1	1.92	0.52
11:AK:36:ASP:OD2	11:AK:38:GLN:N	2.42	0.52
16:AP:20:VAL:HG21	16:AP:32:PHE:CG	2.45	0.52
17:AQ:16:LYS:O	17:AQ:16:LYS:CG	2.57	0.52
22:BA:271:G:H4'	22:BA:272:A:OP1	2.10	0.52
22:BA:280:U:H2'	22:BA:281:C:O4'	2.09	0.52
22:BA:819:A:N3	22:BA:1189:A:C2	2.77	0.52
22:BA:1007:C:OP1	31:BJ:39:LYS:HD2	2.10	0.52
22:BA:2393:U:C2'	22:BA:2394:C:O5'	2.58	0.52
32:BK:107:LEU:O	32:BK:109:SER:N	2.43	0.52
33:BL:53:GLY:O	33:BL:54:GLN:C	2.52	0.52
35:BN:69:ARG:O	35:BN:70:THR:HG23	2.10	0.52
53:B5:65:LEU:HD21	53:B5:191:ARG:CB	2.39	0.52
1:CA:109:A:C6	1:CA:327:A:C5	2.98	0.52
1:CA:455:G:C6	1:CA:456:A:C6	2.98	0.52
1:CA:518:C:H5"	1:CA:519:C:C6	2.45	0.52
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.09	0.52
1:CA:892:A:C5	1:CA:893:C:C5	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1053:G:O5'	1:CA:1054:C:H3'	2.09	0.52
1:CA:1098:C:H2'	1:CA:1099:G:O4'	2.10	0.52
1:CA:1458:G:O2'	20:CT:23:SER:HB3	2.09	0.52
1:CA:1467:C:H2'	1:CA:1468:A:C8	2.45	0.52
13:CM:29:ARG:NH1	13:CM:59:GLU:O	2.43	0.52
14:CN:31:ILE:O	14:CN:33:ASP:N	2.43	0.52
17:CQ:49:GLU:C	17:CQ:50:ASN:CG	2.77	0.52
22:DA:294:A:C6	22:DA:345:A:C4	2.97	0.52
22:DA:815:C:H2'	22:DA:816:C:C6	2.45	0.52
22:DA:1204:A:C2	22:DA:1240:U:N3	2.77	0.52
22:DA:2230:G:H5'	45:DX:30:LEU:HD13	1.92	0.52
22:DA:2297:A:N3	22:DA:2297:A:H2'	2.25	0.52
22:DA:2870:C:H5"	35:DN:65:LEU:HD21	1.92	0.52
29:DH:23:ALA:O	29:DH:27:ARG:N	2.38	0.52
33:DL:102:GLY:N	58:DL:301:HOH:O	2.43	0.52
37:DP:39:ARG:HA	37:DP:39:ARG:HE	1.74	0.52
41:DT:77:ARG:O	41:DT:78:SER:CB	2.57	0.52
50:D2:10:LEU:O	50:D2:14:ARG:HG3	2.10	0.52
1:AA:47:C:O2	1:AA:49:U:C5	2.62	0.51
1:AA:102:G:C2	1:AA:103:U:C5	2.98	0.51
1:AA:760:G:C5	1:AA:761:G:C8	2.98	0.51
1:AA:862:C:C2'	1:AA:863:U:H5'	2.40	0.51
1:AA:878:A:OP2	8:AH:80:ARG:NH1	2.43	0.51
1:AA:1171:A:C2	1:AA:1172:C:C2	2.98	0.51
1:AA:1367:C:OP2	9:AI:114:LYS:NZ	2.41	0.51
2:AB:206:ALA:O	2:AB:210:VAL:HG22	2.10	0.51
4:AD:29:ASP:C	4:AD:30:THR:O	2.51	0.51
5:AE:13:GLU:CB	5:AE:39:VAL:HG12	2.41	0.51
6:AF:47:LEU:HD13	6:AF:51:ILE:HG23	1.91	0.51
8:AH:111:MET:HE2	8:AH:116:ALA:N	2.25	0.51
13:AM:6:GLY:C	13:AM:8:ASN:N	2.66	0.51
20:AT:5:LYS:O	20:AT:6:SER:C	2.52	0.51
22:BA:195:A:C6	22:BA:198:C:C5	2.97	0.51
22:BA:225:C:H2'	22:BA:226:A:O4'	2.10	0.51
22:BA:1098:A:C8	22:BA:1099:G:N7	2.78	0.51
26:BE:149:ILE:C	26:BE:149:ILE:HD12	2.34	0.51
27:BF:85:ILE:O	27:BF:85:ILE:HG12	2.10	0.51
27:BF:103:LEU:O	27:BF:108:VAL:HB	2.10	0.51
30:BI:24:VAL:CG2	30:BI:28:LEU:HD23	2.40	0.51
31:BJ:17:VAL:HG22	31:BJ:55:ILE:HB	1.92	0.51
34:BM:12:MET:HE3	34:BM:71:LYS:HG3	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:17:SER:O	41:BT:18:GLU:C	2.53	0.51
1:CA:519:C:H2'	1:CA:520:A:O4'	2.10	0.51
3:CC:117:ALA:HB1	3:CC:187:SER:HB2	1.90	0.51
4:CD:26:ARG:CG	4:CD:27:ALA:N	2.73	0.51
5:CE:154:ALA:C	5:CE:156:LYS:N	2.66	0.51
12:CL:38:TYR:CB	12:CL:52:VAL:HG13	2.40	0.51
17:CQ:50:ASN:O	17:CQ:52:GLU:N	2.43	0.51
18:CR:25:ASP:OD1	18:CR:25:ASP:N	2.43	0.51
22:DA:425:G:N2	22:DA:426:C:N3	2.58	0.51
22:DA:522:A:C6	22:DA:523:C:N3	2.78	0.51
22:DA:740:C:H5'	22:DA:1784:A:C3'	2.39	0.51
22:DA:973:A:O4'	22:DA:1188:U:C6	2.63	0.51
22:DA:1544:A:C6	22:DA:1545:A:N1	2.78	0.51
22:DA:1678:A:C5	22:DA:1679:A:C8	2.98	0.51
22:DA:1809:A:C6	22:DA:1810:A:C6	2.98	0.51
22:DA:2209:G:C2	22:DA:2216:G:N3	2.78	0.51
22:DA:2221:G:C5	22:DA:2222:C:C5	2.98	0.51
25:DD:140:HIS:CE1	58:DD:303:HOH:O	2.63	0.51
26:DE:47:LYS:O	26:DE:83:VAL:HB	2.10	0.51
30:DI:80:LEU:HA	30:DI:84:ALA:HB2	1.92	0.51
32:DK:71:ARG:HB3	32:DK:72:PRO:HD2	1.92	0.51
32:DK:97:THR:C	32:DK:98:ARG:HG2	2.36	0.51
49:D1:5:ILE:HG22	49:D1:28:ARG:NH1	2.25	0.51
51:D3:4:ILE:HG21	51:D3:63:PRO:HG3	1.92	0.51
1:AA:601:G:H2'	1:AA:602:A:C8	2.44	0.51
1:AA:1315:U:C4	1:AA:1316:G:C6	2.98	0.51
2:AB:42:ASN:O	2:AB:43:LEU:C	2.53	0.51
2:AB:164:ILE:HD12	2:AB:210:VAL:CG1	2.41	0.51
9:AI:50:GLN:O	9:AI:52:LEU:N	2.42	0.51
14:AN:49:GLN:HA	14:AN:49:GLN:OE1	2.09	0.51
22:BA:307:G:N2	22:BA:309:A:H3'	2.25	0.51
22:BA:563:A:C2	22:BA:564:C:C2	2.99	0.51
22:BA:861:A:C2	22:BA:917:A:C4	2.99	0.51
22:BA:1056:G:C2	22:BA:1102:C:C5	2.98	0.51
22:BA:1737:G:C6	22:BA:1738:G:N1	2.78	0.51
22:BA:2140:G:N3	22:BA:2140:G:H2'	2.25	0.51
49:B1:23:THR:OG1	49:B1:24:THR:N	2.44	0.51
1:CA:137:U:H1'	1:CA:227:G:N2	2.25	0.51
1:CA:151:A:H2'	1:CA:152:A:O4'	2.10	0.51
3:CC:172:ARG:HG3	3:CC:174:PRO:HD3	1.92	0.51
15:CO:67:LEU:O	15:CO:70:LEU:N	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:169:G:C2	22:DA:170:U:C6	2.98	0.51
22:DA:176:A:N7	22:DA:177:G:C6	2.79	0.51
22:DA:195:A:C6	22:DA:198:C:C5	2.99	0.51
22:DA:270:A:C2	22:DA:369:U:H4'	2.46	0.51
22:DA:398:C:OP1	45:DX:53:ALA:CB	2.59	0.51
22:DA:856:G:H2'	22:DA:857:G:C8	2.44	0.51
22:DA:914:G:H5'	22:DA:915:C:OP2	2.10	0.51
22:DA:1049:C:H2'	22:DA:1050:A:H5'	1.92	0.51
22:DA:1845:G:OP1	24:DC:256:LYS:NZ	2.40	0.51
22:DA:2174:C:H2'	22:DA:2175:C:O4'	2.09	0.51
24:DC:184:VAL:O	24:DC:185:GLU:C	2.54	0.51
42:DU:13:VAL:HG21	42:DU:39:ILE:CG2	2.40	0.51
50:D2:18:PHE:O	50:D2:19:ARG:C	2.54	0.51
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.92	0.51
10:AJ:10:LEU:CD1	10:AJ:98:VAL:HG12	2.40	0.51
12:AL:23:ALA:O	12:AL:24:LEU:O	2.27	0.51
22:BA:547:A:H3'	22:BA:548:G:C5'	2.40	0.51
22:BA:1050:A:H2'	22:BA:1051:G:O4'	2.10	0.51
22:BA:1075:C:H2'	22:BA:1076:C:C2	2.46	0.51
22:BA:1087:G:O2'	22:BA:1089:A:O4'	2.29	0.51
22:BA:1171:G:N3	22:BA:1179:G:N1	2.57	0.51
22:BA:1432:G:O2'	22:BA:1433:A:H5'	2.10	0.51
22:BA:2882:A:OP1	35:BN:96:ARG:HD3	2.10	0.51
29:BH:99:ILE:O	29:BH:103:VAL:CG2	2.58	0.51
1:CA:74:A:C2	1:CA:75:G:C5	2.98	0.51
1:CA:620:C:N1	4:CD:132:ILE:HD13	2.25	0.51
1:CA:1072:G:C5	1:CA:1073:U:C5	2.99	0.51
1:CA:1240:U:C5	7:CG:109:ARG:NH1	2.78	0.51
2:CB:187:VAL:HG23	2:CB:188:ASP:O	2.09	0.51
8:CH:75:ILE:HD13	8:CH:129:VAL:HG22	1.92	0.51
17:CQ:8:LEU:HD13	17:CQ:73:TRP:CZ3	2.46	0.51
19:CS:31:LEU:O	19:CS:33:THR:N	2.42	0.51
22:DA:333:G:C5	22:DA:334:C:C5	2.99	0.51
22:DA:370:G:O2'	22:DA:423:A:H3'	2.09	0.51
22:DA:491:G:C6	22:DA:492:A:C5	2.98	0.51
22:DA:617:G:H2'	22:DA:618:G:O4'	2.10	0.51
22:DA:675:A:N3	22:DA:2443:C:O2'	2.43	0.51
22:DA:963:U:H2'	22:DA:964:C:C6	2.45	0.51
22:DA:1286:A:N6	22:DA:1329:U:C2	2.79	0.51
22:DA:1607:C:H4'	22:DA:1608:A:O5'	2.10	0.51
22:DA:2145:C:H5"	22:DA:2146:C:P	2.51	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2284:A:O2'	22:DA:2288:A:N1	2.33	0.51
29:DH:121:VAL:O	29:DH:122:LEU:HB2	2.11	0.51
30:DI:76:ALA:HA	30:DI:79:LEU:HB2	1.91	0.51
31:DJ:142:ILE:OXT	31:DJ:142:ILE:HG23	2.10	0.51
37:DP:54:GLY:O	37:DP:77:HIS:NE2	2.44	0.51
50:D2:18:PHE:O	50:D2:21:ARG:N	2.44	0.51
51:D3:31:HIS:CE1	51:D3:32:ILE:CD1	2.94	0.51
1:AA:340:U:H2'	1:AA:341:C:C6	2.45	0.51
1:AA:374:A:C6	1:AA:375:U:C4	2.99	0.51
4:AD:26:ARG:HD2	4:AD:31:LYS:HE3	1.93	0.51
7:AG:13:LEU:HD22	7:AG:13:LEU:N	2.26	0.51
7:AG:55:GLY:C	7:AG:57:SER:N	2.68	0.51
11:AK:74:VAL:C	11:AK:76:GLU:N	2.66	0.51
14:AN:4:GLN:O	14:AN:7:LYS:N	2.44	0.51
21:AU:12:PHE:CD2	21:AU:12:PHE:N	2.76	0.51
22:BA:244:A:C2	22:BA:255:A:C4	2.98	0.51
22:BA:2009:A:OP1	40:BS:41:LYS:HE2	2.11	0.51
22:BA:2298:A:C4	22:BA:2321:U:C5	2.98	0.51
23:BB:78:A:C2	23:BB:99:A:C4	2.98	0.51
24:BC:238:ARG:O	24:BC:239:ASN:ND2	2.43	0.51
25:BD:38:LYS:O	25:BD:46:ARG:HA	2.10	0.51
26:BE:77:ILE:O	26:BE:77:ILE:CG1	2.58	0.51
33:BL:95:LEU:HD22	33:BL:100:ILE:CD1	2.40	0.51
44:BW:23:VAL:HA	44:BW:38:VAL:HG12	1.92	0.51
50:B2:22:MET:HE2	50:B2:31:LEU:CD1	2.40	0.51
53:B5:50:ILE:HG22	53:B5:51:ASP:N	2.26	0.51
1:CA:686:U:O2'	1:CA:687:A:OP2	2.22	0.51
1:CA:743:A:C6	1:CA:744:C:C4	2.98	0.51
1:CA:963:G:C2'	1:CA:964:A:H5'	2.40	0.51
1:CA:972:C:H4'	10:CJ:59:LYS:HG2	1.91	0.51
2:CB:167:ASP:O	2:CB:168:HIS:HB3	2.09	0.51
3:CC:145:GLY:O	3:CC:146:ALA:O	2.28	0.51
4:CD:74:ASN:HA	4:CD:77:LYS:HB2	1.92	0.51
15:CO:35:GLN:NE2	15:CO:39:LEU:HD21	2.25	0.51
22:DA:491:G:C6	22:DA:492:A:C6	2.98	0.51
22:DA:621:A:C5	22:DA:622:G:H1'	2.45	0.51
22:DA:749:A:C6	22:DA:1618:A:C2	2.99	0.51
22:DA:1324:G:O4'	22:DA:1616:A:N6	2.43	0.51
22:DA:1620:G:C6	22:DA:1621:U:C4	2.99	0.51
33:DL:59:ARG:HB3	33:DL:59:ARG:CZ	2.40	0.51
35:DN:12:ARG:HG2	35:DN:16:HIS:HB3	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:261:U:P	20:AT:71:LYS:HE2	2.51	0.51
1:AA:560:A:C6	5:AE:128:TYR:CE1	2.98	0.51
1:AA:992:U:O2	1:AA:1043:G:N7	2.44	0.51
8:AH:10:MET:HE1	8:AH:33:LYS:CA	2.41	0.51
8:AH:79:SER:HA	8:AH:85:ILE:HG12	1.92	0.51
11:AK:88:GLY:H	11:AK:114:THR:HG22	1.76	0.51
13:AM:15:ALA:O	13:AM:18:ALA:N	2.44	0.51
20:AT:44:LYS:NZ	20:AT:86:LEU:O	2.38	0.51
22:BA:283:G:N7	22:BA:284:U:C5	2.78	0.51
22:BA:304:U:H2'	22:BA:305:C:C6	2.46	0.51
22:BA:929:U:H1'	47:BZ:26:GLY:O	2.11	0.51
22:BA:2223:G:OP1	24:BC:171:TYR:OH	2.23	0.51
22:BA:2492:U:C2	22:BA:2493:U:C5	2.99	0.51
23:BB:63:C:C2	23:BB:64:G:C8	2.99	0.51
24:BC:28:LYS:HD3	24:BC:28:LYS:N	2.26	0.51
29:BH:85:GLY:HA2	29:BH:91:PHE:CE2	2.46	0.51
29:BH:94:ILE:CG2	29:BH:99:ILE:CG1	2.88	0.51
29:BH:110:VAL:HG22	29:BH:114:GLU:HB2	1.90	0.51
35:BN:2:ARG:HA	35:BN:5:LYS:HD2	1.92	0.51
43:BV:61:LEU:HD13	43:BV:61:LEU:N	2.25	0.51
1:CA:16:A:C2'	1:CA:17:U:H5'	2.41	0.51
1:CA:213:G:C8	1:CA:214:C:C5	2.99	0.51
1:CA:756:C:H2'	1:CA:757:U:C5'	2.40	0.51
1:CA:1380:U:C5	7:CG:3:ARG:HA	2.45	0.51
2:CB:10:LEU:CD2	2:CB:12:ALA:O	2.58	0.51
3:CC:64:ILE:HG12	3:CC:66:VAL:HG23	1.92	0.51
5:CE:137:VAL:O	5:CE:138:ARG:CB	2.58	0.51
8:CH:2:SER:C	8:CH:4:GLN:N	2.68	0.51
9:CI:32:GLN:NE2	9:CI:64:TYR:OH	2.43	0.51
9:CI:88:MET:HB2	9:CI:92:GLU:CD	2.36	0.51
9:CI:88:MET:O	9:CI:88:MET:HG2	2.09	0.51
9:CI:120:LYS:CG	9:CI:123:ARG:HB3	2.40	0.51
22:DA:32:C:H5"	22:DA:33:C:OP2	2.10	0.51
22:DA:228:C:H4'	22:DA:229:C:H5"	1.91	0.51
22:DA:410:G:C2	22:DA:2407:A:C5	2.98	0.51
22:DA:415:A:C2	22:DA:2409:G:C6	2.98	0.51
22:DA:504:A:C2	22:DA:1234:U:H4'	2.46	0.51
22:DA:547:A:H3'	22:DA:548:G:C5'	2.40	0.51
22:DA:1435:G:C2'	22:DA:1436:G:H5'	2.41	0.51
22:DA:1651:G:C2	22:DA:2007:U:O2	2.64	0.51
22:DA:1817:G:C2'	22:DA:1818:U:H5'	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1917:U:H2'	22:DA:1918:A:H5'	1.92	0.51
22:DA:2019:A:H4'	38:DQ:34:VAL:HG22	1.92	0.51
27:DF:128:TYR:CG	27:DF:170:LEU:HD13	2.46	0.51
29:DH:26:ALA:HA	29:DH:30:LEU:HB2	1.92	0.51
30:DI:51:LYS:N	30:DI:51:LYS:HD3	2.24	0.51
46:DY:18:LEU:O	46:DY:22:LEU:CB	2.58	0.51
1:AA:651:C:C2'	1:AA:652:U:O5'	2.59	0.51
1:AA:1349:A:C6	1:AA:1374:A:C8	2.99	0.51
1:AA:1429:A:C2	1:AA:1430:A:N9	2.78	0.51
2:AB:14:VAL:HG23	2:AB:208:ARG:NH2	2.25	0.51
2:AB:59:LYS:O	2:AB:63:ARG:HG3	2.11	0.51
2:AB:94:HIS:O	2:AB:95:ARG:C	2.53	0.51
5:AE:136:VAL:O	5:AE:138:ARG:N	2.43	0.51
10:AJ:51:VAL:HB	14:AN:81:ARG:HB2	1.91	0.51
22:BA:1176:U:H2'	22:BA:1177:G:C4	2.46	0.51
22:BA:1366:A:C5	22:BA:1367:A:C8	2.98	0.51
22:BA:1838:C:C5	22:BA:1899:A:C6	2.99	0.51
29:BH:100:ALA:CB	29:BH:112:LYS:HA	2.41	0.51
29:BH:117:LEU:CD2	29:BH:121:VAL:N	2.70	0.51
29:BH:132:PHE:O	29:BH:139:PHE:HB3	2.11	0.51
39:BR:11:GLN:C	39:BR:12:HIS:CG	2.88	0.51
43:BV:14:LYS:CD	43:BV:18:ARG:NH1	2.73	0.51
46:BY:46:VAL:O	46:BY:47:ARG:C	2.54	0.51
1:CA:101:A:C4	1:CA:102:G:C8	2.98	0.51
1:CA:437:U:C4	1:CA:438:U:C5	2.99	0.51
1:CA:736:C:H2'	1:CA:737:C:C6	2.45	0.51
1:CA:1014:A:O4'	19:CS:34:TRP:CZ3	2.63	0.51
1:CA:1285:A:H4'	1:CA:1286:U:C5	2.46	0.51
2:CB:133:GLU:O	2:CB:137:ARG:HB3	2.10	0.51
4:CD:147:GLU:O	4:CD:150:LYS:HB3	2.11	0.51
6:CF:32:ALA:O	6:CF:33:GLU:C	2.54	0.51
10:CJ:91:ASP:O	10:CJ:92:LEU:HB2	2.11	0.51
12:CL:38:TYR:N	12:CL:52:VAL:O	2.43	0.51
22:DA:38:A:H5'	26:DE:45:ALA:HB3	1.92	0.51
22:DA:531:C:C5	22:DA:2035:G:C2	2.98	0.51
22:DA:777:G:N7	22:DA:793:A:C2	2.78	0.51
22:DA:1319:C:H2'	22:DA:1320:C:H5'	1.91	0.51
22:DA:2111:U:C4	22:DA:2147:A:C2	2.99	0.51
22:DA:2341:G:C5	22:DA:2342:C:C4	2.99	0.51
22:DA:2829:A:H2'	22:DA:2830:C:H5'	1.92	0.51
30:DI:6:GLN:O	30:DI:7:ALA:HB3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:31:ARG:HB3	32:DK:32:TYR:CE2	2.46	0.51
41:DT:59:ASN:O	41:DT:84:TYR:N	2.44	0.51
42:DU:44:LYS:HE3	42:DU:46:GLN:HB2	1.92	0.51
1:AA:139:A:C2'	1:AA:140:U:H5'	2.40	0.51
1:AA:201:G:C2	1:AA:217:C:O2	2.64	0.51
1:AA:702:A:H3'	1:AA:703:G:H5'	1.91	0.51
1:AA:921:U:H2'	1:AA:922:G:O4'	2.11	0.51
1:AA:1040:U:H2'	1:AA:1041:G:C8	2.46	0.51
3:AC:79:LYS:O	3:AC:80:LYS:C	2.54	0.51
5:AE:16:ILE:CG2	5:AE:110:ALA:HA	2.40	0.51
6:AF:98:GLU:O	6:AF:99:ALA:O	2.28	0.51
9:AI:52:LEU:HD13	9:AI:57:MET:HG3	1.93	0.51
21:AU:11:PRO:O	21:AU:12:PHE:CB	2.58	0.51
22:BA:142:A:N7	22:BA:143:C:C4	2.79	0.51
22:BA:478:A:C6	22:BA:480:A:C6	2.99	0.51
22:BA:2243:U:H2'	22:BA:2244:U:H6	1.76	0.51
25:BD:150:GLN:O	25:BD:153:GLY:N	2.44	0.51
34:BM:95:LEU:C	34:BM:96:ILE:HD13	2.35	0.51
39:BR:39:LEU:CA	39:BR:49:ILE:HG23	2.41	0.51
53:B5:200:HIS:O	53:B5:201:LYS:C	2.53	0.51
1:CA:57:G:C5	1:CA:58:C:C4	2.98	0.51
1:CA:130:A:N1	1:CA:233:C:O2'	2.43	0.51
1:CA:1238:A:N3	1:CA:1241:G:O2'	2.38	0.51
1:CA:1255:G:N1	1:CA:1279:G:C8	2.79	0.51
1:CA:1347:G:O2'	1:CA:1348:U:P	2.68	0.51
7:CG:5:ARG:HA	7:CG:5:ARG:HE	1.75	0.51
8:CH:64:LYS:HB3	8:CH:71:VAL:HG21	1.93	0.51
9:CI:13:LYS:O	9:CI:14:SER:HB3	2.10	0.51
14:CN:91:GLY:O	14:CN:93:ILE:N	2.43	0.51
16:CP:28:ARG:HG3	16:CP:29:ASN:OD1	2.10	0.51
20:CT:55:GLN:N	20:CT:56:PRO:HD2	2.26	0.51
22:DA:200:U:C4	22:DA:248:G:C2	2.98	0.51
22:DA:201:C:C4	22:DA:202:U:C5	2.98	0.51
22:DA:488:G:N2	22:DA:493:G:C6	2.79	0.51
22:DA:2335:A:C6	22:DA:2337:G:H1'	2.45	0.51
22:DA:2531:A:H5'	28:DG:157:TYR:CE2	2.45	0.51
26:DE:77:ILE:O	26:DE:77:ILE:CG1	2.59	0.51
30:DI:57:VAL:CG2	30:DI:69:PHE:HB2	2.40	0.51
31:DJ:104:ALA:O	31:DJ:108:MET:HG3	2.10	0.51
47:DZ:13:ALA:HB2	47:DZ:24:LEU:CD1	2.41	0.51
1:AA:475:C:H2'	1:AA:476:U:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:74:VAL:HG23	5:AE:76:LEU:CD1	2.41	0.51
21:AU:22:SER:C	21:AU:23:CYS:SG	2.94	0.51
21:AU:34:ARG:O	21:AU:36:GLU:N	2.42	0.51
22:BA:13:A:N3	22:BA:15:G:C6	2.79	0.51
22:BA:1386:C:H2'	22:BA:1387:A:C8	2.45	0.51
22:BA:1791:A:O2'	24:BC:206:GLY:HA2	2.11	0.51
24:BC:25:HIS:CE1	24:BC:26:LYS:O	2.64	0.51
24:BC:125:LYS:HB2	24:BC:126:PRO:HD2	1.93	0.51
25:BD:4:LEU:HD21	25:BD:100:LEU:HB3	1.92	0.51
28:BG:69:ARG:C	28:BG:69:ARG:HD3	2.36	0.51
1:CA:298:A:H2'	1:CA:299:G:O4'	2.10	0.51
1:CA:1474:U:H2'	1:CA:1475:G:H5"	1.93	0.51
4:CD:32:CYS:O	4:CD:33:LYS:HB3	2.09	0.51
7:CG:4:ARG:HG3	7:CG:5:ARG:N	2.26	0.51
20:CT:60:ARG:O	20:CT:64:LYS:HB2	2.11	0.51
21:CU:12:PHE:N	21:CU:12:PHE:CD1	2.79	0.51
22:DA:195:A:C4	22:DA:198:C:N4	2.78	0.51
22:DA:471:A:OP1	26:DE:79:ARG:NH1	2.44	0.51
22:DA:563:A:C6	22:DA:2018:G:C4	2.99	0.51
22:DA:915:C:C4	22:DA:916:G:C5	2.99	0.51
22:DA:1054:A:H2'	22:DA:1055:G:C8	2.46	0.51
22:DA:1096:A:C5	22:DA:1097:U:C5	2.99	0.51
22:DA:1246:A:O2'	26:DE:40:ARG:NH2	2.44	0.51
22:DA:1584:U:O2	22:DA:1584:U:H3'	2.10	0.51
22:DA:1731:G:C6	22:DA:1733:G:C5	2.99	0.51
22:DA:1916:A:H2'	22:DA:1917:U:O4'	2.09	0.51
22:DA:2127:G:N3	22:DA:2162:G:C8	2.79	0.51
22:DA:2645:G:H3'	22:DA:2646:C:C5'	2.41	0.51
23:DB:62:C:H2'	23:DB:63:C:C6	2.45	0.51
29:DH:5:LEU:HA	29:DH:36:ALA:HA	1.93	0.51
34:DM:56:ALA:C	34:DM:58:LYS:H	2.19	0.51
36:DO:49:VAL:HG21	36:DO:82:ALA:HA	1.93	0.51
44:DW:45:PHE:HB3	44:DW:80:ILE:HD12	1.92	0.51
1:AA:109:A:C6	1:AA:326:G:C6	2.99	0.51
1:AA:704:A:C6	1:AA:705:G:C4	2.99	0.51
1:AA:901:A:N7	1:AA:902:G:H1'	2.26	0.51
1:AA:1138:G:C2	1:AA:1140:C:C5	2.99	0.51
5:AE:97:GLN:HB3	5:AE:124:LEU:HD12	1.92	0.51
8:AH:47:GLU:N	8:AH:64:LYS:HG3	2.26	0.51
22:BA:962:G:N2	22:BA:2250:G:H1	2.08	0.51
22:BA:1485:U:H2'	22:BA:1486:U:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1917:U:O2	22:BA:1917:U:H2'	2.09	0.51
22:BA:2514:U:H2'	22:BA:2515:C:C6	2.46	0.51
22:BA:2579:C:H2'	22:BA:2580:U:O4'	2.11	0.51
29:BH:83:LYS:HA	29:BH:148:ALA:HA	1.93	0.51
33:BL:77:ILE:HG23	33:BL:100:ILE:HD11	1.93	0.51
49:B1:17:THR:HG21	49:B1:43:VAL:HG13	1.92	0.51
1:CA:97:G:C5	1:CA:98:A:H1'	2.46	0.51
1:CA:355:C:H2'	1:CA:356:A:O4'	2.11	0.51
1:CA:1202:U:H2'	1:CA:1203:C:O4'	2.11	0.51
2:CB:53:ALA:O	2:CB:57:LEU:HB2	2.11	0.51
3:CC:40:ARG:HG2	3:CC:55:ILE:HD11	1.93	0.51
8:CH:21:ASN:O	8:CH:23:ALA:N	2.44	0.51
9:CI:21:ILE:HG12	9:CI:62:ASP:O	2.10	0.51
13:CM:14:HIS:HB2	13:CM:17:ILE:CD1	2.41	0.51
20:CT:51:PHE:C	20:CT:51:PHE:CD1	2.88	0.51
22:DA:321:U:OP2	26:DE:130:LYS:HA	2.11	0.51
22:DA:912:C:N4	22:DA:913:U:O4	2.44	0.51
22:DA:971:G:H2'	22:DA:972:A:O4'	2.09	0.51
22:DA:1213:A:N3	22:DA:1238:G:O2'	2.39	0.51
22:DA:1831:G:C6	22:DA:1832:C:C4	2.99	0.51
22:DA:2331:G:C5	22:DA:2332:C:C5	2.99	0.51
22:DA:2845:U:H5"	37:DP:52:ASN:O	2.11	0.51
24:DC:92:ALA:HB3	24:DC:104:ILE:CD1	2.41	0.51
24:DC:141:VAL:HG13	24:DC:191:THR:O	2.11	0.51
25:DD:52:THR:OG1	25:DD:53:GLY:N	2.44	0.51
26:DE:149:ILE:HG23	26:DE:188:MET:HA	1.92	0.51
33:DL:68:SER:O	33:DL:69:ARG:CB	2.57	0.51
35:DN:28:LEU:HG	35:DN:28:LEU:O	2.11	0.51
41:DT:69:ARG:NH1	58:DT:102:HOH:O	2.43	0.51
1:AA:208:U:C6	1:AA:210:C:C4	2.99	0.51
1:AA:706:A:C5	1:AA:707:U:C5	2.98	0.51
1:AA:1037:C:H2'	1:AA:1038:C:C6	2.46	0.51
1:AA:1356:G:N2	1:AA:1357:A:C2	2.79	0.51
2:AB:72:THR:O	2:AB:73:LYS:CB	2.59	0.51
5:AE:74:VAL:HG23	5:AE:76:LEU:HD12	1.93	0.51
8:AH:10:MET:HE1	8:AH:33:LYS:CB	2.41	0.51
9:AI:120:LYS:HG3	9:AI:123:ARG:CB	2.41	0.51
22:BA:869:G:H2'	22:BA:870:U:O4'	2.11	0.51
22:BA:1138:G:H5"	22:BA:1139:G:OP2	2.11	0.51
22:BA:1161:C:H1'	39:BR:8:GLY:O	2.11	0.51
22:BA:1458:U:H5'	22:BA:1459:G:C2	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1846:G:N2	22:BA:1895:C:C2	2.79	0.51
22:BA:2230:G:H1'	45:BX:32:ASN:OD1	2.11	0.51
28:BG:141:ILE:C	28:BG:141:ILE:HD12	2.36	0.51
29:BH:117:LEU:CD2	29:BH:121:VAL:CA	2.89	0.51
43:BV:8:VAL:HG23	43:BV:9:ARG:N	2.25	0.51
1:CA:39:G:C6	1:CA:40:C:C4	2.99	0.51
1:CA:374:A:OP1	1:CA:452:A:N1	2.43	0.51
1:CA:608:A:H2'	1:CA:609:A:O4'	2.12	0.51
1:CA:1048:G:OP2	58:CA:1849:HOH:O	2.20	0.51
2:CB:94:HIS:CD2	2:CB:146:ASN:HB2	2.45	0.51
2:CB:131:LYS:O	2:CB:135:LEU:N	2.44	0.51
8:CH:126:ILE:N	8:CH:126:ILE:HD12	2.26	0.51
11:CK:43:GLY:HA3	11:CK:74:VAL:HG12	1.93	0.51
12:CL:90:LEU:CB	12:CL:93:VAL:CG2	2.88	0.51
17:CQ:47:HIS:HB2	17:CQ:67:LEU:HD12	1.92	0.51
20:CT:3:ASN:O	20:CT:4:ILE:C	2.53	0.51
22:DA:85:G:OP2	42:DU:28:VAL:CG1	2.59	0.51
22:DA:228:C:N3	22:DA:418:C:O4'	2.44	0.51
22:DA:344:A:C2	22:DA:345:A:N7	2.79	0.51
22:DA:669:G:N2	22:DA:670:A:C2	2.79	0.51
22:DA:1559:U:H4'	22:DA:1560:G:OP2	2.10	0.51
22:DA:1596:A:N6	22:DA:1597:A:C6	2.79	0.51
22:DA:1651:G:N2	22:DA:2007:U:O2	2.45	0.51
22:DA:1674:G:N2	22:DA:1677:A:H61	2.08	0.51
22:DA:2127:G:N3	22:DA:2162:G:N7	2.59	0.51
24:DC:51:THR:CG2	24:DC:54:ILE:HD11	2.42	0.51
33:DL:93:ASN:O	33:DL:95:LEU:N	2.40	0.51
35:DN:29:VAL:HG13	35:DN:83:LEU:HD11	1.93	0.51
35:DN:54:LEU:HD21	35:DN:66:ALA:HB2	1.93	0.51
36:DO:36:TYR:N	36:DO:36:TYR:CD1	2.78	0.51
44:DW:56:ASP:O	44:DW:57:HIS:HB2	2.10	0.51
46:DY:27:ASN:HA	46:DY:30:MET:HB2	1.93	0.51
1:AA:1203:C:H4'	14:AN:67:THR:HG22	1.93	0.50
1:AA:1319:A:C8	1:AA:1323:G:C5	2.99	0.50
1:AA:1366:C:O2'	10:AJ:62:ARG:NH2	2.43	0.50
1:AA:1464:U:OP2	37:BP:109:ARG:NH1	2.45	0.50
3:AC:11:ARG:NH1	3:AC:182:ILE:HB	2.26	0.50
4:AD:197:GLU:O	4:AD:199:LEU:N	2.43	0.50
6:AF:36:ILE:HG23	6:AF:36:ILE:O	2.11	0.50
7:AG:49:THR:O	7:AG:53:ARG:CB	2.59	0.50
9:AI:58:VAL:O	9:AI:59:GLU:CG	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:65:TYR:HB3	14:AN:96:LEU:HD11	1.93	0.50
11:AK:31:ILE:HB	11:AK:46:THR:HG22	1.93	0.50
14:AN:20:TYR:CE1	14:AN:52:PRO:HG2	2.46	0.50
20:AT:44:LYS:HG2	20:AT:87:ALA:CB	2.41	0.50
22:BA:998:C:H2'	22:BA:999:U:O5'	2.11	0.50
22:BA:1542:U:H2'	22:BA:1543:G:O4'	2.11	0.50
22:BA:2846:G:H2'	22:BA:2847:U:O4'	2.11	0.50
45:BX:68:LEU:HD13	45:BX:78:TYR:CE1	2.46	0.50
1:CA:409:U:H2'	1:CA:410:G:O4'	2.11	0.50
1:CA:939:G:C6	1:CA:940:C:N4	2.79	0.50
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.45	0.50
5:CE:10:GLU:OE1	5:CE:10:GLU:N	2.44	0.50
5:CE:36:LEU:HD21	5:CE:137:VAL:HG11	1.93	0.50
7:CG:99:LEU:HB3	7:CG:103:TRP:CZ2	2.46	0.50
9:CI:54:LEU:O	9:CI:55:VAL:HG22	2.11	0.50
12:CL:3:THR:O	12:CL:4:VAL:C	2.52	0.50
12:CL:61:PHE:N	12:CL:61:PHE:CD1	2.79	0.50
17:CQ:8:LEU:N	17:CQ:8:LEU:HD12	2.25	0.50
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.94	0.50
22:DA:77:G:OP1	46:DY:52:ARG:HD3	2.11	0.50
22:DA:126:A:C2	50:D2:18:PHE:CE2	3.00	0.50
22:DA:748:G:C8	40:DS:89:ALA:HB1	2.47	0.50
22:DA:807:U:OP2	33:DL:41:ARG:NH1	2.44	0.50
22:DA:1231:U:H2'	22:DA:1232:G:H8	1.76	0.50
22:DA:1301:A:N6	22:DA:1303:G:C2	2.79	0.50
22:DA:1519:G:C2	22:DA:1520:U:H1'	2.47	0.50
22:DA:1567:G:C8	24:DC:83:TYR:CE1	2.99	0.50
22:DA:1627:G:N2	22:DA:1628:G:C5	2.79	0.50
22:DA:1805:A:C2	22:DA:1813:G:C2	2.99	0.50
22:DA:1946:U:H2'	22:DA:1947:C:C6	2.45	0.50
22:DA:2209:G:C6	22:DA:2210:U:C4	2.99	0.50
22:DA:2718:G:C6	22:DA:2719:G:C4	2.99	0.50
22:DA:2883:A:OP2	48:D0:49:TYR:OH	2.24	0.50
24:DC:33:LEU:O	24:DC:64:ILE:HD12	2.11	0.50
26:DE:75:SER:O	26:DE:78:TRP:HB2	2.11	0.50
33:DL:50:PHE:CE2	33:DL:52:GLY:O	2.63	0.50
33:DL:77:ILE:O	33:DL:110:VAL:O	2.29	0.50
38:DQ:86:ALA:O	38:DQ:87:SER:CB	2.58	0.50
1:AA:148:G:H2'	1:AA:149:A:O5'	2.12	0.50
1:AA:251:G:C6	1:AA:266:G:O6	2.64	0.50
1:AA:524:G:C6	1:AA:525:C:N4	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1107:C:C4	1:AA:1108:G:C8	3.00	0.50
2:AB:68:LEU:HD22	2:AB:70:VAL:HG23	1.93	0.50
2:AB:106:THR:O	2:AB:107:VAL:HG23	2.11	0.50
9:AI:22:LYS:O	9:AI:62:ASP:HB2	2.10	0.50
11:AK:69:ARG:HD3	22:BA:2146:C:N3	2.26	0.50
11:AK:126:LYS:CA	21:AU:34:ARG:HH21	2.24	0.50
22:BA:64:A:H2'	22:BA:65:U:C6	2.46	0.50
22:BA:136:G:C2	22:BA:144:A:C6	2.98	0.50
22:BA:753:A:H2'	22:BA:754:U:H6	1.77	0.50
22:BA:1384:A:H5"	22:BA:1385:A:OP2	2.11	0.50
22:BA:1483:G:C6	22:BA:1484:U:C4	2.99	0.50
22:BA:1494:A:O2'	22:BA:1495:A:O5'	2.30	0.50
22:BA:2665:A:C2	22:BA:2666:C:N1	2.79	0.50
31:BJ:31:GLU:OE1	31:BJ:34:ARG:HD3	2.11	0.50
33:BL:63:LYS:HA	51:B3:13:ARG:HG3	1.93	0.50
52:B4:10:LEU:HD12	52:B4:33:HIS:CD2	2.47	0.50
1:CA:170:U:O2'	1:CA:171:A:H5'	2.11	0.50
1:CA:562:U:H2'	12:CL:14:ARG:HD3	1.91	0.50
1:CA:575:G:C6	1:CA:821:G:N7	2.80	0.50
1:CA:991:U:N3	1:CA:1212:U:O4'	2.45	0.50
1:CA:1296:C:H5"	1:CA:1297:G:OP2	2.11	0.50
1:CA:1343:G:O2'	9:CI:123:ARG:HD2	2.11	0.50
1:CA:1461:G:H2'	1:CA:1462:C:O4'	2.10	0.50
2:CB:57:LEU:HD13	2:CB:57:LEU:C	2.36	0.50
9:CI:30:ILE:HA	9:CI:65:ILE:O	2.10	0.50
17:CQ:81:LYS:CD	17:CQ:81:LYS:N	2.74	0.50
22:DA:58:G:C4	22:DA:70:G:N2	2.79	0.50
22:DA:76:C:O2'	46:DY:55:THR:OG1	2.28	0.50
22:DA:122:G:H2'	22:DA:123:G:O4'	2.11	0.50
22:DA:289:G:N2	22:DA:352:A:C2	2.80	0.50
22:DA:295:G:N2	22:DA:296:U:C6	2.80	0.50
22:DA:570:G:C4	22:DA:2030:A:N7	2.80	0.50
22:DA:577:G:O2'	22:DA:1254:A:OP1	2.30	0.50
22:DA:1500:G:C6	22:DA:1501:G:N7	2.79	0.50
22:DA:1640:A:H2'	22:DA:1641:A:C8	2.46	0.50
22:DA:1791:A:H2'	22:DA:1792:G:H5'	1.93	0.50
24:DC:67:PHE:CE2	24:DC:156:ARG:NH2	2.79	0.50
25:DD:32:ASN:N	25:DD:96:ILE:O	2.44	0.50
33:DL:117:THR:HG22	33:DL:118:THR:N	2.25	0.50
41:DT:12:ARG:O	41:DT:13:ALA:HB2	2.11	0.50
1:AA:545:C:H5'	4:AD:69:GLU:CG	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1182:G:H4'	1:AA:1183:U:H5'	1.93	0.50
2:AB:64:LYS:HE2	2:AB:64:LYS:HA	1.92	0.50
3:AC:79:LYS:O	3:AC:82:GLU:HG3	2.10	0.50
6:AF:4:TYR:CD2	6:AF:71:ILE:HD13	2.46	0.50
10:AJ:67:ILE:O	10:AJ:67:ILE:HG22	2.11	0.50
20:AT:44:LYS:CB	20:AT:87:ALA:HB1	2.41	0.50
22:BA:686:U:O4	50:B2:12:ARG:HB2	2.11	0.50
22:BA:790:U:O2'	22:BA:791:C:P	2.69	0.50
22:BA:945:A:OP2	22:BA:945:A:H4'	2.12	0.50
22:BA:1070:A:H2'	22:BA:1097:U:OP1	2.11	0.50
25:BD:101:PHE:C	25:BD:103:ASP:H	2.17	0.50
25:BD:129:THR:HG23	25:BD:130:GLN:O	2.11	0.50
27:BF:122:PHE:HB3	27:BF:163:ASP:CG	2.36	0.50
31:BJ:81:ILE:CG2	31:BJ:82:GLY:N	2.72	0.50
32:BK:4:GLU:O	32:BK:5:GLN:HB2	2.11	0.50
40:BS:1:MET:HE3	40:BS:62:ASP:HB3	1.94	0.50
40:BS:17:VAL:HG12	40:BS:76:VAL:HG21	1.93	0.50
42:BU:38:GLY:N	42:BU:62:GLU:OE2	2.35	0.50
51:B3:31:HIS:CD2	51:B3:31:HIS:C	2.88	0.50
1:CA:79:G:N2	1:CA:91:U:O2	2.45	0.50
1:CA:206:C:C2'	1:CA:207:C:H5'	2.40	0.50
1:CA:373:A:C2	1:CA:374:A:C8	2.98	0.50
1:CA:436:C:C2	1:CA:437:U:C5	2.99	0.50
1:CA:573:A:C2	1:CA:574:A:C2	2.99	0.50
1:CA:673:A:H2'	1:CA:674:G:C8	2.46	0.50
1:CA:1309:G:C6	1:CA:1329:A:C2	2.99	0.50
1:CA:1321:U:C4	1:CA:1322:C:C5	2.99	0.50
14:CN:61:ARG:O	14:CN:62:ASN:CB	2.59	0.50
21:CU:37:PHE:CD1	21:CU:40:LYS:HE3	2.46	0.50
22:DA:753:A:H2'	22:DA:754:U:C6	2.46	0.50
22:DA:1791:A:O3'	24:DC:205:LEU:HB2	2.11	0.50
22:DA:1992:G:N2	22:DA:1996:C:O2'	2.45	0.50
22:DA:2163:A:H2'	22:DA:2164:C:H4'	1.93	0.50
22:DA:2344:U:H4'	22:DA:2345:G:OP1	2.11	0.50
23:DB:39:A:H2'	23:DB:40:U:C6	2.46	0.50
26:DE:108:ILE:HD13	26:DE:181:ILE:HG12	1.93	0.50
29:DH:44:ILE:O	29:DH:48:GLU:HB2	2.11	0.50
30:DI:10:LYS:HB2	30:DI:56:PRO:HB3	1.93	0.50
30:DI:22:PRO:HB2	30:DI:23:PRO:HD3	1.94	0.50
30:DI:58:VAL:CG1	30:DI:59:ILE:H	2.24	0.50
48:D0:55:ILE:O	48:D0:56:ALA:HB3	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:728:A:C6	1:AA:729:A:C6	3.00	0.50
1:AA:1201:A:H1'	1:AA:1202:U:OP2	2.11	0.50
2:AB:32:PHE:CD1	2:AB:32:PHE:C	2.89	0.50
4:AD:78:GLU:HG3	4:AD:93:LEU:HD21	1.93	0.50
7:AG:80:VAL:O	7:AG:81:GLY:C	2.55	0.50
11:AK:34:ILE:HG13	11:AK:70:CYS:SG	2.51	0.50
11:AK:102:ALA:C	11:AK:104:GLY:N	2.69	0.50
22:BA:417:C:H2'	22:BA:418:C:C6	2.46	0.50
22:BA:454:A:H4'	22:BA:455:C:OP2	2.11	0.50
22:BA:1670:C:C5	22:BA:1671:U:C4	2.99	0.50
22:BA:1916:A:N9	22:BA:1917:U:H1'	2.26	0.50
23:BB:110:C:C4	23:BB:111:U:C5	3.00	0.50
26:BE:149:ILE:HD12	26:BE:150:THR:N	2.26	0.50
29:BH:66:ASN:OD1	29:BH:138:VAL:HG21	2.11	0.50
35:BN:28:LEU:O	35:BN:32:GLU:N	2.44	0.50
35:BN:119:SER:O	35:BN:120:GLU:C	2.53	0.50
37:BP:53:ARG:HH11	37:BP:53:ARG:HG2	1.77	0.50
37:BP:53:ARG:HH11	37:BP:53:ARG:HG3	1.76	0.50
48:B0:55:ILE:HG22	48:B0:57:LYS:H	1.76	0.50
1:CA:642:A:H2'	1:CA:643:C:C6	2.46	0.50
1:CA:728:A:C8	15:CO:54:ARG:CZ	2.94	0.50
1:CA:1359:C:OP2	14:CN:75:ARG:NH1	2.45	0.50
4:CD:34:ILE:O	4:CD:34:ILE:HG23	2.10	0.50
5:CE:20:ARG:NH2	5:CE:31:PHE:CZ	2.79	0.50
10:CJ:15:HIS:C	10:CJ:15:HIS:CD2	2.88	0.50
20:CT:48:GLN:OE1	20:CT:52:ASN:ND2	2.42	0.50
22:DA:12:U:O2	22:DA:12:U:C2'	2.59	0.50
22:DA:219:A:N6	22:DA:220:G:C6	2.80	0.50
22:DA:508:A:H3'	22:DA:509:C:H5'	1.93	0.50
22:DA:694:U:C3'	22:DA:695:G:H5"	2.41	0.50
22:DA:747:U:O4'	40:DS:92:ARG:NH1	2.44	0.50
22:DA:1317:G:H2'	22:DA:1318:U:O4'	2.11	0.50
22:DA:1343:G:C4	22:DA:1597:A:C6	3.00	0.50
22:DA:1544:A:N6	22:DA:1545:A:N1	2.58	0.50
22:DA:2060:A:O4'	22:DA:2502:G:H1'	2.11	0.50
22:DA:2109:U:H4'	22:DA:2110:G:OP1	2.10	0.50
22:DA:2297:A:N1	22:DA:2321:U:C5	2.80	0.50
22:DA:2636:C:H4'	25:DD:81:GLU:CD	2.37	0.50
24:DC:267:ILE:O	24:DC:267:ILE:HG22	2.12	0.50
44:DW:45:PHE:CD2	44:DW:80:ILE:HD11	2.46	0.50
1:AA:1143:G:C4	1:AA:1144:G:C8	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1458:G:OP1	20:AT:30:THR:OG1	2.29	0.50
2:AB:21:ARG:HA	2:AB:21:ARG:NH1	2.26	0.50
3:AC:64:ILE:CG2	3:AC:99:ALA:HB2	2.41	0.50
5:AE:60:ILE:HD13	5:AE:61:GLN:N	2.27	0.50
7:AG:129:GLU:O	7:AG:130:ASN:C	2.55	0.50
22:BA:624:C:O2'	22:BA:657:U:H5"	2.11	0.50
22:BA:769:U:C2	22:BA:770:G:C8	2.99	0.50
22:BA:796:C:H2'	22:BA:797:G:C8	2.46	0.50
22:BA:1668:A:H4'	22:BA:1669:A:O5'	2.12	0.50
22:BA:2297:A:N1	22:BA:2321:U:C5	2.80	0.50
22:BA:2458:G:C2	22:BA:2490:G:N2	2.79	0.50
22:BA:2469:A:O2'	34:BM:55:ARG:NH1	2.45	0.50
22:BA:2609:U:H2'	54:B6:7:004:CB	2.42	0.50
30:BI:122:ILE:HG23	30:BI:125:MET:SD	2.52	0.50
31:BJ:114:LEU:CG	31:BJ:118:MET:HE3	2.38	0.50
45:BX:2:SER:O	45:BX:4:VAL:N	2.44	0.50
45:BX:43:GLU:OE2	45:BX:45:ARG:NH2	2.44	0.50
1:CA:374:A:C2	1:CA:375:U:C6	2.99	0.50
1:CA:484:G:C5	1:CA:486:U:H1'	2.46	0.50
1:CA:695:A:H2'	1:CA:696:A:C8	2.47	0.50
1:CA:756:C:O2'	1:CA:757:U:H5'	2.11	0.50
1:CA:951:G:C6	1:CA:952:U:C4	3.00	0.50
1:CA:1244:G:H2'	1:CA:1245:C:C6	2.47	0.50
1:CA:1530:G:H2'	1:CA:1531:A:C8	2.47	0.50
2:CB:207:ILE:HD13	2:CB:207:ILE:N	2.26	0.50
4:CD:105:MET:SD	4:CD:143:VAL:CG1	3.00	0.50
4:CD:198:HIS:CE1	4:CD:199:LEU:CD2	2.95	0.50
5:CE:15:LEU:C	5:CE:15:LEU:CD1	2.84	0.50
5:CE:16:ILE:HD11	5:CE:38:VAL:HG23	1.92	0.50
5:CE:111:MET:HG3	5:CE:140:THR:HG21	1.93	0.50
12:CL:65:SER:OG	12:CL:97:THR:HG23	2.12	0.50
12:CL:68:GLY:O	12:CL:99:ARG:NH1	2.45	0.50
17:CQ:19:LYS:CD	17:CQ:49:GLU:HA	2.41	0.50
20:CT:80:THR:O	20:CT:83:ILE:HG13	2.11	0.50
22:DA:20:C:H2'	22:DA:21:A:C8	2.47	0.50
22:DA:21:A:N1	22:DA:520:G:C6	2.80	0.50
22:DA:532:A:H4'	22:DA:533:G:C8	2.46	0.50
22:DA:668:A:C2	22:DA:670:A:C6	3.00	0.50
22:DA:769:U:C4	22:DA:770:G:N7	2.79	0.50
22:DA:1364:G:C6	22:DA:1368:G:C6	2.99	0.50
22:DA:1566:A:N3	24:DC:213:TRP:CG	2.80	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:57:GLY:O	24:DC:58:HIS:O	2.29	0.50
24:DC:68:LYS:HG2	24:DC:151:GLY:HA2	1.94	0.50
25:DD:101:PHE:HA	25:DD:104:VAL:HG13	1.94	0.50
25:DD:125:TRP:O	25:DD:126:ASN:HB2	2.11	0.50
27:DF:108:VAL:HG11	27:DF:176:PRO:CG	2.42	0.50
45:DX:65:ASP:O	45:DX:66:THR:C	2.54	0.50
47:DZ:40:ASP:OD2	47:DZ:45:ARG:NH1	2.44	0.50
1:AA:1151:A:C4	1:AA:1152:A:N7	2.80	0.50
2:AB:62:SER:C	2:AB:64:LYS:N	2.69	0.50
4:AD:190:ASP:C	4:AD:191:LEU:HG	2.36	0.50
7:AG:137:LYS:O	7:AG:141:VAL:HG23	2.12	0.50
22:BA:271:G:C4'	22:BA:272:A:OP1	2.59	0.50
22:BA:641:U:C5	22:BA:642:U:O4	2.64	0.50
22:BA:947:A:O2'	22:BA:984:A:H2	1.94	0.50
22:BA:1014:A:C5	22:BA:1015:U:C5	2.99	0.50
22:BA:1071:G:O2'	22:BA:1072:C:O4'	2.30	0.50
22:BA:1402:U:H2'	22:BA:1403:A:O5'	2.12	0.50
22:BA:1721:G:O2'	22:BA:1739:A:N6	2.44	0.50
22:BA:1731:G:C5	22:BA:1733:G:N7	2.80	0.50
22:BA:1735:A:N3	22:BA:1735:A:H2'	2.26	0.50
22:BA:1866:A:C2	22:BA:1876:A:C5	3.00	0.50
22:BA:2217:G:O2'	22:BA:2218:G:H5'	2.11	0.50
22:BA:2506:U:C2	56:BA:3001:DOL:H472	2.46	0.50
29:BH:80:ILE:O	29:BH:147:VAL:N	2.44	0.50
41:BT:67:VAL:HG22	41:BT:76:ARG:HG2	1.92	0.50
51:B3:42:ARG:HG3	51:B3:45:ARG:NH2	2.27	0.50
1:CA:135:C:O2	16:CP:1:MET:HB2	2.12	0.50
1:CA:425:G:H2'	1:CA:426:U:O4'	2.11	0.50
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.45	0.50
1:CA:811:C:C5	1:CA:812:G:C6	3.00	0.50
1:CA:1345:U:N3	1:CA:1377:A:C2	2.80	0.50
4:CD:116:GLN:HG3	4:CD:120:HIS:CE1	2.47	0.50
4:CD:174:ASP:CG	4:CD:175:ALA:N	2.65	0.50
9:CI:57:MET:HB3	9:CI:61:LEU:CD2	2.42	0.50
13:CM:4:ILE:HA	13:CM:57:ARG:CZ	2.41	0.50
21:CU:29:LEU:C	21:CU:29:LEU:HD23	2.37	0.50
22:DA:532:A:N1	22:DA:2020:A:H1'	2.26	0.50
22:DA:777:G:N3	22:DA:778:G:C8	2.80	0.50
22:DA:825:A:H4'	22:DA:2428:G:C5	2.47	0.50
22:DA:1009:A:O2'	22:DA:1153:C:H4'	2.12	0.50
22:DA:1360:G:C6	22:DA:1372:U:C2	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1390:U:C2'	22:DA:1391:U:H5'	2.41	0.50
22:DA:1754:A:C6	22:DA:1755:A:C6	2.99	0.50
22:DA:2454:G:H1'	58:DA:3531:HOH:O	2.12	0.50
22:DA:2707:U:H2'	22:DA:2708:G:C8	2.46	0.50
28:DG:87:LEU:HD12	28:DG:87:LEU:N	2.26	0.50
29:DH:5:LEU:HD11	29:DH:13:GLY:HA2	1.93	0.50
35:DN:36:THR:HG23	35:DN:41:ALA:HB2	1.94	0.50
41:DT:10:VAL:HG12	41:DT:11:LEU:N	2.26	0.50
1:AA:224:U:H2'	1:AA:225:C:C6	2.47	0.50
1:AA:453:G:H2'	1:AA:454:G:C8	2.47	0.50
1:AA:685:G:N1	1:AA:686:U:O4	2.44	0.50
1:AA:1520:C:C2	1:AA:1521:C:C5	3.00	0.50
2:AB:42:ASN:O	2:AB:44:GLU:N	2.45	0.50
2:AB:140:GLU:O	2:AB:144:LEU:HG	2.12	0.50
4:AD:65:TYR:CG	4:AD:94:LEU:HD22	2.47	0.50
4:AD:151:LYS:HA	4:AD:178:MET:HE1	1.93	0.50
4:AD:170:TRP:CD2	4:AD:186:PRO:HG3	2.47	0.50
9:AI:91:ASP:OD2	9:AI:91:ASP:C	2.54	0.50
11:AK:126:LYS:O	21:AU:34:ARG:NE	2.45	0.50
12:AL:44:LYS:HB3	12:AL:45:PRO:CD	2.41	0.50
22:BA:102:U:C4	46:BY:2:LYS:HD2	2.47	0.50
22:BA:125:A:OP2	50:B2:19:ARG:NH2	2.41	0.50
22:BA:734:A:C4	22:BA:735:A:C8	3.00	0.50
22:BA:1168:G:H2'	22:BA:1169:A:O4'	2.12	0.50
22:BA:1177:G:O2'	22:BA:1178:C:O5'	2.30	0.50
22:BA:1586:A:N7	22:BA:1587:G:C8	2.80	0.50
22:BA:1958:C:C2'	22:BA:1959:G:H5'	2.41	0.50
22:BA:2376:A:N3	36:BO:111:ARG:NH1	2.60	0.50
22:BA:2517:C:O2'	22:BA:2542:A:N7	2.43	0.50
1:CA:453:G:H2'	1:CA:454:G:C8	2.47	0.50
1:CA:782:A:C8	1:CA:783:C:C5	2.99	0.50
1:CA:1034:G:H5'	1:CA:1035:A:OP2	2.11	0.50
1:CA:1228:C:H5'	13:CM:113:ARG:HB2	1.94	0.50
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.46	0.50
2:CB:120:GLN:HG2	2:CB:125:THR:O	2.12	0.50
5:CE:35:ALA:O	5:CE:50:TYR:O	2.29	0.50
5:CE:153:VAL:HG23	5:CE:157:ARG:HB2	1.92	0.50
11:CK:52:PHE:CE2	11:CK:62:ALA:HB1	2.47	0.50
14:CN:80:SER:O	14:CN:83:LYS:N	2.44	0.50
16:CP:14:ARG:N	16:CP:15:PRO:HD2	2.25	0.50
22:DA:64:A:H2'	22:DA:65:U:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:72:U:O4	22:DA:111:A:O2'	2.27	0.50
22:DA:392:U:H2'	22:DA:393:C:C6	2.47	0.50
22:DA:586:A:H1'	22:DA:672:C:H1'	1.93	0.50
22:DA:1351:C:C2	22:DA:1381:G:C2	3.00	0.50
22:DA:1930:G:O2'	22:DA:1931:U:P	2.69	0.50
22:DA:2013:A:N6	22:DA:2014:A:C6	2.80	0.50
22:DA:2250:G:C2	34:DM:82:MET:HB2	2.47	0.50
22:DA:2308:G:C5'	22:DA:2309:A:OP2	2.60	0.50
22:DA:2379:G:H4'	36:DO:21:LEU:HD11	1.94	0.50
22:DA:2461:A:C2	22:DA:2490:G:N2	2.80	0.50
22:DA:2546:U:O4'	22:DA:2565:A:C2	2.65	0.50
22:DA:2852:G:H2'	22:DA:2853:C:O4'	2.12	0.50
28:DG:19:ILE:O	28:DG:21:GLY:N	2.45	0.50
36:DO:33:ARG:O	36:DO:34:HIS:CG	2.64	0.50
42:DU:44:LYS:O	42:DU:58:ILE:HA	2.12	0.50
1:AA:202:G:O2'	1:AA:468:A:H2'	2.11	0.50
1:AA:520:A:N1	1:AA:536:C:H1'	2.27	0.50
1:AA:568:G:C4	1:AA:569:C:C5	2.99	0.50
1:AA:872:A:C4	1:AA:874:G:C8	3.00	0.50
1:AA:876:C:OP1	8:AH:76:GLN:NE2	2.44	0.50
1:AA:927:G:N1	1:AA:1391:U:O2	2.45	0.50
1:AA:1010:U:H2'	1:AA:1011:C:C6	2.46	0.50
1:AA:1029:U:O2'	1:AA:1032:G:O6	2.30	0.50
5:AE:46:VAL:HG21	5:AE:118:ALA:CB	2.41	0.50
6:AF:35:LYS:HD3	6:AF:35:LYS:N	2.26	0.50
7:AG:145:ALA:C	7:AG:147:ALA:H	2.20	0.50
9:AI:113:ARG:NH2	14:AN:101:TRP:CZ2	2.79	0.50
13:AM:33:ILE:HG23	13:AM:59:GLU:HB3	1.94	0.50
16:AP:70:ARG:HD2	16:AP:70:ARG:O	2.12	0.50
22:BA:15:G:C6	22:BA:16:C:C4	3.00	0.50
22:BA:226:A:C6	22:BA:227:A:C6	3.00	0.50
22:BA:362:A:C8	22:BA:362:A:OP2	2.65	0.50
22:BA:510:C:OP1	22:BA:512:G:O6	2.30	0.50
22:BA:693:A:O2'	22:BA:694:U:H5'	2.11	0.50
22:BA:1153:C:OP1	38:BQ:92:ARG:NH1	2.45	0.50
22:BA:1452:G:H2'	22:BA:1457:U:O4	2.11	0.50
22:BA:2526:G:C2'	52:B4:1:MET:H1	2.25	0.50
24:BC:141:VAL:HG12	24:BC:142:HIS:H	1.76	0.50
25:BD:99:GLU:HG2	25:BD:182:ALA:HB2	1.94	0.50
37:BP:22:PRO:HD3	37:BP:50:ILE:HD12	1.94	0.50
42:BU:99:ASN:O	42:BU:100:SER:C	2.54	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:756:C:H2'	1:CA:757:U:H5'	1.94	0.50
2:CB:167:ASP:HA	2:CB:170:HIS:HB3	1.94	0.50
4:CD:58:LYS:NZ	4:CD:59:GLN:OE1	2.41	0.50
7:CG:148:ASN:O	7:CG:151:PHE:N	2.43	0.50
22:DA:477:A:C2'	22:DA:478:A:O5'	2.59	0.50
22:DA:526:A:C6	22:DA:2626:C:H4'	2.46	0.50
22:DA:695:G:C5	22:DA:768:G:C6	2.99	0.50
22:DA:747:U:C5	22:DA:2613:U:C5	2.99	0.50
22:DA:1310:G:H1'	22:DA:1611:C:H5"	1.93	0.50
22:DA:1383:A:C2	22:DA:1384:A:C4	2.99	0.50
22:DA:1476:U:H1'	22:DA:1732:C:C2	2.47	0.50
22:DA:1654:A:OP2	35:DN:1:MET:N	2.43	0.50
22:DA:2199:A:N7	22:DA:2225:A:C6	2.80	0.50
22:DA:2308:G:O6	22:DA:2311:A:N7	2.45	0.50
22:DA:2544:G:H5'	22:DA:2645:G:C2	2.47	0.50
22:DA:2824:C:N4	22:DA:2825:G:C5	2.80	0.50
23:DB:39:A:N6	23:DB:44:G:C6	2.79	0.50
24:DC:171:TYR:CD2	24:DC:185:GLU:HA	2.47	0.50
27:DF:108:VAL:N	27:DF:109:PRO:CD	2.75	0.50
45:DX:51:VAL:HG23	45:DX:52:SER:N	2.27	0.50
1:AA:575:G:H4'	1:AA:576:C:OP1	2.12	0.50
1:AA:601:G:C6	1:AA:602:A:C6	3.00	0.50
1:AA:614:C:H2'	1:AA:615:G:O5'	2.11	0.50
1:AA:803:G:C6	1:AA:804:U:N3	2.80	0.50
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.12	0.50
1:AA:1287:A:C6	1:AA:1288:A:C6	2.99	0.50
2:AB:47:VAL:C	2:AB:49:MET:H	2.19	0.50
3:AC:85:GLU:O	3:AC:87:LEU:N	2.45	0.50
11:AK:55:SER:O	11:AK:57:LYS:N	2.44	0.50
16:AP:19:VAL:HG13	16:AP:37:GLY:C	2.36	0.50
22:BA:1068:G:H2'	22:BA:1069:A:H5'	1.94	0.50
22:BA:1695:G:C8	24:BC:8:PRO:HG2	2.46	0.50
22:BA:1870:C:H4'	22:BA:1871:A:OP2	2.12	0.50
22:BA:2547:A:C2	22:BA:2562:U:C2	3.00	0.50
22:BA:2714:G:C2'	22:BA:2715:C:H5'	2.42	0.50
26:BE:15:SER:N	26:BE:197:GLU:OE2	2.45	0.50
26:BE:29:HIS:CE1	26:BE:33:VAL:HG21	2.46	0.50
28:BG:118:PRO:O	28:BG:119:ALA:C	2.55	0.50
32:BK:58:LEU:HD23	32:BK:59:LYS:O	2.12	0.50
46:BY:20:ASN:O	46:BY:24:GLU:HB2	2.11	0.50
1:CA:4:U:O2	1:CA:4:U:H2'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:174:A:C4	1:CA:175:C:C6	2.99	0.50
1:CA:263:A:P	20:CT:74:ARG:NH1	2.85	0.50
1:CA:717:U:O2'	1:CA:734:G:O4'	2.24	0.50
1:CA:756:C:C2'	1:CA:757:U:H5'	2.42	0.50
1:CA:840:C:C4	1:CA:842:U:H4'	2.47	0.50
1:CA:1002:G:C6	1:CA:1039:G:C2	2.99	0.50
2:CB:68:LEU:HD22	2:CB:70:VAL:HG23	1.93	0.50
2:CB:90:PHE:CZ	2:CB:154:MET:HA	2.47	0.50
8:CH:30:SER:O	8:CH:34:VAL:HG23	2.12	0.50
9:CI:116:VAL:HG21	10:CJ:62:ARG:HD3	1.93	0.50
11:CK:33:THR:HG22	11:CK:33:THR:O	2.11	0.50
19:CS:73:GLU:HB2	19:CS:74:PHE:CE1	2.47	0.50
21:CU:28:VAL:O	21:CU:32:VAL:HG23	2.11	0.50
22:DA:301:G:C2	22:DA:302:C:C2	3.00	0.50
22:DA:397:U:OP1	45:DX:31:PRO:HA	2.12	0.50
22:DA:1243:C:H2'	22:DA:1244:A:O4'	2.12	0.50
22:DA:1301:A:H2'	22:DA:1301:A:N3	2.27	0.50
22:DA:1454:C:H5'	35:DN:63:ARG:HD3	1.93	0.50
22:DA:1734:G:H2'	22:DA:1735:A:C8	2.47	0.50
22:DA:1855:U:C5	22:DA:1856:U:C4	3.00	0.50
22:DA:1876:A:C8	22:DA:1877:A:N7	2.80	0.50
22:DA:2024:G:C4	22:DA:2040:G:N2	2.80	0.50
22:DA:2461:A:H1'	22:DA:2492:U:C2	2.47	0.50
22:DA:2473:U:O2	22:DA:2473:U:H2'	2.10	0.50
23:DB:42:C:O2'	27:DF:63:GLN:NE2	2.45	0.50
26:DE:108:ILE:HD12	26:DE:108:ILE:O	2.12	0.50
27:DF:121:SER:O	27:DF:123:ASP:N	2.44	0.50
28:DG:91:GLY:O	28:DG:94:TYR:CD1	2.65	0.50
32:DK:34:GLY:O	32:DK:35:VAL:C	2.53	0.50
32:DK:47:ILE:HB	32:DK:48:PRO:HD2	1.93	0.50
33:DL:94:THR:O	33:DL:98:ALA:N	2.45	0.50
38:DQ:76:TYR:CZ	38:DQ:80:ILE:HG13	2.47	0.50
40:DS:63:GLY:O	40:DS:64:ALA:HB3	2.11	0.50
49:D1:10:LYS:O	49:D1:51:GLU:CG	2.60	0.50
1:AA:2:A:C6	1:AA:3:A:N1	2.80	0.49
1:AA:858:G:C2'	1:AA:859:G:H5'	2.42	0.49
1:AA:939:G:H2'	1:AA:940:C:C6	2.47	0.49
1:AA:1145:A:HO2'	1:AA:1146:A:P	2.34	0.49
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.12	0.49
3:AC:149:ILE:HG12	3:AC:150:LYS:N	2.27	0.49
4:AD:76:TYR:CD1	4:AD:76:TYR:C	2.89	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:195:ILE:O	4:AD:195:ILE:HG13	2.11	0.49
6:AF:91:ARG:HG3	6:AF:92:THR:N	2.26	0.49
10:AJ:56:HIS:O	10:AJ:57:VAL:CG1	2.60	0.49
11:AK:102:ALA:O	11:AK:103:ALA:C	2.55	0.49
12:AL:88:LYS:O	12:AL:88:LYS:HG3	2.11	0.49
16:AP:43:ALA:C	16:AP:44:SER:HG	2.09	0.49
21:AU:35:ARG:O	21:AU:36:GLU:C	2.55	0.49
22:BA:26:G:H1'	22:BA:514:A:N6	2.27	0.49
22:BA:641:U:C5	22:BA:642:U:C4	3.00	0.49
22:BA:819:A:H1'	22:BA:1189:A:N1	2.26	0.49
22:BA:933:A:H5'	22:BA:934:U:OP2	2.12	0.49
22:BA:1712:U:C4	22:BA:1713:A:C5	3.00	0.49
22:BA:2127:G:H4'	22:BA:2128:G:OP1	2.11	0.49
22:BA:2307:G:N3	22:BA:2308:G:O6	2.45	0.49
22:BA:2309:A:N6	22:BA:2310:C:N4	2.60	0.49
22:BA:2552:U:C2	22:BA:2554:U:H5'	2.48	0.49
22:BA:2728:U:HO2'	22:BA:2729:G:P	2.30	0.49
22:BA:2869:G:H2'	22:BA:2870:C:O4'	2.11	0.49
26:BE:171:ASP:OD1	26:BE:173:THR:N	2.44	0.49
29:BH:43:ASN:O	29:BH:46:PHE:HB3	2.12	0.49
29:BH:86:ASP:O	29:BH:87:GLU:HB2	2.11	0.49
34:BM:42:THR:HG22	34:BM:93:VAL:CG1	2.42	0.49
35:BN:73:ASN:HA	35:BN:76:VAL:HG12	1.93	0.49
38:BQ:58:ARG:HA	38:BQ:61:TRP:CE3	2.47	0.49
38:BQ:76:TYR:C	38:BQ:76:TYR:CD2	2.89	0.49
40:BS:28:LYS:O	40:BS:31:GLN:N	2.45	0.49
1:CA:157:U:O2	1:CA:165:G:C2	2.64	0.49
1:CA:158:G:C5	1:CA:164:G:C6	2.99	0.49
1:CA:256:U:H2'	1:CA:257:G:O4'	2.12	0.49
1:CA:408:A:H2'	1:CA:409:U:O4'	2.12	0.49
1:CA:1055:A:C6	1:CA:1206:G:C5	3.00	0.49
2:CB:165:ASP:O	2:CB:166:ALA:C	2.54	0.49
7:CG:101:MET:HA	7:CG:104:ILE:HD12	1.94	0.49
12:CL:90:LEU:HB3	12:CL:93:VAL:HG21	1.94	0.49
17:CQ:60:GLU:HB3	17:CQ:76:VAL:HG23	1.94	0.49
22:DA:621:A:C6	22:DA:622:G:H1'	2.47	0.49
22:DA:679:C:H2'	22:DA:680:C:H6	1.77	0.49
22:DA:753:A:C2	22:DA:754:U:C2	3.00	0.49
22:DA:1340:U:H4'	22:DA:1341:G:OP2	2.12	0.49
22:DA:1456:G:C6	22:DA:1457:U:C4	2.99	0.49
22:DA:1911:U:H2'	22:DA:1918:A:C2	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2067:G:C6	22:DA:2444:G:C2	3.00	0.49
22:DA:2156:G:C6	22:DA:2157:G:C2	3.00	0.49
22:DA:2539:C:H4'	52:D4:3:VAL:HG11	1.94	0.49
29:DH:127:GLU:HG3	29:DH:145:ASN:HA	1.93	0.49
46:DY:31:GLN:HG2	46:DY:36:GLN:HB2	1.95	0.49
1:AA:978:A:C4	1:AA:1319:A:C2	3.00	0.49
1:AA:1027:C:C5	1:AA:1028:C:N4	2.80	0.49
1:AA:1048:G:N3	1:AA:1050:G:C8	2.80	0.49
2:AB:54:LEU:HD12	2:AB:220:THR:HG21	1.94	0.49
3:AC:92:ALA:HB2	3:AC:99:ALA:HB3	1.94	0.49
10:AJ:32:THR:OG1	10:AJ:33:GLY:N	2.39	0.49
12:AL:86:ARG:CZ	12:AL:88:LYS:HB3	2.41	0.49
22:BA:1022:G:C5	22:BA:1140:C:C4	3.00	0.49
22:BA:1965:C:OP1	22:BA:1966:A:O2'	2.21	0.49
22:BA:2366:A:H2'	22:BA:2367:G:O4'	2.12	0.49
26:BE:79:ARG:CG	26:BE:79:ARG:HH11	2.23	0.49
30:BI:75:PRO:O	30:BI:79:LEU:HD12	2.11	0.49
33:BL:62:PRO:HB2	51:B3:30:ARG:NH2	2.26	0.49
33:BL:91:ASP:O	33:BL:92:LEU:C	2.55	0.49
44:BW:52:GLY:HA3	44:BW:60:PHE:CE2	2.48	0.49
1:CA:71:A:C6	1:CA:72:A:N7	2.80	0.49
1:CA:104:G:C2	1:CA:105:G:C8	3.00	0.49
1:CA:106:C:O2	1:CA:379:C:C5'	2.59	0.49
1:CA:580:C:H2'	1:CA:581:G:O4'	2.12	0.49
1:CA:609:A:N7	1:CA:610:U:C5	2.81	0.49
1:CA:609:A:N7	58:CA:1799:HOH:O	2.33	0.49
1:CA:792:A:O2'	1:CA:794:A:N7	2.41	0.49
1:CA:1167:A:C8	1:CA:1169:A:C5	2.99	0.49
1:CA:1363:A:H2'	1:CA:1363:A:N3	2.27	0.49
1:CA:1423:G:H2'	1:CA:1424:U:O4'	2.12	0.49
3:CC:42:TYR:CZ	3:CC:46:GLU:HG3	2.47	0.49
3:CC:69:HIS:HA	3:CC:104:ALA:HB3	1.93	0.49
3:CC:75:ILE:O	3:CC:75:ILE:HG13	2.10	0.49
4:CD:22:LYS:C	4:CD:24:GLY:N	2.68	0.49
6:CF:86:ARG:HH11	6:CF:86:ARG:HG2	1.77	0.49
11:CK:82:LEU:HD22	11:CK:105:PHE:HB3	1.94	0.49
14:CN:62:ASN:HB3	14:CN:73:PHE:CD1	2.48	0.49
18:CR:46:GLY:C	18:CR:47:THR:HG23	2.37	0.49
22:DA:35:G:O2'	22:DA:451:U:O4	2.30	0.49
22:DA:36:G:H4'	22:DA:451:U:C2	2.48	0.49
22:DA:443:A:N7	26:DE:40:ARG:CG	2.75	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:600:G:OP1	26:DE:24:ASN:ND2	2.42	0.49
22:DA:776:G:C8	22:DA:793:A:C5	3.00	0.49
22:DA:864:G:O6	22:DA:865:C:N4	2.45	0.49
22:DA:2283:C:C2'	22:DA:2284:A:H5'	2.42	0.49
22:DA:2726:A:O4'	32:DK:1:MET:HE1	2.12	0.49
35:DN:69:ARG:O	35:DN:70:THR:HG23	2.12	0.49
39:DR:14:VAL:CG2	39:DR:98:ILE:HG13	2.42	0.49
1:AA:142:G:H2'	1:AA:142:G:N3	2.27	0.49
1:AA:662:U:H2'	1:AA:663:A:C8	2.46	0.49
2:AB:63:ARG:O	2:AB:64:LYS:CB	2.56	0.49
4:AD:138:SER:HB2	4:AD:139:PRO:HD2	1.94	0.49
22:BA:894:U:H2'	22:BA:895:U:C6	2.46	0.49
22:BA:1171:G:C6	22:BA:1172:C:N3	2.80	0.49
22:BA:1180:U:C2'	22:BA:1181:U:H5'	2.42	0.49
22:BA:1909:C:C4	22:BA:1921:G:O6	2.66	0.49
26:BE:104:ALA:O	26:BE:108:ILE:HG23	2.13	0.49
27:BF:69:LYS:N	27:BF:69:LYS:HD2	2.27	0.49
29:BH:99:ILE:O	29:BH:99:ILE:HG22	2.12	0.49
30:BI:116:ASP:OD2	30:BI:117:MET:N	2.45	0.49
53:B5:73:VAL:CG2	53:B5:162:ILE:CB	2.90	0.49
1:CA:242:G:N2	1:CA:285:C:C2	2.80	0.49
1:CA:375:U:N3	1:CA:376:G:N7	2.60	0.49
1:CA:577:G:C2	1:CA:578:C:C6	3.00	0.49
1:CA:1240:U:OP2	7:CG:116:MET:N	2.44	0.49
1:CA:1244:G:C6	1:CA:1245:C:N4	2.81	0.49
1:CA:1261:A:C2	1:CA:1262:C:C5	3.01	0.49
1:CA:1273:C:H2'	1:CA:1274:A:O4'	2.12	0.49
7:CG:92:ARG:NE	7:CG:93:PRO:HD2	2.27	0.49
19:CS:40:ILE:HA	19:CS:44:MET:SD	2.52	0.49
19:CS:55:ARG:CZ	19:CS:79:THR:HG22	2.42	0.49
22:DA:104:A:H2'	22:DA:105:C:O4'	2.12	0.49
22:DA:136:G:N2	22:DA:144:A:N7	2.61	0.49
22:DA:819:A:C8	22:DA:1188:U:O4	2.64	0.49
22:DA:1299:G:H5"	22:DA:1300:G:H5"	1.93	0.49
22:DA:1360:G:O6	22:DA:1372:U:C2	2.65	0.49
22:DA:1378:A:N3	22:DA:1379:U:H2'	2.27	0.49
22:DA:1562:U:H2'	22:DA:1563:U:O4'	2.12	0.49
22:DA:1869:G:C3'	22:DA:1870:C:H5'	2.43	0.49
22:DA:2209:G:C5	22:DA:2210:U:C4	3.00	0.49
22:DA:2392:A:OP2	51:D3:31:HIS:CE1	2.65	0.49
22:DA:2747:G:C2	22:DA:2756:U:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2824:C:C4	22:DA:2825:G:C5	3.01	0.49
24:DC:240:PHE:CE1	24:DC:242:LYS:O	2.65	0.49
25:DD:183:GLU:OE1	25:DD:183:GLU:N	2.45	0.49
26:DE:150:THR:O	26:DE:172:ALA:HB2	2.12	0.49
30:DI:37:GLU:OE1	30:DI:65:ARG:NH2	2.45	0.49
43:DV:80:HIS:CE1	43:DV:83:LYS:HB2	2.47	0.49
1:AA:8:A:N6	4:AD:202:GLU:O	2.45	0.49
1:AA:1005:A:N6	1:AA:1006:G:N2	2.61	0.49
1:AA:1005:A:H4'	1:AA:1037:C:H1'	1.94	0.49
2:AB:163:VAL:HG22	2:AB:185:ALA:HB1	1.94	0.49
4:AD:3:ARG:NH2	4:AD:115:ARG:HD3	2.28	0.49
4:AD:120:HIS:O	4:AD:122:ALA:N	2.45	0.49
11:AK:126:LYS:HA	21:AU:34:ARG:HH21	1.77	0.49
18:AR:52:GLN:OE1	18:AR:52:GLN:HA	2.12	0.49
22:BA:84:A:H4'	22:BA:85:G:O5'	2.12	0.49
22:BA:839:U:H1'	22:BA:1191:G:H1'	1.94	0.49
22:BA:1177:G:C2'	22:BA:1178:C:O5'	2.60	0.49
22:BA:2531:A:OP2	28:BG:174:ALA:O	2.30	0.49
22:BA:2688:G:N1	22:BA:2720:U:OP2	2.37	0.49
24:BC:17:VAL:HB	24:BC:204:VAL:HG13	1.94	0.49
24:BC:167:ARG:O	24:BC:168:ASP:CB	2.58	0.49
38:BQ:79:PHE:CZ	38:BQ:83:LEU:HD11	2.48	0.49
1:CA:237:G:C6	1:CA:238:A:C5	3.01	0.49
1:CA:238:A:O2'	1:CA:239:U:H5'	2.13	0.49
1:CA:527:G:N1	1:CA:528:C:C5	2.80	0.49
1:CA:861:G:C5	1:CA:862:C:C5	3.00	0.49
1:CA:1088:G:C4	1:CA:1089:G:C8	3.00	0.49
2:CB:93:ASN:OD1	2:CB:94:HIS:ND1	2.46	0.49
7:CG:51:ALA:CB	7:CG:58:GLU:HA	2.43	0.49
7:CG:126:ASP:N	7:CG:126:ASP:OD1	2.45	0.49
9:CI:101:ALA:HB1	9:CI:103:PHE:CZ	2.47	0.49
12:CL:74:LEU:HD11	12:CL:80:ILE:HG21	1.94	0.49
19:CS:66:MET:O	19:CS:68:GLY:N	2.46	0.49
22:DA:241:A:N1	22:DA:255:A:H5"	2.27	0.49
22:DA:307:G:N2	22:DA:310:A:C8	2.81	0.49
22:DA:528:A:N1	22:DA:2042:A:H2'	2.27	0.49
22:DA:861:A:H2'	22:DA:862:G:O4'	2.12	0.49
22:DA:937:C:H2'	22:DA:938:G:C8	2.47	0.49
22:DA:1087:G:N1	22:DA:1089:A:C2	2.80	0.49
22:DA:1230:A:H2'	22:DA:1231:U:C6	2.47	0.49
22:DA:1330:C:O2'	22:DA:1331:G:H5'	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1663:G:C6	22:DA:1992:G:C8	2.99	0.49
22:DA:1695:G:H3'	22:DA:1695:G:N3	2.27	0.49
22:DA:2056:G:H2'	22:DA:2056:G:N3	2.27	0.49
22:DA:2121:G:C2	22:DA:2122:U:C2	3.01	0.49
22:DA:2808:G:N2	22:DA:2891:U:C6	2.81	0.49
27:DF:147:ASP:O	27:DF:148:ARG:HB2	2.13	0.49
29:DH:86:ASP:C	29:DH:88:GLY:H	2.19	0.49
30:DI:53:LEU:HG	30:DI:82:LYS:HE2	1.93	0.49
47:DZ:14:ILE:HG22	47:DZ:15:GLY:N	2.27	0.49
1:AA:149:A:C2	1:AA:150:U:C2	3.00	0.49
1:AA:299:G:H2'	1:AA:300:A:C8	2.47	0.49
1:AA:402:G:C6	1:AA:403:C:C4	3.00	0.49
1:AA:760:G:N7	1:AA:761:G:N7	2.59	0.49
1:AA:923:A:O4'	1:AA:1398:A:C2	2.65	0.49
1:AA:1314:C:H41	19:AS:4:SER:HA	1.77	0.49
1:AA:1349:A:C2	1:AA:1374:A:C5	3.00	0.49
1:AA:1539:C:H5"	21:AU:18:ARG:HG3	1.93	0.49
2:AB:133:GLU:O	2:AB:137:ARG:HB2	2.11	0.49
3:AC:3:GLN:OE1	3:AC:3:GLN:N	2.45	0.49
7:AG:27:VAL:HG23	7:AG:28:ASN:N	2.28	0.49
7:AG:71:PRO:O	7:AG:96:ARG:HG3	2.12	0.49
11:AK:31:ILE:O	11:AK:31:ILE:HG13	2.12	0.49
16:AP:79:ASN:O	16:AP:80:LYS:HE3	2.13	0.49
22:BA:437:U:H2'	22:BA:438:G:C8	2.46	0.49
22:BA:1026:G:H1'	22:BA:1134:A:C2	2.48	0.49
22:BA:1586:A:C8	22:BA:1587:G:C8	3.00	0.49
22:BA:1846:G:H2'	22:BA:1847:A:C4	2.47	0.49
22:BA:2131:U:OP2	22:BA:2132:U:C6	2.66	0.49
22:BA:2532:G:N2	22:BA:2663:G:O2'	2.46	0.49
28:BG:153:ARG:O	28:BG:154:PRO:C	2.55	0.49
29:BH:123:ARG:HD3	1:CA:358:U:OP1	2.12	0.49
35:BN:25:ALA:HB1	35:BN:48:VAL:HG22	1.93	0.49
48:B0:30:VAL:HG12	48:B0:35:GLY:HA2	1.95	0.49
1:CA:411:A:C6	1:CA:429:U:C5	3.00	0.49
1:CA:579:A:C4	1:CA:763:G:N2	2.80	0.49
1:CA:794:A:H2'	1:CA:795:C:C6	2.47	0.49
1:CA:945:G:H2'	1:CA:945:G:N3	2.26	0.49
1:CA:1014:A:N7	1:CA:1015:G:C6	2.80	0.49
1:CA:1463:U:H2'	1:CA:1464:U:C6	2.47	0.49
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.12	0.49
3:CC:77:ILE:HA	3:CC:84:VAL:HG23	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:172:ARG:C	3:CC:174:PRO:HD3	2.37	0.49
4:CD:46:PRO:O	4:CD:48:LEU:N	2.45	0.49
5:CE:11:LEU:HG	5:CE:12:GLN:N	2.28	0.49
5:CE:147:MET:HG2	5:CE:147:MET:O	2.12	0.49
20:CT:9:LYS:O	20:CT:12:ILE:HG12	2.12	0.49
22:DA:1127:A:C3'	22:DA:1128:G:H5"	2.43	0.49
22:DA:1176:U:H2'	22:DA:1177:G:C8	2.47	0.49
22:DA:2184:A:H2'	22:DA:2185:U:C6	2.47	0.49
22:DA:2386:A:H2'	22:DA:2387:U:C6	2.48	0.49
22:DA:2537:U:H2'	22:DA:2538:C:C6	2.47	0.49
22:DA:2854:G:N2	22:DA:2864:G:N3	2.61	0.49
26:DE:61:ARG:O	26:DE:63:LYS:N	2.45	0.49
28:DG:95:ARG:HA	28:DG:128:GLN:O	2.11	0.49
29:DH:112:LYS:CG	29:DH:113:SER:N	2.76	0.49
31:DJ:24:THR:O	31:DJ:25:LEU:C	2.56	0.49
34:DM:1:MET:HE3	34:DM:43:ALA:HB3	1.94	0.49
34:DM:120:ALA:O	34:DM:124:LEU:HD23	2.12	0.49
46:DY:21:LEU:HA	46:DY:25:GLN:HB3	1.94	0.49
1:AA:188:C:O2	1:AA:188:C:C2'	2.61	0.49
1:AA:345:C:N3	32:BK:117:SER:OG	2.46	0.49
1:AA:472:U:C4	1:AA:473:U:O4	2.66	0.49
1:AA:1226:C:O2'	13:AM:110:LYS:NZ	2.45	0.49
1:AA:1243:C:H2'	1:AA:1244:G:C8	2.48	0.49
2:AB:46:THR:CG2	2:AB:201:PRO:HB2	2.42	0.49
6:AF:80:PHE:C	6:AF:80:PHE:CD2	2.90	0.49
10:AJ:73:LEU:O	10:AJ:74:VAL:CB	2.61	0.49
11:AK:91:PRO:C	11:AK:93:ARG:H	2.20	0.49
22:BA:603:A:C8	22:BA:655:A:C6	3.00	0.49
22:BA:687:C:H2'	22:BA:688:U:O4'	2.11	0.49
22:BA:830:G:H4'	22:BA:831:G:OP2	2.13	0.49
22:BA:1084:A:C5	22:BA:1085:A:C6	3.00	0.49
22:BA:1477:A:N6	22:BA:1514:G:O2'	2.44	0.49
22:BA:1791:A:O3'	24:BC:204:VAL:O	2.31	0.49
22:BA:1832:C:N4	22:BA:1833:C:C4	2.81	0.49
22:BA:2298:A:N6	22:BA:2318:G:H1'	2.28	0.49
23:BB:43:C:O2	27:BF:92:ARG:NH2	2.42	0.49
24:BC:82:GLU:OE1	24:BC:103:TYR:OH	2.23	0.49
24:BC:246:THR:N	24:BC:250:VAL:O	2.40	0.49
33:BL:68:SER:O	33:BL:69:ARG:HG3	2.12	0.49
41:BT:67:VAL:C	41:BT:68:LYS:HG2	2.38	0.49
49:B1:6:ARG:HG2	49:B1:24:THR:HB	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:53:A:C2	1:CA:359:G:C6	3.00	0.49
1:CA:840:C:N3	1:CA:842:U:H4'	2.28	0.49
1:CA:983:A:C2'	1:CA:983:A:N3	2.76	0.49
1:CA:1105:A:H2'	1:CA:1106:G:H8	1.78	0.49
1:CA:1213:A:C5	1:CA:1215:G:C4	3.01	0.49
1:CA:1337:G:C5'	1:CA:1338:G:OP1	2.60	0.49
1:CA:1361:G:H3'	1:CA:1362:A:H5"	1.94	0.49
10:CJ:57:VAL:HG22	10:CJ:58:ASN:H	1.76	0.49
12:CL:28:PRO:HB2	12:CL:29:GLN:OE1	2.13	0.49
16:CP:23:ASP:OD2	16:CP:25:ARG:HG2	2.12	0.49
22:DA:197:A:C8	22:DA:2430:A:C8	3.01	0.49
22:DA:410:G:C6	22:DA:2407:A:N6	2.81	0.49
22:DA:570:G:H2'	22:DA:571:U:H5'	1.93	0.49
22:DA:1931:U:OP2	22:DA:1968:G:N1	2.43	0.49
22:DA:2057:G:H2'	22:DA:2058:A:O4'	2.13	0.49
22:DA:2283:C:H2'	22:DA:2284:A:H5'	1.95	0.49
22:DA:2862:G:C6	22:DA:2863:C:N4	2.81	0.49
27:DF:122:PHE:O	27:DF:123:ASP:C	2.56	0.49
34:DM:57:VAL:HG11	34:DM:105:MET:SD	2.52	0.49
35:DN:48:VAL:N	35:DN:50:PRO:HD2	2.27	0.49
41:DT:61:LEU:HD12	41:DT:62:VAL:N	2.27	0.49
1:AA:705:G:C5	1:AA:706:A:C8	3.01	0.49
1:AA:850:U:H2'	1:AA:851:G:O5'	2.13	0.49
1:AA:1030:U:OP2	1:AA:1031:C:C5	2.66	0.49
1:AA:1048:G:N3	1:AA:1050:G:N7	2.60	0.49
1:AA:1417:G:C6	1:AA:1482:G:C6	3.01	0.49
4:AD:173:VAL:HG13	4:AD:174:ASP:N	2.28	0.49
14:AN:52:PRO:O	14:AN:53:ARG:HB3	2.11	0.49
19:AS:23:VAL:HG12	19:AS:24:GLU:N	2.28	0.49
22:BA:1487:U:C2	22:BA:1503:A:C2	3.00	0.49
22:BA:2006:C:O2'	22:BA:2823:A:O2'	2.27	0.49
22:BA:2267:A:H5"	22:BA:2268:A:H5'	1.94	0.49
22:BA:2452:C:N3	56:BA:3001:DOL:H131	2.28	0.49
27:BF:8:TYR:HA	27:BF:12:VAL:CG2	2.41	0.49
34:BM:49:ALA:HB1	34:BM:120:ALA:HB1	1.95	0.49
39:BR:49:ILE:HB	39:BR:52:PRO:CA	2.43	0.49
41:BT:1:MET:O	41:BT:2:ILE:CG1	2.61	0.49
41:BT:61:LEU:C	41:BT:61:LEU:HD12	2.37	0.49
46:BY:61:ALA:O	46:BY:62:GLY:C	2.55	0.49
51:B3:45:ARG:N	51:B3:46:PRO:HD2	2.27	0.49
1:CA:154:U:C2	1:CA:168:G:N2	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:890:G:N2	1:CA:906:A:H2'	2.28	0.49
1:CA:1361:G:H3'	1:CA:1362:A:C5'	2.41	0.49
1:CA:1437:A:C2	1:CA:1465:A:C2	3.01	0.49
2:CB:45:LYS:HE2	2:CB:49:MET:HE1	1.93	0.49
6:CF:78:PHE:CD2	6:CF:78:PHE:N	2.81	0.49
21:CU:44:GLU:OE1	21:CU:45:ARG:NH1	2.46	0.49
22:DA:49:A:N6	22:DA:177:G:C5	2.81	0.49
22:DA:411:G:OP1	22:DA:2407:A:OP2	2.29	0.49
22:DA:569:U:H5"	22:DA:821:A:C2	2.48	0.49
22:DA:1071:G:O2'	22:DA:1072:C:O4'	2.23	0.49
22:DA:1248:G:C4	38:DQ:3:ARG:HG3	2.47	0.49
22:DA:1250:G:H5'	38:DQ:6:ARG:HD3	1.95	0.49
22:DA:1779:U:C5	22:DA:1784:A:N7	2.80	0.49
22:DA:2599:G:N7	24:DC:236:GLU:CB	2.76	0.49
22:DA:2842:G:H2'	22:DA:2843:G:O4'	2.11	0.49
22:DA:2848:G:OP2	37:DP:95:ALA:N	2.46	0.49
22:DA:2849:U:H4'	22:DA:2868:A:C2	2.47	0.49
23:DB:109:A:C6	23:DB:110:C:C4	3.00	0.49
34:DM:22:GLN:O	34:DM:24:THR:N	2.46	0.49
41:DT:7:LEU:HD21	41:DT:45:ALA:HB3	1.95	0.49
42:DU:16:GLY:O	42:DU:17:LYS:HB2	2.12	0.49
42:DU:98:SER:O	42:DU:99:ASN:CB	2.60	0.49
1:AA:82:G:N2	1:AA:89:U:OP1	2.45	0.49
1:AA:455:G:C2	1:AA:478:A:C2	3.00	0.49
1:AA:652:U:C4	1:AA:752:G:N3	2.81	0.49
1:AA:1182:G:C3'	1:AA:1183:U:H5'	2.43	0.49
1:AA:1381:U:C2	7:AG:78:ARG:NH1	2.80	0.49
2:AB:166:ALA:HB2	2:AB:187:VAL:HG12	1.94	0.49
4:AD:90:LEU:C	4:AD:90:LEU:HD12	2.38	0.49
8:AH:30:SER:O	8:AH:31:LYS:C	2.56	0.49
11:AK:30:THR:HG21	11:AK:91:PRO:O	2.13	0.49
20:AT:3:ASN:O	20:AT:4:ILE:C	2.55	0.49
22:BA:58:G:OP1	41:BT:78:SER:HB2	2.13	0.49
22:BA:360:U:C4	22:BA:361:G:C6	3.00	0.49
22:BA:1088:A:N3	22:BA:1088:A:H5"	2.27	0.49
22:BA:1747:U:H2'	22:BA:1748:C:C6	2.47	0.49
22:BA:2014:A:H2'	22:BA:2015:A:C8	2.48	0.49
22:BA:2190:G:N1	22:BA:2191:A:C4	2.81	0.49
24:BC:15:HIS:O	24:BC:204:VAL:CG2	2.61	0.49
30:BI:86:ILE:N	30:BI:86:ILE:HD12	2.28	0.49
30:BI:111:GLN:CD	30:BI:111:GLN:C	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:60:ASP:HA	31:BJ:97:PRO:HB3	1.95	0.49
53:B5:215:VAL:O	53:B5:216:THR:CB	2.61	0.49
1:CA:597:G:C8	1:CA:598:U:C5	3.01	0.49
1:CA:1000:A:C2	1:CA:1041:G:C2	3.01	0.49
3:CC:65:ARG:O	3:CC:66:VAL:C	2.55	0.49
5:CE:38:VAL:HG12	5:CE:117:VAL:HG21	1.94	0.49
12:CL:40:THR:HG22	12:CL:41:THR:N	2.28	0.49
19:CS:73:GLU:HB2	19:CS:74:PHE:CD1	2.47	0.49
22:DA:182:A:N6	22:DA:214:G:O6	2.45	0.49
22:DA:508:A:C3'	22:DA:509:C:H5'	2.42	0.49
22:DA:792:A:O2'	22:DA:2440:C:N3	2.36	0.49
22:DA:1361:G:C5	22:DA:1362:C:C5	3.01	0.49
22:DA:1504:A:N6	22:DA:1505:A:C6	2.81	0.49
22:DA:1814:G:C6	22:DA:1815:A:C6	3.00	0.49
22:DA:1973:G:C5	22:DA:1974:C:C4	3.00	0.49
22:DA:2111:U:O4	22:DA:2147:A:C2	2.66	0.49
22:DA:2146:C:H4'	22:DA:2147:A:C8	2.47	0.49
22:DA:2307:G:N2	22:DA:2312:U:N3	2.60	0.49
22:DA:2371:G:C2	22:DA:2372:U:C5	3.00	0.49
29:DH:72:ILE:O	29:DH:141:LYS:O	2.30	0.49
32:DK:31:ARG:HB2	32:DK:32:TYR:CD2	2.47	0.49
37:DP:28:VAL:HG21	37:DP:74:PHE:CE2	2.48	0.49
1:AA:130:A:C8	17:AQ:65:ARG:HB2	2.47	0.49
1:AA:438:U:C2	1:AA:494:G:C6	3.00	0.49
1:AA:501:C:H2'	1:AA:502:A:C8	2.48	0.49
1:AA:1308:U:O2'	1:AA:1309:G:H5'	2.13	0.49
2:AB:15:HIS:O	2:AB:16:PHE:C	2.55	0.49
2:AB:87:CYS:C	2:AB:89:GLN:N	2.71	0.49
3:AC:19:ASN:OD1	3:AC:19:ASN:N	2.45	0.49
3:AC:159:GLY:O	3:AC:160:ALA:C	2.55	0.49
5:AE:137:VAL:O	5:AE:138:ARG:CB	2.60	0.49
7:AG:99:LEU:O	7:AG:100:ALA:C	2.55	0.49
8:AH:125:ILE:O	8:AH:125:ILE:CG1	2.60	0.49
22:BA:2177:C:N4	22:BA:2178:C:O2	2.46	0.49
22:BA:2287:A:OP1	49:B1:30:LYS:NZ	2.35	0.49
25:BD:166:GLY:O	25:BD:167:ASN:HB3	2.13	0.49
26:BE:108:ILE:HG13	26:BE:109:LEU:N	2.28	0.49
28:BG:80:THR:CG2	28:BG:81:GLU:N	2.75	0.49
30:BI:105:GLN:O	30:BI:106:LEU:HB2	2.13	0.49
35:BN:69:ARG:C	35:BN:70:THR:HG23	2.37	0.49
36:BO:25:ARG:HG3	36:BO:27:VAL:HG12	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:49:ILE:HG22	39:BR:52:PRO:C	2.38	0.49
42:BU:13:VAL:HG12	42:BU:19:LYS:HA	1.95	0.49
48:B0:13:ARG:O	48:B0:17:ARG:HG3	2.12	0.49
48:B0:25:VAL:C	48:B0:26:THR:HG23	2.38	0.49
53:B5:65:LEU:O	53:B5:67:HIS:N	2.45	0.49
1:CA:215:C:H2'	1:CA:216:U:O4'	2.13	0.49
1:CA:218:U:H2'	1:CA:219:U:O4'	2.13	0.49
1:CA:846:G:C2	1:CA:847:G:C8	3.01	0.49
1:CA:1061:G:N7	1:CA:1062:U:C5	2.81	0.49
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.13	0.49
1:CA:1211:U:H1'	1:CA:1213:A:C2	2.48	0.49
2:CB:62:SER:HA	2:CB:224:GLY:HA3	1.94	0.49
2:CB:99:GLY:C	2:CB:101:LEU:H	2.21	0.49
2:CB:206:ALA:O	2:CB:207:ILE:C	2.55	0.49
4:CD:174:ASP:OD1	4:CD:177:LYS:N	2.46	0.49
5:CE:83:HIS:CE1	8:CH:96:MET:HE3	2.48	0.49
7:CG:88:PRO:HD2	7:CG:152:ALA:HA	1.94	0.49
11:CK:110:ILE:HG22	21:CU:17:ARG:NH1	2.28	0.49
12:CL:38:TYR:HB3	12:CL:52:VAL:HG13	1.94	0.49
18:CR:25:ASP:C	18:CR:27:ALA:N	2.67	0.49
22:DA:58:G:C2	22:DA:70:G:C2	3.01	0.49
22:DA:430:A:H2'	22:DA:431:U:H5'	1.95	0.49
22:DA:636:G:O2'	22:DA:638:G:O2'	2.29	0.49
22:DA:856:G:C2	22:DA:922:C:N3	2.81	0.49
22:DA:878:A:C2	22:DA:900:A:C4	3.01	0.49
22:DA:1993:U:H4'	25:DD:133:THR:CG2	2.43	0.49
22:DA:2231:U:H2'	22:DA:2232:C:C6	2.48	0.49
22:DA:2360:G:H1'	33:DL:60:ARG:HD3	1.94	0.49
22:DA:2586:U:C5	22:DA:2587:A:C8	3.01	0.49
23:DB:37:C:C5	23:DB:38:C:C4	3.01	0.49
30:DI:76:ALA:HB2	30:DI:129:ILE:HG23	1.95	0.49
31:DJ:31:GLU:OE2	31:DJ:35:ARG:NH1	2.46	0.49
35:DN:1:MET:CE	35:DN:1:MET:N	2.75	0.49
42:DU:85:PHE:N	42:DU:85:PHE:CD1	2.81	0.49
46:DY:20:ASN:O	46:DY:24:GLU:HB2	2.12	0.49
52:D4:16:ILE:HD13	52:D4:25:VAL:HG22	1.95	0.49
1:AA:71:A:N3	1:AA:72:A:C8	2.81	0.49
1:AA:375:U:C4	1:AA:376:G:N7	2.81	0.49
1:AA:872:A:C8	1:AA:874:G:C8	3.01	0.49
2:AB:51:ASN:O	2:AB:52:GLU:HB2	2.12	0.49
3:AC:42:TYR:CZ	3:AC:90:VAL:HG21	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:53:ILE:HD11	14:AN:85:ARG:NH1	2.28	0.49
16:AP:45:GLU:O	16:AP:46:LYS:O	2.31	0.49
22:BA:250:G:C6	22:BA:251:A:C6	3.01	0.49
22:BA:1922:G:N3	22:BA:1922:G:C2'	2.76	0.49
22:BA:2560:A:C5	22:BA:2561:U:C5	3.00	0.49
27:BF:158:THR:CG2	27:BF:160:ALA:H	2.26	0.49
36:BO:100:HIS:O	36:BO:104:GLN:HB3	2.13	0.49
47:BZ:11:ARG:NH1	47:BZ:53:PHE:O	2.46	0.49
1:CA:157:U:O2'	1:CA:158:G:H5'	2.12	0.49
1:CA:1007:U:H2'	1:CA:1008:U:H5"	1.93	0.49
1:CA:1149:C:C4	1:CA:1150:A:C6	3.00	0.49
7:CG:42:ILE:HG21	7:CG:116:MET:HG3	1.95	0.49
7:CG:92:ARG:NE	7:CG:93:PRO:HD3	2.28	0.49
16:CP:16:PHE:CE1	16:CP:38:PHE:HB2	2.48	0.49
17:CQ:15:ASP:N	17:CQ:17:MET:HE2	2.28	0.49
22:DA:55:G:C2	22:DA:56:A:C8	3.00	0.49
22:DA:152:A:C2	22:DA:175:G:N3	2.81	0.49
22:DA:382:A:N1	22:DA:383:C:C2	2.81	0.49
22:DA:581:C:OP2	38:DQ:33:ARG:NE	2.46	0.49
22:DA:883:G:N2	22:DA:894:U:O2	2.46	0.49
22:DA:1567:G:C8	24:DC:83:TYR:CD1	3.00	0.49
22:DA:1638:C:C5'	22:DA:2710:C:O2'	2.61	0.49
22:DA:1791:A:C2'	22:DA:1792:G:H5'	2.43	0.49
22:DA:1869:G:C2	22:DA:1873:G:N1	2.81	0.49
22:DA:2054:A:C2	22:DA:2616:C:C2	3.01	0.49
22:DA:2059:A:H4'	26:DE:64:GLY:O	2.13	0.49
22:DA:2428:G:H5"	22:DA:2429:G:OP1	2.13	0.49
22:DA:2532:G:N2	22:DA:2663:G:O2'	2.46	0.49
22:DA:2729:G:H2'	22:DA:2730:C:O4'	2.13	0.49
24:DC:43:ARG:NH2	24:DC:49:ILE:HD11	2.28	0.49
27:DF:16:LEU:HD11	27:DF:169:LEU:CD1	2.43	0.49
32:DK:92:GLU:N	32:DK:92:GLU:OE2	2.43	0.49
34:DM:69:PRO:O	34:DM:70:ASP:HB3	2.11	0.49
34:DM:70:ASP:C	34:DM:70:ASP:OD1	2.56	0.49
40:DS:20:VAL:CG2	40:DS:39:THR:HG21	2.43	0.49
1:AA:144:G:C2	1:AA:179:A:N3	2.81	0.48
1:AA:374:A:N1	1:AA:390:U:O2'	2.45	0.48
1:AA:411:A:C5	1:AA:429:U:C5	3.01	0.48
1:AA:591:U:P	8:AH:31:LYS:HD2	2.54	0.48
1:AA:709:U:O2'	1:AA:710:G:H5'	2.13	0.48
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:79:ALA:O	2:AB:214:LEU:CD2	2.60	0.48
2:AB:82:ASP:O	2:AB:84:ALA:N	2.46	0.48
5:AE:149:SER:O	5:AE:153:VAL:HG12	2.13	0.48
10:AJ:41:PRO:O	10:AJ:42:LEU:CB	2.61	0.48
11:AK:88:GLY:N	11:AK:114:THR:HG22	2.28	0.48
13:AM:27:LYS:O	13:AM:31:LYS:HG3	2.12	0.48
17:AQ:82:ALA:O	17:AQ:83:VAL:O	2.30	0.48
18:AR:34:THR:OG1	18:AR:35:GLU:N	2.46	0.48
22:BA:78:U:H2'	22:BA:79:C:C6	2.48	0.48
22:BA:1206:G:C6	22:BA:1207:C:C4	3.01	0.48
22:BA:1881:C:H2'	22:BA:1882:U:O4'	2.13	0.48
22:BA:2019:A:H4'	38:BQ:34:VAL:HG21	1.94	0.48
22:BA:2553:G:N1	22:BA:2554:U:O2	2.46	0.48
22:BA:2555:U:C5	22:BA:2556:C:C2	3.01	0.48
22:BA:2615:U:C2'	22:BA:2616:C:H5'	2.42	0.48
29:BH:121:VAL:H	29:BH:122:LEU:HB2	1.77	0.48
29:BH:139:PHE:O	29:BH:140:ALA:HB2	2.13	0.48
30:BI:6:GLN:O	30:BI:7:ALA:HB3	2.13	0.48
33:BL:26:GLY:C	33:BL:27:LEU:HD23	2.38	0.48
1:CA:66:A:H4'	1:CA:173:U:C5	2.47	0.48
1:CA:73:C:HO2'	1:CA:74:A:P	2.34	0.48
1:CA:630:A:H2'	1:CA:631:C:O4'	2.13	0.48
1:CA:786:G:H2'	1:CA:786:G:N3	2.27	0.48
1:CA:881:G:C6	1:CA:882:C:C4	3.01	0.48
1:CA:920:U:C2	1:CA:921:U:C5	3.01	0.48
1:CA:960:U:O2'	1:CA:1223:C:H4'	2.13	0.48
1:CA:1268:G:O2'	1:CA:1326:U:O2'	2.29	0.48
1:CA:1537:U:C5	1:CA:1538:C:C4	3.01	0.48
2:CB:143:LYS:O	2:CB:147:SER:OG	2.24	0.48
5:CE:13:GLU:HB2	5:CE:39:VAL:HG12	1.94	0.48
7:CG:78:ARG:O	7:CG:79:ARG:HB2	2.12	0.48
9:CI:24:GLY:N	9:CI:61:LEU:HA	2.29	0.48
13:CM:46:SER:O	13:CM:47:GLU:HB3	2.11	0.48
17:CQ:45:HIS:O	17:CQ:71:LYS:HA	2.13	0.48
19:CS:51:VAL:O	19:CS:58:VAL:HG13	2.13	0.48
22:DA:477:A:H2'	22:DA:478:A:O5'	2.13	0.48
22:DA:591:U:H1'	51:D3:2:PRO:HD2	1.94	0.48
22:DA:771:G:O2'	22:DA:1355:G:O2'	2.14	0.48
22:DA:933:A:C5'	22:DA:934:U:OP2	2.61	0.48
22:DA:1029:A:N7	22:DA:1030:C:C2	2.81	0.48
22:DA:1076:C:H1'	30:DI:93:PRO:HG2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1569:A:C6	22:DA:1570:A:C2	3.01	0.48
22:DA:1773:A:N3	22:DA:1978:A:C2	2.81	0.48
22:DA:1981:A:H5"	22:DA:1982:U:OP2	2.12	0.48
22:DA:2119:A:N1	22:DA:2169:A:H2'	2.28	0.48
22:DA:2502:G:H5'	22:DA:2503:A:H5"	1.94	0.48
23:DB:34:A:N6	23:DB:44:G:H1'	2.28	0.48
24:DC:246:THR:C	24:DC:248:TRP:H	2.20	0.48
31:DJ:84:ILE:O	31:DJ:84:ILE:CG1	2.61	0.48
41:DT:62:VAL:HG12	41:DT:63:VAL:N	2.28	0.48
45:DX:54:LYS:HA	45:DX:57:ARG:HB2	1.94	0.48
47:DZ:7:ILE:N	47:DZ:36:VAL:O	2.45	0.48
47:DZ:41:THR:HB	47:DZ:42:PRO:HD2	1.95	0.48
1:AA:72:A:H2'	1:AA:73:C:H5'	1.94	0.48
1:AA:215:C:H2'	1:AA:216:U:O4'	2.13	0.48
1:AA:451:A:H4'	1:AA:452:A:O4'	2.13	0.48
1:AA:586:C:O3'	8:AH:81:PRO:HB3	2.13	0.48
1:AA:721:G:H4'	1:AA:722:G:O4'	2.13	0.48
2:AB:40:ILE:N	2:AB:40:ILE:HD13	2.27	0.48
3:AC:37:PHE:O	3:AC:41:GLN:HB2	2.13	0.48
6:AF:93:LYS:CG	6:AF:93:LYS:O	2.61	0.48
8:AH:125:ILE:O	8:AH:125:ILE:HG13	2.13	0.48
9:AI:57:MET:CG	9:AI:58:VAL:N	2.76	0.48
12:AL:44:LYS:HB2	12:AL:45:PRO:CD	2.42	0.48
21:AU:20:LYS:CE	21:AU:20:LYS:HA	2.42	0.48
22:BA:749:A:C6	22:BA:1618:A:C2	3.01	0.48
22:BA:1188:U:H2'	22:BA:1189:A:H5'	1.94	0.48
22:BA:1421:G:N2	22:BA:1495:A:N1	2.58	0.48
22:BA:1583:A:HO2'	22:BA:1584:U:P	2.37	0.48
22:BA:1820:U:OP1	24:BC:177:ARG:NH2	2.46	0.48
22:BA:2419:U:OP1	51:B3:41:LYS:HE2	2.13	0.48
32:BK:1:MET:HE3	32:BK:32:TYR:CZ	2.48	0.48
35:BN:106:ASP:C	35:BN:106:ASP:OD1	2.55	0.48
1:CA:183:C:HO2'	1:CA:184:G:P	2.35	0.48
1:CA:211:G:O2'	1:CA:212:G:H4'	2.14	0.48
1:CA:1259:C:N4	1:CA:1260:G:C4	2.81	0.48
1:CA:1311:A:C2	1:CA:1327:C:N3	2.81	0.48
1:CA:1408:A:N1	1:CA:1494:G:C5	2.81	0.48
4:CD:168:PRO:HB2	4:CD:171:LEU:HD12	1.95	0.48
12:CL:4:VAL:HG22	12:CL:5:ASN:N	2.27	0.48
20:CT:21:ASN:O	20:CT:25:ARG:HB3	2.12	0.48
20:CT:36:TYR:CG	20:CT:37:ALA:N	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:12:PHE:CD1	21:CU:13:ASP:N	2.81	0.48
21:CU:14:VAL:C	21:CU:16:LEU:HG	2.38	0.48
22:DA:223:A:H2'	22:DA:408:G:N3	2.28	0.48
22:DA:248:G:H5'	22:DA:250:G:N7	2.28	0.48
22:DA:470:A:C2	22:DA:471:A:C4	3.01	0.48
22:DA:581:C:OP2	38:DQ:33:ARG:CZ	2.61	0.48
22:DA:796:C:H2'	22:DA:797:G:C8	2.48	0.48
22:DA:1331:G:O2'	22:DA:1332:G:H5'	2.13	0.48
22:DA:1866:A:N3	22:DA:1876:A:C6	2.81	0.48
22:DA:2073:C:H5"	24:DC:228:VAL:CB	2.43	0.48
22:DA:2819:G:H2'	22:DA:2821:A:N7	2.29	0.48
29:DH:21:VAL:CG2	29:DH:22:LYS:N	2.76	0.48
30:DI:54:PRO:HG2	30:DI:78:VAL:HB	1.95	0.48
50:D2:9:VAL:O	50:D2:10:LEU:C	2.56	0.48
1:AA:64:G:C8	1:AA:99:C:C4	3.01	0.48
1:AA:471:U:H2'	1:AA:472:U:O4'	2.14	0.48
1:AA:872:A:C4	1:AA:874:G:N7	2.81	0.48
1:AA:1373:G:H5"	7:AG:36:LYS:HB2	1.95	0.48
2:AB:32:PHE:CG	2:AB:32:PHE:O	2.66	0.48
3:AC:79:LYS:O	3:AC:81:GLY:N	2.46	0.48
5:AE:80:THR:OG1	5:AE:81:LEU:N	2.45	0.48
5:AE:109:GLY:O	5:AE:110:ALA:HB2	2.12	0.48
10:AJ:27:GLU:C	10:AJ:29:ALA:H	2.22	0.48
14:AN:41:ARG:HD3	14:AN:42:TRP:CH2	2.49	0.48
14:AN:43:ASN:C	14:AN:45:VAL:H	2.20	0.48
17:AQ:12:VAL:O	17:AQ:13:VAL:CB	2.61	0.48
21:AU:4:ILE:N	21:AU:19:PHE:CD1	2.80	0.48
22:BA:186:G:O2'	22:BA:187:G:H5'	2.13	0.48
22:BA:877:A:O2'	22:BA:900:A:N6	2.45	0.48
22:BA:1838:C:C5	22:BA:1899:A:C5	3.00	0.48
32:BK:4:GLU:O	32:BK:5:GLN:CB	2.61	0.48
33:BL:81:ASP:O	33:BL:83:ALA:N	2.39	0.48
34:BM:132:THR:CG2	34:BM:133:LYS:N	2.77	0.48
37:BP:31:TRP:CE2	37:BP:40:LEU:HD11	2.48	0.48
53:B5:40:GLU:O	53:B5:42:VAL:N	2.45	0.48
1:CA:145:G:N2	1:CA:146:G:C4	2.81	0.48
1:CA:246:A:C4	1:CA:279:A:C6	3.01	0.48
1:CA:458:U:H2'	1:CA:459:A:C8	2.48	0.48
1:CA:946:A:H2'	1:CA:947:G:C8	2.48	0.48
1:CA:963:G:C2	1:CA:973:G:C6	3.01	0.48
1:CA:1060:U:H5'	10:CJ:53:ILE:HG23	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:97:ARG:O	4:CD:101:VAL:HG23	2.14	0.48
4:CD:107:PHE:N	4:CD:107:PHE:CD1	2.80	0.48
8:CH:86:TYR:CD2	8:CH:124:GLU:HB2	2.48	0.48
9:CI:17:ALA:HA	9:CI:67:VAL:HA	1.94	0.48
17:CQ:21:ILE:HB	17:CQ:48:ASP:OD1	2.12	0.48
21:CU:32:VAL:O	21:CU:32:VAL:HG12	2.11	0.48
22:DA:27:G:HO2'	22:DA:28:A:P	2.37	0.48
22:DA:193:U:C5	22:DA:194:G:N7	2.82	0.48
22:DA:242:G:N7	51:D3:3:LYS:O	2.46	0.48
22:DA:372:G:O2'	22:DA:400:G:O6	2.25	0.48
22:DA:449:A:H2'	22:DA:450:G:H5'	1.95	0.48
22:DA:655:A:H4'	22:DA:656:G:OP1	2.11	0.48
22:DA:661:A:H2'	22:DA:662:G:O4'	2.12	0.48
22:DA:1011:G:O2'	22:DA:1013:C:H5"	2.14	0.48
22:DA:1068:G:H2'	22:DA:1096:A:C5'	2.43	0.48
22:DA:1095:A:C2	22:DA:1096:A:C2	3.01	0.48
22:DA:2727:A:N1	22:DA:2728:U:C4	2.81	0.48
56:DA:3001:DOL:C43	56:DA:3001:DOL:C1	2.91	0.48
23:DB:50:A:H2'	23:DB:51:G:O4'	2.13	0.48
28:DG:96:ALA:N	28:DG:128:GLN:O	2.46	0.48
40:DS:70:LYS:O	40:DS:107:VAL:HG23	2.14	0.48
42:DU:12:ILE:HG21	42:DU:80:ALA:HB2	1.95	0.48
1:AA:32:A:C2	1:AA:33:A:C5	3.01	0.48
1:AA:259:G:C2	1:AA:260:G:H1'	2.48	0.48
1:AA:958:A:C6	1:AA:959:A:N1	2.82	0.48
1:AA:983:A:H5"	1:AA:984:C:OP2	2.13	0.48
1:AA:988:G:C6	1:AA:989:U:C4	3.01	0.48
1:AA:1210:C:C4	1:AA:1211:U:C4	3.02	0.48
1:AA:1362:A:H5"	1:AA:1363:A:OP2	2.14	0.48
2:AB:68:LEU:HD21	2:AB:92:VAL:HG23	1.95	0.48
3:AC:97:VAL:HB	3:AC:98:PRO:HD2	1.94	0.48
3:AC:150:LYS:HG3	3:AC:201:TRP:CE3	2.48	0.48
6:AF:3:HIS:H	6:AF:92:THR:HG23	1.78	0.48
10:AJ:42:LEU:HG	10:AJ:43:PRO:HD2	1.94	0.48
14:AN:90:ARG:NH1	14:AN:92:GLU:OE2	2.46	0.48
19:AS:29:LYS:CB	19:AS:30:PRO:HD2	2.43	0.48
21:AU:16:LEU:HA	21:AU:18:ARG:CZ	2.42	0.48
22:BA:589:U:H2'	22:BA:590:A:C8	2.49	0.48
22:BA:1353:A:O2'	22:BA:1354:A:H5'	2.13	0.48
22:BA:1746:A:H2'	22:BA:1747:U:H6	1.75	0.48
22:BA:2825:G:C3'	22:BA:2826:A:H5'	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:36:LYS:O	24:BC:37:ASN:CB	2.62	0.48
26:BE:77:ILE:O	26:BE:77:ILE:HG13	2.13	0.48
32:BK:41:ILE:HD11	32:BK:58:LEU:CD2	2.44	0.48
36:BO:15:ARG:NE	36:BO:93:ASP:OD1	2.45	0.48
1:CA:169:C:H2'	1:CA:170:U:C6	2.47	0.48
1:CA:195:A:C6	1:CA:196:A:N1	2.81	0.48
1:CA:457:G:C6	1:CA:458:U:N3	2.81	0.48
1:CA:805:C:C2	1:CA:806:C:C5	3.02	0.48
1:CA:932:C:OP1	7:CG:4:ARG:HB3	2.13	0.48
2:CB:91:PHE:CD2	2:CB:150:GLY:HA3	2.47	0.48
3:CC:62:LYS:O	3:CC:97:VAL:HB	2.14	0.48
4:CD:153:SER:O	4:CD:154:ARG:C	2.56	0.48
5:CE:149:SER:OG	5:CE:152:MET:HB2	2.13	0.48
12:CL:86:ARG:NH1	12:CL:88:LYS:HA	2.28	0.48
17:CQ:13:VAL:HG13	17:CQ:22:VAL:HG13	1.94	0.48
22:DA:116:C:O2'	22:DA:126:A:C2'	2.61	0.48
22:DA:158:U:C4	22:DA:159:G:C5	3.01	0.48
22:DA:801:G:C8	26:DE:49:ARG:HG3	2.49	0.48
22:DA:1195:G:O2'	22:DA:1226:A:N1	2.42	0.48
22:DA:1223:G:N2	22:DA:1225:G:H3'	2.28	0.48
22:DA:1355:G:C5	22:DA:1377:G:N2	2.81	0.48
22:DA:1568:G:N3	24:DC:58:HIS:CE1	2.81	0.48
22:DA:2199:A:C5	22:DA:2225:A:N1	2.82	0.48
22:DA:2409:G:H2'	22:DA:2410:G:O4'	2.13	0.48
22:DA:2451:A:C2	56:DA:3001:DOL:C12	2.97	0.48
22:DA:2656:U:OP2	22:DA:2664:G:N1	2.41	0.48
22:DA:2693:G:N2	22:DA:2717:C:C2	2.81	0.48
22:DA:2784:U:H4'	25:DD:42:ASN:O	2.13	0.48
25:DD:28:GLU:HA	25:DD:185:ASN:O	2.13	0.48
31:DJ:84:ILE:O	31:DJ:84:ILE:HG13	2.13	0.48
49:D1:39:PHE:CG	49:D1:40:ASP:N	2.82	0.48
1:AA:57:G:H2'	1:AA:58:C:C6	2.48	0.48
1:AA:104:G:C2	1:AA:105:G:C5	3.02	0.48
1:AA:765:G:C6	1:AA:812:G:C4	3.01	0.48
1:AA:781:A:C5	1:AA:802:A:C2	3.01	0.48
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.48	0.48
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.48	0.48
1:AA:1401:G:C2	1:AA:1402:C:H1'	2.49	0.48
4:AD:30:THR:O	4:AD:31:LYS:C	2.55	0.48
4:AD:36:GLN:O	4:AD:37:ALA:HB2	2.13	0.48
7:AG:48:GLU:O	7:AG:51:ALA:HB3	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:22:HIS:N	11:AK:33:THR:O	2.46	0.48
15:AO:70:LEU:HD21	15:AO:77:ARG:HB2	1.96	0.48
19:AS:42:PRO:O	19:AS:45:ILE:HG13	2.13	0.48
22:BA:39:G:H2'	22:BA:40:U:C6	2.48	0.48
22:BA:141:G:N1	41:BT:1:MET:CE	2.77	0.48
22:BA:1132:U:C3'	22:BA:1133:A:H5"	2.42	0.48
22:BA:1289:C:O2'	22:BA:1330:C:H4'	2.13	0.48
22:BA:2355:G:O3'	44:BW:24:LYS:NZ	2.45	0.48
29:BH:97:ARG:HD3	1:CA:370:C:H5'	1.95	0.48
37:BP:58:ALA:HB1	37:BP:74:PHE:O	2.13	0.48
53:B5:83:LYS:HB3	53:B5:87:ALA:CB	2.44	0.48
1:CA:509:A:N3	1:CA:543:U:O2'	2.39	0.48
1:CA:860:A:N6	1:CA:861:G:C2	2.81	0.48
1:CA:1361:G:H2'	1:CA:1362:A:H5"	1.96	0.48
2:CB:19:GLN:O	2:CB:38:VAL:HG23	2.13	0.48
7:CG:65:ALA:O	7:CG:127:ALA:HB1	2.14	0.48
8:CH:86:TYR:CE2	8:CH:124:GLU:HB2	2.49	0.48
10:CJ:7:ARG:HD3	10:CJ:75:ASP:OD1	2.13	0.48
15:CO:53:ARG:O	15:CO:54:ARG:C	2.57	0.48
21:CU:40:LYS:N	21:CU:41:PRO:CD	2.76	0.48
22:DA:249:C:P	22:DA:2394:C:HO2'	2.36	0.48
22:DA:410:G:H2'	22:DA:2407:A:C8	2.47	0.48
22:DA:543:G:C2	22:DA:551:G:C5	3.01	0.48
22:DA:1350:C:C2	22:DA:1382:G:C2	3.01	0.48
22:DA:1596:A:C6	22:DA:1597:A:C6	3.01	0.48
22:DA:1688:U:H1'	22:DA:1701:A:C6	2.49	0.48
22:DA:2134:A:N3	22:DA:2159:G:H1'	2.28	0.48
22:DA:2562:U:C2'	22:DA:2563:U:H5'	2.43	0.48
24:DC:252:THR:HG22	24:DC:253:LYS:N	2.28	0.48
25:DD:148:GLN:CD	25:DD:148:GLN:N	2.72	0.48
28:DG:89:LEU:CD1	28:DG:162:VAL:HG22	2.44	0.48
29:DH:127:GLU:HG3	29:DH:144:VAL:O	2.13	0.48
31:DJ:71:ASP:O	31:DJ:73:VAL:CG2	2.62	0.48
34:DM:136:MET:HE2	43:DV:57:TYR:CD2	2.48	0.48
36:DO:79:ALA:O	36:DO:83:LEU:HG	2.13	0.48
37:DP:65:SER:O	37:DP:66:ASN:C	2.57	0.48
49:D1:19:HIS:C	49:D1:19:HIS:CD2	2.91	0.48
1:AA:119:A:C4	1:AA:240:G:N7	2.81	0.48
1:AA:895:G:H2'	1:AA:896:C:C6	2.49	0.48
1:AA:1004:A:H2'	1:AA:1005:A:O4'	2.14	0.48
1:AA:1064:G:O4'	1:AA:1066:C:C6	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1157:A:C2	1:AA:1181:G:C4	3.02	0.48
4:AD:124:MET:HG3	4:AD:146:ARG:HG2	1.96	0.48
4:AD:151:LYS:CA	4:AD:178:MET:HE1	2.44	0.48
6:AF:3:HIS:N	6:AF:92:THR:HG23	2.29	0.48
8:AH:18:GLN:O	8:AH:21:ASN:N	2.47	0.48
10:AJ:35:GLN:OE1	10:AJ:35:GLN:HA	2.14	0.48
17:AQ:81:LYS:C	17:AQ:83:VAL:N	2.72	0.48
20:AT:72:ALA:O	20:AT:73:ALA:C	2.56	0.48
22:BA:181:A:C2	22:BA:182:A:C4	3.01	0.48
22:BA:1866:A:C6	22:BA:1876:A:N7	2.82	0.48
22:BA:2591:C:H2'	22:BA:2592:G:C8	2.49	0.48
22:BA:2847:U:C2'	22:BA:2848:G:H5'	2.44	0.48
26:BE:48:THR:O	26:BE:49:ARG:C	2.55	0.48
35:BN:45:ARG:HG2	35:BN:95:THR:HG21	1.96	0.48
39:BR:14:VAL:HG11	39:BR:98:ILE:HG13	1.95	0.48
39:BR:74:ILE:N	39:BR:74:ILE:CD1	2.77	0.48
42:BU:96:PHE:O	42:BU:100:SER:HA	2.13	0.48
48:B0:48:TYR:CZ	48:B0:53:LYS:HD2	2.48	0.48
1:CA:1114:C:C2	1:CA:1187:G:N2	2.82	0.48
1:CA:1240:U:H5'	1:CA:1241:G:C8	2.48	0.48
1:CA:1259:C:N4	1:CA:1260:G:C5	2.82	0.48
1:CA:1302:C:C4	13:CM:17:ILE:CD1	2.97	0.48
1:CA:1328:C:H5"	13:CM:28:THR:HG21	1.94	0.48
1:CA:1394:A:C5	1:CA:1501:C:H4'	2.48	0.48
2:CB:62:SER:C	2:CB:64:LYS:N	2.70	0.48
9:CI:25:ASN:O	9:CI:27:LYS:N	2.45	0.48
12:CL:22:PRO:O	12:CL:24:LEU:N	2.41	0.48
16:CP:70:ARG:O	16:CP:74:LEU:HD23	2.14	0.48
16:CP:78:VAL:HG22	16:CP:78:VAL:O	2.14	0.48
20:CT:25:ARG:HD2	20:CT:29:ARG:NH1	2.29	0.48
22:DA:517:C:O2'	22:DA:518:G:O5'	2.30	0.48
22:DA:606:U:O2'	26:DE:95:LYS:NZ	2.46	0.48
22:DA:654:A:H3'	22:DA:654:A:N3	2.27	0.48
22:DA:842:U:C4	22:DA:843:G:N7	2.81	0.48
22:DA:919:U:H2'	22:DA:920:A:O4'	2.13	0.48
22:DA:1338:G:H4'	41:DT:18:GLU:OE2	2.13	0.48
22:DA:1344:U:HO2'	22:DA:1345:C:P	2.32	0.48
22:DA:1906:G:C8	22:DA:1929:G:H2'	2.49	0.48
22:DA:2062:A:C8	54:D6:1:MHW:CD	2.97	0.48
22:DA:2223:G:C2'	22:DA:2224:G:H5'	2.43	0.48
22:DA:2520:C:O2'	22:DA:2565:A:O2'	2.25	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2840:C:H2'	22:DA:2841:C:C6	2.48	0.48
23:DB:76:G:OP1	43:DV:9:ARG:NH2	2.47	0.48
24:DC:107:PRO:HB3	24:DC:142:HIS:CE1	2.49	0.48
25:DD:15:PHE:CD2	37:DP:78:SER:HA	2.49	0.48
31:DJ:39:LYS:HZ3	31:DJ:39:LYS:HB2	1.79	0.48
40:DS:7:HIS:HB2	40:DS:50:VAL:HG21	1.96	0.48
45:DX:54:LYS:O	45:DX:57:ARG:N	2.46	0.48
49:D1:9:ILE:CG2	49:D1:25:LYS:HB3	2.43	0.48
1:AA:82:G:O6	1:AA:87:C:N4	2.46	0.48
1:AA:1084:G:C5	1:AA:1085:U:C4	3.01	0.48
1:AA:1441:A:H2'	1:AA:1442:G:O5'	2.13	0.48
2:AB:91:PHE:CE2	2:AB:150:GLY:CA	2.96	0.48
3:AC:7:PRO:HG2	3:AC:184:TYR:CG	2.48	0.48
4:AD:191:LEU:O	4:AD:192:SER:HB3	2.13	0.48
4:AD:197:GLU:O	4:AD:200:ILE:N	2.46	0.48
10:AJ:44:THR:HG22	10:AJ:70:HIS:HA	1.95	0.48
10:AJ:61:ALA:O	10:AJ:62:ARG:HB2	2.11	0.48
17:AQ:17:MET:HB2	17:AQ:20:SER:HB3	1.95	0.48
22:BA:48:G:N2	22:BA:49:A:N1	2.61	0.48
22:BA:735:A:N7	22:BA:761:A:H2	2.10	0.48
22:BA:1798:U:OP2	24:BC:271:ARG:NH2	2.45	0.48
22:BA:2298:A:C6	22:BA:2321:U:O4	2.66	0.48
22:BA:2584:U:H2'	22:BA:2585:U:H5'	1.95	0.48
25:BD:26:VAL:HG22	25:BD:188:LEU:CD2	2.44	0.48
26:BE:48:THR:C	26:BE:50:ALA:H	2.22	0.48
27:BF:48:LYS:O	27:BF:51:ASP:HB2	2.14	0.48
27:BF:63:GLN:OE1	27:BF:95:ARG:HD2	2.14	0.48
30:BI:127:ARG:HA	30:BI:130:GLU:CG	2.44	0.48
31:BJ:42:ALA:O	38:BQ:64:ARG:HG2	2.14	0.48
1:CA:32:A:C2	1:CA:33:A:C4	3.01	0.48
1:CA:585:G:C6	1:CA:586:C:C4	3.02	0.48
1:CA:722:G:H3'	1:CA:722:G:N3	2.29	0.48
1:CA:745:G:H5"	1:CA:851:G:O2'	2.13	0.48
1:CA:772:U:O2'	1:CA:773:G:H5'	2.14	0.48
1:CA:1088:G:C5	1:CA:1089:G:N7	2.82	0.48
1:CA:1306:A:H1'	1:CA:1332:A:C5	2.49	0.48
3:CC:36:ASP:O	3:CC:40:ARG:HG3	2.14	0.48
3:CC:61:ALA:O	3:CC:62:LYS:HB2	2.14	0.48
5:CE:133:PRO:HA	5:CE:136:VAL:HG13	1.96	0.48
7:CG:123:GLU:OE1	7:CG:123:GLU:HA	2.13	0.48
13:CM:81:MET:O	13:CM:83:LEU:N	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:75:LEU:CD1	17:CQ:75:LEU:C	2.87	0.48
18:CR:32:TYR:CD2	18:CR:55:LEU:HD21	2.49	0.48
22:DA:396:G:OP2	45:DX:10:LYS:HG2	2.14	0.48
22:DA:532:A:N7	22:DA:2021:C:C2'	2.77	0.48
22:DA:532:A:H2'	22:DA:532:A:N3	2.27	0.48
22:DA:640:C:C4	22:DA:641:U:C5	3.02	0.48
22:DA:646:U:H3'	22:DA:647:G:C4'	2.44	0.48
22:DA:740:C:C5'	22:DA:1784:A:H3'	2.44	0.48
22:DA:769:U:C2	22:DA:770:G:C8	3.02	0.48
22:DA:1361:G:C6	22:DA:1371:G:C2	3.01	0.48
22:DA:1365:A:N3	22:DA:1365:A:H2'	2.27	0.48
22:DA:1373:A:N6	22:DA:1374:G:C2	2.82	0.48
22:DA:1598:A:H2'	22:DA:1599:U:C6	2.49	0.48
22:DA:1754:A:N6	22:DA:1755:A:C6	2.82	0.48
22:DA:1830:C:H5'	24:DC:15:HIS:CD2	2.48	0.48
22:DA:2839:G:N2	22:DA:2880:C:C2	2.81	0.48
24:DC:157:SER:HB2	24:DC:160:THR:HG21	1.95	0.48
25:DD:104:VAL:O	25:DD:105:LYS:HB2	2.13	0.48
25:DD:151:THR:HG22	25:DD:152:PRO:N	2.29	0.48
26:DE:18:THR:HG22	26:DE:19:PHE:CD2	2.48	0.48
35:DN:38:LEU:HB3	35:DN:39:PRO:HD3	1.95	0.48
36:DO:115:LEU:O	36:DO:117:PHE:N	2.41	0.48
41:DT:37:ASP:O	41:DT:81:LYS:NZ	2.38	0.48
41:DT:61:LEU:HD12	41:DT:61:LEU:C	2.38	0.48
42:DU:7:ARG:CG	42:DU:8:ASP:N	2.76	0.48
52:D4:19:ARG:O	52:D4:20:ASP:HB2	2.11	0.48
1:AA:57:G:C5	1:AA:58:C:C4	3.01	0.48
1:AA:652:U:O2'	1:AA:653:U:OP2	2.27	0.48
1:AA:1462:C:H2'	1:AA:1463:U:O4'	2.14	0.48
2:AB:70:VAL:O	2:AB:163:VAL:HA	2.13	0.48
3:AC:206:GLU:O	3:AC:207:ILE:HG22	2.14	0.48
8:AH:10:MET:HE1	8:AH:33:LYS:HB3	1.96	0.48
14:AN:16:LEU:N	14:AN:16:LEU:HD23	2.29	0.48
22:BA:55:G:C2	22:BA:56:A:C8	3.02	0.48
22:BA:528:A:C8	22:BA:528:A:C3'	2.97	0.48
22:BA:636:G:N7	33:BL:109:LYS:NZ	2.49	0.48
22:BA:1064:C:H4'	30:BI:90:SER:HB2	1.94	0.48
22:BA:1080:A:H2'	22:BA:1080:A:N3	2.28	0.48
22:BA:1086:A:O2'	22:BA:1087:G:N7	2.47	0.48
22:BA:1319:C:C2'	22:BA:1320:C:H5'	2.44	0.48
22:BA:1402:U:C2'	22:BA:1403:A:O5'	2.62	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1452:G:C4	22:BA:2702:G:C6	3.02	0.48
22:BA:1820:U:O4	24:BC:198:ALA:HB1	2.13	0.48
22:BA:2256:G:O2'	22:BA:2257:U:H5'	2.14	0.48
22:BA:2615:U:C2	48:B0:4:GLN:HA	2.49	0.48
22:BA:2851:A:H2'	22:BA:2852:G:O4'	2.14	0.48
27:BF:41:GLY:C	27:BF:43:ALA:H	2.21	0.48
27:BF:121:SER:HB2	27:BF:128:TYR:CE1	2.49	0.48
37:BP:64:ILE:O	37:BP:64:ILE:HG22	2.13	0.48
46:BY:45:GLN:O	46:BY:46:VAL:CB	2.62	0.48
49:B1:17:THR:HG22	49:B1:42:VAL:HG11	1.96	0.48
53:B5:100:ILE:HG22	53:B5:104:ILE:CB	2.43	0.48
53:B5:122:GLY:CA	53:B5:146:VAL:CB	2.92	0.48
1:CA:374:A:H5"	1:CA:452:A:C2	2.47	0.48
1:CA:414:A:H2'	1:CA:415:A:O4'	2.14	0.48
1:CA:456:A:H2'	1:CA:457:G:O4'	2.14	0.48
1:CA:604:G:N7	1:CA:605:U:C5	2.82	0.48
1:CA:1134:G:H2'	1:CA:1135:U:O4'	2.14	0.48
1:CA:1490:U:C2'	1:CA:1491:G:O4'	2.62	0.48
2:CB:102:THR:HB	2:CB:175:GLU:CG	2.44	0.48
4:CD:148:LYS:CD	4:CD:148:LYS:H	2.27	0.48
7:CG:46:ALA:HA	7:CG:121:ALA:HB2	1.96	0.48
7:CG:71:PRO:HD2	7:CG:96:ARG:O	2.14	0.48
9:CI:12:ARG:CZ	9:CI:107:ASP:OD2	2.60	0.48
10:CJ:52:LEU:HB2	14:CN:81:ARG:HD2	1.96	0.48
22:DA:83:A:C2	22:DA:103:A:N7	2.82	0.48
22:DA:591:U:C2	22:DA:592:A:C8	3.02	0.48
22:DA:663:G:C6	22:DA:664:G:C5	3.02	0.48
22:DA:683:U:OP1	50:D2:26:ASN:HB3	2.14	0.48
22:DA:833:A:H2'	22:DA:834:G:C8	2.48	0.48
22:DA:1668:A:C4	22:DA:1674:G:C8	3.02	0.48
22:DA:2283:C:N3	22:DA:2389:G:C2	2.82	0.48
26:DE:23:PHE:CG	26:DE:111:GLU:HG3	2.49	0.48
38:DQ:78:LYS:HE2	38:DQ:117:LEU:HD21	1.96	0.48
40:DS:58:ALA:O	40:DS:62:ASP:O	2.31	0.48
41:DT:77:ARG:O	41:DT:78:SER:HB2	2.14	0.48
42:DU:82:ARG:O	42:DU:97:LYS:HB2	2.14	0.48
43:DV:38:LEU:HD23	43:DV:40:ILE:CD1	2.43	0.48
1:AA:72:A:C2'	1:AA:73:C:H5'	2.43	0.48
1:AA:115:G:H1'	1:AA:116:A:N7	2.29	0.48
1:AA:484:G:C5	1:AA:486:U:H1'	2.48	0.48
1:AA:652:U:C2	1:AA:752:G:N2	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:785:G:N2	1:AA:798:U:C2	2.81	0.48
1:AA:1108:G:H5'	3:AC:176:HIS:CE1	2.49	0.48
1:AA:1157:A:C5	1:AA:1180:A:C6	3.01	0.48
1:AA:1210:C:N4	1:AA:1211:U:C4	2.82	0.48
1:AA:1348:U:C5	1:AA:1373:G:N2	2.81	0.48
4:AD:4:TYR:O	4:AD:5:LEU:CB	2.60	0.48
4:AD:103:TYR:HB2	4:AD:114:ALA:CB	2.43	0.48
5:AE:133:PRO:HA	5:AE:136:VAL:CG1	2.44	0.48
7:AG:68:ASN:O	7:AG:138:ARG:HD3	2.14	0.48
7:AG:130:ASN:HA	7:AG:135:VAL:HG11	1.96	0.48
10:AJ:30:LYS:HA	10:AJ:34:ALA:HA	1.95	0.48
11:AK:26:SER:O	11:AK:27:PHE:C	2.57	0.48
15:AO:46:HIS:C	15:AO:48:LYS:H	2.22	0.48
17:AQ:45:HIS:CG	17:AQ:70:THR:CG2	2.97	0.48
20:AT:33:LYS:O	20:AT:34:LYS:C	2.57	0.48
21:AU:40:LYS:N	21:AU:41:PRO:HD2	2.29	0.48
22:BA:585:G:H5"	22:BA:586:A:OP1	2.14	0.48
22:BA:1870:C:H2'	22:BA:1871:A:C2	2.48	0.48
22:BA:2534:A:C2'	22:BA:2535:G:O5'	2.62	0.48
22:BA:2649:C:H2'	22:BA:2650:U:C6	2.48	0.48
27:BF:40:VAL:CG1	27:BF:41:GLY:N	2.75	0.48
29:BH:103:VAL:HG21	29:BH:132:PHE:CZ	2.49	0.48
31:BJ:98:GLU:CD	31:BJ:126:ALA:HB2	2.39	0.48
46:BY:57:LEU:O	46:BY:58:ASN:HB2	2.14	0.48
1:CA:29:U:H5'	1:CA:296:U:OP1	2.14	0.48
1:CA:55:A:C6	1:CA:56:U:C2	3.01	0.48
1:CA:546:A:P	4:CD:69:GLU:HB3	2.53	0.48
1:CA:749:A:O2'	1:CA:750:C:H5'	2.13	0.48
1:CA:1161:C:O2	1:CA:1176:A:C2	2.67	0.48
3:CC:102:ASN:C	3:CC:103:ILE:HG13	2.38	0.48
4:CD:192:SER:O	4:CD:193:ALA:HB3	2.14	0.48
6:CF:6:ILE:HD12	6:CF:6:ILE:N	2.28	0.48
11:CK:116:ILE:O	11:CK:116:ILE:HG22	2.13	0.48
13:CM:91:HIS:CD2	13:CM:97:VAL:HG21	2.49	0.48
14:CN:25:ALA:O	14:CN:28:LYS:HG2	2.14	0.48
17:CQ:15:ASP:OD1	17:CQ:54:GLY:HA2	2.13	0.48
18:CR:57:ARG:HG2	18:CR:58:ALA:N	2.27	0.48
21:CU:18:ARG:O	21:CU:19:PHE:C	2.57	0.48
21:CU:36:GLU:OE1	21:CU:36:GLU:HA	2.13	0.48
22:DA:142:A:H2'	22:DA:143:C:C6	2.48	0.48
22:DA:228:C:N3	22:DA:418:C:C4'	2.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:284:U:H2'	22:DA:284:U:O2	2.13	0.48
22:DA:323:C:O2	22:DA:323:C:O4'	2.32	0.48
22:DA:379:G:C6	22:DA:396:G:C6	3.01	0.48
22:DA:487:C:C2	22:DA:494:G:N2	2.82	0.48
22:DA:593:U:N3	22:DA:594:U:C4	2.82	0.48
22:DA:600:G:C5'	26:DE:27:LEU:HD22	2.43	0.48
22:DA:782:A:H4'	22:DA:783:A:O5'	2.14	0.48
22:DA:846:U:HO2'	22:DA:847:U:P	2.37	0.48
22:DA:1097:U:H1'	30:DI:9:VAL:HG11	1.95	0.48
22:DA:1250:G:C5'	38:DQ:6:ARG:HD2	2.44	0.48
22:DA:1470:A:H2'	22:DA:1471:G:H5'	1.96	0.48
22:DA:1675:C:N4	22:DA:1676:A:C2	2.82	0.48
22:DA:1870:C:C3'	22:DA:1871:A:H5'	2.44	0.48
22:DA:2234:G:C5	22:DA:2235:G:C8	3.02	0.48
22:DA:2507:C:C4	22:DA:2508:G:C5	3.02	0.48
23:DB:27:C:C5	23:DB:28:C:C4	3.02	0.48
23:DB:109:A:C5	23:DB:110:C:C4	3.01	0.48
26:DE:1:MET:HB2	26:DE:16:GLU:HA	1.95	0.48
26:DE:25:GLU:OE1	33:DL:6:LEU:HA	2.14	0.48
30:DI:114:ALA:O	30:DI:115:ALA:HB2	2.13	0.48
32:DK:91:SER:O	32:DK:92:GLU:C	2.56	0.48
35:DN:36:THR:OG1	35:DN:37:THR:N	2.46	0.48
36:DO:58:ILE:HG22	36:DO:58:ILE:O	2.13	0.48
41:DT:2:ILE:HG23	41:DT:4:GLU:N	2.28	0.48
1:AA:90:C:O2'	1:AA:91:U:P	2.72	0.48
1:AA:261:U:C5	20:AT:74:ARG:NH1	2.81	0.48
1:AA:448:A:C4	1:AA:487:A:C2	3.01	0.48
1:AA:509:A:O5'	58:AA:1721:HOH:O	2.20	0.48
1:AA:1018:G:N2	1:AA:1019:A:C8	2.81	0.48
1:AA:1387:G:C6	1:AA:1388:C:C4	3.02	0.48
2:AB:99:GLY:O	2:AB:103:ASN:N	2.46	0.48
4:AD:27:ALA:O	4:AD:28:ILE:C	2.57	0.48
6:AF:9:MET:HE1	18:AR:65:LEU:CA	2.43	0.48
8:AH:51:VAL:O	8:AH:51:VAL:CG2	2.62	0.48
9:AI:49:ARG:C	9:AI:51:PRO:HD2	2.39	0.48
9:AI:81:HIS:NE2	9:AI:104:VAL:O	2.46	0.48
10:AJ:49:PHE:N	10:AJ:49:PHE:CD1	2.81	0.48
10:AJ:56:HIS:C	10:AJ:57:VAL:CG1	2.87	0.48
21:AU:15:ALA:O	21:AU:16:LEU:HB2	2.14	0.48
22:BA:191:A:H2'	22:BA:192:C:C6	2.49	0.48
22:BA:228:C:H4'	22:BA:229:C:H5"	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:503:A:C6	22:BA:505:A:C6	3.02	0.48
22:BA:523:C:O2'	22:BA:524:G:H5'	2.13	0.48
22:BA:1064:C:H4'	30:BI:90:SER:CB	2.43	0.48
22:BA:1352:U:O2'	22:BA:1353:A:H5'	2.14	0.48
22:BA:1406:U:C2	22:BA:1407:G:C8	3.01	0.48
22:BA:2151:U:H2'	22:BA:2152:G:N7	2.28	0.48
22:BA:2451:A:C2	56:BA:3001:DOL:C8	2.97	0.48
22:BA:2555:U:H5"	22:BA:2556:C:OP2	2.14	0.48
51:B3:15:LYS:HD3	51:B3:23:LYS:HE2	1.95	0.48
1:CA:119:A:H4'	1:CA:120:A:O5'	2.14	0.48
1:CA:509:A:C6	1:CA:510:A:N1	2.82	0.48
1:CA:620:C:C6	4:CD:132:ILE:HD13	2.49	0.48
1:CA:966:G:O2'	9:CI:130:ARG:O	2.31	0.48
7:CG:46:ALA:HB2	7:CG:117:ALA:HA	1.95	0.48
10:CJ:41:PRO:O	10:CJ:42:LEU:HB2	2.13	0.48
12:CL:42:PRO:HD3	12:CL:48:ALA:O	2.14	0.48
17:CQ:13:VAL:CG1	17:CQ:22:VAL:HG13	2.44	0.48
20:CT:3:ASN:N	20:CT:8:LYS:HD3	2.29	0.48
20:CT:67:ILE:HD12	20:CT:71:LYS:HE3	1.95	0.48
22:DA:7:G:H4'	31:DJ:15:TRP:CH2	2.48	0.48
22:DA:126:A:C8	22:DA:127:A:C2	3.01	0.48
22:DA:183:C:O2'	22:DA:432:A:O2'	2.23	0.48
22:DA:200:U:C5	22:DA:201:C:C5	3.02	0.48
22:DA:218:A:C2	22:DA:219:A:C4	3.02	0.48
22:DA:306:U:O4	22:DA:307:G:C6	2.66	0.48
22:DA:457:A:N1	22:DA:470:A:H5"	2.29	0.48
22:DA:704:G:H1'	22:DA:726:G:H22	1.79	0.48
22:DA:738:G:C6	22:DA:739:A:N1	2.82	0.48
22:DA:1124:G:O2'	52:D4:37:GLN:O	2.32	0.48
22:DA:1272:A:C6	22:DA:1618:A:H1'	2.49	0.48
22:DA:1794:A:H1'	22:DA:1900:A:C2	2.49	0.48
22:DA:1891:G:H2'	22:DA:1892:C:O4'	2.14	0.48
22:DA:2031:A:C6	22:DA:2498:C:H1'	2.48	0.48
22:DA:2233:U:H2'	22:DA:2234:G:C8	2.49	0.48
22:DA:2321:U:H5'	22:DA:2322:A:OP2	2.14	0.48
22:DA:2415:G:C2	22:DA:2416:C:C2	3.02	0.48
22:DA:2562:U:H2'	22:DA:2563:U:H5'	1.95	0.48
22:DA:2755:C:C4	52:D4:19:ARG:NH1	2.82	0.48
33:DL:78:ARG:HB3	33:DL:113:ALA:CB	2.44	0.48
39:DR:67:GLY:C	39:DR:93:PHE:CE2	2.92	0.48
1:AA:19:A:C2	1:AA:917:G:C5	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:39:G:C2	1:AA:40:C:C6	3.02	0.47
1:AA:195:A:H1'	1:AA:222:C:O2'	2.13	0.47
1:AA:601:G:C2	1:AA:602:A:C4	3.02	0.47
1:AA:1012:A:C2	1:AA:1018:G:N7	2.82	0.47
2:AB:47:VAL:C	2:AB:49:MET:N	2.71	0.47
2:AB:164:ILE:O	2:AB:186:ILE:HG12	2.13	0.47
3:AC:167:TRP:C	3:AC:167:TRP:CE3	2.92	0.47
4:AD:78:GLU:O	4:AD:79:ALA:C	2.57	0.47
5:AE:81:LEU:N	5:AE:81:LEU:HD13	2.29	0.47
6:AF:53:LYS:O	6:AF:54:LEU:CD1	2.62	0.47
9:AI:80:ARG:NH1	9:AI:103:PHE:CD1	2.82	0.47
14:AN:20:TYR:O	14:AN:24:ARG:N	2.47	0.47
15:AO:89:ARG:NH1	22:BA:714:U:C5	2.82	0.47
22:BA:164:C:H2'	22:BA:165:A:O4'	2.14	0.47
22:BA:608:A:C6	22:BA:609:A:C6	3.02	0.47
22:BA:609:A:H2'	22:BA:610:C:O4'	2.14	0.47
22:BA:726:G:O2'	22:BA:727:A:OP2	2.28	0.47
22:BA:1250:G:H5"	38:BQ:6:ARG:HD3	1.96	0.47
22:BA:2187:U:H2'	22:BA:2188:U:O4'	2.14	0.47
22:BA:2849:U:N3	22:BA:2867:G:O4'	2.43	0.47
28:BG:121:ILE:CD1	28:BG:141:ILE:HG22	2.43	0.47
29:BH:135:HIS:CD2	29:BH:137:GLU:HG3	2.48	0.47
36:BO:53:THR:HG23	36:BO:74:VAL:HG21	1.95	0.47
39:BR:51:VAL:CG2	39:BR:52:PRO:HD2	2.43	0.47
40:BS:8:ARG:O	40:BS:9:HIS:HB2	2.14	0.47
41:BT:1:MET:HG3	41:BT:2:ILE:N	2.29	0.47
49:B1:25:LYS:HD3	49:B1:52:ALA:O	2.13	0.47
1:CA:203:G:N2	1:CA:215:C:C2	2.82	0.47
1:CA:429:U:O3'	4:CD:22:LYS:HE3	2.14	0.47
1:CA:1201:A:H1'	1:CA:1202:U:OP2	2.14	0.47
3:CC:81:GLY:O	3:CC:83:ASP:N	2.47	0.47
6:CF:4:TYR:CD2	6:CF:71:ILE:HG21	2.49	0.47
8:CH:78:VAL:N	8:CH:126:ILE:O	2.47	0.47
12:CL:44:LYS:HB3	12:CL:45:PRO:CD	2.43	0.47
13:CM:43:VAL:HG23	13:CM:43:VAL:O	2.14	0.47
17:CQ:52:GLU:HG2	17:CQ:53:CYS:N	2.29	0.47
22:DA:38:A:C2	22:DA:39:G:C4	3.02	0.47
22:DA:580:U:H4'	38:DQ:31:VAL:HG11	1.96	0.47
22:DA:1544:A:C6	22:DA:1545:A:C6	3.02	0.47
22:DA:1682:G:C2	22:DA:1757:A:O4'	2.67	0.47
22:DA:1845:G:P	24:DC:256:LYS:NZ	2.87	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2305:U:O4	22:DA:2306:C:N4	2.47	0.47
22:DA:2478:A:C8	22:DA:2529:G:C5	3.02	0.47
22:DA:2557:G:H2'	22:DA:2558:C:C6	2.49	0.47
24:DC:108:LYS:HA	24:DC:196:GLY:CA	2.44	0.47
29:DH:82:SER:O	29:DH:83:LYS:C	2.57	0.47
31:DJ:42:ALA:O	38:DQ:64:ARG:HD3	2.14	0.47
35:DN:37:THR:HG22	35:DN:110:MET:HE1	1.94	0.47
36:DO:49:VAL:HG12	36:DO:50:ALA:N	2.29	0.47
36:DO:71:ALA:HB2	36:DO:102:ARG:HB2	1.96	0.47
42:DU:60:GLU:HG2	42:DU:60:GLU:O	2.14	0.47
1:AA:9:G:OP2	5:AE:126:LYS:HG3	2.14	0.47
1:AA:162:A:H1'	1:AA:348:G:O2'	2.14	0.47
1:AA:667:G:OP1	1:AA:732:C:O2'	2.21	0.47
1:AA:923:A:N6	1:AA:1392:G:O6	2.46	0.47
1:AA:971:G:H1'	1:AA:1365:G:O2'	2.14	0.47
1:AA:1034:G:C6	1:AA:1035:A:C2	3.02	0.47
1:AA:1053:G:H4'	1:AA:1054:C:H5"	1.96	0.47
1:AA:1123:U:O2'	10:AJ:39:PRO:O	2.30	0.47
6:AF:9:MET:HE1	18:AR:65:LEU:C	2.39	0.47
6:AF:99:ALA:O	6:AF:100:SER:CB	2.62	0.47
8:AH:30:SER:OG	8:AH:33:LYS:HG3	2.14	0.47
9:AI:26:GLY:N	9:AI:59:GLU:HA	2.29	0.47
20:AT:71:LYS:HD2	20:AT:74:ARG:HH21	1.80	0.47
22:BA:118:A:N3	22:BA:178:G:H1'	2.29	0.47
22:BA:1084:A:HO2'	22:BA:1105:U:HO2'	1.59	0.47
22:BA:2038:G:H2'	22:BA:2039:U:O4'	2.13	0.47
22:BA:2192:U:C5	22:BA:2193:G:C8	3.02	0.47
22:BA:2748:A:H1'	28:BG:67:THR:HG22	1.95	0.47
23:BB:54:G:H21	27:BF:26:MET:HE3	1.79	0.47
25:BD:12:THR:HG21	37:BP:9:GLU:OE2	2.13	0.47
26:BE:48:THR:HG22	26:BE:86:ALA:HB3	1.96	0.47
26:BE:111:GLU:HG2	26:BE:114:ARG:NH1	2.30	0.47
27:BF:152:LEU:HD12	27:BF:153:ASP:N	2.29	0.47
27:BF:175:PHE:HD1	27:BF:177:PHE:CE1	2.32	0.47
29:BH:117:LEU:HD23	29:BH:121:VAL:HA	1.95	0.47
40:BS:59:GLU:HA	40:BS:64:ALA:HB2	1.96	0.47
1:CA:1084:G:C5	1:CA:1085:U:C4	3.01	0.47
1:CA:1364:U:O2	1:CA:1364:U:C2'	2.61	0.47
1:CA:1377:A:C6	7:CG:7:ILE:HD12	2.49	0.47
6:CF:37:HIS:CD2	6:CF:65:GLU:HB2	2.49	0.47
14:CN:51:LEU:HB3	14:CN:52:PRO:HD2	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:37:GLY:O	18:CR:63:ARG:NH2	2.48	0.47
19:CS:34:TRP:HA	19:CS:52:HIS:HB2	1.96	0.47
22:DA:228:C:O2	22:DA:418:C:H4'	2.15	0.47
22:DA:305:C:C2	22:DA:313:G:N1	2.82	0.47
22:DA:574:A:H4'	22:DA:575:A:C5'	2.43	0.47
22:DA:1027:A:C5	22:DA:1126:A:C2	3.02	0.47
22:DA:1250:G:H4'	38:DQ:6:ARG:HD2	1.96	0.47
22:DA:1464:G:C2	22:DA:1465:G:C4	3.02	0.47
22:DA:1645:G:H5"	22:DA:1646:C:C5'	2.44	0.47
22:DA:1783:A:H5'	22:DA:2608:G:H4'	1.97	0.47
22:DA:1855:U:C4	22:DA:1856:U:C4	3.02	0.47
22:DA:2110:G:C6	22:DA:2120:G:C8	3.02	0.47
22:DA:2119:A:C6	22:DA:2170:A:C5	3.02	0.47
22:DA:2216:G:H2'	22:DA:2217:G:C8	2.49	0.47
22:DA:2301:C:C2	22:DA:2316:G:N2	2.82	0.47
22:DA:2533:U:OP1	22:DA:2665:A:O2'	2.27	0.47
22:DA:2747:G:O2'	28:DG:67:THR:HG22	2.14	0.47
22:DA:2814:A:C6	22:DA:2815:C:C4	3.01	0.47
24:DC:187:ASP:O	24:DC:188:CYS:C	2.57	0.47
29:DH:117:LEU:HD11	29:DH:130:VAL:HG22	1.95	0.47
31:DJ:94:ALA:O	31:DJ:95:ARG:C	2.57	0.47
37:DP:79:PRO:O	37:DP:80:VAL:C	2.57	0.47
44:DW:49:ALA:O	44:DW:50:ASN:HB2	2.13	0.47
1:AA:66:A:C2	1:AA:104:G:H1'	2.49	0.47
1:AA:292:G:N7	1:AA:293:G:H1'	2.30	0.47
1:AA:901:A:C5	1:AA:902:G:H1'	2.50	0.47
1:AA:980:C:C5	1:AA:981:U:C5	3.02	0.47
1:AA:1418:A:N6	1:AA:1482:G:O2'	2.46	0.47
3:AC:89:LYS:HG2	3:AC:90:VAL:N	2.28	0.47
4:AD:107:PHE:CD1	4:AD:145:ILE:HD13	2.49	0.47
9:AI:30:ILE:O	9:AI:33:ARG:N	2.48	0.47
10:AJ:15:HIS:O	10:AJ:17:LEU:N	2.40	0.47
10:AJ:15:HIS:CG	10:AJ:16:ARG:N	2.83	0.47
10:AJ:63:ASP:HB3	10:AJ:65:TYR:CE2	2.50	0.47
15:AO:48:LYS:O	15:AO:50:HIS:N	2.47	0.47
17:AQ:4:LYS:HD2	17:AQ:4:LYS:C	2.39	0.47
20:AT:58:VAL:O	20:AT:59:ASP:C	2.58	0.47
22:BA:196:A:N3	22:BA:196:A:H2'	2.29	0.47
22:BA:1251:C:OP2	38:BQ:6:ARG:HD2	2.14	0.47
22:BA:1539:U:H2'	22:BA:1540:G:C8	2.48	0.47
22:BA:1916:A:H2'	22:BA:1917:U:H1'	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2339:C:H2'	22:BA:2340:A:H8	1.78	0.47
22:BA:2364:C:OP1	44:BW:55:ARG:NH1	2.47	0.47
22:BA:2721:A:C2	22:BA:2873:A:C5	3.02	0.47
22:BA:2747:G:O2'	28:BG:67:THR:HB	2.14	0.47
24:BC:257:THR:O	24:BC:258:ARG:C	2.56	0.47
27:BF:88:LYS:HG3	27:BF:89:VAL:N	2.29	0.47
27:BF:92:ARG:HA	27:BF:96:MET:HE2	1.96	0.47
38:BQ:24:TYR:O	38:BQ:25:TYR:CB	2.62	0.47
39:BR:43:ASN:N	39:BR:45:GLU:O	2.47	0.47
1:CA:552:U:N3	1:CA:553:A:N7	2.62	0.47
1:CA:1001:C:H2'	1:CA:1002:G:C8	2.48	0.47
1:CA:1088:G:C6	1:CA:1089:G:N7	2.82	0.47
2:CB:21:ARG:O	2:CB:22:TYR:C	2.57	0.47
2:CB:102:THR:HB	2:CB:175:GLU:HG3	1.97	0.47
2:CB:140:GLU:O	2:CB:141:LEU:C	2.57	0.47
8:CH:64:LYS:HE2	8:CH:71:VAL:HG21	1.96	0.47
9:CI:71:GLY:O	9:CI:75:GLN:N	2.46	0.47
11:CK:24:HIS:O	11:CK:30:THR:HA	2.14	0.47
13:CM:40:ALA:O	13:CM:41:GLU:C	2.58	0.47
22:DA:56:A:C2	22:DA:115:C:C2	3.01	0.47
22:DA:89:A:C2	22:DA:90:U:C2	3.02	0.47
22:DA:523:C:H2'	22:DA:524:G:C8	2.49	0.47
22:DA:616:A:OP2	58:DA:3291:HOH:O	2.20	0.47
22:DA:792:A:H2'	22:DA:2440:C:O2	2.13	0.47
22:DA:1131:G:OP1	31:DJ:82:GLY:HA2	2.13	0.47
22:DA:1203:U:OP2	22:DA:1204:A:H2'	2.14	0.47
22:DA:1607:C:H4'	22:DA:1608:A:C5'	2.45	0.47
22:DA:1665:A:H5"	32:DK:66:LYS:HG3	1.95	0.47
22:DA:1692:U:O2'	22:DA:1693:U:H2'	2.14	0.47
22:DA:2199:A:C6	22:DA:2225:A:C5	3.01	0.47
22:DA:2432:A:N1	45:DX:21:ALA:HA	2.29	0.47
22:DA:2505:G:OP2	56:DA:3001:DOL:C17	2.62	0.47
22:DA:2718:G:C2	22:DA:2719:G:H1'	2.49	0.47
24:DC:67:PHE:CE2	24:DC:156:ARG:CZ	2.97	0.47
29:DH:62:LEU:O	29:DH:62:LEU:HD22	2.14	0.47
30:DI:49:ILE:O	30:DI:50:GLU:HB2	2.13	0.47
31:DJ:117:ALA:HA	31:DJ:120:ARG:HD2	1.95	0.47
43:DV:9:ARG:HG2	43:DV:41:GLU:HB3	1.95	0.47
1:AA:631:C:C5'	1:AA:632:U:O5'	2.62	0.47
1:AA:720:C:H5"	18:AR:41:PRO:HA	1.97	0.47
1:AA:1035:A:H2'	1:AA:1036:A:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.50	0.47
3:AC:175:LEU:HD12	3:AC:175:LEU:O	2.14	0.47
7:AG:99:LEU:O	7:AG:101:MET:N	2.46	0.47
13:AM:15:ALA:O	13:AM:16:VAL:C	2.56	0.47
16:AP:50:THR:O	16:AP:50:THR:CG2	2.56	0.47
18:AR:25:ASP:C	18:AR:27:ALA:N	2.71	0.47
20:AT:81:ALA:O	20:AT:85:LYS:HG2	2.14	0.47
22:BA:416:U:H2'	22:BA:417:C:C6	2.48	0.47
22:BA:851:C:O2'	47:BZ:46:GLY:HA3	2.15	0.47
22:BA:1072:C:C2	22:BA:1093:G:O6	2.67	0.47
22:BA:1277:G:H4'	35:BN:20:MET:HE2	1.96	0.47
29:BH:116:ARG:O	29:BH:118:PRO:HD3	2.14	0.47
30:BI:57:VAL:HG22	30:BI:58:VAL:N	2.29	0.47
41:BT:88:LYS:O	41:BT:89:GLU:CB	2.63	0.47
49:B1:28:ARG:HG2	49:B1:28:ARG:O	2.14	0.47
53:B5:172:ILE:O	53:B5:173:HIS:CB	2.62	0.47
1:CA:307:C:H5"	1:CA:308:C:OP2	2.15	0.47
1:CA:811:C:N4	1:CA:812:G:C6	2.82	0.47
2:CB:100:MET:HA	2:CB:107:VAL:HG21	1.97	0.47
3:CC:87:LEU:HA	3:CC:90:VAL:HG22	1.97	0.47
7:CG:12:ILE:HD12	7:CG:24:ALA:C	2.39	0.47
9:CI:42:GLU:O	9:CI:45:ARG:NE	2.46	0.47
13:CM:22:ILE:HB	13:CM:25:VAL:CG1	2.45	0.47
16:CP:75:ILE:HA	16:CP:78:VAL:HG12	1.96	0.47
21:CU:9:ASN:C	21:CU:10:GLU:HG3	2.39	0.47
21:CU:20:LYS:HZ3	21:CU:20:LYS:N	2.11	0.47
22:DA:291:G:N2	22:DA:350:G:C5	2.83	0.47
22:DA:500:G:N2	22:DA:502:A:C8	2.82	0.47
22:DA:579:G:C5'	22:DA:2018:G:OP2	2.63	0.47
22:DA:586:A:N1	22:DA:809:G:O2'	2.35	0.47
22:DA:830:G:C4	22:DA:2448:A:C5	3.03	0.47
22:DA:971:G:O2'	22:DA:983:A:N3	2.43	0.47
22:DA:1016:G:C2	22:DA:1147:A:C2	3.02	0.47
22:DA:1046:A:O2'	22:DA:1047:G:OP1	2.25	0.47
22:DA:1277:G:C6	22:DA:1294:U:C2	3.02	0.47
22:DA:1569:A:N1	22:DA:1570:A:C2	2.82	0.47
22:DA:1598:A:C6	22:DA:1599:U:N3	2.83	0.47
22:DA:1819:A:H4'	22:DA:1820:U:H5"	1.96	0.47
22:DA:2110:G:N1	22:DA:2120:G:C8	2.82	0.47
32:DK:28:SER:O	32:DK:29:HIS:HB2	2.13	0.47
33:DL:76:GLU:O	33:DL:76:GLU:HG3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:116:VAL:O	33:DL:116:VAL:HG13	2.13	0.47
35:DN:58:ASP:HA	35:DN:80:PHE:CD1	2.50	0.47
39:DR:68:ARG:HG3	39:DR:92:TRP:CZ3	2.49	0.47
48:D0:48:TYR:CE2	48:D0:53:LYS:HD3	2.50	0.47
1:AA:5:U:C6	1:AA:5:U:OP1	2.68	0.47
1:AA:19:A:C2	1:AA:917:G:C4	3.02	0.47
1:AA:704:A:C6	1:AA:705:G:C5	3.02	0.47
1:AA:815:A:N1	1:AA:1529:G:O2'	2.45	0.47
1:AA:858:G:O6	1:AA:869:G:C8	2.67	0.47
1:AA:1124:G:H2'	1:AA:1145:A:C6	2.49	0.47
1:AA:1399:C:H4'	1:AA:1400:C:H5"	1.96	0.47
3:AC:140:ASN:O	3:AC:141:ALA:HB2	2.15	0.47
4:AD:35:GLU:CD	4:AD:35:GLU:C	2.82	0.47
5:AE:155:ALA:HB1	8:AH:66:PHE:CE2	2.49	0.47
9:AI:99:ARG:O	9:AI:102:GLY:N	2.48	0.47
11:AK:89:PRO:HG3	21:AU:29:LEU:HD21	1.95	0.47
16:AP:75:ILE:HG22	16:AP:80:LYS:CE	2.44	0.47
22:BA:449:A:H2'	22:BA:450:G:O5'	2.13	0.47
22:BA:511:U:C5	22:BA:512:G:C5	3.03	0.47
22:BA:1003:G:N2	22:BA:1004:U:C2	2.82	0.47
22:BA:1045:C:C4'	22:BA:1046:A:H5'	2.45	0.47
22:BA:1124:G:H1'	52:B4:38:GLY:OXT	2.14	0.47
22:BA:1959:G:C2'	22:BA:1960:A:O5'	2.62	0.47
22:BA:2228:G:H2'	22:BA:2229:U:C6	2.50	0.47
22:BA:2344:U:H4'	22:BA:2345:G:OP1	2.12	0.47
27:BF:108:VAL:HG13	27:BF:114:PHE:CE2	2.49	0.47
28:BG:19:ILE:HD12	28:BG:45:HIS:HB2	1.96	0.47
33:BL:109:LYS:HG2	33:BL:126:ARG:HB2	1.96	0.47
35:BN:116:VAL:O	35:BN:116:VAL:HG13	2.14	0.47
48:B0:43:ILE:HG22	48:B0:49:TYR:HB2	1.96	0.47
1:CA:976:G:C8	1:CA:1361:G:O6	2.68	0.47
1:CA:1009:U:C2	1:CA:1021:A:N6	2.82	0.47
4:CD:102:VAL:HG13	4:CD:107:PHE:HB2	1.95	0.47
11:CK:112:ASP:HB3	21:CU:4:ILE:CG2	2.44	0.47
12:CL:107:VAL:HG23	12:CL:117:TYR:HB3	1.97	0.47
13:CM:22:ILE:HB	13:CM:25:VAL:HG12	1.96	0.47
22:DA:167:A:C2	22:DA:168:G:H1'	2.50	0.47
22:DA:200:U:C6	22:DA:201:C:C6	3.02	0.47
22:DA:249:C:O2	51:D3:12:LYS:NZ	2.48	0.47
22:DA:320:A:H4'	22:DA:322:A:C8	2.50	0.47
22:DA:498:G:C2	22:DA:499:U:C6	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:749:A:C6	22:DA:750:A:N7	2.82	0.47
22:DA:1096:A:OP2	22:DA:1096:A:C8	2.67	0.47
22:DA:1153:C:H5'	38:DQ:62:ILE:HD13	1.95	0.47
22:DA:1257:C:C4	22:DA:1258:U:C4	3.02	0.47
22:DA:1361:G:N3	22:DA:1362:C:C6	2.82	0.47
22:DA:1565:C:C5	22:DA:1567:G:C6	3.02	0.47
22:DA:1662:U:O2	22:DA:2687:U:H5"	2.14	0.47
22:DA:1683:U:O5'	22:DA:1683:U:H6	1.98	0.47
22:DA:1760:C:H2'	22:DA:1761:C:O4'	2.15	0.47
22:DA:1782:U:O4	22:DA:2586:U:H5	1.97	0.47
22:DA:2062:A:N7	54:D6:1:MHW:CD	2.77	0.47
22:DA:2685:G:C4	22:DA:2686:G:C8	3.02	0.47
22:DA:2802:G:C6	22:DA:2803:G:C5	3.02	0.47
22:DA:2885:G:N2	48:D0:32:LYS:HA	2.29	0.47
23:DB:66:A:N6	23:DB:107:G:H2'	2.30	0.47
25:DD:176:ASP:HB2	25:DD:190:LYS:HB3	1.95	0.47
27:DF:117:LEU:HB3	27:DF:130:MET:SD	2.54	0.47
30:DI:86:ILE:HD13	30:DI:89:GLY:N	2.29	0.47
38:DQ:25:TYR:CD2	38:DQ:25:TYR:C	2.92	0.47
40:DS:55:ILE:CG2	40:DS:66:ILE:CD1	2.93	0.47
1:AA:212:G:N2	1:AA:213:G:C4	2.82	0.47
1:AA:577:G:C8	1:AA:816:A:C6	3.03	0.47
2:AB:21:ARG:HA	2:AB:21:ARG:NE	2.28	0.47
2:AB:21:ARG:C	2:AB:23:TRP:N	2.71	0.47
4:AD:68:LEU:N	4:AD:68:LEU:CD2	2.77	0.47
5:AE:82:GLN:HG2	5:AE:150:PRO:HB3	1.96	0.47
6:AF:41:ASP:O	6:AF:43:GLY:N	2.47	0.47
7:AG:120:LEU:O	7:AG:124:LEU:HD23	2.14	0.47
10:AJ:28:THR:O	10:AJ:28:THR:HG22	2.15	0.47
16:AP:77:GLU:C	16:AP:79:ASN:N	2.71	0.47
20:AT:83:ILE:HD12	20:AT:84:ASN:N	2.29	0.47
22:BA:140:C:O4'	22:BA:140:C:O2	2.33	0.47
22:BA:388:G:N7	22:BA:390:U:H2'	2.29	0.47
22:BA:1199:U:H1'	38:BQ:4:VAL:HG22	1.97	0.47
22:BA:1224:U:H4'	39:BR:88:GLY:O	2.14	0.47
22:BA:2040:G:H2'	22:BA:2041:U:O4'	2.13	0.47
22:BA:2063:C:O2	22:BA:2450:A:N1	2.47	0.47
22:BA:2131:U:OP2	22:BA:2132:U:C5	2.68	0.47
22:BA:2311:A:N7	27:BF:77:PHE:CD2	2.83	0.47
23:BB:37:C:C5	23:BB:38:C:C5	3.03	0.47
24:BC:161:TYR:CD2	24:BC:194:GLU:HG2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:30:GLU:O	25:BD:31:ALA:C	2.57	0.47
25:BD:36:GLN:OE1	25:BD:67:HIS:HE1	1.97	0.47
29:BH:14:SER:O	29:BH:15:LEU:CB	2.61	0.47
29:BH:111:ALA:O	29:BH:114:GLU:HB2	2.13	0.47
32:BK:91:SER:O	32:BK:92:GLU:C	2.58	0.47
32:BK:109:SER:O	32:BK:110:GLU:C	2.56	0.47
35:BN:32:GLU:HA	35:BN:115:LEU:HD12	1.96	0.47
35:BN:65:LEU:HD11	35:BN:69:ARG:HH21	1.76	0.47
36:BO:41:ALA:HB2	36:BO:48:LEU:HD21	1.97	0.47
46:BY:46:VAL:O	46:BY:49:ASP:N	2.48	0.47
49:B1:19:HIS:HE1	49:B1:21:TYR:CE2	2.33	0.47
1:CA:74:A:C2	1:CA:75:G:C8	3.02	0.47
1:CA:155:A:C2	1:CA:167:A:C5	3.03	0.47
1:CA:782:A:N7	1:CA:783:C:C5	2.82	0.47
1:CA:991:U:H4'	1:CA:992:U:H5"	1.96	0.47
1:CA:1007:U:C4	1:CA:1008:U:C5	3.02	0.47
1:CA:1105:A:C2	1:CA:1106:G:C8	3.02	0.47
2:CB:62:SER:C	2:CB:64:LYS:H	2.22	0.47
3:CC:130:PHE:CZ	3:CC:131:ARG:HD2	2.50	0.47
5:CE:105:ILE:H	5:CE:122:ASN:C	2.22	0.47
7:CG:148:ASN:C	7:CG:150:ALA:N	2.72	0.47
9:CI:26:GLY:N	9:CI:61:LEU:O	2.48	0.47
12:CL:34:CYS:O	12:CL:76:GLU:O	2.33	0.47
21:CU:20:LYS:C	21:CU:22:SER:H	2.21	0.47
22:DA:881:G:C2	22:DA:882:G:N7	2.83	0.47
22:DA:957:C:C4	22:DA:2459:A:H1'	2.49	0.47
22:DA:1250:G:H5'	38:DQ:6:ARG:CD	2.45	0.47
22:DA:1306:C:C2	22:DA:1307:A:C8	3.02	0.47
22:DA:1574:C:N4	58:DA:3620:HOH:O	2.47	0.47
22:DA:2164:C:H2'	22:DA:2165:C:C5	2.50	0.47
22:DA:2202:U:H5"	22:DA:2203:U:OP1	2.14	0.47
22:DA:2847:U:O4	22:DA:2848:G:C6	2.67	0.47
26:DE:109:LEU:O	26:DE:112:LEU:HB2	2.14	0.47
33:DL:90:VAL:HB	33:DL:122:VAL:HA	1.96	0.47
36:DO:78:VAL:HA	36:DO:81:ARG:HB2	1.96	0.47
40:DS:15:GLN:NE2	48:D0:17:ARG:NH2	2.63	0.47
41:DT:37:ASP:CG	41:DT:38:ALA:N	2.72	0.47
45:DX:56:MET:O	45:DX:60:ASP:N	2.44	0.47
1:AA:350:G:O2'	1:AA:351:G:H5'	2.15	0.47
1:AA:445:G:C4	1:AA:446:G:C8	3.03	0.47
1:AA:729:A:H2'	1:AA:730:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:922:G:C6	1:AA:923:A:C6	3.02	0.47
1:AA:958:A:N1	19:AS:54:GLY:HA3	2.29	0.47
1:AA:1277:C:O2'	1:AA:1279:G:C8	2.67	0.47
1:AA:1324:A:C2	1:AA:1325:C:C2	3.03	0.47
1:AA:1355:G:O2'	1:AA:1356:G:H5'	2.15	0.47
6:AF:92:THR:O	6:AF:93:LYS:HG2	2.14	0.47
8:AH:7:ILE:HD12	8:AH:7:ILE:N	2.29	0.47
10:AJ:80:THR:C	10:AJ:82:LYS:N	2.71	0.47
11:AK:25:ALA:HA	11:AK:30:THR:HG22	1.96	0.47
17:AQ:48:ASP:CG	17:AQ:52:GLU:OE1	2.58	0.47
19:AS:42:PRO:C	19:AS:44:MET:H	2.21	0.47
20:AT:67:ILE:CG1	20:AT:71:LYS:HG2	2.45	0.47
22:BA:136:G:N2	22:BA:144:A:C6	2.83	0.47
22:BA:197:A:N6	22:BA:2430:A:H2'	2.29	0.47
22:BA:599:A:O2'	22:BA:600:G:H5'	2.15	0.47
22:BA:731:C:P	58:BA:3693:HOH:O	2.51	0.47
22:BA:864:G:C6	22:BA:865:C:N4	2.82	0.47
22:BA:877:A:N6	22:BA:899:A:C6	2.83	0.47
22:BA:877:A:C6	22:BA:899:A:C6	3.02	0.47
22:BA:983:A:N6	22:BA:984:A:C2	2.83	0.47
22:BA:1074:G:H2'	22:BA:1075:C:C6	2.49	0.47
22:BA:1153:C:N4	22:BA:1154:G:N1	2.62	0.47
22:BA:1169:A:H2'	22:BA:1170:C:O4'	2.15	0.47
22:BA:1237:A:H4'	22:BA:1238:G:OP1	2.15	0.47
22:BA:1259:G:O2'	22:BA:1260:A:H5'	2.15	0.47
22:BA:1421:G:N3	22:BA:1421:G:H2'	2.29	0.47
22:BA:1696:G:C6	22:BA:1697:G:C4	3.02	0.47
22:BA:1794:A:H2'	22:BA:1795:C:C6	2.48	0.47
22:BA:2056:G:C2	22:BA:2057:G:C8	3.02	0.47
22:BA:2393:U:H2'	22:BA:2394:C:O5'	2.14	0.47
56:BA:3001:DOL:H452	56:BA:3001:DOL:H483	1.54	0.47
23:BB:14:U:O2	23:BB:107:G:H4'	2.15	0.47
24:BC:21:ASN:C	24:BC:21:ASN:OD1	2.56	0.47
24:BC:182:ARG:NH2	24:BC:266:PHE:HB3	2.30	0.47
25:BD:133:THR:CG2	25:BD:134:HIS:CD2	2.98	0.47
26:BE:155:GLU:OE1	26:BE:155:GLU:HA	2.15	0.47
27:BF:104:ILE:HG22	27:BF:176:PRO:CD	2.44	0.47
28:BG:2:SER:C	28:BG:4:VAL:N	2.71	0.47
32:BK:41:ILE:HD11	32:BK:58:LEU:HD22	1.96	0.47
33:BL:14:LYS:HG2	33:BL:15:ALA:N	2.29	0.47
33:BL:100:ILE:O	33:BL:100:ILE:HG13	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:14:SER:HA	35:BN:17:ARG:NH1	2.30	0.47
35:BN:117:ASP:O	35:BN:119:SER:N	2.47	0.47
36:BO:31:THR:HG22	36:BO:34:HIS:H	1.79	0.47
36:BO:67:ASN:HA	36:BO:102:ARG:HD3	1.96	0.47
38:BQ:40:ILE:O	38:BQ:44:GLN:HG3	2.15	0.47
39:BR:46:GLU:OE1	39:BR:46:GLU:O	2.32	0.47
42:BU:39:ILE:CG2	42:BU:40:ASN:N	2.78	0.47
46:BY:26:PHE:CE1	46:BY:30:MET:HG3	2.49	0.47
49:B1:39:PHE:HB2	49:B1:46:HIS:CE1	2.50	0.47
1:CA:91:U:C4	1:CA:92:U:C5	3.03	0.47
1:CA:161:A:H2'	1:CA:162:A:C8	2.49	0.47
1:CA:369:G:OP2	1:CA:388:G:N1	2.45	0.47
1:CA:509:A:C6	1:CA:510:A:C6	3.03	0.47
1:CA:568:G:O6	12:CL:2:ALA:HB2	2.15	0.47
1:CA:771:G:C4	1:CA:809:G:N2	2.83	0.47
1:CA:920:U:H2'	1:CA:921:U:H6	1.78	0.47
1:CA:957:U:O2	1:CA:959:A:C8	2.68	0.47
1:CA:991:U:H4'	1:CA:992:U:OP1	2.15	0.47
1:CA:1151:A:H1'	1:CA:1152:A:C8	2.49	0.47
1:CA:1202:U:N3	14:CN:82:ILE:HG21	2.29	0.47
1:CA:1224:U:N3	1:CA:1322:C:O2	2.47	0.47
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.29	0.47
1:CA:1458:G:O3'	20:CT:23:SER:HA	2.14	0.47
4:CD:42:GLY:C	4:CD:44:ARG:H	2.23	0.47
5:CE:13:GLU:OE1	5:CE:68:ARG:NH1	2.48	0.47
6:CF:9:MET:CE	6:CF:59:TYR:CE1	2.98	0.47
9:CI:88:MET:O	9:CI:88:MET:CG	2.63	0.47
9:CI:95:ARG:HG2	9:CI:104:VAL:HG11	1.97	0.47
15:CO:27:VAL:O	15:CO:31:LEU:HD13	2.15	0.47
19:CS:44:MET:O	19:CS:45:ILE:C	2.57	0.47
22:DA:66:C:C4	22:DA:67:U:C5	3.03	0.47
22:DA:81:G:N7	22:DA:82:U:C4	2.83	0.47
22:DA:301:G:C2	22:DA:302:C:N3	2.83	0.47
22:DA:686:U:H2'	22:DA:788:A:N1	2.30	0.47
22:DA:703:U:C5	22:DA:704:G:C6	3.03	0.47
22:DA:770:G:C2	22:DA:771:G:C8	3.03	0.47
22:DA:915:C:N4	22:DA:916:G:C6	2.83	0.47
22:DA:1034:G:C6	22:DA:1035:U:N3	2.82	0.47
22:DA:1184:U:OP1	47:DZ:30:ARG:HD2	2.14	0.47
22:DA:1258:U:H2'	22:DA:1259:G:C8	2.49	0.47
22:DA:1287:A:C2'	22:DA:1288:G:H5'	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1340:U:O2	22:DA:1340:U:H2'	2.15	0.47
22:DA:1445:G:C2	22:DA:1547:C:N3	2.83	0.47
22:DA:1678:A:C4	22:DA:1679:A:C8	3.02	0.47
22:DA:1831:G:C5	22:DA:1832:C:C4	3.02	0.47
22:DA:1926:U:O2'	22:DA:1928:A:N7	2.47	0.47
22:DA:2040:G:C6	22:DA:2041:U:C4	3.02	0.47
22:DA:2122:U:H2'	22:DA:2123:G:O4'	2.15	0.47
22:DA:2345:G:C6	22:DA:2347:C:N4	2.82	0.47
22:DA:2392:A:C8	22:DA:2429:G:C2	3.03	0.47
22:DA:2677:G:C2	22:DA:2731:G:C2	3.03	0.47
22:DA:2822:G:H2'	22:DA:2823:A:H5"	1.97	0.47
25:DD:35:THR:O	25:DD:36:GLN:HB3	2.15	0.47
25:DD:109:VAL:CG1	25:DD:201:LEU:HD22	2.44	0.47
26:DE:106:LYS:HG3	26:DE:200:LEU:HD23	1.95	0.47
29:DH:5:LEU:HD13	29:DH:13:GLY:HA3	1.96	0.47
32:DK:41:ILE:HD11	32:DK:86:LEU:HD22	1.97	0.47
33:DL:108:ALA:HB3	33:DL:125:LEU:HG	1.96	0.47
34:DM:53:MET:HG3	34:DM:54:THR:N	2.30	0.47
35:DN:28:LEU:O	35:DN:28:LEU:CG	2.62	0.47
37:DP:46:VAL:HG12	37:DP:47:VAL:N	2.30	0.47
47:DZ:7:ILE:O	47:DZ:36:VAL:N	2.48	0.47
52:D4:1:MET:SD	52:D4:34:LYS:HG2	2.54	0.47
1:AA:66:A:C6	1:AA:67:C:C5	3.03	0.47
1:AA:189:A:H2'	1:AA:190:A:O4'	2.15	0.47
1:AA:444:G:C6	1:AA:445:G:C5	3.02	0.47
1:AA:591:U:H2'	1:AA:592:G:C8	2.50	0.47
1:AA:927:G:N1	1:AA:1391:U:C2	2.82	0.47
1:AA:947:G:C2	1:AA:948:C:C2	3.02	0.47
2:AB:188:ASP:HB2	2:AB:204:ASP:OD1	2.14	0.47
3:AC:47:LEU:HB3	3:AC:50:ALA:HB3	1.96	0.47
4:AD:51:TYR:CE2	4:AD:55:LEU:HD12	2.50	0.47
5:AE:39:VAL:HG22	5:AE:67:ALA:HB1	1.97	0.47
6:AF:92:THR:HG22	6:AF:93:LYS:N	2.29	0.47
7:AG:56:LYS:O	7:AG:57:SER:HB3	2.14	0.47
8:AH:10:MET:O	8:AH:12:THR:N	2.47	0.47
9:AI:58:VAL:O	9:AI:59:GLU:HG2	2.14	0.47
12:AL:39:THR:O	12:AL:39:THR:OG1	2.23	0.47
16:AP:29:ASN:N	16:AP:29:ASN:OD1	2.48	0.47
20:AT:57:ILE:HD12	20:AT:60:ARG:HD2	1.97	0.47
21:AU:18:ARG:HD2	21:AU:18:ARG:H	1.80	0.47
22:BA:137:U:H2'	22:BA:140:C:N1	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:223:A:C4	22:BA:422:A:C8	3.03	0.47
22:BA:528:A:H2	22:BA:2043:C:C5'	2.27	0.47
22:BA:622:G:P	58:BA:3293:HOH:O	2.66	0.47
22:BA:975:A:C8	22:BA:990:A:N6	2.83	0.47
22:BA:1554:U:H3'	22:BA:1555:G:C8	2.49	0.47
22:BA:1554:U:H4'	22:BA:1555:G:OP2	2.15	0.47
22:BA:1946:U:H2'	22:BA:1947:C:C6	2.50	0.47
22:BA:2323:G:C2'	22:BA:2324:U:H5'	2.45	0.47
22:BA:2714:G:C5	22:BA:2715:C:C5	3.03	0.47
24:BC:142:HIS:CD2	24:BC:142:HIS:C	2.93	0.47
25:BD:142:VAL:HB	25:BD:143:PRO:HD2	1.97	0.47
28:BG:54:PRO:HG3	28:BG:62:TRP:NE1	2.30	0.47
33:BL:78:ARG:HG2	33:BL:113:ALA:HB3	1.97	0.47
34:BM:20:LEU:HD12	43:BV:81:PRO:HG2	1.96	0.47
34:BM:59:ARG:HG3	34:BM:59:ARG:O	2.14	0.47
53:B5:78:ILE:HG22	53:B5:123:ALA:HA	1.96	0.47
1:CA:121:U:H3'	1:CA:122:G:H5'	1.97	0.47
1:CA:172:A:C5	1:CA:174:A:N7	2.83	0.47
1:CA:247:G:C6	1:CA:278:G:C2	3.03	0.47
1:CA:339:C:O2	1:CA:351:G:N2	2.47	0.47
1:CA:376:G:OP1	16:CP:6:LEU:N	2.46	0.47
1:CA:653:U:C2	8:CH:56:LYS:HG2	2.49	0.47
1:CA:662:U:H2'	1:CA:663:A:C8	2.50	0.47
1:CA:818:G:O2'	1:CA:819:A:H5'	2.14	0.47
1:CA:1000:A:C2	1:CA:1041:G:N2	2.83	0.47
1:CA:1262:C:C2'	1:CA:1263:C:H5'	2.45	0.47
3:CC:64:ILE:CG1	3:CC:66:VAL:HG23	2.45	0.47
8:CH:83:LEU:HD22	8:CH:83:LEU:C	2.40	0.47
9:CI:49:ARG:C	9:CI:51:PRO:HD2	2.39	0.47
22:DA:310:A:H5"	42:DU:15:THR:HB	1.96	0.47
22:DA:396:G:H5"	45:DX:13:VAL:HG21	1.95	0.47
22:DA:511:U:O4	22:DA:512:G:N1	2.47	0.47
22:DA:1416:G:C4	22:DA:1417:C:C5	3.03	0.47
22:DA:1832:C:H2'	22:DA:1833:C:O4'	2.15	0.47
22:DA:1973:G:O6	22:DA:1974:C:N4	2.48	0.47
33:DL:90:VAL:N	33:DL:121:THR:O	2.48	0.47
1:AA:130:A:N7	17:AQ:65:ARG:HB2	2.29	0.47
1:AA:259:G:H2'	1:AA:260:G:O4'	2.15	0.47
1:AA:266:G:H3'	17:AQ:69:LYS:HB3	1.96	0.47
1:AA:507:C:C4	1:AA:508:U:C4	3.03	0.47
1:AA:1121:U:H2'	1:AA:1122:U:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1122:U:C4	1:AA:1123:U:C5	3.02	0.47
1:AA:1135:U:H2'	1:AA:1136:C:O5'	2.14	0.47
1:AA:1144:G:N1	1:AA:1145:A:H2	2.13	0.47
1:AA:1157:A:N7	1:AA:1180:A:C6	2.83	0.47
1:AA:1161:C:H2'	1:AA:1162:C:H6	1.80	0.47
2:AB:79:ALA:O	2:AB:80:VAL:HG23	2.15	0.47
4:AD:168:PRO:HB2	4:AD:171:LEU:HD11	1.97	0.47
4:AD:171:LEU:C	4:AD:171:LEU:HD12	2.40	0.47
5:AE:13:GLU:HB3	5:AE:39:VAL:HG12	1.97	0.47
5:AE:144:LEU:O	5:AE:147:MET:HB3	2.15	0.47
9:AI:19:VAL:HA	9:AI:65:ILE:HG22	1.97	0.47
10:AJ:36:VAL:HA	10:AJ:76:ILE:HA	1.95	0.47
10:AJ:63:ASP:OD1	14:AN:85:ARG:HD2	2.15	0.47
13:AM:64:VAL:O	13:AM:64:VAL:CG1	2.62	0.47
14:AN:41:ARG:HB2	14:AN:42:TRP:CZ3	2.50	0.47
16:AP:1:MET:O	16:AP:1:MET:SD	2.72	0.47
22:BA:250:G:OP2	51:B3:13:ARG:NH1	2.47	0.47
22:BA:601:C:O2	22:BA:605:G:H4'	2.15	0.47
22:BA:752:A:C2	22:BA:1781:U:C2	3.03	0.47
22:BA:1415:U:O2	22:BA:1415:U:H2'	2.15	0.47
22:BA:1747:U:O2'	22:BA:1748:C:H5'	2.14	0.47
22:BA:1851:U:C4	22:BA:1852:U:C4	3.02	0.47
22:BA:1959:G:H2'	22:BA:1960:A:O4'	2.15	0.47
22:BA:2436:G:C2	22:BA:2437:G:C8	3.03	0.47
23:BB:48:U:H2'	23:BB:49:C:C6	2.50	0.47
30:BI:106:LEU:HA	30:BI:109:ILE:HB	1.97	0.47
30:BI:117:MET:SD	30:BI:129:ILE:HD11	2.55	0.47
31:BJ:31:GLU:CG	31:BJ:142:ILE:HD11	2.44	0.47
32:BK:107:LEU:C	32:BK:109:SER:N	2.72	0.47
35:BN:32:GLU:OE1	35:BN:86:ARG:NH2	2.46	0.47
42:BU:12:ILE:CG2	42:BU:80:ALA:HB2	2.45	0.47
1:CA:160:A:C6	1:CA:346:G:O6	2.68	0.47
1:CA:179:A:H2'	1:CA:180:U:C6	2.50	0.47
1:CA:740:U:O2'	1:CA:741:G:H5'	2.15	0.47
1:CA:1162:C:C2	1:CA:1175:G:N2	2.82	0.47
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.50	0.47
3:CC:59:ARG:HB2	3:CC:63:SER:O	2.15	0.47
9:CI:122:ARG:O	9:CI:124:ARG:N	2.48	0.47
11:CK:31:ILE:HB	11:CK:46:THR:HG22	1.97	0.47
11:CK:45:ALA:HB3	11:CK:70:CYS:HB2	1.96	0.47
13:CM:3:ARG:HG2	13:CM:7:ILE:HA	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:20:THR:HG22	13:CM:20:THR:O	2.15	0.47
13:CM:45:ILE:HG22	13:CM:45:ILE:O	2.15	0.47
16:CP:52:LEU:HD22	16:CP:57:ILE:HD11	1.97	0.47
21:CU:5:LYS:HD2	21:CU:5:LYS:O	2.15	0.47
22:DA:279:A:N6	22:DA:361:G:C2'	2.78	0.47
22:DA:302:C:C2	22:DA:303:G:C8	3.03	0.47
22:DA:389:G:O4'	22:DA:2413:G:H5'	2.15	0.47
22:DA:579:G:N2	22:DA:1262:A:C4	2.83	0.47
22:DA:779:U:OP1	24:DC:49:ILE:HG13	2.15	0.47
22:DA:846:U:O2'	22:DA:847:U:P	2.73	0.47
22:DA:1076:C:O2'	30:DI:93:PRO:HD2	2.15	0.47
22:DA:1361:G:C6	22:DA:1362:C:C5	3.03	0.47
22:DA:1532:A:C2	22:DA:1540:G:C6	3.02	0.47
22:DA:1726:C:H2'	22:DA:1727:C:C6	2.50	0.47
22:DA:1768:C:H2'	22:DA:1769:U:O4'	2.15	0.47
22:DA:1783:A:C2	22:DA:2588:G:O4'	2.67	0.47
22:DA:1835:G:C5	22:DA:1836:C:C5	3.03	0.47
22:DA:1857:G:N2	22:DA:1884:G:C4	2.83	0.47
22:DA:1980:G:C2	22:DA:1982:U:C4	3.03	0.47
22:DA:2074:U:O2'	22:DA:2075:U:H5'	2.15	0.47
22:DA:2291:U:OP1	22:DA:2380:C:O2'	2.30	0.47
22:DA:2331:G:C6	22:DA:2332:C:C4	3.03	0.47
22:DA:2372:U:O4'	49:D1:46:HIS:ND1	2.48	0.47
22:DA:2702:G:N7	22:DA:2703:C:C5	2.83	0.47
22:DA:2736:A:C4	22:DA:2737:G:C8	3.02	0.47
26:DE:77:ILE:O	26:DE:77:ILE:HG13	2.14	0.47
32:DK:41:ILE:HD11	32:DK:86:LEU:CD2	2.44	0.47
37:DP:89:ARG:O	37:DP:112:GLU:HA	2.15	0.47
40:DS:47:VAL:CG2	40:DS:47:VAL:O	2.63	0.47
40:DS:89:ALA:O	40:DS:90:LYS:HB2	2.15	0.47
42:DU:13:VAL:HG21	42:DU:39:ILE:HG23	1.96	0.47
1:AA:223:A:C6	1:AA:224:U:C4	3.02	0.47
1:AA:1095:U:H2'	1:AA:1096:C:O4'	2.14	0.47
2:AB:91:PHE:CD2	2:AB:150:GLY:CA	2.98	0.47
2:AB:144:LEU:O	2:AB:148:LEU:HB2	2.15	0.47
3:AC:113:ALA:HA	3:AC:200:VAL:HG21	1.97	0.47
4:AD:130:VAL:HG11	4:AD:135:TYR:CG	2.50	0.47
5:AE:136:VAL:O	5:AE:139:ALA:N	2.47	0.47
7:AG:50:LEU:O	7:AG:50:LEU:HD13	2.14	0.47
21:AU:34:ARG:NE	21:AU:35:ARG:HB2	2.29	0.47
22:BA:277:G:C2'	22:BA:361:G:O6	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:630:G:H5"	22:BA:631:A:OP2	2.14	0.47
22:BA:1098:A:N7	22:BA:1099:G:O6	2.47	0.47
22:BA:1394:U:C2'	22:BA:1395:A:O5'	2.63	0.47
22:BA:1583:A:O2'	22:BA:1584:U:O5'	2.31	0.47
22:BA:1793:C:C2'	22:BA:1794:A:H5'	2.45	0.47
22:BA:1949:G:C2	22:BA:1958:C:O2	2.67	0.47
22:BA:2173:A:C8	22:BA:2174:C:C5	3.02	0.47
22:BA:2318:G:C5	22:BA:2319:G:C6	3.03	0.47
25:BD:13:ARG:HD2	25:BD:15:PHE:CZ	2.50	0.47
25:BD:103:ASP:OD2	25:BD:104:VAL:N	2.48	0.47
27:BF:25:VAL:O	27:BF:28:VAL:HG12	2.14	0.47
27:BF:135:GLN:OE1	27:BF:135:GLN:N	2.45	0.47
28:BG:155:GLU:OE2	28:BG:158:LYS:N	2.47	0.47
30:BI:99:GLY:C	30:BI:100:LYS:HG2	2.40	0.47
32:BK:108:ARG:O	32:BK:109:SER:C	2.57	0.47
34:BM:28:PHE:N	34:BM:104:GLU:OE2	2.46	0.47
46:BY:6:LEU:HD22	46:BY:56:LEU:HD21	1.96	0.47
46:BY:21:LEU:O	46:BY:22:LEU:O	2.33	0.47
1:CA:202:G:H2'	1:CA:203:G:O4'	2.15	0.47
1:CA:445:G:C2	1:CA:490:C:C2	3.02	0.47
1:CA:734:G:C5	1:CA:735:C:C5	3.03	0.47
1:CA:802:A:C2	1:CA:803:G:C1'	2.96	0.47
1:CA:892:A:C2	1:CA:907:A:C4	3.03	0.47
1:CA:927:G:N2	1:CA:1391:U:H1'	2.30	0.47
3:CC:22:TRP:CH2	3:CC:32:ASN:HB3	2.50	0.47
3:CC:130:PHE:CZ	3:CC:131:ARG:CD	2.98	0.47
5:CE:157:ARG:HD3	5:CE:158:GLY:H	1.78	0.47
8:CH:67:GLN:C	8:CH:69:LYS:N	2.72	0.47
12:CL:3:THR:CB	12:CL:6:GLN:HG3	2.44	0.47
14:CN:35:ASN:O	14:CN:42:TRP:CH2	2.68	0.47
15:CO:35:GLN:NE2	15:CO:39:LEU:CD2	2.78	0.47
20:CT:67:ILE:CD1	20:CT:71:LYS:HE3	2.45	0.47
21:CU:36:GLU:HG3	21:CU:37:PHE:H	1.79	0.47
22:DA:185:G:N1	22:DA:212:G:C2	2.82	0.47
22:DA:370:G:O2'	22:DA:424:G:OP1	2.33	0.47
22:DA:711:G:C2	22:DA:721:A:N3	2.83	0.47
22:DA:1335:C:H2'	22:DA:1336:A:C8	2.49	0.47
22:DA:1343:G:C5	22:DA:1344:U:O4	2.67	0.47
22:DA:1581:G:C6	22:DA:1582:C:N4	2.83	0.47
22:DA:1782:U:O4	22:DA:2586:U:C5	2.68	0.47
22:DA:1835:G:C4	22:DA:1836:C:C6	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2011:U:H2'	22:DA:2012:G:O4'	2.15	0.47
22:DA:2144:G:C2	22:DA:2146:C:O2	2.68	0.47
22:DA:2297:A:N1	22:DA:2321:U:H5	2.13	0.47
22:DA:2681:C:C2	22:DA:2724:U:O4	2.68	0.47
22:DA:2732:G:O2'	22:DA:2733:A:H5'	2.15	0.47
24:DC:72:ASP:HA	24:DC:118:SER:O	2.15	0.47
24:DC:87:ARG:HB3	24:DC:87:ARG:NH1	2.30	0.47
24:DC:232:HIS:NE2	24:DC:244:PRO:HA	2.30	0.47
30:DI:28:LEU:HD13	30:DI:38:PHE:CD2	2.50	0.47
31:DJ:41:LYS:O	31:DJ:44:TYR:N	2.43	0.47
33:DL:82:LEU:O	33:DL:82:LEU:HG	2.14	0.47
34:DM:76:LYS:HE3	34:DM:80:VAL:HG12	1.97	0.47
41:DT:28:ASN:HB3	41:DT:87:LEU:HB2	1.96	0.47
41:DT:65:GLY:O	41:DT:66:LYS:C	2.58	0.47
42:DU:41:LEU:HD12	42:DU:60:GLU:CG	2.45	0.47
51:D3:7:VAL:O	51:D3:10:ALA:N	2.45	0.47
1:AA:132:C:H2'	1:AA:133:U:O4'	2.15	0.46
1:AA:542:G:OP1	4:AD:10:LYS:HE2	2.15	0.46
1:AA:654:G:H2'	1:AA:655:A:H5'	1.96	0.46
7:AG:69:VAL:HG23	7:AG:100:ALA:HB1	1.97	0.46
10:AJ:57:VAL:CG2	10:AJ:58:ASN:N	2.78	0.46
12:AL:44:LYS:CB	12:AL:45:PRO:HD3	2.45	0.46
13:AM:114:LYS:CB	13:AM:115:PRO:CD	2.91	0.46
22:BA:111:A:N1	22:BA:112:U:C2	2.83	0.46
22:BA:259:G:O2'	22:BA:260:G:H5'	2.14	0.46
22:BA:287:G:C2	22:BA:354:A:C2	3.03	0.46
22:BA:1174:U:O2	22:BA:1174:U:O4'	2.32	0.46
22:BA:1239:G:H2'	22:BA:1240:U:O4'	2.15	0.46
22:BA:1385:A:C2	22:BA:1386:C:C2	3.04	0.46
22:BA:1491:G:N2	22:BA:1500:G:H1'	2.29	0.46
22:BA:1883:U:O4	22:BA:1884:G:N1	2.48	0.46
22:BA:2592:G:C6	22:BA:2593:U:C4	3.03	0.46
22:BA:2847:U:H2'	22:BA:2848:G:H5'	1.96	0.46
22:BA:2898:U:O2'	22:BA:2899:A:H5'	2.15	0.46
30:BI:65:ARG:NH1	30:BI:66:SER:OG	2.48	0.46
33:BL:26:GLY:O	33:BL:27:LEU:HD23	2.14	0.46
39:BR:49:ILE:HB	39:BR:52:PRO:HA	1.97	0.46
46:BY:22:LEU:O	46:BY:23:ARG:C	2.59	0.46
1:CA:93:U:C2'	1:CA:94:G:H5"	2.45	0.46
1:CA:108:G:C6	20:CT:10:ARG:HG2	2.50	0.46
1:CA:223:A:C6	1:CA:224:U:C4	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:412:A:O2'	1:CA:414:A:H5'	2.15	0.46
1:CA:748:G:H2'	1:CA:749:A:H8	1.78	0.46
1:CA:791:G:C5	1:CA:792:A:N7	2.83	0.46
1:CA:1004:A:C6	1:CA:1005:A:N1	2.83	0.46
1:CA:1022:A:C5	1:CA:1023:U:C5	3.03	0.46
1:CA:1130:A:N9	1:CA:1146:A:C2	2.83	0.46
1:CA:1160:G:O6	1:CA:1181:G:C6	2.67	0.46
2:CB:164:ILE:O	2:CB:186:ILE:HG23	2.16	0.46
5:CE:137:VAL:O	5:CE:138:ARG:CG	2.60	0.46
7:CG:14:PRO:O	7:CG:15:ASP:C	2.58	0.46
9:CI:30:ILE:HD13	9:CI:39:PHE:CE2	2.50	0.46
11:CK:126:LYS:C	21:CU:34:ARG:NH2	2.73	0.46
12:CL:44:LYS:HD3	12:CL:44:LYS:N	2.29	0.46
13:CM:33:ILE:HG22	13:CM:56:LEU:HD23	1.96	0.46
22:DA:84:A:C2	22:DA:103:A:C5	3.03	0.46
22:DA:104:A:C8	22:DA:105:C:C4	3.03	0.46
22:DA:125:A:H3'	50:D2:19:ARG:HG3	1.97	0.46
22:DA:765:C:C4	22:DA:766:U:C4	3.03	0.46
22:DA:1277:G:N3	35:DN:23:ASN:HB3	2.30	0.46
22:DA:1343:G:C6	22:DA:1344:U:O4	2.68	0.46
22:DA:1394:U:H6	22:DA:1394:U:H3'	1.80	0.46
22:DA:1731:G:N1	22:DA:1733:G:C4	2.83	0.46
22:DA:1805:A:C2	22:DA:1813:G:N1	2.83	0.46
22:DA:2199:A:C4	22:DA:2225:A:N1	2.83	0.46
22:DA:2799:A:C6	22:DA:2801:G:C4	3.03	0.46
23:DB:81:G:C6	23:DB:82:U:C4	3.03	0.46
24:DC:30:PHE:CD1	24:DC:32:PRO:HD2	2.50	0.46
26:DE:130:LYS:HB2	26:DE:133:LEU:HB3	1.97	0.46
27:DF:77:PHE:C	27:DF:78:LYS:HG3	2.41	0.46
38:DQ:36:PHE:CE1	38:DQ:40:ILE:HD11	2.49	0.46
39:DR:66:HIS:CD2	39:DR:94:THR:CG2	2.98	0.46
39:DR:68:ARG:HB3	39:DR:90:ARG:HG2	1.96	0.46
50:D2:30:VAL:O	50:D2:34:ARG:HG3	2.15	0.46
1:AA:474:G:C5	1:AA:475:C:C5	3.03	0.46
1:AA:1181:G:O2'	1:AA:1182:G:N7	2.48	0.46
2:AB:33:GLY:HA3	2:AB:40:ILE:H	1.79	0.46
4:AD:118:VAL:HA	4:AD:123:ILE:HD12	1.97	0.46
5:AE:20:ARG:HG3	5:AE:21:VAL:N	2.29	0.46
5:AE:101:GLU:CD	5:AE:101:GLU:C	2.83	0.46
6:AF:66:ALA:HB1	6:AF:67:PRO:HD2	1.97	0.46
7:AG:8:GLY:O	7:AG:9:GLN:HB3	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:112:ASP:HB2	21:AU:20:LYS:HD2	1.96	0.46
13:AM:12:HIS:HA	13:AM:44:LYS:HE3	1.96	0.46
17:AQ:16:LYS:C	17:AQ:17:MET:CE	2.88	0.46
19:AS:3:ARG:O	19:AS:4:SER:HB2	2.16	0.46
20:AT:24:ARG:O	20:AT:25:ARG:C	2.58	0.46
21:AU:25:LYS:O	21:AU:29:LEU:HB3	2.16	0.46
22:BA:1084:A:C2	22:BA:1106:G:H1'	2.50	0.46
22:BA:1338:G:O2'	22:BA:1393:A:N1	2.45	0.46
22:BA:1839:G:H2'	22:BA:1840:G:O5'	2.15	0.46
22:BA:1886:U:C2'	22:BA:1887:C:H5'	2.45	0.46
22:BA:1915:U:C4	22:BA:1916:A:C5	3.03	0.46
22:BA:2331:G:O2'	22:BA:2336:A:N1	2.45	0.46
22:BA:2820:A:C6	25:BD:197:THR:CG2	2.98	0.46
22:BA:2839:G:O2'	35:BN:49:GLU:OE1	2.29	0.46
22:BA:2871:U:OP1	35:BN:69:ARG:NH1	2.48	0.46
26:BE:119:ILE:O	26:BE:187:VAL:HA	2.15	0.46
33:BL:85:VAL:HB	33:BL:94:THR:HG23	1.97	0.46
35:BN:101:GLY:C	35:BN:102:PHE:CD2	2.94	0.46
42:BU:14:LEU:HD11	42:BU:71:ALA:HB2	1.96	0.46
1:CA:50:A:H1'	1:CA:52:C:O4'	2.15	0.46
1:CA:517:G:H5'	1:CA:519:C:C2	2.51	0.46
1:CA:577:G:C2	1:CA:578:C:C5	3.03	0.46
1:CA:1019:A:H2'	1:CA:1020:G:O4'	2.16	0.46
1:CA:1027:C:N4	1:CA:1034:G:N1	2.63	0.46
1:CA:1032:G:H2'	1:CA:1032:G:N3	2.31	0.46
1:CA:1237:C:O2	1:CA:1334:G:O2'	2.17	0.46
4:CD:9:LEU:HD11	4:CD:29:ASP:OD1	2.14	0.46
4:CD:35:GLU:HG3	4:CD:36:GLN:HG3	1.97	0.46
12:CL:47:SER:O	12:CL:48:ALA:HB2	2.12	0.46
14:CN:23:LYS:O	14:CN:26:GLU:HG3	2.15	0.46
21:CU:4:ILE:O	21:CU:4:ILE:HG22	2.15	0.46
22:DA:188:G:C2	22:DA:209:C:N3	2.84	0.46
22:DA:273:G:H2'	22:DA:274:C:O4'	2.14	0.46
22:DA:981:A:H5"	58:DA:3588:HOH:O	2.14	0.46
22:DA:1062:G:C6	22:DA:1063:G:O6	2.68	0.46
22:DA:1121:C:C2	22:DA:1122:G:C8	3.03	0.46
22:DA:1317:G:N2	22:DA:1336:A:N3	2.63	0.46
22:DA:1669:A:O4'	32:DK:5:GLN:HG3	2.15	0.46
22:DA:1954:G:H1'	22:DA:1956:U:O4	2.15	0.46
22:DA:2121:G:C2	22:DA:2177:C:O2	2.68	0.46
22:DA:2297:A:N7	22:DA:2320:U:C4	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2405:G:H1'	22:DA:2412:A:N6	2.30	0.46
22:DA:2693:G:N2	22:DA:2717:C:O2	2.48	0.46
22:DA:2751:G:H4'	28:DG:4:VAL:HG23	1.96	0.46
22:DA:2839:G:C5	22:DA:2840:C:C5	3.03	0.46
25:DD:133:THR:HG23	25:DD:134:HIS:H	1.81	0.46
26:DE:76:PRO:HA	26:DE:82:GLY:HA2	1.96	0.46
27:DF:117:LEU:O	27:DF:118:SER:C	2.57	0.46
32:DK:105:ARG:N	32:DK:122:VAL:OXT	2.48	0.46
34:DM:2:LEU:HD12	34:DM:2:LEU:N	2.30	0.46
1:AA:74:A:C2	1:AA:97:G:C6	3.03	0.46
1:AA:404:G:H4'	1:AA:439:U:O2	2.16	0.46
1:AA:572:A:H5'	1:AA:573:A:P	2.56	0.46
1:AA:596:A:N6	1:AA:645:G:N1	2.63	0.46
1:AA:663:A:C2	1:AA:743:A:C2	3.04	0.46
1:AA:737:C:H2'	1:AA:738:C:C6	2.50	0.46
2:AB:103:ASN:O	2:AB:106:THR:N	2.47	0.46
2:AB:213:TYR:O	2:AB:217:VAL:HG23	2.15	0.46
3:AC:149:ILE:HG13	3:AC:201:TRP:O	2.15	0.46
4:AD:98:LEU:HD23	4:AD:118:VAL:HG11	1.98	0.46
12:AL:38:TYR:O	12:AL:39:THR:HG22	2.15	0.46
13:AM:11:ASP:O	13:AM:12:HIS:CB	2.62	0.46
20:AT:25:ARG:O	20:AT:29:ARG:HG2	2.14	0.46
22:BA:528:A:C2	22:BA:2043:C:C5'	2.95	0.46
22:BA:1268:A:C2	22:BA:2013:A:C4	3.03	0.46
22:BA:1489:C:C2	22:BA:1501:G:C2	3.03	0.46
22:BA:1951:U:H2'	22:BA:1953:A:OP2	2.15	0.46
22:BA:2661:G:H2'	22:BA:2662:A:C8	2.50	0.46
24:BC:144:VAL:HG21	24:BC:162:VAL:HG21	1.96	0.46
28:BG:87:LEU:N	28:BG:87:LEU:HD12	2.30	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
42:BU:26:LYS:O	42:BU:27:ASN:HB3	2.15	0.46
1:CA:81:A:C2	1:CA:89:U:C2	3.03	0.46
1:CA:182:A:C5	1:CA:184:G:C5	3.03	0.46
1:CA:496:A:C2	1:CA:497:G:C6	3.03	0.46
1:CA:517:G:C8	1:CA:531:U:C4	3.03	0.46
1:CA:543:U:O2'	1:CA:544:G:H5'	2.15	0.46
1:CA:578:C:C2	1:CA:579:A:C8	3.03	0.46
2:CB:34:ALA:O	2:CB:35:ARG:O	2.34	0.46
7:CG:91:VAL:HG21	7:CG:96:ARG:HA	1.97	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)
15:CO:41:GLY:O	15:CO:42:HIS:C	2.57	0.46
17:CQ:30:LYS:HB2	17:CQ:37:PHE:CZ	2.50	0.46
22:DA:218:A:H2'	22:DA:219:A:O4'	2.15	0.46
22:DA:265:A:H4'	22:DA:266:G:OP1	2.15	0.46
22:DA:487:C:N4	22:DA:488:G:C6	2.83	0.46
22:DA:570:G:C2'	22:DA:571:U:H5'	2.45	0.46
22:DA:997:G:OP1	38:DQ:92:ARG:NE	2.48	0.46
22:DA:1184:U:OP1	47:DZ:30:ARG:NH2	2.48	0.46
22:DA:1470:A:H2'	22:DA:1471:G:C5'	2.45	0.46
22:DA:1734:G:C2	22:DA:1735:A:C5	3.04	0.46
22:DA:2283:C:C2	22:DA:2389:G:C2	3.03	0.46
22:DA:2305:U:C4	22:DA:2306:C:N4	2.83	0.46
22:DA:2682:A:C2	25:DD:23:PRO:HB3	2.50	0.46
24:DC:247:PRO:HG2	24:DC:248:TRP:CZ3	2.51	0.46
26:DE:23:PHE:CD1	26:DE:111:GLU:HG3	2.49	0.46
29:DH:41:LYS:O	29:DH:44:ILE:HG12	2.15	0.46
29:DH:53:GLU:C	29:DH:55:GLU:N	2.72	0.46
30:DI:20:PRO:HB2	30:DI:23:PRO:HD2	1.98	0.46
30:DI:93:PRO:HB3	30:DI:136:MET:HA	1.97	0.46
32:DK:108:ARG:HB2	32:DK:116:ILE:HD13	1.96	0.46
38:DQ:61:TRP:HB3	38:DQ:92:ARG:O	2.16	0.46
1:AA:818:G:O2'	1:AA:819:A:H5'	2.15	0.46
1:AA:1286:U:H2'	1:AA:1286:U:O2	2.15	0.46
20:AT:54:MET:HE1	20:AT:58:VAL:HG21	1.96	0.46
22:BA:146:A:H2'	22:BA:147:C:O4'	2.16	0.46
22:BA:322:A:C5	22:BA:340:A:C2	3.03	0.46
22:BA:2018:G:O2'	22:BA:2019:A:H5'	2.15	0.46
22:BA:2444:G:OP2	26:BE:63:LYS:HD3	2.16	0.46
22:BA:2607:G:H2'	22:BA:2608:G:O4'	2.16	0.46
24:BC:162:VAL:CG1	24:BC:176:LEU:HD23	2.45	0.46
28:BG:54:PRO:HG3	28:BG:62:TRP:CE2	2.50	0.46
29:BH:37:VAL:CG2	29:BH:38:PRO:HD2	2.45	0.46
40:BS:74:ILE:HG23	40:BS:74:ILE:O	2.16	0.46
41:BT:51:PHE:O	41:BT:52:GLU:C	2.57	0.46
42:BU:72:ILE:HD12	42:BU:72:ILE:O	2.15	0.46
1:CA:651:C:N4	1:CA:753:A:OP2	2.47	0.46
1:CA:779:C:C2'	1:CA:780:A:H5'	2.46	0.46
1:CA:1010:U:C2	1:CA:1020:G:C2	3.04	0.46
1:CA:1279:G:OP2	10:CJ:11:LYS:NZ	2.44	0.46
1:CA:1307:U:C4	1:CA:1308:U:C5	3.03	0.46
1:CA:1460:C:C4	1:CA:1461:G:C5	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:41:ILE:C	2:CB:41:ILE:HD12	2.41	0.46
3:CC:126:ARG:O	3:CC:127:ARG:CB	2.63	0.46
4:CD:161:LEU:HD23	4:CD:162:ALA:N	2.30	0.46
5:CE:70:ASN:N	5:CE:70:ASN:OD1	2.49	0.46
12:CL:61:PHE:N	12:CL:61:PHE:HD1	2.13	0.46
13:CM:23:TYR:CD2	13:CM:23:TYR:O	2.69	0.46
15:CO:45:GLU:O	15:CO:46:HIS:HB2	2.16	0.46
16:CP:19:VAL:HG13	16:CP:37:GLY:N	2.31	0.46
18:CR:58:ALA:O	18:CR:59:ILE:C	2.58	0.46
22:DA:295:G:C2	22:DA:296:U:C6	3.03	0.46
22:DA:771:G:C6	22:DA:772:C:C5	3.03	0.46
22:DA:813:U:H2'	22:DA:814:C:C6	2.50	0.46
22:DA:881:G:N1	22:DA:895:U:O2	2.47	0.46
22:DA:1070:A:H2'	22:DA:1097:U:O5'	2.16	0.46
22:DA:1127:A:N7	22:DA:2488:G:O2'	2.49	0.46
22:DA:1330:C:C2'	22:DA:1331:G:O5'	2.63	0.46
22:DA:1475:G:H4'	22:DA:1732:C:C5	2.50	0.46
22:DA:1577:C:H2'	22:DA:1578:U:C1'	2.46	0.46
22:DA:1924:C:H2'	22:DA:1925:C:O4'	2.16	0.46
22:DA:2015:A:C6	48:D0:3:VAL:HG23	2.51	0.46
24:DC:226:ASN:HB3	24:DC:227:PRO:CD	2.45	0.46
25:DD:148:GLN:N	25:DD:148:GLN:OE1	2.48	0.46
26:DE:52:VAL:HG21	26:DE:81:GLY:HA2	1.98	0.46
32:DK:7:MET:C	32:DK:8:LEU:HD12	2.41	0.46
37:DP:89:ARG:NH1	37:DP:115:ASN:OXT	2.48	0.46
39:DR:52:PRO:O	39:DR:53:PHE:HB2	2.14	0.46
52:D4:25:VAL:HB	52:D4:35:GLN:HB2	1.97	0.46
1:AA:104:G:C2	1:AA:105:G:C8	3.04	0.46
1:AA:737:C:H2'	1:AA:738:C:H6	1.79	0.46
1:AA:858:G:O2'	1:AA:859:G:H5'	2.15	0.46
1:AA:1126:U:O2	1:AA:1280:A:C5'	2.63	0.46
1:AA:1211:U:C2'	1:AA:1212:U:OP2	2.63	0.46
2:AB:65:GLY:C	2:AB:66:LYS:HD3	2.40	0.46
8:AH:11:LEU:N	8:AH:11:LEU:HD23	2.31	0.46
14:AN:49:GLN:OE1	14:AN:49:GLN:CA	2.64	0.46
15:AO:24:SER:O	15:AO:25:THR:C	2.58	0.46
17:AQ:45:HIS:CB	17:AQ:70:THR:HG22	2.46	0.46
19:AS:63:THR:HB	19:AS:65:GLU:OE2	2.15	0.46
20:AT:71:LYS:HD2	20:AT:74:ARG:NH2	2.31	0.46
22:BA:578:G:OP1	22:BA:1255:U:O2'	2.29	0.46
22:BA:918:A:H4'	23:BB:97:C:O2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1564:C:O2'	22:BA:1565:C:H5'	2.16	0.46
22:BA:1592:C:C2'	22:BA:1593:A:H5'	2.46	0.46
22:BA:1637:A:H5'	22:BA:1760:C:O2'	2.15	0.46
22:BA:1958:C:O2'	22:BA:1959:G:H5'	2.16	0.46
22:BA:2262:U:OP1	22:BA:2387:U:O2'	2.29	0.46
25:BD:12:THR:HG22	37:BP:9:GLU:OE2	2.15	0.46
28:BG:94:TYR:C	28:BG:95:ARG:HG2	2.40	0.46
32:BK:107:LEU:O	32:BK:108:ARG:C	2.59	0.46
36:BO:7:ARG:HG3	36:BO:96:GLY:HA3	1.97	0.46
37:BP:26:VAL:CG1	37:BP:47:VAL:HG23	2.45	0.46
38:BQ:36:PHE:CZ	38:BQ:40:ILE:HD11	2.49	0.46
46:BY:57:LEU:HA	46:BY:60:LYS:HB3	1.96	0.46
53:B5:207:GLY:O	53:B5:208:THR:C	2.59	0.46
1:CA:81:A:H2'	1:CA:82:G:C8	2.50	0.46
1:CA:669:G:N2	1:CA:738:C:C2	2.84	0.46
1:CA:872:A:C4	1:CA:874:G:C8	3.03	0.46
1:CA:1134:G:C6	1:CA:1135:U:C2	3.03	0.46
2:CB:128:LYS:O	2:CB:129:LEU:HB2	2.15	0.46
7:CG:25:LYS:O	7:CG:29:ILE:HG12	2.15	0.46
21:CU:26:ALA:O	21:CU:27:GLY:C	2.57	0.46
22:DA:72:U:O2'	22:DA:73:A:O5'	2.25	0.46
22:DA:197:A:N6	22:DA:2430:A:H2'	2.30	0.46
22:DA:538:A:O2'	31:DJ:8:PRO:CG	2.63	0.46
22:DA:571:U:C4	22:DA:575:A:C5	3.04	0.46
22:DA:678:C:H2'	22:DA:679:C:C6	2.51	0.46
22:DA:989:G:C8	47:DZ:14:ILE:HD11	2.50	0.46
22:DA:1323:C:C4	22:DA:1324:G:N7	2.83	0.46
22:DA:1529:G:O6	22:DA:1543:G:C2	2.68	0.46
22:DA:1753:G:N1	22:DA:1756:G:C2	2.83	0.46
22:DA:1819:A:H5"	24:DC:157:SER:HB2	1.98	0.46
22:DA:2420:C:OP1	51:D3:34:THR:HB	2.16	0.46
22:DA:2602:A:H4'	22:DA:2603:G:C5'	2.45	0.46
23:DB:71:C:C2	23:DB:106:G:C2	3.03	0.46
32:DK:31:ARG:HB3	32:DK:32:TYR:CD2	2.50	0.46
35:DN:67:PHE:O	35:DN:71:ARG:HD2	2.16	0.46
35:DN:84:GLY:N	35:DN:85:PRO:HD2	2.30	0.46
39:DR:87:GLN:HG2	39:DR:88:GLY:N	2.31	0.46
44:DW:52:GLY:HA3	44:DW:60:PHE:CE1	2.50	0.46
47:DZ:24:LEU:HD11	47:DZ:54:MET:HE2	1.96	0.46
50:D2:34:ARG:HB2	50:D2:42:LEU:CD1	2.46	0.46
1:AA:36:C:H2'	1:AA:37:U:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:509:A:P	58:AA:1721:HOH:O	2.73	0.46
1:AA:670:G:C2'	1:AA:671:G:O5'	2.63	0.46
1:AA:723:U:OP2	1:AA:723:U:H4'	2.14	0.46
1:AA:1244:G:C2	1:AA:1294:G:C2	3.03	0.46
2:AB:84:ALA:O	2:AB:89:GLN:HB2	2.15	0.46
3:AC:144:LEU:HD13	3:AC:144:LEU:N	2.31	0.46
3:AC:203:PHE:CE1	3:AC:205:GLY:O	2.69	0.46
5:AE:88:VAL:HG23	5:AE:93:ARG:HG2	1.98	0.46
6:AF:9:MET:HE1	18:AR:65:LEU:HA	1.96	0.46
9:AI:30:ILE:O	9:AI:33:ARG:HB2	2.15	0.46
12:AL:57:LEU:C	12:AL:59:ASN:N	2.74	0.46
12:AL:59:ASN:C	12:AL:59:ASN:OD1	2.56	0.46
17:AQ:82:ALA:O	17:AQ:83:VAL:C	2.58	0.46
21:AU:20:LYS:HE2	21:AU:20:LYS:N	2.31	0.46
22:BA:526:A:O2'	22:BA:2043:C:O2	2.27	0.46
22:BA:920:A:O2'	22:BA:921:C:H5'	2.15	0.46
22:BA:1181:U:H2'	22:BA:1182:G:C8	2.51	0.46
22:BA:2190:G:C6	22:BA:2191:A:C6	3.04	0.46
22:BA:2648:G:H2'	22:BA:2649:C:O4'	2.16	0.46
24:BC:162:VAL:HG11	24:BC:174:LEU:HB3	1.96	0.46
27:BF:73:SER:HB2	27:BF:81:GLN:N	2.31	0.46
30:BI:62:TYR:O	30:BI:63:ALA:HB2	2.15	0.46
30:BI:116:ASP:O	30:BI:117:MET:HG2	2.15	0.46
33:BL:87:GLY:O	33:BL:89:VAL:HG12	2.16	0.46
1:CA:33:A:H2'	1:CA:34:C:H6	1.81	0.46
1:CA:429:U:H4'	1:CA:430:A:OP1	2.15	0.46
1:CA:429:U:H3'	4:CD:9:LEU:HD23	1.96	0.46
1:CA:541:G:H2'	1:CA:542:G:O4'	2.15	0.46
1:CA:620:C:H2'	1:CA:621:A:O4'	2.15	0.46
1:CA:681:A:C2	1:CA:710:G:C2	3.04	0.46
1:CA:748:G:H2'	1:CA:749:A:C8	2.51	0.46
1:CA:846:G:OP2	18:CR:48:ARG:NH2	2.49	0.46
1:CA:1226:C:N4	13:CM:103:LYS:HB2	2.31	0.46
3:CC:169:ARG:HD2	3:CC:169:ARG:C	2.40	0.46
4:CD:9:LEU:HG	4:CD:32:CYS:HB2	1.97	0.46
5:CE:16:ILE:N	5:CE:16:ILE:HD12	2.30	0.46
6:CF:8:PHE:N	6:CF:8:PHE:CD2	2.83	0.46
7:CG:31:MET:O	7:CG:31:MET:HG2	2.16	0.46
7:CG:114:LYS:HB2	7:CG:118:LEU:HD12	1.97	0.46
12:CL:25:GLU:CB	12:CL:27:CYS:SG	3.03	0.46
17:CQ:38:ILE:CG2	17:CQ:39:LYS:N	2.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:49:GLU:O	17:CQ:50:ASN:CG	2.59	0.46
22:DA:485:C:C2	22:DA:496:G:C2	3.04	0.46
22:DA:867:C:C5	22:DA:868:U:C5	3.03	0.46
22:DA:1131:G:O6	22:DA:2024:G:O2'	2.25	0.46
22:DA:1177:G:H2'	22:DA:1178:C:H4'	1.97	0.46
22:DA:1682:G:N3	22:DA:1757:A:H1'	2.31	0.46
22:DA:1940:U:C2	22:DA:1965:C:OP2	2.68	0.46
22:DA:1957:C:H5'	22:DA:1984:G:O2'	2.16	0.46
22:DA:2244:U:H2'	22:DA:2245:U:O4'	2.16	0.46
22:DA:2336:A:N3	22:DA:2385:C:H1'	2.30	0.46
22:DA:2581:G:H2'	22:DA:2581:G:N3	2.30	0.46
22:DA:2741:A:H2'	22:DA:2742:G:H5'	1.98	0.46
22:DA:2889:C:C4	22:DA:2890:G:C5	3.03	0.46
25:DD:122:VAL:HG21	25:DD:141:ARG:NH1	2.31	0.46
26:DE:94:GLN:O	26:DE:95:LYS:C	2.59	0.46
27:DF:122:PHE:CE1	27:DF:166:GLY:C	2.94	0.46
31:DJ:19:ASP:O	31:DJ:23:LYS:HE3	2.16	0.46
31:DJ:124:VAL:O	31:DJ:124:VAL:HG23	2.16	0.46
32:DK:118:LEU:O	32:DK:119:ALA:HB3	2.15	0.46
33:DL:29:LYS:C	33:DL:30:THR:HG23	2.41	0.46
35:DN:2:ARG:O	35:DN:3:HIS:C	2.59	0.46
37:DP:113:ARG:C	37:DP:114:LEU:HD23	2.40	0.46
40:DS:41:LYS:O	40:DS:42:LYS:C	2.59	0.46
41:DT:14:PRO:HD2	46:DY:33:ALA:HB1	1.96	0.46
1:AA:32:A:OP1	1:AA:398:U:H1'	2.15	0.46
1:AA:445:G:H2'	1:AA:446:G:O4'	2.15	0.46
1:AA:712:A:C6	1:AA:713:G:C6	3.04	0.46
1:AA:968:A:H4'	1:AA:969:A:OP2	2.16	0.46
1:AA:978:A:C5	1:AA:1318:A:C6	3.03	0.46
1:AA:1059:C:N3	1:AA:1060:U:C5	2.83	0.46
4:AD:34:ILE:O	4:AD:35:GLU:CB	2.64	0.46
4:AD:34:ILE:HG12	4:AD:35:GLU:N	2.29	0.46
8:AH:75:ILE:O	8:AH:75:ILE:HG23	2.16	0.46
8:AH:78:VAL:HG11	8:AH:125:ILE:CD1	2.46	0.46
8:AH:89:LYS:HG3	8:AH:90:ASP:N	2.31	0.46
9:AI:115:LYS:O	9:AI:116:VAL:C	2.59	0.46
11:AK:92:GLY:O	11:AK:96:THR:HB	2.16	0.46
12:AL:44:LYS:HB3	12:AL:45:PRO:HD3	1.96	0.46
15:AO:2:SER:O	15:AO:3:LEU:HB2	2.14	0.46
20:AT:54:MET:SD	20:AT:79:LEU:CD1	3.04	0.46
22:BA:281:C:H2'	22:BA:282:A:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:297:G:OP1	42:BU:92:LYS:NZ	2.49	0.46
22:BA:851:C:H2'	22:BA:852:U:H6	1.80	0.46
22:BA:1047:G:N2	22:BA:1110:G:C4	2.84	0.46
22:BA:2293:G:H2'	22:BA:2294:G:O4'	2.16	0.46
29:BH:89:LYS:O	29:BH:90:LEU:C	2.58	0.46
29:BH:90:LEU:HD23	29:BH:93:SER:HA	1.97	0.46
29:BH:94:ILE:HG23	29:BH:98:ASP:HB2	1.98	0.46
30:BI:117:MET:CE	30:BI:129:ILE:HD11	2.46	0.46
31:BJ:32:LEU:O	31:BJ:36:LEU:HG	2.16	0.46
41:BT:16:VAL:O	41:BT:17:SER:HB3	2.15	0.46
1:CA:3:A:C6	1:CA:629:A:H4'	2.51	0.46
1:CA:73:C:O2'	1:CA:74:A:P	2.74	0.46
1:CA:84:U:O2'	1:CA:85:U:H5'	2.16	0.46
1:CA:517:G:H5'	1:CA:519:C:O2	2.16	0.46
1:CA:643:C:H5'	8:CH:32:LEU:HD22	1.96	0.46
1:CA:671:G:N1	1:CA:672:U:C2	2.84	0.46
1:CA:933:G:OP2	7:CG:3:ARG:HB3	2.15	0.46
1:CA:1170:A:H3'	1:CA:1171:A:H8	1.80	0.46
1:CA:1232:U:OP1	9:CI:126:GLN:HG2	2.16	0.46
2:CB:219:ALA:O	2:CB:220:THR:CB	2.64	0.46
3:CC:167:TRP:C	3:CC:167:TRP:HE3	2.23	0.46
6:CF:36:ILE:HG12	6:CF:36:ILE:O	2.15	0.46
12:CL:107:VAL:CG2	12:CL:117:TYR:HB3	2.45	0.46
17:CQ:48:ASP:O	17:CQ:49:GLU:C	2.57	0.46
18:CR:20:GLU:O	18:CR:21:ILE:C	2.58	0.46
21:CU:37:PHE:HD2	21:CU:41:PRO:HG3	1.80	0.46
22:DA:404:A:C1'	22:DA:405:U:OP2	2.63	0.46
22:DA:415:A:C2	22:DA:2409:G:C2	3.04	0.46
22:DA:647:G:N7	22:DA:648:G:N7	2.64	0.46
22:DA:682:G:N3	22:DA:682:G:H2'	2.30	0.46
22:DA:882:G:C2	22:DA:883:G:H1'	2.51	0.46
22:DA:1264:A:C8	22:DA:1265:A:C8	3.03	0.46
22:DA:1361:G:C6	22:DA:1362:C:C4	3.04	0.46
22:DA:1437:C:N4	22:DA:1438:U:O4	2.49	0.46
22:DA:1514:G:H5"	22:DA:1515:A:P	2.56	0.46
22:DA:1806:C:C5	22:DA:1807:G:C8	3.03	0.46
22:DA:1818:U:H2'	24:DC:156:ARG:HD3	1.98	0.46
22:DA:2114:A:N6	22:DA:2119:A:N7	2.64	0.46
22:DA:2282:G:N3	22:DA:2425:A:N6	2.64	0.46
22:DA:2318:G:C6	22:DA:2319:G:C6	3.02	0.46
22:DA:2330:G:N2	22:DA:2386:A:C4	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2335:A:N6	22:DA:2337:G:H1'	2.31	0.46
25:DD:65:ALA:O	25:DD:69:ALA:N	2.44	0.46
26:DE:40:ARG:CZ	26:DE:92:HIS:CE1	2.99	0.46
26:DE:147:LEU:HD11	26:DE:170:ARG:HG2	1.97	0.46
29:DH:34:GLY:O	29:DH:35:LYS:CG	2.64	0.46
31:DJ:135:GLN:O	31:DJ:136:GLN:C	2.58	0.46
38:DQ:47:TYR:C	38:DQ:47:TYR:CD2	2.93	0.46
38:DQ:98:ILE:HG22	38:DQ:106:PHE:HB2	1.98	0.46
41:DT:32:LEU:HD12	41:DT:32:LEU:O	2.15	0.46
42:DU:40:ASN:O	42:DU:41:LEU:C	2.58	0.46
43:DV:38:LEU:HD23	43:DV:40:ILE:HD11	1.96	0.46
43:DV:44:HIS:O	43:DV:45:ASP:C	2.58	0.46
1:AA:572:A:H5'	1:AA:573:A:OP2	2.15	0.46
1:AA:1014:A:C2	19:AS:34:TRP:CZ2	3.04	0.46
1:AA:1124:G:H2'	1:AA:1145:A:N6	2.30	0.46
1:AA:1211:U:O2'	1:AA:1212:U:P	2.73	0.46
1:AA:1492:A:OP1	12:AL:44:LYS:CA	2.64	0.46
2:AB:42:ASN:O	2:AB:45:LYS:N	2.42	0.46
6:AF:51:ILE:HD12	6:AF:86:ARG:CZ	2.45	0.46
7:AG:145:ALA:O	7:AG:146:GLU:HB3	2.16	0.46
9:AI:30:ILE:HA	9:AI:65:ILE:O	2.15	0.46
10:AJ:43:PRO:O	10:AJ:71:LEU:HD23	2.16	0.46
13:AM:15:ALA:CB	13:AM:34:LEU:HD21	2.45	0.46
15:AO:32:LEU:O	15:AO:33:THR:C	2.59	0.46
20:AT:78:ASN:O	20:AT:82:GLN:HG2	2.15	0.46
21:AU:17:ARG:NH1	21:AU:20:LYS:CG	2.79	0.46
22:BA:380:G:H2'	22:BA:381:G:O4'	2.15	0.46
22:BA:723:C:H2'	22:BA:724:U:C6	2.50	0.46
22:BA:996:A:C6	22:BA:1160:G:C2	3.03	0.46
22:BA:1047:G:N2	22:BA:1110:G:O2'	2.49	0.46
22:BA:1319:C:H2'	22:BA:1320:C:H5'	1.98	0.46
22:BA:1394:U:H2'	22:BA:1395:A:O5'	2.16	0.46
22:BA:1508:A:H4'	22:BA:1508:A:OP1	2.15	0.46
22:BA:2122:U:C4	22:BA:2123:G:N7	2.84	0.46
24:BC:252:THR:HG22	24:BC:253:LYS:N	2.30	0.46
25:BD:104:VAL:O	25:BD:105:LYS:CB	2.61	0.46
27:BF:108:VAL:HG13	27:BF:114:PHE:CZ	2.51	0.46
28:BG:121:ILE:HD11	28:BG:140:VAL:HG12	1.98	0.46
30:BI:62:TYR:CD2	30:BI:62:TYR:N	2.83	0.46
32:BK:116:ILE:O	32:BK:118:LEU:O	2.34	0.46
33:BL:132:ARG:HG3	33:BL:142:ILE:CD1	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:66:HIS:CE1	39:BR:94:THR:HG22	2.51	0.46
40:BS:36:LEU:HD13	40:BS:48:LYS:CA	2.46	0.46
42:BU:6:ARG:O	42:BU:9:ASP:HB2	2.16	0.46
1:CA:38:G:N2	1:CA:397:A:C4	2.84	0.46
1:CA:147:G:N2	1:CA:148:G:C6	2.84	0.46
1:CA:510:A:H5"	1:CA:511:C:P	2.55	0.46
1:CA:688:G:C5	1:CA:700:G:C2	3.04	0.46
1:CA:724:G:C2	1:CA:725:G:C8	3.04	0.46
1:CA:851:G:C2	1:CA:852:G:C8	3.04	0.46
1:CA:983:A:N3	1:CA:983:A:H2'	2.31	0.46
1:CA:1197:A:H2'	1:CA:1198:G:H5'	1.97	0.46
1:CA:1471:U:O2'	1:CA:1472:U:H5'	2.16	0.46
2:CB:16:PHE:CD2	2:CB:16:PHE:N	2.84	0.46
4:CD:168:PRO:CB	4:CD:171:LEU:HD12	2.46	0.46
6:CF:51:ILE:O	6:CF:51:ILE:CG1	2.64	0.46
8:CH:21:ASN:O	8:CH:22:LYS:C	2.59	0.46
11:CK:52:PHE:HB2	11:CK:56:ARG:HB2	1.98	0.46
14:CN:18:ASP:OD2	14:CN:18:ASP:N	2.49	0.46
16:CP:6:LEU:CD1	16:CP:71:VAL:CG2	2.93	0.46
21:CU:29:LEU:O	21:CU:30:ALA:C	2.59	0.46
22:DA:228:C:C2	22:DA:418:C:H4'	2.51	0.46
22:DA:324:A:C6	22:DA:325:G:C4	3.04	0.46
22:DA:359:G:H2'	22:DA:360:U:O4'	2.16	0.46
22:DA:613:A:O2'	22:DA:614:A:P	2.71	0.46
22:DA:1288:G:C4	22:DA:1327:A:C2	3.04	0.46
22:DA:1352:U:H5	22:DA:1377:G:N7	2.14	0.46
22:DA:1437:C:C4	22:DA:1438:U:O4	2.69	0.46
22:DA:1446:C:O2	22:DA:1545:A:O2'	2.32	0.46
22:DA:1570:A:H5'	24:DC:36:LYS:HB3	1.96	0.46
22:DA:1736:U:H2'	22:DA:1737:G:O4'	2.16	0.46
22:DA:2283:C:H2'	22:DA:2284:A:C5'	2.46	0.46
22:DA:2443:C:H2'	22:DA:2444:G:O4'	2.16	0.46
22:DA:2499:C:C4	22:DA:2500:U:O4	2.69	0.46
22:DA:2574:G:N1	22:DA:2575:C:C2	2.84	0.46
22:DA:2880:C:N3	22:DA:2881:U:C5	2.84	0.46
23:DB:8:C:O3'	36:DO:25:ARG:NH1	2.49	0.46
30:DI:9:VAL:HG23	30:DI:10:LYS:N	2.31	0.46
30:DI:46:THR:HG22	30:DI:51:LYS:HG3	1.98	0.46
34:DM:72:PRO:HB3	34:DM:92:TRP:CZ3	2.51	0.46
35:DN:71:ARG:HH21	35:DN:71:ARG:HG3	1.81	0.46
35:DN:92:GLY:HA2	35:DN:94:TYR:CZ	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DQ:10:ALA:C	38:DQ:12:ALA:N	2.71	0.46
45:DX:25:THR:O	45:DX:25:THR:HG22	2.15	0.46
47:DZ:3:LYS:CD	47:DZ:3:LYS:N	2.78	0.46
1:AA:263:A:P	20:AT:74:ARG:NH1	2.89	0.46
1:AA:292:G:O2'	1:AA:608:A:N6	2.47	0.46
1:AA:615:G:C2	1:AA:616:G:C8	3.04	0.46
1:AA:927:G:C6	1:AA:1391:U:O2	2.69	0.46
1:AA:927:G:N2	1:AA:1391:U:H1'	2.30	0.46
1:AA:1075:U:OP1	2:AB:102:THR:HG21	2.16	0.46
1:AA:1081:A:P	5:AE:21:VAL:HG21	2.56	0.46
1:AA:1129:C:O2	1:AA:1130:A:N6	2.49	0.46
1:AA:1133:G:C6	1:AA:1142:G:C6	3.04	0.46
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.51	0.46
1:AA:1492:A:N7	1:AA:1493:A:C2	2.84	0.46
2:AB:24:ASN:O	2:AB:25:PRO:C	2.58	0.46
2:AB:87:CYS:HB2	2:AB:89:GLN:NE2	2.30	0.46
2:AB:106:THR:O	2:AB:107:VAL:CB	2.64	0.46
2:AB:210:VAL:O	2:AB:211:THR:C	2.59	0.46
3:AC:143:ARG:CG	3:AC:144:LEU:HD13	2.46	0.46
5:AE:136:VAL:HG22	5:AE:137:VAL:N	2.29	0.46
11:AK:69:ARG:HD2	22:BA:2146:C:N3	2.31	0.46
12:AL:38:TYR:O	12:AL:39:THR:CG2	2.63	0.46
22:BA:374:A:C2	22:BA:401:A:C4	3.04	0.46
24:BC:141:VAL:CG1	24:BC:190:ALA:HB1	2.45	0.46
24:BC:222:GLY:HA3	24:BC:230:HIS:CE1	2.51	0.46
34:BM:106:ASP:C	34:BM:106:ASP:OD2	2.59	0.46
39:BR:80:ARG:O	39:BR:80:ARG:HG2	2.15	0.46
41:BT:1:MET:C	41:BT:2:ILE:HD12	2.41	0.46
45:BX:41:GLU:OE2	45:BX:44:LYS:NZ	2.47	0.46
1:CA:3:A:O2'	1:CA:612:C:O2'	2.32	0.46
1:CA:32:A:OP1	1:CA:398:U:H1'	2.16	0.46
1:CA:597:G:C5	1:CA:598:U:C6	3.04	0.46
1:CA:955:U:H2'	1:CA:956:U:O4'	2.16	0.46
1:CA:1041:G:C6	1:CA:1042:A:N6	2.83	0.46
1:CA:1152:A:H4'	10:CJ:15:HIS:CD2	2.51	0.46
2:CB:49:MET:HG2	2:CB:199:VAL:O	2.16	0.46
22:DA:208:C:H2'	22:DA:209:C:C6	2.50	0.46
22:DA:320:A:H2'	26:DE:131:THR:CG2	2.46	0.46
22:DA:349:U:C2'	22:DA:350:G:H5'	2.45	0.46
22:DA:458:G:O2'	22:DA:459:U:OP2	2.33	0.46
22:DA:476:G:O4'	22:DA:505:A:C2	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1050:A:C2	22:DA:2751:G:C5	3.03	0.46
22:DA:1265:A:P	58:DA:3745:HOH:O	2.74	0.46
22:DA:1404:C:H2'	22:DA:1405:U:O5'	2.16	0.46
22:DA:2048:G:H2'	22:DA:2049:G:O5'	2.16	0.46
22:DA:2234:G:C4	22:DA:2235:G:C8	3.04	0.46
22:DA:2279:G:N7	44:DW:14:ARG:NH2	2.61	0.46
22:DA:2552:U:C2	22:DA:2554:U:H5'	2.51	0.46
22:DA:2896:C:C2'	22:DA:2897:U:O5'	2.64	0.46
24:DC:18:LYS:O	24:DC:19:VAL:HG23	2.16	0.46
24:DC:107:PRO:HD2	24:DC:110:LEU:HD22	1.97	0.46
25:DD:104:VAL:O	25:DD:105:LYS:HB3	2.16	0.46
26:DE:61:ARG:HD2	26:DE:63:LYS:O	2.15	0.46
28:DG:98:VAL:HG22	28:DG:125:CYS:SG	2.55	0.46
29:DH:60:GLU:HA	29:DH:60:GLU:OE2	2.15	0.46
32:DK:32:TYR:CD2	32:DK:32:TYR:N	2.84	0.46
34:DM:31:PHE:CZ	34:DM:110:GLU:HA	2.51	0.46
37:DP:91:ALA:HB2	37:DP:113:ARG:HG3	1.97	0.46
40:DS:55:ILE:HG21	40:DS:66:ILE:CD1	2.46	0.46
42:DU:34:VAL:O	42:DU:64:ALA:HA	2.16	0.46
49:D1:39:PHE:CD2	49:D1:40:ASP:N	2.83	0.46
50:D2:46:LYS:C	50:D2:46:LYS:HD3	2.41	0.46
54:D6:5:MHU:H12	54:D6:8:MHT:H8	1.98	0.46
1:AA:594:U:C4	1:AA:595:A:C6	3.03	0.46
1:AA:660:C:OP1	15:AO:5:THR:HG21	2.16	0.46
1:AA:844:G:N3	1:AA:845:A:C8	2.83	0.46
1:AA:975:A:N1	1:AA:1366:C:O2'	2.46	0.46
1:AA:1086:U:O2'	1:AA:1087:G:H5'	2.15	0.46
1:AA:1250:A:H4'	9:AI:70:GLY:O	2.15	0.46
2:AB:68:LEU:C	2:AB:68:LEU:CD2	2.89	0.46
2:AB:144:LEU:O	2:AB:145:GLU:C	2.59	0.46
4:AD:85:ASN:OD1	4:AD:88:GLU:HG3	2.16	0.46
6:AF:3:HIS:CE1	6:AF:65:GLU:CD	2.94	0.46
13:AM:3:ARG:O	13:AM:4:ILE:CG1	2.64	0.46
13:AM:37:ALA:CB	13:AM:56:LEU:HD23	2.46	0.46
16:AP:4:ILE:HG13	16:AP:21:VAL:CG2	2.46	0.46
16:AP:45:GLU:O	16:AP:46:LYS:C	2.59	0.46
16:AP:67:ILE:CG2	16:AP:71:VAL:HG12	2.46	0.46
17:AQ:10:GLY:HA3	17:AQ:24:ALA:O	2.16	0.46
21:AU:14:VAL:CG1	21:AU:16:LEU:HD21	2.46	0.46
22:BA:340:A:H2'	22:BA:341:C:C5'	2.46	0.46
22:BA:464:U:C5	22:BA:788:A:C4	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1234:U:H2'	22:BA:1235:G:O4'	2.16	0.46
22:BA:1316:U:C2	22:BA:1337:G:N2	2.84	0.46
22:BA:1956:U:H2'	22:BA:1957:C:H5'	1.98	0.46
22:BA:1980:G:H4'	58:BA:3451:HOH:O	2.14	0.46
22:BA:2133:G:C2'	22:BA:2134:A:OP2	2.64	0.46
22:BA:2469:A:C2	22:BA:2482:A:C4	3.04	0.46
22:BA:2593:U:C2'	22:BA:2594:C:O5'	2.64	0.46
22:BA:2669:G:O2'	22:BA:2670:A:H5'	2.16	0.46
24:BC:157:SER:O	24:BC:158:ALA:C	2.59	0.46
24:BC:250:VAL:HG12	24:BC:251:GLN:N	2.30	0.46
25:BD:133:THR:CG2	25:BD:134:HIS:N	2.79	0.46
28:BG:155:GLU:OE2	28:BG:158:LYS:HB2	2.16	0.46
29:BH:30:LEU:C	29:BH:32:PRO:HD2	2.41	0.46
29:BH:79:THR:HG23	29:BH:147:VAL:HB	1.98	0.46
29:BH:90:LEU:HD21	29:BH:93:SER:HA	1.97	0.46
30:BI:29:GLY:C	30:BI:30:GLN:HG3	2.41	0.46
36:BO:88:LYS:HA	36:BO:115:LEU:HD12	1.98	0.46
38:BQ:19:LYS:O	38:BQ:22:LYS:HG3	2.16	0.46
39:BR:86:GLN:HG2	39:BR:87:GLN:N	2.31	0.46
1:CA:824:G:H1'	8:CH:2:SER:HA	1.97	0.46
1:CA:939:G:C6	1:CA:940:C:C4	3.04	0.46
1:CA:1006:G:OP1	1:CA:1038:C:H5"	2.16	0.46
1:CA:1022:A:C5	1:CA:1023:U:C4	3.04	0.46
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.51	0.46
1:CA:1074:G:O2'	2:CB:102:THR:HG23	2.15	0.46
1:CA:1130:A:C8	1:CA:1146:A:N1	2.84	0.46
1:CA:1491:G:C5	1:CA:1492:A:C6	3.04	0.46
8:CH:96:MET:HB2	8:CH:99:LEU:O	2.16	0.46
10:CJ:74:VAL:HG12	10:CJ:75:ASP:N	2.31	0.46
11:CK:113:VAL:HB	18:CR:73:ARG:NH2	2.31	0.46
13:CM:13:LYS:O	13:CM:14:HIS:CG	2.69	0.46
22:DA:79:C:C2'	22:DA:346:A:N3	2.79	0.46
22:DA:303:G:C2	22:DA:315:G:C6	3.04	0.46
22:DA:396:G:H2'	22:DA:397:U:O5'	2.16	0.46
22:DA:532:A:N7	22:DA:2021:C:O2'	2.43	0.46
22:DA:685:A:C2	22:DA:689:A:C6	3.04	0.46
22:DA:945:A:N7	22:DA:2448:A:C2	2.84	0.46
22:DA:1304:A:C6	22:DA:1305:C:C4	3.04	0.46
22:DA:1389:G:N2	22:DA:1398:C:N3	2.64	0.46
22:DA:1404:C:C2'	22:DA:1405:U:O5'	2.63	0.46
22:DA:1551:A:C5	22:DA:1552:A:C8	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1847:A:H2'	22:DA:1848:A:OP2	2.16	0.46
22:DA:1931:U:OP2	22:DA:1968:G:N2	2.47	0.46
22:DA:2094:A:C2	22:DA:2196:C:C2	3.04	0.46
22:DA:2823:A:C5	22:DA:2824:C:C5	3.04	0.46
27:DF:123:ASP:N	27:DF:127:ASN:O	2.49	0.46
33:DL:29:LYS:O	33:DL:30:THR:OG1	2.31	0.46
35:DN:90:ARG:NH2	35:DN:116:VAL:HG11	2.31	0.46
43:DV:42:LEU:HD23	43:DV:42:LEU:N	2.31	0.46
1:AA:144:G:C5	1:AA:179:A:C2	3.04	0.45
1:AA:275:G:H5'	17:AQ:17:MET:CE	2.46	0.45
1:AA:575:G:C6	1:AA:821:G:N7	2.84	0.45
1:AA:674:G:N2	1:AA:717:U:O2	2.49	0.45
1:AA:949:A:C4	1:AA:950:U:C6	3.04	0.45
1:AA:1026:G:N1	1:AA:1035:A:C2	2.84	0.45
1:AA:1202:U:C5	1:AA:1203:C:C5	3.04	0.45
1:AA:1210:C:C4	1:AA:1211:U:C5	3.04	0.45
3:AC:23:PHE:C	3:AC:23:PHE:CD2	2.93	0.45
5:AE:149:SER:CB	5:AE:152:MET:HB2	2.46	0.45
8:AH:95:VAL:HG12	8:AH:96:MET:N	2.31	0.45
9:AI:127:PHE:CD2	9:AI:127:PHE:C	2.92	0.45
10:AJ:59:LYS:N	10:AJ:59:LYS:HD2	2.31	0.45
15:AO:18:ASP:OD1	15:AO:18:ASP:N	2.49	0.45
20:AT:25:ARG:HG2	20:AT:29:ARG:NH1	2.31	0.45
20:AT:73:ALA:O	20:AT:74:ARG:C	2.60	0.45
22:BA:368:A:N6	22:BA:369:U:O4	2.49	0.45
22:BA:878:A:H5'	22:BA:879:G:OP2	2.17	0.45
22:BA:1153:C:H2'	22:BA:1154:G:O4'	2.16	0.45
22:BA:1413:A:O2'	22:BA:1414:C:H5'	2.16	0.45
22:BA:1422:G:C4	22:BA:1423:G:C8	3.04	0.45
22:BA:1840:G:C6	22:BA:1841:U:C4	3.05	0.45
22:BA:1856:U:C4	22:BA:1857:G:C6	3.04	0.45
22:BA:2885:G:C2'	22:BA:2886:A:H5'	2.46	0.45
32:BK:73:ASP:OD1	32:BK:75:SER:OG	2.30	0.45
33:BL:91:ASP:O	33:BL:94:THR:HB	2.16	0.45
38:BQ:110:VAL:O	38:BQ:114:LYS:HG3	2.15	0.45
39:BR:49:ILE:O	39:BR:51:VAL:O	2.34	0.45
53:B5:61:GLY:O	53:B5:62:THR:C	2.59	0.45
53:B5:191:ARG:O	53:B5:195:ARG:CB	2.63	0.45
1:CA:285:C:H2'	1:CA:286:C:C6	2.52	0.45
1:CA:451:A:N6	1:CA:480:U:H2'	2.31	0.45
1:CA:570:G:H5"	1:CA:571:U:OP2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:711:G:N2	1:CA:712:A:C4	2.84	0.45
1:CA:1006:G:OP1	1:CA:1038:C:C5'	2.64	0.45
1:CA:1250:A:C2	1:CA:1287:A:N1	2.84	0.45
1:CA:1255:G:C6	1:CA:1279:G:N7	2.83	0.45
1:CA:1299:A:H2'	1:CA:1299:A:N3	2.30	0.45
2:CB:18:HIS:O	2:CB:19:GLN:HB2	2.16	0.45
2:CB:30:PHE:CD1	2:CB:30:PHE:N	2.81	0.45
8:CH:2:SER:O	8:CH:4:GLN:N	2.49	0.45
12:CL:43:LYS:O	12:CL:44:LYS:O	2.34	0.45
12:CL:108:LYS:O	12:CL:109:ASP:HB2	2.16	0.45
15:CO:35:GLN:O	15:CO:38:HIS:N	2.50	0.45
17:CQ:46:VAL:HG11	17:CQ:61:ILE:CG1	2.45	0.45
22:DA:371:A:N6	22:DA:402:A:OP2	2.48	0.45
22:DA:408:G:C6	22:DA:409:G:C5	3.04	0.45
22:DA:466:A:N1	22:DA:795:C:O2'	2.36	0.45
22:DA:585:G:H2'	22:DA:586:A:N7	2.31	0.45
22:DA:830:G:C2	22:DA:2448:A:N7	2.84	0.45
22:DA:858:G:H3'	22:DA:859:G:C8	2.51	0.45
22:DA:1208:C:C5	22:DA:1209:U:C5	3.04	0.45
22:DA:1327:A:N6	22:DA:1328:A:C2	2.83	0.45
22:DA:2725:A:C5	22:DA:2727:A:N7	2.84	0.45
24:DC:121:ASP:OD1	24:DC:121:ASP:N	2.50	0.45
25:DD:125:TRP:CE3	25:DD:160:LYS:HD3	2.50	0.45
29:DH:39:ALA:O	29:DH:41:LYS:N	2.47	0.45
31:DJ:84:ILE:O	31:DJ:85:LYS:C	2.59	0.45
33:DL:120:VAL:CG1	33:DL:121:THR:N	2.80	0.45
1:AA:559:A:H2'	1:AA:559:A:N3	2.30	0.45
1:AA:1035:A:H2'	1:AA:1036:A:C1'	2.45	0.45
1:AA:1197:A:OP2	58:AA:1785:HOH:O	2.21	0.45
3:AC:167:TRP:O	3:AC:168:TYR:HB2	2.15	0.45
8:AH:42:GLU:OE1	8:AH:42:GLU:CA	2.65	0.45
9:AI:57:MET:C	9:AI:59:GLU:N	2.74	0.45
10:AJ:57:VAL:O	10:AJ:58:ASN:HB2	2.16	0.45
16:AP:59:HIS:O	16:AP:63:GLN:HB2	2.17	0.45
21:AU:37:PHE:HB3	21:AU:41:PRO:HG3	1.97	0.45
22:BA:242:G:C8	51:B3:5:LYS:HG2	2.51	0.45
22:BA:868:U:C4	22:BA:869:G:N7	2.84	0.45
22:BA:989:G:C8	47:BZ:14:ILE:HD11	2.51	0.45
22:BA:1008:A:N6	22:BA:1136:G:O6	2.50	0.45
22:BA:1340:U:OP1	41:BT:19:LYS:NZ	2.50	0.45
22:BA:1464:G:H2'	22:BA:1465:G:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1474:U:C3'	22:BA:1475:G:H5'	2.46	0.45
22:BA:1613:G:H4'	50:B2:3:ARG:HD3	1.98	0.45
22:BA:1622:G:C2	22:BA:1623:G:C8	3.04	0.45
22:BA:1709:U:C2	22:BA:1750:G:N2	2.85	0.45
22:BA:1820:U:H4'	22:BA:1821:A:OP2	2.16	0.45
22:BA:1949:G:N2	22:BA:1958:C:O2	2.49	0.45
22:BA:2001:C:H4'	22:BA:2689:U:H2'	1.97	0.45
22:BA:2727:A:C6	22:BA:2728:U:O4	2.70	0.45
24:BC:71:LYS:HB3	24:BC:96:TYR:CE2	2.50	0.45
26:BE:171:ASP:OD1	26:BE:171:ASP:C	2.59	0.45
29:BH:129:GLU:C	29:BH:130:VAL:CG2	2.90	0.45
29:BH:129:GLU:C	29:BH:130:VAL:HG23	2.41	0.45
30:BI:19:ASN:N	30:BI:20:PRO:HD2	2.31	0.45
33:BL:57:LEU:HA	33:BL:60:ARG:HD2	1.97	0.45
34:BM:2:LEU:HD22	34:BM:2:LEU:N	2.32	0.45
44:BW:41:ARG:HA	44:BW:41:ARG:HD3	1.54	0.45
1:CA:57:G:H2'	1:CA:58:C:C6	2.51	0.45
1:CA:68:G:O4'	1:CA:171:A:H1'	2.16	0.45
1:CA:518:C:H2'	1:CA:530:G:C8	2.51	0.45
1:CA:583:A:C2	1:CA:759:A:C5	3.04	0.45
1:CA:741:G:N1	1:CA:742:G:C5	2.84	0.45
1:CA:888:G:H4'	1:CA:1488:G:O2'	2.16	0.45
1:CA:1087:G:N2	1:CA:1099:G:H1'	2.31	0.45
2:CB:193:PRO:O	2:CB:194:ASP:C	2.59	0.45
5:CE:101:GLU:O	5:CE:103:THR:CA	2.62	0.45
9:CI:50:GLN:N	9:CI:51:PRO:HD2	2.31	0.45
12:CL:25:GLU:HB2	12:CL:27:CYS:SG	2.57	0.45
21:CU:34:ARG:CD	21:CU:35:ARG:HB2	2.46	0.45
21:CU:41:PRO:O	21:CU:42:THR:C	2.59	0.45
22:DA:183:C:H1'	22:DA:433:C:H1'	1.97	0.45
22:DA:189:G:C4	22:DA:205:G:N2	2.84	0.45
22:DA:230:G:C2	22:DA:231:A:N7	2.84	0.45
22:DA:414:C:N4	22:DA:415:A:N6	2.64	0.45
22:DA:1288:G:C5	22:DA:1327:A:C2	3.04	0.45
22:DA:1649:G:O6	22:DA:2009:A:N6	2.49	0.45
22:DA:1682:G:H2'	22:DA:1683:U:C6	2.51	0.45
22:DA:1731:G:H2'	22:DA:1732:C:H3'	1.98	0.45
22:DA:1797:G:O3'	24:DC:256:LYS:HA	2.16	0.45
22:DA:2209:G:C6	22:DA:2210:U:O4	2.68	0.45
22:DA:2267:A:OP2	22:DA:2268:A:H5"	2.16	0.45
22:DA:2322:A:H2'	22:DA:2323:G:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2507:C:N4	22:DA:2508:G:C6	2.84	0.45
22:DA:2552:U:C2	22:DA:2554:U:C5'	2.99	0.45
24:DC:266:PHE:N	24:DC:266:PHE:CD1	2.83	0.45
29:DH:112:LYS:HG2	29:DH:113:SER:N	2.32	0.45
33:DL:54:GLN:HG2	33:DL:55:MET:N	2.31	0.45
34:DM:19:GLY:C	34:DM:20:LEU:HD22	2.41	0.45
40:DS:22:ASP:OD2	40:DS:22:ASP:N	2.49	0.45
41:DT:45:ALA:HA	41:DT:49:LYS:HE3	1.98	0.45
1:AA:1028:C:O2	1:AA:1034:G:C6	2.69	0.45
1:AA:1107:C:N3	1:AA:1108:G:C8	2.85	0.45
2:AB:21:ARG:O	2:AB:22:TYR:C	2.58	0.45
2:AB:47:VAL:O	2:AB:49:MET:N	2.50	0.45
2:AB:50:PHE:CD2	2:AB:51:ASN:OD1	2.70	0.45
2:AB:78:GLU:C	2:AB:80:VAL:H	2.24	0.45
4:AD:122:ALA:C	4:AD:123:ILE:HG23	2.41	0.45
22:BA:88:G:C6	22:BA:89:A:N7	2.84	0.45
22:BA:697:G:H2'	22:BA:698:C:C6	2.51	0.45
22:BA:948:C:O2	22:BA:984:A:O2'	2.34	0.45
22:BA:1138:G:O2'	31:BJ:107:GLY:HA3	2.17	0.45
22:BA:1176:U:OP1	22:BA:1176:U:H4'	2.16	0.45
22:BA:1385:A:H4'	22:BA:1386:C:OP1	2.17	0.45
22:BA:1430:G:C6	22:BA:1431:A:C5	3.04	0.45
22:BA:2164:C:H3'	22:BA:2165:C:H5"	1.98	0.45
26:BE:147:LEU:HB2	26:BE:183:PHE:CD1	2.51	0.45
27:BF:158:THR:HG22	27:BF:160:ALA:H	1.81	0.45
29:BH:45:GLU:C	29:BH:47:PHE:N	2.72	0.45
29:BH:94:ILE:HG23	29:BH:98:ASP:CB	2.47	0.45
36:BO:64:TYR:O	36:BO:67:ASN:ND2	2.49	0.45
37:BP:65:SER:O	37:BP:66:ASN:C	2.59	0.45
49:B1:26:ASN:OD1	49:B1:28:ARG:HB3	2.15	0.45
53:B5:78:ILE:HG23	53:B5:78:ILE:O	2.17	0.45
1:CA:128:G:N2	1:CA:234:C:C2	2.85	0.45
1:CA:219:U:C2	1:CA:220:G:C8	3.04	0.45
1:CA:230:G:H2'	1:CA:231:U:O4'	2.16	0.45
1:CA:369:G:C6	1:CA:370:C:C4	3.03	0.45
1:CA:575:G:C6	1:CA:821:G:C5	3.04	0.45
1:CA:798:U:C2'	1:CA:799:G:O5'	2.64	0.45
1:CA:821:G:H2'	1:CA:822:U:H6	1.81	0.45
1:CA:1005:A:N7	1:CA:1006:G:C4	2.84	0.45
1:CA:1304:G:O2'	1:CA:1333:A:N6	2.41	0.45
1:CA:1377:A:C5	7:CG:7:ILE:HD12	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:11:LEU:HD23	4:CD:11:LEU:N	2.31	0.45
22:DA:33:C:O2	22:DA:447:A:N6	2.49	0.45
22:DA:308:G:N1	22:DA:309:A:C2	2.84	0.45
22:DA:649:G:H2'	22:DA:650:C:C6	2.51	0.45
22:DA:1337:G:H2'	22:DA:1338:G:O4'	2.15	0.45
22:DA:1355:G:N1	22:DA:1356:G:C8	2.84	0.45
22:DA:1385:A:C2	22:DA:1386:C:C2	3.04	0.45
22:DA:1555:G:N1	22:DA:1556:C:C2	2.84	0.45
22:DA:1666:G:N7	22:DA:1667:G:C6	2.85	0.45
22:DA:1866:A:N7	22:DA:1867:G:C8	2.84	0.45
22:DA:2033:A:H4'	22:DA:2034:U:OP1	2.16	0.45
22:DA:2106:U:H2'	22:DA:2107:G:C8	2.51	0.45
22:DA:2148:G:C2	22:DA:2149:U:C5	3.04	0.45
22:DA:2163:A:OP2	22:DA:2171:A:C8	2.69	0.45
22:DA:2387:U:H1'	44:DW:41:ARG:HD2	1.99	0.45
22:DA:2655:G:HO2'	22:DA:2656:U:P	2.38	0.45
22:DA:2718:G:OP1	37:DP:98:TYR:CD1	2.70	0.45
22:DA:2748:A:C2	22:DA:2757:A:C5	3.05	0.45
22:DA:2804:U:C4	22:DA:2805:C:C4	3.04	0.45
22:DA:2847:U:C2'	22:DA:2848:G:H5'	2.46	0.45
22:DA:2896:C:H2'	22:DA:2897:U:O5'	2.16	0.45
23:DB:100:G:H2'	23:DB:101:A:O4'	2.17	0.45
25:DD:56:LYS:C	25:DD:58:ASN:N	2.75	0.45
31:DJ:12:LYS:HE3	31:DJ:14:ASP:OD2	2.16	0.45
32:DK:66:LYS:NZ	32:DK:79:PHE:O	2.43	0.45
34:DM:69:PRO:O	34:DM:93:VAL:O	2.35	0.45
43:DV:42:LEU:HD12	43:DV:47:VAL:HG21	1.99	0.45
46:DY:46:VAL:O	46:DY:50:VAL:HG23	2.16	0.45
1:AA:351:G:H4'	1:AA:352:C:OP2	2.16	0.45
1:AA:522:C:N4	1:AA:523:A:C6	2.84	0.45
1:AA:554:A:H2'	1:AA:555:U:C6	2.52	0.45
1:AA:757:U:OP1	1:AA:822:U:O2'	2.28	0.45
1:AA:1162:C:H2'	1:AA:1163:A:O4'	2.16	0.45
1:AA:1163:A:C2	1:AA:1174:G:C2	3.04	0.45
1:AA:1202:U:C2	1:AA:1203:C:C6	3.05	0.45
1:AA:1241:G:C2	1:AA:1242:G:C5	3.05	0.45
2:AB:155:GLY:O	2:AB:157:LEU:N	2.50	0.45
3:AC:39:VAL:O	3:AC:43:LEU:HB2	2.16	0.45
3:AC:85:GLU:C	3:AC:87:LEU:N	2.72	0.45
3:AC:126:ARG:O	3:AC:127:ARG:CB	2.64	0.45
5:AE:75:ALA:O	5:AE:82:GLN:NE2	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:29:ILE:HG23	6:AF:66:ALA:HB2	1.98	0.45
7:AG:67:GLU:HA	7:AG:70:ARG:HE	1.82	0.45
7:AG:146:GLU:O	7:AG:149:LYS:HB2	2.16	0.45
9:AI:21:ILE:CG2	9:AI:22:LYS:N	2.78	0.45
11:AK:36:ASP:OD2	11:AK:38:GLN:C	2.59	0.45
12:AL:55:VAL:HG21	12:AL:80:ILE:HD11	1.99	0.45
14:AN:25:ALA:C	14:AN:27:LEU:N	2.73	0.45
16:AP:4:ILE:HG13	16:AP:21:VAL:HG22	1.99	0.45
16:AP:10:GLY:O	16:AP:11:ALA:HB2	2.16	0.45
21:AU:10:GLU:CB	21:AU:11:PRO:HD3	2.46	0.45
22:BA:790:U:HO2'	22:BA:791:C:P	2.37	0.45
22:BA:1403:A:H2'	22:BA:1404:C:C6	2.52	0.45
22:BA:1947:C:O2'	22:BA:1948:G:H5'	2.16	0.45
22:BA:2020:A:H5'	48:B0:9:THR:CG2	2.46	0.45
22:BA:2031:A:C6	22:BA:2498:C:H1'	2.51	0.45
22:BA:2077:A:C6	22:BA:2435:A:N6	2.85	0.45
22:BA:2575:C:O2'	25:BD:145:SER:HB2	2.17	0.45
22:BA:2808:G:C2	22:BA:2891:U:C6	3.04	0.45
27:BF:175:PHE:O	27:BF:176:PRO:O	2.35	0.45
29:BH:88:GLY:C	29:BH:125:THR:OG1	2.59	0.45
32:BK:41:ILE:CD1	32:BK:58:LEU:HD22	2.47	0.45
35:BN:24:MET:HE2	35:BN:44:LEU:HD13	1.97	0.45
42:BU:39:ILE:O	42:BU:40:ASN:C	2.58	0.45
46:BY:53:VAL:O	46:BY:56:LEU:O	2.35	0.45
1:CA:299:G:N2	1:CA:565:U:O2	2.49	0.45
1:CA:607:A:C2	1:CA:608:A:C4	3.05	0.45
1:CA:819:A:H4'	1:CA:820:U:OP2	2.17	0.45
1:CA:891:U:C5	1:CA:906:A:C2	3.05	0.45
1:CA:971:G:OP1	1:CA:972:C:H5"	2.16	0.45
2:CB:167:ASP:OD2	2:CB:191:SER:HA	2.17	0.45
5:CE:102:GLY:C	5:CE:104:GLY:N	2.72	0.45
8:CH:89:LYS:HG3	8:CH:90:ASP:N	2.32	0.45
9:CI:46:MET:O	9:CI:49:ARG:HB3	2.16	0.45
10:CJ:15:HIS:HB3	10:CJ:70:HIS:CD2	2.52	0.45
12:CL:12:ARG:HG2	12:CL:12:ARG:HH11	1.81	0.45
14:CN:23:LYS:HG3	14:CN:24:ARG:N	2.31	0.45
16:CP:38:PHE:O	16:CP:38:PHE:CD1	2.69	0.45
17:CQ:81:LYS:N	17:CQ:81:LYS:HD2	2.32	0.45
21:CU:14:VAL:O	21:CU:16:LEU:HG	2.17	0.45
21:CU:39:GLU:HA	21:CU:42:THR:OG1	2.16	0.45
22:DA:137:U:H2'	22:DA:140:C:C2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:192:C:H2'	22:DA:193:U:H5'	1.99	0.45
22:DA:220:G:H5"	22:DA:221:A:P	2.57	0.45
22:DA:282:A:N1	22:DA:359:G:C6	2.84	0.45
22:DA:600:G:H1'	26:DE:100:MET:CG	2.46	0.45
22:DA:727:A:H2'	22:DA:728:G:C8	2.51	0.45
22:DA:836:G:C5	22:DA:837:C:C4	3.04	0.45
22:DA:965:C:H4'	22:DA:2273:A:H1'	1.99	0.45
22:DA:1203:U:O4	22:DA:1204:A:C6	2.70	0.45
22:DA:1246:A:OP2	33:DL:13:LYS:NZ	2.49	0.45
22:DA:1332:G:C6	22:DA:1609:A:N7	2.85	0.45
22:DA:1565:C:O2'	22:DA:1566:A:OP2	2.28	0.45
22:DA:1598:A:H2'	22:DA:1599:U:O4'	2.17	0.45
22:DA:1799:G:N1	22:DA:1819:A:OP2	2.46	0.45
22:DA:2215:C:O2'	22:DA:2216:G:H5'	2.17	0.45
22:DA:2221:G:C6	22:DA:2222:C:C5	3.04	0.45
22:DA:2283:C:C4	22:DA:2389:G:C4	3.04	0.45
22:DA:2712:C:C2	22:DA:2715:C:OP1	2.70	0.45
22:DA:2756:U:C4	22:DA:2759:G:O6	2.70	0.45
22:DA:2898:U:H2'	22:DA:2899:A:C8	2.52	0.45
24:DC:45:ASN:C	24:DC:47:GLY:H	2.25	0.45
25:DD:101:PHE:O	25:DD:103:ASP:N	2.50	0.45
29:DH:34:GLY:O	29:DH:35:LYS:CD	2.65	0.45
41:DT:38:ALA:C	41:DT:39:THR:HG22	2.41	0.45
42:DU:39:ILE:HG22	42:DU:39:ILE:O	2.16	0.45
1:AA:66:A:H4'	1:AA:173:U:C5	2.52	0.45
1:AA:69:G:H5'	1:AA:70:U:P	2.57	0.45
1:AA:346:G:P	32:BK:105:ARG:NH1	2.89	0.45
1:AA:767:A:H2'	1:AA:768:A:O4'	2.17	0.45
1:AA:1010:U:O2	1:AA:1019:A:N1	2.50	0.45
1:AA:1033:G:O2'	1:AA:1034:G:H5'	2.16	0.45
1:AA:1237:C:C4	1:AA:1336:C:N3	2.84	0.45
2:AB:119:THR:O	2:AB:120:GLN:HB2	2.17	0.45
4:AD:15:GLU:OE2	4:AD:56:ARG:NH2	2.49	0.45
4:AD:28:ILE:O	4:AD:29:ASP:C	2.60	0.45
6:AF:98:GLU:O	6:AF:99:ALA:C	2.59	0.45
9:AI:127:PHE:CD2	9:AI:127:PHE:O	2.70	0.45
10:AJ:86:ALA:O	10:AJ:90:LEU:HB2	2.16	0.45
12:AL:86:ARG:HA	12:AL:94:ARG:HA	1.98	0.45
20:AT:44:LYS:HD3	20:AT:87:ALA:HA	1.98	0.45
20:AT:54:MET:HA	20:AT:57:ILE:HG22	1.98	0.45
21:AU:25:LYS:C	21:AU:27:GLY:N	2.75	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:55:G:N2	22:BA:56:A:C4	2.85	0.45
22:BA:404:A:C8	22:BA:406:G:C6	3.04	0.45
22:BA:1026:G:H2'	22:BA:1027:A:C8	2.51	0.45
22:BA:1131:G:C6	31:BJ:77:HIS:CD2	3.05	0.45
22:BA:1775:U:H2'	22:BA:1776:G:O5'	2.17	0.45
22:BA:1911:U:H2'	22:BA:1918:A:N1	2.31	0.45
22:BA:2154:A:H2'	22:BA:2155:U:C6	2.51	0.45
24:BC:141:VAL:HG13	24:BC:191:THR:C	2.42	0.45
24:BC:199:GLU:O	24:BC:200:HIS:C	2.59	0.45
27:BF:108:VAL:HG12	27:BF:109:PRO:HD3	1.97	0.45
27:BF:121:SER:HB3	27:BF:129:SER:O	2.16	0.45
30:BI:58:VAL:HG12	30:BI:59:ILE:H	1.81	0.45
31:BJ:17:VAL:HG23	31:BJ:137:PRO:HB2	1.98	0.45
31:BJ:73:VAL:HG11	31:BJ:75:TYR:CZ	2.52	0.45
31:BJ:77:HIS:HA	31:BJ:83:GLY:O	2.17	0.45
36:BO:31:THR:HG22	36:BO:34:HIS:N	2.32	0.45
42:BU:72:ILE:HD12	42:BU:72:ILE:N	2.32	0.45
53:B5:214:TYR:O	53:B5:215:VAL:CB	2.64	0.45
1:CA:162:A:H2'	1:CA:163:C:O4'	2.17	0.45
1:CA:1272:G:H2'	1:CA:1273:C:O4'	2.16	0.45
1:CA:1317:C:C4	14:CN:53:ARG:HD2	2.51	0.45
2:CB:71:GLY:CA	2:CB:164:ILE:CG2	2.95	0.45
2:CB:131:LYS:HE2	2:CB:131:LYS:HA	1.98	0.45
2:CB:135:LEU:O	2:CB:139:ARG:HG3	2.17	0.45
2:CB:139:ARG:HD2	2:CB:140:GLU:N	2.31	0.45
2:CB:148:LEU:HD12	2:CB:148:LEU:N	2.32	0.45
5:CE:155:ALA:C	5:CE:156:LYS:HG3	2.41	0.45
12:CL:24:LEU:HD22	12:CL:59:ASN:OD1	2.17	0.45
21:CU:24:GLU:OE1	21:CU:24:GLU:N	2.50	0.45
22:DA:36:G:N1	22:DA:445:C:C4	2.85	0.45
22:DA:78:U:OP2	46:DY:2:LYS:HD2	2.16	0.45
22:DA:515:A:C8	22:DA:516:C:C6	3.04	0.45
22:DA:613:A:OP2	22:DA:614:A:N7	2.50	0.45
22:DA:656:G:O2'	22:DA:657:U:H5'	2.17	0.45
22:DA:1292:G:C6	22:DA:1293:C:N4	2.84	0.45
22:DA:1357:C:H2'	22:DA:1358:G:C5'	2.47	0.45
22:DA:1435:G:O2'	22:DA:1436:G:H5'	2.16	0.45
22:DA:1663:G:C6	22:DA:1992:G:N7	2.85	0.45
22:DA:2371:G:C2	22:DA:2372:U:C6	3.04	0.45
22:DA:2848:G:C8	37:DP:95:ALA:HB2	2.51	0.45
29:DH:147:VAL:HG12	29:DH:148:ALA:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:39:LEU:C	39:DR:49:ILE:HG23	2.42	0.45
40:DS:61:ASN:O	40:DS:62:ASP:CB	2.63	0.45
52:D4:3:VAL:HG23	52:D4:37:GLN:CD	2.41	0.45
1:AA:719:C:O2'	18:AR:39:ILE:O	2.27	0.45
1:AA:731:G:OP1	1:AA:766:A:H1'	2.17	0.45
1:AA:771:G:C5	1:AA:772:U:C5	3.05	0.45
1:AA:900:A:N1	1:AA:901:A:C2	2.85	0.45
1:AA:999:C:H2'	1:AA:1000:A:C8	2.51	0.45
1:AA:1012:A:N1	1:AA:1018:G:N7	2.64	0.45
1:AA:1309:G:C6	1:AA:1310:G:C5	3.04	0.45
2:AB:68:LEU:HD12	2:AB:154:MET:HE1	1.99	0.45
2:AB:104:TRP:CZ3	2:AB:158:PRO:HD3	2.51	0.45
2:AB:125:THR:O	2:AB:126:PHE:HB3	2.16	0.45
2:AB:132:LYS:HG3	2:AB:133:GLU:N	2.32	0.45
4:AD:107:PHE:CG	4:AD:145:ILE:HD11	2.50	0.45
8:AH:11:LEU:HD11	8:AH:127:CYS:CB	2.47	0.45
9:AI:86:ALA:C	9:AI:88:MET:N	2.73	0.45
11:AK:108:THR:HG22	11:AK:109:ASN:ND2	2.31	0.45
12:AL:21:VAL:O	12:AL:21:VAL:HG22	2.17	0.45
16:AP:30:GLY:O	16:AP:31:ARG:C	2.59	0.45
20:AT:44:LYS:HB3	20:AT:87:ALA:HB1	1.99	0.45
22:BA:669:G:C5	22:BA:801:G:C6	3.04	0.45
22:BA:749:A:H4'	22:BA:1271:G:N3	2.32	0.45
22:BA:909:A:H2'	22:BA:912:C:C5	2.51	0.45
22:BA:1056:G:N1	22:BA:1102:C:C5	2.84	0.45
22:BA:1456:G:C5	22:BA:1457:U:C5	3.04	0.45
22:BA:1469:A:C2	22:BA:1470:A:C4	3.04	0.45
22:BA:1503:A:N6	22:BA:1504:A:N6	2.65	0.45
22:BA:1586:A:N7	22:BA:1587:G:N7	2.65	0.45
22:BA:1683:U:O2'	22:BA:1684:G:H5'	2.16	0.45
22:BA:2185:U:C2'	22:BA:2186:G:H5'	2.47	0.45
22:BA:2488:G:C2'	22:BA:2489:U:H5'	2.47	0.45
28:BG:126:PRO:HG2	28:BG:130:GLU:HB3	1.98	0.45
31:BJ:7:LYS:HA	31:BJ:8:PRO:HD3	1.85	0.45
39:BR:74:ILE:O	39:BR:86:GLN:HA	2.16	0.45
41:BT:34:VAL:HG21	41:BT:43:ILE:HD11	1.99	0.45
42:BU:49:VAL:O	42:BU:49:VAL:HG23	2.17	0.45
45:BX:3:ARG:CD	45:BX:30:LEU:HD13	2.47	0.45
1:CA:109:A:N1	1:CA:327:A:C6	2.84	0.45
1:CA:862:C:C4	1:CA:863:U:C5	3.05	0.45
1:CA:926:G:C6	1:CA:1505:G:C6	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:992:U:C2	1:CA:1043:G:N7	2.85	0.45
1:CA:1053:G:C4	1:CA:1199:U:C5	3.05	0.45
1:CA:1181:G:O2'	1:CA:1182:G:C8	2.64	0.45
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.52	0.45
4:CD:14:ARG:HG2	4:CD:56:ARG:NH2	2.31	0.45
14:CN:54:ASP:HA	14:CN:59:ARG:CD	2.46	0.45
15:CO:62:GLN:O	15:CO:66:LEU:HD23	2.17	0.45
15:CO:67:LEU:O	15:CO:68:ASP:C	2.60	0.45
22:DA:2:G:O6	22:DA:2900:A:N6	2.50	0.45
22:DA:82:U:O2	22:DA:83:A:C8	2.68	0.45
22:DA:515:A:H2'	22:DA:516:C:H5'	1.98	0.45
22:DA:571:U:C4	22:DA:2030:A:C6	3.05	0.45
22:DA:641:U:C5	22:DA:642:U:O4	2.69	0.45
22:DA:645:C:H2'	22:DA:647:G:C5	2.52	0.45
22:DA:681:G:C2	22:DA:797:G:C2	3.04	0.45
22:DA:1090:A:C2	22:DA:1091:G:N7	2.85	0.45
22:DA:1208:C:C4	22:DA:1209:U:C5	3.05	0.45
22:DA:1264:A:N7	22:DA:1265:A:C5	2.85	0.45
22:DA:1275:A:C5	35:DN:16:HIS:CD2	3.04	0.45
22:DA:1347:A:C5	22:DA:1348:C:C5	3.04	0.45
22:DA:1413:A:H2'	22:DA:1414:C:C6	2.51	0.45
22:DA:1838:C:C5	22:DA:1899:A:C5	3.05	0.45
22:DA:2044:C:C2	22:DA:2625:G:N2	2.84	0.45
22:DA:2066:C:H5"	58:DA:3504:HOH:O	2.17	0.45
22:DA:2074:U:C2	22:DA:2436:G:C2	3.05	0.45
22:DA:2193:G:C4	22:DA:2194:U:C5	3.04	0.45
22:DA:2311:A:H3'	22:DA:2312:U:C6	2.52	0.45
22:DA:2345:G:N3	22:DA:2381:A:H2'	2.31	0.45
25:DD:13:ARG:HD3	25:DD:21:SER:OG	2.16	0.45
30:DI:47:ASP:HA	30:DI:51:LYS:HD2	1.99	0.45
30:DI:101:ILE:HG22	30:DI:102:SER:N	2.30	0.45
36:DO:7:ARG:CD	36:DO:97:PHE:CE1	2.99	0.45
37:DP:39:ARG:HG3	37:DP:40:LEU:N	2.31	0.45
41:DT:7:LEU:HD22	41:DT:46:ALA:CA	2.47	0.45
1:AA:207:C:H2'	1:AA:208:U:O2	2.17	0.45
1:AA:542:G:OP1	4:AD:10:LYS:CE	2.65	0.45
1:AA:575:G:O2'	1:AA:821:G:H5'	2.17	0.45
1:AA:587:G:N2	1:AA:755:G:C5	2.85	0.45
1:AA:638:U:H2'	1:AA:639:G:O4'	2.16	0.45
1:AA:820:U:H4'	1:AA:821:G:OP2	2.16	0.45
1:AA:994:A:N1	1:AA:1047:G:H4'	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1064:G:O2'	1:AA:1190:G:N2	2.49	0.45
1:AA:1160:G:HO2'	1:AA:1161:C:P	2.39	0.45
2:AB:67:ILE:O	2:AB:68:LEU:HB3	2.16	0.45
2:AB:82:ASP:OD1	2:AB:84:ALA:HB3	2.16	0.45
3:AC:26:THR:O	3:AC:27:LYS:C	2.60	0.45
7:AG:14:PRO:O	7:AG:15:ASP:O	2.35	0.45
19:AS:50:ALA:HB1	19:AS:57:HIS:CB	2.45	0.45
22:BA:231:A:C6	22:BA:232:G:C2	3.05	0.45
22:BA:245:G:N7	51:B3:8:ARG:NH1	2.64	0.45
22:BA:595:C:H2'	22:BA:596:U:C6	2.51	0.45
22:BA:783:A:H8	22:BA:784:G:H4'	1.80	0.45
22:BA:876:C:H2'	22:BA:877:A:O4'	2.16	0.45
22:BA:998:C:C2'	22:BA:999:U:O5'	2.65	0.45
22:BA:1360:G:C6	22:BA:1372:U:C2	3.05	0.45
22:BA:1717:A:H2'	22:BA:1718:G:O4'	2.17	0.45
22:BA:1917:U:O4	22:BA:1918:A:C6	2.68	0.45
22:BA:2032:G:C8	58:BA:3534:HOH:O	2.70	0.45
22:BA:2780:G:OP2	31:BJ:120:ARG:HD3	2.17	0.45
26:BE:136:GLN:O	26:BE:137:LYS:C	2.60	0.45
29:BH:90:LEU:HG	29:BH:92:GLY:C	2.42	0.45
30:BI:103:ARG:HE	30:BI:104:ALA:N	2.15	0.45
34:BM:41:LEU:HD22	34:BM:124:LEU:HD22	1.99	0.45
38:BQ:76:TYR:CZ	38:BQ:80:ILE:HG13	2.52	0.45
38:BQ:89:GLU:H	39:BR:49:ILE:HD12	1.81	0.45
44:BW:41:ARG:HH11	44:BW:41:ARG:CG	2.30	0.45
46:BY:14:LEU:HA	46:BY:17:GLU:HB3	1.99	0.45
1:CA:792:A:H1'	1:CA:794:A:N7	2.32	0.45
1:CA:898:G:O2'	1:CA:900:A:N7	2.38	0.45
1:CA:976:G:H1'	1:CA:1363:A:N6	2.32	0.45
1:CA:1053:G:N7	1:CA:1200:C:H5'	2.32	0.45
1:CA:1293:C:H2'	1:CA:1294:G:O4'	2.17	0.45
4:CD:90:LEU:HD21	4:CD:200:ILE:HD11	1.98	0.45
6:CF:59:TYR:HE2	18:CR:67:LEU:CD2	2.30	0.45
7:CG:53:ARG:NH2	7:CG:125:SER:OG	2.49	0.45
10:CJ:40:ILE:HG22	10:CJ:42:LEU:HG	1.97	0.45
22:DA:7:G:H2'	22:DA:8:C:O4'	2.17	0.45
22:DA:17:G:H4'	38:DQ:25:TYR:CE1	2.51	0.45
22:DA:87:U:O2	46:DY:44:LYS:NZ	2.49	0.45
22:DA:303:G:C6	22:DA:304:U:N3	2.85	0.45
22:DA:447:A:O2'	22:DA:473:G:N7	2.37	0.45
22:DA:572:A:H5"	22:DA:573:U:OP2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:966:G:H4'	22:DA:2272:U:O2	2.16	0.45
22:DA:994:C:O2'	39:DR:10:LYS:HE3	2.16	0.45
22:DA:1040:A:C2	22:DA:1041:G:C4	3.05	0.45
22:DA:1351:C:H2'	22:DA:1352:U:H1'	1.99	0.45
22:DA:1358:G:N2	22:DA:1374:G:C6	2.85	0.45
22:DA:1452:G:C8	22:DA:1457:U:N3	2.85	0.45
22:DA:1651:G:C6	22:DA:1652:A:C5	3.05	0.45
22:DA:1813:G:H2'	22:DA:1814:G:O4'	2.16	0.45
22:DA:2037:A:C6	22:DA:2038:G:C6	3.04	0.45
22:DA:2170:A:C2	22:DA:2171:A:C6	3.04	0.45
22:DA:2370:G:O2'	49:D1:44:ARG:NH1	2.50	0.45
22:DA:2446:G:C6	22:DA:2501:C:H2'	2.51	0.45
22:DA:2499:C:C4	22:DA:2500:U:C4	3.05	0.45
22:DA:2880:C:C2	22:DA:2881:U:C6	3.05	0.45
24:DC:69:ARG:NH2	24:DC:116:ILE:CD1	2.80	0.45
24:DC:121:ASP:O	24:DC:122:ALA:C	2.60	0.45
25:DD:108:ASP:N	25:DD:204:LYS:O	2.50	0.45
25:DD:187:LEU:HD21	25:DD:203:VAL:HG11	1.99	0.45
27:DF:40:VAL:HG13	27:DF:41:GLY:N	2.31	0.45
29:DH:31:VAL:CG1	29:DH:32:PRO:HD3	2.47	0.45
29:DH:83:LYS:HG3	29:DH:149:GLU:HG3	1.94	0.45
29:DH:93:SER:HB3	29:DH:123:ARG:HG3	1.99	0.45
31:DJ:80:HIS:C	31:DJ:82:GLY:N	2.74	0.45
33:DL:135:ILE:HG22	33:DL:140:GLY:HA2	1.98	0.45
35:DN:12:ARG:CZ	35:DN:20:MET:HE3	2.47	0.45
40:DS:39:THR:O	40:DS:41:LYS:N	2.50	0.45
44:DW:70:GLU:O	44:DW:79:PHE:N	2.49	0.45
48:D0:20:ASP:N	48:D0:20:ASP:OD2	2.49	0.45
54:D6:4:PRO:CB	54:D6:5:MHU:HM1	2.46	0.45
1:AA:351:G:H1'	1:AA:352:C:OP1	2.17	0.45
1:AA:792:A:H1'	1:AA:794:A:N7	2.31	0.45
1:AA:980:C:C5	1:AA:981:U:C4	3.04	0.45
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.51	0.45
3:AC:84:VAL:HG13	3:AC:101:ILE:HG21	1.99	0.45
5:AE:94:VAL:CG2	5:AE:111:MET:SD	3.05	0.45
6:AF:45:ARG:O	6:AF:56:LYS:HA	2.17	0.45
11:AK:69:ARG:HD2	22:BA:2146:C:C4	2.52	0.45
16:AP:39:PHE:CD1	16:AP:39:PHE:C	2.95	0.45
22:BA:38:A:H5'	26:BE:45:ALA:HB3	1.99	0.45
22:BA:211:C:O2'	22:BA:212:G:H5'	2.17	0.45
22:BA:528:A:H3'	22:BA:528:A:H8	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1167:C:H2'	22:BA:1168:G:H5"	1.99	0.45
22:BA:1381:G:H1'	22:BA:1571:A:N1	2.32	0.45
22:BA:1585:C:H2'	22:BA:1586:A:H5'	1.99	0.45
22:BA:1816:C:C6	24:BC:62:TYR:CE1	3.04	0.45
22:BA:2681:C:C2	22:BA:2724:U:O4	2.69	0.45
22:BA:2810:A:H2'	22:BA:2811:G:O4'	2.16	0.45
26:BE:111:GLU:CG	26:BE:114:ARG:NH1	2.80	0.45
26:BE:145:ASP:HA	26:BE:166:LYS:O	2.16	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:39:CYS:HA	30:BI:42:PHE:HB2	1.99	0.45
31:BJ:44:TYR:C	31:BJ:44:TYR:CD2	2.94	0.45
32:BK:23:LYS:HB3	32:BK:40:LYS:HB3	1.99	0.45
33:BL:111:ILE:N	33:BL:111:ILE:CD1	2.80	0.45
39:BR:39:LEU:C	39:BR:49:ILE:HG23	2.41	0.45
43:BV:14:LYS:CD	43:BV:18:ARG:HH11	2.30	0.45
46:BY:7:ARG:O	46:BY:8:GLU:HG3	2.17	0.45
1:CA:101:A:C5	1:CA:102:G:N7	2.85	0.45
1:CA:263:A:OP2	20:CT:74:ARG:NH1	2.50	0.45
1:CA:519:C:OP2	12:CL:47:SER:OG	2.23	0.45
1:CA:1117:A:H5'	9:CI:110:GLN:NE2	2.32	0.45
1:CA:1124:G:N2	1:CA:1127:G:N2	2.65	0.45
3:CC:101:ILE:HG23	3:CC:101:ILE:O	2.16	0.45
5:CE:19:ASN:O	5:CE:33:PHE:HA	2.17	0.45
8:CH:78:VAL:HG12	8:CH:79:SER:N	2.32	0.45
10:CJ:17:LEU:HD23	10:CJ:18:ILE:N	2.31	0.45
17:CQ:55:ILE:C	17:CQ:55:ILE:HD13	2.42	0.45
17:CQ:79:VAL:C	17:CQ:80:GLU:CG	2.90	0.45
21:CU:37:PHE:O	21:CU:39:GLU:N	2.44	0.45
22:DA:55:G:H2'	22:DA:55:G:N3	2.32	0.45
22:DA:259:G:C4	22:DA:260:G:C8	3.04	0.45
22:DA:453:A:O3'	22:DA:472:A:N6	2.49	0.45
22:DA:686:U:H6	22:DA:788:A:N1	2.15	0.45
22:DA:779:U:H5"	24:DC:49:ILE:HD11	1.98	0.45
22:DA:1312:U:C2	22:DA:1603:A:C2	3.05	0.45
22:DA:1464:G:N1	22:DA:1465:G:C5	2.84	0.45
22:DA:1476:U:O2'	22:DA:1477:A:H5'	2.17	0.45
22:DA:1949:G:C6	22:DA:1950:G:C6	3.05	0.45
22:DA:2135:A:C2	22:DA:2136:G:H1'	2.51	0.45
23:DB:17:C:H2'	23:DB:18:G:H5'	1.98	0.45
23:DB:48:U:O2'	23:DB:49:C:O4'	2.33	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:59:A:H2'	23:DB:60:C:O4'	2.17	0.45
26:DE:91:ASP:CG	26:DE:91:ASP:O	2.59	0.45
33:DL:20:GLY:HA2	33:DL:28:GLY:HA2	1.98	0.45
37:DP:70:VAL:HG12	37:DP:71:GLU:N	2.32	0.45
43:DV:35:GLU:CD	43:DV:35:GLU:N	2.75	0.45
44:DW:34:GLY:N	44:DW:61:ALA:O	2.40	0.45
1:AA:316:C:C5	1:AA:351:G:C2	3.04	0.45
1:AA:927:G:H4'	1:AA:1503:A:N7	2.32	0.45
1:AA:947:G:C6	1:AA:948:C:C4	3.04	0.45
1:AA:1048:G:C2	1:AA:1050:G:C5	3.05	0.45
1:AA:1134:G:N2	1:AA:1135:U:C2	2.84	0.45
1:AA:1140:C:O2'	1:AA:1141:C:P	2.75	0.45
1:AA:1144:G:N1	1:AA:1145:A:C2	2.85	0.45
1:AA:1387:G:C6	1:AA:1388:C:N4	2.85	0.45
1:AA:1425:U:O2'	1:AA:1426:G:H5'	2.17	0.45
5:AE:46:VAL:HG22	5:AE:118:ALA:HA	1.99	0.45
7:AG:69:VAL:HG21	7:AG:104:ILE:HG13	1.99	0.45
10:AJ:52:LEU:HB2	14:AN:81:ARG:CD	2.47	0.45
22:BA:5:A:H2'	22:BA:6:A:C8	2.52	0.45
22:BA:674:G:H1'	26:BE:69:ARG:HD3	1.99	0.45
22:BA:674:G:H5"	26:BE:71:GLY:N	2.32	0.45
22:BA:695:G:C2	22:BA:696:G:C8	3.05	0.45
22:BA:1056:G:H5"	22:BA:1057:A:C4'	2.47	0.45
22:BA:1486:U:O2'	22:BA:1487:U:H5'	2.17	0.45
22:BA:1832:C:C4	22:BA:1833:C:C5	3.05	0.45
22:BA:1916:A:OP2	22:BA:1916:A:H3'	2.17	0.45
22:BA:2020:A:H5'	48:B0:9:THR:HG22	1.98	0.45
22:BA:2052:A:H4'	25:BD:148:GLN:O	2.16	0.45
22:BA:2502:G:H5'	22:BA:2503:A:C5'	2.47	0.45
22:BA:2515:C:O2	22:BA:2570:G:C2	2.70	0.45
27:BF:14:LYS:O	27:BF:18:THR:CG2	2.65	0.45
27:BF:143:TYR:O	27:BF:146:VAL:HG22	2.17	0.45
30:BI:97:LYS:HG2	30:BI:139:VAL:HG22	1.99	0.45
36:BO:36:TYR:N	36:BO:36:TYR:CD2	2.84	0.45
42:BU:26:LYS:HD2	42:BU:26:LYS:HA	1.89	0.45
42:BU:52:LEU:HA	42:BU:54:GLN:OE1	2.17	0.45
46:BY:15:ASN:O	46:BY:19:LEU:HG	2.16	0.45
53:B5:64:SER:O	53:B5:65:LEU:HB3	2.17	0.45
1:CA:9:G:OP2	5:CE:126:LYS:NZ	2.47	0.45
1:CA:206:C:H2'	1:CA:207:C:C5'	2.45	0.45
1:CA:669:G:N2	1:CA:738:C:O2	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:756:C:C4	1:CA:757:U:C5	3.05	0.45
1:CA:1004:A:C2	1:CA:1026:G:N3	2.84	0.45
1:CA:1123:U:O2'	10:CJ:39:PRO:O	2.28	0.45
1:CA:1315:U:O4	1:CA:1316:G:C6	2.70	0.45
2:CB:16:PHE:CZ	2:CB:18:HIS:CE1	3.05	0.45
2:CB:85:LEU:O	2:CB:85:LEU:HD12	2.17	0.45
5:CE:100:SER:O	5:CE:101:GLU:C	2.60	0.45
9:CI:12:ARG:CD	9:CI:107:ASP:HB3	2.47	0.45
10:CJ:91:ASP:O	10:CJ:92:LEU:CB	2.64	0.45
11:CK:100:LEU:O	11:CK:103:ALA:N	2.49	0.45
12:CL:83:ARG:CG	12:CL:84:GLY:N	2.79	0.45
13:CM:22:ILE:HD12	13:CM:22:ILE:N	2.32	0.45
14:CN:67:THR:HG23	14:CN:83:LYS:HD2	1.98	0.45
15:CO:45:GLU:O	15:CO:46:HIS:CB	2.65	0.45
19:CS:22:ALA:CB	19:CS:47:LEU:HD13	2.46	0.45
22:DA:30:G:C5	22:DA:31:C:N3	2.85	0.45
22:DA:45:G:H2'	22:DA:215:G:N7	2.32	0.45
22:DA:143:C:H2'	22:DA:144:A:H5'	1.98	0.45
22:DA:292:U:C5	22:DA:293:U:C5	3.05	0.45
22:DA:377:G:C6	22:DA:378:C:N4	2.85	0.45
22:DA:599:A:C2	22:DA:659:G:C6	3.04	0.45
22:DA:663:G:O6	22:DA:664:G:C6	2.70	0.45
22:DA:669:G:N2	22:DA:670:A:N1	2.65	0.45
22:DA:708:G:N2	22:DA:724:U:H1'	2.31	0.45
22:DA:745:G:O2'	22:DA:748:G:H1'	2.17	0.45
22:DA:794:A:C6	22:DA:795:C:N3	2.85	0.45
22:DA:1222:U:H1'	22:DA:1228:G:N2	2.32	0.45
22:DA:1231:U:H2'	22:DA:1232:G:C8	2.52	0.45
22:DA:1358:G:C2'	22:DA:1359:A:OP2	2.65	0.45
22:DA:1425:G:H2'	22:DA:1426:G:O4'	2.17	0.45
22:DA:1662:U:O2	22:DA:2687:U:H4'	2.16	0.45
22:DA:1724:G:O6	22:DA:1736:U:C2	2.70	0.45
22:DA:2331:G:C5	22:DA:2332:C:C4	3.05	0.45
22:DA:2345:G:H5'	22:DA:2347:C:O4'	2.16	0.45
22:DA:2504:U:C5	56:DA:3001:DOL:C16	2.98	0.45
22:DA:2543:G:N3	22:DA:2765:A:H2'	2.32	0.45
22:DA:2740:A:C6	22:DA:2764:A:C8	3.05	0.45
23:DB:25:U:C4	23:DB:26:C:C4	3.04	0.45
27:DF:128:TYR:CB	27:DF:170:LEU:CD1	2.95	0.45
28:DG:91:GLY:O	28:DG:92:VAL:C	2.59	0.45
28:DG:158:LYS:C	28:DG:160:LYS:N	2.74	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:91:GLY:O	30:DI:93:PRO:HD3	2.17	0.45
33:DL:56:PRO:O	33:DL:60:ARG:CB	2.64	0.45
33:DL:58:TYR:O	51:D3:13:ARG:HD3	2.17	0.45
35:DN:114:GLU:OE2	35:DN:118:ARG:HD2	2.17	0.45
37:DP:115:ASN:C	37:DP:115:ASN:OD1	2.59	0.45
41:DT:38:ALA:O	41:DT:39:THR:CB	2.65	0.45
41:DT:73:ARG:HA	41:DT:73:ARG:CZ	2.47	0.45
47:DZ:13:ALA:HB2	47:DZ:24:LEU:HD12	1.98	0.45
49:D1:9:ILE:HG23	49:D1:25:LYS:HB3	1.99	0.45
1:AA:85:U:O2	1:AA:85:U:O4'	2.35	0.45
1:AA:105:G:N2	1:AA:379:C:O3'	2.50	0.45
1:AA:500:G:C6	1:AA:546:A:C2	3.05	0.45
1:AA:832:G:C4	1:AA:833:G:C8	3.05	0.45
1:AA:933:G:OP2	7:AG:3:ARG:CB	2.65	0.45
2:AB:27:MET:HE1	2:AB:193:PRO:HG3	1.99	0.45
2:AB:77:SER:O	2:AB:80:VAL:HB	2.17	0.45
4:AD:91:LEU:HD11	4:AD:195:ILE:HD11	1.99	0.45
8:AH:80:ARG:HB2	8:AH:81:PRO:HD2	1.99	0.45
14:AN:93:ILE:HD12	14:AN:96:LEU:HD23	1.99	0.45
17:AQ:17:MET:CG	17:AQ:20:SER:HB3	2.47	0.45
19:AS:11:ILE:HG13	19:AS:15:LEU:HD23	1.99	0.45
22:BA:18:U:O3'	38:BQ:23:GLY:HA2	2.16	0.45
22:BA:83:A:N6	22:BA:101:A:C4	2.85	0.45
22:BA:136:G:C6	22:BA:137:U:O4	2.70	0.45
22:BA:503:A:H4'	22:BA:504:A:O5'	2.17	0.45
22:BA:780:G:H2'	22:BA:782:A:N7	2.32	0.45
22:BA:832:U:H2'	22:BA:833:A:C8	2.51	0.45
22:BA:1064:C:O2	22:BA:1064:C:H2'	2.16	0.45
22:BA:1283:G:N2	22:BA:1285:A:H3'	2.32	0.45
22:BA:1501:G:C2	22:BA:1502:A:C8	3.04	0.45
22:BA:1838:C:C6	22:BA:1899:A:C6	3.05	0.45
22:BA:1885:A:C2'	22:BA:1886:U:H5'	2.47	0.45
22:BA:1993:U:C2'	22:BA:1994:C:H5'	2.47	0.45
22:BA:2273:A:H2'	22:BA:2274:A:C8	2.52	0.45
22:BA:2345:G:H4'	22:BA:2346:A:H5"	1.98	0.45
22:BA:2451:A:C2	56:BA:3001:DOL:C12	2.99	0.45
23:BB:42:C:OP1	27:BF:64:LYS:HE2	2.16	0.45
23:BB:54:G:H21	27:BF:26:MET:CE	2.30	0.45
27:BF:2:ALA:O	27:BF:5:HIS:N	2.50	0.45
29:BH:12:LEU:HG	29:BH:13:GLY:N	2.31	0.45
29:BH:76:GLU:HA	29:BH:142:VAL:CG1	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BU:34:VAL:HG23	42:BU:65:ILE:HG22	1.99	0.45
1:CA:115:G:C2	1:CA:289:G:N7	2.84	0.45
1:CA:803:G:C6	1:CA:804:U:C4	3.05	0.45
1:CA:842:U:O2'	1:CA:846:G:C6	2.70	0.45
1:CA:878:A:C6	1:CA:879:C:C4	3.05	0.45
1:CA:1080:A:C8	1:CA:1081:A:H1'	2.52	0.45
1:CA:1179:A:H2'	1:CA:1180:A:O4'	2.17	0.45
1:CA:1227:A:OP2	13:CM:110:LYS:HD2	2.17	0.45
1:CA:1386:G:C2	1:CA:1387:G:C8	3.05	0.45
1:CA:1410:A:H2'	1:CA:1411:C:C6	2.52	0.45
1:CA:1422:G:O3'	32:DK:49:ARG:NH2	2.49	0.45
5:CE:157:ARG:C	5:CE:159:LYS:N	2.74	0.45
12:CL:90:LEU:HB2	12:CL:93:VAL:HG21	1.98	0.45
14:CN:65:ARG:HB2	14:CN:78:GLY:O	2.17	0.45
16:CP:6:LEU:CD1	16:CP:71:VAL:HG23	2.47	0.45
21:CU:34:ARG:HE	21:CU:35:ARG:HB2	1.82	0.45
22:DA:8:C:O2'	22:DA:9:G:H5'	2.16	0.45
22:DA:158:U:C2'	22:DA:159:G:H5'	2.45	0.45
22:DA:204:A:H5'	22:DA:206:U:O4'	2.17	0.45
22:DA:249:C:O5'	22:DA:2394:C:O2'	2.35	0.45
22:DA:415:A:C2	22:DA:2409:G:N1	2.84	0.45
22:DA:515:A:C2'	22:DA:516:C:H5'	2.47	0.45
22:DA:581:C:H2'	22:DA:582:A:C8	2.52	0.45
22:DA:630:G:H3'	22:DA:631:A:H5"	1.99	0.45
22:DA:683:U:OP1	50:D2:26:ASN:CB	2.65	0.45
22:DA:1006:C:P	58:DA:3779:HOH:O	2.74	0.45
22:DA:1262:A:N3	22:DA:1262:A:H2'	2.32	0.45
22:DA:1358:G:H2'	22:DA:1359:A:OP2	2.17	0.45
22:DA:1388:G:N2	22:DA:1400:U:C2	2.85	0.45
22:DA:1614:A:H2'	22:DA:1615:C:H5'	1.99	0.45
22:DA:1649:G:N1	22:DA:2009:A:C6	2.85	0.45
22:DA:1651:G:H4'	35:DN:39:PRO:HG2	1.99	0.45
22:DA:1829:A:H2'	24:DC:15:HIS:NE2	2.32	0.45
22:DA:2063:C:O2	22:DA:2063:C:H2'	2.17	0.45
22:DA:2111:U:O2	22:DA:2111:U:O4'	2.34	0.45
22:DA:2193:G:H2'	22:DA:2194:U:C6	2.52	0.45
22:DA:2211:A:C4'	22:DA:2212:A:OP1	2.65	0.45
22:DA:2221:G:C2'	22:DA:2222:C:H5'	2.47	0.45
22:DA:2308:G:H4'	22:DA:2309:A:OP2	2.15	0.45
22:DA:2451:A:C2	56:DA:3001:DOL:HC12	2.52	0.45
22:DA:2821:A:OP2	25:DD:115:GLY:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2868:A:C6	22:DA:2869:G:C6	3.05	0.45
27:DF:111:ILE:HB	27:DF:114:PHE:CB	2.47	0.45
29:DH:15:LEU:HD22	29:DH:15:LEU:N	2.32	0.45
30:DI:24:VAL:HB	30:DI:28:LEU:HD23	1.99	0.45
32:DK:73:ASP:OD2	32:DK:75:SER:OG	2.28	0.45
33:DL:29:LYS:HG3	33:DL:30:THR:HG23	1.98	0.45
34:DM:67:VAL:HG11	34:DM:96:ILE:HD12	1.99	0.45
34:DM:124:LEU:N	34:DM:124:LEU:HD23	2.32	0.45
36:DO:48:LEU:C	36:DO:49:VAL:HG23	2.42	0.45
43:DV:48:MET:SD	43:DV:86:LEU:HG	2.56	0.45
47:DZ:52:SER:C	47:DZ:54:MET:N	2.74	0.45
50:D2:34:ARG:HB2	50:D2:42:LEU:HD12	1.99	0.45
1:AA:9:G:C6	1:AA:26:A:N6	2.85	0.44
1:AA:192:A:C2	1:AA:193:C:C2	3.05	0.44
1:AA:320:A:H2'	1:AA:321:A:C1'	2.48	0.44
1:AA:531:U:H5"	3:AC:161:GLU:OE2	2.16	0.44
1:AA:855:U:N3	1:AA:856:C:C5	2.86	0.44
2:AB:79:ALA:O	2:AB:214:LEU:HD21	2.18	0.44
2:AB:84:ALA:O	2:AB:89:GLN:CB	2.65	0.44
3:AC:7:PRO:HD2	3:AC:184:TYR:CD2	2.52	0.44
4:AD:126:ASN:HA	4:AD:142:VAL:HG23	1.99	0.44
5:AE:35:ALA:CB	5:AE:60:ILE:HA	2.47	0.44
5:AE:50:TYR:O	5:AE:63:ALA:HB2	2.17	0.44
9:AI:34:SER:O	9:AI:35:LEU:C	2.60	0.44
10:AJ:66:GLU:HB3	14:AN:99:ALA:CB	2.46	0.44
14:AN:64:CYS:HB2	14:AN:80:SER:HB2	1.99	0.44
14:AN:93:ILE:HG21	14:AN:96:LEU:HD22	2.00	0.44
15:AO:61:SER:O	15:AO:65:LYS:HG3	2.18	0.44
16:AP:46:LYS:HD3	16:AP:47:GLU:H	1.80	0.44
20:AT:7:ALA:HB1	20:AT:10:ARG:HB2	1.99	0.44
22:BA:250:G:H2'	22:BA:251:A:C8	2.52	0.44
22:BA:613:A:H2'	22:BA:614:A:H5'	1.98	0.44
22:BA:1084:A:O2'	22:BA:1105:U:O2'	2.29	0.44
22:BA:1098:A:H5'	22:BA:1099:G:OP2	2.17	0.44
24:BC:162:VAL:HG13	24:BC:176:LEU:HD23	1.97	0.44
25:BD:61:THR:HB	25:BD:63:PRO:HD2	1.99	0.44
29:BH:93:SER:O	1:CA:368:U:C6	2.71	0.44
30:BI:108:GLU:HA	30:BI:111:GLN:HB3	1.99	0.44
34:BM:57:VAL:O	34:BM:60:GLN:HB2	2.16	0.44
40:BS:36:LEU:HD13	40:BS:48:LYS:HA	1.99	0.44
41:BT:29:THR:OG1	41:BT:86:THR:HG22	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BU:61:LYS:HE3	42:BU:62:GLU:O	2.17	0.44
43:BV:26:PHE:CE1	43:BV:42:LEU:HD12	2.52	0.44
43:BV:80:HIS:ND1	43:BV:83:LYS:CG	2.80	0.44
1:CA:186:C:O2	1:CA:186:C:H2'	2.17	0.44
1:CA:484:G:N7	1:CA:486:U:C1'	2.80	0.44
1:CA:519:C:N4	1:CA:520:A:N1	2.65	0.44
1:CA:609:A:C5	1:CA:610:U:C6	3.05	0.44
1:CA:714:G:H2'	1:CA:715:A:C8	2.53	0.44
1:CA:992:U:O4'	1:CA:993:G:C2	2.70	0.44
1:CA:1000:A:H3'	1:CA:1001:C:C6	2.53	0.44
1:CA:1306:A:H1'	1:CA:1332:A:N7	2.32	0.44
5:CE:38:VAL:HG11	5:CE:114:VAL:HA	1.99	0.44
9:CI:35:LEU:HD21	9:CI:48:VAL:HG21	1.97	0.44
10:CJ:15:HIS:HA	10:CJ:18:ILE:HG22	1.98	0.44
20:CT:58:VAL:CG1	20:CT:72:ALA:HB1	2.47	0.44
22:DA:185:G:C5	22:DA:212:G:N2	2.84	0.44
22:DA:294:A:C6	22:DA:345:A:N3	2.85	0.44
22:DA:846:U:H1'	22:DA:847:U:C5	2.51	0.44
22:DA:993:G:N2	39:DR:23:GLU:OE1	2.50	0.44
22:DA:1153:C:H2'	22:DA:1154:G:O4'	2.17	0.44
22:DA:1211:C:H3'	22:DA:1212:G:H5'	1.99	0.44
22:DA:1476:U:H1'	22:DA:1732:C:O2	2.17	0.44
22:DA:1731:G:C6	22:DA:1733:G:C8	3.05	0.44
22:DA:1783:A:C6	22:DA:2587:A:C2	3.05	0.44
22:DA:1906:G:OP1	22:DA:1930:G:C8	2.69	0.44
22:DA:2043:C:H2'	22:DA:2043:C:O2	2.16	0.44
22:DA:2634:A:C2	22:DA:2635:A:C4	3.05	0.44
24:DC:87:ARG:HB3	24:DC:87:ARG:CZ	2.46	0.44
27:DF:85:ILE:HG13	27:DF:85:ILE:O	2.17	0.44
29:DH:5:LEU:CD1	29:DH:13:GLY:CA	2.95	0.44
30:DI:33:VAL:O	30:DI:33:VAL:HG12	2.16	0.44
31:DJ:9:GLU:O	31:DJ:10:THR:HG23	2.18	0.44
33:DL:55:MET:SD	33:DL:59:ARG:CB	3.06	0.44
36:DO:51:ALA:HB1	36:DO:77:ALA:CB	2.46	0.44
36:DO:51:ALA:HB1	36:DO:77:ALA:HB1	1.99	0.44
1:AA:131:A:C2	1:AA:132:C:C4	3.05	0.44
1:AA:172:A:N7	1:AA:174:A:N7	2.65	0.44
1:AA:603:U:H2'	1:AA:604:G:C8	2.52	0.44
1:AA:874:G:C6	1:AA:875:U:C4	3.06	0.44
1:AA:908:A:O2'	1:AA:909:A:H5'	2.17	0.44
1:AA:1419:G:C5	1:AA:1420:U:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1535:C:OP2	1:AA:1535:C:C6	2.71	0.44
3:AC:21:THR:HG23	3:AC:58:GLU:HB3	1.99	0.44
9:AI:25:ASN:HB2	9:AI:27:LYS:HG2	1.99	0.44
11:AK:63:ALA:CB	11:AK:92:GLY:HA3	2.48	0.44
13:AM:14:HIS:HB2	13:AM:17:ILE:HD13	1.99	0.44
17:AQ:16:LYS:CA	17:AQ:17:MET:SD	3.05	0.44
17:AQ:30:LYS:HG2	17:AQ:37:PHE:CZ	2.52	0.44
21:AU:34:ARG:NH2	21:AU:35:ARG:HD2	2.32	0.44
22:BA:111:A:C2	22:BA:112:U:C2	3.06	0.44
22:BA:465:G:H2'	22:BA:466:A:C8	2.52	0.44
22:BA:846:U:O2'	22:BA:847:U:OP2	2.34	0.44
22:BA:927:A:O2'	47:BZ:39:GLU:OE2	2.35	0.44
22:BA:954:G:C5	22:BA:955:U:C5	3.05	0.44
22:BA:1768:C:C2	22:BA:1769:U:C6	3.05	0.44
22:BA:1875:G:HO2'	22:BA:1876:A:P	2.40	0.44
22:BA:1935:G:O2'	22:BA:1936:A:H5'	2.18	0.44
22:BA:2128:G:OP2	53:B5:37:LYS:HB2	2.17	0.44
22:BA:2554:U:C4	22:BA:2555:U:O4	2.70	0.44
23:BB:24:G:N2	23:BB:28:C:O2	2.50	0.44
25:BD:13:ARG:HD3	25:BD:21:SER:OG	2.17	0.44
26:BE:197:GLU:O	26:BE:201:ALA:N	2.50	0.44
27:BF:107:ALA:C	27:BF:109:PRO:HD2	2.41	0.44
29:BH:14:SER:OG	29:BH:17:ASP:OD1	2.29	0.44
30:BI:73:THR:HG21	30:BI:116:ASP:HB3	1.98	0.44
31:BJ:98:GLU:OE2	31:BJ:126:ALA:HB2	2.17	0.44
34:BM:51:ARG:O	34:BM:52:ALA:C	2.60	0.44
34:BM:53:MET:HE1	34:BM:103:TYR:CG	2.52	0.44
37:BP:73:VAL:HG23	37:BP:73:VAL:O	2.15	0.44
41:BT:29:THR:HG23	41:BT:86:THR:N	2.31	0.44
41:BT:47:VAL:HG12	41:BT:55:VAL:CG2	2.47	0.44
1:CA:829:G:C5	1:CA:858:G:N2	2.85	0.44
1:CA:1345:U:H4'	1:CA:1346:A:H5'	1.97	0.44
1:CA:1434:A:N6	1:CA:1435:G:C6	2.85	0.44
2:CB:35:ARG:O	2:CB:38:VAL:N	2.45	0.44
2:CB:117:LEU:HB3	2:CB:141:LEU:HG	1.98	0.44
5:CE:132:ASN:O	5:CE:133:PRO:C	2.60	0.44
17:CQ:14:SER:HB3	17:CQ:22:VAL:HG12	1.99	0.44
22:DA:590:A:C5	22:DA:591:U:C5	3.05	0.44
22:DA:626:A:C2	33:DL:78:ARG:HD3	2.52	0.44
22:DA:877:A:H2'	22:DA:878:A:OP2	2.17	0.44
22:DA:1343:G:C5	22:DA:1344:U:C4	3.04	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1483:G:C4	22:DA:1484:U:C5	3.05	0.44
22:DA:1688:U:C4	22:DA:1698:A:C2	3.06	0.44
22:DA:1965:C:OP1	22:DA:1966:A:H2'	2.17	0.44
22:DA:2286:G:C4'	22:DA:2287:A:O5'	2.60	0.44
22:DA:2502:G:H5'	22:DA:2503:A:C5'	2.46	0.44
22:DA:2526:G:C5	22:DA:2527:C:C5	3.05	0.44
22:DA:2582:G:C2	22:DA:2583:G:C8	3.05	0.44
22:DA:2683:C:H4'	25:DD:13:ARG:NH1	2.31	0.44
22:DA:2853:C:H2'	22:DA:2854:G:C8	2.53	0.44
25:DD:32:ASN:HB3	25:DD:50:VAL:HB	1.99	0.44
25:DD:56:LYS:O	25:DD:57:ALA:C	2.58	0.44
29:DH:1:MET:CE	29:DH:27:ARG:NH1	2.80	0.44
33:DL:110:VAL:O	33:DL:111:ILE:O	2.35	0.44
35:DN:2:ARG:O	35:DN:2:ARG:CD	2.65	0.44
35:DN:65:LEU:HD11	35:DN:69:ARG:NH2	2.33	0.44
41:DT:74:ILE:HD12	41:DT:75:GLY:N	2.32	0.44
44:DW:45:PHE:HB3	44:DW:80:ILE:CD1	2.47	0.44
46:DY:46:VAL:O	46:DY:46:VAL:HG12	2.18	0.44
1:AA:587:G:N2	1:AA:755:G:C8	2.85	0.44
1:AA:960:U:O2'	1:AA:1223:C:C5'	2.65	0.44
1:AA:1493:A:HO2'	1:AA:1494:G:P	2.39	0.44
2:AB:24:ASN:O	2:AB:27:MET:N	2.47	0.44
2:AB:208:ARG:O	2:AB:210:VAL:N	2.50	0.44
4:AD:26:ARG:HD3	4:AD:31:LYS:HD2	1.99	0.44
5:AE:101:GLU:CD	5:AE:101:GLU:O	2.60	0.44
6:AF:91:ARG:CG	6:AF:92:THR:N	2.81	0.44
7:AG:55:GLY:O	7:AG:56:LYS:C	2.59	0.44
9:AI:25:ASN:C	9:AI:59:GLU:HA	2.42	0.44
9:AI:63:LEU:N	9:AI:63:LEU:CD2	2.79	0.44
10:AJ:15:HIS:C	10:AJ:17:LEU:N	2.76	0.44
10:AJ:35:GLN:O	10:AJ:36:VAL:O	2.35	0.44
11:AK:71:ALA:O	11:AK:73:ALA:N	2.49	0.44
13:AM:16:VAL:HG22	13:AM:41:GLU:HB2	1.98	0.44
19:AS:15:LEU:CD1	19:AS:33:THR:HG21	2.48	0.44
22:BA:829:A:N7	22:BA:2247:A:O2'	2.49	0.44
22:BA:1190:G:OP1	33:BL:32:GLY:HA2	2.17	0.44
22:BA:1392:A:C6	22:BA:1393:A:C6	3.06	0.44
22:BA:1536:C:O4'	22:BA:1537:G:C2	2.70	0.44
22:BA:1735:A:C2'	22:BA:1736:U:H5'	2.47	0.44
22:BA:2488:G:O2'	22:BA:2489:U:H5'	2.17	0.44
22:BA:2885:G:H2'	22:BA:2886:A:C4'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:15:A:O2'	23:BB:16:G:H5'	2.16	0.44
26:BE:29:HIS:NE2	33:BL:8:PRO:HD3	2.32	0.44
29:BH:57:LYS:CG	29:BH:58:LEU:N	2.81	0.44
29:BH:75:LEU:C	29:BH:75:LEU:HD22	2.41	0.44
30:BI:105:GLN:O	30:BI:106:LEU:CB	2.65	0.44
31:BJ:75:TYR:CD1	31:BJ:86:GLN:HB3	2.52	0.44
36:BO:30:ARG:HG2	36:BO:31:THR:N	2.33	0.44
43:BV:51:GLN:HB2	43:BV:57:TYR:OH	2.17	0.44
53:B5:133:GLY:O	53:B5:134:PRO:CB	2.64	0.44
1:CA:39:G:C2	1:CA:40:C:C2	3.05	0.44
1:CA:218:U:C2'	1:CA:219:U:H5'	2.47	0.44
1:CA:327:A:C2	1:CA:329:A:C4	3.04	0.44
1:CA:407:U:OP1	4:CD:3:ARG:NH2	2.50	0.44
1:CA:689:C:H2'	1:CA:690:G:O4'	2.16	0.44
1:CA:775:G:C2'	1:CA:776:G:H5'	2.48	0.44
1:CA:836:G:C6	1:CA:837:U:C2	3.05	0.44
1:CA:1007:U:C2'	1:CA:1008:U:H5'	2.46	0.44
1:CA:1206:G:C6	1:CA:1207:G:C5	3.05	0.44
1:CA:1265:C:C2	1:CA:1266:G:N7	2.85	0.44
3:CC:141:ALA:O	3:CC:146:ALA:HB3	2.16	0.44
5:CE:25:VAL:O	5:CE:26:LYS:C	2.60	0.44
7:CG:136:LYS:O	7:CG:136:LYS:HD2	2.17	0.44
10:CJ:52:LEU:HD23	10:CJ:62:ARG:HG2	1.98	0.44
10:CJ:52:LEU:HD23	10:CJ:62:ARG:CG	2.47	0.44
11:CK:112:ASP:HB3	21:CU:20:LYS:HE3	2.00	0.44
12:CL:22:PRO:C	12:CL:24:LEU:H	2.25	0.44
12:CL:114:ARG:CZ	12:CL:121:ARG:HA	2.47	0.44
14:CN:58:SER:O	14:CN:59:ARG:HG3	2.17	0.44
22:DA:92:U:H2'	22:DA:93:G:O4'	2.15	0.44
22:DA:121:G:H1'	22:DA:131:A:N1	2.32	0.44
22:DA:200:U:C6	22:DA:201:C:C5	3.05	0.44
22:DA:253:C:H2'	22:DA:254:G:H5'	1.98	0.44
22:DA:419:U:C4	22:DA:420:C:C5	3.06	0.44
22:DA:600:G:H1'	26:DE:100:MET:HG2	2.00	0.44
22:DA:681:G:C4	22:DA:682:G:C8	3.06	0.44
22:DA:730:A:OP1	22:DA:1775:U:O2'	2.24	0.44
22:DA:769:U:N3	22:DA:770:G:N7	2.65	0.44
22:DA:1439:A:C2	22:DA:1553:A:C4	3.05	0.44
22:DA:2234:G:C6	22:DA:2235:G:C5	3.05	0.44
22:DA:2518:A:N3	22:DA:2518:A:H2'	2.32	0.44
22:DA:2800:A:H3'	22:DA:2801:G:H5'	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:18:LYS:O	24:DC:19:VAL:CB	2.65	0.44
24:DC:221:ARG:NH2	58:DC:306:HOH:O	2.50	0.44
25:DD:18:ASP:OD2	25:DD:18:ASP:N	2.51	0.44
27:DF:136:ILE:HA	27:DF:141:ILE:HG21	1.98	0.44
28:DG:91:GLY:HA3	28:DG:160:LYS:HG3	1.99	0.44
29:DH:25:TYR:O	29:DH:29:PHE:HB3	2.18	0.44
29:DH:37:VAL:HG22	29:DH:38:PRO:HD2	1.98	0.44
30:DI:20:PRO:CG	30:DI:23:PRO:HG2	2.47	0.44
33:DL:50:PHE:CZ	33:DL:52:GLY:O	2.70	0.44
33:DL:91:ASP:HB3	33:DL:94:THR:HB	2.00	0.44
35:DN:34:ILE:HD11	35:DN:44:LEU:CD2	2.48	0.44
35:DN:87:PHE:CZ	35:DN:94:TYR:HB3	2.52	0.44
38:DQ:93:LYS:O	38:DQ:97:ASP:HB2	2.17	0.44
39:DR:49:ILE:HG22	39:DR:53:PHE:C	2.42	0.44
41:DT:72:GLN:O	41:DT:74:ILE:HG23	2.18	0.44
44:DW:45:PHE:CG	44:DW:80:ILE:HD11	2.52	0.44
44:DW:46:HIS:CD2	44:DW:77:ARG:HD3	2.52	0.44
50:D2:1:MET:O	50:D2:2:LYS:C	2.60	0.44
1:AA:600:A:C2	1:AA:601:G:C4	3.05	0.44
1:AA:636:U:H5”	17:AQ:6:ARG:HG2	1.99	0.44
1:AA:727:G:N2	1:AA:731:G:C4	2.85	0.44
1:AA:803:G:C5	1:AA:804:U:C4	3.06	0.44
1:AA:945:G:C2	1:AA:946:A:C8	3.05	0.44
1:AA:1182:G:C4’	1:AA:1183:U:H5’	2.48	0.44
1:AA:1317:C:O2’	14:AN:49:GLN:HG2	2.17	0.44
4:AD:4:TYR:O	4:AD:5:LEU:HB3	2.18	0.44
5:AE:83:HIS:HB2	5:AE:84:PRO:CD	2.48	0.44
5:AE:100:SER:O	5:AE:101:GLU:C	2.60	0.44
5:AE:101:GLU:CB	5:AE:122:ASN:CB	2.94	0.44
9:AI:13:LYS:O	9:AI:15:SER:N	2.47	0.44
9:AI:84:THR:HG21	9:AI:103:PHE:CB	2.47	0.44
13:AM:16:VAL:CG2	13:AM:41:GLU:HB2	2.47	0.44
22:BA:428:A:H2’	22:BA:429:A:C8	2.52	0.44
22:BA:668:A:H2’	22:BA:669:G:OP1	2.17	0.44
22:BA:1059:G:O2’	30:BI:129:ILE:HA	2.17	0.44
22:BA:1071:G:P	22:BA:1071:G:H8	2.39	0.44
22:BA:1794:A:C2’	22:BA:1795:C:O5’	2.66	0.44
22:BA:1850:G:C2	22:BA:1893:C:O2	2.71	0.44
22:BA:1875:G:C2’	22:BA:1876:A:OP2	2.65	0.44
22:BA:2218:G:O2’	22:BA:2219:U:H5’	2.17	0.44
22:BA:2280:G:C2	22:BA:2281:A:C8	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2716:C:C2'	22:BA:2717:C:H5'	2.48	0.44
24:BC:195:VAL:CG1	24:BC:196:GLY:N	2.80	0.44
26:BE:32:VAL:HG23	26:BE:33:VAL:N	2.32	0.44
27:BF:5:HIS:CE1	27:BF:9:LYS:HE3	2.53	0.44
29:BH:62:LEU:HD12	29:BH:62:LEU:O	2.17	0.44
32:BK:66:LYS:HB3	32:BK:66:LYS:HE2	1.84	0.44
33:BL:62:PRO:CG	51:B3:25:LYS:HD3	2.47	0.44
34:BM:78:LEU:N	34:BM:78:LEU:HD12	2.32	0.44
44:BW:56:ASP:O	44:BW:57:HIS:CB	2.65	0.44
45:BX:43:GLU:O	45:BX:44:LYS:C	2.61	0.44
1:CA:142:G:C2	1:CA:143:A:H1'	2.52	0.44
1:CA:374:A:N3	1:CA:375:U:C6	2.86	0.44
1:CA:743:A:C5	1:CA:744:C:C5	3.06	0.44
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.82	0.44
2:CB:27:MET:HE2	2:CB:187:VAL:HG22	2.00	0.44
2:CB:56:GLU:CD	2:CB:56:GLU:N	2.74	0.44
2:CB:71:GLY:HA2	2:CB:164:ILE:CG2	2.47	0.44
4:CD:46:PRO:O	4:CD:47:ARG:C	2.60	0.44
10:CJ:73:LEU:C	10:CJ:73:LEU:HD23	2.43	0.44
14:CN:87:ALA:HB1	14:CN:92:GLU:HB2	2.00	0.44
15:CO:13:SER:O	15:CO:14:GLU:HG3	2.18	0.44
17:CQ:51:ASN:ND2	17:CQ:51:ASN:O	2.51	0.44
17:CQ:69:LYS:C	17:CQ:70:THR:HG1	2.11	0.44
22:DA:84:A:N6	22:DA:99:U:H4'	2.32	0.44
22:DA:188:G:C6	22:DA:189:G:C4	3.05	0.44
22:DA:207:A:C4	22:DA:208:C:C6	3.06	0.44
22:DA:449:A:N7	22:DA:450:G:N7	2.65	0.44
22:DA:1179:G:C6	22:DA:1180:U:H1'	2.52	0.44
22:DA:1275:A:H4'	22:DA:1276:A:OP1	2.16	0.44
22:DA:1286:A:C6	22:DA:1329:U:C4	3.04	0.44
22:DA:1310:G:H2'	22:DA:1311:G:H5'	1.99	0.44
22:DA:1312:U:O2	22:DA:1603:A:C2	2.71	0.44
22:DA:1345:C:H5'	22:DA:1396:U:O4	2.17	0.44
22:DA:1409:U:H2'	22:DA:1410:G:O4'	2.17	0.44
22:DA:1726:C:H2'	22:DA:1727:C:H6	1.82	0.44
22:DA:2032:G:H1'	25:DD:150:GLN:HE22	1.79	0.44
22:DA:2308:G:C4'	22:DA:2309:A:OP2	2.65	0.44
23:DB:76:G:H2'	23:DB:77:U:O4'	2.18	0.44
24:DC:178:SER:O	24:DC:271:ARG:HB2	2.17	0.44
26:DE:108:ILE:HD13	26:DE:181:ILE:HG13	1.98	0.44
27:DF:117:LEU:CD2	27:DF:176:PRO:HG2	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:28:LEU:HD11	30:DI:35:ILE:CD1	2.47	0.44
39:DR:51:VAL:O	39:DR:52:PRO:C	2.59	0.44
1:AA:8:A:H5'	5:AE:125:ALA:O	2.17	0.44
1:AA:721:G:C6	1:AA:733:G:C2	3.05	0.44
1:AA:723:U:O5'	21:AU:49:LYS:HG2	2.17	0.44
1:AA:926:G:C6	1:AA:1505:G:C5	3.05	0.44
1:AA:937:A:N6	1:AA:1345:U:O4	2.50	0.44
1:AA:949:A:C5	1:AA:950:U:C5	3.05	0.44
1:AA:1504:G:OP2	1:AA:1507:A:O2'	2.26	0.44
2:AB:33:GLY:O	2:AB:34:ALA:HB2	2.18	0.44
2:AB:208:ARG:C	2:AB:210:VAL:N	2.74	0.44
5:AE:56:VAL:N	5:AE:57:PRO:HD2	2.33	0.44
6:AF:45:ARG:HG2	6:AF:46:GLN:N	2.32	0.44
6:AF:90:MET:O	6:AF:91:ARG:O	2.36	0.44
8:AH:111:MET:CE	8:AH:116:ALA:HA	2.46	0.44
9:AI:90:TYR:O	9:AI:91:ASP:CG	2.61	0.44
11:AK:16:VAL:HG13	11:AK:17:SER:H	1.82	0.44
12:AL:101:ALA:O	12:AL:102:LEU:C	2.61	0.44
14:AN:87:ALA:O	14:AN:92:GLU:HB2	2.18	0.44
22:BA:414:C:H2'	22:BA:415:A:C8	2.52	0.44
22:BA:685:A:H1'	22:BA:688:U:O4	2.18	0.44
22:BA:1100:C:H2'	22:BA:1101:U:C6	2.52	0.44
22:BA:1359:A:N7	22:BA:1373:A:C2	2.85	0.44
22:BA:1441:G:H2'	22:BA:1442:U:C6	2.52	0.44
22:BA:1442:U:H2'	22:BA:1443:U:C6	2.52	0.44
22:BA:1635:A:C2	22:BA:1636:U:H1'	2.52	0.44
22:BA:1688:U:C4	22:BA:1698:A:C2	3.06	0.44
22:BA:1917:U:N3	22:BA:1918:A:C4	2.85	0.44
22:BA:2352:A:C2'	22:BA:2353:G:H5'	2.48	0.44
22:BA:2511:U:O4	22:BA:2575:C:N3	2.50	0.44
22:BA:2623:G:H4'	22:BA:2825:G:C8	2.53	0.44
24:BC:195:VAL:O	24:BC:196:GLY:O	2.35	0.44
29:BH:31:VAL:N	29:BH:32:PRO:CD	2.80	0.44
30:BI:67:PHE:CD2	30:BI:67:PHE:N	2.85	0.44
30:BI:74:PRO:O	30:BI:75:PRO:O	2.36	0.44
38:BQ:58:ARG:O	38:BQ:62:ILE:HG13	2.18	0.44
49:B1:16:GLY:O	49:B1:17:THR:C	2.60	0.44
1:CA:68:G:N2	1:CA:152:A:H1'	2.33	0.44
1:CA:178:C:H2'	1:CA:179:A:O4'	2.18	0.44
1:CA:302:G:C6	1:CA:303:A:C5	3.05	0.44
1:CA:330:C:O2	1:CA:330:C:H2'	2.15	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:577:G:O2'	1:CA:578:C:H5'	2.17	0.44
1:CA:1068:G:H2'	1:CA:1069:C:H5'	2.00	0.44
2:CB:56:GLU:HG2	2:CB:198:PHE:CZ	2.53	0.44
2:CB:82:ASP:N	2:CB:85:LEU:HB3	2.33	0.44
2:CB:186:ILE:HA	2:CB:200:ILE:HB	1.98	0.44
4:CD:11:LEU:HD13	4:CD:63:ARG:HD3	2.00	0.44
5:CE:103:THR:O	5:CE:122:ASN:HA	2.18	0.44
9:CI:130:ARG:HD2	9:CI:130:ARG:HA	1.81	0.44
10:CJ:7:ARG:HD2	10:CJ:73:LEU:HD21	1.99	0.44
14:CN:48:LEU:O	14:CN:48:LEU:HD23	2.17	0.44
16:CP:67:ILE:HG22	16:CP:68:SER:O	2.17	0.44
17:CQ:28:PHE:CE1	17:CQ:37:PHE:HB3	2.53	0.44
18:CR:33:ILE:CA	18:CR:40:VAL:HG23	2.45	0.44
19:CS:74:PHE:CD1	19:CS:74:PHE:N	2.84	0.44
22:DA:39:G:C5	22:DA:40:U:C5	3.05	0.44
22:DA:118:A:N3	22:DA:178:G:H1'	2.32	0.44
22:DA:207:A:C2	22:DA:208:C:H1'	2.52	0.44
22:DA:699:A:C2'	22:DA:700:G:H5'	2.48	0.44
22:DA:1090:A:N1	22:DA:1091:G:N7	2.66	0.44
22:DA:1369:G:N3	22:DA:1370:C:C6	2.84	0.44
22:DA:1497:U:O2'	22:DA:1577:C:H5"	2.18	0.44
22:DA:1524:G:C2	22:DA:1525:A:C8	3.05	0.44
22:DA:1604:C:H5"	58:DA:3406:HOH:O	2.17	0.44
22:DA:1867:G:O6	22:DA:1875:G:C2	2.70	0.44
22:DA:2436:G:C2	22:DA:2437:G:C8	3.05	0.44
23:DB:58:A:H2'	23:DB:59:A:O4'	2.18	0.44
24:DC:124:ILE:O	24:DC:124:ILE:HG22	2.16	0.44
26:DE:61:ARG:O	26:DE:62:GLN:C	2.61	0.44
27:DF:57:LEU:HB2	27:DF:65:PRO:HG2	2.00	0.44
30:DI:65:ARG:HG3	30:DI:66:SER:N	2.31	0.44
36:DO:67:ASN:O	36:DO:70:ALA:N	2.51	0.44
37:DP:103:ARG:HD3	37:DP:108:ALA:HB2	1.98	0.44
39:DR:27:ILE:HG13	39:DR:33:VAL:HG11	2.00	0.44
42:DU:83:VAL:HG11	42:DU:94:ARG:HB3	1.99	0.44
46:DY:1:MET:HA	46:DY:4:LYS:HB2	1.99	0.44
1:AA:417:G:C2	1:AA:418:C:C2	3.06	0.44
1:AA:452:A:H2'	1:AA:453:G:H5'	2.00	0.44
1:AA:663:A:N1	1:AA:743:A:C2	2.85	0.44
1:AA:771:G:O2'	1:AA:772:U:H5'	2.16	0.44
1:AA:781:A:H4'	1:AA:1522:U:O2'	2.17	0.44
1:AA:1014:A:C4	19:AS:34:TRP:CZ3	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1068:G:O2'	1:AA:1191:A:N1	2.38	0.44
1:AA:1538:C:O2'	1:AA:1539:C:H5'	2.17	0.44
2:AB:117:LEU:O	2:AB:120:GLN:HB3	2.18	0.44
2:AB:144:LEU:N	2:AB:144:LEU:HD23	2.32	0.44
3:AC:14:ILE:O	3:AC:15:VAL:HG22	2.18	0.44
3:AC:191:THR:HB	3:AC:193:TYR:CE2	2.52	0.44
5:AE:45:ARG:HA	5:AE:72:ILE:O	2.18	0.44
9:AI:22:LYS:HD2	9:AI:22:LYS:C	2.43	0.44
12:AL:23:ALA:C	12:AL:24:LEU:O	2.60	0.44
18:AR:70:TYR:HB2	18:AR:71:THR:HG22	2.00	0.44
20:AT:55:GLN:N	20:AT:56:PRO:HD2	2.33	0.44
22:BA:26:G:H1'	22:BA:514:A:H61	1.83	0.44
22:BA:662:G:O3'	33:BL:16:GLY:HA2	2.17	0.44
22:BA:880:G:C4	22:BA:881:G:C8	3.06	0.44
22:BA:1014:A:C6	22:BA:1015:U:C4	3.05	0.44
22:BA:1179:G:C5	22:BA:1180:U:N1	2.86	0.44
22:BA:2563:U:H1'	22:BA:2566:A:N6	2.33	0.44
22:BA:2824:C:C4	22:BA:2825:G:C5	3.05	0.44
23:BB:94:A:H2'	23:BB:95:U:C6	2.53	0.44
24:BC:123:ALA:O	24:BC:125:LYS:N	2.51	0.44
25:BD:9:VAL:O	25:BD:197:THR:OG1	2.35	0.44
29:BH:89:LYS:CE	29:BH:124:THR:HG22	2.48	0.44
33:BL:14:LYS:O	33:BL:15:ALA:C	2.61	0.44
36:BO:29:HIS:C	36:BO:29:HIS:CD2	2.94	0.44
46:BY:9:LYS:HB3	46:BY:12:GLU:CG	2.48	0.44
46:BY:32:ALA:HB2	46:BY:37:LEU:CD2	2.48	0.44
48:B0:41:HIS:HA	48:B0:49:TYR:OH	2.17	0.44
53:B5:65:LEU:HD21	53:B5:195:ARG:CB	2.47	0.44
1:CA:57:G:C6	1:CA:58:C:C4	3.06	0.44
1:CA:121:U:H3'	1:CA:122:G:C5'	2.48	0.44
1:CA:183:C:H2'	1:CA:183:C:O2	2.18	0.44
1:CA:528:C:O2	1:CA:528:C:H2'	2.16	0.44
1:CA:570:G:H1'	1:CA:820:U:C4	2.52	0.44
1:CA:676:A:H2'	1:CA:677:U:C6	2.52	0.44
3:CC:23:PHE:CG	3:CC:24:ALA:N	2.85	0.44
3:CC:184:TYR:CD1	3:CC:201:TRP:CD1	3.06	0.44
7:CG:42:ILE:CG2	7:CG:116:MET:HG3	2.48	0.44
8:CH:101:ILE:HD12	8:CH:101:ILE:C	2.42	0.44
10:CJ:22:THR:HA	10:CJ:25:ILE:HG22	1.98	0.44
10:CJ:81:GLU:HA	10:CJ:84:VAL:HG12	2.00	0.44
12:CL:44:LYS:HB3	12:CL:45:PRO:HD3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:31:ILE:N	14:CN:31:ILE:HD12	2.32	0.44
20:CT:36:TYR:CD1	20:CT:37:ALA:N	2.85	0.44
22:DA:108:G:H1'	22:DA:347:A:N3	2.33	0.44
22:DA:453:A:H4'	22:DA:472:A:H62	1.82	0.44
22:DA:693:A:C5	22:DA:694:U:C4	3.06	0.44
22:DA:920:A:OP1	47:DZ:19:LYS:HE3	2.18	0.44
22:DA:1066:U:C2'	22:DA:1067:A:OP1	2.66	0.44
22:DA:1190:G:OP1	33:DL:32:GLY:CA	2.66	0.44
22:DA:1364:G:H2'	22:DA:1365:A:C5'	2.44	0.44
22:DA:1645:G:H4'	22:DA:1646:C:C5	2.52	0.44
22:DA:2128:G:H1'	22:DA:2173:A:O2'	2.17	0.44
22:DA:2513:A:C5	22:DA:2514:U:C4	3.06	0.44
22:DA:2540:C:C2	22:DA:2541:A:C8	3.05	0.44
22:DA:2699:C:H2'	22:DA:2700:A:O4'	2.17	0.44
23:DB:68:C:H2'	23:DB:69:G:O4'	2.16	0.44
24:DC:174:LEU:O	24:DC:181:MET:HA	2.17	0.44
24:DC:244:PRO:C	24:DC:245:VAL:HG13	2.42	0.44
26:DE:101:TYR:CD2	26:DE:101:TYR:C	2.96	0.44
27:DF:2:ALA:N	27:DF:94:GLU:OE2	2.50	0.44
30:DI:28:LEU:HD11	30:DI:35:ILE:HD12	1.99	0.44
42:DU:56:GLY:O	42:DU:57:GLY:C	2.60	0.44
1:AA:77:A:H2'	1:AA:78:A:C8	2.53	0.44
1:AA:268:U:H2'	1:AA:269:C:C6	2.52	0.44
1:AA:427:U:C4	1:AA:428:G:C6	3.06	0.44
1:AA:828:U:C5	1:AA:859:G:C4	3.06	0.44
1:AA:957:U:H1'	1:AA:960:U:N3	2.33	0.44
1:AA:1024:G:C2'	1:AA:1025:U:O5'	2.66	0.44
1:AA:1027:C:C2	1:AA:1034:G:O6	2.70	0.44
2:AB:132:LYS:O	2:AB:136:MET:HB2	2.17	0.44
3:AC:50:ALA:O	3:AC:51:SER:C	2.61	0.44
10:AJ:18:ILE:CG2	10:AJ:19:ASP:N	2.80	0.44
10:AJ:23:ALA:O	10:AJ:27:GLU:HB2	2.17	0.44
10:AJ:71:LEU:O	10:AJ:72:ARG:HD3	2.17	0.44
12:AL:94:ARG:C	12:AL:95:TYR:CD2	2.95	0.44
13:AM:66:GLU:O	13:AM:67:GLY:C	2.60	0.44
16:AP:6:LEU:HD13	16:AP:71:VAL:HG23	1.99	0.44
16:AP:43:ALA:O	16:AP:46:LYS:HD2	2.17	0.44
20:AT:54:MET:CE	20:AT:58:VAL:HG21	2.47	0.44
21:AU:19:PHE:O	21:AU:22:SER:HB3	2.18	0.44
22:BA:57:C:H2'	22:BA:58:G:O4'	2.18	0.44
22:BA:197:A:C6	22:BA:198:C:C2	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:481:G:C2	22:BA:507:A:C4	3.06	0.44
22:BA:1103:A:OP2	22:BA:1104:C:C5	2.71	0.44
22:BA:1185:G:H5"	22:BA:1186:G:P	2.58	0.44
22:BA:1366:A:C2	22:BA:1367:A:H1'	2.52	0.44
22:BA:2502:G:C5'	22:BA:2503:A:H5"	2.46	0.44
26:BE:31:VAL:HG21	26:BE:104:ALA:HB2	1.99	0.44
27:BF:6:ASP:O	27:BF:7:TYR:C	2.61	0.44
29:BH:97:ARG:O	29:BH:101:ASP:HB2	2.17	0.44
29:BH:100:ALA:HB2	29:BH:115:VAL:HG21	1.98	0.44
30:BI:72:LYS:CD	30:BI:72:LYS:N	2.80	0.44
30:BI:97:LYS:HB3	30:BI:139:VAL:CG2	2.48	0.44
33:BL:77:ILE:HD11	33:BL:101:ILE:HG21	2.00	0.44
33:BL:89:VAL:O	33:BL:94:THR:HG21	2.18	0.44
37:BP:34:GLU:N	37:BP:37:LYS:O	2.46	0.44
1:CA:78:A:C2	1:CA:92:U:O2	2.71	0.44
1:CA:128:G:C2	1:CA:234:C:C2	3.05	0.44
1:CA:462:G:O6	1:CA:469:C:N4	2.50	0.44
1:CA:635:A:C6	1:CA:636:U:C4	3.05	0.44
1:CA:756:C:H2'	1:CA:757:U:O5'	2.18	0.44
1:CA:1002:G:C2	1:CA:1003:G:H1'	2.53	0.44
1:CA:1007:U:C2'	1:CA:1008:U:C5'	2.95	0.44
1:CA:1015:G:H2'	1:CA:1016:A:O4'	2.18	0.44
1:CA:1092:A:N1	1:CA:1183:U:O2	2.51	0.44
1:CA:1186:G:H4'	9:CI:112:GLU:CD	2.43	0.44
1:CA:1265:C:N3	1:CA:1266:G:N7	2.65	0.44
1:CA:1291:U:H4'	9:CI:42:GLU:HG2	2.00	0.44
1:CA:1537:U:C4	1:CA:1538:C:C4	3.06	0.44
2:CB:21:ARG:HA	2:CB:21:ARG:NE	2.30	0.44
4:CD:9:LEU:O	4:CD:10:LYS:C	2.60	0.44
4:CD:24:GLY:O	4:CD:161:LEU:HD11	2.17	0.44
4:CD:195:ILE:O	4:CD:195:ILE:CG1	2.66	0.44
5:CE:83:HIS:HB2	5:CE:84:PRO:HD2	1.98	0.44
5:CE:105:ILE:HG13	5:CE:105:ILE:O	2.17	0.44
16:CP:67:ILE:HG23	16:CP:71:VAL:CG1	2.48	0.44
19:CS:58:VAL:HA	19:CS:59:PRO:HD3	1.89	0.44
22:DA:40:U:C5	22:DA:41:C:N4	2.85	0.44
22:DA:54:G:N1	22:DA:55:G:N7	2.65	0.44
22:DA:187:G:N1	22:DA:210:C:C2	2.85	0.44
22:DA:406:G:H2'	22:DA:407:G:C8	2.52	0.44
22:DA:422:A:C2	22:DA:423:A:C4	3.05	0.44
22:DA:426:C:C4	22:DA:427:U:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:465:G:N2	22:DA:684:G:H1'	2.33	0.44
22:DA:517:C:C2'	22:DA:518:G:O5'	2.66	0.44
22:DA:599:A:C2	22:DA:659:G:C5	3.05	0.44
22:DA:1193:G:C2	22:DA:1194:A:C5	3.06	0.44
22:DA:1248:G:C5	26:DE:46:GLN:NE2	2.86	0.44
22:DA:1403:A:C2	22:DA:1404:C:C2	3.06	0.44
22:DA:1999:C:H5"	22:DA:2723:C:O2'	2.18	0.44
22:DA:2134:A:C2	22:DA:2159:G:H1'	2.53	0.44
22:DA:2166:U:H2'	22:DA:2167:U:H5'	2.00	0.44
22:DA:2350:C:H2'	22:DA:2351:G:O4'	2.17	0.44
22:DA:2410:G:H2'	22:DA:2411:A:O4'	2.17	0.44
24:DC:158:ALA:HA	24:DC:195:VAL:HG22	2.00	0.44
25:DD:4:LEU:HD22	25:DD:101:PHE:CE2	2.52	0.44
25:DD:125:TRP:O	25:DD:126:ASN:CB	2.66	0.44
26:DE:131:THR:HB	26:DE:164:LEU:HD22	1.99	0.44
29:DH:31:VAL:CB	29:DH:32:PRO:HD3	2.47	0.44
32:DK:111:LYS:HG3	32:DK:112:PHE:CE1	2.52	0.44
33:DL:55:MET:SD	33:DL:59:ARG:CZ	3.06	0.44
35:DN:69:ARG:C	35:DN:70:THR:CG2	2.90	0.44
40:DS:30:SER:HA	40:DS:33:LEU:HD12	1.99	0.44
41:DT:24:MET:HG2	41:DT:29:THR:O	2.18	0.44
45:DX:39:TRP:HB2	45:DX:46:PHE:CE2	2.53	0.44
45:DX:47:VAL:O	45:DX:47:VAL:CG1	2.65	0.44
45:DX:52:SER:O	45:DX:55:GLY:N	2.51	0.44
48:D0:40:ARG:O	48:D0:41:HIS:HB2	2.18	0.44
1:AA:197:A:N3	1:AA:198:G:H1'	2.33	0.44
1:AA:200:G:N2	1:AA:218:U:O2	2.51	0.44
1:AA:264:C:H2'	1:AA:265:G:O4'	2.18	0.44
1:AA:397:A:N7	1:AA:548:G:C8	2.85	0.44
1:AA:723:U:H2'	1:AA:855:U:H4'	1.99	0.44
1:AA:1028:C:C5	1:AA:1029:U:C5	3.05	0.44
1:AA:1220:G:H2'	1:AA:1221:G:O4'	2.18	0.44
1:AA:1317:C:H2'	1:AA:1318:A:H5'	1.99	0.44
1:AA:1399:C:C4	1:AA:1502:A:N1	2.86	0.44
2:AB:81:LYS:HG3	2:AB:91:PHE:CZ	2.53	0.44
2:AB:94:HIS:ND1	2:AB:146:ASN:HB2	2.32	0.44
2:AB:149:GLY:O	2:AB:150:GLY:C	2.60	0.44
4:AD:147:GLU:O	4:AD:148:LYS:C	2.61	0.44
4:AD:152:GLN:O	4:AD:155:VAL:HG12	2.18	0.44
12:AL:44:LYS:O	12:AL:45:PRO:C	2.61	0.44
16:AP:5:ARG:HA	16:AP:68:SER:OG	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:79:VAL:O	17:AQ:80:GLU:HB2	2.18	0.44
22:BA:18:U:O2'	22:BA:19:A:H5'	2.17	0.44
22:BA:590:A:H2'	22:BA:591:U:C6	2.53	0.44
22:BA:900:A:C5	22:BA:901:C:C6	3.06	0.44
22:BA:910:A:H2'	22:BA:911:A:C8	2.53	0.44
22:BA:1087:G:N2	22:BA:1090:A:C8	2.86	0.44
22:BA:1091:G:H2'	22:BA:1092:C:C5	2.52	0.44
22:BA:1408:G:C6	22:BA:1409:U:C4	3.06	0.44
22:BA:2232:C:C4	22:BA:2233:U:C4	3.05	0.44
22:BA:2533:U:H2'	22:BA:2534:A:H5'	1.99	0.44
27:BF:132:VAL:O	27:BF:132:VAL:CG2	2.66	0.44
29:BH:57:LYS:HG3	29:BH:58:LEU:N	2.33	0.44
34:BM:45:GLN:HG2	34:BM:125:PRO:HD3	1.99	0.44
39:BR:34:GLU:HG3	39:BR:60:LYS:HE2	1.99	0.44
45:BX:4:VAL:N	45:BX:33:LEU:HD11	2.33	0.44
1:CA:120:A:H2'	1:CA:120:A:OP2	2.18	0.44
1:CA:237:G:C4	1:CA:238:A:C8	3.06	0.44
1:CA:685:G:C2	1:CA:686:U:C4	3.06	0.44
1:CA:1361:G:C4	1:CA:1362:A:C8	3.06	0.44
9:CI:88:MET:HB2	9:CI:92:GLU:OE2	2.17	0.44
11:CK:35:THR:OG1	11:CK:40:ASN:N	2.51	0.44
14:CN:85:ARG:O	14:CN:86:GLU:C	2.61	0.44
19:CS:10:PHE:O	19:CS:39:THR:OG1	2.35	0.44
22:DA:82:U:N3	22:DA:83:A:N7	2.66	0.44
22:DA:281:C:H2'	22:DA:282:A:C8	2.53	0.44
22:DA:601:C:H2'	22:DA:602:A:O4'	2.18	0.44
22:DA:687:C:N3	22:DA:788:A:H5'	2.33	0.44
22:DA:770:G:O4'	22:DA:1379:U:C5	2.71	0.44
22:DA:835:C:C4	22:DA:836:G:N7	2.85	0.44
22:DA:1222:U:H2'	22:DA:1223:G:C8	2.53	0.44
22:DA:1362:C:N3	22:DA:1363:C:C2	2.86	0.44
22:DA:1804:C:N4	22:DA:1814:G:N2	2.66	0.44
22:DA:1936:A:C8	22:DA:1945:G:C6	3.06	0.44
24:DC:69:ARG:NH2	24:DC:116:ILE:HD11	2.32	0.44
27:DF:4:LEU:O	27:DF:8:TYR:N	2.51	0.44
27:DF:33:LYS:HD3	27:DF:92:ARG:NH1	2.33	0.44
33:DL:116:VAL:HG21	33:DL:135:ILE:HA	1.99	0.44
36:DO:53:THR:HB	36:DO:65:THR:CG2	2.48	0.44
42:DU:12:ILE:CG2	42:DU:80:ALA:HB2	2.48	0.44
42:DU:18:ASP:HB3	42:DU:21:LYS:HG3	1.99	0.44
47:DZ:2:ALA:CB	47:DZ:39:GLU:HB2	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:43:C:H2'	1:AA:44:A:O4'	2.18	0.44
1:AA:283:U:C5	1:AA:284:C:C5	3.06	0.44
1:AA:557:G:C6	1:AA:558:G:N1	2.86	0.44
1:AA:602:A:C2	1:AA:603:U:O2	2.71	0.44
1:AA:722:G:C2'	1:AA:723:U:OP2	2.65	0.44
1:AA:1149:C:O2'	1:AA:1150:A:H5'	2.18	0.44
1:AA:1211:U:H1'	1:AA:1213:A:C2	2.53	0.44
1:AA:1296:C:H5"	1:AA:1297:G:OP2	2.18	0.44
2:AB:66:LYS:HD3	2:AB:66:LYS:N	2.33	0.44
2:AB:149:GLY:C	2:AB:151:ILE:N	2.76	0.44
4:AD:50:ASP:C	4:AD:50:ASP:OD2	2.60	0.44
5:AE:81:LEU:HB3	5:AE:147:MET:HE3	1.99	0.44
7:AG:139:GLU:OE1	7:AG:139:GLU:HA	2.18	0.44
9:AI:20:PHE:O	9:AI:63:LEU:HA	2.17	0.44
9:AI:36:GLU:HA	9:AI:40:GLY:HA3	2.00	0.44
11:AK:86:VAL:HG12	11:AK:93:ARG:NH1	2.33	0.44
12:AL:56:ARG:NH1	12:AL:62:GLU:HG3	2.33	0.44
14:AN:53:ARG:HG3	14:AN:59:ARG:CZ	2.48	0.44
16:AP:2:VAL:HG22	16:AP:65:ALA:HB2	1.99	0.44
17:AQ:12:VAL:O	17:AQ:13:VAL:CG1	2.66	0.44
22:BA:142:A:C8	22:BA:143:C:C5	3.06	0.44
22:BA:273:G:N2	22:BA:365:U:O2	2.51	0.44
22:BA:301:G:H4'	22:BA:301:G:OP1	2.18	0.44
22:BA:713:G:C6	22:BA:714:U:C4	3.06	0.44
22:BA:1722:A:N6	22:BA:1738:G:H1'	2.33	0.44
22:BA:1996:C:H4'	22:BA:1997:C:OP1	2.18	0.44
22:BA:2018:G:C2	22:BA:2019:A:C4	3.06	0.44
29:BH:4:ILE:HG23	29:BH:17:ASP:O	2.17	0.44
29:BH:99:ILE:CD1	29:BH:117:LEU:HD13	2.48	0.44
32:BK:103:VAL:O	32:BK:122:VAL:HB	2.18	0.44
35:BN:8:ARG:NH2	35:BN:39:PRO:HA	2.33	0.44
35:BN:84:GLY:N	35:BN:85:PRO:HD2	2.33	0.44
52:B4:25:VAL:HB	52:B4:35:GLN:HB2	1.99	0.44
53:B5:65:LEU:CD2	53:B5:195:ARG:CB	2.95	0.44
53:B5:84:ILE:O	53:B5:84:ILE:HG22	2.17	0.44
1:CA:9:G:H5'	5:CE:108:GLY:HA3	2.00	0.44
1:CA:39:G:N2	1:CA:40:C:C2	2.86	0.44
1:CA:261:U:O2'	1:CA:263:A:N7	2.50	0.44
1:CA:539:A:H2'	1:CA:540:G:C8	2.53	0.44
1:CA:642:A:O2'	8:CH:105:SER:OG	2.32	0.44
1:CA:844:G:C8	1:CA:844:G:OP2	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:974:A:C8	14:CN:71:HIS:CD2	3.06	0.44
1:CA:1004:A:C5	1:CA:1005:A:C6	3.05	0.44
1:CA:1317:C:H2'	1:CA:1318:A:O5'	2.18	0.44
1:CA:1417:G:N2	1:CA:1484:C:C4	2.86	0.44
2:CB:68:LEU:C	2:CB:68:LEU:CD2	2.90	0.44
2:CB:186:ILE:HA	2:CB:200:ILE:O	2.18	0.44
3:CC:111:LEU:HD22	3:CC:111:LEU:N	2.33	0.44
11:CK:40:ASN:O	11:CK:41:ALA:HB3	2.18	0.44
11:CK:77:TYR:CD1	11:CK:77:TYR:N	2.86	0.44
14:CN:41:ARG:HG2	14:CN:42:TRP:N	2.32	0.44
17:CQ:25:ILE:O	17:CQ:41:THR:HA	2.18	0.44
17:CQ:25:ILE:HG12	17:CQ:42:THR:O	2.18	0.44
20:CT:5:LYS:O	20:CT:6:SER:C	2.60	0.44
22:DA:738:G:N1	22:DA:739:A:C2	2.86	0.44
22:DA:856:G:C2	22:DA:922:C:C2	3.06	0.44
22:DA:972:A:N1	22:DA:973:A:N6	2.65	0.44
22:DA:983:A:N6	22:DA:984:A:C2	2.86	0.44
22:DA:1109:C:C4	22:DA:1110:G:O6	2.71	0.44
22:DA:1139:G:N2	22:DA:1140:C:C2	2.86	0.44
22:DA:1330:C:H2'	22:DA:1331:G:O5'	2.17	0.44
22:DA:1332:G:O6	22:DA:1609:A:C8	2.71	0.44
22:DA:1355:G:H2'	22:DA:1356:G:C5'	2.48	0.44
22:DA:1362:C:C2'	22:DA:1363:C:H5'	2.48	0.44
22:DA:1810:A:H2'	22:DA:1811:G:O4'	2.18	0.44
22:DA:2018:G:H2'	22:DA:2019:A:O4'	2.18	0.44
22:DA:2064:C:H2'	22:DA:2065:C:C6	2.53	0.44
22:DA:2104:C:N3	22:DA:2186:G:N2	2.66	0.44
22:DA:2179:C:H2'	22:DA:2180:U:C6	2.52	0.44
22:DA:2252:G:H2'	22:DA:2253:G:O4'	2.17	0.44
22:DA:2409:G:C6	22:DA:2410:G:C6	3.06	0.44
24:DC:104:ILE:HD12	24:DC:104:ILE:O	2.18	0.44
24:DC:176:LEU:HD12	24:DC:180:GLU:HB3	1.99	0.44
24:DC:227:PRO:C	24:DC:229:ASP:N	2.76	0.44
24:DC:251:GLN:HG2	24:DC:255:LYS:HB2	2.00	0.44
26:DE:130:LYS:HB2	26:DE:133:LEU:HB2	2.00	0.44
29:DH:27:ARG:HE	45:DX:60:ASP:CG	2.25	0.44
29:DH:29:PHE:O	29:DH:30:LEU:C	2.61	0.44
33:DL:30:THR:OG1	33:DL:31:GLY:N	2.51	0.44
33:DL:82:LEU:HD23	33:DL:82:LEU:C	2.43	0.44
39:DR:78:ARG:CB	39:DR:83:TYR:CD1	3.00	0.44
42:DU:74:ASN:CG	42:DU:96:PHE:CD1	2.96	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:96:PHE:CZ	42:DU:103:ILE:HG13	2.53	0.44
43:DV:80:HIS:CG	43:DV:81:PRO:HD2	2.53	0.44
50:D2:12:ARG:NH2	50:D2:44:VAL:CG1	2.81	0.44
1:AA:184:G:C6	1:AA:185:U:C4	3.06	0.43
1:AA:192:A:H2'	1:AA:193:C:C6	2.53	0.43
1:AA:554:A:H5'	12:AL:26:ALA:HB1	2.00	0.43
1:AA:651:C:H2'	1:AA:652:U:O5'	2.18	0.43
1:AA:654:G:C2'	1:AA:655:A:H5'	2.48	0.43
1:AA:862:C:H2'	1:AA:863:U:H5'	2.00	0.43
1:AA:935:A:C2	1:AA:936:C:C2	3.05	0.43
1:AA:1005:A:N6	1:AA:1006:G:C2	2.87	0.43
1:AA:1130:A:C1'	1:AA:1146:A:C2	3.01	0.43
1:AA:1154:G:H2'	1:AA:1155:A:C8	2.53	0.43
4:AD:58:LYS:HE2	4:AD:69:GLU:OE2	2.18	0.43
9:AI:30:ILE:CG2	9:AI:65:ILE:HD11	2.48	0.43
18:AR:32:TYR:CG	18:AR:55:LEU:HD11	2.53	0.43
22:BA:143:C:O2	41:BT:1:MET:N	2.44	0.43
22:BA:464:U:C6	22:BA:788:A:C2	3.06	0.43
22:BA:1073:A:C2'	22:BA:1074:G:H5"	2.48	0.43
22:BA:1098:A:N7	22:BA:1099:G:C6	2.86	0.43
22:BA:1125:G:C6	22:BA:1126:A:N6	2.86	0.43
22:BA:1199:U:H2'	22:BA:1200:C:C6	2.53	0.43
22:BA:1479:G:H2'	22:BA:1480:C:O4'	2.18	0.43
22:BA:1839:G:C2'	22:BA:1840:G:O5'	2.66	0.43
22:BA:1880:U:H2'	22:BA:1881:C:C6	2.53	0.43
22:BA:2298:A:C2	22:BA:2321:U:C5	3.06	0.43
22:BA:2315:G:H2'	22:BA:2316:G:C8	2.52	0.43
22:BA:2808:G:C2	22:BA:2891:U:C5	3.06	0.43
26:BE:157:LEU:HG	26:BE:169:VAL:HG21	2.00	0.43
29:BH:89:LYS:HE3	29:BH:124:THR:HG22	1.99	0.43
31:BJ:52:ASP:O	31:BJ:121:LYS:HE2	2.18	0.43
31:BJ:80:HIS:C	31:BJ:81:ILE:HG22	2.43	0.43
35:BN:51:LEU:O	35:BN:52:ILE:C	2.60	0.43
38:BQ:105:ALA:HB1	39:BR:40:MET:HE1	2.00	0.43
38:BQ:108:ALA:C	39:BR:48:LYS:NZ	2.76	0.43
47:BZ:17:LEU:O	47:BZ:18:PRO:C	2.61	0.43
49:B1:40:ASP:C	49:B1:40:ASP:OD1	2.61	0.43
1:CA:198:G:O2'	1:CA:199:A:H5'	2.18	0.43
1:CA:229:U:H2'	1:CA:230:G:C8	2.53	0.43
1:CA:747:A:N6	1:CA:748:G:C6	2.86	0.43
1:CA:980:C:O3'	14:CN:13:ARG:NH2	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1018:G:O6	1:CA:1019:A:N6	2.51	0.43
1:CA:1052:U:C5'	1:CA:1053:G:OP2	2.66	0.43
1:CA:1361:G:C4	1:CA:1362:A:N7	2.86	0.43
2:CB:26:LYS:HB2	2:CB:193:PRO:HD2	2.00	0.43
2:CB:164:ILE:O	2:CB:186:ILE:O	2.36	0.43
4:CD:62:ARG:NH1	4:CD:69:GLU:OE1	2.51	0.43
5:CE:83:HIS:NE2	8:CH:96:MET:CE	2.81	0.43
11:CK:72:ASP:CG	11:CK:73:ALA:N	2.76	0.43
17:CQ:10:GLY:HA3	17:CQ:25:ILE:HD13	2.00	0.43
17:CQ:14:SER:HB3	17:CQ:22:VAL:CG1	2.48	0.43
19:CS:66:MET:HE1	19:CS:74:PHE:CE2	2.53	0.43
22:DA:104:A:C5	22:DA:105:C:N3	2.86	0.43
22:DA:528:A:C2	22:DA:2043:C:H4'	2.53	0.43
22:DA:936:A:C2	22:DA:937:C:C2	3.06	0.43
22:DA:1448:G:C4	22:DA:1449:G:C8	3.06	0.43
22:DA:1744:A:C5	22:DA:1745:A:C5	3.05	0.43
22:DA:1757:A:N1	22:DA:1762:A:C2	2.86	0.43
22:DA:2061:G:C8	22:DA:2501:C:H4'	2.53	0.43
22:DA:2141:G:N2	22:DA:2151:U:O2	2.51	0.43
22:DA:2513:A:C6	22:DA:2514:U:C4	3.06	0.43
22:DA:2720:U:C6	22:DA:2872:A:N1	2.86	0.43
22:DA:2843:G:N2	22:DA:2875:C:N3	2.66	0.43
23:DB:7:G:O2'	36:DO:38:GLN:OE1	2.35	0.43
26:DE:45:ALA:HA	26:DE:87:ALA:O	2.18	0.43
27:DF:5:HIS:O	27:DF:9:LYS:HG3	2.18	0.43
27:DF:163:ASP:N	27:DF:163:ASP:OD1	2.51	0.43
30:DI:33:VAL:HA	30:DI:67:PHE:CE2	2.53	0.43
31:DJ:10:THR:O	31:DJ:11:VAL:C	2.61	0.43
31:DJ:10:THR:O	31:DJ:11:VAL:O	2.35	0.43
31:DJ:40:HIS:O	31:DJ:40:HIS:CG	2.69	0.43
37:DP:53:ARG:N	37:DP:57:SER:OG	2.50	0.43
39:DR:83:TYR:CD1	39:DR:83:TYR:C	2.96	0.43
42:DU:52:LEU:O	42:DU:53:ASN:CG	2.61	0.43
42:DU:82:ARG:HB2	42:DU:82:ARG:CZ	2.47	0.43
48:D0:44:THR:OG1	48:D0:48:TYR:N	2.51	0.43
51:D3:7:VAL:O	51:D3:10:ALA:HB3	2.18	0.43
1:AA:300:A:H2'	1:AA:301:G:O4'	2.18	0.43
1:AA:690:G:C6	1:AA:691:G:C6	3.07	0.43
1:AA:998:C:H2'	1:AA:999:C:C6	2.54	0.43
1:AA:1227:A:O2'	13:AM:115:PRO:HD2	2.18	0.43
1:AA:1250:A:O3'	9:AI:69:GLY:HA2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1322:C:O2'	1:AA:1323:G:OP2	2.29	0.43
7:AG:42:ILE:HG21	7:AG:116:MET:CG	2.48	0.43
7:AG:55:GLY:C	7:AG:57:SER:H	2.26	0.43
7:AG:58:GLU:O	7:AG:59:LEU:C	2.61	0.43
8:AH:29:SER:OG	8:AH:30:SER:N	2.50	0.43
9:AI:36:GLU:HA	9:AI:40:GLY:CA	2.49	0.43
10:AJ:54:SER:OG	10:AJ:55:PRO:HD2	2.18	0.43
22:BA:255:A:H2'	22:BA:256:A:O4'	2.19	0.43
22:BA:811:U:OP2	33:BL:20:GLY:C	2.61	0.43
22:BA:976:G:C2	22:BA:977:G:C8	3.06	0.43
22:BA:1003:G:C2	22:BA:1004:U:C5	3.06	0.43
22:BA:1439:A:C2	22:BA:1553:A:C5	3.06	0.43
22:BA:1665:A:H2'	22:BA:1666:G:O4'	2.18	0.43
22:BA:1754:A:N6	22:BA:1755:A:C6	2.86	0.43
22:BA:1820:U:O2'	24:BC:158:ALA:O	2.32	0.43
22:BA:1844:C:O3'	24:BC:256:LYS:NZ	2.50	0.43
22:BA:1963:U:H6	22:BA:1963:U:O5'	2.01	0.43
22:BA:2248:C:OP2	22:BA:2249:U:C5	2.70	0.43
22:BA:2267:A:H2	58:BA:3511:HOH:O	2.00	0.43
24:BC:70:ASN:C	24:BC:72:ASP:N	2.76	0.43
26:BE:46:GLN:O	26:BE:88:ARG:NH1	2.51	0.43
37:BP:106:LYS:O	37:BP:109:ARG:HD3	2.19	0.43
38:BQ:102:ASP:OD1	39:BR:2:TYR:OH	2.31	0.43
43:BV:72:VAL:HG12	43:BV:93:ARG:HA	2.00	0.43
1:CA:421:U:C4'	1:CA:421:U:OP1	2.67	0.43
1:CA:1068:G:C2'	1:CA:1069:C:H5'	2.47	0.43
1:CA:1151:A:C2	1:CA:1152:A:C4	3.06	0.43
1:CA:1225:A:C2'	1:CA:1225:A:N3	2.81	0.43
1:CA:1457:G:H2'	1:CA:1458:G:O4'	2.18	0.43
2:CB:115:LYS:O	2:CB:119:THR:HB	2.18	0.43
6:CF:12:PRO:C	6:CF:15:SER:HG	2.11	0.43
6:CF:38:ARG:HG3	6:CF:63:ASN:HB2	1.98	0.43
9:CI:116:VAL:HG23	10:CJ:62:ARG:HD3	2.00	0.43
12:CL:25:GLU:HB3	12:CL:27:CYS:SG	2.58	0.43
22:DA:35:G:N2	22:DA:450:G:H1'	2.33	0.43
22:DA:54:G:C6	22:DA:55:G:N7	2.86	0.43
22:DA:185:G:C6	22:DA:212:G:N2	2.86	0.43
22:DA:192:C:O2'	22:DA:802:A:N3	2.51	0.43
22:DA:483:A:O2'	42:DU:56:GLY:HA3	2.18	0.43
22:DA:603:A:N3	22:DA:604:G:H1'	2.34	0.43
22:DA:633:A:H5"	33:DL:70:LYS:CD	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:969:G:H2'	22:DA:970:U:C6	2.54	0.43
22:DA:1341:G:C2	41:DT:84:TYR:CD2	3.06	0.43
22:DA:1351:C:O3'	22:DA:1571:A:O2'	2.36	0.43
22:DA:1362:C:H2'	22:DA:1363:C:H5'	2.00	0.43
22:DA:1477:A:N6	22:DA:1514:G:H1'	2.33	0.43
22:DA:1568:G:H5"	24:DC:61:ALA:N	2.33	0.43
22:DA:1670:C:C5	22:DA:1671:U:C4	3.06	0.43
22:DA:2232:C:OP1	45:DX:27:ARG:NH1	2.50	0.43
22:DA:2331:G:N2	22:DA:2385:C:C2	2.86	0.43
22:DA:2464:G:H2'	22:DA:2465:C:O4'	2.17	0.43
22:DA:2897:U:H2'	22:DA:2898:U:C6	2.53	0.43
24:DC:9:THR:O	24:DC:10:SER:HB3	2.15	0.43
26:DE:1:MET:HE2	26:DE:19:PHE:HB3	1.99	0.43
26:DE:56:GLY:O	26:DE:57:LYS:C	2.61	0.43
29:DH:127:GLU:CG	29:DH:144:VAL:O	2.65	0.43
33:DL:62:PRO:HG3	51:D3:26:HIS:O	2.18	0.43
35:DN:108:ALA:HB3	35:DN:110:MET:CE	2.49	0.43
44:DW:36:ILE:HG23	44:DW:58:THR:CG2	2.48	0.43
48:D0:44:THR:O	48:D0:47:GLY:N	2.52	0.43
49:D1:9:ILE:HB	49:D1:52:ALA:HA	2.00	0.43
50:D2:43:THR:O	50:D2:44:VAL:HB	2.17	0.43
1:AA:167:A:H2'	1:AA:168:G:O4'	2.18	0.43
1:AA:500:G:C2'	1:AA:501:C:O5'	2.66	0.43
1:AA:558:G:C5	1:AA:559:A:C2	3.07	0.43
1:AA:681:A:C6	1:AA:710:G:C6	3.07	0.43
1:AA:1069:C:H4'	1:AA:1192:C:O2	2.19	0.43
1:AA:1126:U:O4'	1:AA:1281:C:C2	2.71	0.43
1:AA:1442:G:H2'	1:AA:1443:C:H6	1.83	0.43
2:AB:75:ALA:O	2:AB:76:ALA:CB	2.65	0.43
2:AB:148:LEU:C	2:AB:151:ILE:HG22	2.42	0.43
3:AC:141:ALA:O	3:AC:146:ALA:HB3	2.18	0.43
4:AD:174:ASP:O	4:AD:175:ALA:CB	2.66	0.43
6:AF:42:TRP:HB2	6:AF:59:TYR:HB2	2.01	0.43
8:AH:115:ALA:O	8:AH:118:GLN:N	2.51	0.43
14:AN:90:ARG:HB2	14:AN:92:GLU:HG2	2.00	0.43
14:AN:100:SER:O	14:AN:101:TRP:HB3	2.18	0.43
19:AS:58:VAL:CG1	19:AS:75:ALA:HB1	2.49	0.43
21:AU:22:SER:C	21:AU:23:CYS:HG	2.27	0.43
22:BA:45:G:H5"	22:BA:46:G:OP1	2.18	0.43
22:BA:587:C:C5	22:BA:671:C:H1'	2.53	0.43
22:BA:784:G:C5'	24:BC:226:ASN:OD1	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:927:A:H2'	22:BA:928:A:O4'	2.19	0.43
22:BA:1087:G:C2'	22:BA:1089:A:H1'	2.48	0.43
22:BA:1607:C:N4	22:BA:1622:G:C8	2.86	0.43
22:BA:2308:G:O6	22:BA:2311:A:C8	2.71	0.43
22:BA:2517:C:C5	22:BA:2542:A:C4	3.06	0.43
23:BB:22:U:H2'	23:BB:23:G:C8	2.52	0.43
24:BC:83:TYR:CD1	24:BC:83:TYR:C	2.96	0.43
27:BF:171:ALA:O	27:BF:173:PHE:N	2.51	0.43
28:BG:10:VAL:HG13	28:BG:10:VAL:O	2.18	0.43
29:BH:80:ILE:HG21	29:BH:94:ILE:HG13	2.00	0.43
31:BJ:53:TYR:CD1	31:BJ:121:LYS:HB3	2.53	0.43
1:CA:97:G:C6	1:CA:98:A:H1'	2.53	0.43
1:CA:404:G:O6	4:CD:2:ALA:N	2.51	0.43
1:CA:411:A:H4'	1:CA:412:A:O5'	2.17	0.43
1:CA:459:A:C8	1:CA:459:A:OP2	2.72	0.43
1:CA:577:G:N3	1:CA:578:C:C6	2.86	0.43
1:CA:1027:C:N4	1:CA:1034:G:O6	2.51	0.43
1:CA:1244:G:C2	1:CA:1294:G:C2	3.07	0.43
1:CA:1319:A:H5"	19:CS:5:LEU:HD11	1.99	0.43
1:CA:1385:G:H2'	1:CA:1386:G:O4'	2.19	0.43
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.53	0.43
2:CB:20:THR:OG1	2:CB:21:ARG:N	2.51	0.43
2:CB:199:VAL:C	2:CB:200:ILE:HD12	2.43	0.43
3:CC:167:TRP:C	3:CC:167:TRP:CE3	2.96	0.43
4:CD:34:ILE:O	4:CD:34:ILE:CG2	2.66	0.43
5:CE:15:LEU:C	5:CE:16:ILE:HD12	2.44	0.43
5:CE:38:VAL:HG12	5:CE:39:VAL:N	2.34	0.43
7:CG:108:ALA:HB3	7:CG:116:MET:HE1	2.00	0.43
9:CI:63:LEU:HG	9:CI:63:LEU:O	2.18	0.43
11:CK:60:PRO:N	11:CK:91:PRO:HB2	2.34	0.43
12:CL:9:ARG:HB2	12:CL:9:ARG:CZ	2.48	0.43
13:CM:50:GLU:HA	13:CM:50:GLU:OE2	2.19	0.43
14:CN:91:GLY:O	14:CN:92:GLU:C	2.61	0.43
19:CS:40:ILE:HD13	19:CS:66:MET:HB3	1.98	0.43
22:DA:498:G:C4	22:DA:499:U:C5	3.07	0.43
22:DA:513:A:C2	22:DA:514:A:N7	2.86	0.43
22:DA:683:U:H2'	22:DA:684:G:O5'	2.18	0.43
22:DA:694:U:C3'	22:DA:695:G:C5'	2.95	0.43
22:DA:1357:C:N4	22:DA:1358:G:N1	2.66	0.43
22:DA:1519:G:H3'	22:DA:1520:U:C6	2.53	0.43
22:DA:1563:U:H2'	22:DA:1564:C:C6	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1622:G:H2'	22:DA:1623:G:O4'	2.18	0.43
22:DA:1638:C:O3'	22:DA:2709:G:N2	2.51	0.43
22:DA:1754:A:C6	22:DA:1755:A:C5	3.06	0.43
22:DA:1796:U:H2'	22:DA:1797:G:C8	2.53	0.43
22:DA:1881:C:H2'	22:DA:1882:U:O4'	2.17	0.43
22:DA:2502:G:H5'	22:DA:2503:A:O5'	2.19	0.43
22:DA:2711:A:N6	22:DA:2714:G:C5	2.86	0.43
25:DD:3:GLY:O	25:DD:82:PHE:CE1	2.72	0.43
26:DE:149:ILE:HG13	26:DE:188:MET:HE3	2.00	0.43
31:DJ:31:GLU:HB3	31:DJ:142:ILE:CG1	2.48	0.43
37:DP:75:GLN:HB2	37:DP:78:SER:HB2	2.00	0.43
40:DS:15:GLN:O	40:DS:19:LEU:HD22	2.18	0.43
42:DU:57:GLY:O	42:DU:59:VAL:HG23	2.18	0.43
42:DU:72:ILE:HD13	42:DU:83:VAL:HB	2.00	0.43
43:DV:28:ALA:O	43:DV:40:ILE:HB	2.18	0.43
43:DV:75:GLN:HB3	43:DV:90:ASP:O	2.17	0.43
48:D0:54:VAL:O	48:D0:55:ILE:HB	2.18	0.43
1:AA:116:A:C4	1:AA:117:G:C8	3.07	0.43
1:AA:157:U:O2'	1:AA:158:G:H5'	2.18	0.43
1:AA:266:G:H4'	1:AA:267:C:OP1	2.17	0.43
1:AA:389:A:C6	1:AA:390:U:H1'	2.53	0.43
1:AA:867:G:N2	1:AA:868:C:C2	2.86	0.43
1:AA:963:G:H2'	1:AA:963:G:N3	2.33	0.43
2:AB:93:ASN:OD1	2:AB:94:HIS:ND1	2.52	0.43
3:AC:167:TRP:C	3:AC:167:TRP:HE3	2.27	0.43
4:AD:23:SER:O	4:AD:24:GLY:O	2.37	0.43
5:AE:30:ILE:HD11	5:AE:54:ARG:NH1	2.34	0.43
6:AF:67:PRO:O	6:AF:69:GLU:N	2.52	0.43
7:AG:27:VAL:O	7:AG:31:MET:N	2.50	0.43
7:AG:49:THR:O	7:AG:53:ARG:HB2	2.18	0.43
7:AG:69:VAL:HG12	7:AG:135:VAL:HA	2.01	0.43
9:AI:6:TYR:CD1	9:AI:89:GLU:OE2	2.71	0.43
11:AK:36:ASP:OD2	11:AK:36:ASP:C	2.61	0.43
19:AS:51:VAL:CG2	19:AS:71:LEU:HB3	2.48	0.43
20:AT:58:VAL:HG12	20:AT:72:ALA:HB1	2.00	0.43
22:BA:24:G:O2'	40:BS:77:ASP:HB3	2.18	0.43
22:BA:103:A:H2'	22:BA:104:A:O4'	2.18	0.43
22:BA:362:A:C4	22:BA:363:G:C8	3.07	0.43
22:BA:744:U:H2'	22:BA:745:G:O4'	2.19	0.43
22:BA:975:A:C4	22:BA:990:A:C5	3.06	0.43
22:BA:1153:C:N4	22:BA:1154:G:C6	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1253:A:C8	58:BA:3335:HOH:O	2.66	0.43
22:BA:1494:A:C2	22:BA:1495:A:N9	2.87	0.43
22:BA:1840:G:C2	22:BA:1841:U:C2	3.06	0.43
22:BA:2622:U:O2'	22:BA:2825:G:N7	2.50	0.43
22:BA:2680:U:O2'	22:BA:2681:C:H5'	2.18	0.43
23:BB:2:G:C2	23:BB:119:A:N3	2.87	0.43
27:BF:17:MET:CE	27:BF:22:TYR:HB2	2.49	0.43
29:BH:27:ARG:O	29:BH:28:ASN:CB	2.66	0.43
29:BH:76:GLU:HA	29:BH:142:VAL:HG12	2.00	0.43
30:BI:77:ALA:HB2	30:BI:132:THR:CG2	2.48	0.43
30:BI:124:ALA:O	30:BI:127:ARG:HG2	2.17	0.43
31:BJ:35:ARG:HG2	31:BJ:40:HIS:CD2	2.52	0.43
41:BT:18:GLU:CD	41:BT:18:GLU:N	2.77	0.43
48:B0:54:VAL:O	48:B0:55:ILE:C	2.61	0.43
1:CA:86:G:O2'	1:CA:87:C:P	2.76	0.43
1:CA:160:A:C5	1:CA:346:G:O6	2.72	0.43
1:CA:216:U:H5"	1:CA:464:U:H4'	2.00	0.43
1:CA:451:A:OP2	16:CP:70:ARG:NH2	2.47	0.43
1:CA:652:U:C2	1:CA:752:G:N2	2.86	0.43
1:CA:683:G:O2'	1:CA:684:U:H5'	2.19	0.43
1:CA:706:A:O2'	11:CK:31:ILE:CD1	2.66	0.43
1:CA:1014:A:C2	19:CS:34:TRP:CZ2	3.06	0.43
2:CB:81:LYS:CG	2:CB:85:LEU:HD22	2.48	0.43
3:CC:81:GLY:O	3:CC:82:GLU:C	2.61	0.43
3:CC:182:ILE:HD13	3:CC:203:PHE:HA	2.00	0.43
5:CE:96:MET:CE	5:CE:111:MET:CE	2.95	0.43
6:CF:70:VAL:HG23	6:CF:71:ILE:HD12	1.99	0.43
8:CH:74:SER:O	8:CH:130:ALA:N	2.50	0.43
12:CL:43:LYS:N	12:CL:89:ASP:O	2.44	0.43
15:CO:27:VAL:O	15:CO:31:LEU:CD1	2.67	0.43
16:CP:5:ARG:O	16:CP:19:VAL:HA	2.19	0.43
17:CQ:14:SER:CB	17:CQ:22:VAL:HG12	2.49	0.43
22:DA:40:U:C4	22:DA:41:C:N4	2.86	0.43
22:DA:301:G:H5'	22:DA:334:C:O2	2.18	0.43
22:DA:672:C:C2	22:DA:809:G:N2	2.86	0.43
22:DA:772:C:H2'	22:DA:773:U:O4'	2.18	0.43
22:DA:892:A:H3'	22:DA:892:A:N3	2.34	0.43
22:DA:972:A:C6	22:DA:973:A:C6	3.06	0.43
22:DA:1045:C:H4'	22:DA:1046:A:H5'	2.00	0.43
22:DA:1120:G:C6	22:DA:1121:C:N4	2.86	0.43
22:DA:1287:A:H2'	22:DA:1288:G:H5'	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1378:A:C4'	22:DA:1379:U:OP1	2.66	0.43
22:DA:1567:G:H2'	24:DC:85:PRO:HG3	2.00	0.43
22:DA:1829:A:OP2	22:DA:1829:A:O4'	2.36	0.43
22:DA:2112:G:H5'	22:DA:2113:U:OP2	2.19	0.43
22:DA:2167:U:O2	22:DA:2170:A:OP2	2.37	0.43
22:DA:2333:A:N7	22:DA:2335:A:C4	2.86	0.43
22:DA:2756:U:H4'	22:DA:2757:A:OP1	2.19	0.43
24:DC:2:ALA:N	24:DC:199:GLU:OE1	2.51	0.43
25:DD:186:LEU:CD1	37:DP:8:LEU:CD1	2.97	0.43
26:DE:22:ASP:OD2	26:DE:22:ASP:N	2.51	0.43
27:DF:12:VAL:O	27:DF:12:VAL:HG12	2.19	0.43
27:DF:114:PHE:O	27:DF:114:PHE:CG	2.71	0.43
30:DI:15:ALA:HB3	30:DI:52:GLY:N	2.32	0.43
32:DK:23:LYS:HB3	32:DK:40:LYS:HB3	1.99	0.43
33:DL:29:LYS:O	33:DL:29:LYS:CG	2.66	0.43
41:DT:8:LEU:CD2	41:DT:50:LEU:HD21	2.47	0.43
1:AA:219:U:H2'	1:AA:220:G:C8	2.53	0.43
1:AA:404:G:N7	4:AD:2:ALA:HB3	2.32	0.43
1:AA:557:G:C6	1:AA:558:G:C6	3.07	0.43
1:AA:803:G:C6	1:AA:804:U:C4	3.06	0.43
1:AA:1319:A:C5	1:AA:1323:G:C4	3.07	0.43
2:AB:15:HIS:O	2:AB:16:PHE:O	2.36	0.43
4:AD:107:PHE:CD1	4:AD:145:ILE:CD1	3.02	0.43
7:AG:49:THR:O	7:AG:53:ARG:HB3	2.19	0.43
12:AL:87:VAL:CG2	12:AL:96:HIS:CE1	3.01	0.43
22:BA:71:A:H5"	22:BA:72:U:H3'	2.01	0.43
22:BA:275:C:H3'	22:BA:276:U:H5"	1.99	0.43
22:BA:612:G:H2'	22:BA:614:A:C8	2.52	0.43
22:BA:1739:A:H2'	22:BA:1740:G:O4'	2.18	0.43
22:BA:1922:G:C2	22:BA:1923:U:C1'	3.02	0.43
22:BA:2480:C:C2'	22:BA:2481:G:H5'	2.48	0.43
22:BA:2495:G:C2'	22:BA:2496:C:H5'	2.49	0.43
22:BA:2620:C:H2'	22:BA:2621:G:O4'	2.18	0.43
25:BD:104:VAL:HG23	25:BD:105:LYS:N	2.33	0.43
27:BF:108:VAL:CG2	27:BF:117:LEU:HD21	2.49	0.43
28:BG:74:SER:HA	28:BG:77:ILE:CG1	2.49	0.43
28:BG:83:PHE:CE2	28:BG:138:LYS:HB2	2.54	0.43
29:BH:9:VAL:O	29:BH:10:ALA:O	2.36	0.43
29:BH:96:THR:O	29:BH:100:ALA:N	2.50	0.43
33:BL:129:LYS:O	33:BL:130:GLY:C	2.61	0.43
34:BM:24:THR:HG23	34:BM:24:THR:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:72:ASP:C	35:BN:72:ASP:OD2	2.61	0.43
37:BP:96:LYS:HB3	37:BP:98:TYR:CE1	2.52	0.43
43:BV:26:PHE:HB2	43:BV:27:PRO:HD2	2.00	0.43
1:CA:211:G:O2'	1:CA:212:G:C4'	2.67	0.43
1:CA:369:G:OP2	1:CA:388:G:N2	2.51	0.43
1:CA:635:A:C5	1:CA:636:U:C5	3.07	0.43
1:CA:667:G:O2'	15:CO:49:ASP:OD2	2.28	0.43
1:CA:718:A:H5'	11:CK:119:ASN:CG	2.44	0.43
1:CA:800:G:N2	1:CA:801:U:O4	2.51	0.43
1:CA:1319:A:OP2	19:CS:5:LEU:HD21	2.18	0.43
1:CA:1483:A:N1	22:DA:1959:G:O2'	2.43	0.43
2:CB:86:SER:O	2:CB:87:CYS:O	2.36	0.43
3:CC:25:ASN:O	3:CC:29:PHE:HB2	2.19	0.43
3:CC:147:LYS:HB2	3:CC:203:PHE:CD2	2.54	0.43
5:CE:112:ARG:O	5:CE:113:ALA:C	2.62	0.43
6:CF:25:TYR:N	6:CF:25:TYR:CD2	2.84	0.43
9:CI:49:ARG:O	9:CI:50:GLN:C	2.62	0.43
13:CM:14:HIS:HB2	13:CM:17:ILE:HD12	1.99	0.43
13:CM:83:LEU:N	13:CM:83:LEU:HD23	2.33	0.43
16:CP:3:THR:HG22	16:CP:4:ILE:N	2.34	0.43
22:DA:39:G:C6	22:DA:40:U:O4	2.72	0.43
22:DA:45:G:O3'	22:DA:46:G:O4'	2.36	0.43
22:DA:49:A:N6	22:DA:177:G:C4	2.86	0.43
22:DA:64:A:H2'	22:DA:65:U:C6	2.53	0.43
22:DA:380:G:O3'	45:DX:16:ASN:HB2	2.18	0.43
22:DA:607:U:H5	22:DA:619:G:C5	2.37	0.43
22:DA:874:G:C2	22:DA:904:G:C2	3.06	0.43
22:DA:922:C:H2'	22:DA:923:G:C8	2.54	0.43
22:DA:1272:A:C2	22:DA:1618:A:N3	2.86	0.43
22:DA:1364:G:C5	22:DA:1368:G:N1	2.86	0.43
22:DA:1760:C:H3'	22:DA:1761:C:C6	2.53	0.43
22:DA:1791:A:C8	22:DA:1792:G:C8	3.06	0.43
22:DA:1896:G:H2'	22:DA:1897:G:O4'	2.19	0.43
22:DA:1965:C:H3'	22:DA:1966:A:C8	2.54	0.43
22:DA:2038:G:N7	22:DA:2039:U:C5	2.87	0.43
22:DA:2061:G:C5	56:DA:3001:DOL:HC19	2.53	0.43
22:DA:2092:U:H4'	22:DA:2093:G:H5"	2.00	0.43
22:DA:2280:G:O2'	22:DA:2388:A:N1	2.46	0.43
22:DA:2283:C:N4	22:DA:2389:G:C5	2.86	0.43
22:DA:2515:C:O2'	22:DA:2516:A:H5'	2.19	0.43
22:DA:2641:G:H5"	31:DJ:78:THR:HB	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2676:C:O2	22:DA:2732:G:N2	2.51	0.43
22:DA:2684:U:C4'	32:DK:70:ARG:NH1	2.81	0.43
30:DI:67:PHE:N	30:DI:67:PHE:CD2	2.86	0.43
35:DN:24:MET:HE3	35:DN:44:LEU:HB2	2.00	0.43
41:DT:48:GLN:HB2	41:DT:49:LYS:CE	2.49	0.43
46:DY:29:ARG:C	46:DY:31:GLN:H	2.25	0.43
50:D2:6:GLN:OE1	50:D2:6:GLN:HA	2.18	0.43
52:D4:7:VAL:HG13	52:D4:38:GLY:CA	2.49	0.43
1:AA:242:G:C2	1:AA:245:U:C4	3.07	0.43
1:AA:244:U:O4	1:AA:906:A:H1'	2.18	0.43
1:AA:590:U:N3	1:AA:591:U:C4	2.87	0.43
1:AA:730:G:H2'	1:AA:730:G:N3	2.33	0.43
1:AA:810:C:O2	1:AA:810:C:H2'	2.17	0.43
1:AA:840:C:N3	1:AA:846:G:O6	2.52	0.43
1:AA:1108:G:N3	1:AA:1108:G:H2'	2.34	0.43
1:AA:1264:U:O2	1:AA:1272:G:C2	2.71	0.43
2:AB:73:LYS:C	2:AB:75:ALA:N	2.76	0.43
8:AH:10:MET:O	8:AH:11:LEU:C	2.62	0.43
10:AJ:28:THR:HG22	10:AJ:86:ALA:HB1	2.01	0.43
10:AJ:91:ASP:C	10:AJ:92:LEU:HG	2.43	0.43
14:AN:43:ASN:O	14:AN:45:VAL:N	2.51	0.43
16:AP:12:LYS:O	16:AP:13:LYS:HB2	2.18	0.43
22:BA:25:U:C2'	22:BA:26:G:H5'	2.49	0.43
22:BA:90:U:C4	22:BA:91:A:C5	3.07	0.43
22:BA:332:A:C2	22:BA:335:C:C5	3.07	0.43
22:BA:569:U:H1'	22:BA:947:A:O4'	2.18	0.43
22:BA:1081:U:O2	22:BA:1081:U:H2'	2.19	0.43
22:BA:1374:G:H2'	22:BA:1375:U:O4'	2.19	0.43
22:BA:1910:G:N1	22:BA:1921:G:C5	2.87	0.43
22:BA:2311:A:O2'	27:BF:85:ILE:HD11	2.18	0.43
22:BA:2507:C:H5"	22:BA:2573:C:N4	2.33	0.43
24:BC:207:LYS:O	24:BC:210:ALA:HB3	2.19	0.43
25:BD:37:VAL:HG12	25:BD:38:LYS:N	2.33	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
29:BH:103:VAL:O	29:BH:108:VAL:O	2.37	0.43
30:BI:132:THR:O	30:BI:132:THR:HG22	2.18	0.43
31:BJ:7:LYS:O	31:BJ:11:VAL:HG23	2.19	0.43
31:BJ:84:ILE:HG23	31:BJ:84:ILE:O	2.18	0.43
32:BK:7:MET:HE1	32:BK:44:LYS:HG3	2.01	0.43
33:BL:81:ASP:HB3	33:BL:100:ILE:CD1	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:11:LYS:CE	34:BM:87:GLY:O	2.67	0.43
39:BR:49:ILE:O	39:BR:49:ILE:HG13	2.19	0.43
39:BR:79:ARG:O	39:BR:81:LYS:HG2	2.19	0.43
42:BU:54:GLN:N	42:BU:55:PRO:CD	2.82	0.43
1:CA:51:A:H4'	1:CA:52:C:C5'	2.48	0.43
1:CA:130:A:OP1	17:CQ:65:ARG:HD2	2.18	0.43
1:CA:135:C:C2	16:CP:1:MET:HB2	2.53	0.43
1:CA:161:A:C2	1:CA:162:A:C4	3.07	0.43
1:CA:185:U:H2'	1:CA:186:C:C6	2.54	0.43
1:CA:577:G:C8	1:CA:816:A:N1	2.86	0.43
1:CA:767:A:H2'	1:CA:768:A:O4'	2.19	0.43
1:CA:793:U:O2'	1:CA:1516:G:H1'	2.18	0.43
1:CA:793:U:C2'	1:CA:1516:G:HO2'	2.31	0.43
1:CA:1107:C:C2	1:CA:1108:G:C8	3.06	0.43
1:CA:1125:U:O2'	1:CA:1126:U:H2'	2.18	0.43
1:CA:1409:C:N4	1:CA:1410:A:N6	2.67	0.43
4:CD:53:VAL:HG23	4:CD:54:GLN:N	2.34	0.43
4:CD:151:LYS:C	4:CD:152:GLN:OE1	2.62	0.43
5:CE:96:MET:CE	5:CE:111:MET:HE3	2.48	0.43
5:CE:122:ASN:O	5:CE:123:VAL:O	2.36	0.43
8:CH:6:PRO:O	8:CH:9:ASP:HB3	2.18	0.43
8:CH:55:THR:C	8:CH:57:PRO:HD3	2.43	0.43
12:CL:29:GLN:HB2	12:CL:82:ILE:O	2.17	0.43
14:CN:17:ALA:HA	14:CN:55:SER:O	2.19	0.43
20:CT:28:MET:HE3	20:CT:58:VAL:HA	2.00	0.43
22:DA:38:A:C2	22:DA:442:G:C6	3.07	0.43
22:DA:55:G:C2	22:DA:116:C:C2	3.06	0.43
22:DA:193:U:C4	22:DA:194:G:N7	2.87	0.43
22:DA:200:U:C5	22:DA:201:C:C4	3.06	0.43
22:DA:216:A:OP2	22:DA:429:A:OP1	2.37	0.43
22:DA:480:A:O3'	42:DU:44:LYS:HG3	2.19	0.43
22:DA:553:G:H2'	22:DA:554:U:O4'	2.19	0.43
22:DA:563:A:C2	22:DA:2018:G:H1'	2.53	0.43
22:DA:614:A:H2'	22:DA:614:A:OP2	2.19	0.43
22:DA:623:C:H2'	22:DA:624:C:O4'	2.19	0.43
22:DA:696:G:C6	22:DA:767:U:C2	3.07	0.43
22:DA:771:G:N3	22:DA:771:G:H2'	2.33	0.43
22:DA:982:C:H5"	22:DA:983:A:OP1	2.18	0.43
22:DA:1178:C:C2	22:DA:1179:G:N7	2.87	0.43
22:DA:1219:U:H2'	22:DA:1220:G:C8	2.54	0.43
22:DA:1267:U:N3	22:DA:2013:A:N7	2.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1324:G:C1’	22:DA:1616:A:N6	2.81	0.43
22:DA:1403:A:H2’	22:DA:1404:C:C6	2.54	0.43
22:DA:1422:G:N2	22:DA:1577:C:H1’	2.33	0.43
22:DA:1445:G:C2	22:DA:1446:C:C2	3.07	0.43
22:DA:1677:A:N6	22:DA:1678:A:C2	2.87	0.43
22:DA:1749:A:C2	22:DA:1750:G:C4	3.07	0.43
22:DA:1789:A:H5”	24:DC:219:THR:O	2.19	0.43
22:DA:2104:C:C2	22:DA:2186:G:N2	2.86	0.43
22:DA:2114:A:C2	22:DA:2115:G:H1’	2.54	0.43
22:DA:2333:A:OP2	44:DW:77:ARG:NH2	2.42	0.43
22:DA:2415:G:C6	22:DA:2416:C:N4	2.87	0.43
22:DA:2643:G:C2’	22:DA:2644:G:H5’	2.49	0.43
22:DA:2756:U:N3	22:DA:2759:G:O6	2.52	0.43
23:DB:52:A:C4	36:DO:33:ARG:NH2	2.86	0.43
24:DC:124:ILE:CD1	24:DC:136:PRO:HD3	2.48	0.43
25:DD:33:ARG:HA	25:DD:95:SER:HA	2.01	0.43
27:DF:44:ILE:CG2	27:DF:79:ILE:HG22	2.49	0.43
27:DF:166:GLY:O	27:DF:167:ARG:C	2.60	0.43
32:DK:92:GLU:O	32:DK:93:GLN:HB2	2.18	0.43
38:DQ:90:ILE:CG2	38:DQ:94:ILE:CG2	2.97	0.43
40:DS:66:ILE:O	40:DS:67:ASP:C	2.61	0.43
1:AA:29:U:O2’	1:AA:30:U:H5’	2.18	0.43
1:AA:112:G:C2	1:AA:113:G:C8	3.07	0.43
1:AA:670:G:H2’	1:AA:671:G:O5’	2.18	0.43
1:AA:903:G:H2’	1:AA:904:U:H6	1.83	0.43
1:AA:1130:A:C4	1:AA:1146:A:C2	3.07	0.43
1:AA:1145:A:O2’	1:AA:1146:A:P	2.77	0.43
3:AC:72:ARG:N	3:AC:73:PRO:HD3	2.32	0.43
6:AF:51:ILE:O	6:AF:52:ASN:HB2	2.19	0.43
9:AI:52:LEU:HB3	9:AI:57:MET:HG3	2.00	0.43
20:AT:4:ILE:HA	20:AT:8:LYS:HD3	2.00	0.43
22:BA:404:A:H1’	22:BA:405:U:OP2	2.18	0.43
22:BA:971:G:O2’	22:BA:983:A:N3	2.42	0.43
22:BA:1082:U:H5’	30:BI:119:GLY:N	2.34	0.43
22:BA:1142:A:C2	22:BA:1144:A:O4’	2.72	0.43
22:BA:1439:A:C2	22:BA:1553:A:C4	3.06	0.43
22:BA:1464:G:C6	22:BA:1465:G:C6	3.06	0.43
22:BA:1734:G:H2’	22:BA:1735:A:O4’	2.19	0.43
22:BA:1916:A:H2’	22:BA:1917:U:C4’	2.49	0.43
22:BA:2196:C:C2’	22:BA:2197:U:H5’	2.48	0.43
22:BA:2244:U:H2’	22:BA:2245:U:O4’	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:165:HIS:C	26:BE:167:VAL:H	2.27	0.43
34:BM:78:LEU:O	34:BM:80:VAL:HG23	2.19	0.43
35:BN:31:HIS:C	35:BN:33:ILE:H	2.26	0.43
37:BP:21:ARG:HB2	37:BP:22:PRO:HD2	2.01	0.43
37:BP:31:TRP:CD2	37:BP:40:LEU:HD12	2.53	0.43
53:B5:76:LEU:O	53:B5:76:LEU:HD13	2.18	0.43
1:CA:60:A:H4'	1:CA:61:G:O5'	2.19	0.43
1:CA:923:A:H2'	1:CA:924:C:O4'	2.19	0.43
1:CA:957:U:H4'	19:CS:79:THR:O	2.18	0.43
1:CA:971:G:N2	1:CA:1363:A:C8	2.87	0.43
1:CA:1197:A:C2'	1:CA:1198:G:H5'	2.48	0.43
1:CA:1361:G:C3'	1:CA:1362:A:H5"	2.48	0.43
2:CB:18:HIS:O	2:CB:19:GLN:CB	2.67	0.43
3:CC:36:ASP:OD2	3:CC:57:ILE:HG12	2.19	0.43
6:CF:70:VAL:HG23	6:CF:71:ILE:CD1	2.49	0.43
8:CH:88:ARG:O	8:CH:92:LEU:HD12	2.18	0.43
14:CN:46:LEU:HG	14:CN:46:LEU:O	2.18	0.43
22:DA:116:C:C4	22:DA:117:G:N7	2.86	0.43
22:DA:153:U:H2'	22:DA:154:U:C6	2.53	0.43
22:DA:377:G:O6	22:DA:378:C:N4	2.51	0.43
22:DA:828:U:H2'	22:DA:829:A:C8	2.53	0.43
22:DA:1060:U:OP2	30:DI:75:PRO:HA	2.18	0.43
22:DA:1063:G:C4'	30:DI:77:ALA:HB1	2.49	0.43
22:DA:1241:A:N3	22:DA:1241:A:H2'	2.32	0.43
22:DA:1272:A:C5	22:DA:1618:A:H1'	2.53	0.43
22:DA:1272:A:N3	22:DA:1618:A:C4	2.87	0.43
22:DA:1544:A:N6	22:DA:1545:A:C6	2.86	0.43
22:DA:1616:A:H2	22:DA:1647:U:C5	2.37	0.43
22:DA:1874:C:C5'	22:DA:1875:G:OP2	2.67	0.43
22:DA:2012:G:OP1	40:DS:98:LYS:NZ	2.52	0.43
22:DA:2326:C:C1'	22:DA:2327:A:OP1	2.67	0.43
22:DA:2598:A:OP1	24:DC:234:GLY:O	2.36	0.43
23:DB:42:C:N3	27:DF:90:THR:OG1	2.50	0.43
25:DD:193:VAL:HB	25:DD:194:PRO:CD	2.49	0.43
26:DE:15:SER:OG	26:DE:197:GLU:OE2	2.32	0.43
26:DE:48:THR:OG1	26:DE:49:ARG:N	2.51	0.43
29:DH:31:VAL:O	29:DH:32:PRO:C	2.61	0.43
31:DJ:15:TRP:CD2	31:DJ:53:TYR:HB2	2.54	0.43
31:DJ:57:LEU:O	31:DJ:58:ASN:HB2	2.18	0.43
39:DR:52:PRO:C	39:DR:53:PHE:CG	2.95	0.43
39:DR:80:ARG:C	39:DR:82:HIS:N	2.76	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DW:19:LYS:O	44:DW:20:ARG:C	2.61	0.43
1:AA:474:G:C6	1:AA:475:C:C5	3.06	0.43
1:AA:567:G:C2	1:AA:568:G:H1'	2.54	0.43
1:AA:597:G:N7	1:AA:598:U:C5	2.86	0.43
1:AA:751:U:C4	1:AA:752:G:C6	3.06	0.43
1:AA:914:A:C4	1:AA:915:A:C8	3.07	0.43
1:AA:1313:U:OP2	19:AS:6:LYS:HB3	2.19	0.43
3:AC:22:TRP:CD1	3:AC:59:ARG:CD	3.02	0.43
4:AD:22:LYS:C	4:AD:24:GLY:N	2.76	0.43
4:AD:78:GLU:CG	4:AD:93:LEU:HD21	2.48	0.43
5:AE:72:ILE:CD1	5:AE:145:GLU:OE2	2.67	0.43
6:AF:38:ARG:HB3	6:AF:63:ASN:HB2	2.01	0.43
8:AH:7:ILE:O	8:AH:11:LEU:HG	2.18	0.43
9:AI:50:GLN:C	9:AI:52:LEU:N	2.76	0.43
12:AL:63:VAL:HG21	12:AL:95:TYR:CE2	2.54	0.43
19:AS:65:GLU:OE2	19:AS:66:MET:N	2.52	0.43
20:AT:51:PHE:HA	20:AT:54:MET:HG2	2.00	0.43
22:BA:118:A:C8	22:BA:119:A:C8	3.06	0.43
22:BA:242:G:N7	51:B3:5:LYS:HG2	2.34	0.43
22:BA:282:A:H2'	22:BA:283:G:C8	2.54	0.43
22:BA:483:A:H1'	42:BU:58:ILE:CD1	2.49	0.43
22:BA:572:A:P	58:BA:3569:HOH:O	2.77	0.43
22:BA:580:U:O3'	38:BQ:31:VAL:HG13	2.18	0.43
22:BA:735:A:H3'	22:BA:736:C:C6	2.54	0.43
22:BA:753:A:H2'	22:BA:754:U:C6	2.54	0.43
22:BA:971:G:OP2	22:BA:974:G:N2	2.52	0.43
22:BA:1097:U:H3'	22:BA:1098:A:H4'	2.01	0.43
22:BA:1607:C:N4	22:BA:1622:G:C5	2.86	0.43
22:BA:1916:A:O3'	22:BA:1917:U:H4'	2.18	0.43
22:BA:1937:A:C2	22:BA:1939:U:C4	3.07	0.43
22:BA:2116:G:C6	22:BA:2171:A:N6	2.87	0.43
22:BA:2190:G:C4	22:BA:2191:A:C8	3.07	0.43
22:BA:2356:U:O3'	44:BW:20:ARG:HD3	2.18	0.43
22:BA:2435:A:C2'	22:BA:2436:G:O5'	2.67	0.43
22:BA:2636:C:H2'	22:BA:2637:U:C6	2.53	0.43
22:BA:2820:A:N1	25:BD:197:THR:CG2	2.81	0.43
26:BE:1:MET:N	26:BE:14:VAL:O	2.50	0.43
32:BK:4:GLU:C	32:BK:5:GLN:HG2	2.44	0.43
41:BT:28:ASN:HD21	41:BT:91:GLN:HB2	1.84	0.43
42:BU:12:ILE:HG13	42:BU:22:ARG:HG3	2.00	0.43
42:BU:95:PHE:CD1	42:BU:95:PHE:C	2.96	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B5:50:ILE:CB	53:B5:52:PRO:HD3	2.48	0.43
53:B5:65:LEU:HD13	53:B5:65:LEU:C	2.44	0.43
1:CA:21:G:H2'	1:CA:22:G:C8	2.54	0.43
1:CA:32:A:N1	1:CA:33:A:C6	2.87	0.43
1:CA:50:A:N1	1:CA:360:G:O2'	2.47	0.43
1:CA:91:U:C4	1:CA:92:U:C4	3.07	0.43
1:CA:461:A:H2'	1:CA:462:G:O4'	2.19	0.43
1:CA:582:C:C4	1:CA:760:G:C6	3.07	0.43
1:CA:741:G:C6	1:CA:742:G:C5	3.07	0.43
1:CA:824:G:H1'	8:CH:2:SER:CA	2.49	0.43
1:CA:1137:C:H1'	1:CA:1138:G:N2	2.33	0.43
1:CA:1203:C:H4'	14:CN:67:THR:HG22	2.00	0.43
1:CA:1314:C:OP2	19:CS:6:LYS:HG2	2.19	0.43
3:CC:9:GLY:HA3	14:CN:89:MET:SD	2.59	0.43
3:CC:156:ARG:NH1	3:CC:159:GLY:O	2.52	0.43
5:CE:109:GLY:O	5:CE:110:ALA:CB	2.67	0.43
5:CE:156:LYS:HD3	8:CH:71:VAL:HG13	2.01	0.43
6:CF:92:THR:HG22	6:CF:93:LYS:N	2.33	0.43
9:CI:31:ASN:O	9:CI:32:GLN:C	2.62	0.43
12:CL:16:VAL:HG23	12:CL:16:VAL:O	2.19	0.43
12:CL:80:ILE:HD12	12:CL:97:THR:HG21	2.01	0.43
15:CO:23:GLY:O	15:CO:24:SER:C	2.62	0.43
19:CS:53:ASN:OD1	19:CS:55:ARG:HG2	2.19	0.43
22:DA:245:G:O6	51:D3:8:ARG:HD2	2.19	0.43
22:DA:288:U:H2'	22:DA:289:G:C8	2.54	0.43
22:DA:349:U:O2'	22:DA:350:G:H5'	2.18	0.43
22:DA:599:A:H1'	22:DA:659:G:N2	2.34	0.43
22:DA:1109:C:C5	22:DA:1110:G:O6	2.72	0.43
22:DA:1179:G:H2'	22:DA:1180:U:H4'	2.00	0.43
22:DA:1249:U:H4'	38:DQ:4:VAL:HB	2.00	0.43
22:DA:1464:G:C4	22:DA:1465:G:C8	3.06	0.43
22:DA:1502:A:C2	22:DA:1503:A:C4	3.07	0.43
22:DA:1663:G:H3'	58:DA:3423:HOH:O	2.17	0.43
22:DA:1715:G:O2'	22:DA:1716:U:OP2	2.36	0.43
22:DA:1794:A:H2'	22:DA:1795:C:C6	2.54	0.43
22:DA:1874:C:N4	22:DA:1875:G:C6	2.86	0.43
22:DA:2156:G:C6	22:DA:2157:G:N2	2.87	0.43
22:DA:2258:C:O2'	22:DA:2427:C:OP2	2.27	0.43
22:DA:2747:G:HO2'	28:DG:67:THR:HG22	1.84	0.43
22:DA:2819:G:N3	22:DA:2828:G:C2	2.86	0.43
22:DA:2849:U:C3'	22:DA:2850:A:H5'	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:17:VAL:N	24:DC:204:VAL:HG22	2.34	0.43
24:DC:75:PRO:HB2	24:DC:97:LYS:CG	2.49	0.43
24:DC:251:GLN:CG	24:DC:255:LYS:HB2	2.49	0.43
25:DD:106:LYS:HA	25:DD:175:LEU:O	2.19	0.43
27:DF:16:LEU:HD11	27:DF:169:LEU:HD13	2.01	0.43
27:DF:31:VAL:O	27:DF:31:VAL:HG13	2.19	0.43
29:DH:62:LEU:HD13	29:DH:63:ALA:N	2.34	0.43
30:DI:80:LEU:HA	30:DI:84:ALA:HB3	2.01	0.43
31:DJ:38:GLY:O	31:DJ:44:TYR:HB2	2.18	0.43
31:DJ:114:LEU:O	31:DJ:118:MET:HG2	2.18	0.43
33:DL:82:LEU:HA	33:DL:85:VAL:HG13	1.99	0.43
38:DQ:76:TYR:CE1	38:DQ:80:ILE:HD11	2.54	0.43
39:DR:69:GLY:O	39:DR:70:GLU:C	2.62	0.43
42:DU:46:GLN:HG2	42:DU:47:LYS:N	2.34	0.43
45:DX:30:LEU:HB3	45:DX:31:PRO:CD	2.49	0.43
1:AA:188:C:N3	1:AA:189:A:C2	2.86	0.43
1:AA:209:U:C4'	1:AA:210:C:OP2	2.64	0.43
1:AA:258:G:C5	1:AA:259:G:C8	3.06	0.43
1:AA:1367:C:C4	1:AA:1368:A:N7	2.87	0.43
1:AA:1508:A:H2'	1:AA:1509:C:O4'	2.18	0.43
4:AD:150:LYS:O	4:AD:152:GLN:NE2	2.51	0.43
10:AJ:40:ILE:HB	10:AJ:73:LEU:HB2	2.00	0.43
13:AM:66:GLU:O	13:AM:69:LEU:N	2.51	0.43
13:AM:83:LEU:HD21	19:AS:65:GLU:HG2	1.99	0.43
20:AT:82:GLN:O	20:AT:83:ILE:C	2.62	0.43
22:BA:460:A:H2'	22:BA:461:C:O4'	2.18	0.43
22:BA:818:G:H5'	22:BA:839:U:OP1	2.19	0.43
22:BA:1243:C:H2'	22:BA:1244:A:O4'	2.19	0.43
22:BA:1442:U:H2'	22:BA:1443:U:H6	1.84	0.43
22:BA:1535:A:H5'	22:BA:1536:C:C5	2.54	0.43
22:BA:1637:A:H4'	22:BA:2711:A:O2'	2.19	0.43
22:BA:1675:C:N3	25:BD:133:THR:HG21	2.34	0.43
22:BA:2029:G:N1	22:BA:2033:A:OP2	2.36	0.43
24:BC:208:ALA:O	24:BC:209:GLY:C	2.62	0.43
25:BD:103:ASP:CG	25:BD:104:VAL:N	2.77	0.43
29:BH:45:GLU:HA	29:BH:48:GLU:HB2	2.01	0.43
35:BN:38:LEU:HB3	35:BN:39:PRO:HD3	2.01	0.43
37:BP:31:TRP:CE2	37:BP:40:LEU:HD12	2.54	0.43
41:BT:29:THR:OG1	41:BT:86:THR:CG2	2.66	0.43
41:BT:57:VAL:HG22	41:BT:58:VAL:N	2.34	0.43
46:BY:26:PHE:CD1	46:BY:26:PHE:C	2.96	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:29:THR:C	49:B1:31:PRO:HD3	2.43	0.43
53:B5:218:THR:O	53:B5:219:MET:CB	2.65	0.43
1:CA:94:G:H4'	1:CA:95:C:C5	2.54	0.43
1:CA:378:G:N2	1:CA:386:C:O2	2.51	0.43
1:CA:552:U:H4'	12:CL:83:ARG:HG3	2.00	0.43
1:CA:786:G:N2	1:CA:787:A:H1'	2.34	0.43
1:CA:959:A:O3'	1:CA:960:U:H4'	2.19	0.43
1:CA:1105:A:C2	1:CA:1106:G:C5	3.07	0.43
1:CA:1160:G:O6	1:CA:1181:G:C5	2.72	0.43
1:CA:1386:G:H2'	1:CA:1387:G:H8	1.84	0.43
2:CB:73:LYS:O	2:CB:74:ARG:C	2.59	0.43
5:CE:56:VAL:N	5:CE:57:PRO:CD	2.81	0.43
8:CH:59:LEU:HD12	8:CH:60:GLU:N	2.34	0.43
10:CJ:80:THR:O	10:CJ:84:VAL:HG12	2.19	0.43
12:CL:14:ARG:NH1	12:CL:15:LYS:HG3	2.34	0.43
14:CN:46:LEU:HD23	19:CS:10:PHE:HB2	2.01	0.43
16:CP:37:GLY:HA2	16:CP:51:ARG:NH1	2.34	0.43
22:DA:46:G:N1	22:DA:47:C:C4	2.87	0.43
22:DA:110:G:N2	22:DA:111:A:H1'	2.34	0.43
22:DA:155:A:H2'	22:DA:156:A:C8	2.53	0.43
22:DA:167:A:H2'	22:DA:168:G:O4'	2.19	0.43
22:DA:372:G:P	45:DX:62:LYS:NZ	2.92	0.43
22:DA:415:A:N1	22:DA:2409:G:C6	2.87	0.43
22:DA:571:U:H1'	22:DA:573:U:C6	2.54	0.43
22:DA:668:A:C4	22:DA:670:A:N7	2.87	0.43
22:DA:668:A:H3'	22:DA:669:G:H5"	2.00	0.43
22:DA:784:G:H5"	24:DC:226:ASN:OD1	2.18	0.43
22:DA:845:A:C6	22:DA:847:U:C6	3.07	0.43
22:DA:950:G:H2'	22:DA:951:C:O4'	2.19	0.43
22:DA:1056:G:N1	22:DA:1102:C:OP2	2.48	0.43
22:DA:1062:G:C2	22:DA:1063:G:N1	2.87	0.43
22:DA:1239:G:H2'	22:DA:1240:U:O4'	2.18	0.43
22:DA:1383:A:C2	22:DA:1384:A:C5	3.07	0.43
22:DA:1677:A:N6	22:DA:1678:A:N1	2.67	0.43
22:DA:1833:C:C4	22:DA:1834:U:C4	3.07	0.43
22:DA:2103:C:H2'	22:DA:2104:C:C5	2.54	0.43
22:DA:2115:G:H2'	22:DA:2117:A:N7	2.34	0.43
22:DA:2201:G:H2'	22:DA:2202:U:C6	2.54	0.43
22:DA:2253:G:C5	22:DA:2254:C:C5	3.06	0.43
22:DA:2345:G:C4	22:DA:2381:A:C2	3.06	0.43
22:DA:2478:A:C8	22:DA:2529:G:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2478:A:N7	22:DA:2529:G:C6	2.86	0.43
22:DA:2720:U:C5	22:DA:2872:A:N1	2.87	0.43
22:DA:2829:A:C2'	22:DA:2830:C:H5'	2.49	0.43
25:DD:167:ASN:O	25:DD:168:GLU:HB3	2.18	0.43
32:DK:113:MET:HA	32:DK:116:ILE:HG12	2.01	0.43
36:DO:11:ALA:O	36:DO:13:ARG:N	2.52	0.43
37:DP:100:LEU:HD22	37:DP:108:ALA:HB1	2.00	0.43
39:DR:102:SER:O	39:DR:103:ALA:C	2.61	0.43
42:DU:71:ALA:HB3	42:DU:80:ALA:HB1	1.99	0.43
46:DY:20:ASN:HB3	46:DY:50:VAL:CG2	2.49	0.43
1:AA:65:A:C4	1:AA:381:C:C5	3.06	0.43
1:AA:104:G:N2	1:AA:105:G:C4	2.87	0.43
1:AA:259:G:C2	1:AA:268:U:O2	2.71	0.43
1:AA:404:G:O2'	1:AA:498:A:N1	2.50	0.43
1:AA:625:U:H5"	16:AP:16:PHE:CD1	2.53	0.43
1:AA:1160:G:O6	1:AA:1181:G:C5	2.71	0.43
1:AA:1178:G:C8	9:AI:99:ARG:NH2	2.87	0.43
1:AA:1296:C:H4'	1:AA:1302:C:N4	2.34	0.43
2:AB:23:TRP:CZ3	2:AB:25:PRO:HA	2.54	0.43
4:AD:13:ARG:HD2	4:AD:34:ILE:HA	2.01	0.43
12:AL:57:LEU:O	12:AL:59:ASN:N	2.52	0.43
15:AO:87:LEU:N	15:AO:87:LEU:CD2	2.82	0.43
16:AP:67:ILE:HG23	16:AP:71:VAL:CG1	2.49	0.43
18:AR:67:LEU:O	18:AR:68:LEU:HG	2.19	0.43
22:BA:27:G:N2	22:BA:512:G:H1'	2.34	0.43
22:BA:141:G:N1	41:BT:1:MET:HE1	2.34	0.43
22:BA:319:G:C4	22:BA:333:G:N2	2.86	0.43
22:BA:1062:G:OP1	22:BA:1070:A:H4'	2.19	0.43
22:BA:1277:G:C4'	35:BN:20:MET:HE2	2.48	0.43
22:BA:1736:U:N3	22:BA:1737:G:C4	2.87	0.43
22:BA:1980:G:C4	22:BA:1982:U:C4	3.07	0.43
27:BF:146:VAL:O	27:BF:146:VAL:HG23	2.19	0.43
28:BG:13:ALA:O	28:BG:14:GLY:C	2.61	0.43
30:BI:28:LEU:HG	30:BI:35:ILE:HD12	2.00	0.43
32:BK:92:GLU:HG3	32:BK:111:LYS:NZ	2.33	0.43
34:BM:42:THR:O	34:BM:45:GLN:HB2	2.18	0.43
34:BM:70:ASP:OD2	34:BM:70:ASP:C	2.61	0.43
36:BO:28:VAL:HG11	36:BO:92:PHE:CZ	2.54	0.43
38:BQ:86:ALA:O	38:BQ:87:SER:CB	2.66	0.43
39:BR:49:ILE:HB	39:BR:52:PRO:O	2.19	0.43
40:BS:28:LYS:O	40:BS:30:SER:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:69:ARG:HB3	41:BT:74:ILE:HG22	2.01	0.43
49:B1:6:ARG:HD3	49:B1:24:THR:OG1	2.19	0.43
53:B5:59:VAL:HG23	53:B5:167:ASP:O	2.19	0.43
53:B5:93:ASP:OD1	53:B5:93:ASP:C	2.62	0.43
1:CA:40:C:H2'	1:CA:41:G:O4'	2.18	0.43
1:CA:451:A:H4'	1:CA:452:A:O4'	2.19	0.43
1:CA:560:A:N7	1:CA:566:G:C4	2.87	0.43
1:CA:706:A:H4'	11:CK:31:ILE:HD11	2.01	0.43
1:CA:755:G:C2	1:CA:756:C:C6	3.07	0.43
1:CA:783:C:C2	1:CA:784:A:C8	3.07	0.43
1:CA:847:G:C2	1:CA:848:C:C2	3.07	0.43
1:CA:1362:A:OP1	1:CA:1362:A:H4'	2.17	0.43
5:CE:131:THR:O	5:CE:132:ASN:C	2.61	0.43
7:CG:40:GLU:O	7:CG:44:TYR:CD2	2.72	0.43
8:CH:51:VAL:O	8:CH:51:VAL:HG22	2.19	0.43
10:CJ:33:GLY:HA3	10:CJ:83:THR:HB	2.00	0.43
12:CL:87:VAL:HG11	12:CL:90:LEU:HD23	2.00	0.43
12:CL:111:LYS:O	12:CL:114:ARG:HG3	2.19	0.43
22:DA:447:A:H5'	22:DA:449:A:C5	2.53	0.43
22:DA:469:G:O6	50:D2:37:LYS:NZ	2.43	0.43
22:DA:483:A:H4'	42:DU:47:LYS:HA	2.00	0.43
22:DA:546:U:O2	22:DA:546:U:C2'	2.67	0.43
22:DA:609:A:H2'	22:DA:610:C:O4'	2.19	0.43
22:DA:629:G:O4'	22:DA:638:G:N2	2.52	0.43
22:DA:687:C:C2	22:DA:788:A:H5'	2.54	0.43
22:DA:704:G:H1'	22:DA:726:G:N2	2.34	0.43
22:DA:776:G:C8	22:DA:793:A:C2	3.07	0.43
22:DA:980:A:N6	22:DA:981:A:N1	2.67	0.43
22:DA:1431:A:C6	22:DA:1432:G:C5	3.07	0.43
22:DA:1537:G:H3'	22:DA:1537:G:N3	2.34	0.43
22:DA:2067:G:C4	22:DA:2444:G:N2	2.87	0.43
22:DA:2199:A:C1'	29:DH:28:ASN:ND2	2.81	0.43
22:DA:2291:U:H2'	22:DA:2292:U:C6	2.53	0.43
22:DA:2756:U:H1'	22:DA:2757:A:H5"	2.01	0.43
22:DA:2803:G:C2	22:DA:2804:U:C4	3.07	0.43
23:DB:40:U:C2	23:DB:44:G:OP2	2.70	0.43
24:DC:129:THR:CG2	24:DC:130:LEU:N	2.82	0.43
27:DF:9:LYS:O	27:DF:13:VAL:HG23	2.19	0.43
27:DF:110:ARG:CZ	27:DF:110:ARG:HB3	2.49	0.43
27:DF:169:LEU:HG	27:DF:169:LEU:O	2.18	0.43
30:DI:59:ILE:CG2	30:DI:60:THR:N	2.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:17:VAL:HG22	31:DJ:55:ILE:HB	2.00	0.43
32:DK:99:ILE:CG2	32:DK:119:ALA:HB2	2.49	0.43
33:DL:56:PRO:HD2	33:DL:59:ARG:HB2	2.01	0.43
34:DM:62:LYS:HD3	34:DM:64:TRP:CZ2	2.54	0.43
37:DP:60:THR:HA	37:DP:73:VAL:HA	2.01	0.43
40:DS:10:ALA:HB3	40:DS:101:SER:O	2.19	0.43
41:DT:38:ALA:O	41:DT:39:THR:HB	2.18	0.43
1:AA:33:A:H2'	1:AA:34:C:C6	2.54	0.42
1:AA:408:A:C2	1:AA:435:A:C2	3.07	0.42
1:AA:457:G:C6	1:AA:458:U:C2	3.07	0.42
1:AA:580:C:H2'	1:AA:581:G:O4'	2.19	0.42
1:AA:827:U:H2'	1:AA:870:U:O4	2.19	0.42
1:AA:832:G:C2	1:AA:833:G:C8	3.06	0.42
1:AA:946:A:H2'	1:AA:947:G:C8	2.54	0.42
1:AA:1202:U:C4	1:AA:1203:C:C5	3.08	0.42
1:AA:1368:A:OP2	9:AI:114:LYS:HD2	2.19	0.42
1:AA:1370:G:C5'	9:AI:111:VAL:HG21	2.49	0.42
1:AA:1392:G:C5	1:AA:1393:U:C5	3.07	0.42
1:AA:1419:G:C6	1:AA:1420:U:C4	3.07	0.42
2:AB:49:MET:C	2:AB:51:ASN:O	2.62	0.42
2:AB:131:LYS:HA	2:AB:131:LYS:HE2	2.01	0.42
4:AD:160:GLU:C	4:AD:162:ALA:H	2.27	0.42
4:AD:190:ASP:O	4:AD:191:LEU:O	2.37	0.42
5:AE:154:ALA:O	5:AE:157:ARG:C	2.62	0.42
7:AG:46:ALA:CB	7:AG:120:LEU:HD12	2.49	0.42
17:AQ:8:LEU:N	17:AQ:8:LEU:CD1	2.82	0.42
19:AS:37:ARG:O	19:AS:70:LYS:HD2	2.19	0.42
19:AS:40:ILE:CG1	19:AS:71:LEU:HD22	2.49	0.42
21:AU:12:PHE:CD1	21:AU:16:LEU:CD1	3.02	0.42
22:BA:123:G:H2'	22:BA:124:G:O4'	2.18	0.42
22:BA:973:A:H5'	22:BA:1188:U:C1'	2.48	0.42
22:BA:999:U:C5	22:BA:1154:G:C5	3.07	0.42
22:BA:1313:U:H2'	22:BA:1610:A:C2	2.55	0.42
22:BA:1853:A:N1	22:BA:2087:G:H1'	2.34	0.42
22:BA:1925:C:C4'	22:BA:1926:U:OP1	2.66	0.42
22:BA:2166:U:O4	22:BA:2170:A:N7	2.52	0.42
22:BA:2275:C:O2	34:BM:84:LYS:CD	2.67	0.42
22:BA:2452:C:C4	22:BA:2453:A:C6	3.07	0.42
22:BA:2576:G:O2'	22:BA:2579:C:OP2	2.23	0.42
22:BA:2615:U:H2'	22:BA:2616:C:H5'	2.01	0.42
27:BF:5:HIS:O	27:BF:8:TYR:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:55:ALA:HA	27:BF:58:ALA:HB3	2.00	0.42
28:BG:168:VAL:O	28:BG:168:VAL:HG13	2.19	0.42
29:BH:79:THR:CG2	29:BH:147:VAL:CG2	2.97	0.42
29:BH:97:ARG:NH1	1:CA:370:C:O4'	2.52	0.42
37:BP:93:ARG:O	37:BP:94:LYS:HB2	2.18	0.42
42:BU:7:ARG:O	42:BU:8:ASP:O	2.37	0.42
45:BX:7:VAL:HG23	45:BX:51:VAL:HG12	2.00	0.42
1:CA:75:G:N2	1:CA:96:U:H1'	2.34	0.42
2:CB:146:ASN:OD1	2:CB:147:SER:N	2.51	0.42
4:CD:76:TYR:CD1	4:CD:76:TYR:C	2.97	0.42
4:CD:119:SER:O	4:CD:131:ASN:OD1	2.36	0.42
6:CF:66:ALA:HB3	6:CF:71:ILE:HD11	2.00	0.42
8:CH:49:PHE:C	8:CH:49:PHE:CD1	2.96	0.42
11:CK:118:HIS:O	11:CK:119:ASN:HB2	2.19	0.42
22:DA:14:A:H5"	22:DA:15:G:OP2	2.18	0.42
22:DA:389:G:C2	22:DA:2413:G:H1'	2.54	0.42
22:DA:578:G:C5	22:DA:2018:G:H5'	2.54	0.42
22:DA:579:G:C2	22:DA:1262:A:C5	3.06	0.42
22:DA:847:U:O4	22:DA:932:U:C4	2.72	0.42
22:DA:1109:C:H3'	22:DA:1110:G:C8	2.54	0.42
22:DA:1384:A:O4'	22:DA:1405:U:O4'	2.35	0.42
22:DA:1415:U:O2'	22:DA:1416:G:H4'	2.18	0.42
22:DA:1434:A:H2'	22:DA:1435:G:C8	2.54	0.42
22:DA:1453:A:C2	35:DN:77:ALA:HB2	2.54	0.42
22:DA:1975:G:N2	22:DA:1976:U:H1'	2.34	0.42
22:DA:2235:G:C2	22:DA:2236:U:C2	3.07	0.42
22:DA:2297:A:C8	22:DA:2320:U:C4	3.06	0.42
22:DA:2840:C:H5"	35:DN:53:THR:OG1	2.19	0.42
24:DC:3:VAL:HG11	24:DC:202:LEU:HD23	2.00	0.42
28:DG:121:ILE:HD12	28:DG:141:ILE:HG22	2.00	0.42
30:DI:10:LYS:HB2	30:DI:56:PRO:HB2	2.01	0.42
32:DK:21:CYS:HA	32:DK:41:ILE:HG22	2.01	0.42
33:DL:29:LYS:O	33:DL:30:THR:HG23	2.19	0.42
47:DZ:3:LYS:O	47:DZ:4:THR:HG22	2.19	0.42
1:AA:78:A:C5	1:AA:79:G:H1'	2.55	0.42
1:AA:79:G:N2	1:AA:91:U:O4	2.52	0.42
1:AA:464:U:N3	1:AA:466:A:H5"	2.33	0.42
1:AA:549:C:C2	1:AA:550:G:C8	3.07	0.42
1:AA:1296:C:H4'	1:AA:1302:C:C5	2.54	0.42
1:AA:1452:C:O4'	1:AA:1453:G:N2	2.52	0.42
1:AA:1485:U:O2'	1:AA:1486:G:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:50:PHE:CE2	2:AB:51:ASN:OD1	2.73	0.42
2:AB:83:ALA:O	2:AB:87:CYS:SG	2.77	0.42
3:AC:25:ASN:O	3:AC:27:LYS:HG2	2.19	0.42
4:AD:98:LEU:O	4:AD:99:ASP:C	2.62	0.42
5:AE:56:VAL:O	5:AE:60:ILE:HG23	2.19	0.42
5:AE:115:LEU:HG	5:AE:120:VAL:HG21	2.01	0.42
6:AF:52:ASN:C	6:AF:53:LYS:O	2.60	0.42
9:AI:30:ILE:O	9:AI:31:ASN:C	2.62	0.42
9:AI:51:PRO:HG2	9:AI:83:ILE:HD13	2.02	0.42
10:AJ:52:LEU:CB	14:AN:81:ARG:HE	2.32	0.42
11:AK:35:THR:HA	11:AK:42:LEU:HG	2.01	0.42
13:AM:74:SER:O	13:AM:78:LYS:HG3	2.19	0.42
14:AN:3:LYS:O	14:AN:4:GLN:C	2.62	0.42
20:AT:35:VAL:CG1	20:AT:79:LEU:HD22	2.49	0.42
22:BA:83:A:C6	22:BA:101:A:C4	3.06	0.42
22:BA:195:A:C4	22:BA:198:C:N4	2.86	0.42
22:BA:419:U:H2'	22:BA:420:C:C6	2.54	0.42
22:BA:451:U:H4'	26:BE:47:LYS:NZ	2.34	0.42
22:BA:468:G:N7	50:B2:39:ARG:NH2	2.65	0.42
22:BA:915:C:C2'	22:BA:916:G:H5'	2.49	0.42
22:BA:996:A:N6	22:BA:1160:G:N1	2.67	0.42
22:BA:1194:A:H2'	22:BA:1195:G:O5'	2.19	0.42
22:BA:1510:G:H2'	22:BA:1511:G:O4'	2.19	0.42
22:BA:1635:A:C6	22:BA:1636:U:C2	3.08	0.42
22:BA:2060:A:O4'	22:BA:2502:G:H1'	2.18	0.42
22:BA:2271:G:H2'	22:BA:2272:U:O4'	2.20	0.42
22:BA:2552:U:C2	22:BA:2554:U:C5'	3.03	0.42
24:BC:141:VAL:HG13	24:BC:191:THR:O	2.19	0.42
24:BC:264:ASP:O	24:BC:265:LYS:C	2.63	0.42
25:BD:127:PHE:CZ	25:BD:160:LYS:HB2	2.54	0.42
26:BE:152:GLU:OE1	26:BE:152:GLU:HA	2.20	0.42
30:BI:101:ILE:HG22	30:BI:102:SER:N	2.34	0.42
32:BK:66:LYS:HA	32:BK:79:PHE:O	2.19	0.42
33:BL:62:PRO:HG2	51:B3:25:LYS:CD	2.48	0.42
34:BM:65:ILE:HG12	34:BM:103:TYR:CE2	2.54	0.42
36:BO:51:ALA:HB3	36:BO:78:VAL:HG13	2.02	0.42
1:CA:102:G:C2	1:CA:103:U:C5	3.07	0.42
1:CA:401:C:O2'	1:CA:402:G:H5'	2.18	0.42
1:CA:590:U:O2'	1:CA:591:U:H5'	2.18	0.42
1:CA:678:U:H2'	1:CA:679:C:O4'	2.20	0.42
1:CA:728:A:C6	1:CA:729:A:C6	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:924:C:O2'	1:CA:1502:A:N1	2.52	0.42
1:CA:1175:G:O6	1:CA:1182:G:O6	2.37	0.42
1:CA:1424:U:H2'	1:CA:1425:U:O4'	2.17	0.42
1:CA:1426:G:C4	1:CA:1475:G:C2	3.07	0.42
2:CB:21:ARG:C	2:CB:23:TRP:N	2.76	0.42
2:CB:87:CYS:HB3	2:CB:222:ARG:HA	2.02	0.42
3:CC:179:ARG:HD2	3:CC:179:ARG:C	2.45	0.42
4:CD:168:PRO:HB2	4:CD:171:LEU:CD1	2.49	0.42
5:CE:150:PRO:C	5:CE:152:MET:N	2.77	0.42
6:CF:38:ARG:CG	6:CF:63:ASN:CB	2.97	0.42
6:CF:45:ARG:HD2	6:CF:59:TYR:CD2	2.54	0.42
7:CG:42:ILE:HG21	7:CG:116:MET:CG	2.49	0.42
10:CJ:17:LEU:HD21	10:CJ:96:VAL:HG22	2.01	0.42
13:CM:64:VAL:O	13:CM:69:LEU:HB2	2.18	0.42
22:DA:268:C:O2'	22:DA:269:C:H5'	2.20	0.42
22:DA:280:U:O4	22:DA:361:G:N2	2.52	0.42
22:DA:905:A:H2'	22:DA:906:U:H5'	2.02	0.42
22:DA:1097:U:O2	30:DI:9:VAL:CG1	2.67	0.42
22:DA:1210:G:C8	22:DA:1212:G:C2	3.08	0.42
22:DA:1332:G:C6	22:DA:1609:A:C5	3.07	0.42
22:DA:1364:G:C4	22:DA:1368:G:N2	2.87	0.42
22:DA:1501:G:H2'	22:DA:1502:A:O4'	2.19	0.42
22:DA:1509:A:O2'	22:DA:1510:G:OP2	2.36	0.42
22:DA:1512:C:N3	22:DA:1513:U:C4	2.87	0.42
22:DA:1595:C:H2'	22:DA:1596:A:O4'	2.20	0.42
22:DA:1956:U:O2	22:DA:1985:C:H4'	2.19	0.42
22:DA:2059:A:H2'	22:DA:2503:A:N1	2.34	0.42
22:DA:2201:G:C6	22:DA:2202:U:C4	3.07	0.42
22:DA:2331:G:N2	22:DA:2385:C:N1	2.68	0.42
22:DA:2425:A:H4'	22:DA:2426:A:O5'	2.20	0.42
22:DA:2699:C:O2	22:DA:2709:G:C2	2.72	0.42
22:DA:2740:A:N6	22:DA:2764:A:C8	2.87	0.42
22:DA:2886:A:N1	48:D0:29:SER:OG	2.49	0.42
23:DB:11:C:C5	23:DB:12:C:C5	3.07	0.42
24:DC:199:GLU:O	24:DC:200:HIS:C	2.61	0.42
26:DE:130:LYS:CB	26:DE:133:LEU:HB2	2.49	0.42
27:DF:69:LYS:HG3	27:DF:84:PRO:HA	2.00	0.42
27:DF:136:ILE:HA	27:DF:141:ILE:CG2	2.48	0.42
28:DG:67:THR:O	28:DG:68:ALA:C	2.62	0.42
31:DJ:36:LEU:HD23	31:DJ:121:LYS:HB2	2.00	0.42
33:DL:41:ARG:O	33:DL:44:GLY:N	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:111:ILE:HG22	33:DL:112:LEU:N	2.34	0.42
33:DL:116:VAL:HG21	33:DL:134:ALA:C	2.44	0.42
33:DL:135:ILE:O	33:DL:140:GLY:HA3	2.19	0.42
34:DM:49:ALA:CB	34:DM:124:LEU:HD21	2.49	0.42
34:DM:78:LEU:O	34:DM:79:ALA:HB3	2.19	0.42
40:DS:25:ARG:CZ	40:DS:25:ARG:HB2	2.49	0.42
41:DT:2:ILE:HG12	41:DT:7:LEU:HD12	1.99	0.42
47:DZ:3:LYS:N	47:DZ:3:LYS:HD3	2.34	0.42
1:AA:38:G:C2	1:AA:397:A:C2	3.07	0.42
1:AA:55:A:C6	1:AA:56:U:C2	3.08	0.42
1:AA:96:U:O2'	1:AA:97:G:P	2.77	0.42
1:AA:457:G:C5	1:AA:458:U:C5	3.07	0.42
1:AA:692:U:O2	1:AA:694:A:C8	2.72	0.42
1:AA:722:G:H2'	1:AA:723:U:OP2	2.20	0.42
1:AA:1134:G:H2'	1:AA:1135:U:O4'	2.19	0.42
1:AA:1181:G:H4'	1:AA:1182:G:OP1	2.19	0.42
1:AA:1210:C:N4	1:AA:1211:U:O4	2.52	0.42
1:AA:1461:G:H2'	1:AA:1462:C:H6	1.84	0.42
2:AB:96:TRP:O	2:AB:97:LEU:C	2.62	0.42
3:AC:132:ARG:O	3:AC:136:ARG:HG2	2.20	0.42
5:AE:84:PRO:HA	5:AE:98:PRO:HD3	2.01	0.42
9:AI:36:GLU:OE2	9:AI:36:GLU:CA	2.68	0.42
11:AK:126:LYS:C	21:AU:34:ARG:NE	2.77	0.42
15:AO:62:GLN:O	15:AO:63:ARG:C	2.62	0.42
15:AO:81:LEU:CD1	15:AO:85:LEU:CD2	2.98	0.42
22:BA:360:U:H3'	22:BA:361:G:C8	2.54	0.42
22:BA:391:A:C5	22:BA:392:U:C5	3.07	0.42
22:BA:1047:G:C2	22:BA:1110:G:C4	3.07	0.42
22:BA:1232:G:C4	22:BA:1233:C:C6	3.07	0.42
22:BA:1474:U:O4	22:BA:1475:G:N2	2.52	0.42
22:BA:1507:C:H2'	22:BA:1508:A:C4'	2.50	0.42
22:BA:1912:A:C2	22:BA:1919:A:C6	3.08	0.42
22:BA:1916:A:H2'	22:BA:1917:U:C2'	2.49	0.42
22:BA:1924:C:N3	22:BA:1926:U:O4	2.52	0.42
22:BA:2191:A:C2	22:BA:2192:U:N3	2.88	0.42
22:BA:2191:A:C2	22:BA:2192:U:O4	2.72	0.42
22:BA:2637:U:H2'	22:BA:2638:G:H5'	2.01	0.42
22:BA:2776:A:H4'	22:BA:2777:G:O5'	2.19	0.42
26:BE:134:LEU:HD23	26:BE:160:ALA:O	2.19	0.42
27:BF:69:LYS:N	27:BF:69:LYS:CD	2.83	0.42
34:BM:136:MET:HE3	43:BV:57:TYR:HD2	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:49:GLU:N	35:BN:50:PRO:CD	2.82	0.42
38:BQ:94:ILE:HG21	39:BR:4:VAL:HG11	2.01	0.42
39:BR:21:ARG:CZ	39:BR:93:PHE:CE1	3.02	0.42
39:BR:76:LYS:O	39:BR:84:ARG:HA	2.19	0.42
1:CA:130:A:C2	1:CA:264:C:N1	2.88	0.42
1:CA:156:C:C4	1:CA:157:U:C4	3.08	0.42
1:CA:302:G:O2'	1:CA:556:C:H5"	2.19	0.42
1:CA:455:G:C2	1:CA:478:A:N1	2.88	0.42
1:CA:938:A:C2	1:CA:1345:U:O4	2.73	0.42
1:CA:964:A:N3	1:CA:969:A:O2'	2.50	0.42
1:CA:1068:G:C6	1:CA:1069:C:C4	3.07	0.42
1:CA:1149:C:N4	1:CA:1150:A:N6	2.67	0.42
1:CA:1213:A:C8	1:CA:1215:G:C6	3.07	0.42
1:CA:1385:G:N7	58:CA:1873:HOH:O	2.37	0.42
4:CD:48:LEU:HD23	4:CD:53:VAL:N	2.34	0.42
4:CD:105:MET:HE1	4:CD:143:VAL:HG12	2.01	0.42
5:CE:82:GLN:HG2	5:CE:147:MET:HE3	2.01	0.42
6:CF:86:ARG:CG	6:CF:86:ARG:NH1	2.78	0.42
15:CO:73:LYS:HA	15:CO:73:LYS:CE	2.49	0.42
16:CP:4:ILE:N	16:CP:4:ILE:HD12	2.34	0.42
18:CR:23:TYR:CB	18:CR:58:ALA:HB1	2.50	0.42
20:CT:67:ILE:O	20:CT:68:HIS:O	2.37	0.42
22:DA:35:G:H1'	22:DA:454:A:C4	2.55	0.42
22:DA:86:G:O2'	22:DA:104:A:H4'	2.19	0.42
22:DA:482:A:H1'	22:DA:498:G:N2	2.34	0.42
22:DA:607:U:O4	22:DA:619:G:H2'	2.18	0.42
22:DA:1049:C:C2'	22:DA:1050:A:H5'	2.49	0.42
22:DA:1084:A:C8	22:DA:1085:A:C8	3.07	0.42
22:DA:1120:G:C5	22:DA:1121:C:C5	3.07	0.42
22:DA:1355:G:C6	22:DA:1356:G:C8	3.08	0.42
22:DA:1500:G:N1	22:DA:1501:G:C5	2.87	0.42
22:DA:1606:C:O2'	22:DA:1607:C:P	2.77	0.42
22:DA:1652:A:H3'	22:DA:1653:G:C8	2.54	0.42
22:DA:2010:G:C6	22:DA:2011:U:N3	2.87	0.42
22:DA:2024:G:C2	22:DA:2040:G:N3	2.87	0.42
22:DA:2044:C:N3	22:DA:2045:C:C5	2.88	0.42
22:DA:2234:G:C5	22:DA:2235:G:N7	2.87	0.42
22:DA:2323:G:C6	22:DA:2324:U:C4	3.07	0.42
22:DA:2341:G:C6	22:DA:2342:C:N3	2.87	0.42
22:DA:2370:G:C6	22:DA:2371:G:C6	3.08	0.42
22:DA:2793:C:H2'	22:DA:2794:C:C1'	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:70:LYS:C	25:DD:72:GLY:N	2.77	0.42
26:DE:25:GLU:HA	26:DE:28:VAL:HB	1.99	0.42
26:DE:170:ARG:N	26:DE:170:ARG:HD3	2.34	0.42
28:DG:2:SER:OG	28:DG:3:ARG:N	2.50	0.42
42:DU:3:ALA:O	42:DU:6:ARG:NH1	2.53	0.42
42:DU:60:GLU:O	42:DU:60:GLU:CG	2.67	0.42
51:D3:52:LYS:O	51:D3:53:GLY:C	2.63	0.42
1:AA:174:A:C2'	1:AA:175:C:H5'	2.50	0.42
1:AA:322:C:O2'	20:AT:18:ARG:HG3	2.20	0.42
1:AA:451:A:H61	1:AA:481:G:H5'	1.84	0.42
1:AA:457:G:H2'	1:AA:457:G:N3	2.34	0.42
1:AA:616:G:O2'	1:AA:617:G:H5'	2.19	0.42
1:AA:842:U:H3'	1:AA:843:U:C5'	2.49	0.42
1:AA:891:U:H2'	1:AA:892:A:H5'	2.01	0.42
1:AA:1072:G:C5	1:AA:1073:U:C4	3.07	0.42
1:AA:1253:G:N3	1:AA:1254:A:C8	2.88	0.42
1:AA:1410:A:C4	1:AA:1491:G:N2	2.87	0.42
2:AB:132:LYS:HA	2:AB:132:LYS:HE3	2.00	0.42
5:AE:151:GLU:HG2	5:AE:152:MET:H	1.84	0.42
6:AF:12:PRO:O	6:AF:15:SER:N	2.50	0.42
6:AF:85:ILE:O	6:AF:86:ARG:HG2	2.19	0.42
8:AH:89:LYS:HG3	8:AH:90:ASP:H	1.84	0.42
10:AJ:57:VAL:CG2	10:AJ:58:ASN:H	2.32	0.42
16:AP:36:VAL:CG2	16:AP:57:ILE:HG13	2.49	0.42
22:BA:517:C:P	48:B0:10:ARG:NH2	2.91	0.42
22:BA:863:A:O2'	22:BA:864:G:H5'	2.19	0.42
22:BA:969:G:C6	22:BA:970:U:C4	3.07	0.42
22:BA:1060:U:C1'	22:BA:1062:G:OP2	2.67	0.42
22:BA:1438:U:C5	22:BA:1552:A:C2	3.07	0.42
22:BA:1813:G:H1'	24:BC:50:THR:OG1	2.18	0.42
22:BA:2190:G:N2	22:BA:2191:A:H1'	2.34	0.42
22:BA:2672:U:C2'	22:BA:2673:G:O5'	2.68	0.42
22:BA:2683:C:H5"	37:BP:56:HIS:HB3	2.00	0.42
22:BA:2820:A:N1	25:BD:197:THR:HG22	2.34	0.42
22:BA:2838:G:C6	22:BA:2839:G:C5	3.08	0.42
22:BA:2885:G:H2'	22:BA:2886:A:H5'	2.02	0.42
30:BI:125:MET:HA	30:BI:128:SER:HB3	2.02	0.42
32:BK:64:ARG:HB2	32:BK:83:ALA:HB3	2.01	0.42
34:BM:132:THR:HG22	34:BM:133:LYS:N	2.34	0.42
40:BS:59:GLU:HA	40:BS:64:ALA:CB	2.50	0.42
47:BZ:24:LEU:HD11	47:BZ:54:MET:CE	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:17:THR:CG2	49:B1:43:VAL:HG13	2.49	0.42
1:CA:207:C:O2	1:CA:207:C:H2'	2.20	0.42
1:CA:375:U:O3'	16:CP:6:LEU:HB2	2.20	0.42
1:CA:780:A:H1'	1:CA:803:G:N2	2.34	0.42
1:CA:1049:U:H4'	1:CA:1050:G:O5'	2.19	0.42
1:CA:1178:G:O2'	1:CA:1180:A:N7	2.40	0.42
2:CB:118:GLU:HA	2:CB:121:SER:OG	2.20	0.42
4:CD:130:VAL:HG11	4:CD:135:TYR:CG	2.55	0.42
7:CG:37:SER:C	7:CG:39:ALA:N	2.76	0.42
11:CK:127:ARG:HB2	21:CU:34:ARG:NH1	2.34	0.42
15:CO:37:ASN:O	15:CO:40:GLN:CB	2.68	0.42
18:CR:72:ASP:C	18:CR:73:ARG:HG2	2.45	0.42
21:CU:15:ALA:O	21:CU:16:LEU:C	2.61	0.42
22:DA:77:G:H2'	22:DA:78:U:O4'	2.19	0.42
22:DA:485:C:H2'	22:DA:486:C:O4'	2.18	0.42
22:DA:751:A:C6	22:DA:789:A:C5	3.08	0.42
22:DA:841:G:H2'	22:DA:842:U:O4'	2.20	0.42
22:DA:1026:G:H1'	22:DA:1134:A:C2	2.53	0.42
22:DA:1085:A:H2'	22:DA:1086:A:C4	2.54	0.42
22:DA:1255:U:H2'	22:DA:1256:G:OP1	2.20	0.42
22:DA:1265:A:N1	22:DA:2013:A:H5"	2.34	0.42
22:DA:1386:C:H2'	22:DA:1387:A:C8	2.55	0.42
22:DA:1519:G:N3	22:DA:1519:G:H2'	2.33	0.42
22:DA:1525:A:C6	22:DA:1526:C:C4	3.07	0.42
22:DA:1668:A:H4'	22:DA:1669:A:O5'	2.19	0.42
22:DA:2116:G:C6	22:DA:2171:A:N6	2.87	0.42
22:DA:2291:U:O2'	22:DA:2292:U:H5'	2.19	0.42
22:DA:2397:G:N3	22:DA:2397:G:H2'	2.35	0.42
22:DA:2480:C:N4	22:DA:2481:G:C6	2.87	0.42
23:DB:26:C:C5	23:DB:27:C:C4	3.08	0.42
24:DC:62:TYR:CD1	24:DC:63:ARG:N	2.86	0.42
25:DD:149:ASN:CG	25:DD:150:GLN:H	2.27	0.42
26:DE:152:GLU:O	26:DE:154:ASP:N	2.52	0.42
27:DF:117:LEU:HG	27:DF:130:MET:SD	2.58	0.42
27:DF:131:GLY:HA2	27:DF:153:ASP:HA	2.00	0.42
30:DI:56:PRO:HD2	30:DI:75:PRO:HD3	2.01	0.42
32:DK:31:ARG:CB	32:DK:32:TYR:CE2	3.02	0.42
33:DL:77:ILE:HG23	33:DL:81:ASP:OD2	2.20	0.42
34:DM:17:ASN:O	34:DM:38:ARG:HD3	2.19	0.42
42:DU:33:LYS:HB3	42:DU:64:ALA:HB1	2.01	0.42
46:DY:27:ASN:O	46:DY:31:GLN:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:D1:15:ALA:C	49:D1:17:THR:H	2.27	0.42
1:AA:200:G:N2	1:AA:218:U:C2	2.87	0.42
1:AA:666:G:C6	1:AA:741:G:C6	3.07	0.42
1:AA:925:G:C2	1:AA:927:G:C8	3.07	0.42
1:AA:1031:C:O2'	1:AA:1032:G:P	2.77	0.42
1:AA:1074:G:O2'	1:AA:1101:A:N1	2.46	0.42
2:AB:208:ARG:O	2:AB:209:ALA:C	2.62	0.42
4:AD:206:LYS:C	4:AD:206:LYS:CD	2.92	0.42
5:AE:115:LEU:CD2	5:AE:123:VAL:HG21	2.49	0.42
7:AG:16:PRO:HB2	9:AI:46:MET:HE3	2.01	0.42
9:AI:30:ILE:HG22	9:AI:65:ILE:CD1	2.49	0.42
10:AJ:11:LYS:HA	10:AJ:70:HIS:O	2.20	0.42
10:AJ:17:LEU:HD21	10:AJ:96:VAL:HG22	2.01	0.42
10:AJ:32:THR:O	10:AJ:33:GLY:C	2.61	0.42
12:AL:106:GLY:HA3	12:AL:118:GLY:O	2.19	0.42
22:BA:37:C:H4'	22:BA:451:U:OP1	2.19	0.42
22:BA:144:A:C6	22:BA:145:C:C4	3.06	0.42
22:BA:1059:G:C5	22:BA:1080:A:C2	3.07	0.42
22:BA:1075:C:H2'	22:BA:1076:C:N1	2.35	0.42
22:BA:1848:A:C2'	22:BA:1849:G:O5'	2.67	0.42
22:BA:2275:C:O2	34:BM:84:LYS:HD3	2.20	0.42
22:BA:2804:U:H2'	22:BA:2805:C:H6	1.84	0.42
22:BA:2805:C:C4	22:BA:2806:C:C4	3.08	0.42
23:BB:17:C:H2'	23:BB:18:G:O4'	2.19	0.42
23:BB:78:A:H2'	23:BB:79:G:O4'	2.19	0.42
24:BC:174:LEU:N	24:BC:174:LEU:CD1	2.83	0.42
25:BD:3:GLY:C	25:BD:4:LEU:HD13	2.44	0.42
27:BF:28:VAL:O	27:BF:28:VAL:CG1	2.68	0.42
28:BG:11:VAL:O	28:BG:11:VAL:HG22	2.19	0.42
28:BG:40:ALA:CB	28:BG:58:TYR:HB3	2.49	0.42
28:BG:174:ALA:O	28:BG:175:LYS:HB2	2.20	0.42
30:BI:22:PRO:HB2	30:BI:23:PRO:HD3	2.01	0.42
42:BU:48:PRO:CB	42:BU:54:GLN:O	2.67	0.42
43:BV:4:ILE:HG13	43:BV:50:MET:HE1	2.01	0.42
44:BW:40:GLN:OE1	44:BW:44:LYS:N	2.52	0.42
44:BW:41:ARG:HH11	44:BW:41:ARG:HG3	1.84	0.42
44:BW:75:LYS:O	44:BW:76:ASN:HB2	2.18	0.42
48:B0:10:ARG:HB2	48:B0:13:ARG:NH2	2.34	0.42
1:CA:64:G:H4'	1:CA:65:A:O5'	2.18	0.42
1:CA:428:G:OP2	4:CD:10:LYS:HE3	2.20	0.42
1:CA:1149:C:N4	1:CA:1150:A:C6	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1489:G:C5	1:CA:1490:U:C5	3.08	0.42
2:CB:25:PRO:O	2:CB:28:LYS:HB2	2.19	0.42
2:CB:55:ALA:O	2:CB:59:LYS:HB2	2.20	0.42
2:CB:71:GLY:O	2:CB:93:ASN:HA	2.19	0.42
3:CC:206:GLU:O	3:CC:207:ILE:C	2.62	0.42
4:CD:198:HIS:CE1	4:CD:199:LEU:HD21	2.54	0.42
6:CF:80:PHE:O	6:CF:80:PHE:CD2	2.72	0.42
7:CG:51:ALA:HB2	7:CG:58:GLU:HA	2.01	0.42
9:CI:49:ARG:NH2	9:CI:52:LEU:O	2.53	0.42
11:CK:25:ALA:O	11:CK:89:PRO:O	2.37	0.42
11:CK:60:PRO:HD3	11:CK:91:PRO:HB3	2.00	0.42
14:CN:93:ILE:HG21	14:CN:96:LEU:HD22	2.02	0.42
16:CP:21:VAL:HG23	16:CP:36:VAL:HG21	2.02	0.42
17:CQ:19:LYS:HD3	17:CQ:49:GLU:HA	2.01	0.42
19:CS:40:ILE:HG21	19:CS:66:MET:HB3	2.01	0.42
22:DA:7:G:H4'	31:DJ:15:TRP:HH2	1.85	0.42
22:DA:219:A:C6	22:DA:220:G:C6	3.07	0.42
22:DA:232:G:N2	22:DA:420:C:OP1	2.52	0.42
22:DA:322:A:O4'	22:DA:340:A:H1'	2.20	0.42
22:DA:371:A:N3	45:DX:61:LYS:NZ	2.67	0.42
22:DA:695:G:C6	22:DA:768:G:C5	3.08	0.42
22:DA:705:A:C2	22:DA:727:A:O4'	2.72	0.42
22:DA:848:C:O2	22:DA:933:A:C2	2.72	0.42
22:DA:1036:G:C6	22:DA:1120:G:C5	3.08	0.42
22:DA:1154:G:OP1	38:DQ:58:ARG:HD3	2.20	0.42
22:DA:1248:G:C5	38:DQ:3:ARG:HB2	2.55	0.42
22:DA:1277:G:H2'	22:DA:1278:C:O4'	2.19	0.42
22:DA:1310:G:H1'	22:DA:1611:C:C5'	2.49	0.42
22:DA:1350:C:O2	22:DA:1382:G:N3	2.53	0.42
22:DA:1400:U:H2'	22:DA:1401:G:O4'	2.20	0.42
22:DA:2059:A:C2	54:D6:5:MHU:HD1	2.53	0.42
22:DA:2108:A:H2'	22:DA:2109:U:H5'	2.01	0.42
22:DA:2114:A:C4	22:DA:2167:U:H4'	2.54	0.42
22:DA:2410:G:C2	22:DA:2411:A:H1'	2.54	0.42
22:DA:2428:G:H5"	22:DA:2429:G:P	2.59	0.42
22:DA:2825:G:H2'	22:DA:2826:A:H5'	2.02	0.42
24:DC:130:LEU:HD11	24:DC:135:ILE:HG12	2.01	0.42
25:DD:60:VAL:HG13	25:DD:60:VAL:O	2.19	0.42
25:DD:107:VAL:HB	25:DD:204:LYS:O	2.18	0.42
26:DE:40:ARG:NH2	26:DE:92:HIS:CE1	2.87	0.42
31:DJ:25:LEU:HA	31:DJ:62:VAL:HG21	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:56:ASP:OD2	32:DK:56:ASP:N	2.53	0.42
35:DN:95:THR:HG23	35:DN:96:ARG:N	2.34	0.42
42:DU:59:VAL:HG12	42:DU:61:LYS:HB2	2.00	0.42
1:AA:73:C:O2'	1:AA:74:A:P	2.77	0.42
1:AA:444:G:N1	1:AA:445:G:C5	2.87	0.42
1:AA:499:A:H4'	1:AA:500:G:OP1	2.20	0.42
1:AA:695:A:N1	1:AA:696:A:C2	2.87	0.42
1:AA:945:G:H2'	1:AA:945:G:N3	2.34	0.42
1:AA:986:U:C2	1:AA:987:G:C8	3.07	0.42
1:AA:1109:C:P	3:AC:176:HIS:CE1	3.13	0.42
1:AA:1141:C:C2	1:AA:1142:G:C8	3.07	0.42
1:AA:1157:A:C4	1:AA:1181:G:C6	3.08	0.42
1:AA:1160:G:O2'	1:AA:1161:C:O5'	2.35	0.42
1:AA:1375:A:C6	1:AA:1376:U:C4	3.08	0.42
2:AB:112:LYS:O	2:AB:116:ASP:HB2	2.20	0.42
2:AB:184:PHE:CE1	2:AB:198:PHE:CD2	3.07	0.42
3:AC:85:GLU:O	3:AC:86:LYS:C	2.62	0.42
4:AD:33:LYS:O	4:AD:34:ILE:C	2.62	0.42
4:AD:53:VAL:CG2	4:AD:54:GLN:N	2.82	0.42
4:AD:58:LYS:HG2	4:AD:203:LEU:HD22	2.01	0.42
4:AD:135:TYR:C	4:AD:135:TYR:CD2	2.97	0.42
4:AD:147:GLU:O	4:AD:150:LYS:N	2.53	0.42
12:AL:46:ASN:ND2	12:AL:89:ASP:OD1	2.51	0.42
14:AN:46:LEU:C	14:AN:48:LEU:N	2.77	0.42
17:AQ:17:MET:HG2	17:AQ:20:SER:HB3	2.02	0.42
17:AQ:50:ASN:O	17:AQ:51:ASN:O	2.36	0.42
17:AQ:59:VAL:HG23	17:AQ:77:ARG:O	2.20	0.42
19:AS:64:ASP:HB3	27:BF:115:ARG:NH2	2.34	0.42
20:AT:8:LYS:O	20:AT:11:ALA:HB3	2.19	0.42
21:AU:53:VAL:O	21:AU:54:LYS:HB2	2.18	0.42
22:BA:872:U:H2'	22:BA:873:C:C6	2.54	0.42
22:BA:934:U:H2'	22:BA:935:C:H6	1.85	0.42
22:BA:1380:G:N2	22:BA:1570:A:N1	2.65	0.42
22:BA:1923:U:H2'	22:BA:1923:U:O2	2.19	0.42
22:BA:2602:A:H4'	22:BA:2603:G:OP2	2.18	0.42
22:BA:2727:A:C2'	22:BA:2728:U:H5'	2.50	0.42
23:BB:2:G:C6	23:BB:119:A:C2	3.08	0.42
23:BB:101:A:H2'	23:BB:102:G:O4'	2.20	0.42
27:BF:134:GLU:HG2	27:BF:136:ILE:HD12	2.00	0.42
29:BH:114:GLU:CB	29:BH:133:GLN:O	2.66	0.42
31:BJ:77:HIS:CD2	31:BJ:79:GLY:H	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:62:ILE:HG23	38:BQ:76:TYR:CE1	2.54	0.42
38:BQ:66:ASN:CG	38:BQ:76:TYR:HB2	2.45	0.42
45:BX:71:LEU:HB3	45:BX:76:GLU:O	2.19	0.42
46:BY:9:LYS:O	46:BY:10:SER:C	2.63	0.42
48:B0:25:VAL:HG13	48:B0:26:THR:N	2.34	0.42
53:B5:67:HIS:CD2	53:B5:69:LEU:HD23	2.54	0.42
1:CA:209:U:O2	1:CA:209:U:H2'	2.18	0.42
1:CA:784:A:C2	1:CA:785:G:C4	3.07	0.42
1:CA:853:C:H2'	1:CA:854:U:O4'	2.20	0.42
1:CA:1114:C:O2'	14:CN:100:SER:O	2.24	0.42
1:CA:1321:U:C4	1:CA:1322:C:H5	2.37	0.42
1:CA:1459:G:H2'	1:CA:1460:C:O4'	2.20	0.42
2:CB:32:PHE:N	2:CB:40:ILE:O	2.45	0.42
2:CB:68:LEU:HG	2:CB:154:MET:HE1	2.02	0.42
3:CC:36:ASP:C	3:CC:38:LYS:N	2.78	0.42
4:CD:5:LEU:CD1	4:CD:5:LEU:N	2.82	0.42
4:CD:30:THR:O	4:CD:31:LYS:HD3	2.19	0.42
7:CG:43:VAL:HG12	7:CG:44:TYR:CD1	2.54	0.42
7:CG:51:ALA:HB1	7:CG:57:SER:O	2.20	0.42
8:CH:105:SER:O	8:CH:123:GLY:HA3	2.20	0.42
9:CI:114:LYS:HG3	9:CI:120:LYS:HA	2.01	0.42
9:CI:116:VAL:CG2	10:CJ:60:ASP:O	2.68	0.42
10:CJ:83:THR:O	10:CJ:83:THR:HG23	2.19	0.42
11:CK:107:ILE:HG23	11:CK:107:ILE:O	2.18	0.42
13:CM:37:ALA:CB	13:CM:56:LEU:HG	2.48	0.42
21:CU:36:GLU:O	21:CU:37:PHE:HB2	2.19	0.42
22:DA:24:G:C6	22:DA:25:U:C4	3.07	0.42
22:DA:237:C:N4	22:DA:238:C:C5	2.88	0.42
22:DA:298:G:N2	22:DA:341:C:C4	2.87	0.42
22:DA:450:G:H2'	22:DA:451:U:H5"	2.02	0.42
22:DA:1043:C:C5	22:DA:1044:C:C5	3.07	0.42
22:DA:1163:G:C2	22:DA:1164:C:C5	3.08	0.42
22:DA:1262:A:C6	22:DA:1263:U:C2	3.07	0.42
22:DA:1358:G:O6	22:DA:1371:G:C8	2.72	0.42
22:DA:1366:A:OP1	45:DX:2:SER:OG	2.34	0.42
22:DA:2079:U:C2'	22:DA:2080:A:O4'	2.66	0.42
22:DA:2191:A:C6	22:DA:2192:U:C4	3.07	0.42
22:DA:2511:U:C5	22:DA:2512:C:C5	3.08	0.42
22:DA:2722:G:H4'	35:DN:4:ARG:HB2	2.00	0.42
22:DA:2834:G:O6	22:DA:2879:A:C2'	2.66	0.42
25:DD:3:GLY:C	25:DD:82:PHE:CE1	2.98	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:15:PHE:CE2	37:DP:78:SER:HA	2.55	0.42
25:DD:122:VAL:HG21	25:DD:141:ARG:HB3	2.01	0.42
25:DD:177:VAL:CG2	25:DD:187:LEU:HD11	2.49	0.42
26:DE:8:ALA:HB2	26:DE:122:GLU:CG	2.49	0.42
26:DE:112:LEU:HD11	26:DE:180:LEU:O	2.20	0.42
26:DE:170:ARG:NH2	26:DE:176:ASP:OD1	2.52	0.42
27:DF:17:MET:SD	27:DF:22:TYR:HB2	2.60	0.42
27:DF:43:ALA:O	27:DF:44:ILE:C	2.62	0.42
29:DH:31:VAL:HG12	29:DH:32:PRO:HD3	2.02	0.42
29:DH:69:ALA:HB2	29:DH:138:VAL:HG12	2.02	0.42
29:DH:72:ILE:O	29:DH:72:ILE:CG2	2.67	0.42
30:DI:8:TYR:HB2	30:DI:59:ILE:H	1.85	0.42
39:DR:39:LEU:O	39:DR:49:ILE:HG23	2.19	0.42
40:DS:29:VAL:CG1	40:DS:55:ILE:HD11	2.49	0.42
42:DU:96:PHE:CE1	42:DU:103:ILE:HG13	2.54	0.42
44:DW:67:VAL:HG12	44:DW:68:LYS:N	2.35	0.42
1:AA:639:G:N3	1:AA:639:G:H2'	2.34	0.42
1:AA:955:U:O4'	1:AA:1227:A:N6	2.51	0.42
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.55	0.42
1:AA:1216:A:H2'	1:AA:1217:C:C6	2.54	0.42
1:AA:1269:A:N1	1:AA:1313:U:O4'	2.53	0.42
2:AB:222:ARG:HB3	2:AB:222:ARG:NH1	2.35	0.42
4:AD:121:LYS:HB3	4:AD:129:VAL:HG21	2.02	0.42
4:AD:190:ASP:O	4:AD:191:LEU:HD12	2.18	0.42
17:AQ:26:GLU:OE2	17:AQ:39:LYS:HD3	2.20	0.42
17:AQ:31:HIS:C	17:AQ:33:ILE:H	2.28	0.42
22:BA:477:A:H2'	22:BA:478:A:C8	2.54	0.42
22:BA:532:A:N3	22:BA:532:A:H2'	2.35	0.42
22:BA:536:G:C2	22:BA:537:G:H1'	2.55	0.42
22:BA:598:U:O2'	22:BA:599:A:H5'	2.20	0.42
22:BA:670:A:H4'	22:BA:671:C:O5'	2.20	0.42
22:BA:874:G:OP1	34:BM:62:LYS:NZ	2.53	0.42
22:BA:1071:G:O4'	22:BA:1089:A:N7	2.52	0.42
22:BA:1458:U:H5'	22:BA:1459:G:N3	2.35	0.42
22:BA:2187:U:H2'	22:BA:2188:U:H1'	2.00	0.42
22:BA:2371:G:C2	22:BA:2372:U:C6	3.07	0.42
22:BA:2543:G:H2'	22:BA:2544:G:O4'	2.20	0.42
56:BA:3001:DOL:C37	56:BA:3001:DOL:C29	2.98	0.42
25:BD:177:VAL:O	25:BD:177:VAL:CG2	2.67	0.42
26:BE:79:ARG:CG	26:BE:79:ARG:NH1	2.83	0.42
32:BK:58:LEU:CD2	32:BK:58:LEU:C	2.93	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:132:THR:HG22	34:BM:133:LYS:O	2.20	0.42
35:BN:24:MET:HG2	35:BN:44:LEU:HD13	2.01	0.42
39:BR:79:ARG:O	39:BR:80:ARG:HB3	2.20	0.42
41:BT:47:VAL:CG1	41:BT:55:VAL:CG2	2.98	0.42
41:BT:88:LYS:O	41:BT:89:GLU:CG	2.68	0.42
41:BT:91:GLN:HG3	41:BT:91:GLN:O	2.19	0.42
1:CA:68:G:C5	1:CA:69:G:H1'	2.55	0.42
1:CA:754:C:OP1	15:CO:72:ARG:NH2	2.53	0.42
1:CA:756:C:C2	1:CA:757:U:C6	3.07	0.42
1:CA:1107:C:C4	1:CA:1108:G:N7	2.87	0.42
1:CA:1124:G:C2'	1:CA:1145:A:H62	2.32	0.42
2:CB:99:GLY:C	2:CB:101:LEU:N	2.76	0.42
2:CB:138:THR:C	2:CB:140:GLU:N	2.76	0.42
4:CD:192:SER:HB2	4:CD:195:ILE:HG12	2.00	0.42
6:CF:64:VAL:HG12	6:CF:65:GLU:H	1.84	0.42
6:CF:97:THR:O	6:CF:98:GLU:CG	2.68	0.42
8:CH:95:VAL:O	8:CH:99:LEU:O	2.38	0.42
9:CI:88:MET:HA	9:CI:92:GLU:OE2	2.19	0.42
10:CJ:5:ARG:O	10:CJ:102:LEU:CD1	2.68	0.42
11:CK:124:PRO:O	21:CU:35:ARG:N	2.48	0.42
13:CM:3:ARG:HA	13:CM:8:ASN:O	2.19	0.42
13:CM:20:THR:HG23	13:CM:26:GLY:O	2.19	0.42
14:CN:67:THR:HG23	14:CN:83:LYS:CE	2.50	0.42
22:DA:42:A:C2	22:DA:438:G:C2	3.07	0.42
22:DA:80:G:O2'	22:DA:346:A:C8	2.67	0.42
22:DA:192:C:P	58:DA:3739:HOH:O	2.75	0.42
22:DA:479:A:N3	22:DA:481:G:H5"	2.35	0.42
22:DA:481:G:C2	22:DA:507:A:C4	3.08	0.42
22:DA:669:G:C2	22:DA:801:G:C6	3.08	0.42
22:DA:669:G:N3	22:DA:801:G:C2	2.88	0.42
22:DA:826:U:H2'	22:DA:828:U:O4'	2.18	0.42
22:DA:1428:C:C5	22:DA:1569:A:C5'	3.03	0.42
22:DA:1439:A:C8	22:DA:1440:U:C5	3.08	0.42
22:DA:1601:G:C5	22:DA:1602:U:C4	3.08	0.42
22:DA:1668:A:N3	22:DA:1670:C:C4	2.88	0.42
22:DA:1833:C:N3	22:DA:1834:U:C4	2.87	0.42
22:DA:1867:G:O6	22:DA:1875:G:N2	2.52	0.42
22:DA:1999:C:O2	22:DA:2687:U:O2'	2.34	0.42
22:DA:2093:G:N7	22:DA:2225:A:H2'	2.35	0.42
22:DA:2217:G:C6	22:DA:2218:G:C5	3.08	0.42
22:DA:2583:G:H2'	22:DA:2584:U:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2599:G:C8	24:DC:236:GLU:HB2	2.55	0.42
22:DA:2807:U:H1'	22:DA:2892:G:N2	2.34	0.42
22:DA:2837:A:H2'	22:DA:2838:G:O4'	2.20	0.42
22:DA:2883:A:P	48:D0:49:TYR:HH	2.41	0.42
23:DB:92:C:H2'	23:DB:93:C:C6	2.54	0.42
24:DC:246:THR:C	24:DC:248:TRP:N	2.78	0.42
25:DD:62:LYS:N	25:DD:63:PRO:CD	2.82	0.42
25:DD:186:LEU:HD11	37:DP:8:LEU:HD12	2.02	0.42
28:DG:52:PHE:CE2	28:DG:69:ARG:HA	2.54	0.42
29:DH:41:LYS:HE2	29:DH:44:ILE:CD1	2.50	0.42
31:DJ:41:LYS:HD2	31:DJ:50:THR:O	2.19	0.42
32:DK:87:LEU:O	32:DK:88:ASN:C	2.63	0.42
33:DL:77:ILE:HG22	33:DL:78:ARG:N	2.34	0.42
33:DL:90:VAL:O	33:DL:123:ARG:N	2.50	0.42
35:DN:51:LEU:N	35:DN:51:LEU:HD23	2.34	0.42
42:DU:49:VAL:HG13	42:DU:53:ASN:O	2.20	0.42
44:DW:37:ILE:HG22	44:DW:38:VAL:CG2	2.49	0.42
45:DX:54:LYS:CA	45:DX:57:ARG:HB2	2.50	0.42
50:D2:10:LEU:HD11	50:D2:14:ARG:NH1	2.35	0.42
1:AA:79:G:N2	1:AA:91:U:C4	2.88	0.42
1:AA:695:A:H2'	1:AA:696:A:O4'	2.20	0.42
1:AA:1081:A:OP1	5:AE:21:VAL:HG23	2.19	0.42
1:AA:1173:U:H2'	1:AA:1174:G:C8	2.55	0.42
1:AA:1307:U:H2'	1:AA:1308:U:H6	1.85	0.42
1:AA:1370:G:C2	1:AA:1371:G:C8	3.08	0.42
2:AB:41:ILE:N	2:AB:41:ILE:CD1	2.83	0.42
2:AB:165:ASP:C	2:AB:165:ASP:OD1	2.63	0.42
3:AC:112:ASP:O	3:AC:116:VAL:HG23	2.20	0.42
4:AD:17:THR:HG22	4:AD:18:ASP:N	2.32	0.42
8:AH:78:VAL:HG11	8:AH:125:ILE:HD11	2.01	0.42
11:AK:128:ARG:HG2	11:AK:128:ARG:NH1	2.32	0.42
12:AL:50:ARG:HG3	12:AL:90:LEU:HD11	2.02	0.42
14:AN:46:LEU:HG	14:AN:47:LYS:N	2.34	0.42
14:AN:50:THR:O	14:AN:50:THR:OG1	2.34	0.42
17:AQ:81:LYS:N	17:AQ:81:LYS:CD	2.82	0.42
20:AT:54:MET:CE	20:AT:58:VAL:CG2	2.98	0.42
22:BA:226:A:N6	22:BA:227:A:C6	2.88	0.42
22:BA:475:C:C5	22:BA:481:G:O6	2.73	0.42
22:BA:784:G:H5'	24:BC:226:ASN:OD1	2.19	0.42
22:BA:859:G:O2'	22:BA:860:U:P	2.78	0.42
22:BA:1071:G:C4	22:BA:1089:A:C5	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1754:A:N6	22:BA:1755:A:N6	2.67	0.42
22:BA:1998:A:O3'	22:BA:2724:U:H4'	2.19	0.42
22:BA:2459:A:C5	22:BA:2460:U:C5	3.07	0.42
22:BA:2725:A:C4	22:BA:2727:A:C8	3.08	0.42
26:BE:97:ASN:O	26:BE:98:LYS:C	2.59	0.42
26:BE:149:ILE:HD12	26:BE:150:THR:O	2.20	0.42
29:BH:41:LYS:O	29:BH:42:LYS:C	2.62	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
31:BJ:62:VAL:HG22	31:BJ:63:ALA:N	2.35	0.42
32:BK:21:CYS:HA	32:BK:41:ILE:HG22	2.02	0.42
33:BL:101:ILE:HG13	33:BL:102:GLY:N	2.35	0.42
34:BM:11:LYS:HE2	34:BM:87:GLY:O	2.19	0.42
38:BQ:83:LEU:HD22	38:BQ:88:VAL:HG11	2.02	0.42
1:CA:32:A:C2	1:CA:33:A:C6	3.07	0.42
1:CA:104:G:H4'	1:CA:174:A:O4'	2.19	0.42
1:CA:260:G:C6	1:CA:261:U:C4	3.08	0.42
1:CA:406:G:C2	1:CA:407:U:C5	3.08	0.42
1:CA:431:A:H2'	1:CA:432:A:O4'	2.20	0.42
1:CA:463:U:H5'	1:CA:464:U:OP2	2.20	0.42
1:CA:632:U:H2'	1:CA:633:G:OP1	2.20	0.42
1:CA:723:U:C5	21:CU:49:LYS:HB3	2.55	0.42
1:CA:857:C:H2'	1:CA:858:G:O4'	2.19	0.42
1:CA:993:G:H2'	1:CA:995:C:N4	2.35	0.42
1:CA:1060:U:H5"	10:CJ:53:ILE:CG2	2.50	0.42
1:CA:1225:A:OP1	13:CM:101:ARG:HA	2.19	0.42
1:CA:1493:A:H4'	22:DA:1913:A:N1	2.35	0.42
3:CC:71:ALA:O	3:CC:73:PRO:HD3	2.19	0.42
5:CE:122:ASN:O	5:CE:123:VAL:C	2.63	0.42
7:CG:37:SER:OG	9:CI:43:THR:HG23	2.20	0.42
7:CG:57:SER:O	7:CG:61:ALA:HB2	2.20	0.42
9:CI:71:GLY:O	9:CI:72:ILE:C	2.63	0.42
15:CO:35:GLN:O	15:CO:36:ILE:C	2.62	0.42
15:CO:89:ARG:NH1	22:DA:716:A:OP1	2.53	0.42
18:CR:72:ASP:CG	18:CR:72:ASP:O	2.61	0.42
22:DA:110:G:H2'	22:DA:110:G:N3	2.34	0.42
22:DA:135:U:H2'	22:DA:136:G:C8	2.55	0.42
22:DA:447:A:C2	22:DA:454:A:H2'	2.55	0.42
22:DA:972:A:N1	22:DA:973:A:C6	2.87	0.42
22:DA:1339:G:O4'	22:DA:1393:A:C2	2.73	0.42
22:DA:1855:U:C6	22:DA:1856:U:C5	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1869:G:C2	22:DA:1873:G:C6	3.07	0.42
22:DA:2204:G:C4	22:DA:2205:A:C8	3.08	0.42
22:DA:2345:G:C8	22:DA:2381:A:C2	3.08	0.42
22:DA:2347:C:C2	22:DA:2371:G:N2	2.87	0.42
22:DA:2357:G:H5'	22:DA:2358:A:OP2	2.20	0.42
22:DA:2603:G:C5	22:DA:2604:U:C5	3.08	0.42
22:DA:2722:G:H2'	22:DA:2723:C:O4'	2.20	0.42
22:DA:2810:A:H2'	22:DA:2811:G:O4'	2.19	0.42
24:DC:18:LYS:O	24:DC:19:VAL:HB	2.19	0.42
24:DC:25:HIS:HB2	24:DC:80:ARG:HG3	2.00	0.42
25:DD:114:LYS:HE2	25:DD:196:ALA:CB	2.50	0.42
27:DF:38:MET:HE1	27:DF:56:ASP:HB3	2.00	0.42
28:DG:9:VAL:O	28:DG:49:THR:HA	2.20	0.42
30:DI:21:SER:HB3	30:DI:22:PRO:HD3	2.00	0.42
32:DK:113:MET:O	32:DK:116:ILE:CG1	2.68	0.42
33:DL:127:VAL:HG12	33:DL:131:ALA:C	2.45	0.42
36:DO:111:ARG:NH2	36:DO:117:PHE:OXT	2.52	0.42
38:DQ:11:ARG:O	38:DQ:11:ARG:HG3	2.20	0.42
46:DY:16:THR:O	46:DY:19:LEU:HB2	2.20	0.42
51:D3:31:HIS:CE1	51:D3:32:ILE:HD12	2.54	0.42
1:AA:22:G:C5	1:AA:23:C:C5	3.07	0.42
1:AA:137:U:H1'	1:AA:227:G:N2	2.35	0.42
1:AA:760:G:C8	1:AA:761:G:C8	3.07	0.42
1:AA:1053:G:N7	1:AA:1200:C:H5"	2.35	0.42
1:AA:1119:C:OP1	9:AI:85:ARG:NH2	2.53	0.42
6:AF:55:HIS:O	6:AF:56:LYS:HB2	2.19	0.42
6:AF:99:ALA:O	6:AF:100:SER:HB2	2.20	0.42
7:AG:56:LYS:O	7:AG:57:SER:OG	2.38	0.42
9:AI:50:GLN:OE1	9:AI:80:ARG:NH1	2.53	0.42
11:AK:112:ASP:CB	21:AU:20:LYS:HD2	2.49	0.42
15:AO:17:ARG:HB3	15:AO:18:ASP:H	1.71	0.42
18:AR:71:THR:OG1	18:AR:73:ARG:HB2	2.19	0.42
21:AU:25:LYS:C	21:AU:27:GLY:H	2.27	0.42
22:BA:150:U:H2'	22:BA:151:C:C6	2.55	0.42
22:BA:195:A:C5	22:BA:198:C:C5	3.08	0.42
22:BA:340:A:H2'	22:BA:341:C:O4'	2.20	0.42
22:BA:983:A:C6	22:BA:984:A:N1	2.87	0.42
22:BA:1027:A:C5	22:BA:1126:A:C2	3.07	0.42
22:BA:1176:U:H3'	22:BA:1177:G:C8	2.55	0.42
22:BA:1179:G:O6	22:BA:1180:U:C2	2.73	0.42
22:BA:1380:G:N3	22:BA:1380:G:H2'	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1839:G:C4	22:BA:1840:G:C8	3.08	0.42
22:BA:1922:G:C6	22:BA:1923:U:C5	3.08	0.42
22:BA:2352:A:H2'	22:BA:2353:G:H5'	2.02	0.42
22:BA:2722:G:H2'	22:BA:2723:C:C6	2.54	0.42
24:BC:14:ARG:HG2	24:BC:15:HIS:ND1	2.34	0.42
28:BG:4:VAL:O	28:BG:5:ALA:C	2.60	0.42
32:BK:86:LEU:N	32:BK:86:LEU:HD23	2.34	0.42
33:BL:82:LEU:HD21	33:BL:120:VAL:HG11	2.02	0.42
43:BV:92:VAL:O	43:BV:92:VAL:HG12	2.20	0.42
45:BX:45:ARG:HG2	45:BX:46:PHE:N	2.34	0.42
53:B5:64:SER:O	53:B5:65:LEU:CB	2.68	0.42
1:CA:6:G:O6	5:CE:100:SER:N	2.52	0.42
1:CA:47:C:H4'	1:CA:48:C:OP1	2.18	0.42
1:CA:49:U:O4	1:CA:362:G:N2	2.52	0.42
1:CA:112:G:H5'	1:CA:389:A:O2'	2.19	0.42
1:CA:182:A:C4	1:CA:184:G:C8	3.08	0.42
1:CA:213:G:C5	1:CA:214:C:C2	3.08	0.42
1:CA:268:U:H2'	1:CA:269:C:H6	1.83	0.42
1:CA:411:A:C5	1:CA:429:U:C5	3.08	0.42
1:CA:518:C:H4'	1:CA:519:C:O5'	2.20	0.42
1:CA:716:A:N3	11:CK:120:GLY:HA2	2.35	0.42
1:CA:1012:A:C2	1:CA:1018:G:N2	2.88	0.42
1:CA:1055:A:C5	1:CA:1206:G:C6	3.08	0.42
1:CA:1158:C:O2	1:CA:1158:C:C2'	2.67	0.42
1:CA:1259:C:C5	1:CA:1260:G:C8	3.08	0.42
3:CC:110:GLU:C	3:CC:111:LEU:HD22	2.44	0.42
4:CD:188:ARG:HD2	4:CD:191:LEU:HD11	2.01	0.42
7:CG:136:LYS:O	7:CG:136:LYS:CG	2.68	0.42
7:CG:145:ALA:O	7:CG:146:GLU:HB2	2.18	0.42
8:CH:11:LEU:HD22	8:CH:75:ILE:HD11	2.02	0.42
11:CK:97:ILE:HG13	11:CK:98:ARG:N	2.33	0.42
12:CL:64:THR:HG23	12:CL:93:VAL:HA	2.02	0.42
21:CU:15:ALA:O	21:CU:17:ARG:N	2.52	0.42
22:DA:9:G:C6	22:DA:2629:U:C6	3.07	0.42
22:DA:483:A:C1'	42:DU:45:HIS:HB2	2.50	0.42
22:DA:538:A:O2'	31:DJ:8:PRO:HG3	2.19	0.42
22:DA:600:G:H2'	22:DA:601:C:C6	2.55	0.42
22:DA:892:A:N3	22:DA:892:A:C2'	2.82	0.42
22:DA:1511:G:O2'	22:DA:1512:C:H5'	2.19	0.42
22:DA:1525:A:H2'	22:DA:1526:C:O4'	2.20	0.42
22:DA:1607:C:O2	22:DA:1621:U:C5	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1989:G:H2'	22:DA:1990:C:H5'	2.02	0.42
22:DA:2127:G:O2'	22:DA:2173:A:C4	2.72	0.42
22:DA:2230:G:C5	22:DA:2231:U:C4	3.08	0.42
22:DA:2333:A:C8	22:DA:2335:A:C4	3.07	0.42
22:DA:2691:C:N3	22:DA:2718:G:O6	2.53	0.42
23:DB:109:A:C6	23:DB:110:C:N3	2.88	0.42
25:DD:146:ILE:O	25:DD:146:ILE:HG13	2.20	0.42
28:DG:174:ALA:O	28:DG:175:LYS:O	2.37	0.42
29:DH:121:VAL:O	29:DH:122:LEU:CB	2.67	0.42
29:DH:127:GLU:HA	29:DH:144:VAL:O	2.19	0.42
33:DL:135:ILE:HG22	33:DL:140:GLY:CA	2.49	0.42
35:DN:71:ARG:HH21	35:DN:71:ARG:HG2	1.82	0.42
39:DR:11:GLN:NE2	39:DR:39:LEU:CD2	2.82	0.42
40:DS:66:ILE:O	40:DS:69:LEU:HB2	2.20	0.42
41:DT:93:LEU:N	41:DT:93:LEU:HD22	2.34	0.42
43:DV:51:GLN:HB3	43:DV:56:PHE:CD2	2.55	0.42
45:DX:40:VAL:CG1	45:DX:68:LEU:CD1	2.97	0.42
45:DX:71:LEU:HA	45:DX:74:ARG:CG	2.50	0.42
47:DZ:52:SER:O	47:DZ:55:VAL:N	2.52	0.42
49:D1:11:LEU:HB2	49:D1:21:TYR:HB2	2.02	0.42
1:AA:223:A:C6	1:AA:224:U:O4	2.72	0.42
1:AA:230:G:C5	1:AA:231:U:C5	3.08	0.42
1:AA:614:C:C2'	1:AA:615:G:O5'	2.67	0.42
1:AA:657:U:O2	15:AO:22:THR:HG22	2.19	0.42
1:AA:1067:A:N3	1:AA:1068:G:H1'	2.35	0.42
1:AA:1139:G:N2	1:AA:1141:C:C5	2.88	0.42
1:AA:1263:C:H2'	1:AA:1264:U:C6	2.55	0.42
2:AB:118:GLU:O	2:AB:121:SER:CB	2.67	0.42
3:AC:155:GLY:N	3:AC:164:ARG:O	2.51	0.42
4:AD:34:ILE:O	4:AD:34:ILE:HD13	2.20	0.42
4:AD:98:LEU:O	4:AD:101:VAL:N	2.53	0.42
9:AI:44:ALA:HA	9:AI:46:MET:HE2	2.02	0.42
10:AJ:33:GLY:HA3	10:AJ:83:THR:OG1	2.20	0.42
11:AK:38:GLN:O	11:AK:38:GLN:HG2	2.19	0.42
11:AK:112:ASP:OD1	11:AK:114:THR:HG23	2.19	0.42
12:AL:3:THR:HG22	12:AL:4:VAL:N	2.35	0.42
14:AN:84:VAL:HG12	14:AN:85:ARG:N	2.34	0.42
16:AP:38:PHE:CD1	16:AP:38:PHE:C	2.98	0.42
19:AS:15:LEU:HD12	19:AS:33:THR:HG21	2.02	0.42
21:AU:10:GLU:OE2	3:CC:72:ARG:NH2	2.53	0.42
22:BA:141:G:C2	41:BT:1:MET:HE3	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:189:G:H2'	22:BA:205:G:N2	2.35	0.42
22:BA:451:U:C2	22:BA:453:A:N7	2.87	0.42
22:BA:481:G:N3	22:BA:507:A:C2	2.88	0.42
22:BA:735:A:H3'	22:BA:736:C:H6	1.85	0.42
22:BA:826:U:O2'	33:BL:53:GLY:CA	2.68	0.42
22:BA:1737:G:C6	22:BA:1738:G:C2	3.08	0.42
22:BA:1829:A:O2'	24:BC:15:HIS:CD2	2.73	0.42
22:BA:1922:G:N1	22:BA:1923:U:C6	2.88	0.42
22:BA:2021:C:P	48:B0:9:THR:HG21	2.60	0.42
22:BA:2233:U:H2'	22:BA:2234:G:C8	2.54	0.42
22:BA:2680:U:C2	22:BA:2681:C:C5	3.08	0.42
22:BA:2861:U:O2	22:BA:2862:G:C8	2.72	0.42
22:BA:2896:C:H2'	22:BA:2897:U:H6	1.85	0.42
24:BC:72:ASP:HA	24:BC:118:SER:O	2.20	0.42
25:BD:39:ASP:CG	25:BD:40:LEU:N	2.78	0.42
25:BD:106:LYS:HA	25:BD:175:LEU:O	2.20	0.42
25:BD:196:ALA:O	25:BD:197:THR:C	2.63	0.42
31:BJ:80:HIS:O	31:BJ:81:ILE:C	2.62	0.42
31:BJ:124:VAL:O	31:BJ:124:VAL:HG22	2.20	0.42
37:BP:73:VAL:O	37:BP:73:VAL:CG2	2.67	0.42
39:BR:39:LEU:O	39:BR:49:ILE:HG23	2.20	0.42
39:BR:51:VAL:CB	39:BR:52:PRO:CD	2.98	0.42
41:BT:2:ILE:HG12	41:BT:7:LEU:HD11	2.02	0.42
45:BX:11:ARG:HB2	45:BX:12:PRO:CD	2.50	0.42
1:CA:33:A:H2'	1:CA:34:C:C6	2.55	0.42
1:CA:73:C:C2	1:CA:74:A:H8	2.37	0.42
1:CA:147:G:C2	1:CA:148:G:C6	3.08	0.42
1:CA:291:U:O2	1:CA:291:U:H2'	2.19	0.42
1:CA:407:U:H2'	1:CA:408:A:H8	1.84	0.42
1:CA:445:G:N1	1:CA:446:G:C5	2.88	0.42
1:CA:604:G:C2	1:CA:635:A:C2	3.08	0.42
1:CA:701:U:H4'	1:CA:703:G:C8	2.55	0.42
1:CA:707:U:H4'	11:CK:22:HIS:ND1	2.35	0.42
1:CA:938:A:N6	1:CA:939:G:C5	2.88	0.42
1:CA:1004:A:H2'	1:CA:1005:A:C8	2.54	0.42
1:CA:1126:U:O4	10:CJ:73:LEU:CD1	2.68	0.42
1:CA:1280:A:OP1	1:CA:1281:C:C5	2.73	0.42
1:CA:1314:C:N3	1:CA:1315:U:C4	2.88	0.42
2:CB:15:HIS:CD2	2:CB:209:ALA:HB2	2.55	0.42
2:CB:16:PHE:CZ	2:CB:18:HIS:NE2	2.88	0.42
2:CB:222:ARG:HE	2:CB:223:GLU:N	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:90:THR:HG22	5:CE:91:GLY:N	2.35	0.42
5:CE:104:GLY:O	5:CE:105:ILE:HG23	2.19	0.42
5:CE:104:GLY:HA3	5:CE:122:ASN:HA	2.01	0.42
6:CF:81:ASN:OD1	6:CF:81:ASN:C	2.63	0.42
12:CL:42:PRO:HG2	12:CL:47:SER:C	2.45	0.42
15:CO:73:LYS:HA	15:CO:73:LYS:HE2	2.02	0.42
22:DA:162:U:H4'	22:DA:163:C:OP1	2.20	0.42
22:DA:294:A:N6	22:DA:345:A:N9	2.68	0.42
22:DA:389:G:N9	22:DA:2413:G:H4'	2.34	0.42
22:DA:602:A:H2'	22:DA:602:A:N3	2.34	0.42
22:DA:611:C:N3	22:DA:618:G:C2	2.87	0.42
22:DA:752:A:N3	22:DA:752:A:H2'	2.35	0.42
22:DA:845:A:H5'	22:DA:846:U:OP2	2.19	0.42
22:DA:957:C:C4	22:DA:2459:A:C1'	3.02	0.42
22:DA:965:C:C4'	22:DA:2273:A:H1'	2.49	0.42
22:DA:1073:A:H2'	22:DA:1074:G:H5'	2.02	0.42
22:DA:1257:C:N4	22:DA:1258:U:O4	2.52	0.42
22:DA:1282:U:C4	22:DA:1283:G:C6	3.07	0.42
22:DA:1310:G:N2	22:DA:1605:C:C2	2.87	0.42
22:DA:1359:A:N1	22:DA:1360:G:H1'	2.35	0.42
22:DA:1394:U:H4'	22:DA:1603:A:H4'	2.02	0.42
22:DA:1480:C:C4	22:DA:1481:U:C4	3.08	0.42
22:DA:1754:A:N6	22:DA:1755:A:N6	2.68	0.42
22:DA:1863:G:H2'	22:DA:1864:U:O4'	2.19	0.42
22:DA:2013:A:N1	22:DA:2014:A:C2	2.87	0.42
22:DA:2016:U:O2	48:D0:4:GLN:NE2	2.52	0.42
22:DA:2186:G:C5	22:DA:2187:U:C5	3.08	0.42
22:DA:2262:U:N3	22:DA:2279:G:C2	2.88	0.42
22:DA:2305:U:C5	22:DA:2306:C:C5	3.07	0.42
22:DA:2351:G:H1'	22:DA:2367:G:N2	2.35	0.42
22:DA:2440:C:N3	22:DA:2441:U:H1'	2.35	0.42
22:DA:2683:C:C5	22:DA:2684:U:C5	3.08	0.42
23:DB:90:C:H5'	34:DM:18:ARG:HG2	2.02	0.42
29:DH:31:VAL:HB	29:DH:32:PRO:HD2	2.00	0.42
29:DH:43:ASN:C	29:DH:45:GLU:H	2.28	0.42
32:DK:121:GLU:HG2	32:DK:122:VAL:HG23	2.01	0.42
33:DL:78:ARG:CB	33:DL:113:ALA:CB	2.98	0.42
33:DL:78:ARG:CZ	33:DL:113:ALA:HB1	2.50	0.42
41:DT:65:GLY:O	41:DT:66:LYS:O	2.38	0.42
43:DV:26:PHE:CD1	43:DV:26:PHE:C	2.98	0.42
43:DV:30:ILE:O	43:DV:37:PRO:HA	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DV:41:GLU:C	43:DV:42:LEU:HD23	2.45	0.42
45:DX:40:VAL:CG2	45:DX:45:ARG:O	2.68	0.42
1:AA:22:G:H2'	1:AA:23:C:H6	1.85	0.41
1:AA:243:A:C2	1:AA:246:A:C8	3.08	0.41
1:AA:325:A:H2'	1:AA:326:G:O4'	2.20	0.41
1:AA:375:U:C2	1:AA:376:G:C8	3.08	0.41
1:AA:402:G:C5	1:AA:403:C:C5	3.08	0.41
1:AA:466:A:H5'	1:AA:467:U:OP2	2.20	0.41
1:AA:468:A:N1	1:AA:469:C:C4	2.88	0.41
1:AA:748:G:N1	1:AA:749:A:C5	2.88	0.41
1:AA:757:U:O2'	1:AA:879:C:O2	2.33	0.41
1:AA:781:A:C4	1:AA:802:A:C2	3.08	0.41
1:AA:1264:U:O2	1:AA:1272:G:N2	2.53	0.41
1:AA:1346:A:C8	7:AG:10:ARG:NH2	2.88	0.41
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.34	0.41
1:AA:1513:A:H2'	1:AA:1514:G:C8	2.55	0.41
2:AB:24:ASN:HA	2:AB:25:PRO:HD2	1.79	0.41
2:AB:68:LEU:C	2:AB:68:LEU:HD23	2.46	0.41
2:AB:186:ILE:HG22	2:AB:200:ILE:HB	2.02	0.41
2:AB:193:PRO:O	2:AB:194:ASP:C	2.62	0.41
4:AD:19:LEU:HD22	4:AD:64:ILE:CG1	2.49	0.41
11:AK:53:ARG:O	11:AK:56:ARG:HG3	2.20	0.41
14:AN:73:PHE:CZ	14:AN:78:GLY:HA2	2.55	0.41
19:AS:29:LYS:HG2	19:AS:30:PRO:HD2	2.02	0.41
20:AT:34:LYS:HD3	20:AT:34:LYS:HA	1.84	0.41
22:BA:468:G:O6	22:BA:469:G:C2	2.73	0.41
22:BA:483:A:H1'	42:BU:58:ILE:HD12	2.02	0.41
22:BA:574:A:C6	22:BA:2033:A:H5'	2.55	0.41
22:BA:586:A:C2	22:BA:1254:A:C2	3.08	0.41
22:BA:1513:U:H2'	22:BA:1514:G:O4'	2.20	0.41
22:BA:1563:U:H2'	22:BA:1564:C:H6	1.82	0.41
22:BA:1992:G:N2	22:BA:1996:C:O2'	2.53	0.41
22:BA:2190:G:C5	22:BA:2191:A:C5	3.08	0.41
22:BA:2341:G:H2'	22:BA:2342:C:C6	2.55	0.41
22:BA:2418:A:C6	22:BA:2419:U:C4	3.08	0.41
22:BA:2469:A:H4'	34:BM:55:ARG:HH12	1.86	0.41
22:BA:2540:C:H2'	22:BA:2541:A:O4'	2.20	0.41
22:BA:2592:G:C5	22:BA:2593:U:C4	3.08	0.41
22:BA:2673:G:C2	22:BA:2674:G:C8	3.08	0.41
22:BA:2845:U:H5"	37:BP:52:ASN:O	2.18	0.41
24:BC:22:PRO:C	24:BC:24:LEU:N	2.78	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:141:VAL:CG1	24:BC:142:HIS:N	2.83	0.41
25:BD:1:MET:HG3	25:BD:205:PRO:HG2	2.01	0.41
25:BD:125:TRP:CE3	25:BD:160:LYS:HD2	2.55	0.41
28:BG:125:CYS:HB3	28:BG:127:THR:O	2.20	0.41
29:BH:104:THR:CG2	29:BH:110:VAL:O	2.68	0.41
29:BH:139:PHE:O	29:BH:140:ALA:HB3	2.20	0.41
30:BI:116:ASP:O	30:BI:117:MET:CG	2.68	0.41
31:BJ:76:HIS:CE1	31:BJ:85:LYS:HB2	2.55	0.41
32:BK:63:VAL:HG12	32:BK:107:LEU:HD11	2.02	0.41
34:BM:62:LYS:HG2	34:BM:63:ILE:N	2.35	0.41
36:BO:83:LEU:HD22	36:BO:88:LYS:HB2	2.02	0.41
39:BR:49:ILE:C	39:BR:51:VAL:O	2.63	0.41
40:BS:20:VAL:O	40:BS:21:ALA:C	2.63	0.41
43:BV:89:ILE:HG21	43:BV:91:PHE:CZ	2.55	0.41
1:CA:208:U:H2'	1:CA:210:C:O4'	2.21	0.41
1:CA:504:C:H1'	1:CA:510:A:C4	2.54	0.41
1:CA:583:A:C6	1:CA:759:A:N7	2.88	0.41
1:CA:999:C:H2'	1:CA:1000:A:C8	2.55	0.41
1:CA:1240:U:OP2	7:CG:116:MET:HB3	2.19	0.41
1:CA:1260:G:OP1	1:CA:1284:C:O2'	2.25	0.41
1:CA:1379:G:C6	1:CA:1380:U:O4	2.73	0.41
1:CA:1380:U:C4	7:CG:3:ARG:HA	2.54	0.41
3:CC:159:GLY:O	3:CC:160:ALA:C	2.62	0.41
4:CD:9:LEU:HD22	4:CD:22:LYS:HD2	2.01	0.41
4:CD:116:GLN:CG	4:CD:120:HIS:CE1	3.02	0.41
7:CG:37:SER:C	7:CG:39:ALA:H	2.28	0.41
7:CG:133:THR:HA	7:CG:136:LYS:HB3	2.02	0.41
8:CH:95:VAL:O	8:CH:96:MET:C	2.63	0.41
10:CJ:15:HIS:HB3	10:CJ:70:HIS:NE2	2.35	0.41
10:CJ:37:ARG:O	10:CJ:38:GLY:O	2.38	0.41
10:CJ:47:GLU:O	10:CJ:66:GLU:HA	2.19	0.41
13:CM:18:ALA:HB2	13:CM:45:ILE:HD11	2.01	0.41
14:CN:34:VAL:HG12	14:CN:34:VAL:O	2.20	0.41
22:DA:46:G:C2	22:DA:47:C:C4	3.08	0.41
22:DA:177:G:O2'	22:DA:178:G:O4'	2.35	0.41
22:DA:253:C:C2'	22:DA:254:G:H5'	2.50	0.41
22:DA:554:U:O4	22:DA:555:G:C6	2.73	0.41
22:DA:620:G:H2'	22:DA:620:G:N3	2.34	0.41
22:DA:629:G:H4'	22:DA:650:C:O2	2.20	0.41
22:DA:1051:G:H4'	22:DA:2752:C:O2'	2.20	0.41
22:DA:1140:C:C2'	22:DA:1141:U:H5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1190:G:OP1	33:DL:32:GLY:HA2	2.19	0.41
22:DA:1337:G:C2	22:DA:1338:G:H1'	2.55	0.41
22:DA:1379:U:OP1	22:DA:1379:U:C6	2.73	0.41
22:DA:1453:A:N3	35:DN:77:ALA:HB2	2.35	0.41
22:DA:1737:G:C6	22:DA:1738:G:C6	3.08	0.41
22:DA:1810:A:H5"	22:DA:1811:G:OP2	2.19	0.41
22:DA:1851:U:H2'	22:DA:1852:U:O4'	2.20	0.41
22:DA:2127:G:H4'	22:DA:2128:G:OP1	2.20	0.41
22:DA:2305:U:O4'	27:DF:131:GLY:HA3	2.19	0.41
22:DA:2451:A:N3	56:DA:3001:DOL:HC12	2.34	0.41
22:DA:2454:G:N2	22:DA:2499:C:C2	2.88	0.41
22:DA:2560:A:H2'	22:DA:2561:U:O4'	2.20	0.41
22:DA:2884:U:O2	22:DA:2884:U:O4'	2.38	0.41
22:DA:2887:A:C2	22:DA:2888:C:H1'	2.55	0.41
23:DB:39:A:H2'	23:DB:40:U:H6	1.85	0.41
25:DD:2:ILE:HG23	25:DD:88:GLU:OE2	2.19	0.41
25:DD:48:ILE:HG23	25:DD:84:LEU:HD11	2.02	0.41
27:DF:9:LYS:O	27:DF:13:VAL:CG2	2.67	0.41
30:DI:29:GLY:HA2	30:DI:33:VAL:HB	2.02	0.41
33:DL:100:ILE:O	33:DL:100:ILE:HG13	2.14	0.41
35:DN:72:ASP:O	35:DN:75:ILE:N	2.52	0.41
36:DO:104:GLN:C	36:DO:106:LEU:N	2.78	0.41
39:DR:49:ILE:HD12	39:DR:52:PRO:HA	2.02	0.41
41:DT:2:ILE:HG12	41:DT:7:LEU:CD1	2.50	0.41
41:DT:7:LEU:HD21	41:DT:45:ALA:CB	2.50	0.41
41:DT:21:SER:O	41:DT:24:MET:N	2.53	0.41
41:DT:24:MET:CG	41:DT:29:THR:O	2.68	0.41
42:DU:45:HIS:HB3	42:DU:58:ILE:HG12	2.02	0.41
42:DU:74:ASN:O	42:DU:75:ALA:HB3	2.20	0.41
42:DU:83:VAL:HG11	42:DU:94:ARG:HD2	2.01	0.41
50:D2:26:ASN:O	50:D2:30:VAL:HG23	2.20	0.41
1:AA:78:A:H2'	1:AA:79:G:O4'	2.18	0.41
1:AA:340:U:C2	1:AA:341:C:C5	3.08	0.41
1:AA:390:U:H2'	1:AA:391:G:H8	1.82	0.41
1:AA:787:A:C5	1:AA:788:U:C5	3.08	0.41
1:AA:1118:U:O4'	1:AA:1179:A:H1'	2.20	0.41
1:AA:1368:A:OP2	9:AI:114:LYS:CD	2.69	0.41
1:AA:1377:A:C5	7:AG:7:ILE:CD1	3.03	0.41
2:AB:164:ILE:HG12	2:AB:165:ASP:N	2.34	0.41
2:AB:182:PRO:O	2:AB:197:ASP:CG	2.62	0.41
4:AD:125:VAL:C	4:AD:127:GLY:N	2.77	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:95:PHE:CD1	5:AE:95:PHE:C	2.97	0.41
5:AE:136:VAL:O	5:AE:140:THR:HG23	2.20	0.41
7:AG:69:VAL:HG21	7:AG:104:ILE:HD11	2.01	0.41
8:AH:95:VAL:O	8:AH:96:MET:C	2.62	0.41
9:AI:26:GLY:CA	9:AI:59:GLU:HA	2.50	0.41
11:AK:74:VAL:C	11:AK:76:GLU:H	2.29	0.41
12:AL:108:LYS:O	12:AL:109:ASP:HB2	2.19	0.41
13:AM:88:GLY:C	13:AM:90:ARG:N	2.77	0.41
13:AM:104:THR:O	13:AM:105:ASN:C	2.63	0.41
17:AQ:45:HIS:CG	17:AQ:70:THR:HG22	2.55	0.41
17:AQ:46:VAL:HG21	17:AQ:61:ILE:HG12	2.02	0.41
19:AS:58:VAL:HG11	19:AS:75:ALA:HA	2.03	0.41
21:AU:12:PHE:N	21:AU:12:PHE:HD2	2.16	0.41
22:BA:71:A:OP2	22:BA:71:A:H3'	2.20	0.41
22:BA:785:G:C6	22:BA:786:C:C4	3.08	0.41
22:BA:1006:C:C2	22:BA:1138:G:N2	2.87	0.41
22:BA:1820:U:O2	24:BC:200:HIS:HB3	2.20	0.41
22:BA:1921:G:N2	22:BA:1922:G:C8	2.88	0.41
22:BA:1999:C:H2'	22:BA:2000:C:O4'	2.20	0.41
22:BA:2190:G:C2'	22:BA:2191:A:H5'	2.50	0.41
22:BA:2504:U:C5	56:BA:3001:DOL:H161	2.54	0.41
22:BA:2888:C:O2	22:BA:2888:C:H2'	2.20	0.41
23:BB:37:C:C6	23:BB:38:C:C5	3.08	0.41
30:BI:18:ALA:O	30:BI:19:ASN:CB	2.66	0.41
35:BN:55:ALA:HA	35:BN:80:PHE:CE1	2.55	0.41
36:BO:2:ASP:OD1	36:BO:3:LYS:N	2.53	0.41
39:BR:64:VAL:CG2	39:BR:65:ALA:N	2.83	0.41
46:BY:13:GLU:HG3	46:BY:53:VAL:HG13	2.01	0.41
50:B2:22:MET:HE2	50:B2:31:LEU:HD13	2.01	0.41
1:CA:376:G:H5'	16:CP:5:ARG:CB	2.46	0.41
1:CA:399:G:C6	1:CA:400:C:C4	3.08	0.41
1:CA:456:A:C6	1:CA:457:G:C5	3.07	0.41
1:CA:599:C:H4'	8:CH:122:GLY:C	2.45	0.41
1:CA:734:G:C4	1:CA:735:C:C6	3.08	0.41
1:CA:862:C:N3	1:CA:863:U:C5	2.88	0.41
1:CA:1239:A:N7	1:CA:1298:U:H5	2.17	0.41
1:CA:1251:A:H2'	1:CA:1252:A:O4'	2.20	0.41
3:CC:42:TYR:CZ	3:CC:90:VAL:HG21	2.54	0.41
7:CG:69:VAL:HG21	7:CG:104:ILE:HD11	2.01	0.41
7:CG:92:ARG:CZ	7:CG:93:PRO:HD3	2.51	0.41
12:CL:90:LEU:HB2	12:CL:93:VAL:CG2	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:23:ASP:O	16:CP:25:ARG:N	2.52	0.41
21:CU:36:GLU:O	21:CU:37:PHE:CB	2.67	0.41
22:DA:141:G:H3'	22:DA:142:A:C8	2.55	0.41
22:DA:379:G:C4	22:DA:396:G:C2	3.08	0.41
22:DA:627:A:C6	22:DA:637:A:C8	3.08	0.41
22:DA:770:G:C4	22:DA:771:G:C8	3.09	0.41
22:DA:871:U:H5"	34:DM:68:PHE:CZ	2.56	0.41
22:DA:1218:G:H2'	22:DA:1219:U:O4'	2.20	0.41
22:DA:1413:A:C2	22:DA:1590:A:C2	3.08	0.41
22:DA:1613:G:O2'	50:D2:3:ARG:HD2	2.20	0.41
22:DA:2115:G:N3	22:DA:2117:A:N7	2.68	0.41
22:DA:2146:C:OP2	22:DA:2146:C:O4'	2.39	0.41
22:DA:2185:U:H2'	22:DA:2186:G:C8	2.55	0.41
22:DA:2345:G:H4'	22:DA:2346:A:H5"	2.02	0.41
23:DB:20:G:N2	23:DB:64:G:C4	2.88	0.41
24:DC:131:PRO:HB2	24:DC:133:ARG:HG2	2.02	0.41
24:DC:212:ARG:C	24:DC:214:ARG:H	2.28	0.41
25:DD:93:GLY:O	25:DD:94:GLN:C	2.63	0.41
25:DD:115:GLY:O	35:DN:3:HIS:CE1	2.74	0.41
29:DH:40:THR:OG1	29:DH:43:ASN:ND2	2.53	0.41
31:DJ:35:ARG:HB3	31:DJ:54:ILE:HD11	2.02	0.41
34:DM:63:ILE:HG22	34:DM:64:TRP:N	2.34	0.41
34:DM:110:GLU:O	34:DM:114:ARG:HG3	2.19	0.41
36:DO:27:VAL:HG21	36:DO:40:ILE:HD12	2.02	0.41
36:DO:28:VAL:CG1	36:DO:94:ARG:HA	2.50	0.41
37:DP:110:ILE:HD13	37:DP:110:ILE:N	2.35	0.41
39:DR:21:ARG:NE	39:DR:93:PHE:CE1	2.87	0.41
41:DT:15:HIS:CD2	41:DT:17:SER:OG	2.74	0.41
41:DT:49:LYS:HD3	41:DT:49:LYS:N	2.35	0.41
43:DV:85:LYS:C	43:DV:86:LEU:HG	2.45	0.41
45:DX:39:TRP:CE3	45:DX:45:ARG:O	2.73	0.41
45:DX:40:VAL:HG11	45:DX:68:LEU:CD1	2.50	0.41
48:D0:31:ASP:OD1	48:D0:48:TYR:HB3	2.20	0.41
1:AA:104:G:C2	1:AA:105:G:N7	2.88	0.41
1:AA:113:G:C6	1:AA:315:A:N6	2.88	0.41
1:AA:393:A:C2	1:AA:394:G:C8	3.09	0.41
1:AA:455:G:C2	1:AA:478:A:N1	2.88	0.41
1:AA:459:A:H2'	1:AA:460:A:C8	2.55	0.41
1:AA:478:A:H2'	1:AA:479:U:C5'	2.50	0.41
1:AA:570:G:H1'	1:AA:820:U:C4	2.55	0.41
1:AA:1154:G:C2	1:AA:1155:A:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:23:PHE:CD2	3:AC:24:ALA:N	2.88	0.41
3:AC:53:SER:HB2	3:AC:112:ASP:OD2	2.20	0.41
3:AC:120:ILE:O	3:AC:124:LEU:HG	2.20	0.41
4:AD:58:LYS:CE	4:AD:69:GLU:OE2	2.67	0.41
5:AE:41:ASP:OD1	5:AE:42:GLY:N	2.53	0.41
6:AF:63:ASN:OD1	6:AF:96:VAL:CG2	2.69	0.41
7:AG:74:GLU:HG2	7:AG:91:VAL:HB	2.01	0.41
8:AH:25:VAL:O	8:AH:25:VAL:CG1	2.67	0.41
10:AJ:56:HIS:O	10:AJ:57:VAL:HG13	2.19	0.41
10:AJ:66:GLU:HG3	10:AJ:67:ILE:N	2.34	0.41
12:AL:107:VAL:CG2	12:AL:117:TYR:HB3	2.50	0.41
14:AN:26:GLU:HG2	14:AN:27:LEU:N	2.33	0.41
15:AO:55:GLY:O	15:AO:58:ARG:HB3	2.20	0.41
22:BA:616:A:H2'	22:BA:617:G:O4'	2.20	0.41
22:BA:668:A:C2'	22:BA:669:G:OP1	2.67	0.41
22:BA:684:G:C6	22:BA:774:G:C4	3.09	0.41
22:BA:1414:C:C5	22:BA:1415:U:C5	3.08	0.41
22:BA:1496:A:C2	22:BA:1498:C:O2	2.73	0.41
22:BA:2262:U:H4'	22:BA:2328:A:C2	2.55	0.41
23:BB:42:C:C6	27:BF:66:LEU:HD13	2.55	0.41
25:BD:172:VAL:HG21	25:BD:194:PRO:HD3	2.01	0.41
27:BF:44:ILE:HG21	27:BF:79:ILE:HG22	2.02	0.41
27:BF:53:ALA:O	27:BF:56:ASP:HB2	2.21	0.41
27:BF:122:PHE:HB3	27:BF:163:ASP:OD2	2.19	0.41
28:BG:55:ARG:HG2	28:BG:58:TYR:CD1	2.54	0.41
32:BK:53:LYS:NZ	32:BK:56:ASP:OD2	2.46	0.41
37:BP:43:PHE:CE2	37:BP:63:LYS:HD3	2.56	0.41
37:BP:53:ARG:HG3	37:BP:53:ARG:NH1	2.36	0.41
38:BQ:41:LYS:O	38:BQ:41:LYS:HG3	2.19	0.41
44:BW:64:ASP:OD2	44:BW:64:ASP:N	2.52	0.41
46:BY:7:ARG:O	46:BY:7:ARG:HG3	2.19	0.41
46:BY:9:LYS:HB3	46:BY:12:GLU:HG2	2.02	0.41
51:B3:15:LYS:HD3	51:B3:23:LYS:CE	2.51	0.41
1:CA:112:G:C2'	1:CA:113:G:H5'	2.50	0.41
1:CA:135:C:O2	16:CP:1:MET:CB	2.69	0.41
1:CA:198:G:H2'	1:CA:199:A:C5'	2.49	0.41
1:CA:302:G:C6	1:CA:303:A:C6	3.08	0.41
1:CA:445:G:N3	1:CA:445:G:H2'	2.34	0.41
1:CA:821:G:C4	1:CA:822:U:C5	3.08	0.41
2:CB:72:THR:C	2:CB:73:LYS:CG	2.93	0.41
2:CB:161:LEU:CD2	2:CB:176:ALA:HB2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:207:ILE:HG12	2:CB:208:ARG:N	2.35	0.41
4:CD:73:ARG:O	4:CD:76:TYR:N	2.53	0.41
4:CD:203:LEU:HD12	4:CD:203:LEU:O	2.19	0.41
11:CK:25:ALA:N	11:CK:87:LYS:O	2.49	0.41
13:CM:22:ILE:HG22	13:CM:23:TYR:N	2.36	0.41
13:CM:106:ALA:O	13:CM:110:LYS:HB3	2.20	0.41
17:CQ:29:VAL:O	17:CQ:29:VAL:CG2	2.68	0.41
20:CT:33:LYS:HA	20:CT:36:TYR:HD2	1.85	0.41
21:CU:9:ASN:C	21:CU:12:PHE:CE2	2.99	0.41
22:DA:117:G:N1	22:DA:119:A:N6	2.68	0.41
22:DA:226:A:H4'	22:DA:258:G:OP1	2.20	0.41
22:DA:487:C:N4	22:DA:488:G:N1	2.68	0.41
22:DA:594:U:H2'	22:DA:595:C:C6	2.55	0.41
22:DA:609:A:C6	22:DA:610:C:O2	2.72	0.41
22:DA:715:A:N1	22:DA:716:A:C2	2.89	0.41
22:DA:756:A:H2'	22:DA:757:G:O4'	2.19	0.41
22:DA:870:U:OP1	34:DM:6:ARG:CD	2.68	0.41
22:DA:1063:G:O4'	30:DI:77:ALA:HB1	2.19	0.41
22:DA:1274:A:N3	22:DA:1297:C:H1'	2.35	0.41
22:DA:1298:C:N4	22:DA:1299:G:C6	2.88	0.41
22:DA:1302:A:H5'	22:DA:1608:A:OP1	2.21	0.41
22:DA:1317:G:C6	22:DA:1318:U:N3	2.89	0.41
22:DA:1469:A:C2'	22:DA:1470:A:C8	2.98	0.41
22:DA:1483:G:C6	22:DA:1484:U:C4	3.08	0.41
22:DA:1553:A:N7	22:DA:1555:G:C5	2.88	0.41
22:DA:1809:A:C5	22:DA:1810:A:C5	3.09	0.41
22:DA:2372:U:H2'	22:DA:2373:G:H8	1.86	0.41
22:DA:2412:A:H3'	22:DA:2413:G:H8	1.82	0.41
22:DA:2457:U:C4	22:DA:2458:G:C6	3.08	0.41
22:DA:2610:C:C6	54:D6:7:004:HD2	2.55	0.41
22:DA:2799:A:C2	22:DA:2801:G:H1'	2.55	0.41
22:DA:2870:C:H5"	35:DN:65:LEU:CD2	2.49	0.41
36:DO:104:GLN:O	36:DO:105:ALA:C	2.61	0.41
40:DS:28:LYS:O	40:DS:31:GLN:N	2.50	0.41
45:DX:54:LYS:HA	45:DX:57:ARG:CG	2.50	0.41
1:AA:262:A:H2'	1:AA:263:A:C8	2.54	0.41
1:AA:269:C:N4	1:AA:270:A:N6	2.67	0.41
1:AA:460:A:H2'	1:AA:461:A:O4'	2.20	0.41
1:AA:704:A:N6	1:AA:705:G:C6	2.89	0.41
1:AA:834:U:C4	1:AA:835:U:C4	3.09	0.41
1:AA:909:A:H2'	1:AA:910:C:O5'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1225:A:N3	1:AA:1225:A:C2'	2.83	0.41
1:AA:1277:C:O2'	1:AA:1279:G:H8	2.01	0.41
1:AA:1327:C:O2'	1:AA:1328:C:H5'	2.20	0.41
1:AA:1381:U:C5	1:AA:1382:C:C5	3.09	0.41
1:AA:1401:G:N2	1:AA:1402:C:H1'	2.34	0.41
2:AB:79:ALA:C	2:AB:82:ASP:OD2	2.63	0.41
5:AE:94:VAL:HG22	5:AE:111:MET:HE1	2.02	0.41
5:AE:126:LYS:CD	5:AE:128:TYR:HE2	2.33	0.41
8:AH:10:MET:C	8:AH:12:THR:N	2.76	0.41
9:AI:44:ALA:O	9:AI:47:VAL:HG22	2.20	0.41
9:AI:58:VAL:O	9:AI:59:GLU:HB2	2.18	0.41
9:AI:61:LEU:HD23	9:AI:61:LEU:H	1.85	0.41
10:AJ:34:ALA:O	10:AJ:35:GLN:HB2	2.20	0.41
10:AJ:35:GLN:HG3	10:AJ:77:VAL:HB	2.01	0.41
10:AJ:91:ASP:O	10:AJ:92:LEU:HD12	2.20	0.41
11:AK:91:PRO:C	11:AK:93:ARG:N	2.78	0.41
18:AR:63:ARG:HB3	18:AR:70:TYR:CZ	2.56	0.41
22:BA:818:G:H2'	22:BA:819:A:OP2	2.20	0.41
22:BA:1856:U:O4	22:BA:1857:G:C6	2.73	0.41
22:BA:1899:A:O2'	22:BA:1900:A:H5"	2.21	0.41
22:BA:1915:U:H2'	22:BA:1916:A:H8	1.85	0.41
22:BA:1932:A:H2	22:BA:1969:A:C2	2.38	0.41
22:BA:2075:U:C4	22:BA:2238:G:C6	3.09	0.41
22:BA:2190:G:C6	22:BA:2191:A:C4	3.08	0.41
22:BA:2192:U:H2'	22:BA:2193:G:C5'	2.46	0.41
22:BA:2280:G:O6	44:BW:14:ARG:HD2	2.20	0.41
22:BA:2311:A:H1'	27:BF:85:ILE:HD11	2.01	0.41
22:BA:2331:G:C6	22:BA:2332:C:N3	2.88	0.41
22:BA:2380:C:P	36:BO:17:LYS:NZ	2.93	0.41
22:BA:2402:U:C2'	22:BA:2403:C:OP2	2.68	0.41
22:BA:2564:A:C6	22:BA:2565:A:N1	2.89	0.41
22:BA:2650:U:C2'	22:BA:2651:C:H5'	2.50	0.41
22:BA:2885:G:H2'	22:BA:2886:A:C5'	2.49	0.41
25:BD:13:ARG:O	25:BD:14:ILE:HD12	2.20	0.41
25:BD:68:PHE:O	25:BD:69:ALA:C	2.63	0.41
29:BH:33:GLN:O	29:BH:35:LYS:N	2.53	0.41
31:BJ:5:THR:HG22	31:BJ:6:ALA:O	2.20	0.41
32:BK:64:ARG:O	32:BK:82:ASN:HA	2.20	0.41
32:BK:66:LYS:HE3	32:BK:66:LYS:O	2.21	0.41
33:BL:115:GLU:CD	33:BL:115:GLU:H	2.27	0.41
34:BM:20:LEU:HD12	43:BV:81:PRO:CG	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:78:LYS:C	35:BN:79:LEU:O	2.59	0.41
37:BP:53:ARG:CG	37:BP:53:ARG:NH1	2.72	0.41
53:B5:43:GLU:HA	53:B5:178:LYS:HA	2.02	0.41
1:CA:182:A:C4	1:CA:184:G:N7	2.89	0.41
1:CA:784:A:H2'	1:CA:785:G:C8	2.55	0.41
1:CA:932:C:H2'	1:CA:933:G:C8	2.55	0.41
1:CA:968:A:C8	1:CA:1062:U:H4'	2.55	0.41
1:CA:1015:G:O2'	1:CA:1016:A:H5'	2.20	0.41
1:CA:1216:A:OP1	14:CN:5:SER:CB	2.69	0.41
1:CA:1286:U:O2	1:CA:1286:U:H2'	2.19	0.41
1:CA:1310:G:N2	1:CA:1328:C:O2	2.53	0.41
2:CB:68:LEU:HD12	2:CB:158:PRO:CG	2.51	0.41
2:CB:141:LEU:O	2:CB:143:LYS:N	2.53	0.41
2:CB:187:VAL:HG22	2:CB:187:VAL:O	2.21	0.41
4:CD:150:LYS:O	4:CD:151:LYS:C	2.64	0.41
10:CJ:31:ARG:O	10:CJ:31:ARG:HG2	2.20	0.41
11:CK:82:LEU:HD23	11:CK:82:LEU:O	2.21	0.41
13:CM:85:CYS:HB3	19:CS:74:PHE:CZ	2.56	0.41
18:CR:62:ALA:HB1	18:CR:67:LEU:HB2	2.02	0.41
22:DA:543:G:N2	22:DA:551:G:C4	2.87	0.41
22:DA:590:A:H2'	22:DA:591:U:O4'	2.21	0.41
22:DA:681:G:N3	22:DA:682:G:C8	2.88	0.41
22:DA:830:G:C6	22:DA:2448:A:C8	3.09	0.41
22:DA:972:A:C2	22:DA:973:A:N6	2.88	0.41
22:DA:1436:G:C2	22:DA:1437:C:H1'	2.55	0.41
22:DA:1662:U:O2	22:DA:2687:U:C5'	2.69	0.41
22:DA:2094:A:C2	22:DA:2196:C:O2	2.73	0.41
22:DA:2361:G:H2'	22:DA:2362:C:O4'	2.20	0.41
22:DA:2379:G:H2'	22:DA:2380:C:C6	2.55	0.41
22:DA:2665:A:N3	22:DA:2665:A:H2'	2.35	0.41
22:DA:2815:C:H2'	22:DA:2816:G:C8	2.56	0.41
23:DB:64:G:H2'	23:DB:65:U:O4'	2.20	0.41
24:DC:64:ILE:O	24:DC:103:TYR:HB2	2.20	0.41
25:DD:47:ALA:HB2	25:DD:83:ARG:HA	2.02	0.41
26:DE:170:ARG:CZ	26:DE:176:ASP:OD1	2.68	0.41
29:DH:135:HIS:CG	29:DH:136:SER:N	2.89	0.41
30:DI:19:ASN:OD1	30:DI:35:ILE:HG22	2.20	0.41
30:DI:54:PRO:HB2	30:DI:78:VAL:HG21	2.03	0.41
31:DJ:128:ASN:O	31:DJ:128:ASN:CG	2.63	0.41
35:DN:38:LEU:HD11	35:DN:42:LYS:HE3	2.02	0.41
40:DS:19:LEU:HD13	40:DS:19:LEU:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DZ:52:SER:O	47:DZ:53:PHE:C	2.63	0.41
49:D1:26:ASN:O	49:D1:28:ARG:N	2.53	0.41
1:AA:212:G:N1	1:AA:213:G:C5	2.89	0.41
1:AA:411:A:C6	1:AA:429:U:C4	3.07	0.41
1:AA:422:C:H1'	1:AA:423:G:N2	2.35	0.41
1:AA:495:A:N3	1:AA:496:A:C6	2.88	0.41
1:AA:678:U:H2'	1:AA:679:C:O4'	2.21	0.41
1:AA:791:G:C5	1:AA:792:A:N7	2.88	0.41
1:AA:927:G:C2	1:AA:1391:U:O2	2.73	0.41
1:AA:974:A:H4'	1:AA:975:A:O5'	2.20	0.41
1:AA:1005:A:H3'	1:AA:1006:G:C8	2.55	0.41
1:AA:1130:A:N3	1:AA:1146:A:C4	2.89	0.41
2:AB:81:LYS:HG2	2:AB:85:LEU:HD22	2.03	0.41
2:AB:91:PHE:CE2	2:AB:150:GLY:HA2	2.55	0.41
4:AD:62:ARG:NH1	4:AD:69:GLU:HG2	2.36	0.41
9:AI:50:GLN:N	9:AI:51:PRO:HD2	2.35	0.41
11:AK:102:ALA:C	11:AK:104:GLY:H	2.29	0.41
13:AM:114:LYS:HB3	13:AM:115:PRO:HD3	2.02	0.41
14:AN:8:ALA:O	14:AN:9:ARG:C	2.62	0.41
22:BA:185:G:H4'	22:BA:218:A:H4'	2.02	0.41
22:BA:257:C:H3'	22:BA:258:G:H8	1.86	0.41
22:BA:345:A:N3	22:BA:346:A:N6	2.67	0.41
22:BA:769:U:N3	22:BA:770:G:N7	2.69	0.41
22:BA:1169:A:N1	22:BA:1180:U:O4	2.53	0.41
22:BA:1333:G:C2	22:BA:1334:G:C8	3.09	0.41
22:BA:1366:A:C6	22:BA:1367:A:C4	3.09	0.41
22:BA:1540:G:H2'	22:BA:1541:C:O4'	2.21	0.41
22:BA:1613:G:O2'	50:B2:3:ARG:HD3	2.21	0.41
22:BA:1857:G:N2	22:BA:1884:G:H1'	2.35	0.41
22:BA:1900:A:C2	22:BA:1970:A:C4	3.08	0.41
22:BA:1917:U:C5	22:BA:1918:A:C6	3.08	0.41
22:BA:2085:U:O2	22:BA:2235:G:C2	2.74	0.41
22:BA:2302:U:O2'	22:BA:2303:G:H5'	2.20	0.41
22:BA:2379:G:O3'	36:BO:17:LYS:NZ	2.53	0.41
23:BB:97:C:H2'	23:BB:98:G:H5'	2.03	0.41
25:BD:25:THR:HG22	25:BD:27:ILE:HG13	2.01	0.41
29:BH:90:LEU:HD13	29:BH:125:THR:HA	2.03	0.41
32:BK:47:ILE:HB	32:BK:48:PRO:CD	2.50	0.41
34:BM:135:VAL:CG2	43:BV:57:TYR:CD1	3.04	0.41
35:BN:24:MET:HE1	35:BN:40:LYS:HB3	2.01	0.41
35:BN:70:THR:OG1	35:BN:71:ARG:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:69:LEU:HG	40:BS:107:VAL:HG22	2.02	0.41
51:B3:15:LYS:O	51:B3:22:PHE:HA	2.20	0.41
53:B5:28:ARG:O	53:B5:28:ARG:CG	2.69	0.41
53:B5:28:ARG:O	53:B5:28:ARG:HG3	2.20	0.41
53:B5:36:ALA:O	53:B5:37:LYS:HB2	2.19	0.41
53:B5:212:SER:CB	53:B5:221:PRO:CB	2.98	0.41
1:CA:18:C:C4	1:CA:19:A:N7	2.88	0.41
1:CA:29:U:H4'	1:CA:295:C:O3'	2.20	0.41
1:CA:312:C:H2'	1:CA:313:A:O4'	2.21	0.41
1:CA:552:U:N3	1:CA:553:A:C8	2.88	0.41
1:CA:553:A:O2'	12:CL:26:ALA:C	2.63	0.41
1:CA:686:U:C2	1:CA:687:A:N7	2.89	0.41
1:CA:803:G:N7	1:CA:804:U:C4	2.89	0.41
1:CA:1014:A:C8	1:CA:1015:G:C5	3.09	0.41
1:CA:1061:G:C2	1:CA:1197:A:C2	3.09	0.41
1:CA:1351:U:H2'	1:CA:1352:C:C6	2.54	0.41
2:CB:80:VAL:O	2:CB:84:ALA:HB3	2.20	0.41
3:CC:111:LEU:N	3:CC:111:LEU:CD2	2.84	0.41
3:CC:173:VAL:O	3:CC:173:VAL:HG12	2.20	0.41
5:CE:121:HIS:O	5:CE:122:ASN:HB3	2.21	0.41
5:CE:157:ARG:O	5:CE:158:GLY:C	2.55	0.41
14:CN:31:ILE:HG22	14:CN:32:SER:N	2.34	0.41
15:CO:39:LEU:O	15:CO:40:GLN:C	2.64	0.41
22:DA:84:A:C2	22:DA:103:A:C6	3.07	0.41
22:DA:426:C:H2'	22:DA:427:U:O4'	2.20	0.41
22:DA:489:G:C2	22:DA:491:G:H1'	2.55	0.41
22:DA:870:U:OP1	34:DM:6:ARG:HD2	2.21	0.41
22:DA:892:A:N3	22:DA:892:A:H2'	2.35	0.41
22:DA:1215:G:H2'	22:DA:1216:G:O4'	2.21	0.41
22:DA:1257:C:C4	22:DA:1258:U:O4	2.74	0.41
22:DA:1567:G:N7	24:DC:83:TYR:CE1	2.88	0.41
22:DA:1605:C:H4'	22:DA:1610:A:C6	2.55	0.41
22:DA:1830:C:H5'	24:DC:15:HIS:NE2	2.36	0.41
22:DA:1835:G:N3	22:DA:1836:C:C6	2.88	0.41
22:DA:1847:A:O2'	22:DA:1848:A:P	2.78	0.41
22:DA:2261:C:C2	22:DA:2280:G:C2	3.08	0.41
22:DA:2540:C:H2'	22:DA:2541:A:H8	1.86	0.41
22:DA:2553:G:H2'	22:DA:2554:U:H4'	2.02	0.41
22:DA:2619:C:OP1	25:DD:157:LYS:HE2	2.21	0.41
22:DA:2864:G:C2'	22:DA:2865:U:H5'	2.51	0.41
23:DB:44:G:N2	23:DB:48:U:O2	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:71:C:O2	23:DB:106:G:C2	2.74	0.41
25:DD:25:THR:HG22	25:DD:27:ILE:HG13	2.01	0.41
26:DE:108:ILE:HD11	26:DE:180:LEU:HB3	2.01	0.41
26:DE:131:THR:HG22	26:DE:160:ALA:HA	2.02	0.41
27:DF:13:VAL:O	27:DF:17:MET:HG2	2.21	0.41
28:DG:133:LEU:HD12	28:DG:133:LEU:C	2.45	0.41
30:DI:54:PRO:O	30:DI:75:PRO:HD2	2.21	0.41
32:DK:36:GLY:HA2	32:DK:62:VAL:O	2.20	0.41
41:DT:11:LEU:HG	41:DT:46:ALA:HB1	2.02	0.41
45:DX:13:VAL:HG23	45:DX:29:PHE:HB2	2.03	0.41
49:D1:21:TYR:CE1	49:D1:38:LYS:HD2	2.56	0.41
49:D1:38:LYS:HB2	49:D1:49:TYR:CD2	2.56	0.41
52:D4:30:GLU:HG3	52:D4:32:LYS:HB2	2.01	0.41
1:AA:142:G:H5'	1:AA:143:A:OP2	2.20	0.41
1:AA:864:A:H3'	1:AA:865:A:C8	2.56	0.41
1:AA:923:A:H2'	1:AA:924:C:C6	2.55	0.41
1:AA:956:U:C5	1:AA:957:U:C5	3.09	0.41
1:AA:1008:U:H5"	1:AA:1009:U:OP1	2.21	0.41
1:AA:1157:A:C6	1:AA:1180:A:C5	3.09	0.41
1:AA:1213:A:C5	1:AA:1215:G:C4	3.08	0.41
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.21	0.41
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.55	0.41
2:AB:50:PHE:CA	2:AB:213:TYR:OH	2.65	0.41
2:AB:182:PRO:O	2:AB:183:VAL:HB	2.20	0.41
4:AD:112:ALA:O	4:AD:115:ARG:N	2.53	0.41
6:AF:42:TRP:CZ2	6:AF:61:LEU:HB2	2.56	0.41
7:AG:9:GLN:HG3	7:AG:9:GLN:O	2.21	0.41
7:AG:69:VAL:HG21	7:AG:104:ILE:CD1	2.49	0.41
10:AJ:10:LEU:O	10:AJ:71:LEU:HA	2.20	0.41
11:AK:111:THR:HA	21:AU:4:ILE:O	2.21	0.41
20:AT:51:PHE:CD1	20:AT:51:PHE:C	2.98	0.41
22:BA:242:G:N7	51:B3:5:LYS:HD3	2.35	0.41
22:BA:807:U:OP2	33:BL:41:ARG:NH1	2.54	0.41
22:BA:1428:C:C5	22:BA:1569:A:H5"	2.56	0.41
22:BA:2201:G:C4	22:BA:2223:G:N2	2.89	0.41
22:BA:2311:A:C5	27:BF:77:PHE:HB3	2.56	0.41
22:BA:2592:G:C5	22:BA:2593:U:C5	3.09	0.41
22:BA:2831:G:P	25:BD:56:LYS:NZ	2.93	0.41
26:BE:79:ARG:O	26:BE:80:SER:CB	2.68	0.41
26:BE:108:ILE:CD1	26:BE:180:LEU:HB3	2.49	0.41
26:BE:134:LEU:O	26:BE:135:ALA:C	2.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:8:TYR:CD2	27:BF:12:VAL:HB	2.56	0.41
30:BI:57:VAL:HG23	30:BI:71:THR:HA	2.02	0.41
31:BJ:17:VAL:HG23	31:BJ:137:PRO:CB	2.51	0.41
34:BM:65:ILE:HG12	34:BM:103:TYR:CD2	2.56	0.41
39:BR:50:GLY:C	39:BR:51:VAL:O	2.62	0.41
41:BT:29:THR:HG23	41:BT:86:THR:CA	2.50	0.41
41:BT:71:GLY:O	41:BT:73:ARG:N	2.47	0.41
46:BY:35:GLY:O	46:BY:36:GLN:O	2.38	0.41
46:BY:42:LEU:O	46:BY:45:GLN:O	2.38	0.41
53:B5:45:HIS:CD2	53:B5:176:VAL:HA	2.56	0.41
1:CA:34:C:H2'	1:CA:35:G:C8	2.56	0.41
1:CA:53:A:H2'	1:CA:54:C:O4'	2.21	0.41
1:CA:116:A:C8	1:CA:116:A:OP2	2.73	0.41
1:CA:282:A:C8	1:CA:283:U:C5	3.09	0.41
1:CA:296:U:C2	1:CA:297:G:C8	3.09	0.41
1:CA:413:G:O6	4:CD:32:CYS:N	2.53	0.41
1:CA:445:G:C2	1:CA:446:G:C4	3.08	0.41
1:CA:554:A:H2'	1:CA:555:U:H6	1.86	0.41
1:CA:630:A:H2'	1:CA:631:C:C6	2.56	0.41
1:CA:977:A:O2'	1:CA:1223:C:N4	2.53	0.41
1:CA:1144:G:N2	1:CA:1145:A:C2	2.88	0.41
1:CA:1291:U:OP1	7:CG:37:SER:HB3	2.20	0.41
1:CA:1315:U:C5	1:CA:1316:G:C5	3.09	0.41
5:CE:37:THR:HB	5:CE:64:MET:HE2	2.03	0.41
5:CE:89:HIS:CE1	5:CE:90:THR:OG1	2.73	0.41
11:CK:51:GLY:O	11:CK:52:PHE:CD2	2.74	0.41
13:CM:18:ALA:CB	13:CM:45:ILE:HD11	2.50	0.41
21:CU:41:PRO:C	21:CU:43:THR:N	2.76	0.41
22:DA:149:A:C2'	22:DA:150:U:H5'	2.51	0.41
22:DA:311:A:OP1	22:DA:332:A:C2	2.73	0.41
22:DA:321:U:H4'	26:DE:159:LEU:O	2.20	0.41
22:DA:677:A:C2	22:DA:802:A:C2	3.09	0.41
22:DA:1178:C:H2'	22:DA:1179:G:C8	2.55	0.41
22:DA:1265:A:C8	22:DA:1267:U:N3	2.89	0.41
22:DA:1276:A:N1	22:DA:1295:C:C2	2.88	0.41
22:DA:1358:G:N1	22:DA:1372:U:OP2	2.50	0.41
22:DA:1555:G:C2	22:DA:1556:C:C2	3.09	0.41
22:DA:1717:A:H2'	22:DA:1718:G:O4'	2.21	0.41
22:DA:1722:A:C2	22:DA:1739:A:H1'	2.55	0.41
22:DA:1854:A:H2'	22:DA:1855:U:H5'	2.03	0.41
22:DA:2025:C:H2'	22:DA:2026:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2061:G:C6	56:DA:3001:DOL:H162	2.55	0.41
22:DA:2133:G:C6	22:DA:2157:G:C6	3.08	0.41
22:DA:2262:U:O2'	22:DA:2263:C:H5'	2.21	0.41
22:DA:2308:G:H5'	22:DA:2309:A:OP2	2.21	0.41
22:DA:2447:G:C2	22:DA:2501:C:N4	2.89	0.41
22:DA:2725:A:C4	22:DA:2727:A:N7	2.87	0.41
22:DA:2751:G:N3	22:DA:2751:G:H2'	2.36	0.41
22:DA:2820:A:C6	25:DD:197:THR:HB	2.56	0.41
22:DA:2836:U:H2'	22:DA:2837:A:C8	2.54	0.41
22:DA:2889:C:C4	22:DA:2890:G:C6	3.08	0.41
25:DD:30:GLU:HG2	25:DD:185:ASN:ND2	2.35	0.41
25:DD:37:VAL:CG1	25:DD:38:LYS:N	2.83	0.41
25:DD:179:ARG:HD2	25:DD:188:LEU:CD1	2.51	0.41
26:DE:188:MET:HE2	26:DE:188:MET:HB3	1.90	0.41
27:DF:106:ILE:C	27:DF:109:PRO:HD2	2.45	0.41
27:DF:174:ASP:O	27:DF:175:PHE:O	2.39	0.41
28:DG:80:THR:HG22	28:DG:81:GLU:N	2.35	0.41
29:DH:76:GLU:O	29:DH:76:GLU:CD	2.63	0.41
29:DH:130:VAL:CG1	29:DH:131:SER:N	2.82	0.41
30:DI:84:ALA:HA	30:DI:101:ILE:HD12	2.01	0.41
31:DJ:4:PHE:CD2	38:DQ:100:VAL:HG11	2.56	0.41
32:DK:20:MET:HE2	32:DK:42:THR:HG22	2.02	0.41
35:DN:63:ARG:HG3	35:DN:80:PHE:CE2	2.56	0.41
36:DO:11:ALA:O	36:DO:12:THR:C	2.62	0.41
41:DT:20:ALA:HA	41:DT:31:VAL:HG21	2.02	0.41
42:DU:13:VAL:CG2	42:DU:39:ILE:HG21	2.51	0.41
51:D3:32:ILE:HG22	51:D3:35:LYS:HD2	2.02	0.41
1:AA:102:G:C2	1:AA:103:U:C6	3.09	0.41
1:AA:397:A:C5	1:AA:548:G:N7	2.89	0.41
1:AA:504:C:H1'	1:AA:510:A:C4	2.56	0.41
1:AA:604:G:C2	1:AA:635:A:N3	2.89	0.41
1:AA:604:G:C6	1:AA:635:A:N1	2.89	0.41
1:AA:707:U:H4'	11:AK:22:HIS:CD2	2.56	0.41
1:AA:885:G:C2	1:AA:913:A:N1	2.89	0.41
1:AA:890:G:O2'	1:AA:906:A:N6	2.54	0.41
1:AA:1068:G:N7	1:AA:1094:G:H2'	2.35	0.41
1:AA:1151:A:O2'	1:AA:1152:A:P	2.78	0.41
1:AA:1438:G:OP1	20:AT:29:ARG:HD3	2.20	0.41
3:AC:77:ILE:HA	3:AC:84:VAL:CG2	2.51	0.41
4:AD:173:VAL:HG22	4:AD:174:ASP:H	1.85	0.41
8:AH:64:LYS:HB3	8:AH:64:LYS:HE2	1.93	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:5:ARG:HG2	10:AJ:79:PRO:HG3	2.01	0.41
10:AJ:8:ILE:O	10:AJ:73:LEU:O	2.38	0.41
10:AJ:53:ILE:HG22	10:AJ:61:ALA:HB3	2.01	0.41
11:AK:56:ARG:HA	11:AK:56:ARG:HE	1.85	0.41
11:AK:65:VAL:O	11:AK:65:VAL:HG23	2.20	0.41
17:AQ:7:THR:HG22	17:AQ:61:ILE:O	2.20	0.41
17:AQ:14:SER:HB3	17:AQ:22:VAL:HG11	2.03	0.41
20:AT:74:ARG:O	20:AT:78:ASN:OD1	2.38	0.41
22:BA:54:G:C5	22:BA:55:G:C8	3.09	0.41
22:BA:108:G:C2'	22:BA:109:C:H5'	2.50	0.41
22:BA:493:G:H2'	22:BA:494:G:O4'	2.21	0.41
22:BA:528:A:C2	22:BA:2042:A:H2'	2.56	0.41
22:BA:934:U:H2'	22:BA:935:C:C6	2.56	0.41
22:BA:1045:C:H3'	22:BA:1046:A:C5'	2.50	0.41
22:BA:1496:A:N3	22:BA:1577:C:O2'	2.46	0.41
22:BA:1808:A:N1	45:BX:28:ARG:HD2	2.35	0.41
22:BA:1850:G:C6	22:BA:1851:U:C4	3.08	0.41
22:BA:1924:C:O2	22:BA:1926:U:C5	2.73	0.41
22:BA:1941:C:C4	22:BA:1942:C:C4	3.07	0.41
22:BA:2564:A:C6	22:BA:2565:A:C6	3.09	0.41
22:BA:2819:G:H2'	22:BA:2821:A:N7	2.36	0.41
22:BA:2838:G:O3'	35:BN:46:ARG:HD3	2.21	0.41
24:BC:7:LYS:HB3	24:BC:8:PRO:HD2	2.02	0.41
24:BC:30:PHE:CZ	24:BC:32:PRO:HG2	2.55	0.41
24:BC:31:ALA:N	24:BC:32:PRO:CD	2.83	0.41
25:BD:61:THR:CB	25:BD:63:PRO:HD2	2.50	0.41
26:BE:43:THR:O	26:BE:44:ARG:HB3	2.21	0.41
28:BG:74:SER:HA	28:BG:77:ILE:HG12	2.02	0.41
29:BH:82:SER:HB3	29:BH:146:VAL:HG12	2.03	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
30:BI:92:LYS:HB3	30:BI:95:LYS:HG2	2.03	0.41
30:BI:113:LYS:HE2	30:BI:117:MET:HE3	2.03	0.41
33:BL:74:THR:HA	33:BL:107:PHE:O	2.21	0.41
39:BR:66:HIS:ND1	39:BR:94:THR:CG2	2.82	0.41
40:BS:36:LEU:CD1	40:BS:47:VAL:HG12	2.51	0.41
43:BV:56:PHE:O	43:BV:61:LEU:HD11	2.19	0.41
1:CA:6:G:H4'	1:CA:298:A:H4'	2.03	0.41
1:CA:177:G:C6	1:CA:178:C:N4	2.89	0.41
1:CA:270:A:H2'	1:CA:271:C:C6	2.56	0.41
1:CA:376:G:N3	1:CA:389:A:C2	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:435:A:C2'	1:CA:436:C:O5'	2.69	0.41
1:CA:554:A:H2'	1:CA:555:U:C6	2.55	0.41
1:CA:661:G:C5	1:CA:662:U:C5	3.08	0.41
1:CA:764:C:C5	1:CA:765:G:N7	2.89	0.41
1:CA:771:G:C2	1:CA:809:G:C2	3.08	0.41
1:CA:994:A:N3	1:CA:994:A:C2'	2.82	0.41
1:CA:1056:U:H5'	3:CC:163:ALA:HB3	2.02	0.41
1:CA:1138:G:C2	1:CA:1140:C:C4	3.09	0.41
1:CA:1361:G:C2'	1:CA:1362:A:H5"	2.51	0.41
1:CA:1434:A:N6	1:CA:1435:G:N1	2.68	0.41
2:CB:72:THR:HG22	2:CB:95:ARG:NH1	2.36	0.41
3:CC:47:LEU:HD22	3:CC:76:VAL:HG22	2.03	0.41
4:CD:76:TYR:O	4:CD:77:LYS:C	2.62	0.41
4:CD:129:VAL:O	4:CD:129:VAL:HG13	2.19	0.41
5:CE:77:ASN:O	5:CE:80:THR:HG22	2.20	0.41
5:CE:150:PRO:HA	8:CH:99:LEU:HD21	2.02	0.41
6:CF:38:ARG:CG	6:CF:63:ASN:HB2	2.50	0.41
6:CF:47:LEU:CD2	6:CF:59:TYR:OH	2.69	0.41
6:CF:92:THR:O	6:CF:93:LYS:C	2.63	0.41
9:CI:15:SER:OG	9:CI:70:GLY:HA3	2.19	0.41
9:CI:49:ARG:NH2	9:CI:53:GLU:HA	2.35	0.41
12:CL:21:VAL:C	12:CL:23:ALA:H	2.29	0.41
13:CM:25:VAL:HG13	13:CM:25:VAL:O	2.20	0.41
17:CQ:15:ASP:HA	17:CQ:21:ILE:HD12	2.02	0.41
22:DA:158:U:C5	22:DA:159:G:N7	2.88	0.41
22:DA:195:A:C5	22:DA:198:C:C5	3.08	0.41
22:DA:503:A:C2	22:DA:506:G:C5	3.09	0.41
22:DA:520:G:H2'	22:DA:521:U:C6	2.56	0.41
22:DA:527:C:OP2	22:DA:2779:U:N3	2.54	0.41
22:DA:543:G:N1	22:DA:551:G:C6	2.88	0.41
22:DA:1221:C:H2'	22:DA:1222:U:O4'	2.21	0.41
22:DA:1268:A:H2'	22:DA:1269:A:O4'	2.20	0.41
22:DA:1417:C:N3	22:DA:1581:G:O6	2.54	0.41
22:DA:1876:A:N7	22:DA:1877:A:C5	2.88	0.41
22:DA:2127:G:H1'	22:DA:2162:G:N7	2.36	0.41
22:DA:2409:G:C6	22:DA:2410:G:C5	3.08	0.41
22:DA:2513:A:C4	22:DA:2514:U:C5	3.08	0.41
22:DA:2718:G:C2	22:DA:2719:G:C1'	3.03	0.41
22:DA:2746:U:H2'	22:DA:2747:G:O4'	2.20	0.41
22:DA:2748:A:N1	22:DA:2749:A:C2	2.89	0.41
22:DA:2847:U:H2'	22:DA:2848:G:H5'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2892:G:H5”	22:DA:2894:G:N2	2.36	0.41
25:DD:5:VAL:HG21	25:DD:80:TRP:CG	2.56	0.41
25:DD:104:VAL:HG23	25:DD:105:LYS:N	2.36	0.41
33:DL:78:ARG:CB	33:DL:113:ALA:HB3	2.50	0.41
36:DO:18:LEU:CD1	36:DO:23:ALA:HB3	2.51	0.41
41:DT:64:LYS:HA	41:DT:79:ASP:OD1	2.21	0.41
48:D0:7:LYS:HE2	48:D0:8:PRO:O	2.21	0.41
1:AA:131:A:C2	1:AA:132:C:N3	2.89	0.41
1:AA:148:G:C2’	1:AA:149:A:O5’	2.69	0.41
1:AA:255:G:H4’	17:AQ:19:LYS:HD3	2.03	0.41
1:AA:399:G:H2’	1:AA:400:C:C6	2.56	0.41
1:AA:472:U:C4	1:AA:473:U:C4	3.09	0.41
1:AA:502:A:C2	1:AA:544:G:C2	3.09	0.41
1:AA:527:G:O2’	1:AA:535:A:N1	2.49	0.41
1:AA:1501:C:C5	1:AA:1504:G:C8	3.09	0.41
2:AB:36:ASN:C	2:AB:37:LYS:HG2	2.45	0.41
2:AB:167:ASP:C	2:AB:169:GLU:N	2.75	0.41
2:AB:167:ASP:O	2:AB:170:HIS:CE1	2.74	0.41
2:AB:186:ILE:HD11	2:AB:204:ASP:HA	2.02	0.41
6:AF:38:ARG:CZ	6:AF:61:LEU:HD21	2.50	0.41
8:AH:49:PHE:HB3	8:AH:61:LEU:CD2	2.50	0.41
8:AH:49:PHE:CB	8:AH:61:LEU:HD23	2.51	0.41
11:AK:56:ARG:HA	11:AK:56:ARG:NE	2.35	0.41
13:AM:90:ARG:NH1	13:AM:95:LEU:HB3	2.36	0.41
15:AO:46:HIS:O	15:AO:47:LYS:HB2	2.21	0.41
16:AP:78:VAL:O	16:AP:78:VAL:CG1	2.68	0.41
18:AR:25:ASP:O	18:AR:27:ALA:N	2.54	0.41
19:AS:18:LYS:HE3	19:AS:33:THR:CG2	2.51	0.41
20:AT:67:ILE:CD1	20:AT:71:LYS:HG2	2.51	0.41
21:AU:53:VAL:O	21:AU:54:LYS:CB	2.69	0.41
22:BA:247:G:H4’	22:BA:386:G:C5	2.55	0.41
22:BA:477:A:C6	22:BA:478:A:C6	3.08	0.41
22:BA:524:G:O2’	22:BA:525:U:H5’	2.21	0.41
22:BA:673:C:OP1	26:BE:49:ARG:NH2	2.53	0.41
22:BA:674:G:O2’	26:BE:69:ARG:HB3	2.21	0.41
22:BA:996:A:C5	22:BA:1160:G:C2	3.09	0.41
22:BA:1045:C:H3’	22:BA:1046:A:H5’	2.01	0.41
22:BA:1073:A:H2’	22:BA:1074:G:H5”	2.02	0.41
22:BA:1171:G:C5	22:BA:1172:C:C4	3.08	0.41
22:BA:1195:G:O2’	22:BA:1196:C:H5’	2.20	0.41
22:BA:1869:G:C2	22:BA:1873:G:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2648:G:H2'	22:BA:2649:C:C6	2.55	0.41
26:BE:149:ILE:CD1	26:BE:172:ALA:N	2.84	0.41
27:BF:123:ASP:CG	27:BF:127:ASN:HB2	2.46	0.41
28:BG:146:ALA:O	28:BG:149:ARG:HB3	2.20	0.41
30:BI:18:ALA:O	30:BI:19:ASN:HB2	2.21	0.41
32:BK:71:ARG:O	32:BK:73:ASP:N	2.53	0.41
36:BO:60:GLU:C	36:BO:62:LEU:H	2.28	0.41
36:BO:78:VAL:HG23	36:BO:79:ALA:N	2.36	0.41
37:BP:16:ASP:O	37:BP:17:VAL:C	2.64	0.41
37:BP:27:GLU:O	37:BP:27:GLU:HG3	2.21	0.41
39:BR:14:VAL:CG1	39:BR:15:SER:N	2.83	0.41
44:BW:47:ALA:HB1	44:BW:51:VAL:O	2.21	0.41
45:BX:4:VAL:HG22	45:BX:11:ARG:HB3	2.03	0.41
1:CA:280:C:H4'	1:CA:281:G:OP2	2.21	0.41
1:CA:386:C:C4	1:CA:387:U:C5	3.09	0.41
1:CA:1074:G:H4'	2:CB:102:THR:O	2.21	0.41
1:CA:1243:C:H2'	1:CA:1244:G:C8	2.56	0.41
1:CA:1386:G:N3	1:CA:1387:G:C8	2.88	0.41
1:CA:1423:G:C6	1:CA:1424:U:C4	3.09	0.41
2:CB:94:HIS:CG	2:CB:95:ARG:NH2	2.89	0.41
2:CB:116:ASP:O	2:CB:120:GLN:HB3	2.21	0.41
2:CB:170:HIS:CE1	2:CB:171:ILE:HG13	2.56	0.41
4:CD:33:LYS:NZ	4:CD:33:LYS:HB2	2.35	0.41
4:CD:58:LYS:CB	4:CD:200:ILE:HB	2.50	0.41
4:CD:92:ALA:O	4:CD:93:LEU:C	2.64	0.41
4:CD:126:ASN:HA	4:CD:142:VAL:HG23	2.01	0.41
5:CE:154:ALA:O	5:CE:156:LYS:N	2.54	0.41
5:CE:156:LYS:CD	8:CH:71:VAL:HG13	2.51	0.41
6:CF:9:MET:HG3	6:CF:86:ARG:HB2	2.02	0.41
6:CF:25:TYR:O	6:CF:26:THR:C	2.64	0.41
6:CF:68:GLN:O	6:CF:72:ASP:HB2	2.21	0.41
8:CH:10:MET:HE1	8:CH:36:ILE:HB	2.03	0.41
8:CH:95:VAL:CG2	8:CH:128:TYR:HB3	2.51	0.41
9:CI:13:LYS:O	9:CI:14:SER:CB	2.69	0.41
16:CP:38:PHE:CZ	16:CP:51:ARG:HB3	2.55	0.41
19:CS:36:ARG:NH1	19:CS:72:GLY:HA3	2.36	0.41
20:CT:11:ALA:O	20:CT:14:SER:OG	2.33	0.41
21:CU:25:LYS:HZ2	21:CU:26:ALA:N	2.19	0.41
22:DA:126:A:P	50:D2:19:ARG:HG3	2.60	0.41
22:DA:201:C:C5	22:DA:202:U:C5	3.08	0.41
22:DA:235:U:C4	22:DA:430:A:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:319:G:OP2	26:DE:132:LYS:HE3	2.21	0.41
22:DA:319:G:C5	22:DA:333:G:C2	3.09	0.41
22:DA:372:G:P	45:DX:62:LYS:HZ2	2.44	0.41
22:DA:492:A:H2'	22:DA:493:G:O4'	2.20	0.41
22:DA:612:G:O2'	22:DA:613:A:C8	2.73	0.41
22:DA:1032:A:H4'	52:D4:16:ILE:HD12	2.03	0.41
22:DA:1158:C:H5"	47:DZ:31:ARG:HG3	2.03	0.41
22:DA:1502:A:C2	22:DA:1503:A:C5	3.09	0.41
22:DA:1602:U:O4	58:DA:3711:HOH:O	2.20	0.41
22:DA:1654:A:OP1	35:DN:1:MET:HA	2.21	0.41
22:DA:1973:G:C4	22:DA:1974:C:C5	3.09	0.41
22:DA:2093:G:C2	22:DA:2094:A:N7	2.89	0.41
22:DA:2134:A:C8	22:DA:2158:A:C2	3.08	0.41
22:DA:2303:G:N1	22:DA:2314:A:C6	2.89	0.41
22:DA:2345:G:C4	22:DA:2347:C:C5	3.09	0.41
22:DA:2393:U:H2'	22:DA:2394:C:O4'	2.21	0.41
22:DA:2648:G:C4	22:DA:2673:G:C2	3.09	0.41
22:DA:2704:C:H2'	22:DA:2705:A:O4'	2.21	0.41
22:DA:2784:U:H2'	22:DA:2785:C:C6	2.56	0.41
56:DA:3001:DOL:N9	56:DA:3001:DOL:HC41	2.36	0.41
28:DG:61:GLY:O	28:DG:62:TRP:C	2.63	0.41
29:DH:2:GLN:O	29:DH:3:VAL:O	2.38	0.41
31:DJ:39:LYS:HD3	31:DJ:39:LYS:HA	1.91	0.41
32:DK:21:CYS:SG	32:DK:39:ILE:HB	2.60	0.41
32:DK:92:GLU:HB3	32:DK:93:GLN:H	1.70	0.41
33:DL:23:ILE:HD12	39:DR:84:ARG:HG2	2.02	0.41
41:DT:34:VAL:HG11	41:DT:43:ILE:HD13	2.02	0.41
42:DU:13:VAL:HB	42:DU:18:ASP:O	2.20	0.41
42:DU:86:ARG:NH2	42:DU:95:PHE:HB3	2.36	0.41
43:DV:32:GLY:O	43:DV:93:ARG:HB2	2.21	0.41
45:DX:40:VAL:CG1	45:DX:68:LEU:HD11	2.50	0.41
46:DY:20:ASN:HB3	46:DY:50:VAL:HG22	2.02	0.41
1:AA:76:G:N2	1:AA:95:C:C2	2.89	0.41
1:AA:113:G:H2'	1:AA:114:U:H6	1.85	0.41
1:AA:263:A:H2'	1:AA:264:C:C5	2.56	0.41
1:AA:515:G:N2	1:AA:537:G:C4	2.89	0.41
1:AA:592:G:C6	1:AA:593:U:N3	2.89	0.41
1:AA:597:G:C8	1:AA:598:U:C5	3.08	0.41
1:AA:644:U:O2'	1:AA:645:G:H5'	2.20	0.41
1:AA:686:U:O4	1:AA:703:G:O2'	2.26	0.41
1:AA:741:G:H2'	1:AA:742:G:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:747:A:C6	1:AA:748:G:C6	3.09	0.41
1:AA:959:A:O2'	1:AA:984:C:O2'	2.37	0.41
1:AA:990:C:N3	1:AA:991:U:C4	2.88	0.41
1:AA:1032:G:H3'	1:AA:1033:G:O4'	2.21	0.41
1:AA:1217:C:H2'	1:AA:1218:C:H6	1.86	0.41
1:AA:1323:G:O2'	1:AA:1324:A:H5'	2.21	0.41
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.21	0.41
2:AB:101:LEU:HD13	2:AB:101:LEU:HA	1.94	0.41
2:AB:151:ILE:O	2:AB:153:ASP:N	2.53	0.41
2:AB:157:LEU:HA	2:AB:158:PRO:HD3	1.98	0.41
3:AC:22:TRP:CB	3:AC:59:ARG:HG2	2.49	0.41
3:AC:113:ALA:HB1	3:AC:200:VAL:CG2	2.51	0.41
4:AD:123:ILE:N	4:AD:123:ILE:CD1	2.82	0.41
4:AD:124:MET:HE3	4:AD:146:ARG:CD	2.51	0.41
4:AD:151:LYS:HB3	4:AD:178:MET:HE1	2.03	0.41
5:AE:80:THR:HB	5:AE:122:ASN:OD1	2.20	0.41
5:AE:151:GLU:O	5:AE:153:VAL:N	2.54	0.41
6:AF:90:MET:O	6:AF:91:ARG:C	2.63	0.41
7:AG:42:ILE:HG21	7:AG:116:MET:HB3	2.02	0.41
9:AI:17:ALA:CB	9:AI:67:VAL:HB	2.51	0.41
9:AI:105:THR:CG2	9:AI:106:ARG:N	2.84	0.41
10:AJ:29:ALA:O	10:AJ:32:THR:HG23	2.21	0.41
11:AK:65:VAL:O	11:AK:65:VAL:CG2	2.68	0.41
12:AL:24:LEU:HB2	12:AL:59:ASN:HD22	1.84	0.41
12:AL:67:ILE:HG21	12:AL:72:HIS:CD2	2.56	0.41
14:AN:73:PHE:CD1	14:AN:74:LEU:N	2.89	0.41
15:AO:22:THR:HG22	15:AO:23:GLY:N	2.35	0.41
16:AP:14:ARG:N	16:AP:15:PRO:CD	2.84	0.41
16:AP:22:ALA:HA	16:AP:33:ILE:CG1	2.49	0.41
16:AP:49:GLY:O	16:AP:50:THR:OG1	2.31	0.41
16:AP:53:ASP:OD1	16:AP:55:ASP:CG	2.64	0.41
16:AP:78:VAL:O	16:AP:78:VAL:HG13	2.20	0.41
19:AS:36:ARG:NE	19:AS:52:HIS:O	2.52	0.41
20:AT:67:ILE:HG13	20:AT:71:LYS:CG	2.48	0.41
21:AU:11:PRO:C	21:AU:12:PHE:CG	2.98	0.41
22:BA:158:U:O2	22:BA:158:U:H2'	2.21	0.41
22:BA:223:A:N1	22:BA:407:G:O2'	2.51	0.41
22:BA:359:G:H2'	22:BA:360:U:O4'	2.21	0.41
22:BA:416:U:C4	22:BA:417:C:C4	3.08	0.41
22:BA:548:G:O2'	22:BA:549:G:C2	2.72	0.41
22:BA:593:U:H2'	22:BA:594:U:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:669:G:C6	22:BA:801:G:O6	2.73	0.41
22:BA:910:A:N3	22:BA:2264:C:O2'	2.42	0.41
22:BA:936:A:H2'	22:BA:937:C:C6	2.56	0.41
22:BA:975:A:C2	22:BA:990:A:C8	3.09	0.41
22:BA:982:C:H5"	22:BA:983:A:P	2.60	0.41
22:BA:1011:G:H1'	22:BA:1013:C:O4'	2.21	0.41
22:BA:1026:G:C5	22:BA:1134:A:C5	3.08	0.41
22:BA:1095:A:H2'	22:BA:1096:A:C8	2.56	0.41
22:BA:1266:G:N7	40:BS:16:LYS:HE3	2.36	0.41
22:BA:1301:A:C2	22:BA:1303:G:C6	3.08	0.41
22:BA:1340:U:H4'	22:BA:1341:G:OP2	2.20	0.41
22:BA:1501:G:O2'	22:BA:1502:A:H5'	2.21	0.41
22:BA:1537:G:H3'	22:BA:1537:G:N3	2.36	0.41
22:BA:1638:C:H4'	22:BA:2710:C:O2	2.21	0.41
22:BA:1707:G:H2'	22:BA:1708:C:O4'	2.21	0.41
22:BA:1734:G:C4	22:BA:1735:A:C8	3.08	0.41
22:BA:1759:A:H2'	22:BA:1760:C:C6	2.55	0.41
22:BA:1792:G:OP1	24:BC:204:VAL:O	2.38	0.41
22:BA:2189:U:C2'	22:BA:2190:G:C1'	2.95	0.41
22:BA:2308:G:C5	27:BF:77:PHE:CE2	3.09	0.41
22:BA:2379:G:H4'	36:BO:21:LEU:HD11	2.03	0.41
22:BA:2458:G:N3	22:BA:2490:G:N2	2.69	0.41
22:BA:2592:G:C2'	22:BA:2593:U:H5'	2.51	0.41
22:BA:2680:U:H2'	22:BA:2681:C:C6	2.56	0.41
22:BA:2740:A:C6	22:BA:2764:A:C8	3.08	0.41
22:BA:2771:C:H2'	22:BA:2772:C:C6	2.55	0.41
23:BB:116:G:H4'	36:BO:54:VAL:CG1	2.50	0.41
24:BC:77:VAL:HA	24:BC:114:ASP:O	2.21	0.41
24:BC:77:VAL:HG22	24:BC:78:VAL:N	2.35	0.41
24:BC:159:GLY:HA2	24:BC:198:ALA:HB2	2.02	0.41
25:BD:113:SER:O	25:BD:167:ASN:N	2.52	0.41
26:BE:1:MET:HE2	26:BE:19:PHE:HB3	2.03	0.41
26:BE:61:ARG:NH2	26:BE:64:GLY:HA3	2.36	0.41
26:BE:85:PHE:O	26:BE:86:ALA:C	2.63	0.41
29:BH:10:ALA:C	29:BH:12:LEU:H	2.27	0.41
29:BH:75:LEU:C	29:BH:75:LEU:CD2	2.93	0.41
29:BH:132:PHE:CE2	29:BH:142:VAL:CG2	3.04	0.41
30:BI:24:VAL:CG2	30:BI:28:LEU:CD2	2.99	0.41
30:BI:44:ALA:O	30:BI:45:LYS:CG	2.67	0.41
30:BI:115:ALA:O	30:BI:116:ASP:HB2	2.20	0.41
31:BJ:120:ARG:O	31:BJ:123:LYS:HE2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:57:LEU:HG	51:B3:14:PHE:HZ	1.86	0.41
33:BL:82:LEU:C	33:BL:84:LYS:H	2.28	0.41
34:BM:17:ASN:O	34:BM:38:ARG:HD3	2.21	0.41
35:BN:58:ASP:CG	35:BN:63:ARG:HH21	2.29	0.41
36:BO:17:LYS:HA	36:BO:17:LYS:HD3	1.82	0.41
36:BO:93:ASP:C	36:BO:95:SER:N	2.79	0.41
37:BP:51:ARG:O	37:BP:57:SER:HA	2.21	0.41
37:BP:103:ARG:CG	37:BP:103:ARG:NH1	2.75	0.41
37:BP:113:ARG:O	37:BP:114:LEU:HG	2.21	0.41
40:BS:51:LEU:O	40:BS:54:ALA:HB3	2.21	0.41
42:BU:85:PHE:CD1	42:BU:85:PHE:N	2.89	0.41
49:B1:52:ALA:O	49:B1:53:LYS:OXT	2.38	0.41
53:B5:21:TYR:O	53:B5:22:THR:HG23	2.20	0.41
1:CA:4:U:O2	1:CA:4:U:C2'	2.68	0.41
1:CA:144:G:C6	1:CA:145:G:C5	3.09	0.41
1:CA:197:A:C5	1:CA:221:C:H4'	2.55	0.41
1:CA:260:G:C6	1:CA:261:U:O4	2.74	0.41
1:CA:505:G:C2	1:CA:506:G:C5	3.09	0.41
1:CA:786:G:C2	1:CA:787:A:H1'	2.55	0.41
1:CA:801:U:N3	1:CA:802:A:N7	2.69	0.41
1:CA:825:A:H2'	1:CA:826:C:H6	1.86	0.41
1:CA:833:G:C5	1:CA:834:U:C5	3.09	0.41
1:CA:951:G:C5	1:CA:952:U:C4	3.09	0.41
1:CA:977:A:N6	1:CA:1224:U:O4'	2.54	0.41
1:CA:992:U:O4	1:CA:1044:A:C8	2.74	0.41
1:CA:1044:A:N7	1:CA:1045:C:H1'	2.36	0.41
1:CA:1126:U:N1	1:CA:1281:C:C5	2.89	0.41
1:CA:1211:U:HO2'	1:CA:1212:U:P	2.36	0.41
1:CA:1243:C:N4	1:CA:1244:G:O6	2.54	0.41
1:CA:1245:C:C2	1:CA:1246:A:C8	3.09	0.41
1:CA:1248:A:N3	9:CI:72:ILE:HD11	2.35	0.41
1:CA:1255:G:N1	1:CA:1279:G:N7	2.68	0.41
1:CA:1277:C:HO2'	1:CA:1279:G:C1'	2.34	0.41
1:CA:1298:U:H4'	1:CA:1299:A:C4	2.55	0.41
1:CA:1346:A:O3'	1:CA:1347:G:H4'	2.20	0.41
2:CB:71:GLY:HA3	2:CB:164:ILE:HG21	2.03	0.41
3:CC:23:PHE:CD2	10:CJ:97:ASP:HB2	2.56	0.41
3:CC:43:LEU:HD21	3:CC:68:ILE:HD11	2.02	0.41
4:CD:35:GLU:O	4:CD:37:ALA:N	2.49	0.41
4:CD:58:LYS:HE2	4:CD:69:GLU:OE1	2.21	0.41
4:CD:90:LEU:CD2	4:CD:200:ILE:HD11	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:149:ALA:O	4:CD:150:LYS:C	2.62	0.41
5:CE:100:SER:O	5:CE:102:GLY:N	2.54	0.41
7:CG:57:SER:HB3	7:CG:60:GLU:HB2	2.03	0.41
8:CH:95:VAL:HG12	8:CH:96:MET:N	2.36	0.41
10:CJ:52:LEU:HD21	10:CJ:59:LYS:HA	2.02	0.41
10:CJ:71:LEU:O	10:CJ:72:ARG:HD3	2.21	0.41
10:CJ:78:GLU:HG3	10:CJ:80:THR:OG1	2.20	0.41
11:CK:50:SER:HB3	11:CK:65:VAL:CG2	2.51	0.41
11:CK:59:THR:C	11:CK:91:PRO:HB2	2.46	0.41
11:CK:82:LEU:CD2	11:CK:105:PHE:HB3	2.51	0.41
12:CL:36:ARG:O	12:CL:54:ARG:N	2.53	0.41
12:CL:47:SER:O	12:CL:48:ALA:HB3	2.19	0.41
15:CO:57:LEU:C	15:CO:59:MET:N	2.78	0.41
15:CO:58:ARG:O	15:CO:62:GLN:HB2	2.21	0.41
16:CP:21:VAL:HG23	16:CP:36:VAL:CG2	2.51	0.41
17:CQ:24:ALA:HA	17:CQ:43:LYS:HA	2.01	0.41
17:CQ:46:VAL:HG12	17:CQ:47:HIS:N	2.36	0.41
20:CT:37:ALA:HA	20:CT:40:GLU:HB3	2.03	0.41
20:CT:79:LEU:O	20:CT:83:ILE:HG23	2.20	0.41
22:DA:80:G:O2'	22:DA:346:A:N7	2.52	0.41
22:DA:116:C:H4'	22:DA:127:A:H5'	2.03	0.41
22:DA:120:U:O4	22:DA:177:G:C8	2.74	0.41
22:DA:236:C:H2'	22:DA:237:C:H6	1.85	0.41
22:DA:320:A:H4'	22:DA:322:A:N7	2.36	0.41
22:DA:532:A:H3'	38:DQ:28:ARG:CZ	2.51	0.41
22:DA:542:C:N4	22:DA:543:G:O6	2.53	0.41
22:DA:561:G:O2'	38:DQ:45:TYR:OH	2.28	0.41
22:DA:562:U:H2'	22:DA:572:A:O4'	2.21	0.41
22:DA:580:U:H2'	22:DA:581:C:O4'	2.21	0.41
22:DA:616:A:C2	22:DA:617:G:C1'	3.04	0.41
22:DA:616:A:N3	22:DA:616:A:H2'	2.36	0.41
22:DA:667:U:C4	22:DA:668:A:C5	3.08	0.41
22:DA:961:C:C6	22:DA:2031:A:C2	3.09	0.41
22:DA:971:G:C2	22:DA:972:A:H1'	2.56	0.41
22:DA:1068:G:H2'	22:DA:1096:A:H5'	2.03	0.41
22:DA:1361:G:C4	22:DA:1362:C:C5	3.08	0.41
22:DA:1370:C:N3	22:DA:1371:G:C5	2.89	0.41
22:DA:1409:U:H2'	22:DA:1410:G:C8	2.56	0.41
22:DA:1652:A:C2	22:DA:2006:C:N3	2.89	0.41
22:DA:2023:C:O2'	22:DA:2024:G:H5'	2.21	0.41
22:DA:2128:G:C4	22:DA:2173:A:O2'	2.72	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2290:G:H2'	22:DA:2291:U:O4'	2.20	0.41
22:DA:2416:C:H2'	22:DA:2417:C:C6	2.56	0.41
22:DA:2468:A:C2	22:DA:2481:G:C2	3.09	0.41
22:DA:2624:G:H1'	48:D0:19:HIS:HE1	1.86	0.41
22:DA:2651:C:O2'	22:DA:2652:C:H5'	2.20	0.41
23:DB:34:A:C6	23:DB:44:G:C4	3.09	0.41
23:DB:77:U:C2'	23:DB:78:A:H5'	2.51	0.41
24:DC:129:THR:C	24:DC:130:LEU:HD23	2.46	0.41
24:DC:145:GLU:HG2	24:DC:152:GLY:N	2.36	0.41
25:DD:35:THR:O	25:DD:36:GLN:HB2	2.21	0.41
26:DE:148:ILE:HB	26:DE:169:VAL:HG13	2.01	0.41
26:DE:149:ILE:CG2	26:DE:188:MET:HG2	2.51	0.41
27:DF:6:ASP:HA	27:DF:9:LYS:CD	2.51	0.41
27:DF:141:ILE:O	27:DF:141:ILE:HG22	2.21	0.41
28:DG:141:ILE:O	28:DG:145:ALA:N	2.53	0.41
28:DG:144:VAL:O	28:DG:144:VAL:CG1	2.69	0.41
29:DH:1:MET:HB3	29:DH:21:VAL:O	2.20	0.41
30:DI:22:PRO:CB	30:DI:23:PRO:HD3	2.51	0.41
31:DJ:6:ALA:O	31:DJ:7:LYS:CB	2.68	0.41
31:DJ:34:ARG:CZ	31:DJ:39:LYS:HG3	2.50	0.41
32:DK:2:ILE:N	32:DK:33:ALA:O	2.52	0.41
32:DK:64:ARG:HD3	32:DK:102:PRO:O	2.21	0.41
32:DK:78:ARG:NH2	37:DP:73:VAL:CG1	2.84	0.41
33:DL:90:VAL:CG1	33:DL:125:LEU:HD22	2.51	0.41
34:DM:68:PHE:O	34:DM:69:PRO:C	2.63	0.41
34:DM:95:LEU:O	34:DM:97:GLN:NE2	2.54	0.41
34:DM:135:VAL:O	34:DM:136:MET:HB3	2.21	0.41
36:DO:48:LEU:C	36:DO:49:VAL:CG2	2.93	0.41
36:DO:99:TYR:CZ	36:DO:104:GLN:HG3	2.55	0.41
38:DQ:58:ARG:NH2	38:DQ:92:ARG:CZ	2.84	0.41
39:DR:1:MET:HE1	39:DR:101:ILE:HB	2.02	0.41
39:DR:1:MET:HA	39:DR:42:ALA:O	2.21	0.41
39:DR:85:LYS:HG2	39:DR:86:GLN:N	2.35	0.41
40:DS:32:ALA:O	40:DS:35:ILE:HB	2.21	0.41
41:DT:44:LYS:O	41:DT:48:GLN:HG2	2.20	0.41
43:DV:63:ILE:CD1	43:DV:72:VAL:HG21	2.51	0.41
45:DX:78:TYR:CD1	45:DX:78:TYR:C	2.98	0.41
50:D2:44:VAL:O	50:D2:45:SER:CB	2.69	0.41
51:D3:31:HIS:ND1	51:D3:31:HIS:C	2.79	0.41
1:AA:596:A:C5	1:AA:645:G:C2	3.09	0.41
1:AA:628:G:H2'	1:AA:629:A:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:655:A:N1	1:AA:656:G:C5	2.89	0.41
1:AA:947:G:C5	1:AA:948:C:C4	3.08	0.41
1:AA:1069:C:H2'	1:AA:1070:U:O5'	2.21	0.41
1:AA:1360:A:C8	14:AN:58:SER:HB3	2.56	0.41
1:AA:1476:A:H2'	1:AA:1477:U:O4'	2.20	0.41
2:AB:151:ILE:CG2	2:AB:152:LYS:N	2.84	0.41
3:AC:109:PRO:C	3:AC:111:LEU:N	2.77	0.41
4:AD:159:LEU:HD13	4:AD:175:ALA:HA	2.02	0.41
5:AE:109:GLY:HA2	5:AE:112:ARG:HB3	2.03	0.41
7:AG:148:ASN:O	7:AG:149:LYS:C	2.64	0.41
8:AH:25:VAL:CG1	8:AH:61:LEU:HB2	2.50	0.41
10:AJ:29:ALA:HA	10:AJ:32:THR:CG2	2.51	0.41
13:AM:40:ALA:HB3	13:AM:43:VAL:CG1	2.51	0.41
13:AM:109:ARG:HG3	13:AM:109:ARG:O	2.20	0.41
14:AN:66:GLN:HG3	14:AN:79:LEU:HD21	2.03	0.41
20:AT:58:VAL:HG13	20:AT:72:ALA:CB	2.51	0.41
21:AU:14:VAL:HG13	21:AU:16:LEU:HD11	2.03	0.41
22:BA:22:C:H2'	22:BA:23:G:O5'	2.21	0.41
22:BA:784:G:O2'	22:BA:785:G:H5"	2.21	0.41
22:BA:864:G:O2'	22:BA:865:C:H5'	2.20	0.41
22:BA:988:A:OP2	47:BZ:12:SER:HB3	2.21	0.41
22:BA:1353:A:C2'	22:BA:1354:A:H5'	2.51	0.41
22:BA:1515:A:H2'	22:BA:1516:G:O4'	2.21	0.41
22:BA:1607:C:C4	22:BA:1622:G:N7	2.88	0.41
22:BA:1789:A:H5"	24:BC:219:THR:O	2.20	0.41
22:BA:2313:C:H5"	27:BF:88:LYS:HD3	2.03	0.41
22:BA:2345:G:N3	22:BA:2381:A:H2'	2.35	0.41
22:BA:2820:A:C2'	22:BA:2821:A:OP1	2.69	0.41
26:BE:149:ILE:CD1	26:BE:172:ALA:CA	2.96	0.41
30:BI:101:ILE:HD11	30:BI:138:LEU:HD13	2.03	0.41
35:BN:52:ILE:O	35:BN:53:THR:C	2.63	0.41
38:BQ:50:ARG:NH2	39:BR:74:ILE:HD12	2.36	0.41
39:BR:74:ILE:N	39:BR:74:ILE:HD13	2.35	0.41
53:B5:76:LEU:O	53:B5:122:GLY:N	2.54	0.41
53:B5:191:ARG:O	53:B5:195:ARG:N	2.54	0.41
1:CA:173:U:H1'	1:CA:197:A:C5	2.56	0.41
1:CA:189:A:N6	1:CA:190:A:N1	2.69	0.41
1:CA:204:G:H2'	1:CA:205:A:O4'	2.21	0.41
1:CA:206:C:H2'	1:CA:207:C:C4'	2.51	0.41
1:CA:295:C:C4	1:CA:296:U:C4	3.09	0.41
1:CA:462:G:N2	1:CA:471:U:C2	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:511:C:C2	1:CA:512:U:C6	3.09	0.41
1:CA:604:G:C6	1:CA:605:U:C4	3.09	0.41
1:CA:784:A:H2'	1:CA:785:G:O4'	2.20	0.41
1:CA:844:G:OP2	1:CA:844:G:N9	2.54	0.41
1:CA:994:A:C2	1:CA:995:C:C1'	3.04	0.41
1:CA:1126:U:C5	1:CA:1281:C:N4	2.88	0.41
1:CA:1262:C:N4	1:CA:1263:C:C4	2.89	0.41
1:CA:1271:A:H5'	1:CA:1314:C:OP1	2.20	0.41
1:CA:1388:C:C2	1:CA:1389:C:C5	3.09	0.41
1:CA:1462:C:H2'	1:CA:1463:U:C6	2.56	0.41
1:CA:1527:U:H2'	1:CA:1528:U:C6	2.56	0.41
2:CB:221:VAL:O	2:CB:221:VAL:CG1	2.69	0.41
3:CC:40:ARG:NH1	3:CC:55:ILE:HG13	2.36	0.41
3:CC:112:ASP:O	3:CC:113:ALA:C	2.63	0.41
5:CE:16:ILE:CD1	5:CE:38:VAL:HG23	2.50	0.41
7:CG:75:VAL:CG2	7:CG:144:MET:HG2	2.51	0.41
7:CG:88:PRO:HD2	7:CG:151:PHE:O	2.21	0.41
7:CG:130:ASN:HA	7:CG:135:VAL:HG11	2.02	0.41
9:CI:21:ILE:O	9:CI:21:ILE:HG22	2.20	0.41
10:CJ:56:HIS:O	10:CJ:57:VAL:C	2.64	0.41
17:CQ:12:VAL:CG1	17:CQ:21:ILE:HD11	2.51	0.41
18:CR:25:ASP:O	18:CR:27:ALA:N	2.53	0.41
22:DA:184:C:H2'	22:DA:185:G:C8	2.56	0.41
22:DA:218:A:C6	22:DA:219:A:C5	3.08	0.41
22:DA:222:A:N1	22:DA:233:A:H5"	2.35	0.41
22:DA:349:U:H2'	22:DA:350:G:H8	1.86	0.41
22:DA:362:A:N7	22:DA:363:G:N7	2.69	0.41
22:DA:420:C:C2	22:DA:421:C:C5	3.09	0.41
22:DA:543:G:C2	22:DA:551:G:C6	3.09	0.41
22:DA:586:A:OP2	22:DA:586:A:C8	2.74	0.41
22:DA:630:G:C5'	22:DA:631:A:OP2	2.69	0.41
22:DA:642:U:H1'	22:DA:644:A:N7	2.36	0.41
22:DA:647:G:C4	22:DA:648:G:C8	3.09	0.41
22:DA:822:G:O6	22:DA:943:A:H2	2.04	0.41
22:DA:1203:U:C4	22:DA:1204:A:C5	3.09	0.41
22:DA:1334:G:C6	22:DA:1335:C:N3	2.89	0.41
22:DA:1352:U:H5	22:DA:1377:G:C6	2.39	0.41
22:DA:1437:C:N3	22:DA:1438:U:C4	2.89	0.41
22:DA:1567:G:N7	24:DC:83:TYR:CD1	2.89	0.41
22:DA:1751:U:O4'	22:DA:2860:A:C2	2.74	0.41
22:DA:1866:A:C2	22:DA:1876:A:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1926:U:H2'	22:DA:1928:A:C8	2.55	0.41
22:DA:2050:C:C4	22:DA:2051:A:C6	3.08	0.41
22:DA:2083:G:N7	22:DA:2084:C:C5	2.89	0.41
22:DA:2177:C:H2'	22:DA:2178:C:C6	2.56	0.41
22:DA:2267:A:H5"	22:DA:2268:A:C5'	2.51	0.41
22:DA:2271:G:H2'	22:DA:2272:U:C6	2.56	0.41
22:DA:2327:A:H2'	22:DA:2328:A:C8	2.55	0.41
22:DA:2366:A:H2'	22:DA:2367:G:H5'	2.02	0.41
22:DA:2516:A:C2'	22:DA:2517:C:O5'	2.69	0.41
22:DA:2659:G:C4	22:DA:2661:G:OP2	2.74	0.41
22:DA:2741:A:C2'	22:DA:2742:G:H5'	2.51	0.41
22:DA:2831:G:N7	25:DD:59:ARG:NH1	2.67	0.41
22:DA:2893:A:O4'	22:DA:2894:G:C2	2.74	0.41
24:DC:24:LEU:HD11	24:DC:90:ASN:HD21	1.86	0.41
24:DC:145:GLU:HA	24:DC:152:GLY:HA2	2.03	0.41
29:DH:96:THR:C	29:DH:98:ASP:N	2.79	0.41
30:DI:54:PRO:C	30:DI:55:ILE:HG13	2.45	0.41
30:DI:57:VAL:HG22	30:DI:58:VAL:N	2.36	0.41
31:DJ:102:GLU:O	31:DJ:106:LYS:HB2	2.21	0.41
41:DT:11:LEU:CD2	41:DT:34:VAL:HG12	2.51	0.41
41:DT:30:ILE:HD13	41:DT:32:LEU:HG	2.02	0.41
41:DT:30:ILE:HG23	41:DT:32:LEU:HG	2.03	0.41
45:DX:61:LYS:O	45:DX:62:LYS:C	2.64	0.41
46:DY:31:GLN:O	46:DY:32:ALA:C	2.64	0.41
46:DY:45:GLN:C	46:DY:47:ARG:N	2.77	0.41
1:AA:257:G:C2	1:AA:258:G:C5	3.09	0.40
1:AA:508:U:H1'	1:AA:509:A:N7	2.36	0.40
1:AA:972:C:H4'	10:AJ:59:LYS:HE3	2.02	0.40
1:AA:1143:G:C5	1:AA:1144:G:N7	2.89	0.40
1:AA:1190:G:P	3:AC:5:VAL:HG12	2.61	0.40
1:AA:1191:A:OP1	3:AC:4:LYS:HD3	2.21	0.40
1:AA:1322:C:O2'	1:AA:1323:G:P	2.79	0.40
1:AA:1501:C:C4	1:AA:1504:G:C5	3.09	0.40
3:AC:16:LYS:HG3	3:AC:17:PRO:HD2	2.02	0.40
5:AE:50:TYR:O	5:AE:63:ALA:CB	2.69	0.40
5:AE:98:PRO:O	5:AE:99:ALA:HB3	2.20	0.40
6:AF:54:LEU:O	6:AF:54:LEU:HD13	2.21	0.40
6:AF:64:VAL:CG1	6:AF:65:GLU:N	2.84	0.40
8:AH:46:ILE:HG22	8:AH:63:LEU:HA	2.02	0.40
10:AJ:36:VAL:HA	10:AJ:75:ASP:O	2.21	0.40
11:AK:70:CYS:O	11:AK:74:VAL:HG22	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:43:ASN:O	14:AN:44:ALA:C	2.64	0.40
16:AP:51:ARG:HH11	16:AP:51:ARG:HB3	1.86	0.40
16:AP:61:VAL:HG22	16:AP:67:ILE:HD11	2.02	0.40
21:AU:25:LYS:O	21:AU:27:GLY:N	2.54	0.40
22:BA:63:A:C2	22:BA:64:A:C8	3.09	0.40
22:BA:404:A:C2'	22:BA:405:U:OP2	2.69	0.40
22:BA:499:U:C4	22:BA:500:G:C6	3.10	0.40
22:BA:528:A:C2	22:BA:2043:C:C4'	3.01	0.40
22:BA:585:G:H5"	22:BA:586:A:P	2.61	0.40
22:BA:725:G:C6	22:BA:726:G:N1	2.88	0.40
22:BA:1179:G:C8	22:BA:1180:U:O4'	2.74	0.40
22:BA:1196:C:H1'	22:BA:1226:A:C4	2.57	0.40
22:BA:1378:A:C2'	58:BA:3753:HOH:O	2.69	0.40
22:BA:1414:C:C5	22:BA:1415:U:H5	2.39	0.40
22:BA:1478:G:H1	22:BA:1513:U:H3	1.69	0.40
22:BA:1846:G:C2	22:BA:1895:C:C2	3.09	0.40
22:BA:1851:U:O2'	22:BA:1852:U:H5'	2.21	0.40
22:BA:1900:A:O2'	22:BA:1901:A:OP1	2.29	0.40
22:BA:1913:A:OP2	22:BA:1913:A:H2'	2.20	0.40
22:BA:2694:G:C5	22:BA:2695:U:C4	3.09	0.40
25:BD:113:SER:O	25:BD:167:ASN:HA	2.22	0.40
26:BE:31:VAL:HG21	26:BE:104:ALA:CB	2.51	0.40
29:BH:82:SER:HG	29:BH:90:LEU:HG	1.85	0.40
29:BH:97:ARG:NH1	1:CA:369:G:C2'	2.84	0.40
32:BK:108:ARG:CZ	32:BK:113:MET:HE1	2.51	0.40
36:BO:117:PHE:CD1	36:BO:117:PHE:O	2.74	0.40
39:BR:49:ILE:O	39:BR:50:GLY:C	2.62	0.40
42:BU:26:LYS:HA	42:BU:26:LYS:CE	2.51	0.40
43:BV:26:PHE:CZ	43:BV:42:LEU:HD12	2.57	0.40
46:BY:54:LYS:HA	46:BY:57:LEU:HD23	2.02	0.40
53:B5:94:TYR:O	53:B5:95:VAL:HG23	2.20	0.40
1:CA:246:A:N3	1:CA:279:A:N6	2.68	0.40
1:CA:249:U:C2	1:CA:276:G:N1	2.89	0.40
1:CA:407:U:C2	1:CA:408:A:C8	3.09	0.40
1:CA:552:U:H4'	12:CL:83:ARG:CG	2.51	0.40
1:CA:603:U:H2'	1:CA:604:G:C8	2.56	0.40
1:CA:811:C:C5	1:CA:812:G:C5	3.10	0.40
1:CA:875:U:O3'	8:CH:15:ARG:NH1	2.53	0.40
1:CA:1014:A:N3	19:CS:34:TRP:CZ2	2.89	0.40
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.21	0.40
1:CA:1126:U:C6	1:CA:1281:C:C4	3.08	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1262:C:N4	1:CA:1263:C:N4	2.68	0.40
2:CB:47:VAL:HB	2:CB:48:PRO:CD	2.51	0.40
2:CB:104:TRP:CZ2	2:CB:155:GLY:C	2.99	0.40
6:CF:29:ILE:HG21	6:CF:64:VAL:CG1	2.51	0.40
9:CI:83:ILE:O	9:CI:87:LEU:N	2.53	0.40
9:CI:91:ASP:OD2	9:CI:91:ASP:C	2.64	0.40
13:CM:71:ARG:HA	13:CM:74:SER:HB3	2.02	0.40
19:CS:64:ASP:O	19:CS:67:VAL:HG23	2.21	0.40
22:DA:225:C:H2'	22:DA:226:A:O4'	2.20	0.40
22:DA:416:U:H2'	22:DA:417:C:C6	2.56	0.40
22:DA:443:A:C8	26:DE:40:ARG:CG	3.04	0.40
22:DA:444:C:OP2	22:DA:444:C:H4'	2.22	0.40
22:DA:567:U:H4'	22:DA:808:G:OP1	2.22	0.40
22:DA:585:G:C6	22:DA:1251:C:C5	3.09	0.40
22:DA:638:G:O6	22:DA:650:C:N3	2.54	0.40
22:DA:783:A:C4	22:DA:785:G:H1'	2.56	0.40
22:DA:919:U:C4	22:DA:920:A:C5	3.10	0.40
22:DA:1205:A:C2	26:DE:165:HIS:HB2	2.56	0.40
22:DA:1401:G:C5	22:DA:1402:U:C5	3.09	0.40
22:DA:1401:G:C6	22:DA:1402:U:C4	3.09	0.40
22:DA:1468:U:H2'	22:DA:1522:A:N6	2.36	0.40
22:DA:1545:A:H2'	22:DA:1546:G:O4'	2.21	0.40
22:DA:1676:A:N6	22:DA:1677:A:C6	2.89	0.40
22:DA:1773:A:C2	22:DA:1978:A:C2	3.09	0.40
22:DA:2066:C:O2'	22:DA:2067:G:H5'	2.20	0.40
22:DA:2093:G:C2	22:DA:2094:A:C8	3.08	0.40
22:DA:2145:C:H5"	22:DA:2146:C:OP1	2.21	0.40
22:DA:2250:G:C8	22:DA:2250:G:O5'	2.74	0.40
22:DA:2262:U:H4'	22:DA:2328:A:C2	2.56	0.40
22:DA:2326:C:H1'	22:DA:2327:A:OP1	2.21	0.40
22:DA:2702:G:C5	22:DA:2703:C:C5	3.09	0.40
22:DA:2825:G:C2'	22:DA:2826:A:H5'	2.50	0.40
23:DB:55:U:H4'	27:DF:25:VAL:HG12	2.03	0.40
25:DD:33:ARG:NH2	25:DD:74:GLU:O	2.54	0.40
27:DF:73:SER:HB2	27:DF:81:GLN:HB2	2.03	0.40
30:DI:28:LEU:HD13	30:DI:38:PHE:CE2	2.56	0.40
30:DI:119:GLY:C	30:DI:121:ASP:N	2.79	0.40
31:DJ:110:PRO:O	31:DJ:115:GLY:HA3	2.21	0.40
32:DK:9:ASN:O	32:DK:83:ALA:HA	2.20	0.40
33:DL:29:LYS:O	33:DL:30:THR:CB	2.67	0.40
34:DM:63:ILE:CG2	34:DM:64:TRP:N	2.84	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DM:107:GLY:C	34:DM:108:VAL:HG22	2.46	0.40
36:DO:79:ALA:CB	36:DO:113:ALA:HB3	2.50	0.40
41:DT:62:VAL:CG1	41:DT:63:VAL:N	2.84	0.40
44:DW:47:ALA:HB2	44:DW:59:LEU:HD22	2.04	0.40
1:AA:126:G:H2'	1:AA:127:G:O4'	2.22	0.40
1:AA:246:A:H4'	1:AA:247:G:OP1	2.21	0.40
1:AA:451:A:C5'	16:AP:70:ARG:HH22	2.34	0.40
1:AA:606:G:H1'	1:AA:633:G:C2	2.56	0.40
1:AA:751:U:H4'	15:AO:24:SER:HA	2.01	0.40
1:AA:1008:U:H2'	1:AA:1009:U:C6	2.56	0.40
1:AA:1256:A:N6	1:AA:1277:C:C2	2.90	0.40
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.57	0.40
2:AB:118:GLU:HB3	2:AB:141:LEU:HD11	2.02	0.40
2:AB:148:LEU:HD22	2:AB:148:LEU:HA	1.92	0.40
4:AD:60:LYS:NZ	4:AD:194:ASP:O	2.54	0.40
5:AE:50:TYR:CE2	5:AE:134:ILE:HD11	2.56	0.40
5:AE:105:ILE:HG13	5:AE:105:ILE:O	2.21	0.40
6:AF:76:THR:O	6:AF:79:ARG:N	2.51	0.40
9:AI:52:LEU:HA	9:AI:55:VAL:HG23	2.03	0.40
12:AL:110:ARG:NH1	12:AL:113:ALA:HB3	2.36	0.40
17:AQ:8:LEU:N	17:AQ:8:LEU:HD13	2.36	0.40
17:AQ:16:LYS:O	17:AQ:17:MET:HE3	2.20	0.40
17:AQ:81:LYS:N	17:AQ:81:LYS:HE2	2.36	0.40
19:AS:52:HIS:CD2	19:AS:54:GLY:N	2.89	0.40
22:BA:467:G:H2'	22:BA:468:G:O4'	2.22	0.40
22:BA:531:C:C5	22:BA:2035:G:C2	3.10	0.40
22:BA:1330:C:O2'	22:BA:1331:G:H5'	2.20	0.40
22:BA:1334:G:C6	22:BA:1335:C:C4	3.10	0.40
22:BA:1356:G:C2	22:BA:1357:C:C2	3.09	0.40
22:BA:1922:G:C2	22:BA:1923:U:C6	3.09	0.40
22:BA:2030:A:C2	22:BA:2499:C:H5"	2.56	0.40
22:BA:2247:A:C2'	22:BA:2248:C:O5'	2.70	0.40
22:BA:2286:G:H4'	22:BA:2287:A:O4'	2.20	0.40
22:BA:2492:U:H2'	22:BA:2493:U:H6	1.87	0.40
22:BA:2665:A:C2	22:BA:2666:C:C2	3.09	0.40
24:BC:24:LEU:HD12	24:BC:24:LEU:HA	1.85	0.40
24:BC:44:ASN:CG	24:BC:50:THR:HG21	2.46	0.40
24:BC:53:HIS:CD2	24:BC:219:THR:HA	2.56	0.40
24:BC:84:ASP:OD1	24:BC:84:ASP:C	2.65	0.40
26:BE:37:ALA:O	26:BE:40:ARG:HB2	2.21	0.40
26:BE:61:ARG:HD2	26:BE:63:LYS:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:17:MET:HE3	27:BF:22:TYR:HB2	2.02	0.40
30:BI:100:LYS:HD2	30:BI:139:VAL:HG21	2.02	0.40
30:BI:133:ALA:O	30:BI:138:LEU:HD12	2.21	0.40
31:BJ:37:ARG:O	31:BJ:37:ARG:HG3	2.20	0.40
32:BK:122:VAL:OXT	32:BK:122:VAL:HG12	2.22	0.40
42:BU:22:ARG:CZ	42:BU:73:PHE:CE2	3.04	0.40
47:BZ:56:LYS:HE3	47:BZ:58:GLU:OE1	2.21	0.40
49:B1:38:LYS:HB2	49:B1:49:TYR:CD2	2.56	0.40
53:B5:23:ILE:O	53:B5:23:ILE:HG22	2.22	0.40
53:B5:74:ARG:HB3	53:B5:93:ASP:OD1	2.22	0.40
1:CA:68:G:C6	1:CA:69:G:H1'	2.56	0.40
1:CA:173:U:H3'	1:CA:174:A:H5'	2.01	0.40
1:CA:542:G:C2	1:CA:543:U:C5	3.10	0.40
1:CA:583:A:C8	1:CA:584:G:C8	3.09	0.40
1:CA:1092:A:N6	1:CA:1093:A:N1	2.70	0.40
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.55	0.40
1:CA:1192:C:C5	1:CA:1193:G:C8	3.09	0.40
1:CA:1261:A:H2'	1:CA:1262:C:H5'	2.04	0.40
2:CB:57:LEU:HD21	2:CB:67:ILE:HD11	2.03	0.40
3:CC:20:SER:HB2	14:CN:92:GLU:O	2.20	0.40
3:CC:71:ALA:HA	3:CC:106:VAL:HB	2.02	0.40
5:CE:20:ARG:O	5:CE:20:ARG:HG2	2.21	0.40
5:CE:41:ASP:OD2	5:CE:45:ARG:HB2	2.21	0.40
5:CE:96:MET:HE3	5:CE:111:MET:CE	2.51	0.40
6:CF:38:ARG:HG2	6:CF:63:ASN:CB	2.50	0.40
10:CJ:6:ILE:HB	10:CJ:76:ILE:O	2.22	0.40
10:CJ:87:LEU:HD13	10:CJ:87:LEU:C	2.45	0.40
10:CJ:90:LEU:O	10:CJ:91:ASP:C	2.64	0.40
11:CK:124:PRO:HB2	11:CK:126:LYS:HE3	2.04	0.40
13:CM:27:LYS:CD	13:CM:27:LYS:O	2.69	0.40
13:CM:109:ARG:HG3	13:CM:109:ARG:O	2.20	0.40
16:CP:3:THR:CG2	16:CP:5:ARG:HG2	2.52	0.40
16:CP:19:VAL:HG12	16:CP:37:GLY:C	2.46	0.40
19:CS:36:ARG:NE	19:CS:52:HIS:O	2.49	0.40
19:CS:40:ILE:HG22	19:CS:67:VAL:HA	2.02	0.40
19:CS:63:THR:HG22	19:CS:64:ASP:H	1.86	0.40
19:CS:67:VAL:O	19:CS:67:VAL:CG1	2.69	0.40
20:CT:27:MET:HG3	20:CT:28:MET:N	2.36	0.40
22:DA:30:G:C5	22:DA:31:C:C4	3.10	0.40
22:DA:120:U:H1'	22:DA:149:A:N7	2.36	0.40
22:DA:662:G:C2	22:DA:663:G:C8	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:843:G:H2'	22:DA:844:A:C8	2.56	0.40
22:DA:962:G:C5	22:DA:963:U:C5	3.09	0.40
22:DA:1000:A:C6	22:DA:1001:A:C6	3.09	0.40
22:DA:1063:G:C8	22:DA:1064:C:C6	3.09	0.40
22:DA:1131:G:N7	22:DA:2025:C:H4'	2.36	0.40
22:DA:1317:G:N7	22:DA:1318:U:C4	2.89	0.40
22:DA:1354:A:C8	22:DA:1355:G:C8	3.09	0.40
22:DA:1355:G:C6	22:DA:1356:G:N7	2.89	0.40
22:DA:1357:C:O2'	22:DA:1358:G:H5'	2.22	0.40
22:DA:1567:G:O2'	24:DC:63:ARG:NH1	2.54	0.40
22:DA:1765:U:O2'	22:DA:1766:G:H5'	2.21	0.40
22:DA:1959:G:H2'	22:DA:1960:A:O4'	2.21	0.40
22:DA:2013:A:N6	22:DA:2014:A:N1	2.69	0.40
22:DA:2282:G:C5	22:DA:2425:A:N1	2.90	0.40
22:DA:2662:A:C4	22:DA:2663:G:H1'	2.56	0.40
22:DA:2786:U:H4'	25:DD:67:HIS:HA	2.04	0.40
23:DB:7:G:C5'	36:DO:29:HIS:CE1	3.04	0.40
23:DB:8:C:O2'	36:DO:40:ILE:HD13	2.22	0.40
25:DD:34:VAL:HG22	25:DD:50:VAL:HG12	2.02	0.40
28:DG:95:ARG:HG3	28:DG:106:SER:HB2	2.03	0.40
29:DH:96:THR:O	29:DH:98:ASP:N	2.54	0.40
30:DI:24:VAL:CG1	30:DI:28:LEU:HB3	2.51	0.40
30:DI:103:ARG:O	30:DI:107:GLN:N	2.53	0.40
31:DJ:56:VAL:HB	31:DJ:124:VAL:HG12	2.02	0.40
31:DJ:102:GLU:HG3	31:DJ:124:VAL:HG21	2.04	0.40
32:DK:39:ILE:O	32:DK:39:ILE:HG13	2.21	0.40
32:DK:91:SER:O	32:DK:92:GLU:O	2.39	0.40
33:DL:77:ILE:CG2	33:DL:81:ASP:OD2	2.69	0.40
35:DN:47:VAL:O	35:DN:47:VAL:HG12	2.22	0.40
36:DO:64:TYR:O	36:DO:67:ASN:ND2	2.45	0.40
40:DS:20:VAL:HG23	40:DS:39:THR:HG21	2.02	0.40
41:DT:4:GLU:O	41:DT:8:LEU:N	2.54	0.40
44:DW:37:ILE:HG22	44:DW:38:VAL:HG23	2.03	0.40
1:AA:110:C:C4	1:AA:111:G:C5	3.09	0.40
1:AA:141:G:C2	1:AA:142:G:H1'	2.56	0.40
1:AA:346:G:P	32:BK:105:ARG:HH12	2.44	0.40
1:AA:849:G:N3	1:AA:849:G:H2'	2.35	0.40
1:AA:924:C:H2'	1:AA:925:G:H8	1.86	0.40
1:AA:1076:U:C2	1:AA:1082:A:C2	3.09	0.40
1:AA:1112:C:O2'	3:AC:179:ARG:HG3	2.21	0.40
1:AA:1141:C:O2'	1:AA:1142:G:P	2.79	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1538:C:C2'	1:AA:1539:C:H5'	2.51	0.40
4:AD:170:TRP:HB2	4:AD:184:ARG:O	2.22	0.40
5:AE:61:GLN:C	5:AE:63:ALA:N	2.77	0.40
8:AH:18:GLN:C	8:AH:20:ALA:N	2.78	0.40
14:AN:25:ALA:O	14:AN:26:GLU:C	2.63	0.40
15:AO:20:ASN:C	15:AO:22:THR:H	2.29	0.40
16:AP:36:VAL:O	16:AP:36:VAL:HG13	2.21	0.40
16:AP:52:LEU:O	16:AP:54:LEU:N	2.53	0.40
16:AP:75:ILE:C	16:AP:77:GLU:H	2.29	0.40
18:AR:55:LEU:HD22	18:AR:55:LEU:HA	1.94	0.40
21:AU:47:ARG:HA	21:AU:47:ARG:HE	1.86	0.40
22:BA:27:G:C2	22:BA:512:G:N3	2.89	0.40
22:BA:146:A:H2'	22:BA:147:C:C6	2.56	0.40
22:BA:221:A:C4	22:BA:266:G:N7	2.89	0.40
22:BA:253:C:OP2	51:B3:5:LYS:CE	2.68	0.40
22:BA:372:G:N2	22:BA:400:G:H2'	2.36	0.40
22:BA:489:G:O4'	22:BA:1284:A:C8	2.74	0.40
22:BA:974:G:C8	22:BA:989:G:C2	3.09	0.40
22:BA:1018:U:O3'	22:BA:1120:G:N2	2.53	0.40
22:BA:1046:A:H3'	22:BA:1047:G:H5'	2.03	0.40
22:BA:1122:G:N3	22:BA:1122:G:H2'	2.36	0.40
22:BA:1142:A:C4	22:BA:1144:A:C8	3.09	0.40
22:BA:1438:U:C4	22:BA:1552:A:C2	3.10	0.40
22:BA:1735:A:H2'	22:BA:1736:U:H5'	2.03	0.40
22:BA:1927:A:N1	22:BA:1928:A:C2	2.89	0.40
22:BA:1959:G:H2'	22:BA:1960:A:O5'	2.20	0.40
22:BA:2001:C:N3	22:BA:2002:G:C8	2.90	0.40
22:BA:2720:U:C2	22:BA:2872:A:C6	3.10	0.40
24:BC:107:PRO:HB3	24:BC:142:HIS:CE1	2.57	0.40
24:BC:161:TYR:CD1	24:BC:161:TYR:C	3.00	0.40
24:BC:172:VAL:HG23	24:BC:174:LEU:CD1	2.50	0.40
27:BF:134:GLU:HG2	27:BF:136:ILE:CD1	2.51	0.40
27:BF:136:ILE:HD11	27:BF:149:VAL:HG12	2.04	0.40
29:BH:90:LEU:HB2	29:BH:124:THR:C	2.46	0.40
30:BI:24:VAL:HG22	30:BI:25:GLY:N	2.37	0.40
36:BO:78:VAL:O	36:BO:79:ALA:C	2.64	0.40
38:BQ:50:ARG:O	38:BQ:54:LYS:HE3	2.21	0.40
39:BR:86:GLN:CG	39:BR:87:GLN:N	2.84	0.40
39:BR:98:ILE:HG21	39:BR:101:ILE:HD11	2.02	0.40
40:BS:38:TYR:CD1	48:B0:28:LEU:HD11	2.56	0.40
42:BU:18:ASP:O	42:BU:20:GLY:N	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BU:54:GLN:N	42:BU:55:PRO:HD2	2.37	0.40
44:BW:23:VAL:HG22	44:BW:38:VAL:CG1	2.51	0.40
44:BW:28:GLY:O	44:BW:66:LYS:HG2	2.20	0.40
44:BW:51:VAL:CG2	44:BW:81:SER:HA	2.51	0.40
48:B0:55:ILE:HG22	48:B0:56:ALA:H	1.86	0.40
51:B3:32:ILE:O	51:B3:32:ILE:HG22	2.21	0.40
1:CA:41:G:H2'	1:CA:42:G:C8	2.57	0.40
1:CA:72:A:N6	1:CA:99:C:H1'	2.36	0.40
1:CA:149:A:C2	1:CA:150:U:C2	3.10	0.40
1:CA:155:A:C2	1:CA:167:A:C4	3.09	0.40
1:CA:484:G:C8	1:CA:486:U:O4'	2.75	0.40
1:CA:541:G:C4	1:CA:542:G:C8	3.09	0.40
1:CA:780:A:C2	1:CA:803:G:N1	2.89	0.40
1:CA:1007:U:C3'	1:CA:1008:U:H5'	2.51	0.40
1:CA:1216:A:H2'	1:CA:1217:C:C6	2.56	0.40
1:CA:1250:A:N3	1:CA:1287:A:C6	2.89	0.40
2:CB:23:TRP:CZ2	2:CB:25:PRO:HA	2.57	0.40
2:CB:72:THR:HA	2:CB:93:ASN:O	2.21	0.40
2:CB:72:THR:CG2	2:CB:95:ARG:NH1	2.84	0.40
3:CC:9:GLY:HA2	3:CC:12:LEU:HG	2.02	0.40
4:CD:22:LYS:O	4:CD:24:GLY:N	2.55	0.40
6:CF:93:LYS:N	6:CF:93:LYS:HD3	2.37	0.40
8:CH:34:VAL:O	8:CH:35:ALA:C	2.64	0.40
8:CH:67:GLN:C	8:CH:69:LYS:H	2.29	0.40
9:CI:56:ASP:C	9:CI:57:MET:HG3	2.47	0.40
10:CJ:84:VAL:HA	10:CJ:87:LEU:HD12	2.04	0.40
12:CL:21:VAL:C	12:CL:23:ALA:N	2.79	0.40
15:CO:89:ARG:NH1	22:DA:714:U:C5	2.89	0.40
19:CS:6:LYS:HB2	19:CS:7:LYS:HE2	2.02	0.40
22:DA:465:G:C6	22:DA:466:A:N6	2.89	0.40
22:DA:498:G:C2	22:DA:499:U:C5	3.09	0.40
22:DA:517:C:O2'	40:DS:18:ARG:NH1	2.55	0.40
22:DA:634:C:P	33:DL:70:LYS:HE2	2.61	0.40
22:DA:647:G:C6	22:DA:648:G:C5	3.09	0.40
22:DA:711:G:C2	22:DA:721:A:C2	3.09	0.40
22:DA:927:A:H2'	22:DA:928:A:O4'	2.21	0.40
22:DA:959:A:H2'	22:DA:960:A:C8	2.56	0.40
22:DA:978:G:C2	22:DA:986:C:C2	3.09	0.40
22:DA:1121:C:H2'	22:DA:1122:G:O5'	2.22	0.40
22:DA:1308:A:H2'	22:DA:1309:G:O4'	2.21	0.40
22:DA:1373:A:N6	22:DA:1374:G:N3	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1607:C:O2	22:DA:1621:U:N3	2.53	0.40
22:DA:1668:A:N3	22:DA:1674:G:C8	2.89	0.40
22:DA:1800:C:OP1	24:DC:258:ARG:NH2	2.54	0.40
22:DA:1809:A:N6	22:DA:1810:A:C6	2.89	0.40
22:DA:1914:C:O2	22:DA:1914:C:O4'	2.37	0.40
22:DA:2201:G:C6	22:DA:2223:G:C2	3.09	0.40
22:DA:2323:G:H2'	22:DA:2324:U:O4'	2.21	0.40
22:DA:2345:G:OP2	49:D1:46:HIS:NE2	2.51	0.40
22:DA:2439:A:H4'	22:DA:2440:C:H5"	2.03	0.40
22:DA:2574:G:N2	22:DA:2575:C:H1'	2.36	0.40
22:DA:2785:C:H2'	22:DA:2786:U:O4'	2.21	0.40
22:DA:2854:G:N2	22:DA:2864:G:C4	2.89	0.40
22:DA:2885:G:O6	48:D0:29:SER:HB3	2.21	0.40
26:DE:24:ASN:O	26:DE:28:VAL:HG23	2.21	0.40
26:DE:47:LYS:O	26:DE:83:VAL:CB	2.70	0.40
27:DF:36:LEU:HD23	27:DF:57:LEU:HD22	2.03	0.40
31:DJ:13:ARG:HG2	31:DJ:51:GLY:O	2.20	0.40
31:DJ:74:TYR:CD1	31:DJ:92:MET:HG3	2.56	0.40
37:DP:103:ARG:HB3	37:DP:108:ALA:CB	2.50	0.40
41:DT:67:VAL:HG12	41:DT:68:LYS:N	2.37	0.40
43:DV:75:GLN:CB	43:DV:92:VAL:HG23	2.52	0.40
46:DY:10:SER:C	46:DY:12:GLU:N	2.79	0.40
1:AA:69:G:C3'	1:AA:70:U:H6	2.35	0.40
1:AA:110:C:C4	1:AA:111:G:C6	3.10	0.40
1:AA:126:G:O2'	1:AA:635:A:H4'	2.22	0.40
1:AA:295:C:H2'	1:AA:296:U:O4'	2.22	0.40
1:AA:300:A:H1'	1:AA:565:U:O2	2.21	0.40
1:AA:374:A:C5	1:AA:375:U:C5	3.09	0.40
1:AA:457:G:H5'	1:AA:458:U:OP2	2.21	0.40
1:AA:1080:A:O3'	5:AE:21:VAL:HG21	2.21	0.40
1:AA:1081:A:OP1	5:AE:21:VAL:CG2	2.69	0.40
1:AA:1102:A:H2'	1:AA:1103:C:C6	2.56	0.40
1:AA:1154:G:H2'	1:AA:1154:G:N3	2.36	0.40
1:AA:1213:A:C5	1:AA:1215:G:C5	3.10	0.40
1:AA:1272:G:H2'	1:AA:1273:C:O4'	2.22	0.40
1:AA:1379:G:N1	1:AA:1380:U:C4	2.89	0.40
3:AC:169:ARG:HD2	3:AC:169:ARG:C	2.47	0.40
8:AH:7:ILE:N	8:AH:7:ILE:CD1	2.85	0.40
8:AH:15:ARG:HB2	8:AH:75:ILE:CG2	2.51	0.40
10:AJ:52:LEU:HD23	10:AJ:62:ARG:HG2	2.03	0.40
11:AK:72:ASP:O	11:AK:73:ALA:HB2	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:87:LEU:N	15:AO:87:LEU:HD23	2.36	0.40
17:AQ:76:VAL:C	17:AQ:77:ARG:CG	2.94	0.40
19:AS:3:ARG:O	19:AS:4:SER:CB	2.69	0.40
22:BA:26:G:C2'	22:BA:27:G:O5'	2.70	0.40
22:BA:364:C:H2'	22:BA:365:U:C6	2.57	0.40
22:BA:372:G:H5"	45:BX:61:LYS:HD2	2.03	0.40
22:BA:511:U:O4	22:BA:512:G:N1	2.55	0.40
22:BA:743:A:O3'	58:BA:3654:HOH:O	2.22	0.40
22:BA:1003:G:C2	22:BA:1004:U:C4	3.08	0.40
22:BA:1046:A:OP2	22:BA:1046:A:H4'	2.21	0.40
22:BA:1139:G:O3'	31:BJ:26:GLY:HA3	2.22	0.40
22:BA:1180:U:H2'	22:BA:1181:U:H5'	2.02	0.40
22:BA:1482:G:N3	22:BA:1483:G:C8	2.89	0.40
22:BA:1502:A:C2	22:BA:1503:A:C4	3.09	0.40
22:BA:1647:U:H3'	22:BA:1647:U:P	2.62	0.40
22:BA:1801:A:OP2	24:BC:150:LYS:NZ	2.54	0.40
22:BA:1958:C:H2'	22:BA:1959:G:H5'	2.03	0.40
22:BA:2137:U:C5	22:BA:2138:G:N7	2.89	0.40
22:BA:2393:U:O3'	33:BL:62:PRO:HA	2.22	0.40
22:BA:2533:U:C2'	22:BA:2534:A:H5'	2.51	0.40
22:BA:2560:A:C6	22:BA:2561:U:C4	3.09	0.40
24:BC:36:LYS:O	24:BC:37:ASN:HB3	2.22	0.40
29:BH:2:GLN:C	29:BH:3:VAL:HG13	2.45	0.40
30:BI:28:LEU:HG	30:BI:35:ILE:CD1	2.51	0.40
31:BJ:20:ALA:O	31:BJ:23:LYS:HG2	2.21	0.40
32:BK:25:LEU:HD12	32:BK:38:ILE:HG22	2.02	0.40
35:BN:1:MET:O	35:BN:2:ARG:HB2	2.21	0.40
39:BR:69:GLY:C	39:BR:70:GLU:O	2.64	0.40
42:BU:94:ARG:HB3	42:BU:103:ILE:HD12	2.04	0.40
53:B5:76:LEU:O	53:B5:121:MET:HA	2.22	0.40
1:CA:228:A:H2'	1:CA:229:U:O4'	2.21	0.40
1:CA:666:G:C6	1:CA:741:G:C5	3.10	0.40
1:CA:815:A:C2	1:CA:1529:G:C4	3.10	0.40
1:CA:936:C:O2'	1:CA:1382:C:N3	2.52	0.40
1:CA:1220:G:H1'	19:CS:52:HIS:CD2	2.56	0.40
1:CA:1299:A:O2'	1:CA:1301:U:O4'	2.39	0.40
1:CA:1522:U:O2'	1:CA:1523:G:H5'	2.21	0.40
2:CB:57:LEU:CD2	2:CB:67:ILE:HD11	2.51	0.40
2:CB:221:VAL:O	2:CB:221:VAL:HG12	2.20	0.40
4:CD:59:GLN:OE1	4:CD:59:GLN:CA	2.65	0.40
4:CD:148:LYS:H	4:CD:148:LYS:CE	2.34	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:23:LYS:O	5:CE:24:THR:CB	2.69	0.40
5:CE:80:THR:OG1	5:CE:81:LEU:N	2.54	0.40
5:CE:148:ASN:OD1	8:CH:96:MET:HE1	2.21	0.40
5:CE:154:ALA:C	5:CE:156:LYS:H	2.30	0.40
6:CF:36:ILE:O	6:CF:36:ILE:CG1	2.69	0.40
6:CF:86:ARG:HD3	18:CR:64:TYR:CE1	2.56	0.40
8:CH:20:ALA:C	8:CH:22:LYS:H	2.29	0.40
9:CI:51:PRO:HG2	9:CI:83:ILE:HD12	2.04	0.40
9:CI:57:MET:HA	9:CI:60:LYS:HB3	2.04	0.40
20:CT:28:MET:HE1	20:CT:67:ILE:HG21	2.03	0.40
21:CU:41:PRO:O	21:CU:44:GLU:N	2.54	0.40
22:DA:83:A:H2	22:DA:103:A:N7	2.18	0.40
22:DA:192:C:C4	22:DA:193:U:C2	3.09	0.40
22:DA:207:A:C2	22:DA:208:C:C1’	3.04	0.40
22:DA:582:A:C6	22:DA:583:G:C6	3.09	0.40
22:DA:637:A:P	33:DL:112:LEU:HB3	2.60	0.40
22:DA:773:U:C5’	22:DA:774:G:OP2	2.69	0.40
22:DA:927:A:H2’	22:DA:928:A:C8	2.56	0.40
22:DA:1372:U:H2’	22:DA:1373:A:C8	2.57	0.40
22:DA:1601:G:C5	22:DA:1602:U:C5	3.10	0.40
22:DA:1649:G:C6	22:DA:2009:A:N6	2.89	0.40
22:DA:1670:C:C4	22:DA:1671:U:N3	2.90	0.40
22:DA:2010:G:H5”	40:DS:42:LYS:HB2	2.01	0.40
22:DA:2067:G:C6	22:DA:2444:G:N1	2.90	0.40
22:DA:2285:C:C5	49:D1:6:ARG:NH1	2.89	0.40
22:DA:2320:U:H5’	22:DA:2321:U:C5	2.57	0.40
22:DA:2679:A:H2’	22:DA:2680:U:O4’	2.22	0.40
23:DB:14:U:O2	23:DB:14:U:H2’	2.21	0.40
23:DB:110:C:H2’	23:DB:111:U:O4’	2.21	0.40
24:DC:204:VAL:O	24:DC:205:LEU:C	2.64	0.40
28:DG:91:GLY:O	28:DG:94:TYR:CG	2.74	0.40
28:DG:123:ALA:HB2	28:DG:133:LEU:HA	2.03	0.40
30:DI:73:THR:HG21	30:DI:113:LYS:HE3	2.02	0.40
35:DN:44:LEU:O	35:DN:48:VAL:HG23	2.21	0.40
35:DN:108:ALA:HB3	35:DN:110:MET:HE3	2.03	0.40
38:DQ:76:TYR:OH	38:DQ:92:ARG:NH1	2.55	0.40
42:DU:7:ARG:HG3	42:DU:8:ASP:H	1.86	0.40
46:DY:28:LEU:CD1	46:DY:46:VAL:HG21	2.51	0.40
1:AA:34:C:H2’	1:AA:35:G:C8	2.56	0.40
1:AA:345:C:O2’	32:BK:116:ILE:CD1	2.67	0.40
1:AA:451:A:H4’	1:AA:452:A:O5’	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:582:C:N3	1:AA:583:A:C8	2.90	0.40
1:AA:599:C:C2	1:AA:600:A:C8	3.09	0.40
1:AA:669:G:O2'	1:AA:670:G:H5'	2.21	0.40
1:AA:836:G:C5	1:AA:851:G:C6	3.10	0.40
1:AA:1124:G:P	10:AJ:38:GLY:HA3	2.62	0.40
1:AA:1253:G:N1	1:AA:1285:A:N6	2.69	0.40
1:AA:1304:G:C6	1:AA:1305:G:C2	3.09	0.40
1:AA:1493:A:O2'	1:AA:1494:G:P	2.79	0.40
1:AA:1539:C:O3'	21:AU:18:ARG:HB3	2.21	0.40
2:AB:66:LYS:HB2	2:AB:159:ASP:OD2	2.21	0.40
2:AB:84:ALA:O	2:AB:89:GLN:OE1	2.40	0.40
2:AB:118:GLU:O	2:AB:120:GLN:N	2.55	0.40
3:AC:172:ARG:C	3:AC:173:VAL:CG2	2.95	0.40
4:AD:99:ASP:OD2	4:AD:115:ARG:CZ	2.68	0.40
4:AD:115:ARG:O	4:AD:116:GLN:C	2.64	0.40
5:AE:116:GLU:HG2	5:AE:117:VAL:N	2.37	0.40
6:AF:3:HIS:CE1	6:AF:65:GLU:OE2	2.74	0.40
7:AG:66:LEU:O	7:AG:70:ARG:HD3	2.22	0.40
8:AH:10:MET:CE	8:AH:33:LYS:HB3	2.52	0.40
12:AL:43:LYS:O	12:AL:44:LYS:C	2.64	0.40
17:AQ:48:ASP:OD2	17:AQ:48:ASP:O	2.39	0.40
20:AT:54:MET:HG3	20:AT:55:GLN:N	2.36	0.40
22:BA:162:U:H4'	22:BA:163:C:OP1	2.21	0.40
22:BA:184:C:H2'	22:BA:185:G:C8	2.55	0.40
22:BA:565:C:H4'	22:BA:1253:A:N6	2.37	0.40
22:BA:567:U:C2'	22:BA:568:U:O5'	2.70	0.40
22:BA:582:A:H2'	22:BA:583:G:C8	2.57	0.40
22:BA:988:A:H4'	22:BA:1155:A:N1	2.37	0.40
22:BA:1000:A:C6	22:BA:1001:A:C6	3.10	0.40
22:BA:1039:A:H2'	22:BA:1040:A:O4'	2.22	0.40
22:BA:1070:A:N1	22:BA:1097:U:O2'	2.47	0.40
22:BA:1075:C:N3	22:BA:1076:C:N4	2.70	0.40
22:BA:1177:G:H2'	22:BA:1178:C:O4'	2.22	0.40
22:BA:1482:G:C2	22:BA:1483:G:C8	3.10	0.40
22:BA:1829:A:H2'	22:BA:1830:C:O4'	2.21	0.40
22:BA:1883:U:O4	22:BA:1884:G:C6	2.75	0.40
22:BA:1920:C:O2	22:BA:1920:C:H2'	2.20	0.40
22:BA:2564:A:C5	22:BA:2565:A:C6	3.10	0.40
22:BA:2580:U:C5	22:BA:2581:G:C6	3.09	0.40
23:BB:65:U:O4	23:BB:108:A:H1'	2.22	0.40
24:BC:221:ARG:NH2	58:BC:403:HOH:O	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:245:VAL:HA	24:BC:250:VAL:O	2.21	0.40
25:BD:2:ILE:HG23	25:BD:88:GLU:OE1	2.21	0.40
25:BD:186:LEU:HD21	37:BP:4:ILE:HG21	2.03	0.40
27:BF:48:LYS:HA	27:BF:51:ASP:HB2	2.03	0.40
27:BF:49:LEU:HD21	27:BF:148:ARG:NH2	2.37	0.40
28:BG:19:ILE:CD1	28:BG:45:HIS:HB2	2.51	0.40
29:BH:66:ASN:OD1	29:BH:138:VAL:HG11	2.21	0.40
29:BH:120:GLY:HA2	29:BH:122:LEU:HA	2.04	0.40
30:BI:115:ALA:O	30:BI:116:ASP:CB	2.69	0.40
35:BN:72:ASP:O	35:BN:76:VAL:HG12	2.21	0.40
36:BO:87:ILE:O	36:BO:88:LYS:O	2.40	0.40
39:BR:20:VAL:HG21	39:BR:22:LEU:HD21	2.04	0.40
43:BV:14:LYS:HD2	43:BV:18:ARG:NH1	2.37	0.40
46:BY:57:LEU:O	46:BY:57:LEU:CG	2.69	0.40
1:CA:9:G:OP2	5:CE:126:LYS:CE	2.70	0.40
1:CA:17:U:H4'	1:CA:1080:A:O4'	2.21	0.40
1:CA:59:A:N3	1:CA:59:A:H2'	2.37	0.40
1:CA:299:G:C6	1:CA:300:A:C6	3.10	0.40
1:CA:582:C:O2'	1:CA:583:A:H5'	2.21	0.40
1:CA:613:C:H2'	1:CA:614:C:C6	2.56	0.40
1:CA:840:C:H3'	1:CA:841:C:C5'	2.50	0.40
1:CA:1000:A:C5	1:CA:1001:C:C2	3.09	0.40
1:CA:1082:A:OP1	5:CE:23:LYS:NZ	2.54	0.40
1:CA:1126:U:C6	1:CA:1281:C:C5	3.10	0.40
3:CC:66:VAL:O	3:CC:66:VAL:HG12	2.21	0.40
3:CC:77:ILE:HA	3:CC:84:VAL:HG22	2.01	0.40
4:CD:125:VAL:HG23	4:CD:130:VAL:CG2	2.51	0.40
4:CD:145:ILE:HD13	4:CD:178:MET:HB3	2.03	0.40
4:CD:162:ALA:HA	4:CD:165:ARG:HG3	2.03	0.40
5:CE:42:GLY:O	5:CE:119:GLY:HA3	2.22	0.40
6:CF:3:HIS:O	6:CF:92:THR:HA	2.22	0.40
6:CF:4:TYR:CE2	6:CF:71:ILE:HG12	2.57	0.40
6:CF:54:LEU:C	6:CF:55:HIS:O	2.64	0.40
6:CF:71:ILE:CD1	6:CF:71:ILE:N	2.85	0.40
7:CG:125:SER:C	7:CG:127:ALA:N	2.80	0.40
8:CH:18:GLN:HG2	8:CH:63:LEU:HD13	2.03	0.40
9:CI:129:LYS:O	9:CI:130:ARG:CD	2.70	0.40
12:CL:44:LYS:O	12:CL:45:PRO:C	2.64	0.40
13:CM:90:ARG:HD2	13:CM:97:VAL:HA	2.03	0.40
14:CN:51:LEU:O	14:CN:52:PRO:C	2.65	0.40
17:CQ:62:ARG:C	17:CQ:73:TRP:CE3	3.00	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:77:G:C2	22:DA:78:U:C2	3.09	0.40
22:DA:118:A:O4'	22:DA:178:G:O2'	2.38	0.40
22:DA:119:A:H5'	58:DA:3218:HOH:O	2.21	0.40
22:DA:269:C:O2	22:DA:269:C:C2'	2.69	0.40
22:DA:312:G:C2	22:DA:313:G:C8	3.09	0.40
22:DA:432:A:H2'	22:DA:433:C:O4'	2.21	0.40
22:DA:505:A:O2'	22:DA:509:C:O2'	2.23	0.40
22:DA:753:A:H2'	22:DA:754:U:H6	1.84	0.40
22:DA:909:A:N6	22:DA:912:C:O2	2.54	0.40
22:DA:1040:A:H2'	22:DA:1041:G:O4'	2.21	0.40
22:DA:1343:G:N3	22:DA:1597:A:N1	2.69	0.40
22:DA:1359:A:C2	22:DA:1360:G:H1'	2.56	0.40
22:DA:1429:G:H1'	22:DA:1568:G:N3	2.37	0.40
22:DA:1802:A:N1	22:DA:1803:A:C2	2.90	0.40
22:DA:2115:G:N3	22:DA:2117:A:C8	2.89	0.40
22:DA:2125:G:H5'	22:DA:2126:A:OP2	2.21	0.40
22:DA:2245:U:O2'	22:DA:2435:A:H3'	2.22	0.40
22:DA:2449:U:H4'	22:DA:2450:A:OP1	2.22	0.40
22:DA:2452:C:C4'	56:DA:3001:DOL:H461	2.52	0.40
22:DA:2553:G:H2'	22:DA:2554:U:C4'	2.52	0.40
22:DA:2842:G:C6	22:DA:2876:G:C6	3.10	0.40
23:DB:27:C:C5	23:DB:28:C:C5	3.10	0.40
23:DB:29:A:N3	23:DB:56:G:C2	2.89	0.40
23:DB:90:C:H5'	34:DM:18:ARG:HA	2.04	0.40
26:DE:58:LYS:CD	26:DE:60:TRP:O	2.70	0.40
26:DE:199:MET:HE3	26:DE:200:LEU:CD1	2.52	0.40
28:DG:155:GLU:OE1	28:DG:158:LYS:HG3	2.21	0.40
30:DI:12:GLN:NE2	30:DI:55:ILE:O	2.54	0.40
30:DI:57:VAL:HG23	30:DI:71:THR:CA	2.52	0.40
32:DK:4:GLU:C	32:DK:5:GLN:HG2	2.46	0.40
33:DL:93:ASN:CG	33:DL:94:THR:N	2.79	0.40
39:DR:96:VAL:O	39:DR:96:VAL:HG23	2.21	0.40
40:DS:14:ALA:HB1	40:DS:18:ARG:CZ	2.52	0.40
40:DS:24:ILE:O	40:DS:25:ARG:C	2.65	0.40
40:DS:47:VAL:HB	40:DS:103:ILE:HG21	2.03	0.40
42:DU:96:PHE:CZ	42:DU:103:ILE:CG1	3.03	0.40
45:DX:5:CYS:O	45:DX:9:GLY:HA2	2.22	0.40
47:DZ:3:LYS:C	47:DZ:4:THR:HG22	2.47	0.40
49:D1:10:LYS:O	49:D1:51:GLU:HG2	2.22	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:204:G:OP1	22:DA:289:G:O2'[3_545]	2.12	0.08

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AB	216/218 (99%)	126 (58%)	45 (21%)	45 (21%)	0	0
2	CB	216/218 (99%)	140 (65%)	51 (24%)	25 (12%)	0	1
3	AC	204/206 (99%)	148 (72%)	35 (17%)	21 (10%)	0	1
3	CC	204/206 (99%)	154 (76%)	39 (19%)	11 (5%)	1	4
4	AD	203/205 (99%)	137 (68%)	39 (19%)	27 (13%)	0	0
4	CD	203/205 (99%)	152 (75%)	32 (16%)	19 (9%)	0	1
5	AE	148/150 (99%)	102 (69%)	27 (18%)	19 (13%)	0	0
5	CE	148/150 (99%)	100 (68%)	33 (22%)	15 (10%)	0	1
6	AF	98/100 (98%)	73 (74%)	15 (15%)	10 (10%)	0	1
6	CF	98/100 (98%)	68 (69%)	15 (15%)	15 (15%)	0	0
7	AG	149/151 (99%)	107 (72%)	29 (20%)	13 (9%)	0	1
7	CG	149/151 (99%)	119 (80%)	22 (15%)	8 (5%)	1	4
8	AH	127/129 (98%)	90 (71%)	28 (22%)	9 (7%)	1	2
8	CH	127/129 (98%)	98 (77%)	19 (15%)	10 (8%)	1	1
9	AI	125/127 (98%)	87 (70%)	24 (19%)	14 (11%)	0	1
9	CI	125/127 (98%)	89 (71%)	18 (14%)	18 (14%)	0	0
10	AJ	96/98 (98%)	64 (67%)	11 (12%)	21 (22%)	0	0
10	CJ	96/98 (98%)	73 (76%)	11 (12%)	12 (12%)	0	0
11	AK	115/117 (98%)	81 (70%)	17 (15%)	17 (15%)	0	0
11	CK	115/117 (98%)	82 (71%)	24 (21%)	9 (8%)	1	2
12	AL	121/123 (98%)	91 (75%)	21 (17%)	9 (7%)	1	2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
12	CL	121/123 (98%)	92 (76%)	18 (15%)	11 (9%)	0	1
13	AM	112/114 (98%)	81 (72%)	21 (19%)	10 (9%)	0	1
13	CM	112/114 (98%)	80 (71%)	18 (16%)	14 (12%)	0	0
14	AN	92/100 (92%)	61 (66%)	21 (23%)	10 (11%)	0	1
14	CN	92/100 (92%)	58 (63%)	20 (22%)	14 (15%)	0	0
15	AO	86/88 (98%)	65 (76%)	14 (16%)	7 (8%)	1	1
15	CO	86/88 (98%)	64 (74%)	17 (20%)	5 (6%)	1	4
16	AP	80/82 (98%)	55 (69%)	15 (19%)	10 (12%)	0	0
16	CP	80/82 (98%)	59 (74%)	13 (16%)	8 (10%)	0	1
17	AQ	78/80 (98%)	53 (68%)	18 (23%)	7 (9%)	0	1
17	CQ	78/80 (98%)	56 (72%)	15 (19%)	7 (9%)	0	1
18	AR	53/55 (96%)	42 (79%)	11 (21%)	0	100	100
18	CR	53/55 (96%)	37 (70%)	12 (23%)	4 (8%)	1	2
19	AS	77/79 (98%)	57 (74%)	11 (14%)	9 (12%)	0	1
19	CS	77/79 (98%)	55 (71%)	11 (14%)	11 (14%)	0	0
20	AT	83/85 (98%)	59 (71%)	19 (23%)	5 (6%)	1	3
20	CT	83/85 (98%)	62 (75%)	12 (14%)	9 (11%)	0	1
21	AU	49/51 (96%)	26 (53%)	8 (16%)	15 (31%)	0	0
21	CU	49/51 (96%)	21 (43%)	16 (33%)	12 (24%)	0	0
24	BC	269/271 (99%)	218 (81%)	39 (14%)	12 (4%)	2	7
24	DC	269/271 (99%)	196 (73%)	48 (18%)	25 (9%)	0	1
25	BD	207/209 (99%)	180 (87%)	21 (10%)	6 (3%)	3	13
25	DD	207/209 (99%)	153 (74%)	43 (21%)	11 (5%)	1	5
26	BE	199/201 (99%)	165 (83%)	30 (15%)	4 (2%)	6	21
26	DE	199/201 (99%)	154 (77%)	27 (14%)	18 (9%)	0	1
27	BF	175/177 (99%)	142 (81%)	24 (14%)	9 (5%)	1	5
27	DF	175/177 (99%)	135 (77%)	27 (15%)	13 (7%)	1	2
28	BG	174/176 (99%)	148 (85%)	16 (9%)	10 (6%)	1	4
28	DG	174/176 (99%)	127 (73%)	36 (21%)	11 (6%)	1	3
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

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
30	BI	139/141 (99%)	78 (56%)	37 (27%)	24 (17%)	0 0
30	DI	139/141 (99%)	82 (59%)	38 (27%)	19 (14%)	0 0
31	BJ	140/142 (99%)	125 (89%)	14 (10%)	1 (1%)	18 47
31	DJ	140/142 (99%)	104 (74%)	23 (16%)	13 (9%)	0 1
32	BK	120/122 (98%)	97 (81%)	14 (12%)	9 (8%)	1 2
32	DK	120/122 (98%)	95 (79%)	15 (12%)	10 (8%)	0 1
33	BL	141/143 (99%)	112 (79%)	21 (15%)	8 (6%)	1 4
33	DL	141/143 (99%)	98 (70%)	31 (22%)	12 (8%)	0 1
34	BM	134/136 (98%)	120 (90%)	11 (8%)	3 (2%)	5 19
34	DM	134/136 (98%)	112 (84%)	17 (13%)	5 (4%)	2 9
35	BN	118/120 (98%)	95 (80%)	21 (18%)	2 (2%)	7 25
35	DN	118/120 (98%)	90 (76%)	18 (15%)	10 (8%)	0 1
36	BO	114/116 (98%)	96 (84%)	14 (12%)	4 (4%)	3 10
36	DO	114/116 (98%)	82 (72%)	24 (21%)	8 (7%)	1 2
37	BP	112/114 (98%)	99 (88%)	8 (7%)	5 (4%)	2 7
37	DP	112/114 (98%)	88 (79%)	18 (16%)	6 (5%)	1 4
38	BQ	115/117 (98%)	102 (89%)	12 (10%)	1 (1%)	14 41
38	DQ	115/117 (98%)	92 (80%)	22 (19%)	1 (1%)	14 41
39	BR	101/103 (98%)	81 (80%)	10 (10%)	10 (10%)	0 1
39	DR	101/103 (98%)	72 (71%)	23 (23%)	6 (6%)	1 3
40	BS	108/110 (98%)	94 (87%)	10 (9%)	4 (4%)	2 9
40	DS	108/110 (98%)	83 (77%)	17 (16%)	8 (7%)	1 2
41	BT	91/93 (98%)	74 (81%)	9 (10%)	8 (9%)	0 1
41	DT	91/93 (98%)	53 (58%)	28 (31%)	10 (11%)	0 1
42	BU	100/102 (98%)	77 (77%)	19 (19%)	4 (4%)	2 8
42	DU	100/102 (98%)	69 (69%)	19 (19%)	12 (12%)	0 1
43	BV	92/94 (98%)	84 (91%)	7 (8%)	1 (1%)	11 36
43	DV	92/94 (98%)	76 (83%)	14 (15%)	2 (2%)	5 19
44	BW	74/76 (97%)	68 (92%)	4 (5%)	2 (3%)	4 15
44	DW	73/76 (96%)	61 (84%)	12 (16%)	0	100 100
45	BX	75/77 (97%)	68 (91%)	6 (8%)	1 (1%)	9 31

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
45	DX	75/77 (97%)	58 (77%)	12 (16%)	5 (7%)	1 3
46	BY	61/63 (97%)	43 (70%)	10 (16%)	8 (13%)	0 0
46	DY	61/63 (97%)	44 (72%)	12 (20%)	5 (8%)	0 1
47	BZ	56/58 (97%)	54 (96%)	2 (4%)	0	100 100
47	DZ	56/58 (97%)	41 (73%)	10 (18%)	5 (9%)	0 1
48	B0	54/56 (96%)	46 (85%)	4 (7%)	4 (7%)	1 2
48	D0	54/56 (96%)	37 (68%)	12 (22%)	5 (9%)	0 1
49	B1	48/50 (96%)	40 (83%)	4 (8%)	4 (8%)	0 1
49	D1	48/50 (96%)	36 (75%)	8 (17%)	4 (8%)	0 1
50	B2	44/46 (96%)	37 (84%)	5 (11%)	2 (4%)	2 7
50	D2	44/46 (96%)	34 (77%)	6 (14%)	4 (9%)	0 1
51	B3	62/64 (97%)	56 (90%)	5 (8%)	1 (2%)	7 27
51	D3	62/64 (97%)	52 (84%)	6 (10%)	4 (6%)	1 3
52	B4	36/38 (95%)	31 (86%)	4 (11%)	1 (3%)	4 14
52	D4	36/38 (95%)	32 (89%)	2 (6%)	2 (6%)	1 4
53	B5	183/228 (80%)	87 (48%)	53 (29%)	43 (24%)	0 0
54	B6	2/8 (25%)	2 (100%)	0	0	100 100
54	D6	2/8 (25%)	0	2 (100%)	0	100 100
All	All	11422/11688 (98%)	8528 (75%)	1918 (17%)	976 (8%)	0 1

All (976) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	16	PHE
2	AB	20	THR
2	AB	22	TYR
2	AB	25	PRO
2	AB	34	ALA
2	AB	43	LEU
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

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Mol	Chain	Res	Type
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	182	PRO
2	AB	193	PRO
2	AB	194	ASP
2	AB	201	PRO
3	AC	12	LEU
3	AC	18	TRP
3	AC	26	THR
3	AC	80	LYS
3	AC	127	ARG
3	AC	140	ASN
3	AC	141	ALA
3	AC	146	ALA
3	AC	166	GLU
4	AD	23	SER
4	AD	25	VAL
4	AD	29	ASP
4	AD	33	LYS
4	AD	34	ILE
4	AD	35	GLU
4	AD	47	ARG
4	AD	85	ASN
4	AD	126	ASN
4	AD	153	SER
4	AD	168	PRO
4	AD	192	SER
5	AE	69	ARG
5	AE	70	ASN
5	AE	100	SER
5	AE	137	VAL
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

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Mol	Chain	Res	Type
7	AG	56	LYS
7	AG	57	SER
7	AG	81	GLY
8	AH	67	GLN
9	AI	41	ARG
9	AI	44	ALA
9	AI	58	VAL
9	AI	59	GLU
9	AI	116	VAL
10	AJ	34	ALA
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	55	SER
11	AK	56	ARG
11	AK	73	ALA
11	AK	103	ALA
11	AK	126	LYS
12	AL	24	LEU
12	AL	26	ALA
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
14	AN	92	GLU
15	AO	3	LEU
15	AO	17	ARG
16	AP	43	ALA
16	AP	46	LYS

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Mol	Chain	Res	Type
16	AP	80	LYS
17	AQ	13	VAL
17	AQ	18	GLU
17	AQ	51	ASN
17	AQ	82	ALA
19	AS	23	VAL
19	AS	65	GLU
20	AT	4	ILE
20	AT	5	LYS
20	AT	6	SER
21	AU	9	ASN
21	AU	12	PHE
21	AU	23	CYS
21	AU	24	GLU
21	AU	35	ARG
21	AU	36	GLU
21	AU	37	PHE
21	AU	40	LYS
24	BC	71	LYS
24	BC	122	ALA
24	BC	168	ASP
24	BC	196	GLY
24	BC	253	LYS
25	BD	104	VAL
25	BD	152	PRO
26	BE	11	ALA
26	BE	86	ALA
27	BF	3	LYS
27	BF	41	GLY
27	BF	175	PHE
28	BG	39	ASP
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

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Mol	Chain	Res	Type
30	BI	19	ASN
30	BI	45	LYS
30	BI	63	ALA
30	BI	75	PRO
30	BI	83	ALA
30	BI	86	ILE
30	BI	113	LYS
30	BI	117	MET
32	BK	35	VAL
33	BL	15	ALA
33	BL	69	ARG
33	BL	94	THR
34	BM	69	PRO
37	BP	94	LYS
37	BP	114	LEU
38	BQ	25	TYR
39	BR	49	ILE
39	BR	51	VAL
39	BR	53	PHE
39	BR	55	ASP
40	BS	64	ALA
41	BT	2	ILE
41	BT	89	GLU
45	BX	3	ARG
46	BY	22	LEU
46	BY	24	GLU
46	BY	35	GLY
46	BY	36	GLN
46	BY	58	ASN
46	BY	62	GLY
48	B0	56	ALA
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

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Mol	Chain	Res	Type
53	B5	183	PRO
53	B5	184	GLU
53	B5	185	LYS
53	B5	203	GLU
53	B5	214	TYR
53	B5	215	VAL
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
2	CB	126	PHE
2	CB	141	LEU
2	CB	168	HIS
2	CB	193	PRO
2	CB	194	ASP
2	CB	207	ILE
2	CB	220	THR
3	CC	66	VAL
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
5	CE	51	GLY
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

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Mol	Chain	Res	Type
6	CF	92	THR
6	CF	93	LYS
6	CF	98	GLU
6	CF	99	ALA
7	CG	3	ARG
7	CG	56	LYS
7	CG	130	ASN
7	CG	146	GLU
9	CI	26	GLY
9	CI	41	ARG
9	CI	53	GLU
9	CI	72	ILE
9	CI	91	ASP
9	CI	120	LYS
10	CJ	91	ASP
11	CK	52	PHE
11	CK	93	ARG
11	CK	127	ARG
12	CL	4	VAL
12	CL	43	LYS
12	CL	44	LYS
12	CL	48	ALA
12	CL	58	THR
12	CL	89	ASP
13	CM	7	ILE
13	CM	11	ASP
13	CM	41	GLU
13	CM	99	GLY
14	CN	29	ALA
14	CN	52	PRO
14	CN	53	ARG
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
19	CS	5	LEU
20	CT	4	ILE

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Mol	Chain	Res	Type
20	CT	6	SER
20	CT	68	HIS
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
24	DC	238	ARG
24	DC	239	ASN
24	DC	251	GLN
25	DD	36	GLN
25	DD	57	ALA
25	DD	98	VAL
25	DD	105	LYS
25	DD	151	THR
25	DD	152	PRO
26	DE	6	LYS
26	DE	62	GLN
26	DE	145	ASP
27	DF	9	LYS
27	DF	122	PHE
27	DF	123	ASP
27	DF	175	PHE
28	DG	92	VAL
28	DG	119	ALA
28	DG	127	THR
28	DG	159	GLY
28	DG	175	LYS
29	DH	3	VAL
29	DH	10	ALA
29	DH	33	GLN
29	DH	35	LYS
29	DH	41	LYS
29	DH	53	GLU

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Mol	Chain	Res	Type
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	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	108	ARG
32	DK	120	PRO
33	DL	39	LYS
33	DL	40	SER
33	DL	111	ILE
35	DN	70	THR
35	DN	88	ALA
35	DN	107	ASN
36	DO	12	THR
36	DO	34	HIS
36	DO	57	ALA
36	DO	115	LEU
37	DP	66	ASN
39	DR	102	SER
40	DS	29	VAL
40	DS	62	ASP
40	DS	66	ILE
40	DS	67	ASP
40	DS	72	THR
41	DT	21	SER
41	DT	22	THR
41	DT	28	ASN
41	DT	39	THR
41	DT	66	LYS
41	DT	78	SER
42	DU	37	GLU

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Mol	Chain	Res	Type
42	DU	89	ASP
43	DV	24	ASN
45	DX	62	LYS
47	DZ	4	THR
47	DZ	52	SER
47	DZ	53	PHE
48	D0	56	ALA
49	D1	16	GLY
50	D2	44	VAL
50	D2	45	SER
52	D4	23	ILE
2	AB	35	ARG
2	AB	41	ILE
2	AB	68	LEU
2	AB	80	VAL
2	AB	83	ALA
2	AB	119	THR
2	AB	137	ARG
2	AB	150	GLY
2	AB	156	GLY
2	AB	188	ASP
2	AB	202	GLY
2	AB	210	VAL
2	AB	212	LEU
2	AB	220	THR
3	AC	15	VAL
3	AC	17	PRO
3	AC	30	ALA
3	AC	61	ALA
3	AC	88	ARG
3	AC	160	ALA
3	AC	168	TYR
4	AD	17	THR
4	AD	24	GLY
4	AD	121	LYS
4	AD	191	LEU
5	AE	12	GLN
5	AE	45	ARG
5	AE	101	GLU
5	AE	109	GLY
5	AE	110	ALA
5	AE	122	ASN

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Mol	Chain	Res	Type
5	AE	138	ARG
7	AG	77	SER
7	AG	100	ALA
7	AG	130	ASN
8	AH	88	ARG
9	AI	13	LYS
9	AI	120	LYS
10	AJ	17	LEU
10	AJ	32	THR
10	AJ	36	VAL
10	AJ	38	GLY
10	AJ	41	PRO
10	AJ	81	GLU
10	AJ	91	ASP
11	AK	17	SER
11	AK	36	ASP
11	AK	108	THR
12	AL	25	GLU
12	AL	58	THR
12	AL	118	GLY
13	AM	4	ILE
13	AM	65	VAL
14	AN	23	LYS
14	AN	28	LYS
15	AO	88	ARG
16	AP	11	ALA
17	AQ	70	THR
19	AS	6	LYS
19	AS	64	ASP
21	AU	27	GLY
21	AU	38	TYR
21	AU	39	GLU
24	BC	271	ARG
25	BD	86	GLU
25	BD	102	ALA
25	BD	105	LYS
26	BE	49	ARG
27	BF	42	GLU
27	BF	172	ALA
27	BF	176	PRO
28	BG	38	ASN
28	BG	100	GLY

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Mol	Chain	Res	Type
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	108	ARG
32	BK	110	GLU
33	BL	88	GLY
35	BN	70	THR
35	BN	118	ARG
36	BO	87	ILE
36	BO	88	LYS
37	BP	16	ASP
37	BP	35	GLY
37	BP	105	GLY
39	BR	29	THR
39	BR	57	GLY
40	BS	63	GLY
41	BT	17	SER
41	BT	52	GLU
41	BT	71	GLY
41	BT	72	GLN
42	BU	8	ASP
42	BU	19	LYS
42	BU	52	LEU
43	BV	66	ASP
46	BY	23	ARG
49	B1	5	ILE
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

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Mol	Chain	Res	Type
53	B5	136	GLY
53	B5	209	PHE
53	B5	213	VAL
53	B5	216	THR
53	B5	217	THR
53	B5	223	VAL
2	CB	22	TYR
2	CB	124	GLY
3	CC	140	ASN
3	CC	141	ALA
4	CD	29	ASP
4	CD	36	GLN
4	CD	153	SER
4	CD	174	ASP
4	CD	175	ALA
5	CE	122	ASN
6	CF	91	ARG
6	CF	94	HIS
7	CG	84	THR
7	CG	114	LYS
8	CH	22	LYS
8	CH	54	ASP
9	CI	57	MET
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	22	PRO
12	CL	26	ALA
12	CL	76	GLU
13	CM	44	LYS
13	CM	94	GLY
14	CN	22	ALA
14	CN	32	SER
15	CO	21	ASP
16	CP	77	GLU
17	CQ	18	GLU
17	CQ	80	GLU

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Mol	Chain	Res	Type
18	CR	25	ASP
18	CR	47	THR
19	CS	6	LYS
19	CS	32	ARG
19	CS	45	ILE
19	CS	67	VAL
21	CU	9	ASN
21	CU	10	GLU
24	DC	25	HIS
24	DC	122	ALA
24	DC	205	LEU
24	DC	218	PRO
24	DC	240	PHE
24	DC	255	LYS
25	DD	40	LEU
26	DE	18	THR
26	DE	48	THR
26	DE	82	GLY
26	DE	86	ALA
26	DE	122	GLU
26	DE	126	VAL
26	DE	129	PRO
27	DF	148	ARG
28	DG	20	ASN
28	DG	28	GLY
29	DH	31	VAL
29	DH	77	THR
29	DH	118	PRO
30	DI	9	VAL
30	DI	93	PRO
30	DI	106	LEU
30	DI	134	ARG
31	DJ	25	LEU
31	DJ	127	GLY
33	DL	16	GLY
33	DL	36	LYS
33	DL	42	SER
34	DM	23	GLY
35	DN	104	ALA
36	DO	116	GLN
37	DP	36	SER
37	DP	94	LYS

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Mol	Chain	Res	Type
38	DQ	87	SER
39	DR	53	PHE
41	DT	18	GLU
41	DT	90	GLY
42	DU	53	ASN
42	DU	57	GLY
42	DU	98	SER
42	DU	99	ASN
45	DX	7	VAL
46	DY	57	LEU
48	D0	55	ILE
51	D3	26	HIS
2	AB	203	ASN
3	AC	54	ARG
3	AC	86	LYS
4	AD	32	CYS
4	AD	167	LYS
4	AD	169	THR
5	AE	88	VAL
5	AE	147	MET
6	AF	6	ILE
6	AF	42	TRP
6	AF	68	GLN
6	AF	69	GLU
7	AG	59	LEU
7	AG	85	TYR
8	AH	21	ASN
8	AH	50	LYS
9	AI	67	VAL
9	AI	88	MET
10	AJ	58	ASN
10	AJ	61	ALA
10	AJ	92	LEU
11	AK	128	ARG
12	AL	102	LEU
13	AM	10	PRO
13	AM	67	GLY
15	AO	73	LYS
16	AP	10	GLY
16	AP	49	GLY
16	AP	50	THR
16	AP	57	ILE

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Mol	Chain	Res	Type
17	AQ	12	VAL
20	AT	68	HIS
20	AT	69	LYS
21	AU	8	GLU
24	BC	29	PRO
26	BE	44	ARG
29	BH	9	VAL
29	BH	30	LEU
29	BH	85	GLY
29	BH	93	SER
29	BH	105	ALA
30	BI	4	LYS
30	BI	8	TYR
30	BI	20	PRO
30	BI	60	THR
30	BI	101	ILE
32	BK	109	SER
32	BK	119	ALA
34	BM	6	ARG
39	BR	31	GLU
39	BR	50	GLY
48	B0	55	ILE
52	B4	37	GLN
53	B5	27	ALA
53	B5	79	ALA
53	B5	133	GLY
53	B5	208	THR
53	B5	219	MET
2	CB	19	GLN
2	CB	130	THR
3	CC	37	PHE
3	CC	156	ARG
3	CC	174	PRO
4	CD	4	TYR
4	CD	10	LYS
4	CD	154	ARG
4	CD	168	PRO
5	CE	12	GLN
5	CE	45	ARG
5	CE	138	ARG
5	CE	143	GLY
5	CE	155	ALA

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Mol	Chain	Res	Type
6	CF	85	ILE
7	CG	126	ASP
7	CG	140	ASP
8	CH	3	MET
8	CH	66	PHE
8	CH	96	MET
8	CH	114	ARG
9	CI	12	ARG
10	CJ	79	PRO
11	CK	120	GLY
12	CL	23	ALA
13	CM	12	HIS
13	CM	82	ASP
13	CM	114	LYS
14	CN	11	VAL
14	CN	21	PHE
14	CN	62	ASN
15	CO	46	HIS
16	CP	24	SER
16	CP	31	ARG
17	CQ	20	SER
19	CS	66	MET
19	CS	73	GLU
20	CT	7	ALA
21	CU	35	ARG
24	DC	26	LYS
24	DC	143	ASN
25	DD	102	ALA
26	DE	61	ARG
26	DE	149	ILE
28	DG	8	PRO
29	DH	16	GLY
29	DH	40	THR
31	DJ	8	PRO
31	DJ	10	THR
32	DK	105	ARG
33	DL	9	ALA
33	DL	53	GLY
33	DL	69	ARG
34	DM	3	GLN
34	DM	57	VAL
34	DM	58	LYS

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Mol	Chain	Res	Type
34	DM	69	PRO
35	DN	86	ARG
35	DN	118	ARG
36	DO	3	LYS
36	DO	63	LYS
37	DP	80	VAL
40	DS	40	ASN
42	DU	41	LEU
42	DU	58	ILE
45	DX	26	LYS
46	DY	37	LEU
47	DZ	29	LEU
47	DZ	30	ARG
48	D0	52	ARG
49	D1	27	LYS
52	D4	20	ASP
4	AD	26	ARG
4	AD	28	ILE
4	AD	36	GLN
4	AD	160	GLU
4	AD	193	ALA
5	AE	24	THR
5	AE	26	LYS
6	AF	62	MET
7	AG	5	ARG
8	AH	66	PHE
9	AI	9	THR
10	AJ	42	LEU
10	AJ	75	ASP
11	AK	14	LYS
11	AK	119	ASN
13	AM	64	VAL
14	AN	44	ALA
15	AO	20	ASN
15	AO	46	HIS
16	AP	53	ASP
16	AP	79	ASN
17	AQ	16	LYS
19	AS	4	SER
19	AS	29	LYS
19	AS	43	ASN
21	AU	10	GLU

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Mol	Chain	Res	Type
21	AU	26	ALA
24	BC	121	ASP
24	BC	124	ILE
24	BC	265	LYS
27	BF	10	ASP
28	BG	12	PRO
28	BG	80	THR
29	BH	83	LYS
30	BI	9	VAL
30	BI	84	ALA
30	BI	98	VAL
31	BJ	81	ILE
33	BL	68	SER
36	BO	50	ALA
39	BR	43	ASN
39	BR	52	PRO
41	BT	18	GLU
42	BU	100	SER
44	BW	11	ARG
46	BY	46	VAL
49	B1	51	GLU
53	B5	65	LEU
53	B5	66	PRO
53	B5	106	ASP
2	CB	108	ARG
2	CB	136	MET
2	CB	142	GLU
2	CB	149	GLY
4	CD	47	ARG
4	CD	192	SER
5	CE	150	PRO
9	CI	9	THR
10	CJ	35	GLN
10	CJ	36	VAL
10	CJ	92	LEU
10	CJ	95	GLY
12	CL	24	LEU
13	CM	14	HIS
14	CN	23	LYS
14	CN	31	ILE
16	CP	44	SER
19	CS	31	LEU

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Mol	Chain	Res	Type
19	CS	69	HIS
20	CT	67	ILE
21	CU	11	PRO
24	DC	121	ASP
24	DC	203	ARG
25	DD	70	LYS
25	DD	194	PRO
26	DE	125	SER
26	DE	127	GLU
26	DE	153	LEU
27	DF	174	ASP
28	DG	46	ALA
29	DH	9	VAL
30	DI	10	LYS
30	DI	65	ARG
30	DI	84	ALA
32	DK	93	GLN
33	DL	29	LYS
33	DL	30	THR
35	DN	59	SER
35	DN	61	ALA
35	DN	85	PRO
37	DP	114	LEU
39	DR	7	SER
39	DR	82	HIS
40	DS	63	GLY
40	DS	64	ALA
42	DU	7	ARG
42	DU	52	LEU
43	DV	84	PRO
50	D2	8	SER
51	D3	7	VAL
2	AB	13	GLY
2	AB	161	LEU
3	AC	66	VAL
3	AC	159	GLY
4	AD	151	LYS
5	AE	78	ASN
6	AF	54	LEU
6	AF	98	GLU
8	AH	57	PRO
10	AJ	16	ARG

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Mol	Chain	Res	Type
10	AJ	33	GLY
11	AK	16	VAL
15	AO	49	ASP
19	AS	9	PRO
21	AU	52	ALA
27	BF	177	PHE
28	BG	14	GLY
32	BK	91	SER
32	BK	93	GLN
33	BL	29	LYS
33	BL	86	GLU
33	BL	92	LEU
41	BT	25	GLU
44	BW	57	HIS
48	B0	34	SER
50	B2	42	LEU
53	B5	148	PHE
53	B5	171	ALA
53	B5	180	SER
53	B5	201	LYS
53	B5	210	LEU
2	CB	166	ALA
2	CB	203	ASN
3	CC	160	ALA
4	CD	34	ILE
6	CF	39	LEU
8	CH	21	ASN
8	CH	57	PRO
8	CH	67	GLN
8	CH	97	ALA
9	CI	14	SER
9	CI	55	VAL
9	CI	58	VAL
9	CI	128	SER
11	CK	15	GLN
13	CM	37	ALA
13	CM	66	GLU
16	CP	46	LYS
17	CQ	5	ILE
20	CT	5	LYS
20	CT	20	HIS
20	CT	56	PRO

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Mol	Chain	Res	Type
21	CU	16	LEU
24	DC	34	LEU
24	DC	46	ASN
24	DC	85	PRO
24	DC	247	PRO
24	DC	260	ASN
25	DD	195	GLY
26	DE	80	SER
27	DF	27	GLN
27	DF	79	ILE
27	DF	118	SER
27	DF	176	PRO
30	DI	20	PRO
30	DI	22	PRO
31	DJ	95	ARG
32	DK	110	GLU
35	DN	3	HIS
41	DT	77	ARG
48	D0	24	ALA
48	D0	43	ILE
49	D1	51	GLU
2	AB	21	ARG
2	AB	48	PRO
2	AB	183	VAL
3	AC	147	LYS
4	AD	198	HIS
8	AH	14	ILE
8	AH	96	MET
9	AI	43	THR
9	AI	51	PRO
11	AK	89	PRO
12	AL	22	PRO
19	AS	76	PRO
24	BC	97	LYS
24	BC	234	GLY
25	BD	40	LEU
29	BH	120	GLY
30	BI	7	ALA
30	BI	23	PRO
32	BK	118	LEU
36	BO	61	GLN
40	BS	29	VAL

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Mol	Chain	Res	Type
53	B5	36	ALA
53	B5	218	THR
2	CB	68	LEU
5	CE	24	THR
6	CF	13	ASP
6	CF	18	VAL
9	CI	32	GLN
9	CI	129	LYS
10	CJ	75	ASP
13	CM	96	PRO
18	CR	71	THR
26	DE	161	ALA
28	DG	12	PRO
30	DI	61	VAL
36	DO	90	VAL
45	DX	44	LYS
49	D1	5	ILE
51	D3	47	LYS
4	AD	173	VAL
5	AE	105	ILE
5	AE	149	SER
8	AH	25	VAL
10	AJ	43	PRO
28	BG	79	VAL
32	BK	72	PRO
48	B0	54	VAL
53	B5	51	ASP
9	CI	50	GLN
13	CM	25	VAL
14	CN	34	VAL
15	CO	36	ILE
30	DI	13	VAL
30	DI	52	GLY
31	DJ	82	GLY
32	DK	72	PRO
42	DU	54	GLN
50	D2	38	GLY
2	AB	124	GLY
9	AI	24	GLY
13	AM	16	VAL
19	CS	30	PRO
19	CS	76	PRO

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Mol	Chain	Res	Type
24	DC	228	VAL
27	DF	85	ILE
28	DG	17	VAL
32	DK	48	PRO
33	DL	87	GLY
45	DX	51	VAL
46	DY	11	VAL
9	AI	72	ILE
14	AN	91	GLY
27	BF	85	ILE
40	BS	66	ILE
6	CF	64	VAL
11	CK	92	GLY
16	CP	14	ARG
16	CP	42	ILE
20	CT	65	GLY
31	DJ	64	VAL
37	DP	84	ILE
42	DU	25	VAL
2	AB	224	GLY
7	AG	80	VAL
34	BM	26	VAL
4	CD	167	LYS
9	CI	104	VAL
11	CK	89	PRO
26	DE	83	VAL
27	DF	31	VAL
27	DF	44	ILE
30	DI	98	VAL
32	DK	119	ALA
39	DR	101	ILE
41	DT	47	VAL
46	DY	46	VAL
51	D3	32	ILE
3	CC	64	ILE
16	CP	15	PRO
31	DJ	136	GLN
39	DR	30	GLY
46	DY	35	GLY

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%)	127 (71%)	53 (29%)	0 1
2	CB	180/180 (100%)	128 (71%)	52 (29%)	0 1
3	AC	170/170 (100%)	132 (78%)	38 (22%)	1 3
3	CC	170/170 (100%)	144 (85%)	26 (15%)	3 10
4	AD	172/172 (100%)	135 (78%)	37 (22%)	1 4
4	CD	172/172 (100%)	139 (81%)	33 (19%)	1 5
5	AE	113/113 (100%)	79 (70%)	34 (30%)	0 1
5	CE	113/113 (100%)	79 (70%)	34 (30%)	0 1
6	AF	87/87 (100%)	64 (74%)	23 (26%)	0 2
6	CF	87/87 (100%)	58 (67%)	29 (33%)	0 1
7	AG	124/124 (100%)	100 (81%)	24 (19%)	1 5
7	CG	124/124 (100%)	100 (81%)	24 (19%)	1 5
8	AH	104/104 (100%)	79 (76%)	25 (24%)	1 2
8	CH	104/104 (100%)	78 (75%)	26 (25%)	0 2
9	AI	105/105 (100%)	73 (70%)	32 (30%)	0 1
9	CI	105/105 (100%)	91 (87%)	14 (13%)	4 14
10	AJ	86/86 (100%)	64 (74%)	22 (26%)	0 2
10	CJ	86/86 (100%)	65 (76%)	21 (24%)	1 2
11	AK	90/90 (100%)	75 (83%)	15 (17%)	2 8
11	CK	90/90 (100%)	72 (80%)	18 (20%)	1 4
12	AL	103/103 (100%)	86 (84%)	17 (16%)	2 8
12	CL	103/103 (100%)	81 (79%)	22 (21%)	1 4
13	AM	92/92 (100%)	70 (76%)	22 (24%)	1 3
13	CM	92/92 (100%)	73 (79%)	19 (21%)	1 4
14	AN	79/83 (95%)	61 (77%)	18 (23%)	1 3
14	CN	79/83 (95%)	67 (85%)	12 (15%)	3 10

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
15	AO	75/76 (99%)	64 (85%)	11 (15%)	3 10
15	CO	75/76 (99%)	65 (87%)	10 (13%)	4 14
16	AP	65/65 (100%)	45 (69%)	20 (31%)	0 1
16	CP	65/65 (100%)	53 (82%)	12 (18%)	1 6
17	AQ	74/74 (100%)	46 (62%)	28 (38%)	0 0
17	CQ	74/74 (100%)	51 (69%)	23 (31%)	0 1
18	AR	48/48 (100%)	38 (79%)	10 (21%)	1 4
18	CR	48/48 (100%)	37 (77%)	11 (23%)	1 3
19	AS	70/70 (100%)	56 (80%)	14 (20%)	1 4
19	CS	70/70 (100%)	55 (79%)	15 (21%)	1 4
20	AT	65/65 (100%)	48 (74%)	17 (26%)	0 2
20	CT	65/65 (100%)	52 (80%)	13 (20%)	1 4
21	AU	44/44 (100%)	27 (61%)	17 (39%)	0 0
21	CU	44/44 (100%)	28 (64%)	16 (36%)	0 0
24	BC	216/216 (100%)	182 (84%)	34 (16%)	2 9
24	DC	216/216 (100%)	189 (88%)	27 (12%)	4 15
25	BD	164/164 (100%)	143 (87%)	21 (13%)	4 15
25	DD	164/164 (100%)	137 (84%)	27 (16%)	2 8
26	BE	165/165 (100%)	129 (78%)	36 (22%)	1 3
26	DE	165/165 (100%)	133 (81%)	32 (19%)	1 5
27	BF	148/148 (100%)	112 (76%)	36 (24%)	1 2
27	DF	148/148 (100%)	118 (80%)	30 (20%)	1 4
28	BG	137/137 (100%)	115 (84%)	22 (16%)	2 8
28	DG	137/137 (100%)	107 (78%)	30 (22%)	1 3
29	BH	114/114 (100%)	81 (71%)	33 (29%)	0 1
29	DH	114/114 (100%)	89 (78%)	25 (22%)	1 3
30	BI	109/109 (100%)	82 (75%)	27 (25%)	1 2
30	DI	109/109 (100%)	77 (71%)	32 (29%)	0 1
31	BJ	116/116 (100%)	100 (86%)	16 (14%)	3 12
31	DJ	116/116 (100%)	99 (85%)	17 (15%)	3 10
32	BK	103/103 (100%)	87 (84%)	16 (16%)	2 9

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
32	DK	103/103 (100%)	90 (87%)	13 (13%)	4 15
33	BL	102/102 (100%)	92 (90%)	10 (10%)	7 25
33	DL	102/102 (100%)	84 (82%)	18 (18%)	2 7
34	BM	109/109 (100%)	96 (88%)	13 (12%)	5 17
34	DM	109/109 (100%)	97 (89%)	12 (11%)	6 20
35	BN	100/100 (100%)	90 (90%)	10 (10%)	7 24
35	DN	100/100 (100%)	77 (77%)	23 (23%)	1 3
36	BO	86/86 (100%)	65 (76%)	21 (24%)	1 2
36	DO	86/86 (100%)	69 (80%)	17 (20%)	1 5
37	BP	99/99 (100%)	81 (82%)	18 (18%)	2 6
37	DP	99/99 (100%)	89 (90%)	10 (10%)	7 23
38	BQ	89/89 (100%)	79 (89%)	10 (11%)	6 19
38	DQ	89/89 (100%)	75 (84%)	14 (16%)	2 9
39	BR	84/84 (100%)	70 (83%)	14 (17%)	2 8
39	DR	84/84 (100%)	77 (92%)	7 (8%)	10 32
40	BS	93/93 (100%)	74 (80%)	19 (20%)	1 4
40	DS	93/93 (100%)	81 (87%)	12 (13%)	4 14
41	BT	80/80 (100%)	66 (82%)	14 (18%)	2 7
41	DT	80/80 (100%)	64 (80%)	16 (20%)	1 4
42	BU	83/83 (100%)	67 (81%)	16 (19%)	1 5
42	DU	83/83 (100%)	67 (81%)	16 (19%)	1 5
43	BV	78/78 (100%)	59 (76%)	19 (24%)	1 2
43	DV	78/78 (100%)	67 (86%)	11 (14%)	3 12
44	BW	57/58 (98%)	46 (81%)	11 (19%)	1 5
44	DW	56/58 (97%)	49 (88%)	7 (12%)	4 15
45	BX	67/67 (100%)	60 (90%)	7 (10%)	7 22
45	DX	67/67 (100%)	55 (82%)	12 (18%)	2 6
46	BY	55/55 (100%)	48 (87%)	7 (13%)	4 15
46	DY	55/55 (100%)	44 (80%)	11 (20%)	1 4
47	BZ	48/48 (100%)	41 (85%)	7 (15%)	3 11
47	DZ	48/48 (100%)	36 (75%)	12 (25%)	0 2

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
48	B0	47/47 (100%)	41 (87%)	6 (13%)	4 15
48	D0	47/47 (100%)	41 (87%)	6 (13%)	4 15
49	B1	45/45 (100%)	41 (91%)	4 (9%)	9 29
49	D1	45/45 (100%)	37 (82%)	8 (18%)	2 6
50	B2	38/38 (100%)	34 (90%)	4 (10%)	6 22
50	D2	38/38 (100%)	30 (79%)	8 (21%)	1 4
51	B3	51/51 (100%)	45 (88%)	6 (12%)	5 17
51	D3	51/51 (100%)	46 (90%)	5 (10%)	7 25
52	B4	34/34 (100%)	30 (88%)	4 (12%)	5 17
52	D4	34/34 (100%)	25 (74%)	9 (26%)	0 2
53	B5	61/180 (34%)	46 (75%)	15 (25%)	1 2
54	B6	2/2 (100%)	2 (100%)	0	100 100
54	D6	2/2 (100%)	2 (100%)	0	100 100
All	All	9390/9522 (99%)	7540 (80%)	1850 (20%)	1 5

All (1850) 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	22	TYR
2	AB	27	MET
2	AB	31	ILE
2	AB	32	PHE
2	AB	38	VAL
2	AB	39	HIS
2	AB	40	ILE
2	AB	41	ILE
2	AB	43	LEU
2	AB	46	THR
2	AB	50	PHE
2	AB	59	LYS
2	AB	64	LYS
2	AB	66	LYS
2	AB	68	LEU

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Mol	Chain	Res	Type
2	AB	70	VAL
2	AB	85	LEU
2	AB	87	CYS
2	AB	88	ASP
2	AB	100	MET
2	AB	101	LEU
2	AB	102	THR
2	AB	107	VAL
2	AB	108	ARG
2	AB	114	LEU
2	AB	117	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	144	LEU
2	AB	148	LEU
2	AB	153	ASP
2	AB	157	LEU
2	AB	161	LEU
2	AB	163	VAL
2	AB	164	ILE
2	AB	170	HIS
2	AB	182	PRO
2	AB	199	VAL
2	AB	207	ILE
2	AB	208	ARG
2	AB	210	VAL
2	AB	213	TYR
2	AB	220	THR
2	AB	225	ARG
3	AC	3	GLN
3	AC	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

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Mol	Chain	Res	Type
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
3	AC	56	VAL
3	AC	57	ILE
3	AC	59	ARG
3	AC	64	ILE
3	AC	75	ILE
3	AC	86	LYS
3	AC	88	ARG
3	AC	103	ILE
3	AC	127	ARG
3	AC	128	VAL
3	AC	129	MET
3	AC	131	ARG
3	AC	144	LEU
3	AC	167	TRP
3	AC	173	VAL
3	AC	185	ASN
3	AC	186	THR
3	AC	192	THR
3	AC	193	TYR
3	AC	196	ILE
3	AC	200	VAL
3	AC	202	ILE
3	AC	207	ILE
4	AD	5	LEU
4	AD	8	LYS
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

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Mol	Chain	Res	Type
4	AD	56	ARG
4	AD	58	LYS
4	AD	63	ARG
4	AD	68	LEU
4	AD	73	ARG
4	AD	83	LYS
4	AD	90	LEU
4	AD	93	LEU
4	AD	94	LEU
4	AD	104	ARG
4	AD	111	ARG
4	AD	116	GLN
4	AD	121	LYS
4	AD	123	ILE
4	AD	132	ILE
4	AD	143	VAL
4	AD	153	SER
4	AD	161	LEU
4	AD	163	GLU
4	AD	173	VAL
4	AD	183	LYS
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	26	LYS
5	AE	32	SER
5	AE	36	LEU
5	AE	37	THR
5	AE	38	VAL
5	AE	60	ILE
5	AE	68	ARG
5	AE	78	ASN
5	AE	81	LEU
5	AE	82	GLN

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Mol	Chain	Res	Type
5	AE	83	HIS
5	AE	85	VAL
5	AE	94	VAL
5	AE	114	VAL
5	AE	115	LEU
5	AE	120	VAL
5	AE	124	LEU
5	AE	134	ILE
5	AE	136	VAL
5	AE	137	VAL
5	AE	140	THR
5	AE	141	ILE
5	AE	142	ASP
5	AE	149	SER
5	AE	151	GLU
5	AE	153	VAL
5	AE	159	LYS
6	AF	5	GLU
6	AF	6	ILE
6	AF	7	VAL
6	AF	9	MET
6	AF	14	GLN
6	AF	15	SER
6	AF	17	GLN
6	AF	24	ARG
6	AF	36	ILE
6	AF	39	LEU
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	74	LEU
6	AF	75	GLU
6	AF	84	VAL
6	AF	86	ARG
6	AF	89	VAL
6	AF	96	VAL
6	AF	98	GLU
7	AG	4	ARG
7	AG	7	ILE

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Mol	Chain	Res	Type
7	AG	13	LEU
7	AG	22	LEU
7	AG	23	LEU
7	AG	25	LYS
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	78	ARG
7	AG	79	ARG
7	AG	90	GLU
7	AG	106	GLU
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	11	LEU
8	AH	22	LYS
8	AH	25	VAL
8	AH	26	THR
8	AH	32	LEU
8	AH	36	ILE
8	AH	38	ASN
8	AH	39	VAL
8	AH	42	GLU
8	AH	46	ILE
8	AH	47	GLU
8	AH	51	VAL
8	AH	59	LEU
8	AH	77	ARG
8	AH	83	LEU
8	AH	101	ILE
8	AH	104	VAL
8	AH	108	LYS

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Mol	Chain	Res	Type
8	AH	117	ARG
8	AH	121	LEU
8	AH	125	ILE
8	AH	126	ILE
8	AH	129	VAL
9	AI	18	ARG
9	AI	21	ILE
9	AI	30	ILE
9	AI	33	ARG
9	AI	36	GLU
9	AI	43	THR
9	AI	46	MET
9	AI	47	VAL
9	AI	48	VAL
9	AI	49	ARG
9	AI	55	VAL
9	AI	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	72	ILE
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	98	LEU
9	AI	100	LYS
9	AI	115	LYS
9	AI	116	VAL
9	AI	127	PHE
9	AI	129	LYS
9	AI	130	ARG
10	AJ	6	ILE
10	AJ	8	ILE
10	AJ	18	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	50	THR
10	AJ	52	LEU
10	AJ	59	LYS
10	AJ	66	GLU
10	AJ	69	THR
10	AJ	71	LEU
10	AJ	73	LEU
10	AJ	76	ILE
10	AJ	84	VAL
10	AJ	87	LEU
10	AJ	91	ASP
10	AJ	92	LEU
10	AJ	96	VAL
10	AJ	98	VAL
11	AK	16	VAL
11	AK	23	ILE
11	AK	31	ILE
11	AK	33	THR
11	AK	34	ILE
11	AK	52	PHE
11	AK	58	SER
11	AK	65	VAL
11	AK	96	THR
11	AK	97	ILE
11	AK	100	LEU
11	AK	107	ILE
11	AK	126	LYS
11	AK	127	ARG
11	AK	128	ARG
12	AL	7	LEU
12	AL	8	VAL
12	AL	10	LYS
12	AL	29	GLN
12	AL	33	VAL
12	AL	44	LYS
12	AL	58	THR
12	AL	62	GLU
12	AL	74	LEU
12	AL	76	GLU

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Mol	Chain	Res	Type
12	AL	82	ILE
12	AL	89	ASP
12	AL	102	LEU
12	AL	105	SER
12	AL	110	ARG
12	AL	116	LYS
12	AL	121	ARG
13	AM	4	ILE
13	AM	7	ILE
13	AM	9	ILE
13	AM	11	ASP
13	AM	13	LYS
13	AM	16	VAL
13	AM	25	VAL
13	AM	27	LYS
13	AM	29	ARG
13	AM	44	LYS
13	AM	50	GLU
13	AM	59	GLU
13	AM	72	GLU
13	AM	73	ILE
13	AM	77	ILE
13	AM	80	LEU
13	AM	82	ASP
13	AM	87	ARG
13	AM	90	ARG
13	AM	91	HIS
13	AM	104	THR
13	AM	108	THR
14	AN	4	GLN
14	AN	5	SER
14	AN	7	LYS
14	AN	12	LYS
14	AN	14	VAL
14	AN	16	LEU
14	AN	24	ARG
14	AN	26	GLU
14	AN	28	LYS
14	AN	34	VAL
14	AN	46	LEU
14	AN	48	LEU
14	AN	49	GLN

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Mol	Chain	Res	Type
14	AN	50	THR
14	AN	51	LEU
14	AN	84	VAL
14	AN	85	ARG
14	AN	98	LYS
15	AO	8	THR
15	AO	13	SER
15	AO	22	THR
15	AO	35	GLN
15	AO	39	LEU
15	AO	40	GLN
15	AO	59	MET
15	AO	67	LEU
15	AO	83	GLU
15	AO	85	LEU
15	AO	87	LEU
16	AP	2	VAL
16	AP	3	THR
16	AP	4	ILE
16	AP	6	LEU
16	AP	8	ARG
16	AP	18	GLN
16	AP	19	VAL
16	AP	29	ASN
16	AP	33	ILE
16	AP	42	ILE
16	AP	46	LYS
16	AP	51	ARG
16	AP	55	ASP
16	AP	56	ARG
16	AP	59	HIS
16	AP	66	THR
16	AP	71	VAL
16	AP	76	LYS
16	AP	78	VAL
16	AP	80	LYS
17	AQ	4	LYS
17	AQ	7	THR
17	AQ	8	LEU
17	AQ	9	GLN
17	AQ	12	VAL
17	AQ	13	VAL

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Mol	Chain	Res	Type
17	AQ	14	SER
17	AQ	16	LYS
17	AQ	17	MET
17	AQ	21	ILE
17	AQ	23	VAL
17	AQ	29	VAL
17	AQ	30	LYS
17	AQ	33	ILE
17	AQ	38	ILE
17	AQ	42	THR
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	78	VAL
17	AQ	81	LYS
17	AQ	83	VAL
18	AR	21	ILE
18	AR	29	LEU
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	61	ARG
18	AR	71	THR
19	AS	6	LYS
19	AS	7	LYS
19	AS	21	LYS
19	AS	24	GLU
19	AS	29	LYS
19	AS	32	ARG
19	AS	37	ARG
19	AS	39	THR
19	AS	45	ILE
19	AS	55	ARG

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Mol	Chain	Res	Type
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	8	LYS
20	AT	12	ILE
20	AT	24	ARG
20	AT	34	LYS
20	AT	36	TYR
20	AT	54	MET
20	AT	55	GLN
20	AT	58	VAL
20	AT	66	LEU
20	AT	67	ILE
20	AT	69	LYS
20	AT	70	ASN
20	AT	74	ARG
20	AT	86	LEU
21	AU	4	ILE
21	AU	7	ARG
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	40	LYS
21	AU	42	THR
21	AU	46	LYS
21	AU	47	ARG
21	AU	49	LYS
21	AU	54	LYS
24	BC	14	ARG
24	BC	18	LYS
24	BC	20	VAL
24	BC	23	GLU

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Mol	Chain	Res	Type
24	BC	24	LEU
24	BC	51	THR
24	BC	64	ILE
24	BC	71	LYS
24	BC	86	ASN
24	BC	90	ASN
24	BC	97	LYS
24	BC	105	LEU
24	BC	111	LYS
24	BC	117	GLN
24	BC	121	ASP
24	BC	124	ILE
24	BC	140	THR
24	BC	156	ARG
24	BC	162	VAL
24	BC	164	ILE
24	BC	174	LEU
24	BC	177	ARG
24	BC	192	LEU
24	BC	194	GLU
24	BC	197	ASN
24	BC	204	VAL
24	BC	216	VAL
24	BC	220	VAL
24	BC	228	VAL
24	BC	242	LYS
24	BC	245	VAL
24	BC	265	LYS
24	BC	267	ILE
24	BC	268	VAL
25	BD	1	MET
25	BD	4	LEU
25	BD	13	ARG
25	BD	14	ILE
25	BD	18	ASP
25	BD	25	THR
25	BD	42	ASN
25	BD	55	LYS
25	BD	84	LEU
25	BD	89	GLU
25	BD	95	SER
25	BD	97	SER

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Mol	Chain	Res	Type
25	BD	121	THR
25	BD	129	THR
25	BD	133	THR
25	BD	145	SER
25	BD	174	SER
25	BD	177	VAL
25	BD	183	GLU
25	BD	186	LEU
25	BD	197	THR
26	BE	4	VAL
26	BE	5	LEU
26	BE	12	LEU
26	BE	16	GLU
26	BE	30	GLN
26	BE	40	ARG
26	BE	44	ARG
26	BE	55	SER
26	BE	63	LYS
26	BE	69	ARG
26	BE	74	LYS
26	BE	77	ILE
26	BE	79	ARG
26	BE	83	VAL
26	BE	88	ARG
26	BE	90	GLN
26	BE	93	SER
26	BE	108	ILE
26	BE	111	GLU
26	BE	116	ASP
26	BE	120	VAL
26	BE	122	GLU
26	BE	126	VAL
26	BE	131	THR
26	BE	136	GLN
26	BE	141	MET
26	BE	146	VAL
26	BE	149	ILE
26	BE	163	ASN
26	BE	169	VAL
26	BE	171	ASP
26	BE	178	VAL
26	BE	180	LEU

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Mol	Chain	Res	Type
26	BE	197	GLU
26	BE	198	GLU
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	79	ILE
27	BF	81	GLN
27	BF	83	TYR
27	BF	85	ILE
27	BF	104	ILE
27	BF	105	THR
27	BF	108	VAL
27	BF	117	LEU
27	BF	120	LYS
27	BF	132	VAL
27	BF	133	ARG
27	BF	134	GLU
27	BF	147	ASP
27	BF	150	ARG
27	BF	152	LEU
27	BF	154	ILE
27	BF	155	THR
27	BF	158	THR
27	BF	174	ASP
27	BF	178	ARG
28	BG	2	SER
28	BG	9	VAL
28	BG	11	VAL

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Mol	Chain	Res	Type
28	BG	18	LYS
28	BG	33	LEU
28	BG	39	ASP
28	BG	55	ARG
28	BG	56	ASP
28	BG	67	THR
28	BG	77	ILE
28	BG	80	THR
28	BG	84	THR
28	BG	87	LEU
28	BG	88	GLN
28	BG	98	VAL
28	BG	99	LYS
28	BG	124	GLU
28	BG	133	LEU
28	BG	139	GLN
28	BG	152	ARG
28	BG	155	GLU
28	BG	160	LYS
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	54	LEU
29	BH	60	GLU
29	BH	62	LEU
29	BH	66	ASN
29	BH	72	ILE
29	BH	75	LEU
29	BH	76	GLU
29	BH	77	THR
29	BH	79	THR
29	BH	86	ASP
29	BH	91	PHE
29	BH	108	VAL
29	BH	112	LYS
29	BH	117	LEU
29	BH	119	ASN
29	BH	121	VAL
29	BH	122	LEU

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Mol	Chain	Res	Type
29	BH	123	ARG
29	BH	125	THR
29	BH	127	GLU
29	BH	129	GLU
29	BH	131	SER
29	BH	137	GLU
29	BH	142	VAL
29	BH	143	ILE
29	BH	145	ASN
29	BH	146	VAL
30	BI	9	VAL
30	BI	13	VAL
30	BI	17	MET
30	BI	19	ASN
30	BI	24	VAL
30	BI	31	GLN
30	BI	34	ASN
30	BI	45	LYS
30	BI	47	ASP
30	BI	50	GLU
30	BI	51	LYS
30	BI	58	VAL
30	BI	62	TYR
30	BI	69	PHE
30	BI	72	LYS
30	BI	80	LEU
30	BI	82	LYS
30	BI	86	ILE
30	BI	90	SER
30	BI	94	ASN
30	BI	96	ASP
30	BI	100	LYS
30	BI	103	ARG
30	BI	125	MET
30	BI	128	SER
30	BI	134	ARG
30	BI	136	MET
31	BJ	5	THR
31	BJ	17	VAL
31	BJ	30	THR
31	BJ	31	GLU
31	BJ	37	ARG

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Mol	Chain	Res	Type
31	BJ	39	LYS
31	BJ	40	HIS
31	BJ	43	GLU
31	BJ	61	LYS
31	BJ	64	VAL
31	BJ	84	ILE
31	BJ	86	GLN
31	BJ	114	LEU
31	BJ	124	VAL
31	BJ	139	VAL
31	BJ	142	ILE
32	BK	1	MET
32	BK	40	LYS
32	BK	41	ILE
32	BK	49	ARG
32	BK	51	LYS
32	BK	58	LEU
32	BK	66	LYS
32	BK	86	LEU
32	BK	91	SER
32	BK	92	GLU
32	BK	105	ARG
32	BK	106	GLU
32	BK	114	LYS
32	BK	116	ILE
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	111	ILE
33	BL	115	GLU
33	BL	125	LEU
34	BM	20	LEU
34	BM	24	THR
34	BM	45	GLN
34	BM	46	ILE
34	BM	47	GLU

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Mol	Chain	Res	Type
34	BM	55	ARG
34	BM	70	ASP
34	BM	80	VAL
34	BM	100	LYS
34	BM	112	LEU
34	BM	115	GLU
34	BM	126	ILE
34	BM	136	MET
35	BN	2	ARG
35	BN	20	MET
35	BN	33	ILE
35	BN	52	ILE
35	BN	69	ARG
35	BN	76	VAL
35	BN	90	ARG
35	BN	95	THR
35	BN	113	ILE
35	BN	116	VAL
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
36	BO	49	VAL
36	BO	54	VAL
36	BO	55	GLU
36	BO	60	GLU
36	BO	61	GLN
36	BO	65	THR
36	BO	87	ILE
36	BO	89	ASP
37	BP	6	LYS
37	BP	7	GLN
37	BP	12	GLN

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Mol	Chain	Res	Type
37	BP	19	SER
37	BP	26	VAL
37	BP	27	GLU
37	BP	38	LYS
37	BP	53	ARG
37	BP	57	SER
37	BP	63	LYS
37	BP	64	ILE
37	BP	68	GLU
37	BP	73	VAL
37	BP	88	ARG
37	BP	96	LYS
37	BP	103	ARG
37	BP	109	ARG
37	BP	110	ILE
38	BQ	5	LYS
38	BQ	18	LEU
38	BQ	30	ARG
38	BQ	51	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	47	VAL
39	BR	48	LYS
39	BR	54	VAL
39	BR	58	VAL
39	BR	74	ILE
39	BR	85	LYS
39	BR	86	GLN
40	BS	6	LYS
40	BS	7	HIS
40	BS	8	ARG

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Mol	Chain	Res	Type
40	BS	19	LEU
40	BS	25	ARG
40	BS	28	LYS
40	BS	30	SER
40	BS	37	THR
40	BS	42	LYS
40	BS	47	VAL
40	BS	48	LYS
40	BS	59	GLU
40	BS	69	LEU
40	BS	81	SER
40	BS	82	MET
40	BS	90	LYS
40	BS	97	LEU
40	BS	101	SER
40	BS	109	ASP
41	BT	10	VAL
41	BT	12	ARG
41	BT	16	VAL
41	BT	18	GLU
41	BT	27	SER
41	BT	30	ILE
41	BT	33	LYS
41	BT	49	LYS
41	BT	68	LYS
41	BT	70	HIS
41	BT	73	ARG
41	BT	79	ASP
41	BT	86	THR
41	BT	93	LEU
42	BU	5	ILE
42	BU	9	ASP
42	BU	12	ILE
42	BU	24	LYS
42	BU	26	LYS
42	BU	28	VAL
42	BU	29	LEU
42	BU	47	LYS
42	BU	49	VAL
42	BU	52	LEU
42	BU	68	SER
42	BU	72	ILE

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Mol	Chain	Res	Type
42	BU	77	THR
42	BU	86	ARG
42	BU	99	ASN
42	BU	101	GLU
43	BV	1	MET
43	BV	4	ILE
43	BV	8	VAL
43	BV	10	LYS
43	BV	14	LYS
43	BV	17	SER
43	BV	18	ARG
43	BV	20	LEU
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	85	LYS
43	BV	92	VAL
43	BV	93	ARG
44	BW	11	ARG
44	BW	20	ARG
44	BW	29	GLU
44	BW	38	VAL
44	BW	39	ARG
44	BW	41	ARG
44	BW	56	ASP
44	BW	64	ASP
44	BW	72	LYS
44	BW	81	SER
44	BW	85	GLU
45	BX	14	THR
45	BX	25	THR
45	BX	40	VAL
45	BX	43	GLU
45	BX	48	THR
45	BX	66	THR
45	BX	76	GLU
46	BY	5	GLU

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Mol	Chain	Res	Type
46	BY	6	LEU
46	BY	16	THR
46	BY	17	GLU
46	BY	22	LEU
46	BY	29	ARG
46	BY	57	LEU
47	BZ	10	THR
47	BZ	19	LYS
47	BZ	32	ILE
47	BZ	36	VAL
47	BZ	44	ILE
47	BZ	57	VAL
47	BZ	58	GLU
48	B0	18	SER
48	B0	20	ASP
48	B0	26	THR
48	B0	29	SER
48	B0	36	GLU
48	B0	40	ARG
49	B1	29	THR
49	B1	46	HIS
49	B1	47	VAL
49	B1	51	GLU
50	B2	4	THR
50	B2	21	ARG
50	B2	43	THR
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	2	LYS
52	B4	6	SER
52	B4	9	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

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Mol	Chain	Res	Type
53	B5	64	SER
53	B5	73	VAL
53	B5	76	LEU
53	B5	78	ILE
53	B5	83	LYS
53	B5	86	GLU
53	B5	93	ASP
53	B5	94	TYR
53	B5	95	VAL
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	35	ARG
2	CB	40	ILE
2	CB	43	LEU
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	77	SER
2	CB	78	GLU
2	CB	80	VAL
2	CB	81	LYS
2	CB	85	LEU
2	CB	87	CYS
2	CB	88	ASP
2	CB	95	ARG
2	CB	101	LEU
2	CB	106	THR
2	CB	111	ILE
2	CB	117	LEU
2	CB	126	PHE
2	CB	127	ASP

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Mol	Chain	Res	Type
2	CB	130	THR
2	CB	136	MET
2	CB	141	LEU
2	CB	148	LEU
2	CB	151	ILE
2	CB	163	VAL
2	CB	164	ILE
2	CB	171	ILE
2	CB	173	ILE
2	CB	174	LYS
2	CB	175	GLU
2	CB	179	LEU
2	CB	183	VAL
2	CB	187	VAL
2	CB	205	ASP
2	CB	207	ILE
2	CB	208	ARG
2	CB	210	VAL
2	CB	222	ARG
2	CB	225	ARG
3	CC	3	GLN
3	CC	8	ASN
3	CC	16	LYS
3	CC	26	THR
3	CC	27	LYS
3	CC	37	PHE
3	CC	43	LEU
3	CC	64	ILE
3	CC	70	THR
3	CC	75	ILE
3	CC	79	LYS
3	CC	80	LYS
3	CC	103	ILE
3	CC	110	GLU
3	CC	121	THR
3	CC	140	ASN
3	CC	153	VAL
3	CC	156	ARG
3	CC	167	TRP
3	CC	168	TYR
3	CC	175	LEU
3	CC	186	THR

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Mol	Chain	Res	Type
3	CC	193	TYR
3	CC	200	VAL
3	CC	202	ILE
3	CC	206	GLU
4	CD	5	LEU
4	CD	8	LYS
4	CD	9	LEU
4	CD	10	LYS
4	CD	11	LEU
4	CD	23	SER
4	CD	30	THR
4	CD	32	CYS
4	CD	33	LYS
4	CD	44	ARG
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	61	VAL
4	CD	81	ARG
4	CD	125	VAL
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	166	GLU
4	CD	169	THR
4	CD	191	LEU
4	CD	192	SER
4	CD	197	GLU
4	CD	200	ILE
4	CD	206	LYS
5	CE	10	GLU
5	CE	15	LEU
5	CE	18	VAL
5	CE	24	THR
5	CE	25	VAL

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Mol	Chain	Res	Type
5	CE	26	LYS
5	CE	32	SER
5	CE	39	VAL
5	CE	46	VAL
5	CE	52	LYS
5	CE	60	ILE
5	CE	70	ASN
5	CE	76	LEU
5	CE	81	LEU
5	CE	88	VAL
5	CE	93	ARG
5	CE	94	VAL
5	CE	100	SER
5	CE	105	ILE
5	CE	114	VAL
5	CE	115	LEU
5	CE	116	GLU
5	CE	120	VAL
5	CE	126	LYS
5	CE	131	THR
5	CE	136	VAL
5	CE	137	VAL
5	CE	140	THR
5	CE	146	ASN
5	CE	149	SER
5	CE	151	GLU
5	CE	153	VAL
5	CE	156	LYS
5	CE	159	LYS
6	CF	1	MET
6	CF	7	VAL
6	CF	8	PHE
6	CF	10	VAL
6	CF	16	GLU
6	CF	23	GLU
6	CF	24	ARG
6	CF	26	THR
6	CF	30	THR
6	CF	33	GLU
6	CF	35	LYS
6	CF	36	ILE
6	CF	38	ARG

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Mol	Chain	Res	Type
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	69	GLU
6	CF	71	ILE
6	CF	74	LEU
6	CF	75	GLU
6	CF	80	PHE
6	CF	85	ILE
6	CF	86	ARG
6	CF	87	SER
6	CF	89	VAL
6	CF	97	THR
7	CG	4	ARG
7	CG	5	ARG
7	CG	6	VAL
7	CG	7	ILE
7	CG	9	GLN
7	CG	12	ILE
7	CG	22	LEU
7	CG	43	VAL
7	CG	48	GLU
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	91	VAL
7	CG	94	VAL
7	CG	120	LEU
7	CG	123	GLU
7	CG	126	ASP
7	CG	129	GLU
7	CG	140	ASP
7	CG	141	VAL
7	CG	146	GLU
8	CH	13	ARG
8	CH	15	ARG

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Mol	Chain	Res	Type
8	CH	26	THR
8	CH	32	LEU
8	CH	36	ILE
8	CH	39	VAL
8	CH	42	GLU
8	CH	43	GLU
8	CH	45	PHE
8	CH	48	ASP
8	CH	52	GLU
8	CH	54	ASP
8	CH	67	GLN
8	CH	71	VAL
8	CH	73	GLU
8	CH	74	SER
8	CH	75	ILE
8	CH	77	ARG
8	CH	83	LEU
8	CH	92	LEU
8	CH	99	LEU
8	CH	104	VAL
8	CH	108	LYS
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	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	9	ARG
10	CJ	16	ARG
10	CJ	17	LEU
10	CJ	22	THR

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Mol	Chain	Res	Type
10	CJ	25	ILE
10	CJ	51	VAL
10	CJ	53	ILE
10	CJ	59	LYS
10	CJ	62	ARG
10	CJ	71	LEU
10	CJ	74	VAL
10	CJ	77	VAL
10	CJ	80	THR
10	CJ	83	THR
10	CJ	87	LEU
10	CJ	90	LEU
10	CJ	91	ASP
10	CJ	96	VAL
10	CJ	98	VAL
10	CJ	100	ILE
10	CJ	102	LEU
11	CK	15	GLN
11	CK	26	SER
11	CK	33	THR
11	CK	64	GLN
11	CK	65	VAL
11	CK	79	ILE
11	CK	81	ASN
11	CK	82	LEU
11	CK	83	GLU
11	CK	86	VAL
11	CK	96	THR
11	CK	100	LEU
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

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Mol	Chain	Res	Type
12	CL	44	LYS
12	CL	52	VAL
12	CL	59	ASN
12	CL	63	VAL
12	CL	82	ILE
12	CL	86	ARG
12	CL	89	ASP
12	CL	93	VAL
12	CL	97	THR
12	CL	107	VAL
12	CL	110	ARG
12	CL	111	LYS
12	CL	114	ARG
12	CL	121	ARG
12	CL	123	LYS
13	CM	8	ASN
13	CM	13	LYS
13	CM	14	HIS
13	CM	19	LEU
13	CM	27	LYS
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	80	LEU
13	CM	83	LEU
13	CM	91	HIS
13	CM	101	ARG
13	CM	113	ARG
14	CN	10	GLU
14	CN	14	VAL
14	CN	18	ASP
14	CN	23	LYS
14	CN	28	LYS
14	CN	48	LEU
14	CN	75	ARG
14	CN	77	PHE

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Mol	Chain	Res	Type
14	CN	82	ILE
14	CN	83	LYS
14	CN	92	GLU
14	CN	100	SER
15	CO	18	ASP
15	CO	26	GLU
15	CO	27	VAL
15	CO	38	HIS
15	CO	39	LEU
15	CO	66	LEU
15	CO	70	LEU
15	CO	73	LYS
15	CO	84	ARG
15	CO	87	LEU
16	CP	1	MET
16	CP	2	VAL
16	CP	5	ARG
16	CP	18	GLN
16	CP	20	VAL
16	CP	31	ARG
16	CP	46	LYS
16	CP	55	ASP
16	CP	63	GLN
16	CP	74	LEU
16	CP	77	GLU
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	29	VAL
17	CQ	40	ARG
17	CQ	41	THR
17	CQ	48	ASP
17	CQ	50	ASN
17	CQ	55	ILE
17	CQ	61	ILE
17	CQ	62	ARG
17	CQ	63	GLU

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Mol	Chain	Res	Type
17	CQ	70	THR
17	CQ	75	LEU
17	CQ	76	VAL
17	CQ	79	VAL
17	CQ	80	GLU
17	CQ	81	LYS
17	CQ	83	VAL
18	CR	21	ILE
18	CR	25	ASP
18	CR	33	ILE
18	CR	43	ARG
18	CR	45	THR
18	CR	47	THR
18	CR	48	ARG
18	CR	54	GLN
18	CR	57	ARG
18	CR	59	ILE
18	CR	61	ARG
19	CS	5	LEU
19	CS	6	LYS
19	CS	11	ILE
19	CS	13	LEU
19	CS	21	LYS
19	CS	23	VAL
19	CS	27	ASP
19	CS	29	LYS
19	CS	31	LEU
19	CS	43	ASN
19	CS	45	ILE
19	CS	47	LEU
19	CS	49	ILE
19	CS	57	HIS
19	CS	58	VAL
20	CT	3	ASN
20	CT	5	LYS
20	CT	6	SER
20	CT	8	LYS
20	CT	30	THR
20	CT	49	LYS
20	CT	58	VAL
20	CT	59	ASP
20	CT	64	LYS

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Mol	Chain	Res	Type
20	CT	67	ILE
20	CT	69	LYS
20	CT	75	HIS
20	CT	83	ILE
21	CU	5	LYS
21	CU	10	GLU
21	CU	12	PHE
21	CU	14	VAL
21	CU	16	LEU
21	CU	18	ARG
21	CU	20	LYS
21	CU	24	GLU
21	CU	25	LYS
21	CU	28	VAL
21	CU	37	PHE
21	CU	42	THR
21	CU	47	ARG
21	CU	49	LYS
21	CU	53	VAL
21	CU	54	LYS
24	DC	4	VAL
24	DC	6	CYS
24	DC	19	VAL
24	DC	24	LEU
24	DC	30	PHE
24	DC	59	LYS
24	DC	63	ARG
24	DC	80	ARG
24	DC	94	VAL
24	DC	103	TYR
24	DC	104	ILE
24	DC	105	LEU
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	175	ARG
24	DC	195	VAL
24	DC	202	LEU
24	DC	203	ARG

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Mol	Chain	Res	Type
24	DC	205	LEU
24	DC	250	VAL
24	DC	259	SER
24	DC	262	ARG
24	DC	267	ILE
25	DD	1	MET
25	DD	4	LEU
25	DD	7	LYS
25	DD	12	THR
25	DD	25	THR
25	DD	33	ARG
25	DD	51	THR
25	DD	55	LYS
25	DD	73	VAL
25	DD	77	ARG
25	DD	86	GLU
25	DD	92	VAL
25	DD	95	SER
25	DD	98	VAL
25	DD	99	GLU
25	DD	103	ASP
25	DD	118	PHE
25	DD	129	THR
25	DD	138	LEU
25	DD	140	HIS
25	DD	146	ILE
25	DD	168	GLU
25	DD	170	VAL
25	DD	175	LEU
25	DD	180	VAL
25	DD	189	VAL
25	DD	203	VAL
26	DE	9	GLN
26	DE	25	GLU
26	DE	40	ARG
26	DE	41	GLN
26	DE	53	THR
26	DE	58	LYS
26	DE	69	ARG
26	DE	77	ILE
26	DE	84	THR
26	DE	90	GLN

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Mol	Chain	Res	Type
26	DE	91	ASP
26	DE	105	LEU
26	DE	107	SER
26	DE	108	ILE
26	DE	112	LEU
26	DE	113	VAL
26	DE	118	LEU
26	DE	119	ILE
26	DE	120	VAL
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
26	DE	189	THR
27	DF	6	ASP
27	DF	7	TYR
27	DF	14	LYS
27	DF	18	THR
27	DF	26	MET
27	DF	28	VAL
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	67	ILE
27	DF	72	LYS
27	DF	74	VAL
27	DF	78	LYS
27	DF	89	VAL
27	DF	110	ARG
27	DF	117	LEU
27	DF	121	SER

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Mol	Chain	Res	Type
27	DF	125	ARG
27	DF	132	VAL
27	DF	140	GLU
27	DF	141	ILE
27	DF	143	TYR
27	DF	147	ASP
27	DF	150	ARG
27	DF	164	GLU
27	DF	174	ASP
27	DF	177	PHE
28	DG	11	VAL
28	DG	17	VAL
28	DG	24	ILE
28	DG	29	LYS
28	DG	30	ASN
28	DG	42	GLU
28	DG	44	LYS
28	DG	45	HIS
28	DG	49	THR
28	DG	56	ASP
28	DG	62	TRP
28	DG	69	ARG
28	DG	72	LEU
28	DG	76	VAL
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	125	CYS
28	DG	127	THR
28	DG	139	GLN
28	DG	144	VAL
28	DG	149	ARG
28	DG	151	TYR
28	DG	155	GLU
28	DG	158	LYS
28	DG	168	VAL
28	DG	172	LYS
29	DH	7	ASP
29	DH	12	LEU

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Mol	Chain	Res	Type
29	DH	41	LYS
29	DH	42	LYS
29	DH	48	GLU
29	DH	53	GLU
29	DH	54	LEU
29	DH	62	LEU
29	DH	77	THR
29	DH	78	VAL
29	DH	87	GLU
29	DH	89	LYS
29	DH	94	ILE
29	DH	103	VAL
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	142	VAL
29	DH	146	VAL
29	DH	149	GLU
30	DI	3	LYS
30	DI	4	LYS
30	DI	8	TYR
30	DI	11	LEU
30	DI	12	GLN
30	DI	17	MET
30	DI	24	VAL
30	DI	28	LEU
30	DI	38	PHE
30	DI	40	LYS
30	DI	49	ILE
30	DI	64	ASP
30	DI	68	THR
30	DI	69	PHE
30	DI	72	LYS
30	DI	79	LEU
30	DI	82	LYS
30	DI	86	ILE
30	DI	87	LYS

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Mol	Chain	Res	Type
30	DI	88	SER
30	DI	97	LYS
30	DI	98	VAL
30	DI	100	LYS
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	125	MET
30	DI	127	ARG
30	DI	136	MET
31	DJ	7	LYS
31	DJ	9	GLU
31	DJ	14	ASP
31	DJ	30	THR
31	DJ	39	LYS
31	DJ	40	HIS
31	DJ	43	GLU
31	DJ	50	THR
31	DJ	62	VAL
31	DJ	65	THR
31	DJ	76	HIS
31	DJ	81	ILE
31	DJ	84	ILE
31	DJ	101	ILE
31	DJ	103	ILE
31	DJ	109	LEU
31	DJ	138	GLN
32	DK	25	LEU
32	DK	47	ILE
32	DK	53	LYS
32	DK	66	LYS
32	DK	67	LYS
32	DK	87	LEU
32	DK	92	GLU
32	DK	95	ILE
32	DK	104	THR
32	DK	108	ARG
32	DK	110	GLU
32	DK	114	LYS

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Mol	Chain	Res	Type
32	DK	122	VAL
33	DL	2	ARG
33	DL	21	ARG
33	DL	25	SER
33	DL	29	LYS
33	DL	59	ARG
33	DL	78	ARG
33	DL	82	LEU
33	DL	84	LYS
33	DL	86	GLU
33	DL	94	THR
33	DL	100	ILE
33	DL	103	ILE
33	DL	104	GLN
33	DL	106	GLU
33	DL	118	THR
33	DL	120	VAL
33	DL	126	ARG
33	DL	136	GLU
34	DM	14	LYS
34	DM	47	GLU
34	DM	54	THR
34	DM	59	ARG
34	DM	60	GLN
34	DM	70	ASP
34	DM	100	LYS
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	48	VAL
35	DN	51	LEU
35	DN	53	THR

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Mol	Chain	Res	Type
35	DN	65	LEU
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
36	DO	5	SER
36	DO	9	ARG
36	DO	12	THR
36	DO	18	LEU
36	DO	26	LEU
36	DO	31	THR
36	DO	35	ILE
36	DO	36	TYR
36	DO	46	GLU
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
37	DP	4	ILE
37	DP	26	VAL
37	DP	68	GLU
37	DP	73	VAL
37	DP	83	SER
37	DP	93	ARG
37	DP	96	LYS
37	DP	109	ARG
37	DP	110	ILE
37	DP	112	GLU
38	DQ	5	LYS
38	DQ	6	ARG
38	DQ	9	ILE

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Mol	Chain	Res	Type
38	DQ	11	ARG
38	DQ	17	ILE
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	107	THR
38	DQ	117	LEU
39	DR	25	LEU
39	DR	33	VAL
39	DR	41	ILE
39	DR	46	GLU
39	DR	48	LYS
39	DR	58	VAL
39	DR	101	ILE
40	DS	19	LEU
40	DS	20	VAL
40	DS	23	LEU
40	DS	41	LYS
40	DS	47	VAL
40	DS	67	ASP
40	DS	70	LYS
40	DS	72	THR
40	DS	74	ILE
40	DS	76	VAL
40	DS	96	ILE
40	DS	107	VAL
41	DT	3	ARG
41	DT	5	GLU
41	DT	18	GLU
41	DT	22	THR
41	DT	26	LYS
41	DT	30	ILE
41	DT	32	LEU
41	DT	44	LYS
41	DT	49	LYS
41	DT	50	LEU
41	DT	68	LYS
41	DT	69	ARG

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Mol	Chain	Res	Type
41	DT	72	GLN
41	DT	74	ILE
41	DT	77	ARG
41	DT	79	ASP
42	DU	11	VAL
42	DU	12	ILE
42	DU	18	ASP
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
42	DU	102	THR
43	DV	2	PHE
43	DV	3	THR
43	DV	29	ILE
43	DV	30	ILE
43	DV	42	LEU
43	DV	43	ASP
43	DV	50	MET
43	DV	51	GLN
43	DV	53	LYS
43	DV	65	VAL
43	DV	68	LYS
44	DW	20	ARG
44	DW	39	ARG
44	DW	41	ARG
44	DW	50	ASN
44	DW	66	LYS
44	DW	72	LYS
44	DW	85	GLU
45	DX	4	VAL
45	DX	13	VAL
45	DX	25	THR
45	DX	26	LYS

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Mol	Chain	Res	Type
45	DX	37	ARG
45	DX	46	PHE
45	DX	47	VAL
45	DX	54	LYS
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	38	GLN
46	DY	39	GLN
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	27	LEU
47	DZ	31	ARG
47	DZ	36	VAL
47	DZ	41	THR
47	DZ	52	SER
47	DZ	57	VAL
48	D0	3	VAL
48	D0	20	ASP
48	D0	22	LEU
48	D0	25	VAL
48	D0	28	LEU
48	D0	50	ARG
49	D1	5	ILE
49	D1	12	VAL
49	D1	17	THR
49	D1	19	HIS
49	D1	26	ASN

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Mol	Chain	Res	Type
49	D1	42	VAL
49	D1	46	HIS
49	D1	47	VAL
50	D2	4	THR
50	D2	10	LEU
50	D2	11	LYS
50	D2	24	THR
50	D2	41	ARG
50	D2	42	LEU
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	20	ASP
52	D4	26	ILE
52	D4	32	LYS
52	D4	34	LYS
52	D4	37	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (99) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	42	ASN
5	AE	70	ASN
5	AE	77	ASN
8	AH	18	GLN
9	AI	126	GLN
11	AK	22	HIS
11	AK	40	ASN
15	AO	40	GLN
15	AO	50	HIS
17	AQ	31	HIS
17	AQ	45	HIS
19	AS	14	HIS
20	AT	20	HIS

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Mol	Chain	Res	Type
20	AT	52	ASN
24	BC	117	GLN
24	BC	239	ASN
26	BE	92	HIS
26	BE	94	GLN
27	BF	21	ASN
27	BF	27	GLN
29	BH	20	ASN
29	BH	119	ASN
29	BH	135	HIS
30	BI	6	GLN
31	BJ	47	HIS
31	BJ	77	HIS
31	BJ	86	GLN
35	BN	31	HIS
36	BO	98	GLN
37	BP	7	GLN
37	BP	66	ASN
38	BQ	20	GLN
38	BQ	52	GLN
38	BQ	72	ASN
38	BQ	81	ASN
43	BV	24	ASN
43	BV	87	GLN
46	BY	27	ASN
46	BY	58	ASN
52	B4	37	GLN
53	B5	67	HIS
2	CB	39	HIS
2	CB	120	GLN
3	CC	176	HIS
3	CC	190	HIS
5	CE	122	ASN
6	CF	68	GLN
7	CG	97	ASN
7	CG	148	ASN
9	CI	25	ASN
9	CI	81	HIS
10	CJ	99	GLN
14	CN	60	GLN
15	CO	42	HIS
15	CO	46	HIS

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Mol	Chain	Res	Type
15	CO	50	HIS
17	CQ	31	HIS
17	CQ	51	ASN
18	CR	54	GLN
18	CR	74	HIS
19	CS	56	GLN
20	CT	3	ASN
20	CT	61	GLN
24	DC	25	HIS
24	DC	44	ASN
24	DC	251	GLN
25	DD	140	HIS
25	DD	150	GLN
25	DD	185	ASN
27	DF	37	ASN
28	DG	115	HIS
29	DH	20	ASN
30	DI	12	GLN
30	DI	43	ASN
30	DI	94	ASN
31	DJ	130	HIS
32	DK	3	GLN
32	DK	9	ASN
35	DN	23	ASN
35	DN	62	ASN
37	DP	41	GLN
39	DR	66	HIS
39	DR	89	HIS
40	DS	7	HIS
41	DT	15	HIS
41	DT	59	ASN
41	DT	92	ASN
42	DU	74	ASN
44	DW	46	HIS
45	DX	34	HIS
46	DY	36	GLN
46	DY	41	HIS
46	DY	45	GLN
48	D0	19	HIS
49	D1	19	HIS
51	D3	24	HIS
51	D3	26	HIS

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Mol	Chain	Res	Type
51	D3	31	HIS
52	D4	13	ASN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1537/1539 (99%)	324 (21%)	11 (0%)
1	CA	1538/1539 (99%)	342 (22%)	10 (0%)
22	BA	2895/2903 (99%)	580 (20%)	24 (0%)
22	DA	2895/2903 (99%)	704 (24%)	32 (1%)
23	BB	118/119 (99%)	16 (13%)	0
23	DB	117/119 (98%)	20 (17%)	0
All	All	9100/9122 (99%)	1986 (21%)	77 (0%)

All (1986) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	3	A
1	AA	4	U
1	AA	5	U
1	AA	6	G
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

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Mol	Chain	Res	Type
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
1	AA	111	G
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	136	C
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	174	A
1	AA	177	G
1	AA	180	U
1	AA	181	A
1	AA	182	A
1	AA	183	C
1	AA	188	C
1	AA	195	A
1	AA	197	A
1	AA	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

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Mol	Chain	Res	Type
1	AA	262	A
1	AA	263	A
1	AA	266	G
1	AA	267	C
1	AA	281	G
1	AA	285	C
1	AA	289	G
1	AA	320	A
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	367	U
1	AA	372	C
1	AA	373	A
1	AA	376	G
1	AA	384	G
1	AA	392	C
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	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

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Mol	Chain	Res	Type
1	AA	467	U
1	AA	468	A
1	AA	476	U
1	AA	479	U
1	AA	481	G
1	AA	482	A
1	AA	484	G
1	AA	485	U
1	AA	486	U
1	AA	495	A
1	AA	498	A
1	AA	501	C
1	AA	505	G
1	AA	511	C
1	AA	518	C
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	547	A
1	AA	559	A
1	AA	562	U
1	AA	564	C
1	AA	565	U
1	AA	566	G
1	AA	570	G
1	AA	573	A
1	AA	576	C
1	AA	588	G
1	AA	591	U
1	AA	615	G
1	AA	631	C
1	AA	632	U
1	AA	651	C
1	AA	652	U
1	AA	653	U
1	AA	661	G
1	AA	665	A
1	AA	671	G

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Mol	Chain	Res	Type
1	AA	702	A
1	AA	703	G
1	AA	721	G
1	AA	723	U
1	AA	724	G
1	AA	731	G
1	AA	734	G
1	AA	748	G
1	AA	750	C
1	AA	753	A
1	AA	755	G
1	AA	773	G
1	AA	777	A
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	814	A
1	AA	815	A
1	AA	817	C
1	AA	828	U
1	AA	832	G
1	AA	836	G
1	AA	841	C
1	AA	842	U
1	AA	843	U
1	AA	845	A
1	AA	846	G
1	AA	849	G
1	AA	851	G
1	AA	854	U
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	921	U
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	958	A

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Mol	Chain	Res	Type
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
1	AA	977	A
1	AA	986	U
1	AA	987	G
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	1046	A
1	AA	1050	G
1	AA	1065	U
1	AA	1066	C
1	AA	1070	U
1	AA	1084	G
1	AA	1086	U
1	AA	1090	U
1	AA	1091	U
1	AA	1092	A
1	AA	1093	A
1	AA	1094	G
1	AA	1095	U

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Mol	Chain	Res	Type
1	AA	1098	C
1	AA	1101	A
1	AA	1124	G
1	AA	1125	U
1	AA	1133	G
1	AA	1135	U
1	AA	1136	C
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
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	1171	A
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	1238	A
1	AA	1239	A
1	AA	1240	U
1	AA	1250	A
1	AA	1256	A
1	AA	1258	G
1	AA	1280	A

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Mol	Chain	Res	Type
1	AA	1286	U
1	AA	1287	A
1	AA	1293	C
1	AA	1299	A
1	AA	1300	G
1	AA	1302	C
1	AA	1304	G
1	AA	1305	G
1	AA	1312	G
1	AA	1317	C
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

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Mol	Chain	Res	Type
1	AA	1506	U
1	AA	1517	G
1	AA	1529	G
1	AA	1530	G
1	AA	1535	C
1	AA	1538	C
22	BA	10	A
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	80	G
22	BA	103	A
22	BA	106	C
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	180	G
22	BA	181	A
22	BA	196	A
22	BA	215	G
22	BA	216	A
22	BA	221	A
22	BA	222	A
22	BA	248	G
22	BA	255	A
22	BA	257	C
22	BA	265	A

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Mol	Chain	Res	Type
22	BA	266	G
22	BA	271	G
22	BA	272	A
22	BA	276	U
22	BA	277	G
22	BA	279	A
22	BA	299	A
22	BA	302	C
22	BA	311	A
22	BA	325	G
22	BA	329	G
22	BA	330	A
22	BA	340	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	396	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	456	C
22	BA	457	A
22	BA	468	G
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

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Mol	Chain	Res	Type
22	BA	531	C
22	BA	532	A
22	BA	544	C
22	BA	546	U
22	BA	547	A
22	BA	548	G
22	BA	549	G
22	BA	550	C
22	BA	563	A
22	BA	573	U
22	BA	575	A
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	653	U
22	BA	654	A
22	BA	655	A
22	BA	664	G
22	BA	669	G
22	BA	670	A
22	BA	686	U
22	BA	702	U
22	BA	729	G
22	BA	730	A
22	BA	738	G
22	BA	740	C
22	BA	747	U
22	BA	759	G
22	BA	764	A
22	BA	765	C
22	BA	775	G
22	BA	776	G

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Mol	Chain	Res	Type
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	801	G
22	BA	805	G
22	BA	812	C
22	BA	814	C
22	BA	816	C
22	BA	819	A
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	974	G
22	BA	978	G
22	BA	982	C
22	BA	983	A

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Mol	Chain	Res	Type
22	BA	984	A
22	BA	985	C
22	BA	990	A
22	BA	991	C
22	BA	995	C
22	BA	996	A
22	BA	999	U
22	BA	1005	C
22	BA	1012	U
22	BA	1013	C
22	BA	1022	G
22	BA	1026	G
22	BA	1033	U
22	BA	1040	A
22	BA	1046	A
22	BA	1047	G
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	1071	G
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	1095	A

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Mol	Chain	Res	Type
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	1112	G
22	BA	1132	U
22	BA	1133	A
22	BA	1135	C
22	BA	1136	G
22	BA	1138	G
22	BA	1139	G
22	BA	1142	A
22	BA	1144	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	1189	A
22	BA	1218	G
22	BA	1230	A
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	1275	A
22	BA	1294	U
22	BA	1300	G
22	BA	1301	A
22	BA	1303	G

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Mol	Chain	Res	Type
22	BA	1305	C
22	BA	1320	C
22	BA	1325	U
22	BA	1332	G
22	BA	1345	C
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
22	BA	1377	G
22	BA	1378	A
22	BA	1379	U
22	BA	1383	A
22	BA	1384	A
22	BA	1386	C
22	BA	1406	U
22	BA	1407	G
22	BA	1411	U
22	BA	1416	G
22	BA	1419	A
22	BA	1420	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	1461	C
22	BA	1467	U
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

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Mol	Chain	Res	Type
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
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	1632	A
22	BA	1647	U
22	BA	1648	U
22	BA	1649	G
22	BA	1653	G
22	BA	1674	G
22	BA	1685	C
22	BA	1688	U
22	BA	1689	A
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	1744	A
22	BA	1758	U
22	BA	1764	C
22	BA	1773	A
22	BA	1776	G

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Mol	Chain	Res	Type
22	BA	1782	U
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	1828	G
22	BA	1829	A
22	BA	1835	G
22	BA	1840	G
22	BA	1841	U
22	BA	1842	G
22	BA	1847	A
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	1880	U
22	BA	1885	A
22	BA	1888	G
22	BA	1890	A
22	BA	1900	A
22	BA	1906	G
22	BA	1909	C
22	BA	1912	A
22	BA	1913	A
22	BA	1914	C
22	BA	1915	U
22	BA	1916	A
22	BA	1917	U
22	BA	1919	A
22	BA	1920	C
22	BA	1923	U
22	BA	1924	C
22	BA	1925	C
22	BA	1926	U
22	BA	1929	G

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Mol	Chain	Res	Type
22	BA	1930	G
22	BA	1931	U
22	BA	1932	A
22	BA	1938	A
22	BA	1955	U
22	BA	1959	G
22	BA	1964	G
22	BA	1965	C
22	BA	1967	C
22	BA	1970	A
22	BA	1972	G
22	BA	1975	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	2009	A
22	BA	2022	U
22	BA	2023	C
22	BA	2031	A
22	BA	2033	A
22	BA	2043	C
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	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

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Mol	Chain	Res	Type
22	BA	2111	U
22	BA	2112	G
22	BA	2113	U
22	BA	2115	G
22	BA	2116	G
22	BA	2117	A
22	BA	2118	U
22	BA	2119	A
22	BA	2122	U
22	BA	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	2174	C
22	BA	2178	C
22	BA	2179	C
22	BA	2181	U
22	BA	2182	U
22	BA	2187	U
22	BA	2190	G
22	BA	2197	U
22	BA	2198	A

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Mol	Chain	Res	Type
22	BA	2203	U
22	BA	2204	G
22	BA	2210	U
22	BA	2211	A
22	BA	2212	A
22	BA	2214	C
22	BA	2220	U
22	BA	2225	A
22	BA	2238	G
22	BA	2239	G
22	BA	2248	C
22	BA	2250	G
22	BA	2268	A
22	BA	2272	U
22	BA	2278	A
22	BA	2283	C
22	BA	2286	G
22	BA	2287	A
22	BA	2296	U
22	BA	2297	A
22	BA	2305	U
22	BA	2308	G
22	BA	2309	A
22	BA	2311	A
22	BA	2322	A
22	BA	2325	G
22	BA	2326	C
22	BA	2327	A
22	BA	2331	G
22	BA	2335	A
22	BA	2345	G
22	BA	2346	A
22	BA	2347	C
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	2412	A

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Mol	Chain	Res	Type
22	BA	2420	C
22	BA	2422	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
22	BA	2441	U
22	BA	2448	A
22	BA	2465	C
22	BA	2474	U
22	BA	2476	A
22	BA	2478	A
22	BA	2484	G
22	BA	2487	G
22	BA	2490	G
22	BA	2491	U
22	BA	2497	A
22	BA	2502	G
22	BA	2503	A
22	BA	2504	U
22	BA	2505	G
22	BA	2506	U
22	BA	2508	G
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	2566	A
22	BA	2567	G
22	BA	2573	C
22	BA	2576	G
22	BA	2578	G
22	BA	2594	C
22	BA	2602	A
22	BA	2603	G
22	BA	2609	U
22	BA	2613	U

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Mol	Chain	Res	Type
22	BA	2615	U
22	BA	2629	U
22	BA	2652	C
22	BA	2662	A
22	BA	2688	G
22	BA	2689	U
22	BA	2690	U
22	BA	2714	G
22	BA	2726	A
22	BA	2729	G
22	BA	2732	G
22	BA	2733	A
22	BA	2744	G
22	BA	2748	A
22	BA	2757	A
22	BA	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	2803	G
22	BA	2811	G
22	BA	2820	A
22	BA	2821	A
22	BA	2825	G
22	BA	2827	C
22	BA	2835	A
22	BA	2862	G
22	BA	2867	G
22	BA	2873	A
22	BA	2874	C
22	BA	2879	A
22	BA	2880	C
22	BA	2883	A
22	BA	2884	U
22	BA	2885	G
22	BA	2887	A
22	BA	2903	U
23	BB	2	G
23	BB	9	G

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Mol	Chain	Res	Type
23	BB	15	A
23	BB	16	G
23	BB	25	U
23	BB	35	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
23	BB	119	A
1	CA	3	A
1	CA	5	U
1	CA	6	G
1	CA	9	G
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	55	A
1	CA	65	A
1	CA	67	C
1	CA	68	G
1	CA	70	U
1	CA	71	A
1	CA	73	C
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

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Mol	Chain	Res	Type
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	129	A
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
1	CA	159	G
1	CA	173	U
1	CA	174	A
1	CA	176	C
1	CA	181	A
1	CA	182	A
1	CA	183	C
1	CA	184	G
1	CA	185	U
1	CA	186	C
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	241	G

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Mol	Chain	Res	Type
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	259	G
1	CA	266	G
1	CA	267	C
1	CA	268	U
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
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	404	G
1	CA	406	G
1	CA	409	U
1	CA	411	A
1	CA	412	A
1	CA	413	G
1	CA	421	U
1	CA	422	C
1	CA	424	G

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Mol	Chain	Res	Type
1	CA	427	U
1	CA	429	U
1	CA	430	A
1	CA	439	U
1	CA	440	C
1	CA	446	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	505	G
1	CA	509	A
1	CA	511	C
1	CA	518	C
1	CA	519	C
1	CA	524	G
1	CA	527	G
1	CA	530	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	582	C
1	CA	615	G

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Mol	Chain	Res	Type
1	CA	619	U
1	CA	622	A
1	CA	628	G
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	765	G
1	CA	777	A
1	CA	785	G
1	CA	787	A
1	CA	793	U
1	CA	794	A
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	906	A
1	CA	914	A
1	CA	922	G

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Mol	Chain	Res	Type
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
1	CA	1020	G
1	CA	1022	A
1	CA	1025	U
1	CA	1026	G
1	CA	1027	C
1	CA	1028	C
1	CA	1030	U
1	CA	1031	C
1	CA	1032	G
1	CA	1033	G
1	CA	1034	G
1	CA	1037	C
1	CA	1039	G
1	CA	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

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Mol	Chain	Res	Type
1	CA	1070	U
1	CA	1072	G
1	CA	1073	U
1	CA	1086	U
1	CA	1089	G
1	CA	1094	G
1	CA	1095	U
1	CA	1096	C
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
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	1184	G
1	CA	1187	G
1	CA	1196	A
1	CA	1197	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

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Mol	Chain	Res	Type
1	CA	1238	A
1	CA	1239	A
1	CA	1240	U
1	CA	1253	G
1	CA	1256	A
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
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

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Mol	Chain	Res	Type
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	1499	A
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
22	DA	42	A
22	DA	43	G
22	DA	46	G
22	DA	57	C
22	DA	61	C
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

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Mol	Chain	Res	Type
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
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	198	C
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

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Mol	Chain	Res	Type
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	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	285	G
22	DA	291	G
22	DA	294	A
22	DA	311	A
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	359	G
22	DA	361	G
22	DA	362	A
22	DA	367	G
22	DA	370	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

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Mol	Chain	Res	Type
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
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	542	C
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

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Mol	Chain	Res	Type
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	622	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	646	U
22	DA	647	G
22	DA	648	G
22	DA	654	A
22	DA	655	A
22	DA	656	G
22	DA	657	U
22	DA	662	G
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	701	G
22	DA	702	U
22	DA	717	C
22	DA	726	G
22	DA	727	A
22	DA	728	G
22	DA	729	G
22	DA	730	A

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Mol	Chain	Res	Type
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	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
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

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Mol	Chain	Res	Type
22	DA	907	G
22	DA	910	A
22	DA	914	G
22	DA	915	C
22	DA	931	U
22	DA	932	U
22	DA	933	A
22	DA	941	A
22	DA	946	C
22	DA	951	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
22	DA	1026	G
22	DA	1033	U
22	DA	1046	A
22	DA	1047	G
22	DA	1051	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	1068	G
22	DA	1069	A
22	DA	1070	A
22	DA	1071	G
22	DA	1072	C
22	DA	1074	G
22	DA	1075	C
22	DA	1077	A

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Mol	Chain	Res	Type
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	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	1122	G
22	DA	1128	G
22	DA	1132	U
22	DA	1135	C
22	DA	1136	G
22	DA	1139	G
22	DA	1142	A
22	DA	1153	C
22	DA	1155	A
22	DA	1171	G
22	DA	1172	C
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

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Mol	Chain	Res	Type
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	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
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

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Mol	Chain	Res	Type
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	1453	A
22	DA	1454	C
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
22	DA	1531	C
22	DA	1533	C
22	DA	1534	U
22	DA	1535	A
22	DA	1536	C
22	DA	1537	G
22	DA	1540	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

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Mol	Chain	Res	Type
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	1634	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	1660	G
22	DA	1663	G
22	DA	1664	A
22	DA	1674	G
22	DA	1715	G
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	1759	A
22	DA	1764	C
22	DA	1767	G
22	DA	1773	A
22	DA	1781	U
22	DA	1782	U
22	DA	1791	A
22	DA	1793	C

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Mol	Chain	Res	Type
22	DA	1800	C
22	DA	1801	A
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	1828	G
22	DA	1829	A
22	DA	1833	C
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
22	DA	1945	G
22	DA	1955	U
22	DA	1965	C
22	DA	1966	A
22	DA	1967	C
22	DA	1970	A
22	DA	1971	U
22	DA	1972	G
22	DA	1975	G
22	DA	1981	A

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Mol	Chain	Res	Type
22	DA	1987	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	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	2072	C
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	2109	U
22	DA	2110	G
22	DA	2111	U
22	DA	2112	G
22	DA	2113	U
22	DA	2115	G
22	DA	2116	G
22	DA	2117	A
22	DA	2118	U
22	DA	2119	A
22	DA	2120	G

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Mol	Chain	Res	Type
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	2143	C
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
22	DA	2238	G
22	DA	2239	G
22	DA	2242	G
22	DA	2243	U
22	DA	2245	U
22	DA	2246	G

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Mol	Chain	Res	Type
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	2289	G
22	DA	2305	U
22	DA	2307	G
22	DA	2308	G
22	DA	2309	A
22	DA	2310	C
22	DA	2311	A
22	DA	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	2409	G
22	DA	2410	G
22	DA	2412	A
22	DA	2417	C
22	DA	2423	U
22	DA	2424	C
22	DA	2425	A
22	DA	2426	A

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Mol	Chain	Res	Type
22	DA	2429	G
22	DA	2430	A
22	DA	2431	U
22	DA	2435	A
22	DA	2440	C
22	DA	2441	U
22	DA	2446	G
22	DA	2447	G
22	DA	2448	A
22	DA	2449	U
22	DA	2465	C
22	DA	2470	G
22	DA	2476	A
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	2559	C
22	DA	2563	U
22	DA	2566	A
22	DA	2567	G
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
22	DA	2624	G
22	DA	2629	U

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Mol	Chain	Res	Type
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	2689	U
22	DA	2690	U
22	DA	2691	C
22	DA	2714	G
22	DA	2716	C
22	DA	2718	G
22	DA	2719	G
22	DA	2726	A
22	DA	2727	A
22	DA	2729	G
22	DA	2739	U
22	DA	2741	A
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	2807	U
22	DA	2809	A
22	DA	2812	G
22	DA	2818	U
22	DA	2820	A
22	DA	2821	A
22	DA	2823	A
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

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Mol	Chain	Res	Type
22	DA	2855	C
22	DA	2861	U
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 (77) 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

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Mol	Chain	Res	Type
1	AA	1201	A
1	AA	1211	U
1	AA	1505	G
22	BA	70	G
22	BA	199	A
22	BA	271	G
22	BA	404	A
22	BA	455	C
22	BA	764	A
22	BA	784	G
22	BA	800	A
22	BA	960	A
22	BA	984	A
22	BA	995	C
22	BA	1344	U
22	BA	1378	A
22	BA	1494	A
22	BA	1554	U
22	BA	1583	A
22	BA	1606	C
22	BA	1757	A
22	BA	1875	G
22	BA	2127	G
22	BA	2211	A
22	BA	2286	G
22	BA	2326	C
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
1	CA	1279	G
1	CA	1317	C
22	DA	271	G
22	DA	404	A
22	DA	479	A
22	DA	613	A
22	DA	800	A

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Mol	Chain	Res	Type
22	DA	846	U
22	DA	877	A
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	2157	G
22	DA	2162	G
22	DA	2211	A
22	DA	2225	A
22	DA	2286	G
22	DA	2308	G
22	DA	2326	C
22	DA	2425	A
22	DA	2602	A
22	DA	2655	G
22	DA	2756	U
22	DA	2820	A

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

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

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
54	MHV	D6	6	54	7,9,10	1.20	0	8,11,13	2.99	3 (37%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
54	MHW	B6	1	54	9,9,10	1.63	1 (11%)	10,11,13	2.89	5 (50%)
54	DBB	B6	3	54	4,5,6	1.37	0	1,5,7	0.88	0
54	DBB	D6	3	54	4,5,6	1.23	0	1,5,7	0.34	0
54	004	D6	7	54	9,10,11	0.82	0	9,12,14	0.69	0
54	004	B6	7	54	9,10,11	1.62	1 (11%)	9,12,14	1.68	2 (22%)
54	MHU	B6	5	54	14,15,16	1.86	3 (21%)	18,19,21	1.31	3 (16%)
54	MHU	D6	5	54	14,15,16	1.68	3 (21%)	18,19,21	1.17	2 (11%)
54	MHW	D6	1	54	9,9,10	1.92	1 (11%)	10,11,13	2.93	3 (30%)
54	MHV	B6	6	54	7,9,10	1.63	1 (14%)	8,11,13	3.21	5 (62%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
54	MHV	D6	6	54	-	0/1/12/14	0/1/1/1
54	MHW	B6	1	54	-	0/2/2/4	0/1/1/1
54	DBB	B6	3	54	-	1/3/4/6	-
54	DBB	D6	3	54	-	0/3/4/6	-
54	004	D6	7	54	-	0/4/6/8	0/1/1/1
54	004	B6	7	54	-	0/4/6/8	0/1/1/1
54	MHU	B6	5	54	-	0/9/12/14	0/1/1/1
54	MHU	D6	5	54	-	0/9/12/14	0/1/1/1
54	MHW	D6	1	54	-	0/2/2/4	0/1/1/1
54	MHV	B6	6	54	-	0/1/12/14	0/1/1/1

All (10) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	B6	5	MHU	CZ-NZ	5.24	1.49	1.37
54	D6	1	MHW	CA-C	5.01	1.54	1.48
54	D6	5	MHU	CZ-NZ	4.71	1.48	1.37
54	B6	7	004	CB-CA	-4.57	1.48	1.52
54	B6	1	MHW	CA-C	3.81	1.52	1.48
54	B6	6	MHV	CB-CG	-3.09	1.45	1.50
54	B6	5	MHU	CD2-CE2	2.42	1.42	1.38
54	D6	5	MHU	CD2-CE2	2.22	1.42	1.38
54	B6	5	MHU	CB-CG	2.18	1.56	1.51
54	D6	5	MHU	CB-CG	2.14	1.56	1.51

All (23) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	D6	1	MHW	CD-CE-N	6.77	134.13	123.42
54	B6	1	MHW	CD-CE-N	6.08	133.04	123.42
54	B6	6	MHV	CD2-CG-CB	5.42	124.11	115.89
54	D6	6	MHV	CD2-CE-N	-5.25	98.62	109.98
54	D6	6	MHV	CD2-CG-CB	5.04	123.53	115.89
54	D6	1	MHW	CG2-CD-CE	-5.02	111.66	118.92
54	B6	6	MHV	CD2-CE-N	-4.82	99.55	109.98
54	B6	6	MHV	OD1-CG-CB	-4.16	116.26	121.95
54	B6	1	MHW	CG2-CD-CE	-3.99	113.14	118.92
54	B6	1	MHW	CB-CA-C	-3.61	117.41	120.09
54	B6	7	004	CG2-CB-CG1	3.24	122.32	118.30
54	D6	1	MHW	O-C-CA	-3.23	120.32	124.37
54	B6	1	MHW	O-C-CA	-3.15	120.42	124.37
54	D6	5	MHU	O-C-CA	-2.62	118.03	124.77
54	D6	6	MHV	OD1-CG-CD2	-2.61	117.19	122.07
54	D6	5	MHU	CE2-CZ-NZ	-2.50	118.31	121.65
54	B6	5	MHU	CB-CA-N	2.48	114.13	110.48
54	B6	5	MHU	CE2-CZ-NZ	-2.34	118.52	121.65
54	B6	5	MHU	CB-CA-C	-2.32	107.20	111.81
54	B6	7	004	CD1-CG1-CB	-2.16	118.06	120.65
54	B6	6	MHV	CB-CA-N	-2.10	108.17	112.50
54	B6	1	MHW	CE-N-CA	-2.08	113.35	116.83
54	B6	6	MHV	CE-N-CA	2.02	116.31	111.75

There are no chirality outliers.

All (1) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
54	B6	3	DBB	N-CA-CB-CG

There are no ring outliers.

6 monomers are involved in 11 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
54	D6	6	MHV	1	0
54	D6	3	DBB	1	0
54	D6	7	004	4	0
54	B6	7	004	1	0
54	D6	5	MHU	3	0
54	D6	1	MHW	2	0

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 502 ligands modelled in this entry, 500 are monoatomic - leaving 2 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
56	DOL	BA	3001	-	47,50,50	3.24	17 (36%)	57,70,70	2.83	18 (31%)
56	DOL	DA	3001	-	47,50,50	3.30	17 (36%)	57,70,70	2.90	17 (29%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
56	DOL	BA	3001	-	-	17/64/77/77	0/2/3/3
56	DOL	DA	3001	-	-	13/64/77/77	0/2/3/3

All (34) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	DA	3001	DOL	C10-N9	9.53	1.39	1.29
56	BA	3001	DOL	C10-N9	9.35	1.39	1.29
56	DA	3001	DOL	O15-C14	9.00	1.37	1.21
56	BA	3001	DOL	O15-C14	8.64	1.36	1.21
56	DA	3001	DOL	C6-N5	8.00	1.46	1.34
56	DA	3001	DOL	C22-C23	7.55	1.53	1.32
56	BA	3001	DOL	C22-C23	7.29	1.52	1.32
56	BA	3001	DOL	C6-N5	7.00	1.44	1.34
56	DA	3001	DOL	O38-C37	6.38	1.37	1.21
56	BA	3001	DOL	C26-N25	6.28	1.47	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	DA	3001	DOL	C26-N25	6.26	1.47	1.34
56	DA	3001	DOL	C19-C20	6.22	1.51	1.34
56	BA	3001	DOL	O38-C37	6.14	1.36	1.21
56	BA	3001	DOL	C19-C20	5.92	1.50	1.34
56	BA	3001	DOL	C3-C2	-4.15	1.47	1.54
56	DA	3001	DOL	C28-C29	3.69	1.40	1.32
56	BA	3001	DOL	C28-C29	3.68	1.40	1.32
56	BA	3001	DOL	O36-C32	-3.66	1.39	1.44
56	DA	3001	DOL	C3-C2	-3.35	1.49	1.54
56	DA	3001	DOL	O18-C17	-3.27	1.38	1.43
56	BA	3001	DOL	O36-C37	-3.06	1.27	1.34
56	DA	3001	DOL	C12-C8	3.03	1.37	1.34
56	BA	3001	DOL	C12-C8	2.95	1.37	1.34
56	BA	3001	DOL	O18-C17	-2.94	1.38	1.43
56	DA	3001	DOL	C22-C20	2.87	1.52	1.46
56	BA	3001	DOL	C22-C20	2.77	1.51	1.46
56	BA	3001	DOL	C16-C17	-2.68	1.49	1.54
56	DA	3001	DOL	O36-C32	-2.64	1.40	1.44
56	DA	3001	DOL	C16-C17	-2.62	1.49	1.54
56	BA	3001	DOL	C8-C6	2.37	1.53	1.49
56	DA	3001	DOL	O36-C37	-2.33	1.29	1.34
56	BA	3001	DOL	C3-C4	2.30	1.57	1.52
56	DA	3001	DOL	C8-C6	2.15	1.52	1.49
56	DA	3001	DOL	C3-C4	2.13	1.56	1.52

All (35) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	DA	3001	DOL	O40-S39-O41	-15.48	100.57	118.13
56	BA	3001	DOL	O40-S39-O41	-14.69	101.47	118.13
56	DA	3001	DOL	O11-C10-C13	6.54	123.74	117.70
56	BA	3001	DOL	C29-C28-C26	-6.27	107.93	122.67
56	BA	3001	DOL	O11-C10-C13	5.78	123.05	117.70
56	DA	3001	DOL	C4-N5-C1	-5.36	106.22	112.51
56	BA	3001	DOL	C23-C22-C20	-4.62	118.91	125.89
56	DA	3001	DOL	C29-C28-C26	-4.51	112.07	122.67
56	DA	3001	DOL	O36-C37-C1	4.24	120.04	111.48
56	BA	3001	DOL	C12-C8-C6	-3.87	120.33	127.60
56	DA	3001	DOL	C30-C29-C28	-3.87	116.08	126.30
56	DA	3001	DOL	C23-C22-C20	-3.72	120.27	125.89
56	BA	3001	DOL	O7-C6-N5	-3.58	115.16	122.17
56	BA	3001	DOL	C4-N5-C1	-3.48	108.42	112.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	BA	3001	DOL	C30-C29-C28	-3.00	118.37	126.30
56	DA	3001	DOL	O11-C10-N9	-2.78	111.08	114.09
56	BA	3001	DOL	C12-C8-N9	2.76	111.20	109.15
56	BA	3001	DOL	C6-C8-N9	2.72	128.46	123.70
56	DA	3001	DOL	O36-C32-C30	2.71	111.60	107.12
56	DA	3001	DOL	C32-O36-C37	2.71	122.27	117.76
56	BA	3001	DOL	O40-S39-C2	2.68	111.08	108.50
56	DA	3001	DOL	O38-C37-C1	-2.65	119.52	124.58
56	DA	3001	DOL	O41-S39-C2	2.65	111.06	108.50
56	DA	3001	DOL	C31-C30-C32	2.62	115.71	111.11
56	BA	3001	DOL	O36-C37-C1	2.62	116.76	111.48
56	DA	3001	DOL	C14-C13-C10	-2.59	107.17	112.73
56	BA	3001	DOL	C14-C13-C10	-2.54	107.29	112.73
56	BA	3001	DOL	O11-C10-N9	-2.52	111.36	114.09
56	BA	3001	DOL	C28-C26-N25	2.52	120.59	115.07
56	BA	3001	DOL	C24-N25-C26	-2.36	118.35	122.17
56	DA	3001	DOL	C12-C8-N9	2.34	110.89	109.15
56	BA	3001	DOL	C31-C30-C32	2.24	115.04	111.11
56	DA	3001	DOL	C17-C16-C14	-2.17	109.34	113.90
56	BA	3001	DOL	C32-O36-C37	2.10	121.25	117.76
56	DA	3001	DOL	C1-N5-C6	2.08	128.31	120.65

There are no chirality outliers.

All (30) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
56	BA	3001	DOL	C1-C2-S39-O40
56	BA	3001	DOL	C1-C2-S39-C42
56	BA	3001	DOL	S39-C42-C43-N44
56	BA	3001	DOL	C14-C16-C17-O18
56	BA	3001	DOL	C21-C20-C22-C23
56	DA	3001	DOL	C1-C2-S39-C42
56	DA	3001	DOL	O11-C10-C13-C14
56	DA	3001	DOL	N25-C26-C28-C29
56	BA	3001	DOL	C19-C20-C22-C23
56	DA	3001	DOL	O27-C26-C28-C29
56	DA	3001	DOL	C46-C45-N44-C47
56	DA	3001	DOL	C28-C29-C30-C31
56	DA	3001	DOL	C46-C45-N44-C43
56	BA	3001	DOL	C46-C45-N44-C47
56	DA	3001	DOL	N9-C10-C13-C14
56	BA	3001	DOL	C46-C45-N44-C43

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Mol	Chain	Res	Type	Atoms
56	BA	3001	DOL	C10-C13-C14-O15
56	BA	3001	DOL	C14-C16-C17-C19
56	BA	3001	DOL	C10-C13-C14-C16
56	BA	3001	DOL	C17-C19-C20-C22
56	BA	3001	DOL	C48-C47-N44-C45
56	BA	3001	DOL	C3-C2-S39-O40
56	DA	3001	DOL	C3-C2-S39-O40
56	BA	3001	DOL	N25-C26-C28-C29
56	BA	3001	DOL	C28-C29-C30-C31
56	DA	3001	DOL	C10-C13-C14-O15
56	BA	3001	DOL	O27-C26-C28-C29
56	DA	3001	DOL	C10-C13-C14-C16
56	DA	3001	DOL	C42-C43-N44-C45
56	DA	3001	DOL	C1-C2-S39-O40

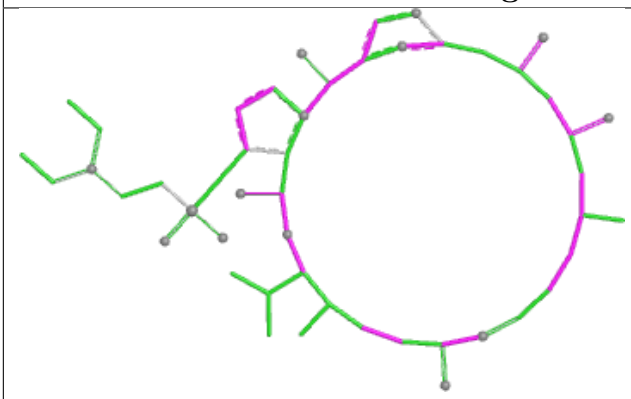
There are no ring outliers.

2 monomers are involved in 40 short contacts:

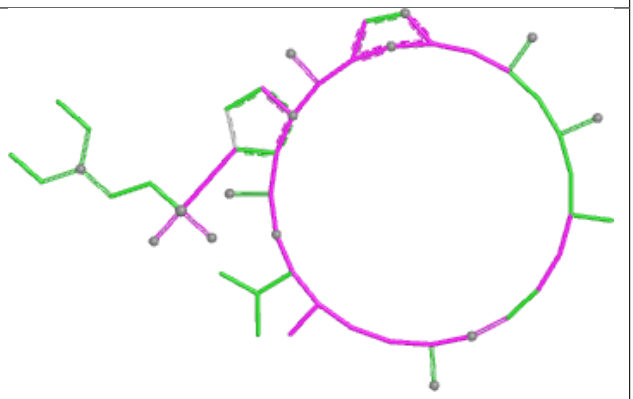
Mol	Chain	Res	Type	Clashes	Symm-Clashes
56	BA	3001	DOL	15	0
56	DA	3001	DOL	25	0

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 then 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.

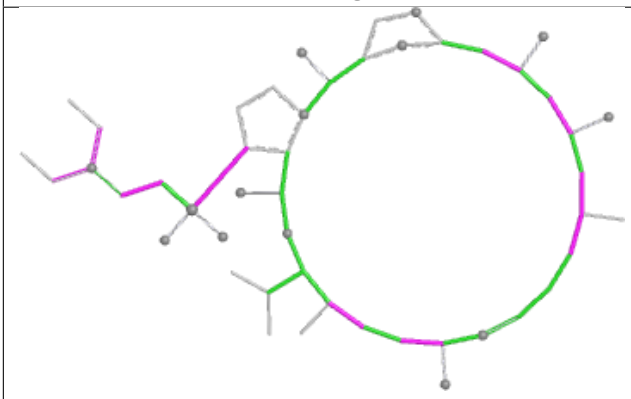
Ligand DOL BA 3001



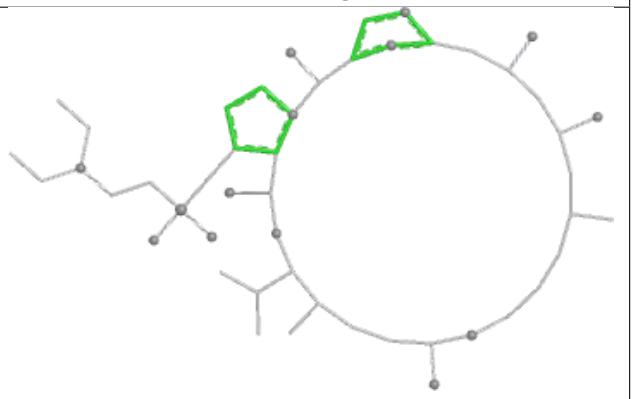
Bond lengths



Bond angles

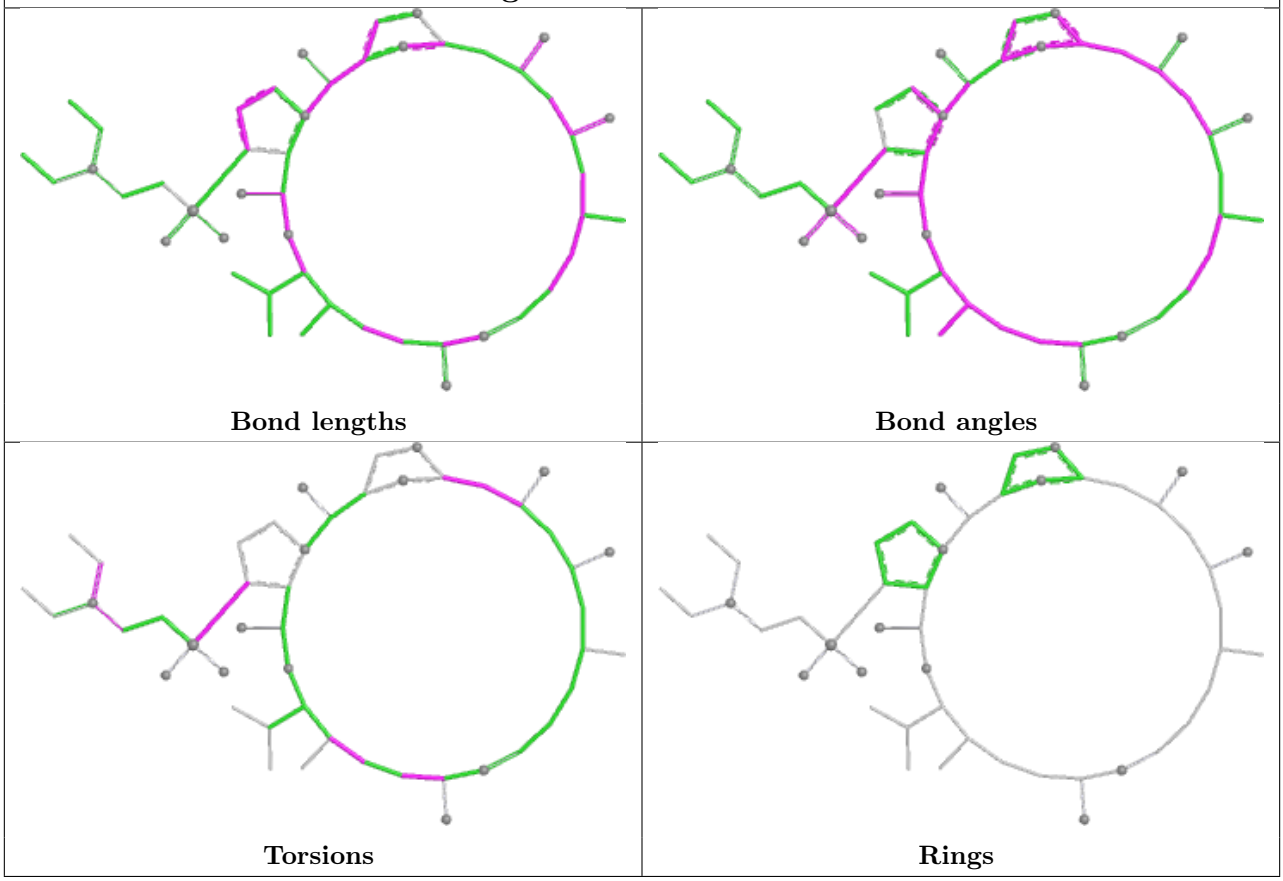


Torsions



Rings

Ligand DOL DA 3001



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} 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%)	-0.18	18 (1%) 76 68	10, 49, 132, 182	0
1	CA	1539/1539 (100%)	0.34	52 (3%) 48 39	22, 70, 146, 178	0
2	AB	218/218 (100%)	0.74	14 (6%) 25 18	36, 73, 100, 117	0
2	CB	218/218 (100%)	1.00	30 (13%) 6 5	57, 86, 108, 121	0
3	AC	206/206 (100%)	0.26	6 (2%) 53 43	33, 57, 78, 95	0
3	CC	206/206 (100%)	0.70	10 (4%) 35 27	55, 80, 96, 107	0
4	AD	205/205 (100%)	0.49	14 (6%) 23 17	31, 56, 79, 99	0
4	CD	205/205 (100%)	0.06	6 (2%) 53 43	13, 35, 60, 82	0
5	AE	150/150 (100%)	0.38	8 (5%) 32 24	26, 47, 78, 93	0
5	CE	150/150 (100%)	0.38	5 (3%) 49 39	25, 52, 84, 104	0
6	AF	100/100 (100%)	0.32	2 (2%) 65 56	32, 54, 73, 77	0
6	CF	100/100 (100%)	0.59	8 (8%) 18 13	41, 74, 92, 103	0
7	AG	151/151 (100%)	0.66	9 (5%) 27 21	51, 75, 92, 100	0
7	CG	151/151 (100%)	1.67	46 (30%) 1 1	82, 106, 114, 118	0
8	AH	129/129 (100%)	0.11	2 (1%) 70 61	29, 46, 67, 79	0
8	CH	129/129 (100%)	0.59	7 (5%) 31 24	46, 64, 80, 94	0
9	AI	127/127 (100%)	1.01	16 (12%) 8 6	40, 74, 98, 107	0
9	CI	127/127 (100%)	1.53	33 (25%) 1 1	79, 96, 112, 121	0
10	AJ	98/98 (100%)	0.82	8 (8%) 17 13	38, 66, 86, 116	0
10	CJ	98/98 (100%)	1.91	44 (44%) 0 0	72, 97, 115, 123	0
11	AK	117/117 (100%)	0.44	4 (3%) 48 39	25, 60, 89, 119	0
11	CK	117/117 (100%)	0.24	1 (0%) 81 74	35, 68, 79, 90	0
12	AL	123/123 (100%)	0.14	6 (4%) 35 27	20, 34, 65, 97	0
12	CL	123/123 (100%)	0.58	12 (9%) 13 9	30, 50, 74, 95	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AM	114/114 (100%)	0.60	6 (5%) 32 24	47, 69, 91, 103	0
13	CM	114/114 (100%)	2.31	63 (55%) 0 0	93, 113, 122, 125	0
14	AN	96/100 (96%)	0.94	10 (10%) 11 8	36, 60, 96, 105	0
14	CN	96/100 (96%)	1.59	26 (27%) 1 1	70, 96, 115, 122	0
15	AO	88/88 (100%)	0.25	4 (4%) 38 30	29, 47, 64, 91	0
15	CO	88/88 (100%)	0.56	4 (4%) 38 30	36, 64, 80, 102	0
16	AP	82/82 (100%)	0.47	4 (4%) 35 27	34, 47, 83, 109	0
16	CP	82/82 (100%)	1.15	9 (10%) 10 8	45, 62, 91, 112	0
17	AQ	80/80 (100%)	0.29	5 (6%) 26 19	27, 48, 75, 111	0
17	CQ	80/80 (100%)	1.28	21 (26%) 1 1	42, 77, 97, 99	0
18	AR	55/55 (100%)	0.44	4 (7%) 21 15	40, 52, 77, 102	0
18	CR	55/55 (100%)	0.29	2 (3%) 46 37	36, 54, 78, 108	0
19	AS	79/79 (100%)	0.78	6 (7%) 20 14	54, 70, 88, 97	0
19	CS	79/79 (100%)	2.30	43 (54%) 0 0	95, 114, 122, 128	0
20	AT	85/85 (100%)	0.58	5 (5%) 28 21	35, 48, 68, 96	0
20	CT	85/85 (100%)	1.34	21 (24%) 2 1	53, 78, 96, 101	0
21	AU	51/51 (100%)	1.55	14 (27%) 1 1	41, 74, 95, 105	0
21	CU	51/51 (100%)	1.57	10 (19%) 3 2	42, 69, 98, 102	0
22	BA	2897/2903 (99%)	-0.60	106 (3%) 45 36	0, 14, 129, 195	0
22	DA	2897/2903 (99%)	0.83	165 (5%) 29 22	41, 85, 148, 181	0
23	BB	119/119 (100%)	-0.82	0 100 100	2, 23, 46, 81	0
23	DB	118/119 (99%)	0.66	1 (0%) 82 75	69, 115, 134, 142	0
24	BC	271/271 (100%)	-0.32	4 (1%) 72 63	2, 18, 35, 55	0
24	DC	271/271 (100%)	1.05	39 (14%) 6 5	46, 64, 77, 95	0
25	BD	209/209 (100%)	-0.55	0 100 100	0, 9, 34, 65	0
25	DD	209/209 (100%)	1.27	37 (17%) 4 3	53, 72, 87, 97	0
26	BE	201/201 (100%)	-0.47	0 100 100	1, 23, 54, 88	0
26	DE	201/201 (100%)	1.63	68 (33%) 1 1	52, 89, 105, 113	0
27	BF	177/177 (100%)	0.05	2 (1%) 78 70	21, 40, 74, 88	0
27	DF	177/177 (100%)	1.49	43 (24%) 2 1	94, 113, 124, 131	0
28	BG	176/176 (100%)	-0.20	1 (0%) 85 80	15, 35, 58, 72	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	DG	176/176 (100%)	1.47	36 (20%) 2 2	78, 96, 110, 121	0
29	BH	149/149 (100%)	2.06	74 (49%) 0 0	25, 102, 121, 129	0
29	DH	149/149 (100%)	1.30	28 (18%) 3 2	25, 92, 107, 115	0
30	BI	141/141 (100%)	2.39	78 (55%) 0 0	89, 116, 126, 134	0
30	DI	141/141 (100%)	2.84	97 (68%) 0 0	105, 124, 135, 142	0
31	BJ	142/142 (100%)	-0.53	1 (0%) 84 77	1, 6, 26, 35	0
31	DJ	142/142 (100%)	1.00	25 (17%) 4 3	49, 69, 83, 91	0
32	BK	122/122 (100%)	-0.61	2 (1%) 70 61	3, 11, 28, 60	0
32	DK	122/122 (100%)	0.85	10 (8%) 17 13	48, 66, 84, 95	0
33	BL	143/143 (100%)	-0.26	1 (0%) 84 77	1, 18, 42, 65	0
33	DL	143/143 (100%)	1.90	54 (37%) 1 0	43, 87, 98, 115	0
34	BM	136/136 (100%)	-0.61	1 (0%) 84 77	1, 10, 24, 85	0
34	DM	136/136 (100%)	0.80	15 (11%) 10 8	44, 70, 85, 99	0
35	BN	120/120 (100%)	-0.51	0 100 100	2, 7, 17, 65	0
35	DN	120/120 (100%)	1.77	44 (36%) 1 0	58, 78, 92, 112	0
36	BO	116/116 (100%)	-0.39	0 100 100	14, 24, 42, 54	0
36	DO	116/116 (100%)	1.52	34 (29%) 1 1	85, 99, 110, 117	0
37	BP	114/114 (100%)	-0.39	2 (1%) 67 58	6, 16, 41, 71	0
37	DP	114/114 (100%)	1.33	23 (20%) 3 2	61, 74, 86, 94	0
38	BQ	117/117 (100%)	-0.62	0 100 100	0, 3, 12, 30	0
38	DQ	117/117 (100%)	1.28	29 (24%) 2 1	55, 70, 81, 89	0
39	BR	103/103 (100%)	-0.43	1 (0%) 79 72	0, 11, 31, 56	0
39	DR	103/103 (100%)	1.37	20 (19%) 3 2	57, 80, 92, 103	0
40	BS	110/110 (100%)	-0.58	0 100 100	1, 4, 21, 68	0
40	DS	110/110 (100%)	1.70	35 (31%) 1 1	60, 79, 94, 105	0
41	BT	93/93 (100%)	-0.04	6 (6%) 25 18	10, 24, 68, 98	0
41	DT	93/93 (100%)	1.92	36 (38%) 1 0	73, 91, 106, 115	0
42	BU	102/102 (100%)	-0.33	1 (0%) 79 72	10, 25, 58, 77	0
42	DU	102/102 (100%)	2.39	59 (57%) 0 0	77, 95, 109, 120	0
43	BV	94/94 (100%)	-0.45	0 100 100	4, 18, 39, 52	0
43	DV	94/94 (100%)	0.71	4 (4%) 40 31	72, 86, 98, 105	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	BW	76/76 (100%)	-0.39	0 100 100	4, 11, 27, 57	0
44	DW	75/76 (98%)	1.42	12 (16%) 5 4	58, 83, 93, 104	0
45	BX	77/77 (100%)	-0.20	0 100 100	8, 22, 48, 68	0
45	DX	77/77 (100%)	1.66	28 (36%) 1 0	47, 72, 87, 91	0
46	BY	63/63 (100%)	0.32	4 (6%) 26 19	18, 38, 71, 94	0
46	DY	63/63 (100%)	1.84	22 (34%) 1 0	81, 99, 106, 109	0
47	BZ	58/58 (100%)	-0.51	0 100 100	2, 6, 25, 34	0
47	DZ	58/58 (100%)	0.99	3 (5%) 33 25	60, 73, 85, 103	0
48	B0	56/56 (100%)	-0.53	0 100 100	0, 7, 33, 60	0
48	D0	56/56 (100%)	1.42	11 (19%) 3 2	51, 82, 95, 103	0
49	B1	50/50 (100%)	-0.27	1 (2%) 65 56	13, 25, 49, 57	0
49	D1	50/50 (100%)	1.55	17 (34%) 1 1	73, 89, 94, 106	0
50	B2	46/46 (100%)	-0.33	1 (2%) 62 52	4, 8, 15, 79	0
50	D2	46/46 (100%)	2.09	21 (45%) 0 0	58, 72, 86, 101	0
51	B3	64/64 (100%)	-0.50	0 100 100	4, 9, 17, 29	0
51	D3	64/64 (100%)	2.53	42 (65%) 0 0	60, 75, 84, 94	0
52	B4	38/38 (100%)	-0.29	0 100 100	5, 15, 29, 52	0
52	D4	38/38 (100%)	1.91	14 (36%) 1 0	62, 77, 88, 98	0
53	B5	191/228 (83%)	2.25	110 (57%) 0 0	100, 121, 133, 141	0
54	B6	2/8 (25%)	-0.26	0 100 100	1, 1, 1, 1	0
54	D6	2/8 (25%)	0.56	0 100 100	46, 46, 46, 51	0
All	All	20738/20810 (99%)	0.45	2086 (10%) 12 9	0, 63, 124, 195	0

All (2086) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
20	CT	4	ILE	10.7
30	BI	53	LEU	9.0
4	CD	25	VAL	8.5
7	AG	5	ARG	7.1
50	D2	46	LYS	7.0
29	BH	130	VAL	7.0
30	BI	5	VAL	6.9
30	DI	78	VAL	6.9
7	CG	62	PHE	6.8

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Mol	Chain	Res	Type	RSRZ
33	DL	92	LEU	6.8
30	DI	53	LEU	6.7
30	BI	54	PRO	6.7
21	AU	38	TYR	6.6
30	BI	11	LEU	6.6
30	DI	54	PRO	6.5
45	DX	22	LEU	6.4
29	BH	146	VAL	6.3
30	DI	83	ALA	6.3
13	CM	18	ALA	6.1
29	BH	121	VAL	6.1
21	CU	35	ARG	6.0
30	BI	79	LEU	6.0
22	BA	2184	A	6.0
19	CS	71	LEU	5.9
53	B5	216	THR	5.8
51	D3	49	MET	5.8
30	DI	13	VAL	5.8
35	DN	28	LEU	5.8
21	CU	38	TYR	5.7
24	DC	242	LYS	5.7
30	DI	79	LEU	5.7
29	BH	120	GLY	5.7
10	AJ	102	LEU	5.7
29	BH	67	ALA	5.7
19	CS	74	PHE	5.6
30	DI	11	LEU	5.6
51	D3	37	ALA	5.6
51	D3	57	LEU	5.6
30	DI	24	VAL	5.6
12	CL	25	GLU	5.6
30	DI	76	ALA	5.6
30	DI	133	ALA	5.5
20	AT	4	ILE	5.5
50	B2	46	LYS	5.5
22	BA	2103	C	5.5
42	DU	36	VAL	5.4
31	DJ	111	LYS	5.4
33	DL	15	ALA	5.4
29	DH	15	LEU	5.4
33	DL	19	LEU	5.4
29	BH	102	ALA	5.4

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Mol	Chain	Res	Type	RSRZ
27	DF	66	LEU	5.4
38	DQ	2	ALA	5.3
42	DU	71	ALA	5.3
45	DX	49	LEU	5.3
41	DT	43	ILE	5.3
40	DS	96	ILE	5.2
53	B5	217	THR	5.2
13	CM	103	LYS	5.2
29	BH	81	ALA	5.2
42	DU	67	VAL	5.2
20	AT	68	HIS	5.2
41	DT	34	VAL	5.2
22	BA	2185	U	5.2
42	DU	39	ILE	5.2
27	DF	67	ILE	5.1
30	DI	5	VAL	5.1
30	BI	8	TYR	5.1
29	BH	97	ARG	5.1
45	DX	35	SER	5.1
11	CK	126	LYS	5.0
13	CM	89	LEU	5.0
13	CM	94	GLY	5.0
19	CS	76	PRO	5.0
2	AB	157	LEU	5.0
30	DI	129	ILE	5.0
29	BH	122	LEU	5.0
9	CI	20	PHE	5.0
17	AQ	20	SER	5.0
2	AB	156	GLY	5.0
13	CM	86	TYR	5.0
50	D2	33	ARG	4.9
42	DU	80	ALA	4.9
49	D1	36	LEU	4.9
13	CM	98	ARG	4.9
29	BH	63	ALA	4.9
1	CA	1305	G	4.9
22	BA	2100	G	4.9
14	AN	21	PHE	4.9
40	DS	92	ARG	4.9
30	DI	14	ALA	4.9
1	AA	121	U	4.9
40	DS	83	LYS	4.9

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Mol	Chain	Res	Type	RSRZ
19	CS	37	ARG	4.9
51	D3	15	LYS	4.9
30	BI	56	PRO	4.8
12	AL	15	LYS	4.8
30	BI	38	PHE	4.8
35	DN	46	ARG	4.8
30	BI	12	GLN	4.8
22	BA	2152	G	4.8
50	D2	42	LEU	4.7
17	AQ	83	VAL	4.7
29	DH	47	PHE	4.7
29	DH	13	GLY	4.7
9	AI	129	LYS	4.7
19	CS	66	MET	4.7
29	BH	69	ALA	4.7
25	DD	128	ARG	4.7
51	D3	61	CYS	4.7
19	CS	60	VAL	4.7
30	BI	13	VAL	4.7
48	D0	27	SER	4.7
31	DJ	47	HIS	4.6
33	DL	49	GLY	4.6
22	BA	2193	G	4.6
53	B5	76	LEU	4.6
21	CU	45	ARG	4.6
30	DI	56	PRO	4.6
29	BH	110	VAL	4.6
25	DD	154	LYS	4.6
30	DI	118	THR	4.6
20	CT	68	HIS	4.6
7	CG	39	ALA	4.6
51	D3	60	ALA	4.6
39	DR	75	VAL	4.6
30	DI	68	THR	4.6
3	AC	175	LEU	4.6
22	BA	2136	G	4.6
26	DE	73	ILE	4.5
33	DL	71	ALA	4.5
22	BA	2160	C	4.5
22	BA	2156	G	4.5
40	DS	46	LEU	4.5
30	BI	4	LYS	4.5

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Mol	Chain	Res	Type	RSRZ
22	BA	2101	A	4.5
30	DI	38	PHE	4.5
19	CS	15	LEU	4.5
30	DI	80	LEU	4.5
22	BA	1926	U	4.5
8	CH	2	SER	4.5
30	DI	4	LYS	4.5
30	DI	58	VAL	4.5
29	DH	12	LEU	4.5
8	AH	2	SER	4.4
30	DI	109	ILE	4.4
33	DL	73	ILE	4.4
22	BA	2135	A	4.4
49	D1	53	LYS	4.4
22	BA	2141	G	4.4
53	B5	35	THR	4.4
10	CJ	74	VAL	4.4
25	DD	135	GLY	4.4
30	DI	98	VAL	4.4
38	DQ	59	GLN	4.4
30	BI	55	ILE	4.4
14	CN	2	ALA	4.4
53	B5	205	ALA	4.4
29	BH	118	PRO	4.4
41	DT	41	ALA	4.3
10	CJ	77	VAL	4.3
13	CM	73	ILE	4.3
33	DL	101	ILE	4.3
22	BA	2174	C	4.3
24	DC	12	GLY	4.3
26	DE	153	LEU	4.3
9	CI	68	LYS	4.3
51	D3	25	LYS	4.3
30	BI	2	ALA	4.3
35	DN	76	VAL	4.3
52	D4	3	VAL	4.3
9	AI	43	THR	4.3
45	DX	11	ARG	4.3
24	DC	205	LEU	4.3
51	D3	20	GLY	4.3
3	CC	193	TYR	4.3
30	DI	114	ALA	4.3

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Mol	Chain	Res	Type	RSRZ
53	B5	120	VAL	4.3
29	BH	119	ASN	4.2
40	DS	40	ASN	4.2
13	CM	7	ILE	4.2
22	DA	1382	G	4.2
53	B5	23	ILE	4.2
41	DT	57	VAL	4.2
2	CB	129	LEU	4.2
33	DL	27	LEU	4.2
42	DU	52	LEU	4.2
42	DU	5	ILE	4.2
30	DI	82	LYS	4.2
33	DL	29	LYS	4.2
14	CN	34	VAL	4.2
30	DI	7	ALA	4.2
30	DI	28	LEU	4.2
38	DQ	8	VAL	4.2
33	DL	14	LYS	4.2
14	AN	22	ALA	4.2
30	BI	86	ILE	4.2
30	DI	55	ILE	4.2
13	CM	63	PHE	4.2
40	DS	86	MET	4.2
1	CA	1536	C	4.1
13	CM	101	ARG	4.1
13	CM	96	PRO	4.1
29	DH	142	VAL	4.1
30	BI	27	ALA	4.1
28	DG	168	VAL	4.1
20	AT	36	TYR	4.1
42	DU	31	SER	4.1
7	CG	38	THR	4.1
21	AU	53	VAL	4.1
51	D3	28	ASN	4.1
30	DI	27	ALA	4.1
53	B5	77	ALA	4.1
22	BA	2098	U	4.1
42	DU	60	GLU	4.1
26	DE	158	PHE	4.1
13	CM	45	ILE	4.1
38	DQ	9	ILE	4.1
1	CA	1535	C	4.1

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Mol	Chain	Res	Type	RSRZ
26	DE	55	SER	4.1
46	DY	19	LEU	4.0
53	B5	52	PRO	4.0
53	B5	137	LEU	4.0
9	CI	111	VAL	4.0
45	DX	20	HIS	4.0
50	D2	13	ASN	4.0
53	B5	96	GLY	4.0
22	BA	1072	C	4.0
4	CD	151	LYS	4.0
30	DI	26	PRO	4.0
30	BI	14	ALA	4.0
3	CC	162	ILE	4.0
30	DI	86	ILE	4.0
30	DI	85	GLY	4.0
22	BA	2113	U	4.0
19	CS	49	ILE	4.0
42	DU	58	ILE	4.0
13	CM	83	LEU	4.0
22	BA	2147	A	4.0
29	BH	111	ALA	3.9
30	DI	35	ILE	3.9
21	AU	54	LYS	3.9
28	DG	174	ALA	3.9
22	BA	2159	G	3.9
29	BH	91	PHE	3.9
2	CB	135	LEU	3.9
29	BH	147	VAL	3.9
30	DI	128	SER	3.9
22	BA	2148	G	3.9
7	CG	6	VAL	3.9
9	CI	128	SER	3.9
28	DG	150	ALA	3.9
22	BA	2183	A	3.9
30	BI	3	LYS	3.9
30	BI	23	PRO	3.9
38	DQ	38	ALA	3.9
48	D0	2	ALA	3.9
22	BA	2145	C	3.9
22	DA	336	C	3.9
53	B5	218	THR	3.9
33	DL	28	GLY	3.8

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Mol	Chain	Res	Type	RSRZ
22	BA	1094	U	3.8
29	BH	108	VAL	3.8
51	D3	58	VAL	3.8
16	AP	81	ALA	3.8
30	BI	15	ALA	3.8
51	D3	17	THR	3.8
12	AL	25	GLU	3.8
22	BA	1925	C	3.8
22	BA	1098	A	3.8
53	B5	84	ILE	3.8
44	DW	44	LYS	3.8
51	D3	16	LYS	3.8
22	BA	2104	C	3.8
30	DI	9	VAL	3.8
5	CE	157	ARG	3.8
30	DI	59	ILE	3.8
36	DO	8	ILE	3.8
42	DU	12	ILE	3.8
42	DU	35	ILE	3.8
53	B5	50	ILE	3.8
30	DI	74	PRO	3.8
26	DE	119	ILE	3.8
31	DJ	81	ILE	3.8
40	DS	80	PRO	3.8
40	DS	98	LYS	3.8
1	AA	412	A	3.8
40	DS	19	LEU	3.8
42	DU	78	GLY	3.8
3	CC	192	THR	3.8
30	BI	67	PHE	3.8
51	D3	14	PHE	3.8
30	BI	24	VAL	3.7
41	DT	36	LYS	3.7
10	AJ	75	ASP	3.7
19	CS	12	ASP	3.7
30	DI	23	PRO	3.7
12	CL	124	ALA	3.7
13	CM	106	ALA	3.7
26	DE	36	ALA	3.7
53	B5	36	ALA	3.7
22	BA	2155	U	3.7
46	DY	43	LEU	3.7

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Mol	Chain	Res	Type	RSRZ
52	D4	10	LEU	3.7
16	CP	39	PHE	3.7
53	B5	38	PHE	3.7
16	CP	3	THR	3.7
21	CU	53	VAL	3.7
28	DG	9	VAL	3.7
42	DU	26	LYS	3.7
30	BI	22	PRO	3.7
1	AA	1017	U	3.7
21	CU	37	PHE	3.7
22	BA	2186	G	3.7
22	DA	1093	G	3.7
26	DE	88	ARG	3.7
9	CI	129	LYS	3.7
26	DE	57	LYS	3.7
28	DG	92	VAL	3.7
44	DW	38	VAL	3.7
30	DI	106	LEU	3.7
41	DT	11	LEU	3.7
13	CM	84	GLY	3.7
42	DU	62	GLU	3.7
26	DE	131	THR	3.7
22	BA	2175	C	3.7
28	DG	10	VAL	3.7
14	CN	48	LEU	3.7
53	B5	27	ALA	3.7
53	B5	79	ALA	3.7
12	AL	38	TYR	3.7
33	DL	26	GLY	3.7
2	CB	164	ILE	3.7
22	DA	12	U	3.7
30	BI	26	PRO	3.6
30	DI	22	PRO	3.6
42	DU	14	LEU	3.6
42	DU	3	ALA	3.6
22	BA	2144	G	3.6
12	CL	15	LYS	3.6
30	DI	10	LYS	3.6
41	DT	73	ARG	3.6
53	B5	28	ARG	3.6
13	CM	5	ALA	3.6
46	BY	63	ALA	3.6

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Mol	Chain	Res	Type	RSRZ
41	DT	81	LYS	3.6
4	CD	24	GLY	3.6
22	BA	2102	G	3.6
22	BA	2168	G	3.6
27	DF	25	VAL	3.6
49	D1	42	VAL	3.6
9	AI	54	LEU	3.6
26	DE	164	LEU	3.6
10	CJ	94	ALA	3.6
26	DE	41	GLN	3.6
42	DU	51	ALA	3.6
29	BH	123	ARG	3.6
40	DS	99	ARG	3.6
3	CC	37	PHE	3.6
42	DU	20	GLY	3.6
26	DE	175	ILE	3.6
29	BH	99	ILE	3.6
53	B5	100	ILE	3.6
7	CG	27	VAL	3.6
19	CS	33	THR	3.6
30	DI	60	THR	3.6
10	CJ	102	LEU	3.6
46	DY	21	LEU	3.6
30	DI	81	LYS	3.6
53	B5	122	GLY	3.6
7	CG	43	VAL	3.6
29	BH	115	VAL	3.6
36	DO	103	VAL	3.6
30	DI	104	ALA	3.5
22	BA	2099	U	3.5
22	BA	2130	U	3.5
22	BA	549	G	3.5
10	CJ	76	ILE	3.5
30	DI	49	ILE	3.5
19	CS	51	VAL	3.5
30	DI	70	VAL	3.5
14	CN	51	LEU	3.5
33	DL	57	LEU	3.5
25	DD	23	PRO	3.5
25	DD	25	THR	3.5
36	DO	3	LYS	3.5
4	CD	27	ALA	3.5

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Mol	Chain	Res	Type	RSRZ
13	CM	113	ARG	3.5
30	BI	63	ALA	3.5
22	BA	1923	U	3.5
30	BI	70	VAL	3.5
40	DS	36	LEU	3.5
27	DF	72	LYS	3.5
12	CL	38	TYR	3.5
19	CS	39	THR	3.5
41	DT	15	HIS	3.5
29	BH	52	ALA	3.5
42	DU	32	GLY	3.5
25	DD	155	VAL	3.5
30	BI	78	VAL	3.5
29	BH	70	GLU	3.5
20	CT	69	LYS	3.5
10	CJ	41	PRO	3.5
1	CA	1032	G	3.5
13	CM	85	CYS	3.5
53	B5	78	ILE	3.5
1	AA	1534	A	3.5
6	AF	61	LEU	3.5
27	DF	32	GLU	3.5
30	BI	81	LYS	3.5
46	DY	22	LEU	3.5
6	CF	91	ARG	3.5
28	DG	170	ARG	3.5
13	CM	28	THR	3.5
30	BI	71	THR	3.5
30	BI	41	ALA	3.5
2	CB	32	PHE	3.4
28	DG	103	ILE	3.4
33	DL	50	PHE	3.4
29	BH	71	LYS	3.4
39	DR	72	VAL	3.4
26	DE	143	LEU	3.4
52	D4	9	LYS	3.4
22	BA	2192	U	3.4
33	DL	78	ARG	3.4
19	CS	14	HIS	3.4
36	DO	2	ASP	3.4
14	CN	20	TYR	3.4
53	B5	199	ALA	3.4

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Mol	Chain	Res	Type	RSRZ
53	B5	208	THR	3.4
35	DN	73	ASN	3.4
53	B5	140	ASN	3.4
30	BI	69	PHE	3.4
30	DI	69	PHE	3.4
36	DO	97	PHE	3.4
36	DO	4	LYS	3.4
39	DR	76	LYS	3.4
52	D4	8	LYS	3.4
29	BH	90	LEU	3.4
18	AR	20	GLU	3.4
19	AS	3	ARG	3.4
21	AU	35	ARG	3.4
22	BA	1093	G	3.4
22	BA	2140	G	3.4
42	DU	50	PRO	3.4
26	DE	68	ALA	3.4
29	BH	56	ALA	3.4
29	BH	105	ALA	3.4
35	DN	25	ALA	3.4
46	DY	41	HIS	3.4
29	BH	94	ILE	3.4
6	CF	80	PHE	3.4
33	DL	107	PHE	3.4
35	DN	102	PHE	3.4
40	DS	73	LYS	3.4
13	CM	95	LEU	3.4
24	DC	249	GLY	3.4
12	AL	124	ALA	3.4
22	DA	1175	A	3.4
41	DT	80	TRP	3.4
4	AD	36	GLN	3.4
16	AP	80	LYS	3.4
30	DI	42	PHE	3.4
13	CM	80	LEU	3.4
19	CS	68	GLY	3.4
33	DL	89	VAL	3.4
52	D4	21	GLY	3.4
52	D4	25	VAL	3.4
13	CM	109	ARG	3.4
30	BI	75	PRO	3.4
46	DY	61	ALA	3.4

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Mol	Chain	Res	Type	RSRZ
53	B5	143	ALA	3.4
15	CO	25	THR	3.4
29	BH	96	THR	3.4
29	BH	98	ASP	3.4
7	CG	87	VAL	3.3
13	CM	97	VAL	3.3
22	DA	1537	G	3.3
32	DK	35	VAL	3.3
53	B5	20	VAL	3.3
29	BH	149	GLU	3.3
13	CM	31	LYS	3.3
17	AQ	5	ILE	3.3
22	DA	2402	U	3.3
30	DI	46	THR	3.3
49	D1	24	THR	3.3
22	BA	2143	C	3.3
33	DL	84	LYS	3.3
9	AI	44	ALA	3.3
12	AL	23	ALA	3.3
46	DY	32	ALA	3.3
29	BH	62	LEU	3.3
29	BH	117	LEU	3.3
53	B5	111	PHE	3.3
6	AF	92	THR	3.3
10	CJ	72	ARG	3.3
21	CU	47	ARG	3.3
22	DA	665	U	3.3
53	B5	126	SER	3.3
29	BH	68	ARG	3.3
1	AA	78	A	3.3
50	D2	2	LYS	3.3
1	CA	1539	C	3.3
25	DD	132	ALA	3.3
29	BH	74	ALA	3.3
30	DI	115	ALA	3.3
30	DI	120	ALA	3.3
22	BA	2157	G	3.3
30	BI	140	VAL	3.3
30	DI	139	VAL	3.3
45	DX	18	ARG	3.3
1	AA	1030	U	3.3
45	DX	17	ASN	3.3

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Mol	Chain	Res	Type	RSRZ
53	B5	142	LYS	3.3
40	DS	82	MET	3.3
20	CT	67	ILE	3.3
13	CM	40	ALA	3.3
51	D3	26	HIS	3.3
7	CG	66	LEU	3.3
9	CI	54	LEU	3.3
33	DL	64	PHE	3.3
35	DN	17	ARG	3.3
22	BA	2112	G	3.3
22	BA	2138	G	3.3
25	DD	144	GLY	3.3
27	DF	82	GLY	3.3
33	DL	11	GLY	3.3
38	DQ	7	GLY	3.3
53	B5	207	GLY	3.3
2	CB	132	LYS	3.2
7	CG	15	ASP	3.2
29	BH	112	LYS	3.2
27	DF	156	ILE	3.2
30	DI	15	ALA	3.2
10	CJ	49	PHE	3.2
22	BA	2158	A	3.2
34	DM	6	ARG	3.2
53	B5	193	PHE	3.2
7	CG	75	VAL	3.2
10	CJ	98	VAL	3.2
24	DC	245	VAL	3.2
26	DE	96	VAL	3.2
27	DF	31	VAL	3.2
22	DA	795	C	3.2
26	DE	42	GLY	3.2
30	BI	91	GLY	3.2
24	DC	5	LYS	3.2
35	DN	20	MET	3.2
40	DS	94	ASP	3.2
22	BA	2111	U	3.2
25	DD	126	ASN	3.2
39	DR	52	PRO	3.2
4	AD	28	ILE	3.2
53	B5	150	ILE	3.2
10	AJ	90	LEU	3.2

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Mol	Chain	Res	Type	RSRZ
18	AR	68	LEU	3.2
30	BI	114	ALA	3.2
33	DL	75	ALA	3.2
36	DO	6	ALA	3.2
53	B5	65	LEU	3.2
9	CI	119	ARG	3.2
53	B5	124	VAL	3.2
5	AE	104	GLY	3.2
30	DI	71	THR	3.2
49	D1	22	THR	3.2
10	CJ	66	GLU	3.2
9	AI	128	SER	3.2
28	DG	2	SER	3.2
1	CA	209	U	3.2
22	BA	2139	U	3.2
27	DF	54	ALA	3.2
35	DN	111	ALA	3.2
41	DT	46	ALA	3.2
42	DU	41	LEU	3.2
26	DE	132	LYS	3.2
13	CM	108	THR	3.2
30	BI	68	THR	3.2
42	DU	77	THR	3.2
22	BA	2191	A	3.2
29	BH	72	ILE	3.2
40	DS	85	ILE	3.2
41	DT	74	ILE	3.2
20	CT	3	ASN	3.2
28	DG	153	ARG	3.2
31	DJ	95	ARG	3.2
41	DT	76	ARG	3.2
46	DY	18	LEU	3.2
1	CA	1235	U	3.2
33	DL	72	ALA	3.2
7	CG	73	VAL	3.2
20	CT	5	LYS	3.2
2	CB	136	MET	3.2
30	DI	75	PRO	3.2
30	DI	101	ILE	3.2
7	CG	23	LEU	3.1
19	AS	5	LEU	3.1
51	D3	64	TYR	3.1

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Mol	Chain	Res	Type	RSRZ
26	DE	135	ALA	3.1
29	BH	140	ALA	3.1
30	DI	18	ALA	3.1
28	BG	111	HIS	3.1
49	D1	38	LYS	3.1
1	AA	1535	C	3.1
30	BI	9	VAL	3.1
5	CE	158	GLY	3.1
10	CJ	44	THR	3.1
4	CD	28	ILE	3.1
21	AU	47	ARG	3.1
22	BA	2123	G	3.1
38	DQ	25	TYR	3.1
9	CI	44	ALA	3.1
26	DE	70	SER	3.1
30	BI	76	ALA	3.1
35	DN	78	LYS	3.1
36	DO	14	ALA	3.1
38	DQ	22	LYS	3.1
39	DR	73	LYS	3.1
42	DU	63	ALA	3.1
44	DW	75	LYS	3.1
22	BA	2142	A	3.1
24	DC	220	VAL	3.1
48	D0	3	VAL	3.1
22	BA	2153	C	3.1
22	DA	343	C	3.1
36	DO	58	ILE	3.1
48	D0	26	THR	3.1
51	D3	4	ILE	3.1
12	CL	44	LYS	3.1
21	CU	54	LYS	3.1
27	DF	88	LYS	3.1
42	DU	47	LYS	3.1
14	AN	44	ALA	3.1
28	DG	157	TYR	3.1
30	BI	115	ALA	3.1
37	DP	108	ALA	3.1
51	D3	24	HIS	3.1
9	AI	104	VAL	3.1
21	CU	14	VAL	3.1
29	BH	132	PHE	3.1

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Mol	Chain	Res	Type	RSRZ
45	DX	4	VAL	3.1
53	B5	73	VAL	3.1
53	B5	110	ASP	3.1
1	CA	1537	U	3.1
35	DN	18	GLN	3.1
2	CB	13	GLY	3.1
51	D3	21	GLY	3.1
30	DI	122	ILE	3.1
37	DP	84	ILE	3.1
1	CA	1031	C	3.1
28	DG	8	PRO	3.1
36	DO	65	THR	3.1
52	D4	12	ARG	3.1
41	DT	68	LYS	3.1
51	D3	52	LYS	3.1
14	CN	99	ALA	3.1
26	DE	182	ALA	3.1
30	DI	110	ALA	3.1
2	AB	213	TYR	3.1
7	CG	151	PHE	3.1
19	CS	41	PHE	3.1
27	DF	20	PHE	3.1
19	CS	8	GLY	3.1
30	DI	32	GLY	3.1
22	DA	2602	A	3.1
17	CQ	21	ILE	3.1
9	CI	9	THR	3.1
11	AK	126	LYS	3.1
35	DN	10	LEU	3.1
41	BT	93	LEU	3.1
40	DS	37	THR	3.1
52	D4	15	LYS	3.1
1	AA	1538	C	3.1
29	BH	65	ALA	3.0
43	DV	23	ALA	3.0
53	B5	123	ALA	3.0
9	CI	7	TYR	3.0
24	DC	216	VAL	3.0
25	DD	9	VAL	3.0
33	DL	116	VAL	3.0
37	DP	92	VAL	3.0
9	AI	46	MET	3.0

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Mol	Chain	Res	Type	RSRZ
13	CM	24	GLY	3.0
24	DC	235	GLY	3.0
24	DC	237	GLY	3.0
29	BH	85	GLY	3.0
30	BI	31	GLN	3.0
41	BT	90	GLY	3.0
10	CJ	100	ILE	3.0
27	DF	79	ILE	3.0
24	DC	18	LYS	3.0
42	DU	21	LYS	3.0
9	CI	125	PRO	3.0
27	DF	84	PRO	3.0
53	B5	156	GLU	3.0
22	BA	546	U	3.0
13	CM	104	THR	3.0
35	DN	70	THR	3.0
29	BH	84	ALA	3.0
42	DU	75	ALA	3.0
43	DV	22	ALA	3.0
41	DT	63	VAL	3.0
53	B5	75	VAL	3.0
19	CS	3	ARG	3.0
35	DN	40	LYS	3.0
36	DO	15	ARG	3.0
41	DT	2	ILE	3.0
51	D3	19	LYS	3.0
52	D4	18	LYS	3.0
53	B5	131	ILE	3.0
31	DJ	9	GLU	3.0
45	DX	48	THR	3.0
53	B5	41	THR	3.0
7	CG	150	ALA	3.0
12	CL	26	ALA	3.0
19	CS	75	ALA	3.0
42	DU	76	ALA	3.0
29	BH	138	VAL	3.0
29	BH	144	VAL	3.0
30	DI	57	VAL	3.0
30	DI	61	VAL	3.0
1	CA	1320	C	3.0
22	DA	1606	C	3.0
25	DD	27	ILE	3.0

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Mol	Chain	Res	Type	RSRZ
26	DE	94	GLN	3.0
30	DI	12	GLN	3.0
33	DL	100	ILE	3.0
38	DQ	33	ARG	3.0
10	CJ	52	LEU	3.0
26	DE	168	ASP	3.0
39	DR	88	GLY	3.0
30	DI	138	LEU	3.0
35	DN	38	LEU	3.0
41	DT	42	GLU	3.0
45	DX	31	PRO	3.0
9	CI	108	ALA	3.0
30	BI	83	ALA	3.0
53	B5	121	MET	3.0
4	AD	25	VAL	3.0
7	CG	18	PHE	3.0
29	DH	139	PHE	3.0
20	CT	64	LYS	3.0
42	DU	44	LYS	3.0
46	DY	44	LYS	3.0
37	DP	110	ILE	3.0
38	DQ	11	ARG	3.0
37	DP	114	LEU	3.0
22	DA	329	G	3.0
33	DL	68	SER	3.0
9	CI	112	GLU	3.0
26	DE	39	ALA	3.0
28	DG	80	THR	3.0
39	DR	36	ALA	3.0
51	D3	48	ALA	3.0
30	BI	57	VAL	3.0
37	DP	73	VAL	3.0
7	AG	25	LYS	2.9
13	CM	110	LYS	2.9
45	DX	77	LYS	2.9
19	CS	80	TYR	2.9
22	BA	2169	A	2.9
24	DC	254	GLY	2.9
30	DI	105	GLN	2.9
33	DL	16	GLY	2.9
1	CA	94	G	2.9
22	DA	215	G	2.9

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Mol	Chain	Res	Type	RSRZ
22	DA	327	G	2.9
9	AI	17	ALA	2.9
10	CJ	61	ALA	2.9
22	BA	2150	C	2.9
22	DA	1625	C	2.9
40	DS	44	ALA	2.9
53	B5	87	ALA	2.9
5	AE	137	VAL	2.9
13	CM	60	VAL	2.9
28	DG	11	VAL	2.9
24	DC	26	LYS	2.9
2	CB	67	ILE	2.9
2	CB	96	TRP	2.9
41	DT	93	LEU	2.9
50	D2	10	LEU	2.9
53	B5	108	TRP	2.9
36	DO	32	PRO	2.9
53	B5	141	PRO	2.9
17	CQ	20	SER	2.9
29	BH	103	VAL	2.9
35	DN	55	ALA	2.9
41	DT	55	VAL	2.9
46	DY	46	VAL	2.9
28	DG	177	LYS	2.9
30	DI	92	LYS	2.9
31	DJ	106	LYS	2.9
36	DO	12	THR	2.9
22	BA	2129	C	2.9
22	DA	2000	C	2.9
35	DN	2	ARG	2.9
30	BI	109	ILE	2.9
1	CA	4	U	2.9
7	CG	118	LEU	2.9
3	AC	167	TRP	2.9
15	CO	80	GLN	2.9
31	DJ	74	TYR	2.9
33	DL	8	PRO	2.9
51	D3	46	PRO	2.9
42	DU	37	GLU	2.9
22	DA	1073	A	2.9
14	CN	58	SER	2.9
38	DQ	29	SER	2.9

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Mol	Chain	Res	Type	RSRZ
7	CG	32	VAL	2.9
29	DH	146	VAL	2.9
53	B5	19	LYS	2.9
53	B5	37	LYS	2.9
2	CB	90	PHE	2.9
29	BH	139	PHE	2.9
18	CR	74	HIS	2.9
31	DJ	76	HIS	2.9
33	DL	18	ARG	2.9
40	DS	84	ARG	2.9
36	DO	40	ILE	2.9
2	CB	161	LEU	2.9
10	CJ	71	LEU	2.9
22	BA	2178	C	2.9
22	DA	2295	C	2.9
22	DA	2011	U	2.9
39	DR	50	GLY	2.9
1	CA	1331	G	2.9
22	BA	2885	G	2.9
3	AC	193	TYR	2.9
33	DL	58	TYR	2.9
19	CS	18	LYS	2.9
16	CP	20	VAL	2.9
20	CT	81	ALA	2.9
29	BH	148	ALA	2.9
30	DI	2	ALA	2.9
35	DN	116	VAL	2.9
53	B5	192	ALA	2.9
26	DE	179	SER	2.9
29	BH	113	SER	2.9
30	BI	135	SER	2.9
40	DS	81	SER	2.9
1	CA	1227	A	2.9
7	CG	22	LEU	2.9
41	DT	30	ILE	2.9
46	DY	56	LEU	2.9
51	D3	44	LEU	2.9
24	DC	41	GLY	2.8
29	DH	35	LYS	2.8
53	B5	25	GLU	2.8
9	CI	121	ALA	2.8
14	AN	45	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
22	BA	2125	G	2.8
22	DA	1266	G	2.8
36	DO	57	ALA	2.8
50	D2	18	PHE	2.8
53	B5	155	ARG	2.8
25	DD	131	ASP	2.8
20	AT	6	SER	2.8
24	DC	232	HIS	2.8
29	BH	131	SER	2.8
9	CI	118	LEU	2.8
29	BH	54	LEU	2.8
33	DL	79	LEU	2.8
39	DR	49	ILE	2.8
42	DU	103	ILE	2.8
27	BF	116	GLY	2.8
35	DN	105	GLY	2.8
51	D3	2	PRO	2.8
10	CJ	59	LYS	2.8
24	DC	265	LYS	2.8
29	BH	114	GLU	2.8
22	BA	1058	U	2.8
7	AG	4	ARG	2.8
12	CL	16	VAL	2.8
13	CM	61	ALA	2.8
22	BA	885	C	2.8
28	DG	136	ALA	2.8
36	DO	11	ALA	2.8
40	DS	95	ARG	2.8
29	DH	79	THR	2.8
33	DL	12	SER	2.8
36	DO	24	THR	2.8
1	CA	1236	A	2.8
13	CM	81	MET	2.8
30	DI	125	MET	2.8
14	CN	47	LYS	2.8
42	DU	79	LYS	2.8
42	DU	55	PRO	2.8
10	AJ	74	VAL	2.8
4	AD	27	ALA	2.8
22	BA	2182	U	2.8
27	DF	74	VAL	2.8
38	DQ	39	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
26	DE	128	ALA	2.8
34	DM	96	ILE	2.8
35	DN	98	LEU	2.8
41	DT	70	HIS	2.8
1	CA	1325	C	2.8
22	BA	1914	C	2.8
22	DA	2300	C	2.8
29	BH	101	ASP	2.8
27	DF	155	THR	2.8
46	DY	30	MET	2.8
2	CB	149	GLY	2.8
1	AA	1018	G	2.8
21	CU	41	PRO	2.8
22	DA	1311	G	2.8
53	B5	183	PRO	2.8
38	DQ	37	GLN	2.8
41	BT	69	ARG	2.8
17	CQ	79	VAL	2.8
3	AC	37	PHE	2.8
27	DF	83	TYR	2.8
44	DW	60	PHE	2.8
2	AB	85	LEU	2.8
13	CM	34	LEU	2.8
13	CM	69	LEU	2.8
31	DJ	118	MET	2.8
33	DL	74	THR	2.8
38	DQ	41	LYS	2.8
40	DS	6	LYS	2.8
44	DW	78	LYS	2.8
22	BA	2146	C	2.8
22	BA	2161	C	2.8
22	DA	183	C	2.8
22	DA	267	C	2.8
22	DA	1092	C	2.8
22	DA	2008	C	2.8
51	D3	18	GLY	2.8
51	D3	56	GLY	2.8
13	CM	112	PRO	2.8
19	CS	78	ARG	2.7
21	AU	24	GLU	2.7
31	DJ	37	ARG	2.7
38	DQ	6	ARG	2.7

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Mol	Chain	Res	Type	RSRZ
2	AB	14	VAL	2.7
10	CJ	57	VAL	2.7
17	CQ	29	VAL	2.7
21	AU	14	VAL	2.7
24	DC	228	VAL	2.7
26	DE	186	VAL	2.7
35	DN	47	VAL	2.7
1	CA	1362	A	2.7
7	CG	103	TRP	2.7
22	BA	654	A	2.7
27	DF	172	ALA	2.7
30	BI	120	ALA	2.7
35	DN	61	ALA	2.7
53	B5	179	ALA	2.7
22	BA	1171	G	2.7
22	BA	2124	G	2.7
22	BA	2127	G	2.7
22	DA	1381	G	2.7
30	BI	59	ILE	2.7
30	BI	80	LEU	2.7
30	BI	106	LEU	2.7
35	DN	97	ILE	2.7
53	B5	101	ILE	2.7
1	CA	1224	U	2.7
22	BA	2106	U	2.7
22	DA	1094	U	2.7
5	CE	152	MET	2.7
41	BT	1	MET	2.7
41	DT	33	LYS	2.7
50	D2	22	MET	2.7
29	BH	66	ASN	2.7
2	CB	130	THR	2.7
26	DE	53	THR	2.7
53	B5	106	ASP	2.7
13	CM	99	GLY	2.7
35	DN	27	SER	2.7
45	DX	15	GLY	2.7
53	B5	81	GLY	2.7
26	DE	67	ARG	2.7
30	DI	134	ARG	2.7
39	DR	80	ARG	2.7
1	CA	1538	C	2.7

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Mol	Chain	Res	Type	RSRZ
22	DA	275	C	2.7
42	DU	66	GLN	2.7
33	DL	106	GLU	2.7
29	DH	108	VAL	2.7
29	DH	147	VAL	2.7
30	BI	98	VAL	2.7
7	CG	13	LEU	2.7
10	AJ	87	LEU	2.7
53	B5	196	ALA	2.7
14	CN	42	TRP	2.7
42	DU	72	ILE	2.7
17	CQ	16	LYS	2.7
22	DA	504	A	2.7
25	DD	157	LYS	2.7
41	DT	9	LYS	2.7
14	CN	50	THR	2.7
30	BI	52	GLY	2.7
2	CB	139	ARG	2.7
10	CJ	54	SER	2.7
24	DC	238	ARG	2.7
46	BY	23	ARG	2.7
32	DK	3	GLN	2.7
30	DI	130	GLU	2.7
9	CI	104	VAL	2.7
39	DR	51	VAL	2.7
2	AB	135	LEU	2.7
10	AJ	92	LEU	2.7
22	BA	1924	C	2.7
30	BI	133	ALA	2.7
35	DN	21	PHE	2.7
49	D1	5	ILE	2.7
4	AD	22	LYS	2.7
14	AN	42	TRP	2.7
20	CT	9	LYS	2.7
49	D1	10	LYS	2.7
2	AB	136	MET	2.7
53	B5	21	TYR	2.7
1	CA	1307	U	2.7
5	AE	146	ASN	2.7
25	DD	133	THR	2.7
10	CJ	60	ASP	2.7
19	CS	9	PRO	2.7

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Mol	Chain	Res	Type	RSRZ
33	DL	69	ARG	2.7
42	DU	48	PRO	2.7
45	DX	28	ARG	2.7
22	DA	51	G	2.7
23	DB	41	G	2.7
7	CG	80	VAL	2.7
21	AU	28	VAL	2.7
2	CB	151	ILE	2.7
7	CG	59	LEU	2.7
13	CM	32	ALA	2.7
14	CN	36	ALA	2.7
17	CQ	5	ILE	2.7
34	DM	124	LEU	2.7
20	CT	7	ALA	2.7
20	CT	63	ALA	2.7
4	AD	151	LYS	2.7
20	CT	85	LYS	2.7
26	DE	95	LYS	2.7
42	DU	19	LYS	2.7
48	D0	19	HIS	2.7
1	AA	990	C	2.7
30	DI	8	TYR	2.7
49	D1	21	TYR	2.7
25	DD	136	ASN	2.7
32	DK	68	GLY	2.7
53	B5	62	THR	2.7
22	BA	2172	U	2.7
10	CJ	19	ASP	2.7
29	DH	144	VAL	2.7
32	DK	122	VAL	2.7
5	AE	11	LEU	2.7
13	CM	22	ILE	2.6
26	DE	77	ILE	2.6
26	DE	148	ILE	2.6
37	BP	2	SER	2.7
30	BI	72	LYS	2.6
42	DU	33	LYS	2.6
53	B5	80	LYS	2.6
53	B5	194	ILE	2.6
14	AN	36	ALA	2.6
30	DI	77	ALA	2.6
50	D2	23	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
1	CA	1312	G	2.6
5	AE	152	MET	2.6
22	BA	2133	G	2.6
22	DA	356	G	2.6
35	DN	1	MET	2.6
26	DE	60	TRP	2.6
10	CJ	9	ARG	2.6
22	DA	268	C	2.6
22	DA	444	C	2.6
10	CJ	43	PRO	2.6
11	AK	120	GLY	2.6
30	DI	25	GLY	2.6
2	CB	20	THR	2.6
40	DS	3	THR	2.6
9	CI	126	GLN	2.6
21	AU	32	VAL	2.6
28	DG	166	ASP	2.6
30	BI	10	LYS	2.6
30	BI	61	VAL	2.6
34	DM	84	LYS	2.6
42	DU	13	VAL	2.6
22	BA	2176	A	2.6
22	DA	1808	A	2.6
42	DU	65	ILE	2.6
47	DZ	48	ILE	2.6
52	D4	23	ILE	2.6
4	AD	37	ALA	2.6
25	DD	31	ALA	2.6
28	DG	74	SER	2.6
30	DI	67	PHE	2.6
21	AU	17	ARG	2.6
22	BA	2162	G	2.6
22	DA	88	G	2.6
22	DA	333	G	2.6
22	DA	1339	G	2.6
22	DA	2405	G	2.6
26	DE	40	ARG	2.6
36	DO	13	ARG	2.6
19	CS	59	PRO	2.6
30	DI	131	GLY	2.6
33	DL	53	GLY	2.6
53	B5	97	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
30	BI	73	THR	2.6
30	DI	3	LYS	2.6
30	DI	73	THR	2.6
17	CQ	23	VAL	2.6
22	DA	2045	C	2.6
33	DL	70	LYS	2.6
40	DS	41	LYS	2.6
26	DE	3	LEU	2.6
33	DL	61	LEU	2.6
42	DU	25	VAL	2.6
53	B5	166	ASN	2.6
53	B5	197	LEU	2.6
53	B5	210	LEU	2.6
19	CS	11	ILE	2.6
53	B5	157	ILE	2.6
13	AM	5	ALA	2.6
20	CT	72	ALA	2.6
29	BH	106	ALA	2.6
30	DI	44	ALA	2.6
1	CA	977	A	2.6
22	DA	631	A	2.6
10	CJ	45	ARG	2.6
38	DQ	32	TYR	2.6
26	DE	89	PRO	2.6
26	DE	177	PRO	2.6
16	CP	80	LYS	2.6
51	D3	3	LYS	2.6
7	CG	133	THR	2.6
19	CS	67	VAL	2.6
21	CU	16	LEU	2.6
14	CN	30	ILE	2.6
22	DA	277	G	2.6
26	DE	120	VAL	2.6
41	DT	50	LEU	2.6
42	DU	29	LEU	2.6
45	DX	30	LEU	2.6
51	D3	29	LEU	2.6
51	D3	33	LEU	2.6
37	DP	68	GLU	2.6
46	DY	24	GLU	2.6
53	B5	104	ILE	2.6
10	CJ	99	GLN	2.6

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Mol	Chain	Res	Type	RSRZ
26	DE	85	PHE	2.6
30	BI	44	ALA	2.6
53	B5	187	ALA	2.6
22	BA	1100	C	2.6
4	AD	23	SER	2.6
19	CS	69	HIS	2.6
25	DD	139	SER	2.6
30	BI	88	SER	2.6
34	BM	59	ARG	2.6
46	DY	48	ARG	2.6
53	B5	130	ARG	2.6
22	BA	892	A	2.6
24	DC	59	LYS	2.6
28	DG	6	LYS	2.6
30	BI	82	LYS	2.6
37	DP	111	LYS	2.6
39	DR	83	TYR	2.6
45	DX	54	LYS	2.6
53	B5	144	GLY	2.6
12	CL	24	LEU	2.6
19	CS	13	LEU	2.6
41	DT	32	LEU	2.6
53	B5	132	LEU	2.6
13	CM	77	ILE	2.6
25	DD	26	VAL	2.6
37	DP	13	MET	2.6
44	DW	23	VAL	2.6
50	D2	43	THR	2.6
53	B5	26	ALA	2.6
22	DA	107	G	2.5
22	DA	1271	G	2.5
22	DA	1407	G	2.5
1	CA	1321	U	2.5
13	CM	93	ARG	2.5
31	DJ	116	ARG	2.5
29	BH	136	SER	2.5
46	DY	40	SER	2.5
33	DL	13	LYS	2.5
1	CA	1019	A	2.5
22	DA	2725	A	2.5
7	CG	44	TYR	2.5
19	CS	5	LEU	2.5

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Mol	Chain	Res	Type	RSRZ
19	CS	72	GLY	2.5
29	BH	95	GLY	2.5
30	BI	93	PRO	2.5
27	DF	128	TYR	2.5
35	DN	44	LEU	2.5
40	DS	97	LEU	2.5
53	B5	107	GLY	2.5
2	AB	221	VAL	2.5
7	CG	7	ILE	2.5
14	AN	30	ILE	2.5
30	BI	17	MET	2.5
30	DI	140	VAL	2.5
38	DQ	4	VAL	2.5
38	DQ	31	VAL	2.5
41	DT	10	VAL	2.5
46	DY	11	VAL	2.5
48	D0	54	VAL	2.5
4	AD	152	GLN	2.5
7	CG	72	THR	2.5
46	DY	16	THR	2.5
48	D0	23	THR	2.5
49	D1	23	THR	2.5
9	AI	20	PHE	2.5
19	AS	55	ARG	2.5
36	DO	9	ARG	2.5
38	DQ	13	ARG	2.5
39	DR	78	ARG	2.5
50	D2	14	ARG	2.5
2	CB	45	LYS	2.5
30	DI	113	LYS	2.5
53	B5	55	SER	2.5
22	DA	214	G	2.5
22	DA	974	G	2.5
22	DA	1068	G	2.5
1	CA	1302	C	2.5
14	CN	16	LEU	2.5
15	AO	57	LEU	2.5
19	CS	30	PRO	2.5
30	BI	74	PRO	2.5
46	DY	37	LEU	2.5
53	B5	134	PRO	2.5
53	B5	182	PRO	2.5

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Mol	Chain	Res	Type	RSRZ
16	CP	60	TRP	2.5
5	CE	30	ILE	2.5
8	CH	3	MET	2.5
25	DD	125	TRP	2.5
42	DU	38	GLY	2.5
27	DF	34	ILE	2.5
38	DQ	45	TYR	2.5
53	B5	94	TYR	2.5
1	AA	1492	A	2.5
1	CA	1493	A	2.5
22	BA	2163	A	2.5
13	CM	102	THR	2.5
19	AS	33	THR	2.5
29	BH	60	GLU	2.5
24	DC	251	GLN	2.5
30	DI	30	GLN	2.5
13	CM	79	ARG	2.5
17	CQ	65	ARG	2.5
26	DE	79	ARG	2.5
24	DC	15	HIS	2.5
10	CJ	63	ASP	2.5
20	CT	33	LYS	2.5
24	DC	39	LYS	2.5
38	DQ	5	LYS	2.5
1	CA	121	U	2.5
1	CA	1540	U	2.5
22	BA	2189	U	2.5
6	CF	54	LEU	2.5
33	DL	62	PRO	2.5
49	D1	34	LEU	2.5
25	DD	158	GLY	2.5
49	D1	4	GLY	2.5
26	DE	169	VAL	2.5
26	DE	178	VAL	2.5
53	B5	44	VAL	2.5
22	DA	549	G	2.5
30	DI	62	TYR	2.5
5	AE	103	THR	2.5
15	CO	15	PHE	2.5
30	BI	42	PHE	2.5
37	DP	9	GLU	2.5
16	AP	82	ALA	2.5

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Mol	Chain	Res	Type	RSRZ
19	AS	56	GLN	2.5
26	DE	43	THR	2.5
26	DE	50	ALA	2.5
1	CA	532	A	2.5
1	CA	994	A	2.5
1	CA	1441	A	2.5
6	CF	79	ARG	2.5
22	DA	2406	A	2.5
13	CM	13	LYS	2.5
13	CM	114	LYS	2.5
2	CB	43	LEU	2.5
35	DN	65	LEU	2.5
29	BH	88	GLY	2.5
30	BI	66	SER	2.5
1	AA	991	U	2.5
41	BT	2	ILE	2.5
52	D4	26	ILE	2.5
13	CM	43	VAL	2.5
53	B5	95	VAL	2.5
24	DC	240	PHE	2.5
30	BI	62	TYR	2.5
2	CB	12	ALA	2.5
7	CG	128	ALA	2.5
29	BH	49	ALA	2.5
30	DI	41	ALA	2.5
37	DP	12	GLN	2.5
42	DU	22	ARG	2.5
44	DW	43	THR	2.5
45	DX	21	ALA	2.5
53	B5	83	LYS	2.5
22	BA	1922	G	2.5
22	DA	75	G	2.5
22	DA	664	G	2.5
22	DA	1430	G	2.5
22	DA	2410	G	2.5
42	DU	69	ASN	2.5
36	DO	48	LEU	2.4
37	DP	97	LEU	2.4
41	DT	8	LEU	2.4
7	AG	12	ILE	2.4
24	DC	244	PRO	2.4
40	DS	4	ILE	2.4

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Mol	Chain	Res	Type	RSRZ
29	DH	61	VAL	2.4
36	DO	66	GLY	2.4
7	CG	57	SER	2.4
50	D2	45	SER	2.4
7	CG	26	PHE	2.4
13	CM	87	ARG	2.4
14	CN	21	PHE	2.4
19	CS	10	PHE	2.4
26	DE	183	PHE	2.4
35	DN	63	ARG	2.4
39	DR	13	ARG	2.4
9	CI	13	LYS	2.4
13	CM	27	LYS	2.4
17	CQ	82	ALA	2.4
29	DH	84	ALA	2.4
36	DO	68	LYS	2.4
22	DA	76	C	2.4
53	B5	189	ASN	2.4
51	D3	62	LEU	2.4
22	DA	103	A	2.4
22	DA	866	A	2.4
2	AB	88	ASP	2.4
9	CI	23	PRO	2.4
26	DE	149	ILE	2.4
27	DF	44	ILE	2.4
33	DL	103	ILE	2.4
35	DN	75	ILE	2.4
53	B5	66	PRO	2.4
5	AE	102	GLY	2.4
24	BC	235	GLY	2.4
53	B5	136	GLY	2.4
35	DN	22	ARG	2.4
2	CB	152	LYS	2.4
22	BA	1101	U	2.4
22	BA	2149	U	2.4
22	DA	276	U	2.4
22	DA	441	U	2.4
22	DA	1406	U	2.4
28	DG	5	ALA	2.4
33	DL	83	ALA	2.4
35	DN	88	ALA	2.4
36	DO	70	ALA	2.4

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Mol	Chain	Res	Type	RSRZ
27	DF	35	THR	2.4
45	DX	25	THR	2.4
28	DG	45	HIS	2.4
39	DR	82	HIS	2.4
27	DF	117	LEU	2.4
29	DH	58	LEU	2.4
42	BU	52	LEU	2.4
42	DU	27	ASN	2.4
4	AD	38	PRO	2.4
9	CI	21	ILE	2.4
17	CQ	25	ILE	2.4
30	BI	20	PRO	2.4
9	AI	111	VAL	2.4
9	CI	55	VAL	2.4
24	DC	159	GLY	2.4
29	BH	86	ASP	2.4
40	DS	76	VAL	2.4
41	DT	79	ASP	2.4
22	BA	2114	A	2.4
22	BA	2154	A	2.4
22	DA	477	A	2.4
22	DA	614	A	2.4
7	CG	5	ARG	2.4
7	CG	76	LYS	2.4
27	DF	30	ARG	2.4
41	DT	82	LYS	2.4
17	CQ	63	GLU	2.4
31	DJ	119	PHE	2.4
7	CG	134	ALA	2.4
24	DC	106	ALA	2.4
26	DE	86	ALA	2.4
29	BH	64	ALA	2.4
30	DI	63	ALA	2.4
37	DP	49	ALA	2.4
8	AH	76	GLN	2.4
30	DI	6	GLN	2.4
16	CP	17	TYR	2.4
9	CI	43	THR	2.4
26	DE	189	THR	2.4
39	DR	19	THR	2.4
48	D0	9	THR	2.4
45	DX	56	MET	2.4

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Mol	Chain	Res	Type	RSRZ
10	CJ	73	LEU	2.4
19	CS	47	LEU	2.4
25	DD	187	LEU	2.4
33	DL	82	LEU	2.4
50	D2	31	LEU	2.4
13	CM	9	ILE	2.4
7	CG	16	PRO	2.4
13	CM	10	PRO	2.4
3	CC	39	VAL	2.4
13	AM	99	GLY	2.4
20	CT	71	LYS	2.4
25	DD	6	GLY	2.4
29	DH	41	LYS	2.4
52	D4	38	GLY	2.4
53	B5	147	GLY	2.4
39	DR	84	ARG	2.4
53	B5	201	LYS	2.4
22	DA	1644	C	2.4
1	AA	1493	A	2.4
21	AU	39	GLU	2.4
22	BA	1090	A	2.4
22	BA	2117	A	2.4
14	CN	8	ALA	2.4
25	DD	192	ALA	2.4
28	DG	7	ALA	2.4
39	BR	103	ALA	2.4
43	DV	6	ALA	2.4
14	CN	32	SER	2.4
25	DD	97	SER	2.4
26	DE	75	SER	2.4
22	BA	1099	G	2.4
22	BA	2166	U	2.4
22	DA	1475	G	2.4
22	DA	2250	G	2.4
30	BI	118	THR	2.4
35	DN	24	MET	2.4
53	B5	145	THR	2.4
34	DM	95	LEU	2.4
53	B5	186	LEU	2.4
26	DE	108	ILE	2.4
52	D4	16	ILE	2.4
6	CF	93	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
20	AT	3	ASN	2.3
25	DD	59	ARG	2.3
28	DG	41	VAL	2.3
28	DG	162	VAL	2.3
31	DJ	48	VAL	2.3
29	BH	107	GLY	2.3
32	DK	101	GLY	2.3
33	DL	48	ARG	2.3
42	DU	84	GLY	2.3
53	B5	211	ARG	2.3
13	CM	11	ASP	2.3
28	DG	137	ASP	2.3
37	DP	20	PHE	2.3
17	CQ	24	ALA	2.3
21	AU	36	GLU	2.3
33	BL	115	GLU	2.3
1	CA	135	C	2.3
1	CA	995	C	2.3
22	BA	143	C	2.3
22	DA	341	C	2.3
22	DA	680	C	2.3
4	CD	23	SER	2.3
22	DA	654	A	2.3
22	DA	1205	A	2.3
30	DI	21	SER	2.3
31	DJ	1	MET	2.3
3	AC	168	TYR	2.3
6	CF	92	THR	2.3
7	CG	142	HIS	2.3
9	CI	98	LEU	2.3
10	CJ	87	LEU	2.3
24	DC	105	LEU	2.3
29	BH	124	THR	2.3
29	DH	6	LEU	2.3
29	DH	54	LEU	2.3
32	DK	104	THR	2.3
33	DL	118	THR	2.3
36	DO	64	TYR	2.3
3	CC	94	ILE	2.3
9	CI	28	ILE	2.3
30	BI	122	ILE	2.3
2	AB	11	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
14	CN	57	PRO	2.3
19	CS	7	LYS	2.3
27	DF	65	PRO	2.3
30	BI	100	LYS	2.3
32	DK	44	LYS	2.3
51	D3	36	LYS	2.3
51	D3	41	LYS	2.3
53	B5	85	LYS	2.3
7	CG	105	VAL	2.3
9	AI	130	ARG	2.3
14	CN	11	VAL	2.3
14	CN	53	ARG	2.3
22	DA	39	G	2.3
22	DA	1248	G	2.3
22	DA	2112	G	2.3
32	BK	35	VAL	2.3
32	BK	122	VAL	2.3
34	DM	40	ARG	2.3
36	DO	16	ARG	2.3
42	DU	49	VAL	2.3
8	CH	44	GLY	2.3
10	CJ	38	GLY	2.3
29	BH	73	ASN	2.3
35	DN	7	GLY	2.3
5	AE	31	PHE	2.3
38	DQ	101	PHE	2.3
49	D1	52	ALA	2.3
53	B5	90	ALA	2.3
2	CB	157	LEU	2.3
20	CT	66	LEU	2.3
26	DE	72	SER	2.3
28	DG	33	LEU	2.3
30	DI	102	SER	2.3
31	DJ	109	LEU	2.3
36	DO	106	LEU	2.3
40	DS	23	LEU	2.3
46	DY	57	LEU	2.3
22	DA	228	C	2.3
22	DA	565	C	2.3
26	DE	165	HIS	2.3
51	D3	43	HIS	2.3
1	AA	1016	A	2.3

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Mol	Chain	Res	Type	RSRZ
22	BA	2134	A	2.3
22	DA	320	A	2.3
22	DA	1347	A	2.3
22	DA	2126	A	2.3
49	D1	48	ILE	2.3
53	B5	214	TYR	2.3
7	CG	149	LYS	2.3
41	DT	66	LYS	2.3
51	D3	47	LYS	2.3
10	CJ	48	ARG	2.3
22	DA	2690	U	2.3
24	DC	212	ARG	2.3
29	DH	32	PRO	2.3
31	DJ	8	PRO	2.3
7	CG	135	VAL	2.3
27	DF	13	VAL	2.3
41	DT	58	VAL	2.3
50	D2	27	GLY	2.3
10	CJ	58	ASN	2.3
28	DG	20	ASN	2.3
26	DE	124	PHE	2.3
22	BA	2115	G	2.3
22	DA	180	G	2.3
48	D0	56	ALA	2.3
33	DL	81	ASP	2.3
20	CT	13	GLN	2.3
29	BH	133	GLN	2.3
33	DL	38	GLN	2.3
35	DN	9	GLN	2.3
36	DO	98	GLN	2.3
3	CC	190	HIS	2.3
7	CG	137	LYS	2.3
8	CH	75	ILE	2.3
10	CJ	40	ILE	2.3
31	DJ	103	ILE	2.3
38	DQ	14	HIS	2.3
45	DX	10	LYS	2.3
49	D1	19	HIS	2.3
17	AQ	70	THR	2.3
30	DI	126	THR	2.3
53	B5	22	THR	2.3
15	AO	89	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
38	DQ	28	ARG	2.3
1	AA	1536	C	2.3
22	BA	1847	A	2.3
22	BA	2177	C	2.3
22	DA	509	C	2.3
22	DA	1305	C	2.3
30	BI	33	VAL	2.3
22	BA	2132	U	2.3
7	CG	112	GLY	2.3
30	BI	25	GLY	2.3
35	DN	101	GLY	2.3
45	DX	75	GLY	2.3
50	D2	5	PHE	2.3
53	B5	181	PHE	2.3
2	AB	166	ALA	2.3
19	CS	65	GLU	2.3
34	DM	119	LEU	2.3
35	DN	51	LEU	2.3
7	CG	110	LYS	2.3
10	AJ	59	LYS	2.3
10	CJ	46	LYS	2.3
39	DR	71	LYS	2.3
42	DU	17	LYS	2.3
1	CA	945	G	2.3
7	CG	42	ILE	2.3
10	CJ	8	ILE	2.3
22	BA	1091	G	2.3
22	DA	325	G	2.3
22	DA	379	G	2.3
22	DA	1303	G	2.3
2	CB	95	ARG	2.3
10	CJ	5	ARG	2.3
19	CS	34	TRP	2.3
14	AN	56	SER	2.3
27	DF	73	SER	2.3
28	DG	149	ARG	2.3
29	DH	136	SER	2.3
45	DX	50	ARG	2.3
7	AG	6	VAL	2.3
10	CJ	39	PRO	2.3
13	CM	16	VAL	2.3
14	CN	52	PRO	2.3

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Mol	Chain	Res	Type	RSRZ
14	CN	70	PRO	2.3
18	AR	51	TYR	2.3
17	CQ	78	VAL	2.3
29	DH	138	VAL	2.3
50	D2	9	VAL	2.3
53	B5	42	VAL	2.3
44	DW	13	GLY	2.3
22	BA	790	U	2.3
1	AA	1031	C	2.2
1	AA	1539	C	2.2
1	CA	940	C	2.2
22	DA	1307	A	2.2
22	DA	1365	A	2.2
28	DG	83	PHE	2.2
46	DY	1	MET	2.2
50	D2	1	MET	2.2
29	DH	149	GLU	2.2
30	BI	7	ALA	2.2
42	DU	40	ASN	2.2
20	CT	86	LEU	2.2
29	BH	58	LEU	2.2
29	DH	5	LEU	2.2
11	AK	14	LYS	2.2
20	CT	8	LYS	2.2
51	D3	23	LYS	2.2
53	B5	188	ASP	2.2
19	AS	49	ILE	2.2
25	DD	14	ILE	2.2
12	CL	86	ARG	2.2
24	DC	214	ARG	2.2
40	DS	102	HIS	2.2
44	DW	55	ARG	2.2
25	DD	80	TRP	2.2
33	DL	121	THR	2.2
10	CJ	84	VAL	2.2
26	DE	4	VAL	2.2
27	DF	28	VAL	2.2
35	DN	15	SER	2.2
50	D2	7	PRO	2.2
53	B5	180	SER	2.2
22	BA	2107	G	2.2
22	DA	189	G	2.2

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Mol	Chain	Res	Type	RSRZ
22	DA	205	G	2.2
22	DA	326	G	2.2
22	DA	476	G	2.2
22	DA	1653	G	2.2
13	CM	111	GLY	2.2
24	DC	225	MET	2.2
22	DA	1559	U	2.2
30	BI	110	ALA	2.2
9	AI	61	LEU	2.2
13	CM	19	LEU	2.2
30	BI	28	LEU	2.2
34	DM	2	LEU	2.2
39	DR	70	GLU	2.2
14	CN	3	LYS	2.2
22	DA	332	A	2.2
22	DA	675	A	2.2
22	DA	1072	C	2.2
22	DA	1306	C	2.2
25	DD	8	LYS	2.2
38	DQ	112	LYS	2.2
52	D4	32	LYS	2.2
53	B5	48	LEU	2.2
9	CI	110	GLN	2.2
45	DX	64	ILE	2.2
13	CM	12	HIS	2.2
17	AQ	11	ARG	2.2
17	CQ	11	ARG	2.2
24	DC	243	HIS	2.2
27	DF	71	ARG	2.2
29	DH	135	HIS	2.2
36	DO	10	ARG	2.2
47	DZ	11	ARG	2.2
50	D2	35	ARG	2.2
17	CQ	7	THR	2.2
17	CQ	53	CYS	2.2
24	DC	19	VAL	2.2
27	DF	146	VAL	2.2
29	BH	61	VAL	2.2
30	DI	132	THR	2.2
41	DT	60	THR	2.2
53	B5	63	VAL	2.2
53	B5	202	PRO	2.2

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Mol	Chain	Res	Type	RSRZ
4	AD	153	SER	2.2
9	AI	6	TYR	2.2
9	CI	64	TYR	2.2
24	BC	272	SER	2.2
30	DI	52	GLY	2.2
53	B5	61	GLY	2.2
53	B5	91	GLY	2.2
33	DL	66	PHE	2.2
53	B5	148	PHE	2.2
10	CJ	42	LEU	2.2
10	CJ	86	ALA	2.2
13	CM	78	LYS	2.2
14	CN	29	ALA	2.2
15	AO	6	GLU	2.2
18	CR	62	ALA	2.2
25	DD	62	LYS	2.2
26	DE	139	LYS	2.2
22	BA	1087	G	2.2
22	DA	805	G	2.2
26	DE	157	LEU	2.2
36	DO	56	LYS	2.2
42	DU	2	ALA	2.2
49	B1	53	LYS	2.2
49	D1	11	LEU	2.2
51	D3	39	LYS	2.2
20	CT	70	ASN	2.2
13	CM	92	ARG	2.2
19	CS	40	ILE	2.2
1	CA	1324	A	2.2
22	DA	342	A	2.2
22	DA	482	A	2.2
1	CA	207	C	2.2
22	BA	2164	C	2.2
22	DA	33	C	2.2
22	DA	1278	C	2.2
22	DA	1656	C	2.2
2	CB	88	ASP	2.2
10	CJ	75	ASP	2.2
2	CB	14	VAL	2.2
13	CM	64	VAL	2.2
25	DD	50	VAL	2.2
30	BI	58	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
40	DS	20	VAL	2.2
41	DT	62	VAL	2.2
49	D1	41	PRO	2.2
5	CE	103	THR	2.2
13	CM	20	THR	2.2
24	DC	252	THR	2.2
25	DD	129	THR	2.2
25	DD	197	THR	2.2
37	DP	69	GLY	2.2
53	B5	222	SER	2.2
7	AG	151	PHE	2.2
24	DC	255	LYS	2.2
29	DH	141	LYS	2.2
42	DU	43	LYS	2.2
33	DL	133	ALA	2.2
34	DM	121	ALA	2.2
37	DP	95	ALA	2.2
38	DQ	35	ALA	2.2
7	AG	109	ARG	2.2
13	CM	29	ARG	2.2
28	DG	26	ILE	2.2
30	BI	101	ILE	2.2
34	DM	126	ILE	2.2
51	D3	59	ILE	2.2
13	AM	8	ASN	2.2
22	DA	2172	U	2.2
22	DA	48	G	2.2
22	DA	376	G	2.2
22	DA	583	G	2.2
1	CA	983	A	2.2
22	DA	74	A	2.2
22	DA	428	A	2.2
30	DI	121	ASP	2.2
31	DJ	46	PRO	2.2
40	DS	45	VAL	2.2
42	DU	18	ASP	2.2
2	AB	27	MET	2.2
22	BA	2165	C	2.2
22	DA	1289	C	2.2
24	DC	246	THR	2.2
26	DE	17	THR	2.2
27	DF	130	MET	2.2

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Mol	Chain	Res	Type	RSRZ
7	CG	34	GLY	2.2
30	BI	40	LYS	2.2
30	DI	87	LYS	2.2
30	DI	91	GLY	2.2
31	DJ	72	LYS	2.2
31	DJ	115	GLY	2.2
32	DK	66	LYS	2.2
33	DL	65	GLY	2.2
42	DU	4	LYS	2.2
27	DF	8	TYR	2.2
42	DU	85	PHE	2.2
46	DY	26	PHE	2.2
6	CF	39	LEU	2.2
36	DO	26	LEU	2.2
7	CG	98	ALA	2.2
10	CJ	34	ALA	2.2
43	DV	39	ALA	2.2
51	D3	27	ALA	2.2
51	D3	65	ALA	2.2
53	B5	198	GLU	2.2
13	CM	4	ILE	2.1
18	AR	21	ILE	2.1
41	BT	3	ARG	2.1
41	DT	12	ARG	2.1
22	DA	355	U	2.1
24	DC	239	ASN	2.1
27	DF	23	ASN	2.1
44	DW	46	HIS	2.1
42	DU	83	VAL	2.1
7	CG	114	LYS	2.1
8	CH	69	LYS	2.1
22	BA	1071	G	2.1
22	DA	45	G	2.1
22	DA	291	G	2.1
22	DA	559	G	2.1
22	DA	914	G	2.1
22	DA	953	G	2.1
22	DA	1300	G	2.1
26	DE	47	LYS	2.1
27	DF	158	THR	2.1
37	DP	38	LYS	2.1
40	DS	72	THR	2.1

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Mol	Chain	Res	Type	RSRZ
42	DU	15	THR	2.1
45	DX	26	LYS	2.1
48	D0	7	LYS	2.1
1	CA	1252	A	2.1
3	AC	2	GLY	2.1
22	DA	1637	A	2.1
2	CB	104	TRP	2.1
26	DE	78	TRP	2.1
15	CO	56	LEU	2.1
22	DA	587	C	2.1
22	DA	679	C	2.1
22	DA	946	C	2.1
22	DA	1536	C	2.1
26	DE	112	LEU	2.1
26	DE	200	LEU	2.1
27	DF	91	LEU	2.1
51	D3	22	PHE	2.1
7	CG	46	ALA	2.1
26	DE	172	ALA	2.1
39	DR	103	ALA	2.1
53	B5	46	ALA	2.1
2	CB	74	ARG	2.1
9	CI	130	ARG	2.1
17	CQ	26	GLU	2.1
31	DJ	99	ARG	2.1
36	DO	60	GLU	2.1
40	DS	25	ARG	2.1
42	DU	82	ARG	2.1
50	D2	12	ARG	2.1
53	B5	165	ARG	2.1
3	CC	207	ILE	2.1
30	BI	35	ILE	2.1
15	AO	80	GLN	2.1
17	CQ	50	ASN	2.1
19	CS	43	ASN	2.1
10	CJ	79	PRO	2.1
22	DA	34	U	2.1
29	DH	78	VAL	2.1
45	DX	67	VAL	2.1
2	AB	131	LYS	2.1
9	CI	120	LYS	2.1
2	AB	155	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
28	DG	21	GLY	2.1
30	BI	137	GLY	2.1
33	DL	22	GLY	2.1
3	CC	167	TRP	2.1
24	DC	213	TRP	2.1
1	CA	1492	A	2.1
2	CB	213	TYR	2.1
13	CM	23	TYR	2.1
22	DA	203	A	2.1
22	DA	429	A	2.1
22	DA	1247	A	2.1
22	DA	1608	A	2.1
22	DA	2820	A	2.1
35	DN	112	TYR	2.1
1	CA	971	G	2.1
7	AG	37	SER	2.1
22	DA	776	G	2.1
22	DA	1136	G	2.1
22	DA	1643	G	2.1
29	BH	109	GLU	2.1
30	DI	66	SER	2.1
46	BY	8	GLU	2.1
53	B5	172	ILE	2.1
22	DA	1607	C	2.1
38	DQ	44	GLN	2.1
9	CI	58	VAL	2.1
9	CI	114	LYS	2.1
10	CJ	11	LYS	2.1
14	AN	34	VAL	2.1
30	DI	20	PRO	2.1
30	DI	97	LYS	2.1
33	DL	120	VAL	2.1
34	DM	80	VAL	2.1
38	DQ	15	LYS	2.1
1	CA	1183	U	2.1
2	CB	65	GLY	2.1
4	AD	24	GLY	2.1
9	AI	40	GLY	2.1
12	CL	118	GLY	2.1
14	CN	46	LEU	2.1
27	DF	62	GLY	2.1
28	DG	148	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
29	BH	75	LEU	2.1
45	DX	71	LEU	2.1
4	AD	169	THR	2.1
27	DF	100	PHE	2.1
4	AD	63	ARG	2.1
16	AP	14	ARG	2.1
26	DE	49	ARG	2.1
27	BF	80	ARG	2.1
35	DN	4	ARG	2.1
50	D2	34	ARG	2.1
53	B5	161	ARG	2.1
9	CI	30	ILE	2.1
21	AU	48	ALA	2.1
24	DC	31	ALA	2.1
37	DP	64	ILE	2.1
46	DY	59	GLU	2.1
1	CA	1363	A	2.1
14	CN	5	SER	2.1
19	CS	4	SER	2.1
22	BA	2126	A	2.1
36	DO	19	GLN	2.1
13	CM	91	HIS	2.1
1	CA	1026	G	2.1
1	CA	1028	C	2.1
1	CA	1322	C	2.1
3	CC	80	LYS	2.1
22	BA	2121	G	2.1
22	DA	130	C	2.1
22	DA	266	G	2.1
22	DA	389	G	2.1
22	DA	530	G	2.1
22	DA	1117	C	2.1
22	DA	1575	C	2.1
8	CH	25	VAL	2.1
22	DA	2414	G	2.1
25	DD	123	LYS	2.1
26	DE	33	VAL	2.1
26	DE	74	LYS	2.1
26	DE	130	LYS	2.1
30	DI	95	LYS	2.1
40	DS	9	HIS	2.1
27	DF	50	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
41	DT	61	LEU	2.1
6	CF	8	PHE	2.1
13	CM	6	GLY	2.1
22	DA	328	U	2.1
22	DA	931	U	2.1
29	DH	126	GLY	2.1
32	DK	74	GLY	2.1
37	DP	74	PHE	2.1
42	DU	87	PHE	2.1
27	DF	10	ASP	2.1
31	DJ	120	ARG	2.1
33	DL	67	THR	2.1
34	DM	81	ARG	2.1
44	DW	11	ARG	2.1
45	DX	14	THR	2.1
2	CB	186	ILE	2.1
13	AM	40	ALA	2.1
16	CP	27	ALA	2.1
24	DC	64	ILE	2.1
27	DF	70	ALA	2.1
27	DF	75	ALA	2.1
27	DF	136	ILE	2.1
28	DG	62	TRP	2.1
30	DI	84	ALA	2.1
29	BH	129	GLU	2.1
28	DG	58	TYR	2.1
10	CJ	30	LYS	2.0
11	AK	80	LYS	2.0
12	AL	44	LYS	2.0
14	CN	7	LYS	2.0
19	CS	35	SER	2.0
29	BH	83	LYS	2.0
31	BJ	111	LYS	2.0
36	DO	5	SER	2.0
21	AU	23	CYS	2.0
37	DP	94	LYS	2.0
35	DN	3	HIS	2.0
10	CJ	51	VAL	2.0
17	CQ	46	VAL	2.0
22	BA	142	A	2.0
22	BA	613	A	2.0
22	BA	2097	A	2.0

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Mol	Chain	Res	Type	RSRZ
22	DA	354	A	2.0
22	DA	1641	A	2.0
22	DA	2082	A	2.0
13	AM	115	PRO	2.0
27	DF	176	PRO	2.0
31	DJ	97	PRO	2.0
44	DW	74	PRO	2.0
1	CA	1228	C	2.0
9	AI	63	LEU	2.0
17	CQ	8	LEU	2.0
35	DN	23	ASN	2.0
48	D0	39	LEU	2.0
1	AA	1305	G	2.0
1	CA	134	G	2.0
1	CA	220	G	2.0
9	AI	45	ARG	2.0
9	CI	127	PHE	2.0
10	AJ	89	ARG	2.0
14	AN	53	ARG	2.0
22	DA	7	G	2.0
22	DA	1408	G	2.0
22	DA	2010	G	2.0
22	DA	2294	G	2.0
24	BC	237	GLY	2.0
25	DD	195	GLY	2.0
47	DZ	53	PHE	2.0
22	BA	1060	U	2.0
22	DA	72	U	2.0
22	DA	290	U	2.0
22	DA	1061	U	2.0
25	DD	146	ILE	2.0
26	DE	13	THR	2.0
40	DS	68	ASP	2.0
51	D3	32	ILE	2.0
13	AM	36	ALA	2.0
25	DD	209	ALA	2.0
26	DE	161	ALA	2.0
29	BH	39	ALA	2.0
29	BH	59	ALA	2.0
16	CP	47	GLU	2.0
2	CB	11	LYS	2.0
46	BY	9	LYS	2.0

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Mol	Chain	Res	Type	RSRZ
31	DJ	92	MET	2.0
9	CI	116	VAL	2.0
12	CL	4	VAL	2.0
17	CQ	22	VAL	2.0
19	CS	23	VAL	2.0
32	DK	29	HIS	2.0
35	DN	29	VAL	2.0
35	DN	60	VAL	2.0
37	DP	61	VAL	2.0
38	DQ	88	VAL	2.0
53	B5	59	VAL	2.0
7	CG	120	LEU	2.0
12	CL	7	LEU	2.0
22	DA	340	A	2.0
22	DA	508	A	2.0
33	DL	95	LEU	2.0
19	CS	55	ARG	2.0
31	DJ	13	ARG	2.0
51	D3	40	ARG	2.0
19	CS	61	PHE	2.0
24	BC	240	PHE	2.0
30	BI	99	GLY	2.0
34	DM	61	GLY	2.0
34	DM	130	PHE	2.0
1	CA	1314	C	2.0
16	CP	33	ILE	2.0
22	DA	1345	C	2.0
22	DA	2073	C	2.0
22	DA	2165	C	2.0
27	DF	85	ILE	2.0
36	DO	35	ILE	2.0
37	DP	4	ILE	2.0
8	CH	55	THR	2.0
20	CT	62	ALA	2.0
40	DS	39	THR	2.0
41	DT	45	ALA	2.0
45	DX	69	ALA	2.0
45	DX	73	ALA	2.0
1	CA	1030	U	2.0
19	CS	73	GLU	2.0
22	DA	29	U	2.0
22	DA	767	U	2.0

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Mol	Chain	Res	Type	RSRZ
22	DA	2833	U	2.0
1	CA	211	G	2.0
22	BA	2110	G	2.0
22	DA	308	G	2.0
22	DA	467	G	2.0
22	DA	628	G	2.0
22	DA	656	G	2.0
22	DA	801	G	2.0
37	BP	111	LYS	2.0
53	B5	109	MET	2.0
37	DP	99	TYR	2.0
7	AG	27	VAL	2.0
25	DD	24	VAL	2.0
26	DE	52	VAL	2.0
28	DG	23	VAL	2.0
28	DG	43	VAL	2.0
29	BH	78	VAL	2.0
29	DH	37	VAL	2.0
34	DM	36	VAL	2.0

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MHW	D6	1	9/10	0.85	0.12	40,52,59,59	0
54	MHU	D6	5	15/16	0.87	0.17	44,54,60,61	0
54	004	D6	7	10/11	0.87	0.14	42,47,58,59	0
54	MHV	D6	6	9/10	0.91	0.10	45,51,58,60	0
54	DBB	D6	3	6/7	0.92	0.12	36,38,47,51	0
54	MHU	B6	5	15/16	0.95	0.09	0,0,1,2	0
54	MHW	B6	1	9/10	0.95	0.08	0,0,2,9	0
54	DBB	B6	3	6/7	0.96	0.10	0,1,1,2	0
54	004	B6	7	10/11	0.96	0.09	0,0,2,3	0
54	MHV	B6	6	9/10	0.96	0.07	0,0,1,1	0

6.3 Carbohydrates (i)

There are no oligosaccharides 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, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	DA	3048	1/1	0.03	0.18	127,127,127,127	0
55	MG	DA	3131	1/1	0.27	0.35	99,99,99,99	0
55	MG	DA	3075	1/1	0.50	0.13	91,91,91,91	0
55	MG	AA	1657	1/1	0.51	0.23	64,64,64,64	0
55	MG	DA	3041	1/1	0.52	0.30	68,68,68,68	0
55	MG	DA	3026	1/1	0.54	0.36	101,101,101,101	0
55	MG	DA	3135	1/1	0.54	0.23	101,101,101,101	0
55	MG	DA	3071	1/1	0.56	0.19	92,92,92,92	0
55	MG	DA	3144	1/1	0.56	0.18	68,68,68,68	0
55	MG	DA	3133	1/1	0.57	0.31	100,100,100,100	0
55	MG	DA	3077	1/1	0.63	0.21	113,113,113,113	0
55	MG	BA	3125	1/1	0.64	0.30	37,37,37,37	0
55	MG	DA	3112	1/1	0.64	0.48	104,104,104,104	0
55	MG	DA	3040	1/1	0.65	0.13	83,83,83,83	0
55	MG	CA	1646	1/1	0.66	0.22	92,92,92,92	0
55	MG	BA	3137	1/1	0.66	0.32	49,49,49,49	0
55	MG	DA	3044	1/1	0.66	0.18	112,112,112,112	0
55	MG	AA	1658	1/1	0.68	0.12	62,62,62,62	0
55	MG	DA	3126	1/1	0.69	0.17	80,80,80,80	0
55	MG	DA	3061	1/1	0.70	0.69	96,96,96,96	0
55	MG	AM	201	1/1	0.70	0.14	62,62,62,62	0
55	MG	DA	3111	1/1	0.70	0.17	107,107,107,107	0
55	MG	DA	3100	1/1	0.71	0.17	77,77,77,77	0
55	MG	BA	3078	1/1	0.72	0.29	79,79,79,79	0
55	MG	DA	3042	1/1	0.72	0.14	87,87,87,87	0
55	MG	DA	3153	1/1	0.72	0.25	53,53,53,53	0
55	MG	CA	1636	1/1	0.73	0.10	126,126,126,126	0
55	MG	DA	3029	1/1	0.73	0.15	73,73,73,73	0
55	MG	DA	3145	1/1	0.74	0.11	71,71,71,71	0
55	MG	BA	3038	1/1	0.75	0.23	42,42,42,42	0
55	MG	DA	3072	1/1	0.76	0.29	90,90,90,90	0
55	MG	DA	3115	1/1	0.76	0.13	111,111,111,111	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	DA	3099	1/1	0.76	0.20	86,86,86,86	0
55	MG	DA	3009	1/1	0.77	0.15	90,90,90,90	0
55	MG	CA	1641	1/1	0.77	0.27	73,73,73,73	0
55	MG	DA	3058	1/1	0.77	0.53	109,109,109,109	0
55	MG	DA	3007	1/1	0.77	0.17	121,121,121,121	0
55	MG	DA	3163	1/1	0.77	0.10	54,54,54,54	0
55	MG	DA	3164	1/1	0.77	0.13	57,57,57,57	0
55	MG	AA	1662	1/1	0.78	0.15	57,57,57,57	0
55	MG	DA	3074	1/1	0.78	0.26	77,77,77,77	0
55	MG	DA	3017	1/1	0.78	0.12	98,98,98,98	0
55	MG	DA	3151	1/1	0.78	0.39	59,59,59,59	0
55	MG	CA	1630	1/1	0.78	0.14	120,120,120,120	0
55	MG	DA	3062	1/1	0.78	0.31	82,82,82,82	0
55	MG	BA	3063	1/1	0.78	0.30	31,31,31,31	0
55	MG	DA	3028	1/1	0.79	0.28	103,103,103,103	0
55	MG	BA	3016	1/1	0.79	0.27	58,58,58,58	0
55	MG	DA	3005	1/1	0.79	0.15	102,102,102,102	0
55	MG	DA	3092	1/1	0.79	0.24	113,113,113,113	0
55	MG	DA	3097	1/1	0.79	0.16	91,91,91,91	0
55	MG	AA	1619	1/1	0.80	0.24	73,73,73,73	0
55	MG	DA	3152	1/1	0.81	0.21	52,52,52,52	0
55	MG	BA	3075	1/1	0.81	0.13	29,29,29,29	0
55	MG	DA	3158	1/1	0.81	0.14	70,70,70,70	0
55	MG	DA	3119	1/1	0.81	0.18	106,106,106,106	0
55	MG	CA	1652	1/1	0.81	0.12	83,83,83,83	0
55	MG	DA	3113	1/1	0.82	0.12	66,66,66,66	0
55	MG	DA	3003	1/1	0.82	0.21	99,99,99,99	0
55	MG	DA	3057	1/1	0.82	0.12	95,95,95,95	0
55	MG	BA	3153	1/1	0.82	0.12	31,31,31,31	0
55	MG	DA	3027	1/1	0.82	0.10	91,91,91,91	0
55	MG	CA	1654	1/1	0.83	0.14	56,56,56,56	0
55	MG	CA	1635	1/1	0.83	0.09	124,124,124,124	0
55	MG	BA	3167	1/1	0.83	0.08	25,25,25,25	0
55	MG	CA	1615	1/1	0.83	0.19	58,58,58,58	0
55	MG	DA	3078	1/1	0.83	0.11	106,106,106,106	0
55	MG	CA	1628	1/1	0.83	0.11	98,98,98,98	0
55	MG	DA	3093	1/1	0.83	0.10	86,86,86,86	0
55	MG	BA	3134	1/1	0.83	0.29	54,54,54,54	0
55	MG	DA	3019	1/1	0.83	0.09	107,107,107,107	0
55	MG	DA	3166	1/1	0.83	0.09	41,41,41,41	0
55	MG	DQ	201	1/1	0.83	0.17	45,45,45,45	0
55	MG	DA	3080	1/1	0.84	0.09	95,95,95,95	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	DA	3103	1/1	0.84	0.12	73,73,73,73	0
55	MG	BA	3136	1/1	0.84	0.12	21,21,21,21	0
55	MG	DA	3056	1/1	0.84	0.26	93,93,93,93	0
55	MG	DA	3157	1/1	0.84	0.17	58,58,58,58	0
55	MG	DA	3011	1/1	0.84	0.13	75,75,75,75	0
55	MG	DA	3137	1/1	0.84	0.26	47,47,47,47	0
55	MG	DA	3140	1/1	0.84	0.20	43,43,43,43	0
55	MG	DA	3142	1/1	0.84	0.18	33,33,33,33	0
55	MG	AA	1664	1/1	0.84	0.08	49,49,49,49	0
55	MG	CA	1653	1/1	0.85	0.23	52,52,52,52	0
55	MG	BA	3059	1/1	0.85	0.24	38,38,38,38	0
55	MG	DA	3146	1/1	0.85	0.11	43,43,43,43	0
55	MG	DA	3124	1/1	0.85	0.10	89,89,89,89	0
55	MG	DA	3098	1/1	0.85	0.10	66,66,66,66	0
55	MG	DA	3127	1/1	0.85	0.11	71,71,71,71	0
55	MG	CA	1656	1/1	0.85	0.10	54,54,54,54	0
55	MG	BA	3104	1/1	0.85	0.19	17,17,17,17	0
55	MG	BA	3061	1/1	0.85	0.22	30,30,30,30	0
55	MG	BA	3187	1/1	0.85	0.12	33,33,33,33	0
55	MG	BA	3049	1/1	0.85	0.11	44,44,44,44	0
55	MG	DA	3167	1/1	0.85	0.13	100,100,100,100	0
55	MG	BA	3050	1/1	0.85	0.09	27,27,27,27	0
55	MG	BA	3178	1/1	0.86	0.30	30,30,30,30	0
55	MG	DA	3160	1/1	0.86	0.19	43,43,43,43	0
55	MG	DA	3045	1/1	0.86	0.09	94,94,94,94	0
55	MG	DA	3060	1/1	0.86	0.16	77,77,77,77	0
55	MG	DA	3165	1/1	0.86	0.26	42,42,42,42	0
55	MG	BA	3100	1/1	0.86	0.26	52,52,52,52	0
55	MG	DA	3155	1/1	0.86	0.14	62,62,62,62	0
55	MG	BA	3113	1/1	0.86	0.07	22,22,22,22	0
55	MG	DA	3148	1/1	0.87	0.25	65,65,65,65	0
55	MG	DA	3149	1/1	0.87	0.28	35,35,35,35	0
55	MG	CA	1627	1/1	0.87	0.15	89,89,89,89	0
55	MG	DA	3031	1/1	0.87	0.07	69,69,69,69	0
55	MG	BA	3027	1/1	0.87	0.22	46,46,46,46	0
55	MG	BA	3057	1/1	0.87	0.25	73,73,73,73	0
55	MG	DA	3079	1/1	0.87	0.08	96,96,96,96	0
55	MG	BA	3058	1/1	0.87	0.23	15,15,15,15	0
55	MG	DA	3090	1/1	0.87	0.12	90,90,90,90	0
55	MG	AA	1667	1/1	0.87	0.07	49,49,49,49	0
55	MG	DA	3143	1/1	0.87	0.13	60,60,60,60	0
55	MG	AA	1671	1/1	0.87	0.24	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	DA	3120	1/1	0.87	0.10	79,79,79,79	0
55	MG	CA	1626	1/1	0.87	0.07	48,48,48,48	0
55	MG	DA	3147	1/1	0.87	0.26	54,54,54,54	0
56	DOL	DA	3001	48/48	0.87	0.14	26,45,58,63	0
55	MG	BA	3191	1/1	0.88	0.13	12,12,12,12	0
55	MG	AA	1629	1/1	0.88	0.10	61,61,61,61	0
55	MG	AA	1669	1/1	0.88	0.25	51,51,51,51	0
55	MG	DA	3089	1/1	0.88	0.13	83,83,83,83	0
55	MG	DA	3039	1/1	0.88	0.09	57,57,57,57	0
55	MG	BA	3181	1/1	0.88	0.12	24,24,24,24	0
55	MG	AA	1644	1/1	0.88	0.06	44,44,44,44	0
55	MG	CA	1629	1/1	0.88	0.09	91,91,91,91	0
55	MG	DA	3107	1/1	0.89	0.11	75,75,75,75	0
55	MG	AA	1654	1/1	0.89	0.14	43,43,43,43	0
55	MG	DA	3012	1/1	0.89	0.14	73,73,73,73	0
55	MG	CA	1606	1/1	0.89	0.09	89,89,89,89	0
55	MG	BA	3176	1/1	0.89	0.09	20,20,20,20	0
55	MG	DA	3116	1/1	0.89	0.16	76,76,76,76	0
55	MG	BA	3146	1/1	0.89	0.23	30,30,30,30	0
55	MG	AA	1661	1/1	0.89	0.10	29,29,29,29	0
55	MG	DA	3123	1/1	0.89	0.09	57,57,57,57	0
55	MG	CA	1645	1/1	0.89	0.13	32,32,32,32	0
55	MG	BA	3159	1/1	0.89	0.13	14,14,14,14	0
55	MG	CA	1651	1/1	0.89	0.10	44,44,44,44	0
55	MG	D2	101	1/1	0.89	0.10	83,83,83,83	0
55	MG	DA	3033	1/1	0.89	0.09	71,71,71,71	0
55	MG	DA	3084	1/1	0.90	0.08	105,105,105,105	0
55	MG	AA	1646	1/1	0.90	0.08	49,49,49,49	0
55	MG	DA	3150	1/1	0.90	0.14	56,56,56,56	0
55	MG	CA	1643	1/1	0.90	0.16	50,50,50,50	0
55	MG	AA	1635	1/1	0.90	0.10	66,66,66,66	0
55	MG	AA	1659	1/1	0.90	0.30	50,50,50,50	0
55	MG	DA	3032	1/1	0.90	0.11	68,68,68,68	0
55	MG	CA	1649	1/1	0.90	0.22	52,52,52,52	0
55	MG	DA	3064	1/1	0.90	0.10	48,48,48,48	0
55	MG	DA	3035	1/1	0.90	0.09	79,79,79,79	0
55	MG	CA	1631	1/1	0.90	0.10	95,95,95,95	0
55	MG	CA	1632	1/1	0.90	0.08	73,73,73,73	0
55	MG	DA	3108	1/1	0.90	0.11	59,59,59,59	0
55	MG	AA	1665	1/1	0.90	0.11	37,37,37,37	0
55	MG	BA	3090	1/1	0.90	0.14	19,19,19,19	0
55	MG	DA	3024	1/1	0.90	0.12	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	DA	3025	1/1	0.90	0.17	69,69,69,69	0
55	MG	CA	1655	1/1	0.90	0.12	44,44,44,44	0
55	MG	CA	1608	1/1	0.91	0.12	84,84,84,84	0
55	MG	DA	3136	1/1	0.91	0.12	91,91,91,91	0
55	MG	DA	3154	1/1	0.91	0.20	40,40,40,40	0
55	MG	DA	3049	1/1	0.91	0.10	84,84,84,84	0
55	MG	AA	1649	1/1	0.91	0.07	32,32,32,32	0
55	MG	BA	3186	1/1	0.91	0.10	29,29,29,29	0
55	MG	AA	1651	1/1	0.91	0.36	61,61,61,61	0
55	MG	DA	3008	1/1	0.91	0.09	100,100,100,100	0
55	MG	BA	3189	1/1	0.91	0.12	45,45,45,45	0
55	MG	DA	3105	1/1	0.91	0.12	80,80,80,80	0
55	MG	DA	3125	1/1	0.91	0.10	62,62,62,62	0
55	MG	DA	3106	1/1	0.91	0.08	52,52,52,52	0
55	MG	AA	1668	1/1	0.91	0.07	29,29,29,29	0
55	MG	AA	1648	1/1	0.91	0.13	47,47,47,47	0
55	MG	DA	3014	1/1	0.91	0.12	73,73,73,73	0
55	MG	BA	3089	1/1	0.92	0.10	33,33,33,33	0
55	MG	BA	3165	1/1	0.92	0.25	43,43,43,43	0
55	MG	DA	3094	1/1	0.92	0.07	84,84,84,84	0
55	MG	DA	3141	1/1	0.92	0.18	40,40,40,40	0
55	MG	AA	1650	1/1	0.92	0.17	36,36,36,36	0
55	MG	DA	3046	1/1	0.92	0.09	62,62,62,62	0
55	MG	DA	3047	1/1	0.92	0.10	73,73,73,73	0
55	MG	BA	3169	1/1	0.92	0.09	35,35,35,35	0
55	MG	DA	3010	1/1	0.92	0.06	80,80,80,80	0
55	MG	AA	1660	1/1	0.92	0.17	51,51,51,51	0
55	MG	CA	1633	1/1	0.92	0.22	64,64,64,64	0
55	MG	AA	1670	1/1	0.92	0.14	33,33,33,33	0
55	MG	BA	3111	1/1	0.92	0.10	6,6,6,6	0
55	MG	AA	1630	1/1	0.92	0.11	73,73,73,73	0
55	MG	CA	1642	1/1	0.92	0.17	25,25,25,25	0
55	MG	BA	3119	1/1	0.92	0.09	20,20,20,20	0
55	MG	DA	3068	1/1	0.92	0.08	65,65,65,65	0
55	MG	AA	1652	1/1	0.92	0.24	49,49,49,49	0
55	MG	AA	1638	1/1	0.92	0.08	87,87,87,87	0
55	MG	CA	1647	1/1	0.92	0.12	41,41,41,41	0
55	MG	DA	3159	1/1	0.92	0.14	43,43,43,43	0
55	MG	CA	1601	1/1	0.92	0.09	39,39,39,39	0
55	MG	AA	1639	1/1	0.92	0.07	65,65,65,65	0
55	MG	AA	1643	1/1	0.92	0.11	28,28,28,28	0
55	MG	CA	1609	1/1	0.92	0.08	89,89,89,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	CA	1614	1/1	0.92	0.06	50,50,50,50	0
55	MG	BA	3042	1/1	0.92	0.21	0,0,0,0	0
55	MG	BA	3149	1/1	0.92	0.09	38,38,38,38	0
55	MG	DA	3134	1/1	0.92	0.11	58,58,58,58	0
55	MG	BA	3081	1/1	0.92	0.09	24,24,24,24	0
55	MG	BB	202	1/1	0.93	0.07	16,16,16,16	0
55	MG	DA	3102	1/1	0.93	0.08	62,62,62,62	0
55	MG	DA	3030	1/1	0.93	0.10	60,60,60,60	0
55	MG	AA	1655	1/1	0.93	0.09	35,35,35,35	0
55	MG	DA	3006	1/1	0.93	0.06	93,93,93,93	0
55	MG	CA	1604	1/1	0.93	0.06	95,95,95,95	0
55	MG	DA	3070	1/1	0.93	0.05	108,108,108,108	0
55	MG	DA	3109	1/1	0.93	0.16	42,42,42,42	0
55	MG	DA	3034	1/1	0.93	0.11	69,69,69,69	0
55	MG	CA	1605	1/1	0.93	0.10	86,86,86,86	0
55	MG	DA	3037	1/1	0.93	0.07	93,93,93,93	0
55	MG	DA	3038	1/1	0.93	0.08	63,63,63,63	0
55	MG	BA	3069	1/1	0.93	0.08	4,4,4,4	0
55	MG	BA	3033	1/1	0.93	0.08	11,11,11,11	0
55	MG	BA	3170	1/1	0.93	0.10	38,38,38,38	0
55	MG	AA	1656	1/1	0.93	0.11	43,43,43,43	0
55	MG	AA	1663	1/1	0.93	0.12	48,48,48,48	0
55	MG	DA	3086	1/1	0.93	0.08	76,76,76,76	0
55	MG	AA	1614	1/1	0.93	0.20	69,69,69,69	0
55	MG	BA	3185	1/1	0.93	0.21	16,16,16,16	0
55	MG	DA	3161	1/1	0.93	0.07	57,57,57,57	0
55	MG	DA	3128	1/1	0.93	0.08	80,80,80,80	0
55	MG	DA	3020	1/1	0.93	0.08	54,54,54,54	0
55	MG	BA	3151	1/1	0.93	0.10	12,12,12,12	0
55	MG	BA	3120	1/1	0.93	0.13	37,37,37,37	0
55	MG	BA	3155	1/1	0.93	0.10	20,20,20,20	0
55	MG	DB	201	1/1	0.93	0.06	116,116,116,116	0
55	MG	BA	3124	1/1	0.93	0.07	11,11,11,11	0
55	MG	BA	3195	1/1	0.93	0.33	23,23,23,23	0
55	MG	DA	3138	1/1	0.93	0.15	40,40,40,40	0
55	MG	DA	3002	1/1	0.94	0.06	78,78,78,78	0
55	MG	BA	3086	1/1	0.94	0.14	14,14,14,14	0
55	MG	DA	3091	1/1	0.94	0.07	77,77,77,77	0
55	MG	BA	3156	1/1	0.94	0.13	19,19,19,19	0
55	MG	AA	1653	1/1	0.94	0.08	28,28,28,28	0
55	MG	BA	3162	1/1	0.94	0.10	36,36,36,36	0
55	MG	DA	3095	1/1	0.94	0.12	91,91,91,91	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	AA	1632	1/1	0.94	0.09	55,55,55,55	0
55	MG	DA	3063	1/1	0.94	0.08	54,54,54,54	0
55	MG	CA	1603	1/1	0.94	0.06	44,44,44,44	0
55	MG	AA	1626	1/1	0.94	0.07	23,23,23,23	0
55	MG	AA	1666	1/1	0.94	0.10	46,46,46,46	0
55	MG	BA	3139	1/1	0.94	0.23	0,0,0,0	0
55	MG	BA	3173	1/1	0.94	0.09	27,27,27,27	0
55	MG	BA	3175	1/1	0.94	0.06	27,27,27,27	0
55	MG	BA	3142	1/1	0.94	0.26	2,2,2,2	0
55	MG	BA	3005	1/1	0.94	0.08	34,34,34,34	0
55	MG	BA	3180	1/1	0.94	0.07	32,32,32,32	0
55	MG	DA	3110	1/1	0.94	0.11	33,33,33,33	0
55	MG	BA	3147	1/1	0.94	0.07	9,9,9,9	0
55	MG	AA	1605	1/1	0.94	0.09	23,23,23,23	0
55	MG	AA	1608	1/1	0.94	0.06	17,17,17,17	0
55	MG	BA	3082	1/1	0.94	0.10	6,6,6,6	0
55	MG	AA	1628	1/1	0.95	0.07	48,48,48,48	0
55	MG	BA	3004	1/1	0.95	0.04	26,26,26,26	0
55	MG	BA	3115	1/1	0.95	0.05	20,20,20,20	0
55	MG	BA	3116	1/1	0.95	0.18	34,34,34,34	0
55	MG	BA	3085	1/1	0.95	0.18	27,27,27,27	0
55	MG	BA	3062	1/1	0.95	0.26	50,50,50,50	0
55	MG	DA	3104	1/1	0.95	0.06	79,79,79,79	0
55	MG	DA	3132	1/1	0.95	0.13	54,54,54,54	0
55	MG	DA	3156	1/1	0.95	0.16	41,41,41,41	0
55	MG	AA	1612	1/1	0.95	0.10	47,47,47,47	0
55	MG	AA	1620	1/1	0.95	0.07	69,69,69,69	0
55	MG	CA	1638	1/1	0.95	0.05	76,76,76,76	0
55	MG	DA	3081	1/1	0.95	0.07	60,60,60,60	0
55	MG	BA	3127	1/1	0.95	0.06	9,9,9,9	0
55	MG	DA	3162	1/1	0.95	0.14	38,38,38,38	0
55	MG	BA	3132	1/1	0.95	0.13	23,23,23,23	0
55	MG	BA	3157	1/1	0.95	0.07	24,24,24,24	0
55	MG	CA	1644	1/1	0.95	0.09	42,42,42,42	0
55	MG	AA	1631	1/1	0.95	0.10	46,46,46,46	0
55	MG	DA	3114	1/1	0.95	0.07	65,65,65,65	0
55	MG	CA	1618	1/1	0.95	0.05	37,37,37,37	0
55	MG	AA	1609	1/1	0.95	0.08	36,36,36,36	0
55	MG	BA	3163	1/1	0.95	0.25	15,15,15,15	0
55	MG	DA	3016	1/1	0.95	0.12	62,62,62,62	0
55	MG	CA	1624	1/1	0.96	0.05	45,45,45,45	0
55	MG	CA	1625	1/1	0.96	0.07	22,22,22,22	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	DA	3088	1/1	0.96	0.06	74,74,74,74	0
55	MG	BA	3121	1/1	0.96	0.07	3,3,3,3	0
55	MG	BA	3152	1/1	0.96	0.06	6,6,6,6	0
55	MG	BA	3183	1/1	0.96	0.09	12,12,12,12	0
55	MG	DA	3043	1/1	0.96	0.07	66,66,66,66	0
55	MG	BA	3093	1/1	0.96	0.05	58,58,58,58	0
55	MG	BA	3094	1/1	0.96	0.07	31,31,31,31	0
55	MG	BA	3095	1/1	0.96	0.04	21,21,21,21	0
55	MG	AA	1617	1/1	0.96	0.07	52,52,52,52	0
55	MG	BA	3190	1/1	0.96	0.06	31,31,31,31	0
55	MG	BA	3036	1/1	0.96	0.15	11,11,11,11	0
55	MG	DA	3050	1/1	0.96	0.05	56,56,56,56	0
55	MG	DA	3053	1/1	0.96	0.06	40,40,40,40	0
55	MG	DA	3054	1/1	0.96	0.06	55,55,55,55	0
55	MG	DA	3055	1/1	0.96	0.09	72,72,72,72	0
55	MG	BA	3076	1/1	0.96	0.11	14,14,14,14	0
55	MG	BA	3112	1/1	0.96	0.07	20,20,20,20	0
55	MG	CA	1639	1/1	0.96	0.05	43,43,43,43	0
55	MG	BB	204	1/1	0.96	0.28	16,16,16,16	0
55	MG	BA	3077	1/1	0.96	0.07	8,8,8,8	0
55	MG	BA	3166	1/1	0.96	0.08	19,19,19,19	0
55	MG	BA	3141	1/1	0.96	0.06	17,17,17,17	0
55	MG	BA	3168	1/1	0.96	0.11	35,35,35,35	0
55	MG	DA	3067	1/1	0.96	0.06	58,58,58,58	0
55	MG	BA	3087	1/1	0.96	0.07	4,4,4,4	0
55	MG	CA	1607	1/1	0.96	0.08	54,54,54,54	0
55	MG	CA	1648	1/1	0.96	0.13	22,22,22,22	0
55	MG	BA	3031	1/1	0.96	0.12	14,14,14,14	0
55	MG	CA	1650	1/1	0.96	0.14	35,35,35,35	0
55	MG	DA	3121	1/1	0.96	0.05	52,52,52,52	0
55	MG	BA	3079	1/1	0.96	0.05	22,22,22,22	0
55	MG	BA	3148	1/1	0.96	0.15	29,29,29,29	0
55	MG	BA	3092	1/1	0.96	0.04	19,19,19,19	0
55	MG	CA	1617	1/1	0.96	0.07	39,39,39,39	0
55	MG	DB	203	1/1	0.96	0.05	85,85,85,85	0
55	MG	DA	3036	1/1	0.96	0.06	62,62,62,62	0
55	MG	BA	3150	1/1	0.96	0.06	37,37,37,37	0
56	DOL	BA	3001	48/48	0.96	0.09	0,3,25,36	0
55	MG	DA	3083	1/1	0.96	0.08	69,69,69,69	0
55	MG	CA	1623	1/1	0.97	0.11	50,50,50,50	0
55	MG	DA	3122	1/1	0.97	0.06	41,41,41,41	0
55	MG	DA	3069	1/1	0.97	0.10	79,79,79,79	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	BA	3171	1/1	0.97	0.06	24,24,24,24	0
55	MG	BA	3021	1/1	0.97	0.06	1,1,1,1	0
55	MG	BA	3174	1/1	0.97	0.04	12,12,12,12	0
55	MG	DA	3073	1/1	0.97	0.09	60,60,60,60	0
55	MG	AA	1637	1/1	0.97	0.04	15,15,15,15	0
55	MG	DA	3129	1/1	0.97	0.06	45,45,45,45	0
55	MG	BA	3030	1/1	0.97	0.05	9,9,9,9	0
55	MG	DA	3076	1/1	0.97	0.10	69,69,69,69	0
55	MG	BA	3144	1/1	0.97	0.07	15,15,15,15	0
55	MG	BA	3145	1/1	0.97	0.18	28,28,28,28	0
55	MG	BA	3064	1/1	0.97	0.06	5,5,5,5	0
55	MG	BA	3182	1/1	0.97	0.14	33,33,33,33	0
55	MG	BA	3103	1/1	0.97	0.06	0,0,0,0	0
55	MG	DA	3082	1/1	0.97	0.07	60,60,60,60	0
55	MG	DA	3139	1/1	0.97	0.17	30,30,30,30	0
55	MG	AA	1625	1/1	0.97	0.06	47,47,47,47	0
55	MG	BA	3071	1/1	0.97	0.05	60,60,60,60	0
55	MG	AA	1602	1/1	0.97	0.14	46,46,46,46	0
55	MG	AA	1640	1/1	0.97	0.10	36,36,36,36	0
55	MG	BA	3002	1/1	0.97	0.04	18,18,18,18	0
55	MG	AA	1613	1/1	0.97	0.06	24,24,24,24	0
55	MG	BA	3192	1/1	0.97	0.06	22,22,22,22	0
55	MG	BA	3193	1/1	0.97	0.05	38,38,38,38	0
55	MG	BA	3154	1/1	0.97	0.09	25,25,25,25	0
55	MG	BA	3117	1/1	0.97	0.09	1,1,1,1	0
55	MG	BA	3043	1/1	0.97	0.04	16,16,16,16	0
55	MG	BA	3047	1/1	0.97	0.07	4,4,4,4	0
55	MG	CA	1602	1/1	0.97	0.09	88,88,88,88	0
55	MG	BA	3048	1/1	0.97	0.05	8,8,8,8	0
55	MG	BA	3160	1/1	0.97	0.04	10,10,10,10	0
55	MG	DA	3101	1/1	0.97	0.06	57,57,57,57	0
55	MG	BA	3084	1/1	0.97	0.12	6,6,6,6	0
55	MG	AA	1634	1/1	0.97	0.05	35,35,35,35	0
55	MG	BA	3164	1/1	0.97	0.04	4,4,4,4	0
55	MG	BA	3006	1/1	0.97	0.08	50,50,50,50	0
55	MG	BA	3129	1/1	0.97	0.08	4,4,4,4	0
55	MG	CA	1610	1/1	0.97	0.04	63,63,63,63	0
55	MG	CA	1611	1/1	0.97	0.12	90,90,90,90	0
55	MG	CA	1613	1/1	0.97	0.04	19,19,19,19	0
55	MG	BA	3051	1/1	0.97	0.04	6,6,6,6	0
55	MG	BA	3008	1/1	0.97	0.09	37,37,37,37	0
55	MG	CA	1616	1/1	0.97	0.05	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	BA	3009	1/1	0.97	0.04	4,4,4,4	0
55	MG	AA	1606	1/1	0.97	0.04	44,44,44,44	0
55	MG	DB	202	1/1	0.97	0.07	66,66,66,66	0
55	MG	CA	1619	1/1	0.97	0.06	33,33,33,33	0
55	MG	CA	1621	1/1	0.97	0.04	64,64,64,64	0
55	MG	DA	3118	1/1	0.97	0.09	60,60,60,60	0
55	MG	DA	3013	1/1	0.97	0.05	44,44,44,44	0
55	MG	CA	1622	1/1	0.97	0.07	51,51,51,51	0
55	MG	DA	3066	1/1	0.98	0.03	47,47,47,47	0
55	MG	DA	3015	1/1	0.98	0.05	55,55,55,55	0
55	MG	AA	1610	1/1	0.98	0.09	65,65,65,65	0
55	MG	BA	3105	1/1	0.98	0.03	4,4,4,4	0
55	MG	BA	3072	1/1	0.98	0.05	3,3,3,3	0
55	MG	AA	1621	1/1	0.98	0.05	39,39,39,39	0
55	MG	DA	3021	1/1	0.98	0.10	63,63,63,63	0
55	MG	DA	3022	1/1	0.98	0.05	52,52,52,52	0
55	MG	BA	3046	1/1	0.98	0.05	17,17,17,17	0
55	MG	BA	3114	1/1	0.98	0.07	0,0,0,0	0
55	MG	DA	3130	1/1	0.98	0.04	81,81,81,81	0
55	MG	BA	3012	1/1	0.98	0.08	14,14,14,14	0
55	MG	CA	1634	1/1	0.98	0.04	49,49,49,49	0
55	MG	BA	3013	1/1	0.98	0.07	0,0,0,0	0
55	MG	AA	1624	1/1	0.98	0.06	41,41,41,41	0
55	MG	CA	1637	1/1	0.98	0.06	64,64,64,64	0
55	MG	BA	3194	1/1	0.98	0.04	8,8,8,8	0
55	MG	BA	3080	1/1	0.98	0.03	39,39,39,39	0
55	MG	BA	3020	1/1	0.98	0.04	22,22,22,22	0
55	MG	BA	3158	1/1	0.98	0.11	19,19,19,19	0
55	MG	DA	3085	1/1	0.98	0.04	67,67,67,67	0
55	MG	BQ	201	1/1	0.98	0.05	3,3,3,3	0
55	MG	DA	3087	1/1	0.98	0.04	54,54,54,54	0
55	MG	AA	1616	1/1	0.98	0.04	50,50,50,50	0
55	MG	BA	3083	1/1	0.98	0.04	0,0,0,0	0
55	MG	BA	3161	1/1	0.98	0.15	31,31,31,31	0
55	MG	BA	3053	1/1	0.98	0.03	2,2,2,2	0
55	MG	BA	3126	1/1	0.98	0.04	6,6,6,6	0
55	MG	BA	3054	1/1	0.98	0.08	9,9,9,9	0
55	MG	BA	3056	1/1	0.98	0.04	5,5,5,5	0
55	MG	BA	3022	1/1	0.98	0.07	2,2,2,2	0
55	MG	DA	3096	1/1	0.98	0.04	57,57,57,57	0
55	MG	BA	3133	1/1	0.98	0.10	32,32,32,32	0
55	MG	AA	1601	1/1	0.98	0.05	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	AA	1645	1/1	0.98	0.08	42,42,42,42	0
55	MG	CA	1612	1/1	0.98	0.04	40,40,40,40	0
55	MG	BA	3003	1/1	0.98	0.10	17,17,17,17	0
55	MG	BA	3138	1/1	0.98	0.25	1,1,1,1	0
55	MG	BA	3172	1/1	0.98	0.07	31,31,31,31	0
55	MG	DA	3051	1/1	0.98	0.05	28,28,28,28	0
55	MG	DA	3052	1/1	0.98	0.06	56,56,56,56	0
55	MG	DA	3004	1/1	0.98	0.07	76,76,76,76	0
55	MG	AA	1627	1/1	0.98	0.09	37,37,37,37	0
55	MG	BA	3140	1/1	0.98	0.16	0,0,0,0	0
55	MG	AA	1636	1/1	0.98	0.10	27,27,27,27	0
55	MG	AA	1603	1/1	0.98	0.10	44,44,44,44	0
55	MG	BA	3177	1/1	0.98	0.12	17,17,17,17	0
55	MG	DA	3059	1/1	0.98	0.04	51,51,51,51	0
55	MG	BA	3143	1/1	0.98	0.20	12,12,12,12	0
55	MG	BA	3179	1/1	0.98	0.10	26,26,26,26	0
55	MG	BA	3099	1/1	0.98	0.05	4,4,4,4	0
55	MG	BA	3065	1/1	0.98	0.04	0,0,0,0	0
55	MG	DA	3117	1/1	0.98	0.04	67,67,67,67	0
55	MG	BA	3041	1/1	0.98	0.05	6,6,6,6	0
55	MG	DA	3065	1/1	0.98	0.03	36,36,36,36	0
55	MG	BA	3096	1/1	0.99	0.02	11,11,11,11	0
55	MG	BA	3184	1/1	0.99	0.09	6,6,6,6	0
55	MG	BA	3097	1/1	0.99	0.05	4,4,4,4	0
55	MG	BA	3098	1/1	0.99	0.03	2,2,2,2	0
55	MG	BA	3034	1/1	0.99	0.04	6,6,6,6	0
55	MG	BA	3188	1/1	0.99	0.02	10,10,10,10	0
55	MG	AA	1615	1/1	0.99	0.03	47,47,47,47	0
55	MG	BA	3101	1/1	0.99	0.04	1,1,1,1	0
55	MG	BA	3102	1/1	0.99	0.03	7,7,7,7	0
55	MG	BA	3066	1/1	0.99	0.05	0,0,0,0	0
55	MG	CA	1640	1/1	0.99	0.07	26,26,26,26	0
55	MG	BA	3068	1/1	0.99	0.07	0,0,0,0	0
55	MG	AA	1607	1/1	0.99	0.04	44,44,44,44	0
55	MG	BA	3106	1/1	0.99	0.05	16,16,16,16	0
55	MG	BB	201	1/1	0.99	0.04	20,20,20,20	0
55	MG	BA	3108	1/1	0.99	0.07	0,0,0,0	0
55	MG	BB	203	1/1	0.99	0.04	7,7,7,7	0
55	MG	BA	3109	1/1	0.99	0.05	12,12,12,12	0
55	MG	BA	3110	1/1	0.99	0.07	3,3,3,3	0
55	MG	BA	3040	1/1	0.99	0.04	0,0,0,0	0
55	MG	BA	3010	1/1	0.99	0.03	0,0,0,0	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	BA	3074	1/1	0.99	0.06	1,1,1,1	0
55	MG	BA	3011	1/1	0.99	0.05	1,1,1,1	0
55	MG	AA	1647	1/1	0.99	0.03	48,48,48,48	0
55	MG	BA	3045	1/1	0.99	0.03	9,9,9,9	0
55	MG	AA	1622	1/1	0.99	0.10	16,16,16,16	0
55	MG	BA	3118	1/1	0.99	0.03	1,1,1,1	0
55	MG	AA	1623	1/1	0.99	0.03	46,46,46,46	0
55	MG	BA	3017	1/1	0.99	0.05	2,2,2,2	0
55	MG	AA	1604	1/1	0.99	0.03	48,48,48,48	0
55	MG	BA	3122	1/1	0.99	0.07	18,18,18,18	0
55	MG	BA	3123	1/1	0.99	0.03	0,0,0,0	0
55	MG	AA	1618	1/1	0.99	0.03	37,37,37,37	0
55	MG	AA	1641	1/1	0.99	0.03	19,19,19,19	0
55	MG	BA	3052	1/1	0.99	0.02	11,11,11,11	0
55	MG	BA	3024	1/1	0.99	0.06	0,0,0,0	0
55	MG	BA	3025	1/1	0.99	0.04	2,2,2,2	0
55	MG	BA	3130	1/1	0.99	0.04	0,0,0,0	0
55	MG	CA	1620	1/1	0.99	0.05	61,61,61,61	0
55	MG	BA	3131	1/1	0.99	0.04	1,1,1,1	0
55	MG	AA	1642	1/1	0.99	0.04	23,23,23,23	0
55	MG	BA	3028	1/1	0.99	0.04	5,5,5,5	0
55	MG	BA	3029	1/1	0.99	0.14	21,21,21,21	0
55	MG	DA	3018	1/1	0.99	0.04	60,60,60,60	0
55	MG	BA	3091	1/1	0.99	0.04	3,3,3,3	0
55	MG	AA	1633	1/1	0.99	0.03	30,30,30,30	0
55	MG	AA	1611	1/1	0.99	0.03	21,21,21,21	0
55	MG	BA	3032	1/1	0.99	0.04	4,4,4,4	0
55	MG	DA	3023	1/1	0.99	0.04	69,69,69,69	0
55	MG	BA	3007	1/1	0.99	0.03	22,22,22,22	0
57	ZN	B4	101	1/1	0.99	0.04	33,33,33,33	0
57	ZN	D4	101	1/1	0.99	0.03	87,87,87,87	0
55	MG	BA	3128	1/1	1.00	0.01	0,0,0,0	0
55	MG	BA	3026	1/1	1.00	0.02	3,3,3,3	0
55	MG	BA	3015	1/1	1.00	0.05	2,2,2,2	0
55	MG	BA	3018	1/1	1.00	0.06	0,0,0,0	0
55	MG	BA	3044	1/1	1.00	0.02	3,3,3,3	0
55	MG	BA	3067	1/1	1.00	0.06	0,0,0,0	0
55	MG	BA	3055	1/1	1.00	0.04	0,0,0,0	0
55	MG	BA	3135	1/1	1.00	0.02	2,2,2,2	0
55	MG	BA	3035	1/1	1.00	0.08	0,0,0,0	0
55	MG	BA	3070	1/1	1.00	0.06	0,0,0,0	0
55	MG	BA	3023	1/1	1.00	0.02	1,1,1,1	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	BA	3037	1/1	1.00	0.04	0,0,0,0	0
55	MG	BA	3088	1/1	1.00	0.10	2,2,2,2	0
55	MG	BA	3073	1/1	1.00	0.11	7,7,7,7	0
55	MG	BA	3019	1/1	1.00	0.04	11,11,11,11	0
55	MG	BA	3107	1/1	1.00	0.09	0,0,0,0	0
55	MG	BA	3060	1/1	1.00	0.04	15,15,15,15	0
55	MG	BA	3039	1/1	1.00	0.10	0,0,0,0	0
55	MG	BA	3014	1/1	1.00	0.05	0,0,0,0	0

6.5 Other polymers (i)

There are no such residues in this entry.